for Preparation Click here

1.PRECAUTION

a. Check that the battery cables are connected to the correct terminals.

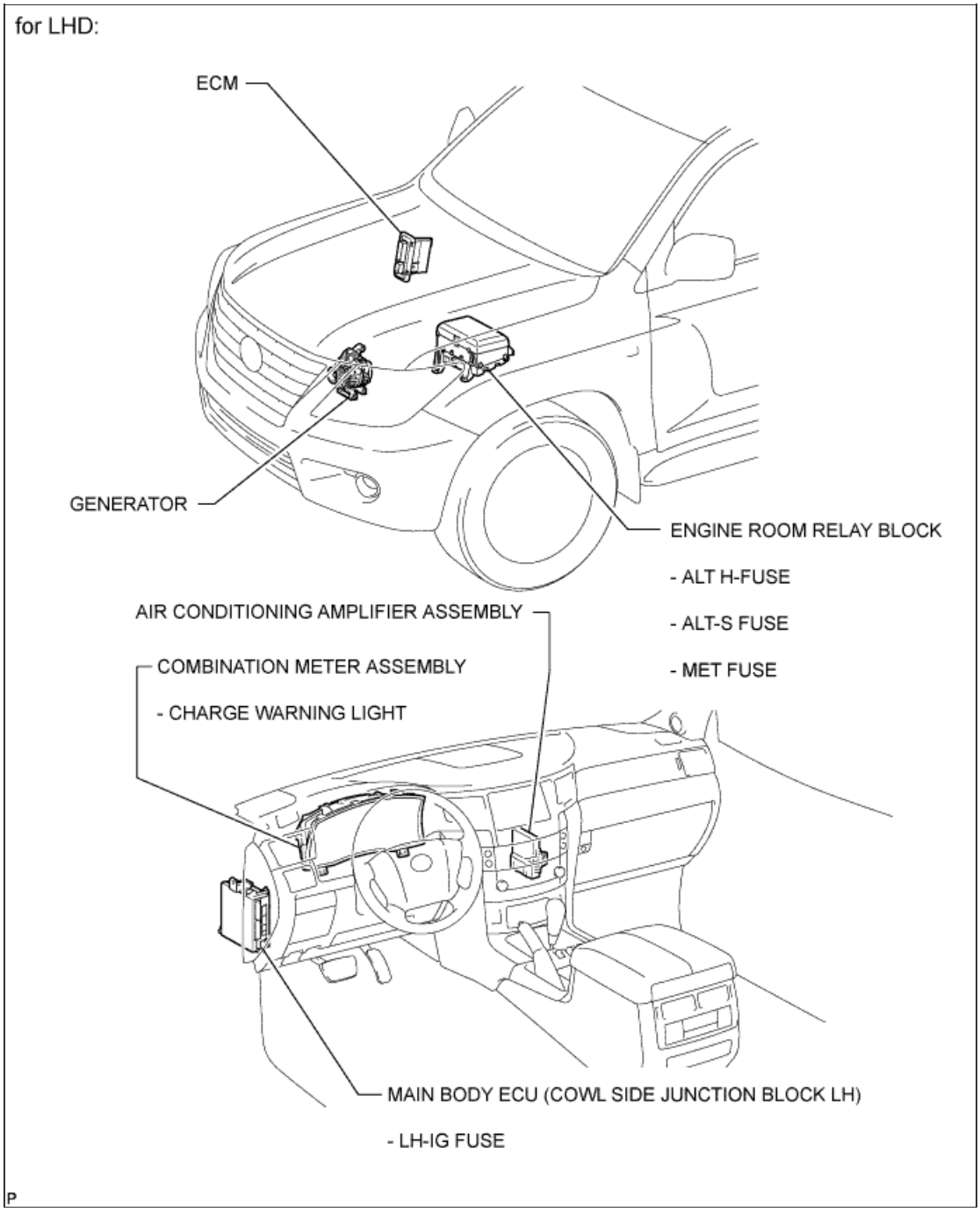
b. Disconnect the battery cables when the battery is given a quick charge.

c. Do not perform tests with a high voltage insulation resistance tester.

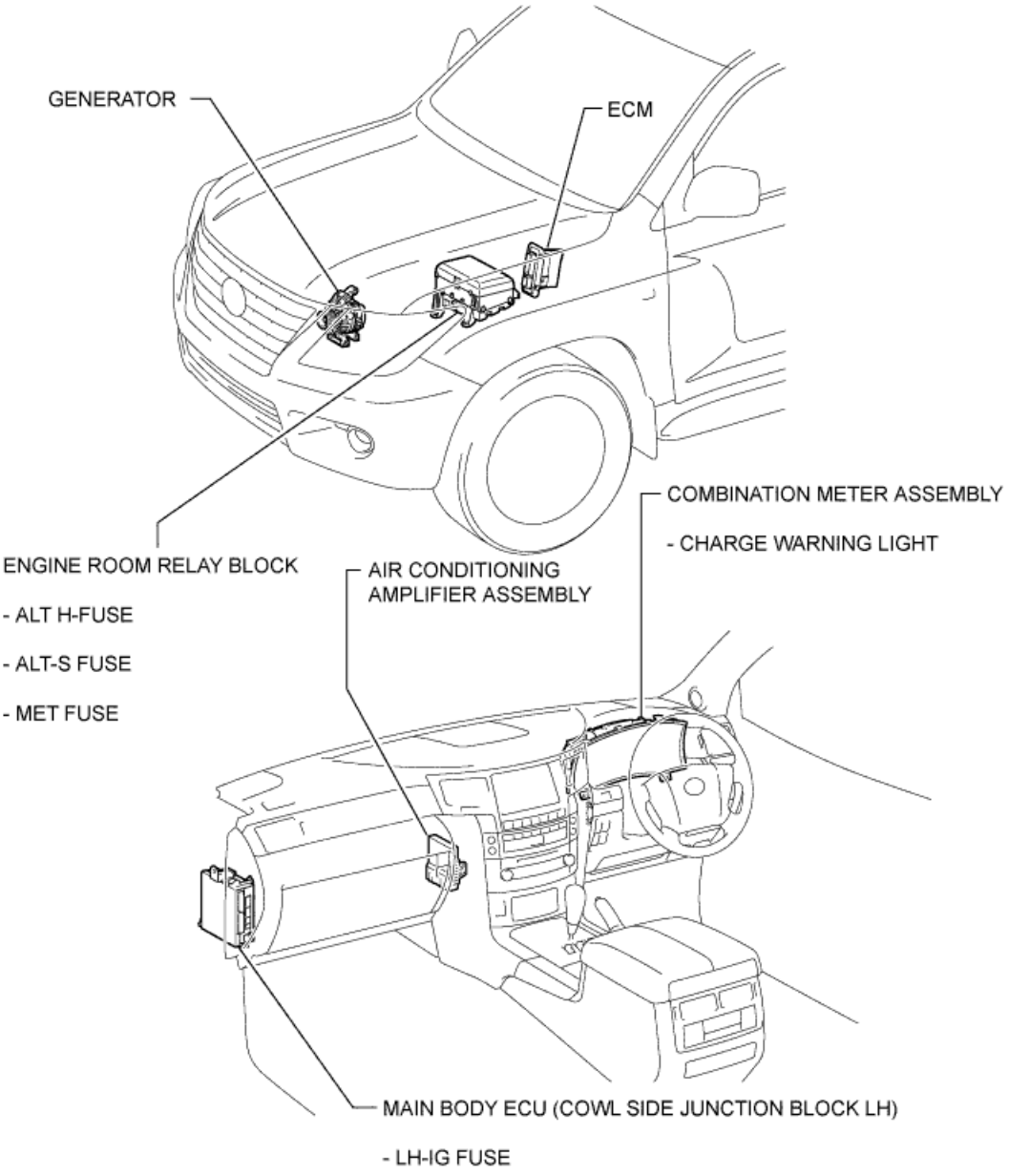
d. Never disconnect the battery while the engine is running.

e. Check that the charging cable nut is securely installed to terminal B of the generator and the fuse box.

for Preparation Click here

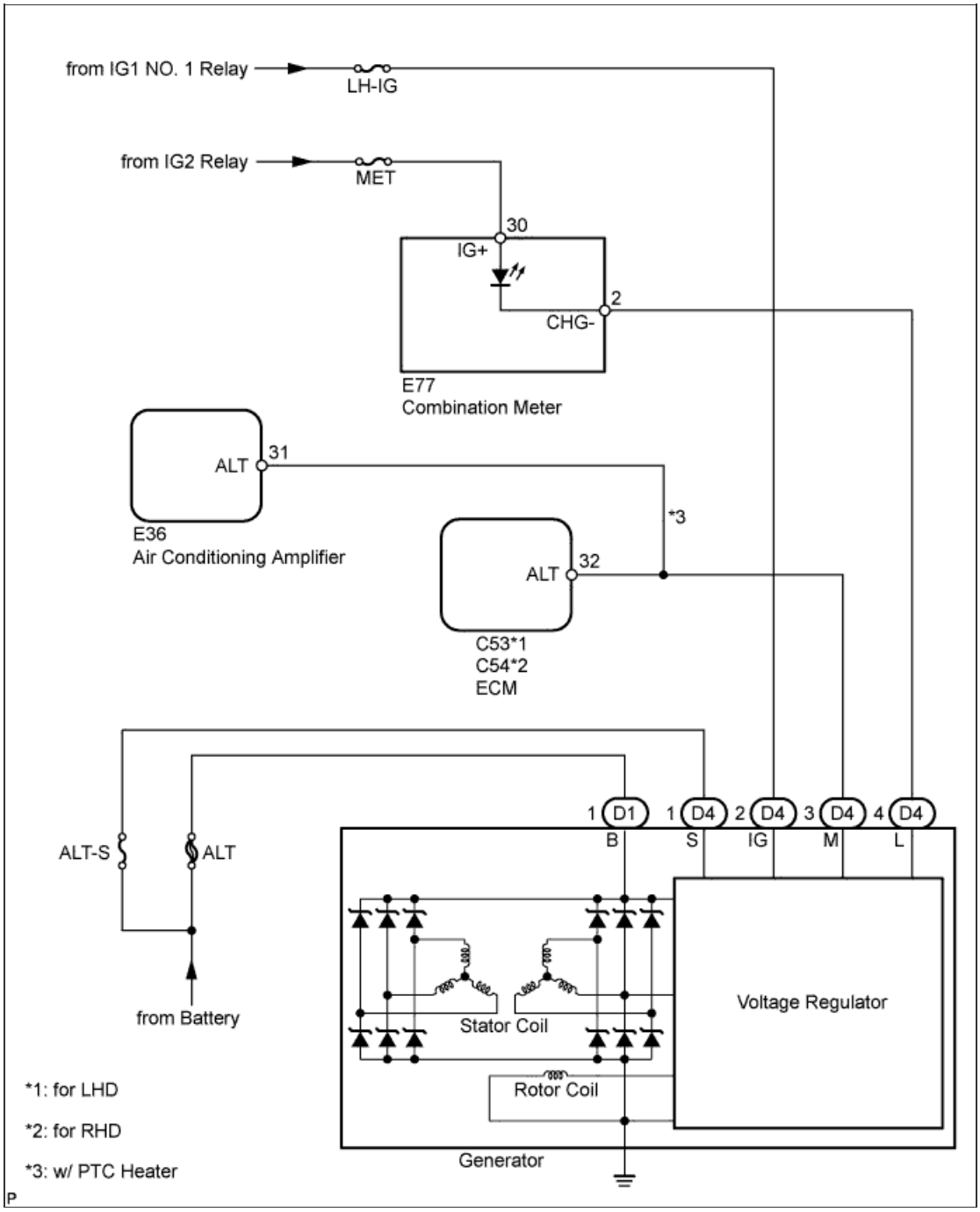


for RHD:


GENERATOR
ECM
COMBINATION METER ASSEMBLY
- CHARGE WARNING LIGHT
ENGINE ROOM RELAY BLOCK
- ALT H-FUSE
- ALT-S FUSE
- MET FUSE
AIR CONDITIONING
AMPLIFIER ASSEMBLY
MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)
- LH-IG FUSE

P

for Preparation Click here



for Preparation Click here

1. CHECK BATTERY CONDITION

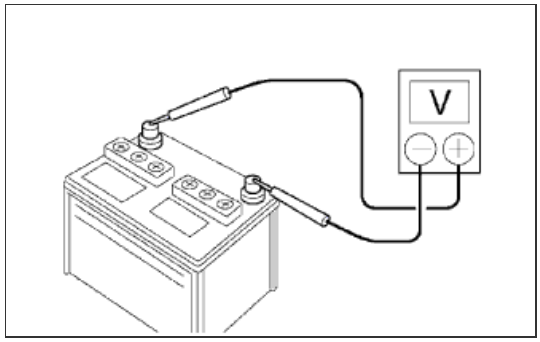
NOTICE:

If the battery is weak or if the engine is difficult to start, perform the following procedures.

a. Check the battery for damage and deformation. If severe damage, deformation or leakage is found, replace the battery.

b. Turn the engine switch off and turn on the headlight for 20 to 30 seconds. This will remove the surface charge from the battery.

c. Measure the battery voltage between the negative (-) and positive (+) terminals of the battery.



Standard voltage:
12.5 to 12.9 V at 20°C (68°F)

HINT:

If the voltage is below the specification, recharge the battery.

d. Check the electrolyte quantity of each cell.

i. For maintenance-free batteries:

- If the electrolyte quantity is below the lower line, replace the battery.
- If the electrolyte quantity is above the lower line, check the battery voltage when cranking the engine. If the voltage is below 9.6 V, recharge or replace the battery.

HINT:

Before checking the battery voltage, turn off all the electrical systems (headlights, blower motor, rear defogger, etc.).

ii. For non-maintenance-free batteries:

- If the electrolyte quantity is below the lower line, add distilled water to each cell. Then, recharge the battery and check the electrolyte specific gravity.

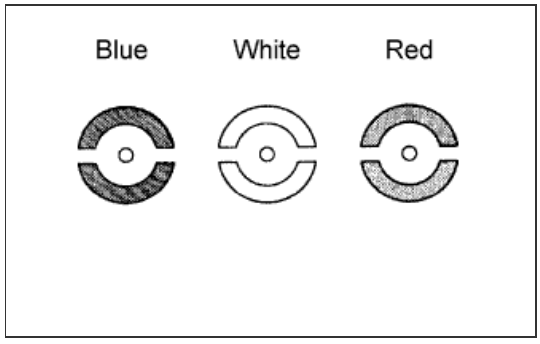
Standard specific gravity:
1.25 to 1.29 at 20°C (68°F)

- If the electrolyte quantity is above the lower line, check the battery voltage when cranking the engine. If the voltage is below 9.6 V, recharge or replace the battery.

HINT:

Before checking the battery voltage, turn off all the electrical systems (headlights, blower motor, rear defogger, etc.).

e. Reference:
The indicator shows the battery condition.



HINT:

- **Blue: OK**
- **White: Charging necessary**
- **Red: Insufficient electrolyte**

2. INSPECT BATTERY TERMINAL AND FUSE

a. Visually check the battery terminals.

i. Check that the battery terminals are not loose or corroded.

b. Check the H-fuse and fuses.

i. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
ALT H-fuse	Always	Below 1 Ω
ALT-S fuse		
MET fuse		
LH-IG fuse		

If the result is not as specified, replace the fuses as necessary.

3. INSPECT V-RIBBED BELT

a. Check the belt (Click here).

4. INSPECT GENERATOR WIRING

a. Visually check the generator wiring.

i. Check that the wiring is in good condition.

5. CHECK FOR ABNORMAL NOISES

a. Listen for abnormal noises from the generator.

i. Check that no abnormal noises are heard from the generator while the engine is running.

6. INSPECT CHARGE WARNING LIGHT CIRCUIT

a. Turn the engine switch on (IG). Check that the charge warning light comes on.

b. Start the engine and check that the light goes off.
If the light does not operate as specified, troubleshoot the charge warning light circuit.

7. INSPECT CHARGING CIRCUIT WITHOUT LOAD

a. Connect a voltmeter and ammeter to the charging circuit as follows:

i. Disconnect the wire from terminal B of the generator, then connect it to the negative (-) lead of an ammeter.

ii. Connect the positive (+) lead of the ammeter to terminal B of the generator.

iii. Connect the positive (+) lead of a voltmeter to the positive (+) terminal of the battery.

iv. Ground the negative (-) lead of the voltmeter.

b. Check the charging circuit.

i. Keep the engine speed at 2000 rpm and check the reading on the

ammeter and voltmeter.

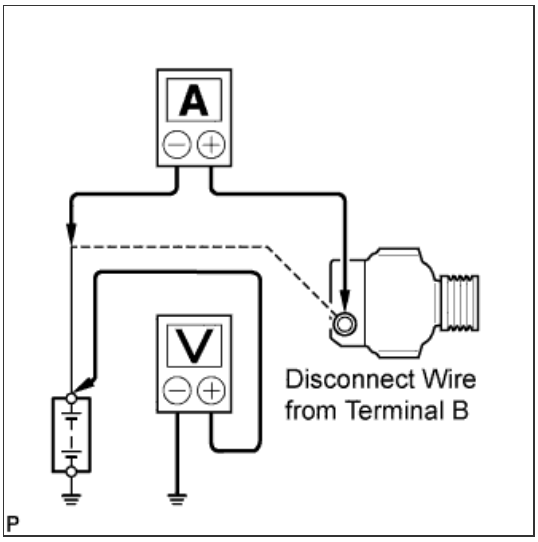
Standard current:
10 A or less

Standard voltage:
13.2 to 14.8 V

If the voltmeter reading is more than the standard voltage, replace the voltage regulator.

HINT:

If the battery is not fully charged, the ammeter reading will sometimes be higher than the standard amperage.



8. INSPECT CHARGING CIRCUIT WITH LOAD

a. With the engine running at 2000 rpm, turn the high beam headlights on and turn the heater blower switch to the "HI" position.

b. Check the reading on the ammeter.

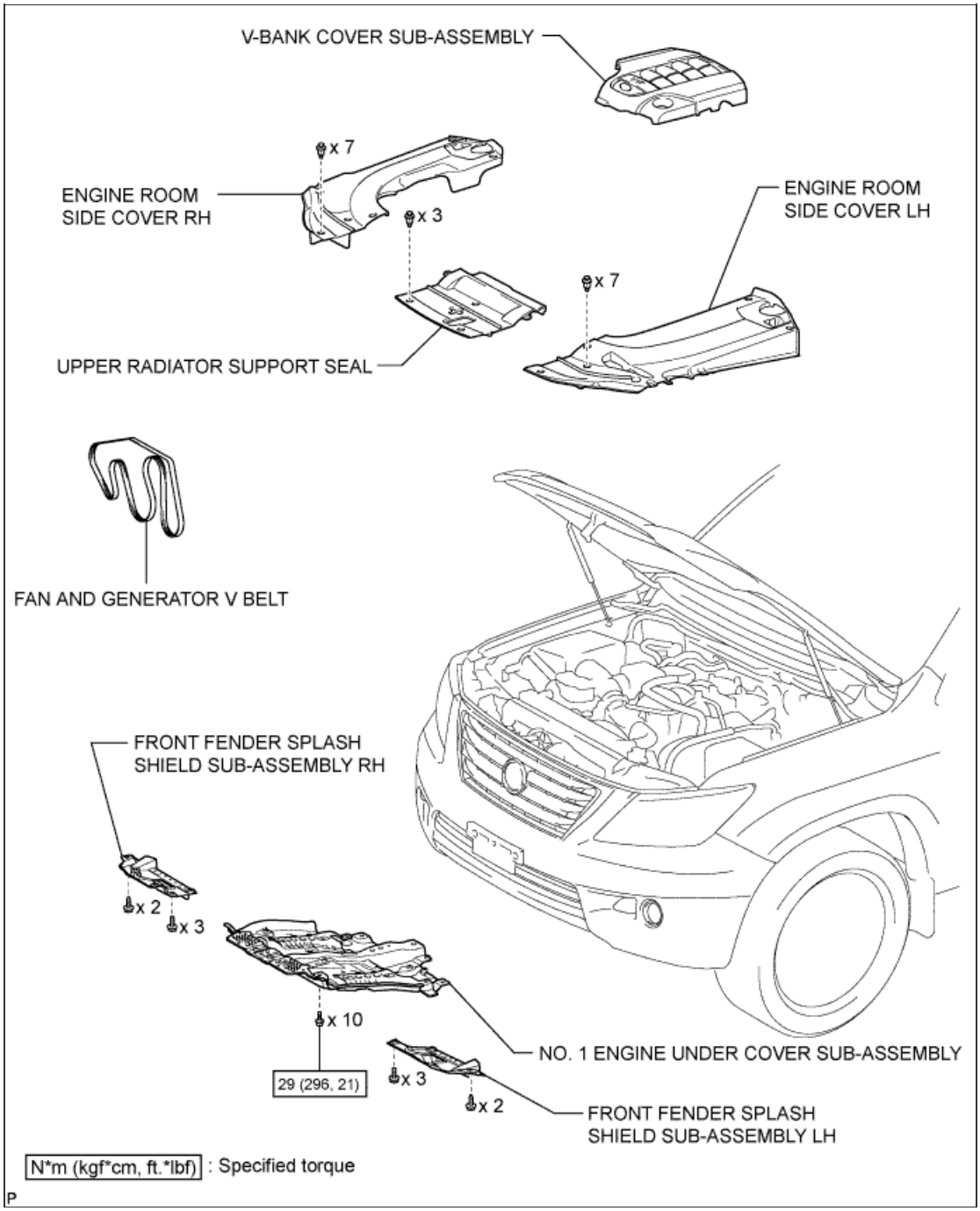
Standard current:
30 A or higher

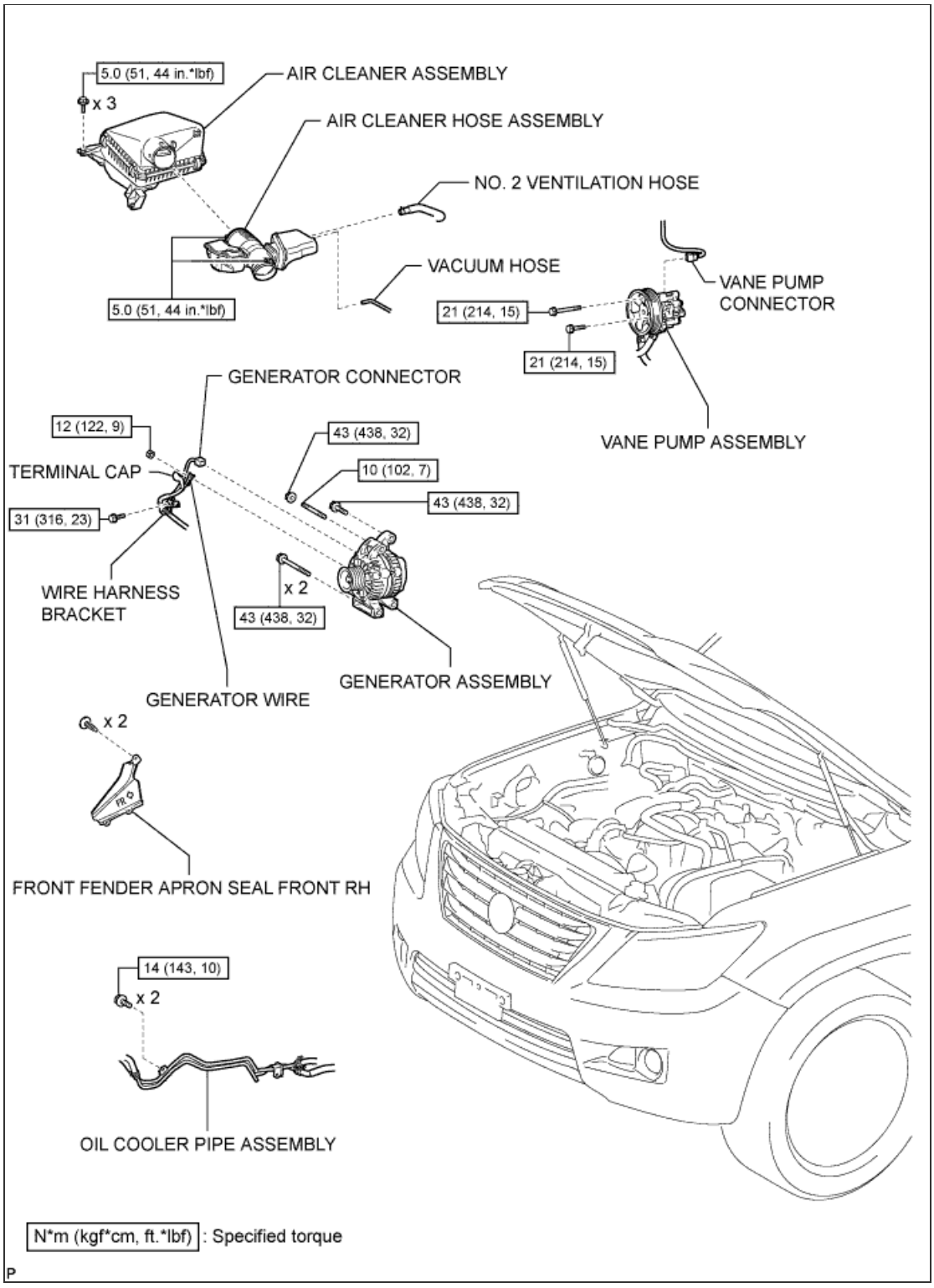
If the ammeter reading is below the standard amperage, repair the generator.

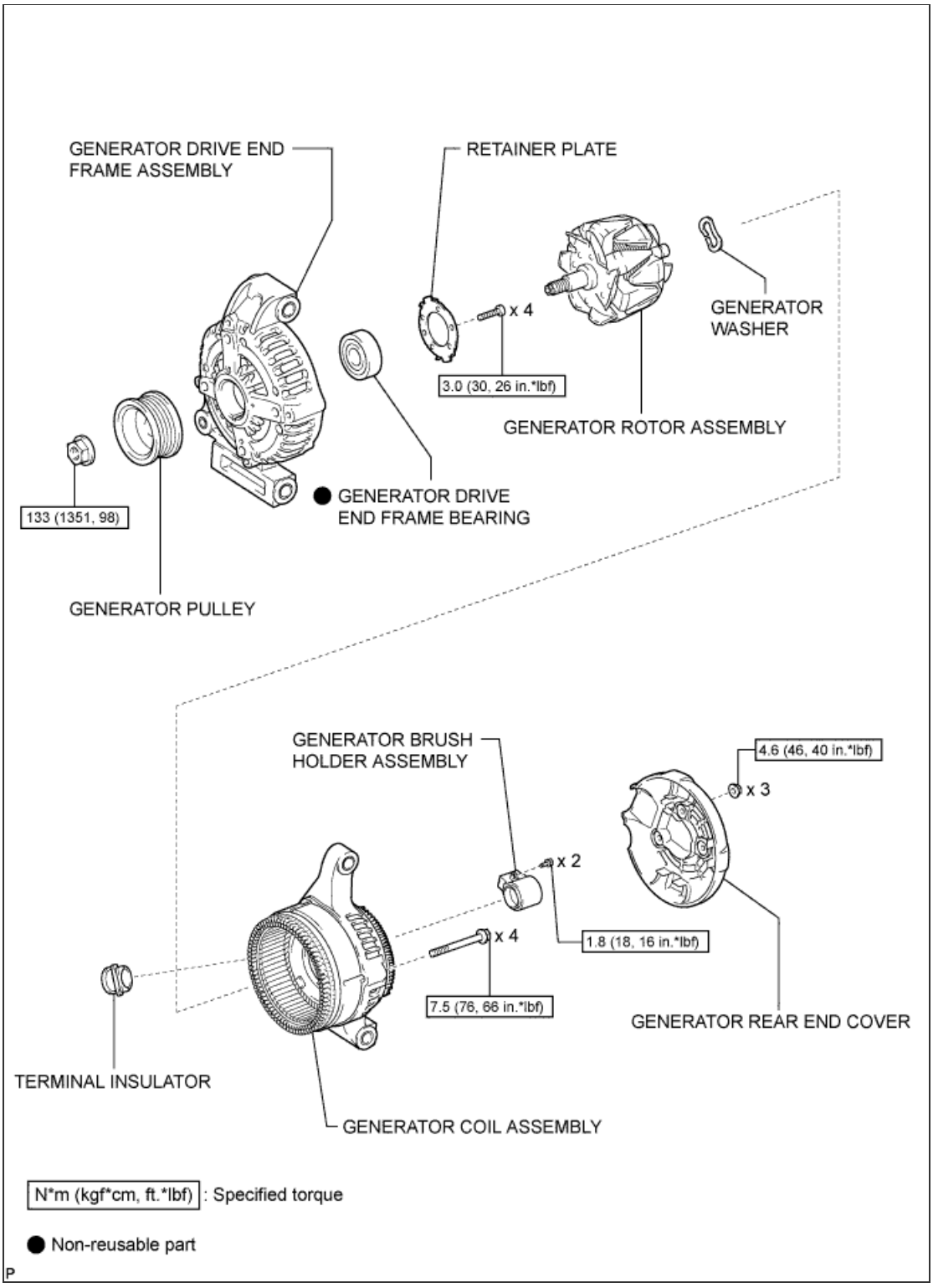
HINT:

If the battery is fully charged, the indication will sometimes be below the standard amperage. If this is the case, add more electrical load (operate the wipers, rear window defogger, etc.) and check the reading on the ammeter again.

for Preparation [Click here]



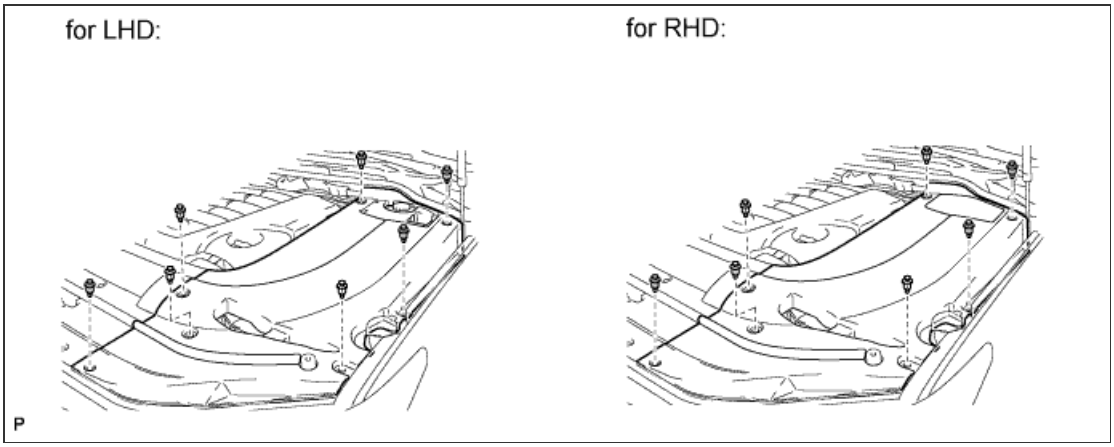

5.0 (51, 44 in.*lbf)
x 3
AIR CLEANER ASSEMBLY
AIR CLEANER HOSE ASSEMBLY
NO. 2 VENTILATION HOSE
VACUUM HOSE
5.0 (51, 44 in.*lbf)
21 (214, 15)
21 (214, 15)
VANE PUMP CONNECTOR
VANE PUMP ASSEMBLY
GENERATOR CONNECTOR
12 (122, 9)
TERMINAL CAP
31 (316, 23)
43 (438, 32)
10 (102, 7)
43 (438, 32)
WIRE HARNESS BRACKET
x 2
43 (438, 32)
GENERATOR ASSEMBLY
GENERATOR WIRE
x 2
FRONT FENDER APRON SEAL FRONT RH
14 (143, 10)
x 2
OIL COOLER PIPE ASSEMBLY
N*m (kgf*cm, ft.*lbf) : Specified torque
P


GENERATOR DRIVE END FRAME ASSEMBLY
RETAINER PLATE
x 4
3.0 (30, 26 in.*lbf)
GENERATOR WASHER
GENERATOR ROTOR ASSEMBLY
133 (1351, 98)
GENERATOR DRIVE END FRAME BEARING
GENERATOR PULLEY
GENERATOR BRUSH HOLDER ASSEMBLY
4.6 (46, 40 in.*lbf)
x 3
x 2
x 4
1.8 (18, 16 in.*lbf)
7.5 (76, 66 in.*lbf)
GENERATOR REAR END COVER
TERMINAL INSULATOR
GENERATOR COIL ASSEMBLY
N*m (kgf*cm, ft.*lbf) : Specified torque
Non-reusable part
P

for Preparation Click here

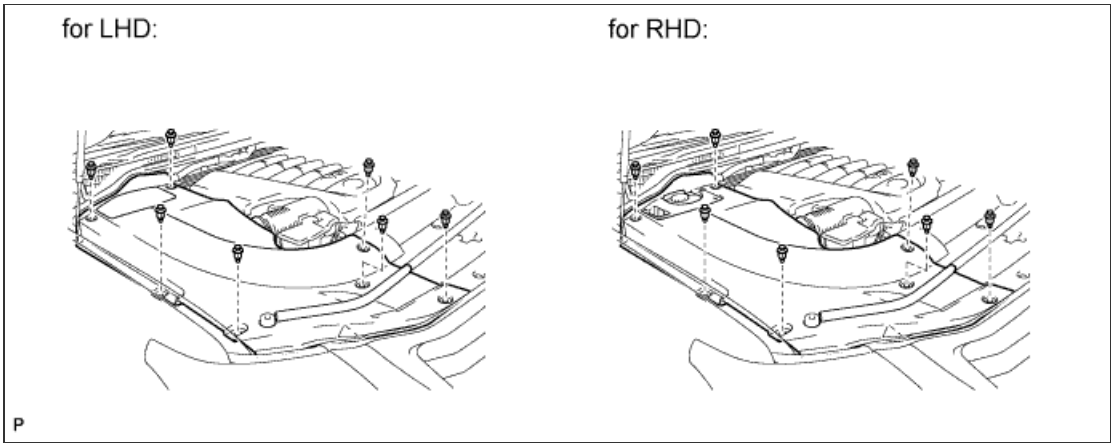
1. REMOVE ENGINE ROOM SIDE COVER LH

a. Remove the 7 clips and engine room side cover.



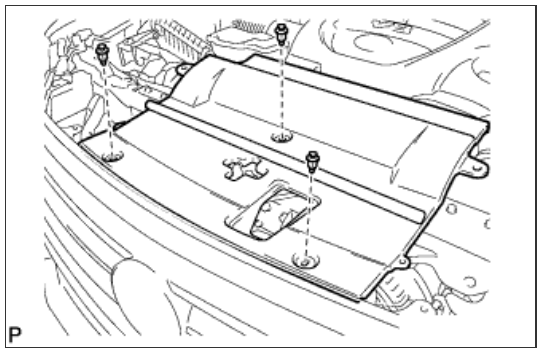
2. REMOVE ENGINE ROOM SIDE COVER RH

a. Remove the 7 clips and engine room side cover.



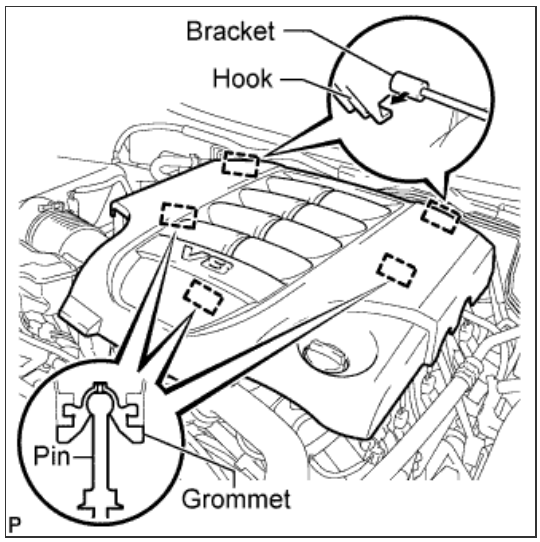
3. REMOVE UPPER RADIATOR SUPPORT SEAL

a. Remove the 3 clips and upper radiator support seal.



4. REMOVE V-BANK COVER SUB-ASSEMBLY

a. Raise the front of the V-bank cover to detach the 3 pins. Then remove the 2 V-bank cover hooks from the bracket, and remove the V-bank cover.



5. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

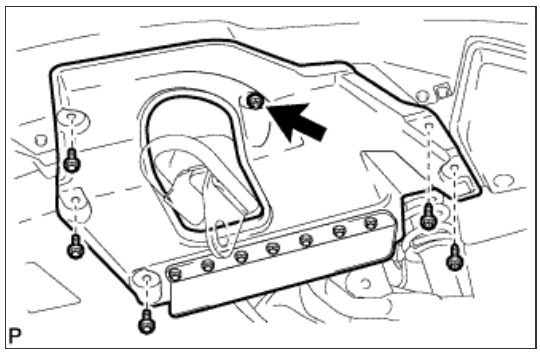
NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable from the cable is reconnected (Click here).

6. REMOVE FRONT FENDER SPLASH SHIELD SUB-ASSEMBLY LH

a. Remove the 3 bolts and 2 screws.

b. Turn the clip indicated by the arrow in the illustration to remove the fender splash shield.



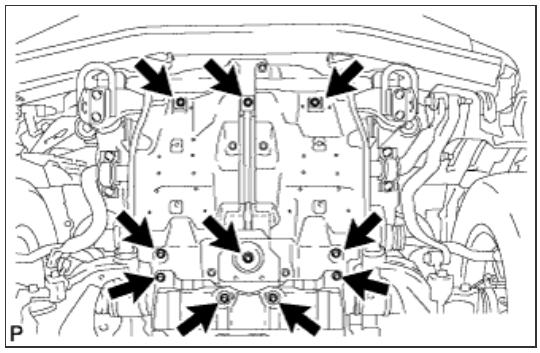
7. REMOVE FRONT FENDER SPLASH SHIELD SUB-ASSEMBLY RH

HINT:

Use the same procedures described for the LH side.

8. REMOVE NO. 1 ENGINE UNDER COVER SUB-ASSEMBLY

a. Remove the 10 bolts and No. 1 engine under cover.



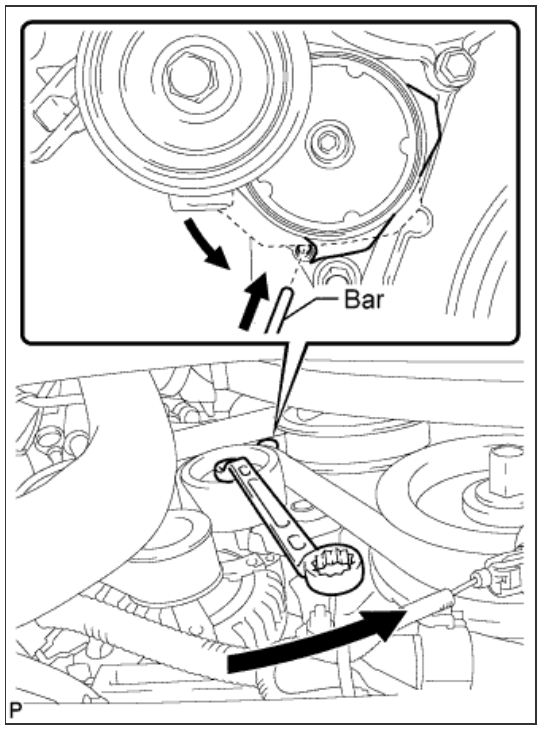
9. REMOVE FAN & GENERATOR V BELT

a. While turning the belt tensioner counterclockwise, align the service hole for the belt tensioner and the belt tensioner fixing position, and then insert a bar of φ5 mm (0.197 in.) into the service hole to fix the belt tensioner in place.

HINT:

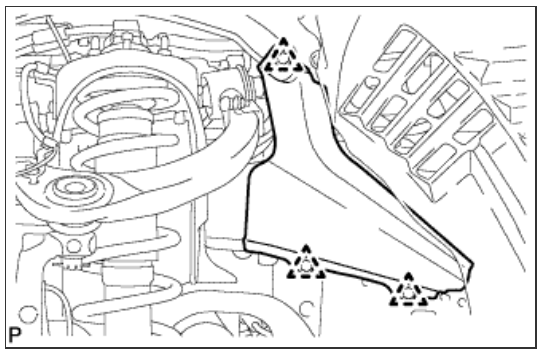
The pulley bolt for the belt tensioner has a left-hand thread.

b. Remove the V belt.



10. REMOVE FRONT FENDER APRON SEAL FRONT RH

a. Using a clip remover, remove the 3 clips and fender apron seal.

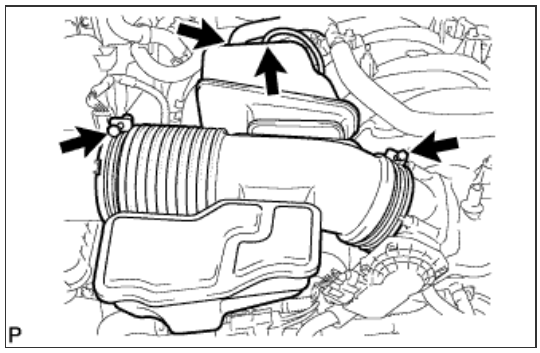


11. REMOVE AIR CLEANER HOSE ASSEMBLY

a. Disconnect the vacuum hose and No. 2 ventilation hose.

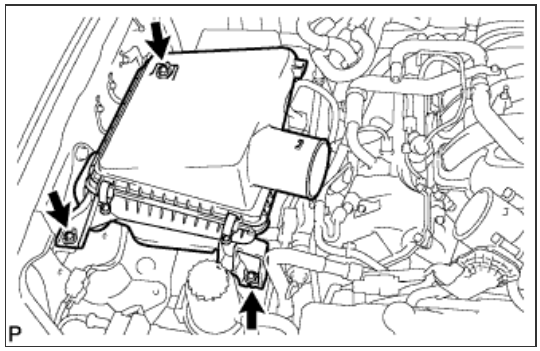
b. Loosen the 2 hose clamps.

c. Remove the air cleaner hose.



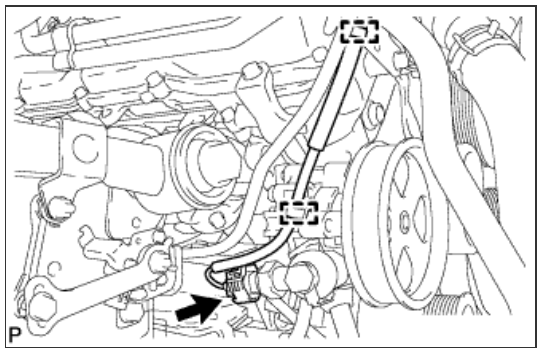
12. REMOVE AIR CLEANER ASSEMBLY

a. Remove the 3 bolts and air cleaner.

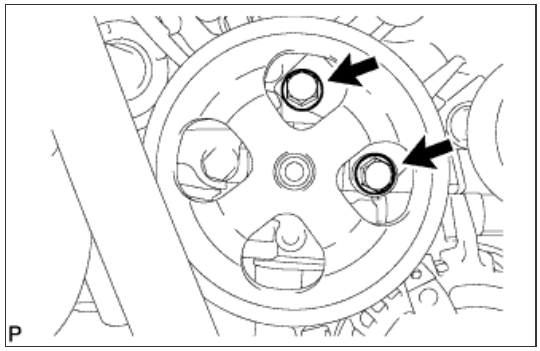


13. DISCONNECT VANE PUMP ASSEMBLY

a. Disconnect the 2 clamps and power steering oil pressure switch connector.

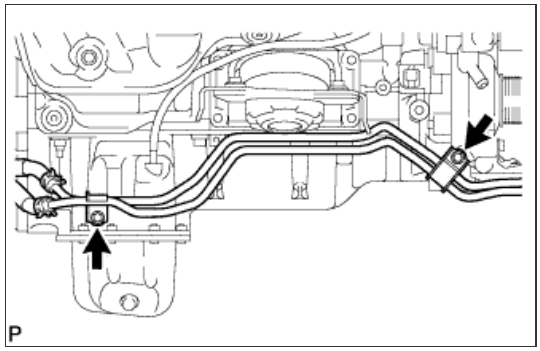


b. Remove the 2 bolts and disconnect the vane pump.



14. DISCONNECT OIL COOLER PIPE ASSEMBLY

a. Remove the 2 bolts and disconnect the oil cooler pipe.

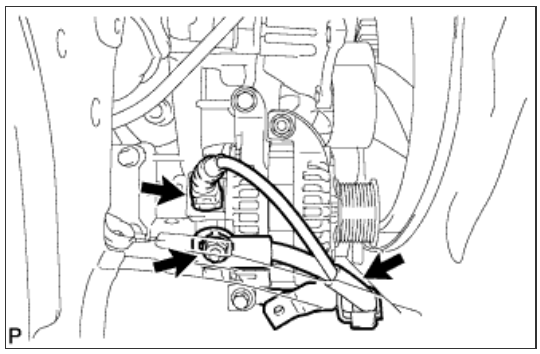


15. REMOVE GENERATOR ASSEMBLY

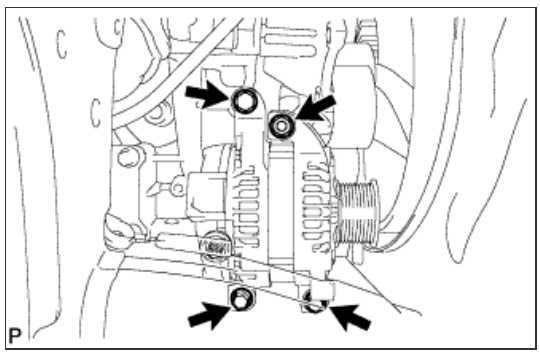
a. Disconnect the generator connector.

b. Remove the terminal cap and nut, and disconnect the generator wire.

c. Remove the bolt and wire harness bracket from the generator.



d. Remove the 3 bolts, nut and generator.



for Preparation Click here

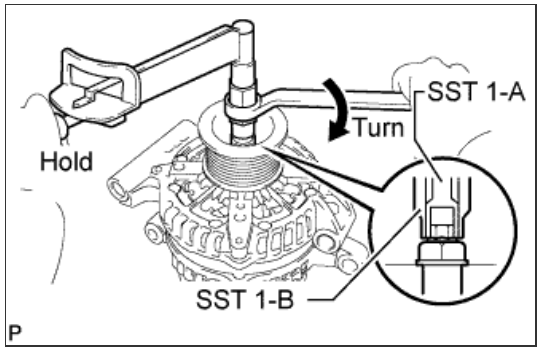
1. REMOVE GENERATOR PULLEY

SST
09820-63011 (09820-06010, 09820-06021)

HINT:

SST 1-A and B	09820-06010
SST 2	09820-06021

a. Hold SST 1-A with a torque wrench, and tighten SST 1-B clockwise to the specified torque.



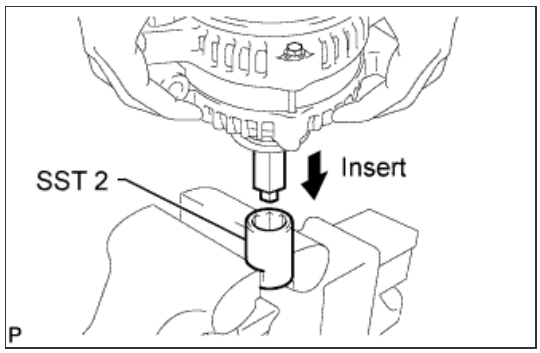
Torque:
39 N*m{ 398 kgf*cm , 29 ft.*lbf }

NOTICE:

Check that SST is secured on the rotor shaft.

b. Mount SST 2 in a vise.

c. Insert SST 1-A and B into SST 2, and attach the pulley nut to SST 2.

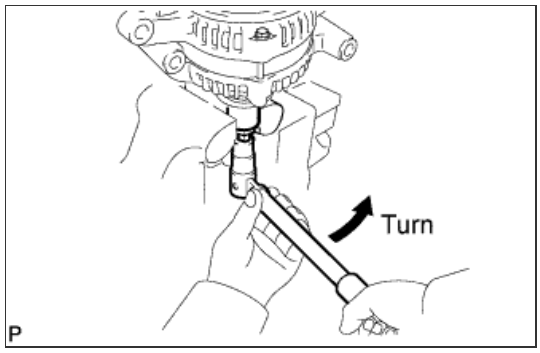


d. To loosen the pulley nut, turn SST 1-A in the direction shown in the illustration.

NOTICE:

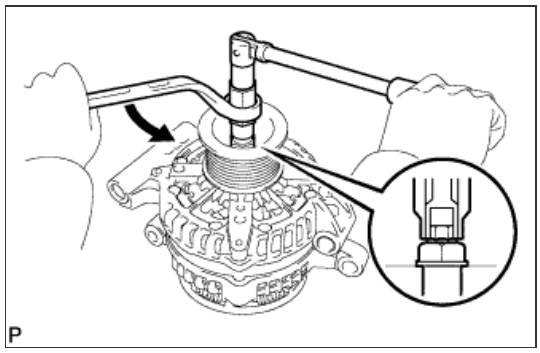
To prevent damage to the rotor shaft, do not loosen the pulley nut more than one-half turn.

e. Remove the generator from SST 2.



f. Turn SST 1-B, and remove SST 1-A and B.

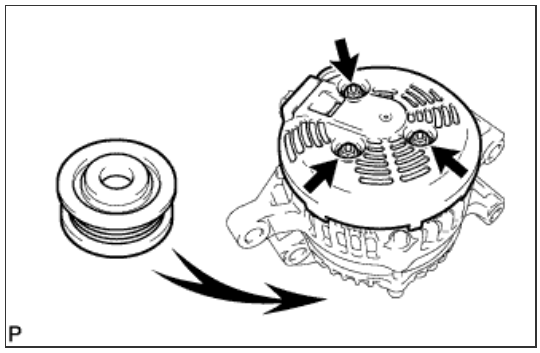
g. Remove the pulley nut and pulley.



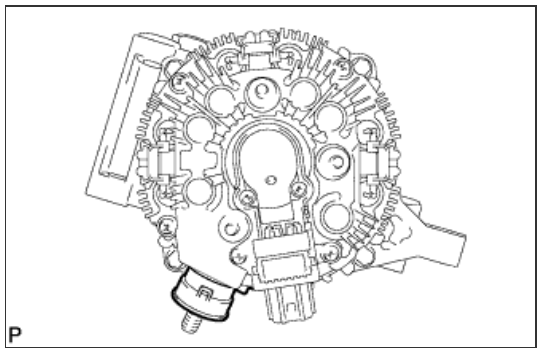
2. REMOVE GENERATOR REAR END COVER

a. Place the generator on the pulley.

b. Remove the 3 nuts and end cover.

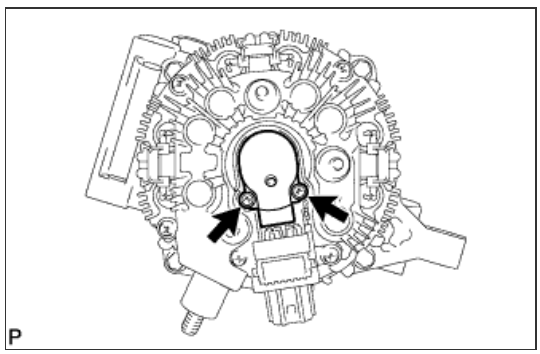


c. Remove the terminal insulator.



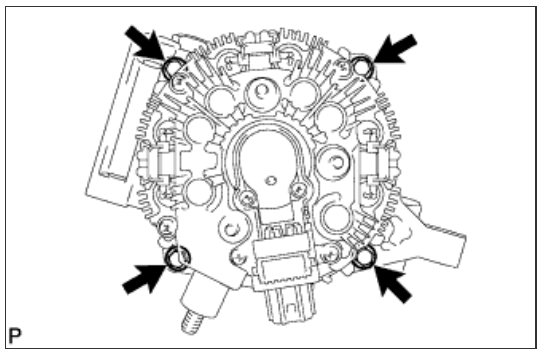
3. REMOVE GENERATOR BRUSH HOLDER ASSEMBLY

a. Remove the 2 screws and brush holder.



4. REMOVE GENERATOR COIL ASSEMBLY

a. Remove the 4 bolts.

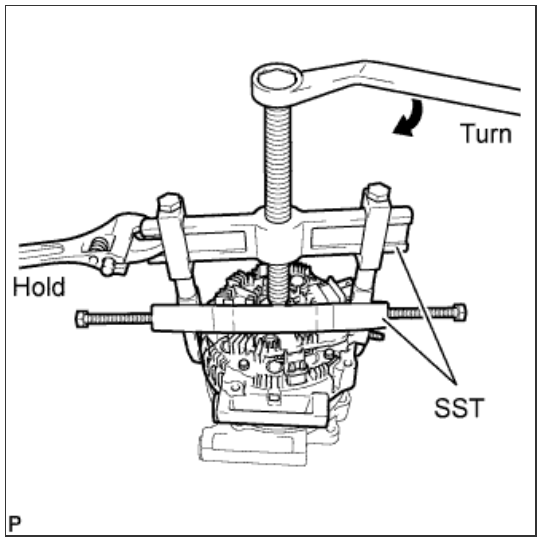


b. Using SST, remove the coil assembly

b. Using SST, remove the coil assembly.

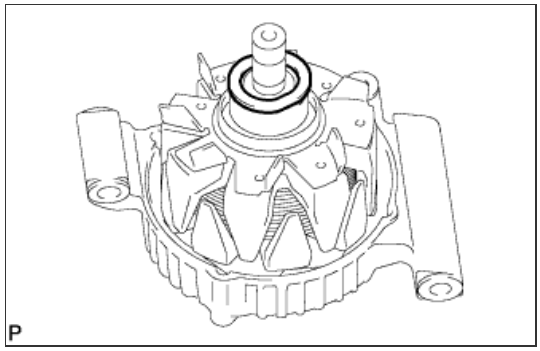
SST

09950-40011 (09951-04020, 09952-04010, 09953-04020, 09954-04010, 09955-04071, 09957-04010, 09958-04011)



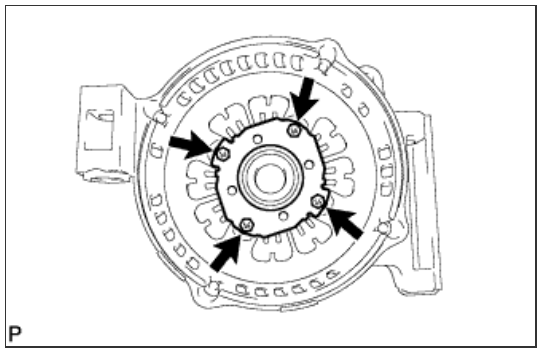
5. REMOVE GENERATOR ROTOR ASSEMBLY

a. Remove the generator washer and generator rotor.



6. REPLACE GENERATOR DRIVE END FRAME BEARING

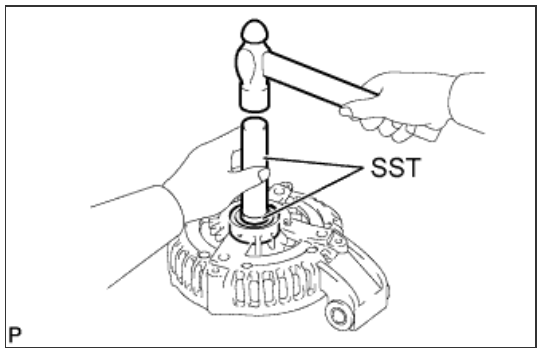
a. Remove the 4 screws and retainer plate.



b. Using SST and a hammer, tap out the bearing.

SST

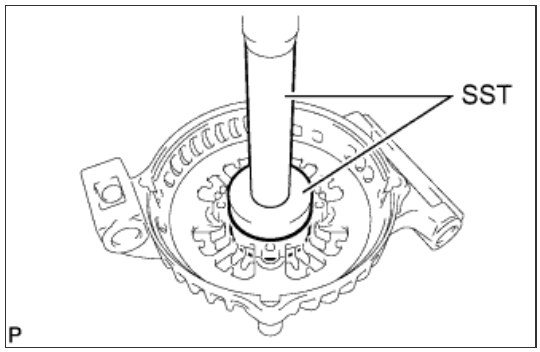
09950-60010 (09951-00250)
09950-70010 (09951-07100)



c. Using SST and a press, press in a new bearing.

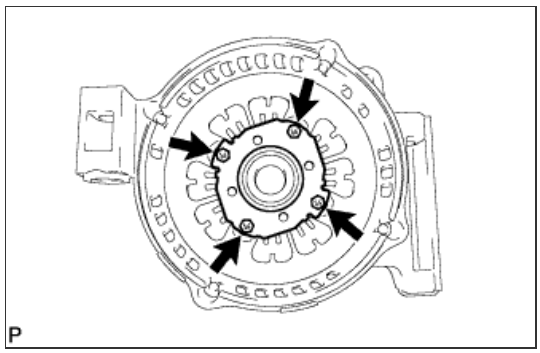
SST

09950-60010 (09951-00500)
09950-70010 (09951-07100)



d. Install the retainer plate with the 4 screws.

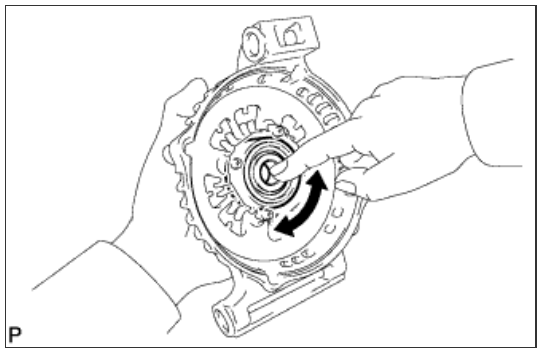
Torque:
3.0 N*m{ 30 kgf*cm , 26 in.*lbf }



for Preparation Click here

1. INSPECT GENERATOR DRIVE END FRAME BEARING

a. Rotate the bearing and check that there is no abnormal noise and that it rotates smoothly.
If necessary, replace the bearing (Click here).



2. INSPECT GENERATOR ROTOR ASSEMBLY

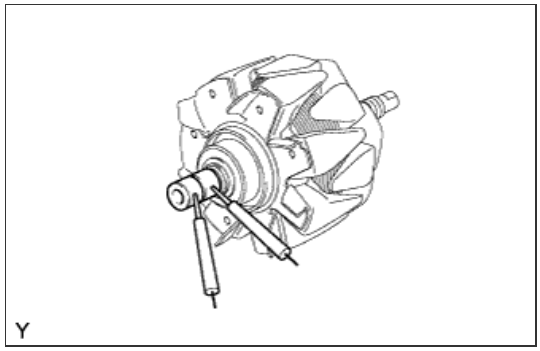
a. Check the rotor for an open circuit.

i. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
Slip ring - Slip ring	20°C (68°F)	1.36 to 1.76 Ω

If the result is not as specified, replace the rotor assembly.



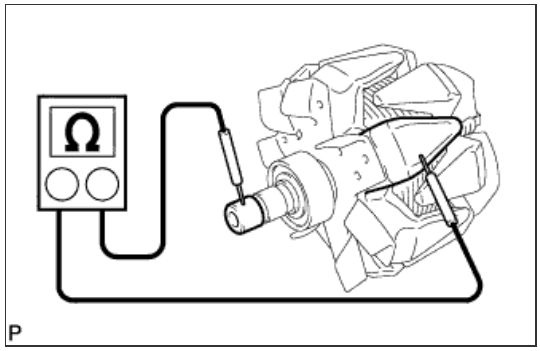
b. Check if the rotor is grounded.

i. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
Slip ring - Rotor	Always	1 MΩ or higher

If the result is not as specified, replace the rotor assembly.



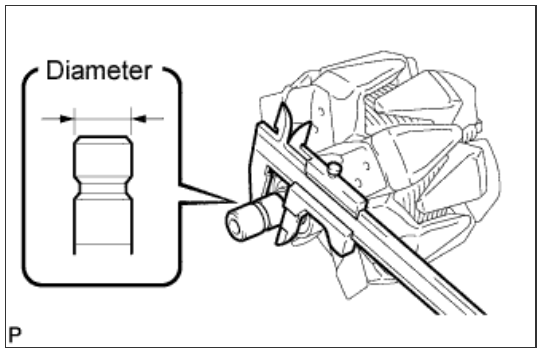
c. Check that the slip rings are not rough or scored.
If rough or scored, replace the rotor assembly.

d. Using a vernier caliper, measure the slip ring diameter.

Standard diameter:
14.2 to 14.4 mm (0.559 to 0.567 in.)

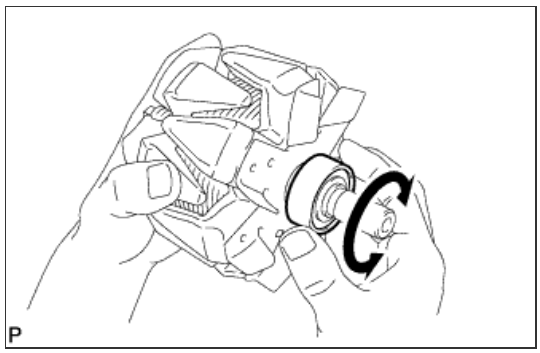
Minimum diameter:
14.0 mm (0.551 in.)

If the diameter is less than the minimum, replace the rotor assembly.



3. INSPECT GENERATOR ROTOR BEARING

a. Rotate the bearing and check that there is no abnormal noise and that it rotates smoothly.
If necessary, replace the generator rotor.



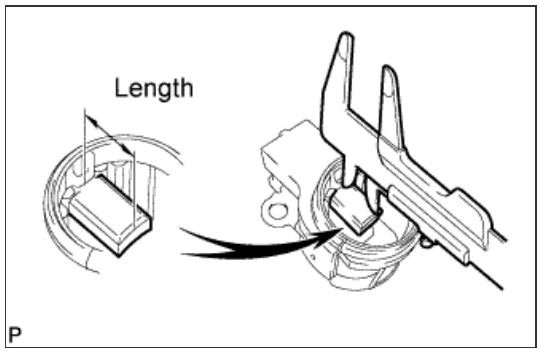
4. INSPECT GENERATOR BRUSH HOLDER ASSEMBLY

a. Using a vernier caliper, measure the exposed brush length.

Standard exposed length:
10.5 mm (0.413 in.)

Minimum exposed length:
4.5 mm (0.177 in.)

If the exposed length is less than the minimum, replace the brush holder assembly.

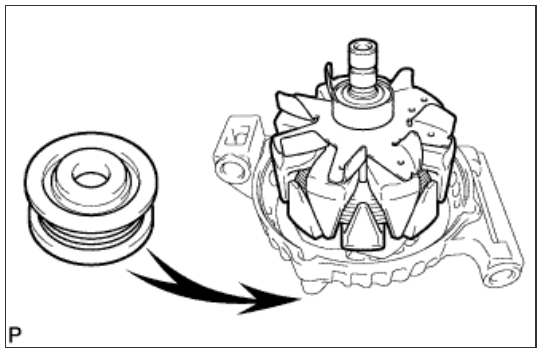


for Preparation Click here

1. INSTALL GENERATOR ROTOR ASSEMBLY

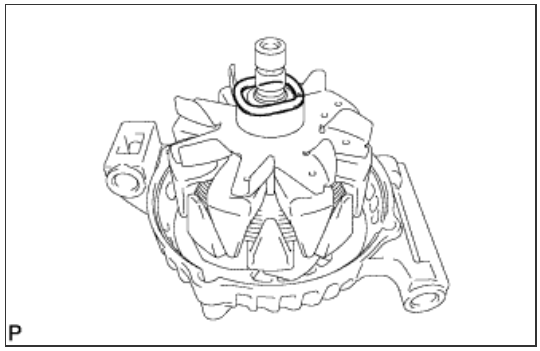
a. Place the drive end frame on the pulley.

b. Install the rotor to the drive end frame.

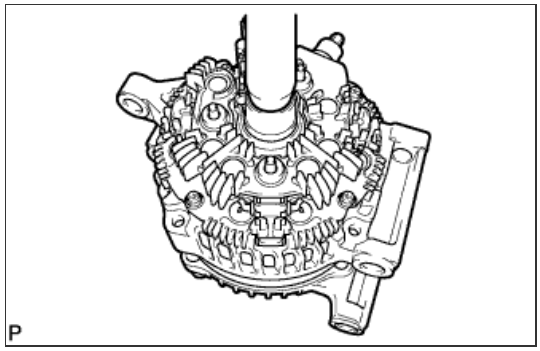


2. INSTALL GENERATOR COIL ASSEMBLY

a. Place the generator washer on the rotor.

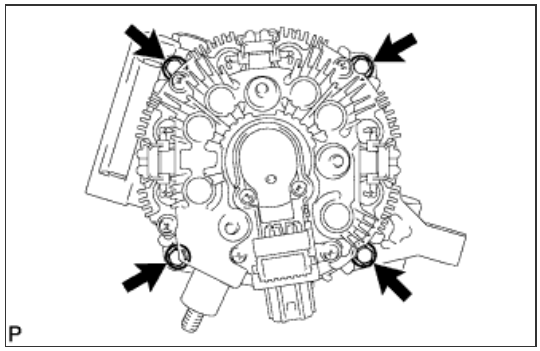


b. Using a 21 mm socket wrench and a press, slowly press in the coil assembly.



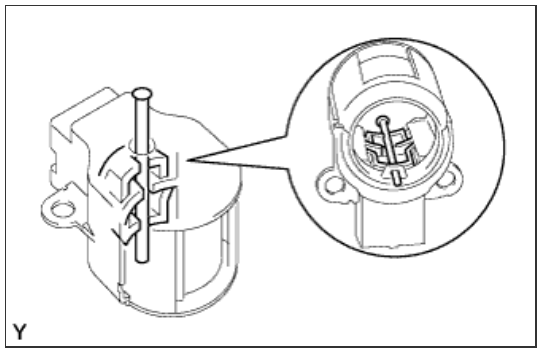
c. Install the 4 bolts.

Torque:
7.5 N*m{ 76 kgf*cm , 66 in.*lbf }



3. INSTALL GENERATOR BRUSH HOLDER ASSEMBLY

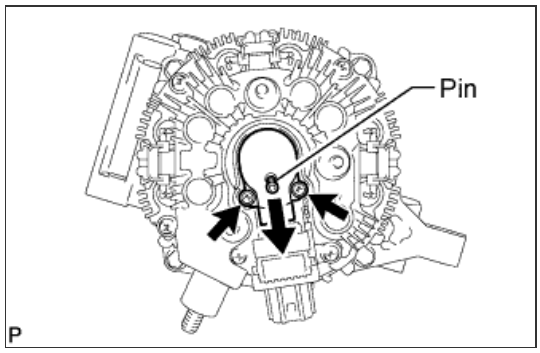
a. While pushing the 2 brushes toward the inside of the brush holder, insert a pin (diameter: 1.0 mm (0.0394 in.)) into the brush holder hole.



b. Install the generator brush holder with the 2 screws.

Torque:
1.8 N*m{ 18 kgf*cm , 16 in.*lbf }

c. Pull out the pin from the generator brush holder.

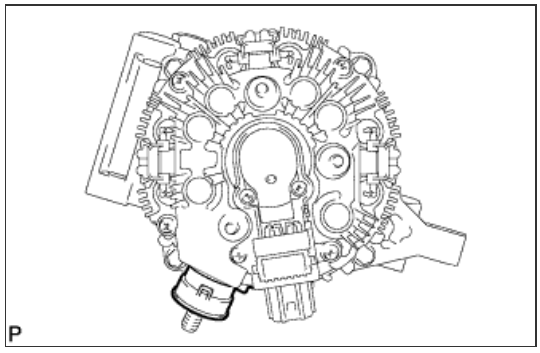


4. INSTALL GENERATOR REAR END COVER

a. Install the terminal insulator to the generator rectifier end frame.

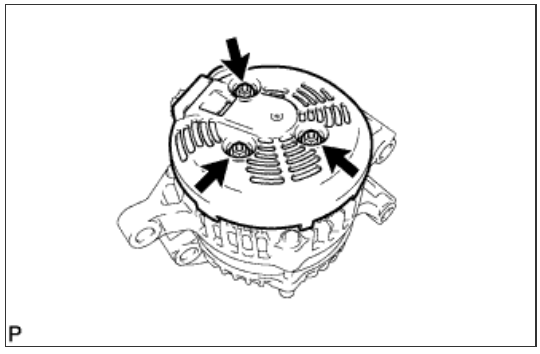
NOTICE:

Pay attention to the mounting orientation of the terminal insulator.



b. Install the end cover with the 3 nuts.

Torque:
4.6 N*m{ 46 kgf*cm , 40 in.*lbf }



5. INSTALL GENERATOR PULLEY

SST

09820-63011 (09820-06010, 09820-06021)

HINT:

SST 1-A and B	09820-06010
SST 2	09820-06021

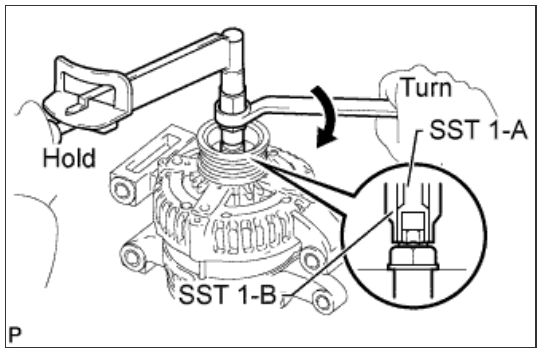
a. Install the pulley onto the rotor shaft by tightening the pulley nut by hand.

b. Hold SST 1-A with a torque wrench, and tighten SST 1-B clockwise to the specified torque.

Torque:
39 N*m{ 398 kgf*cm , 29 ft.*lbf }

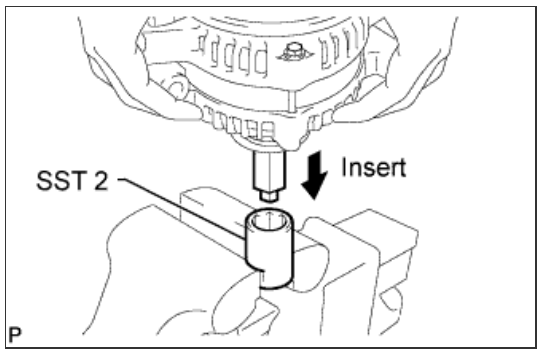
NOTICE:

Check that SST is secured to the rotor shaft.



c. Mount SST 2 in a vise.

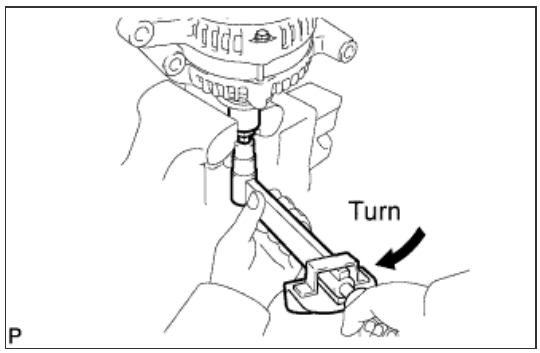
d. Insert SST 1-A and B into SST 2, and attach the pulley nut to SST 2.



e. Tighten the pulley nut by turning SST 1-A in the direction shown in the illustration.

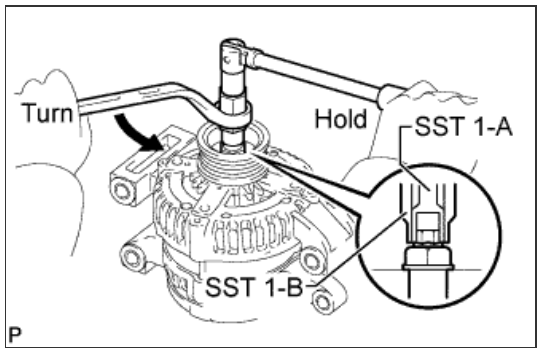
Torque:
133 N*m{ 1351 kgf*cm , 98 ft.*lbf }

f. Remove the generator from SST 2.



g. Turn SST 1-B, and remove SST 1-A and B.

h. Turn the pulley and check that the pulley moves smoothly.

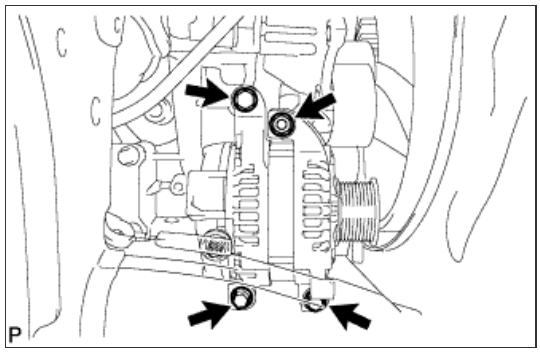


for Preparation Click here

1. INSTALL GENERATOR ASSEMBLY

a. Install the generator with the 3 bolts and nut.

Torque:
43 N*m{ 438 kgf*cm , 32 ft.*lbf }



b. Connect the generator connector.

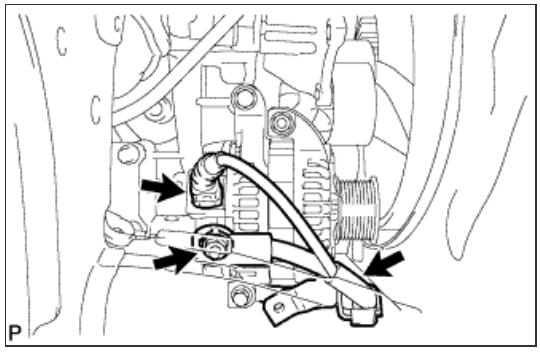
c. Connect the generator wire with the nut.

Torque:
12 N*m{ 122 kgf*cm , 9 ft.*lbf }

d. Install the terminal cap.

e. Install the harness bracket to the generator with the bolt.

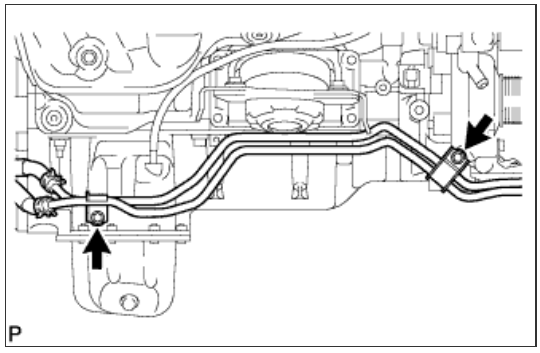
Torque:
31 N*m{ 316 kgf*cm , 23 ft.*lbf }



2. CONNECT OIL COOLER PIPE ASSEMBLY

a. Connect the oil cooler pipe with the 2 bolts.

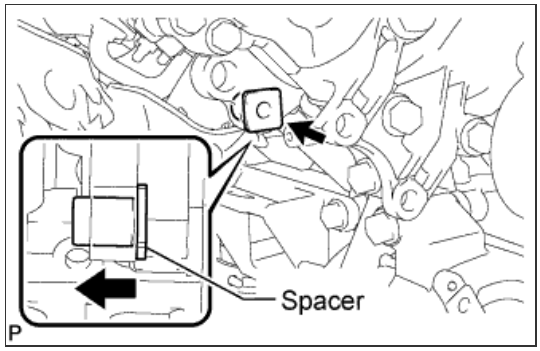
Torque:
14 N*m{ 143 kgf*cm , 10 ft.*lbf }



3. CONNECT VANE PUMP ASSEMBLY

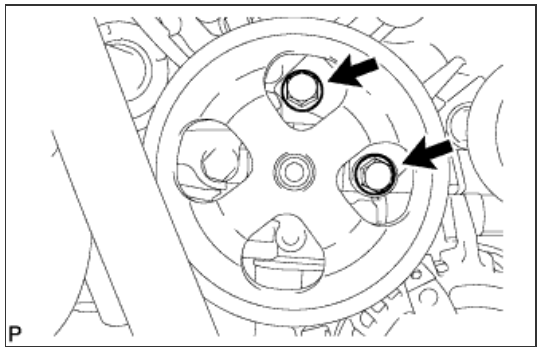
HINT:

Before performing the following procedures, move the spacer until the vane pump can be installed.

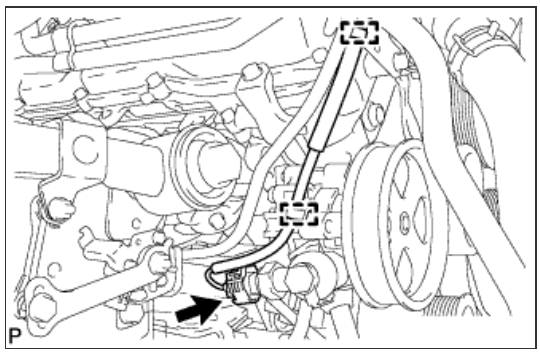


a. Connect the vane pump to the timing chain cover with the 2 bolts.

Torque:
21 N*m{ 214 kgf*cm , 15 ft.*lbf }



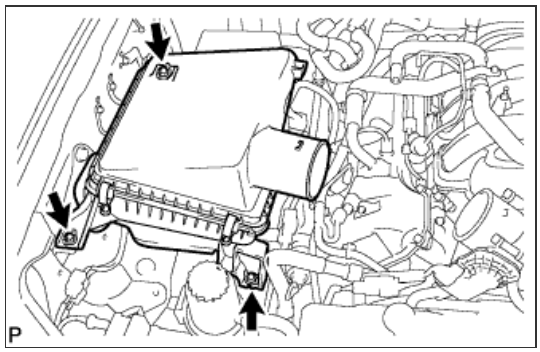
b. Connect the 2 clamps and power steering oil pressure switch connector.



4. INSTALL AIR CLEANER ASSEMBLY

a. Install the air cleaner with the 3 bolts.

Torque:
5.0 N*m{ 51 kgf*cm , 44 in.*lbf }



5. INSTALL AIR CLEANER HOSE ASSEMBLY

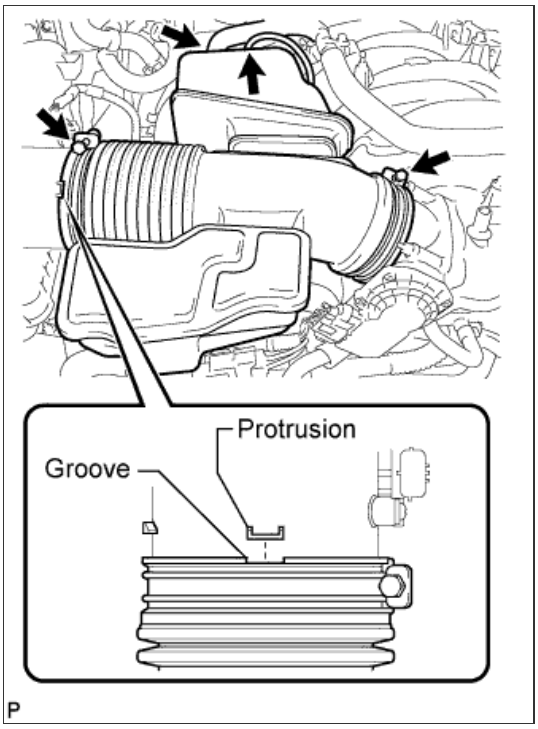
a. Install the air cleaner hose so that the protrusion of the air cleaner cap aligns with the groove of the hose as shown in the illustration.

b. Tighten the 2 clamps.

Torque:
5.0 N*m{ 51 kgf*cm , 44 in.*lbf }

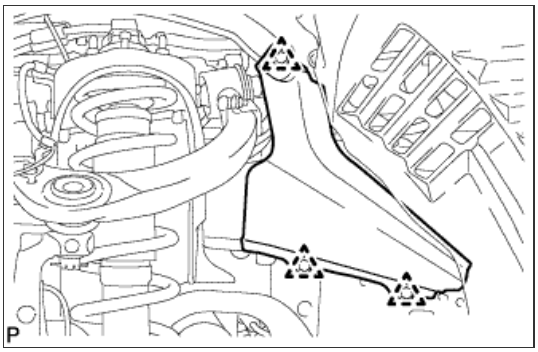
c. Connect the vacuum hose.

d. Connect the No. 2 ventilation hose.



6. INSTALL FRONT FENDER APRON SEAL FRONT RH

a. Install the fender apron seal with the 3 clips.



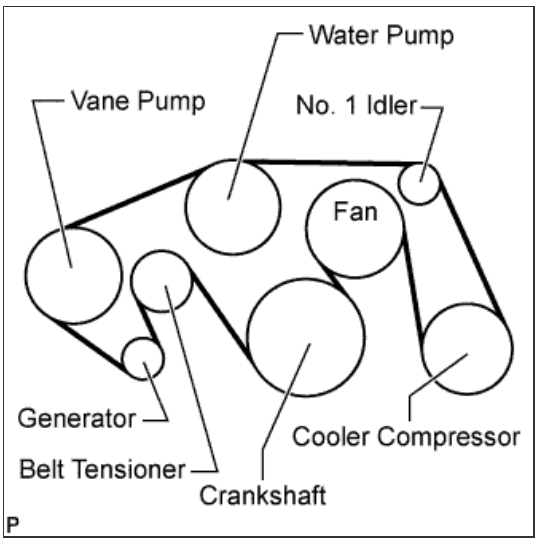
7. INSTALL FAN & GENERATOR V BELT

a. Set the V belt onto every part.

b. While turning the belt tensioner counterclockwise, remove the bar.

NOTICE:

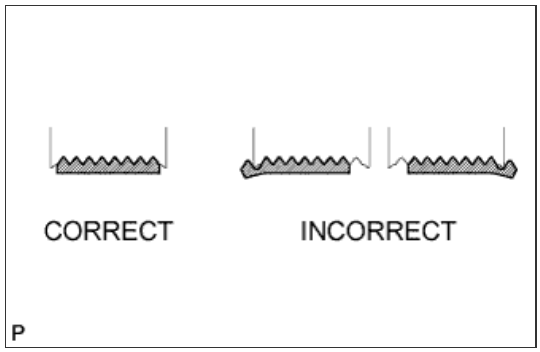
Make sure that the V belt is properly set to each pulley.



c. After installing the belt, check that it fits properly in the ribbed grooves.

HINT:

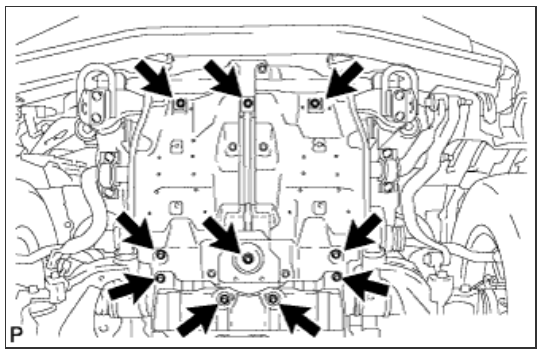
Make sure to check by hand that the belt has not slipped out of the grooves on the bottom of the pulley.



8. INSTALL NO. 1 ENGINE UNDER COVER SUB-ASSEMBLY

a. Install the No. 1 engine under cover with the 10 bolts.

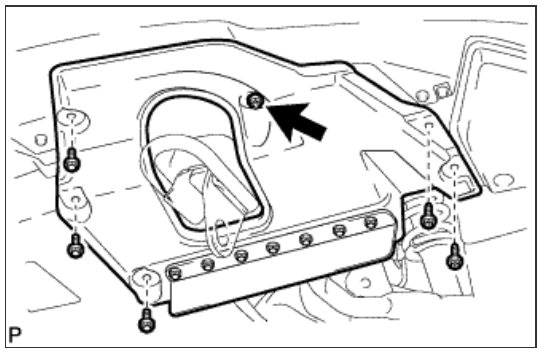
Torque:
29 N*m{ 296 kgf*cm , 21 ft.*lbf }



9. INSTALL FRONT FENDER SPLASH SHIELD SUB-ASSEMBLY LH

a. Push in the clip indicated by the arrow in the illustration to install the fender splash shield.

b. Install the 3 bolts and 2 screws.



10. INSTALL FRONT FENDER SPLASH SHIELD SUB-ASSEMBLY RH

HINT:

Use the same procedures described for the LH side.

11. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

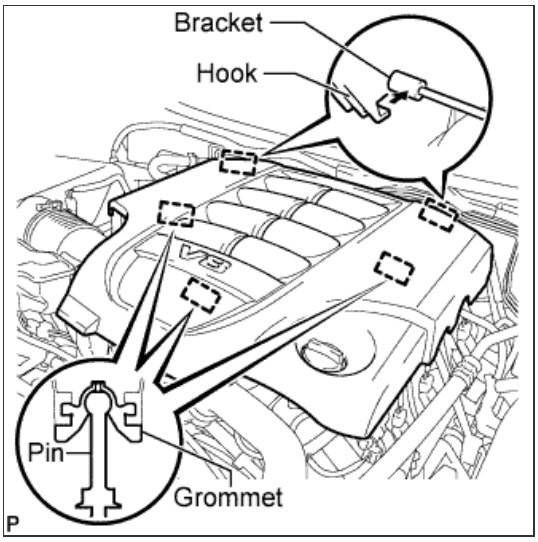
NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable from the cable is reconnected (Click here).

12. INSTALL V-BANK COVER SUB-ASSEMBLY

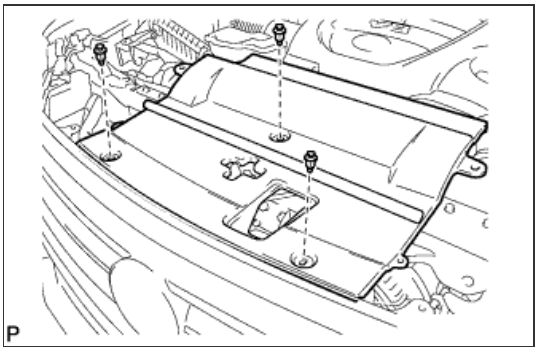
a. Attach the 2 V-bank cover hooks to the bracket. Then align the 3 V-bank cover

grommets with the 3 pins, and press down on the V-bank cover to attach the pins.



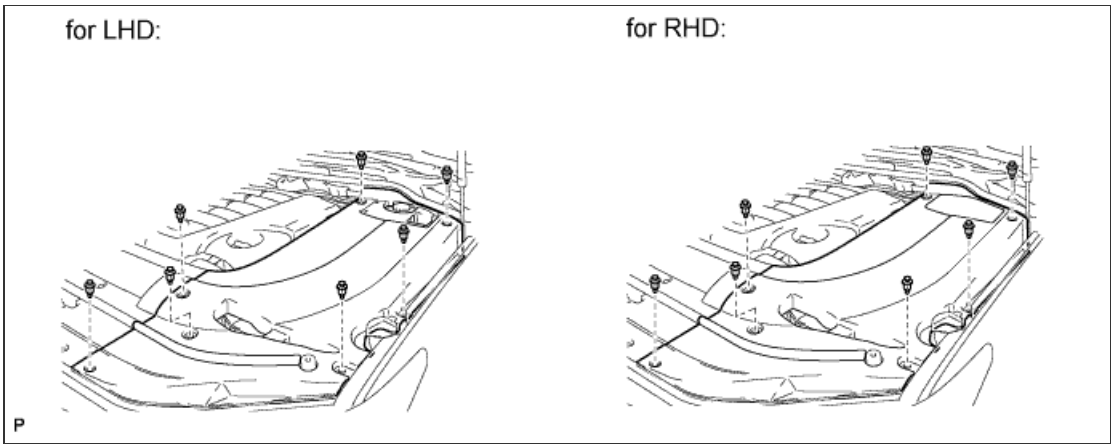
13. INSTALL UPPER RADIATOR SUPPORT SEAL

a. Install the upper radiator support seal with the 3 clips.



14. INSTALL ENGINE ROOM SIDE COVER LH

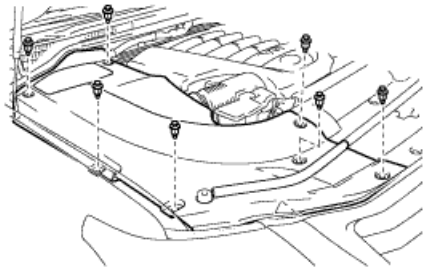
a. Install the engine room side cover with the 7 clips.



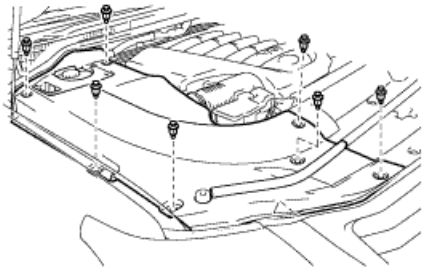
15. INSTALL ENGINE ROOM SIDE COVER RH

a. Install the engine room side cover with the 7 clips.

for LHD:

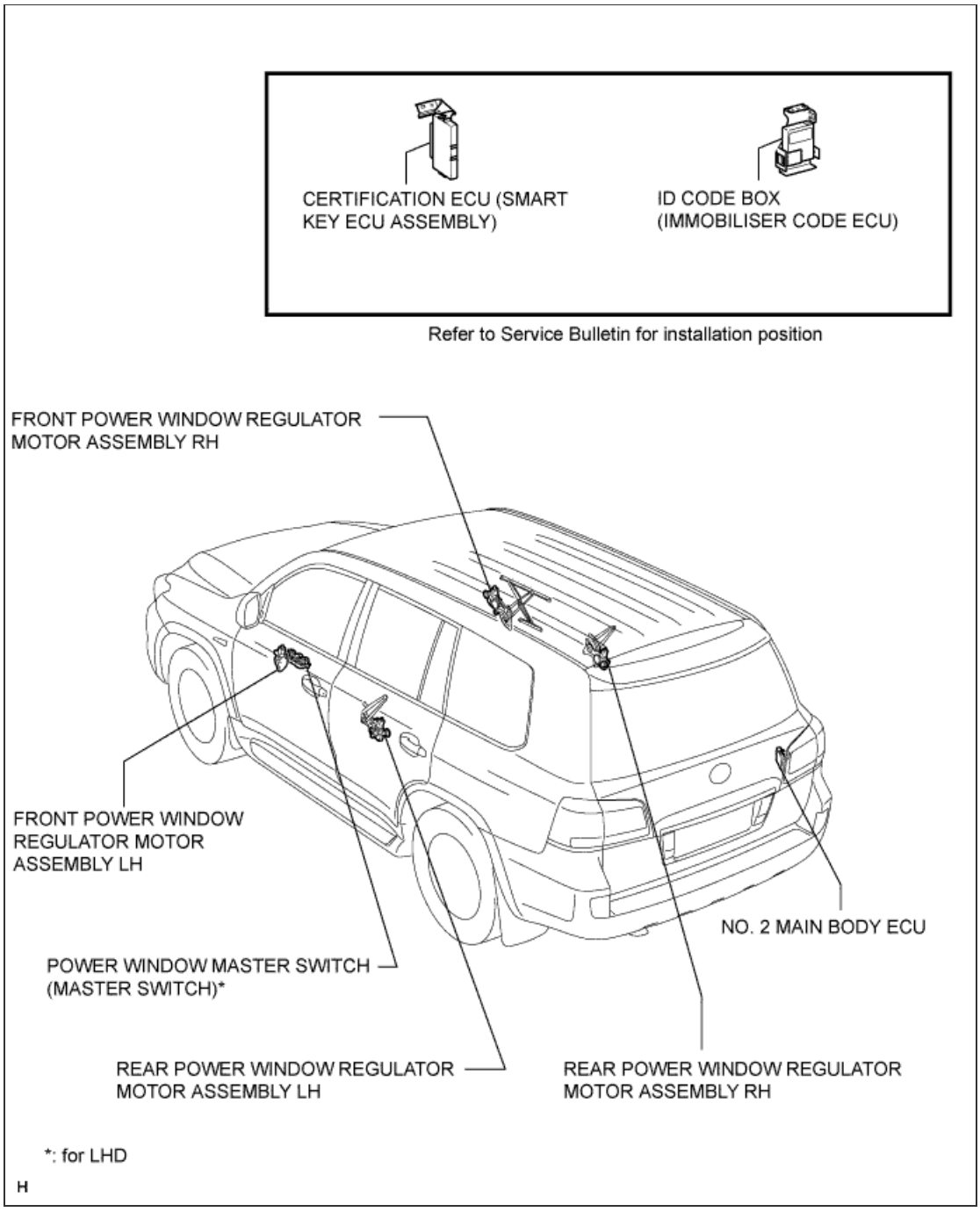


for RHD:

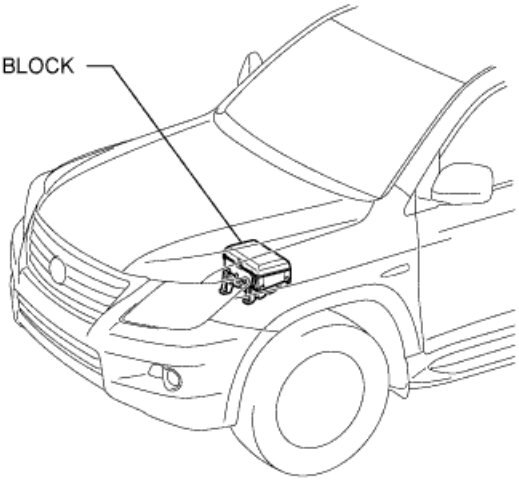


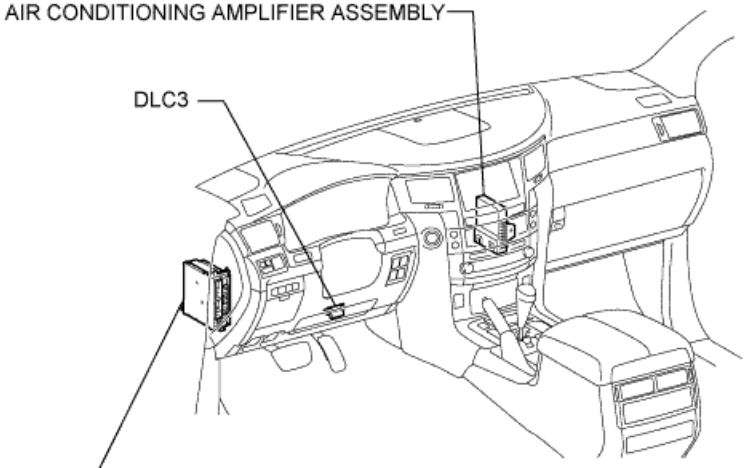
P

for Preparation Click here



for LHD:



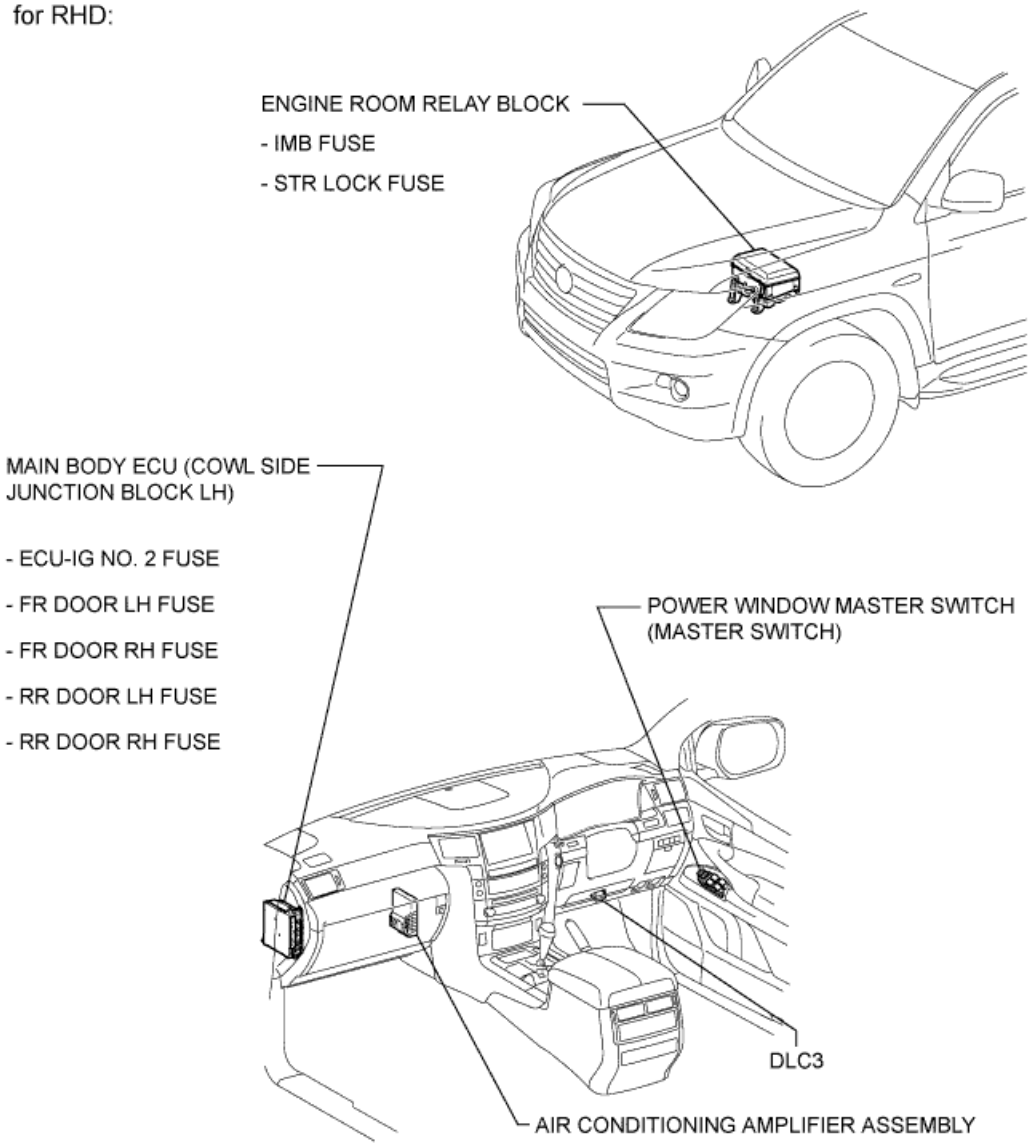


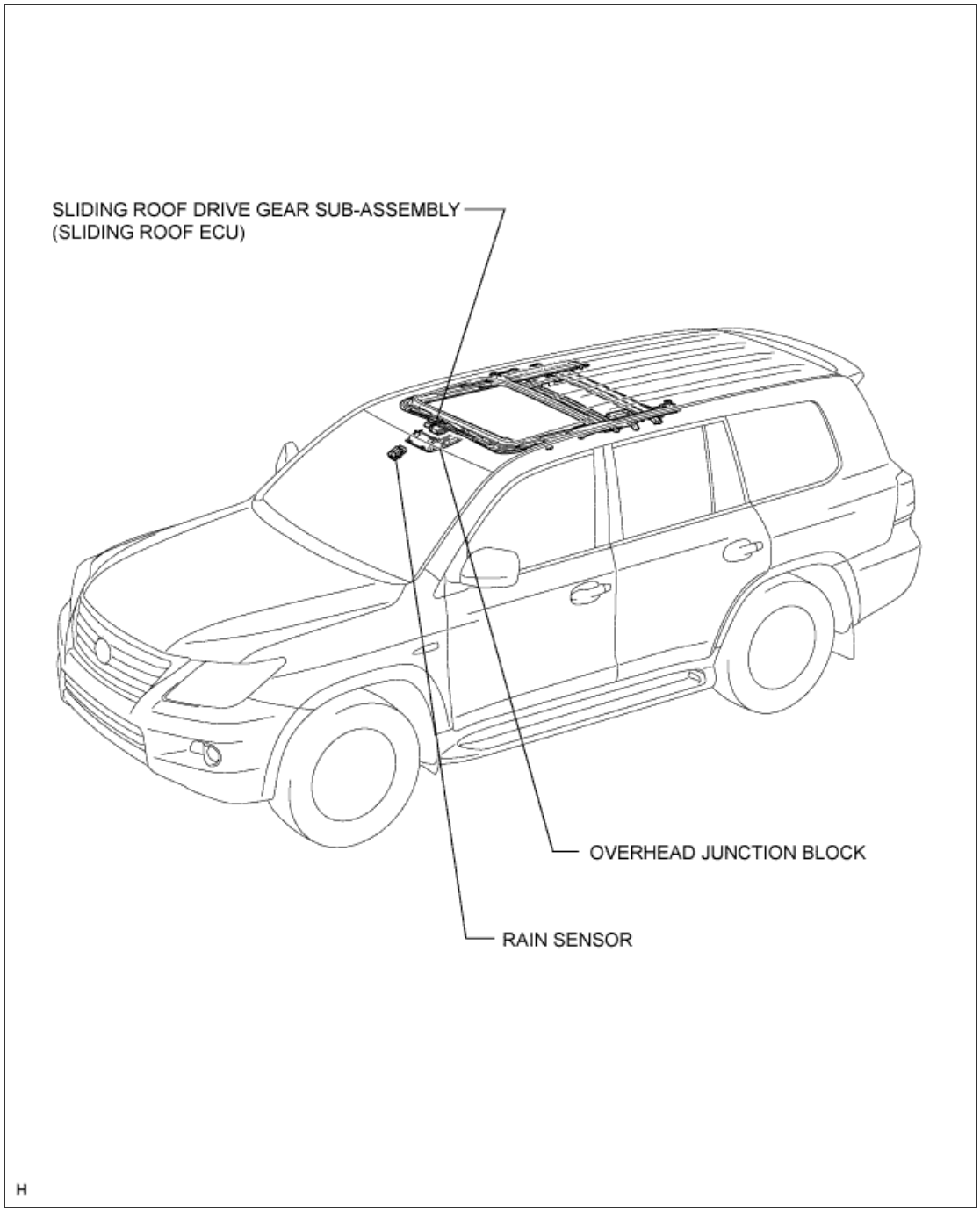
MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

- ECU-IG NO. 2 FUSE
- FR DOOR LH FUSE
- FR DOOR RH FUSE
- RR DOOR LH FUSE
- RR DOOR RH FUSE
- S/ROOF FUSE

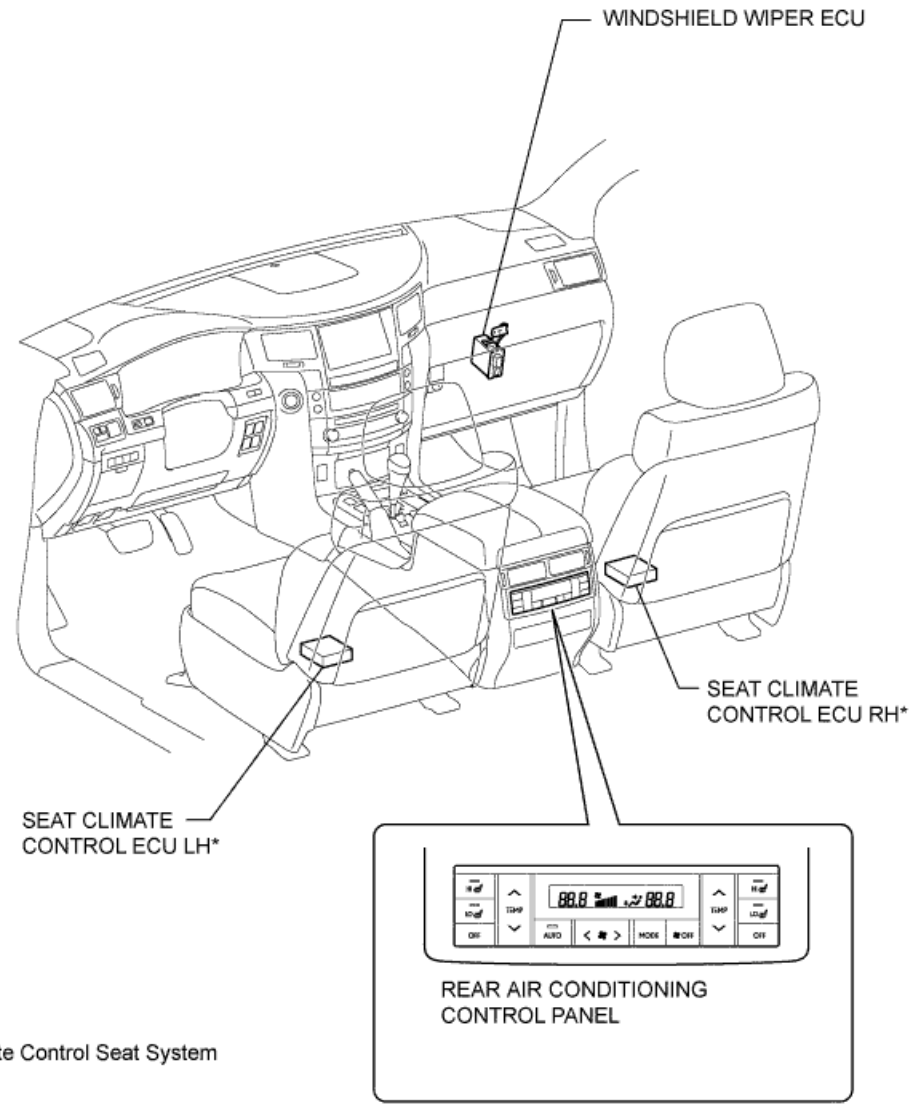
H

for RHD:


ENGINE ROOM RELAY BLOCK
- IMB FUSE
- STR LOCK FUSE
MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)
- ECU-IG NO. 2 FUSE
- FR DOOR LH FUSE
- FR DOOR RH FUSE
- RR DOOR LH FUSE
- RR DOOR RH FUSE
POWER WINDOW MASTER SWITCH (MASTER SWITCH)
DLC3
AIR CONDITIONING AMPLIFIER ASSEMBLY


SLIDING ROOF DRIVE GEAR SUB-ASSEMBLY
(SLIDING ROOF ECU)
OVERHEAD JUNCTION BLOCK
RAIN SENSOR
H

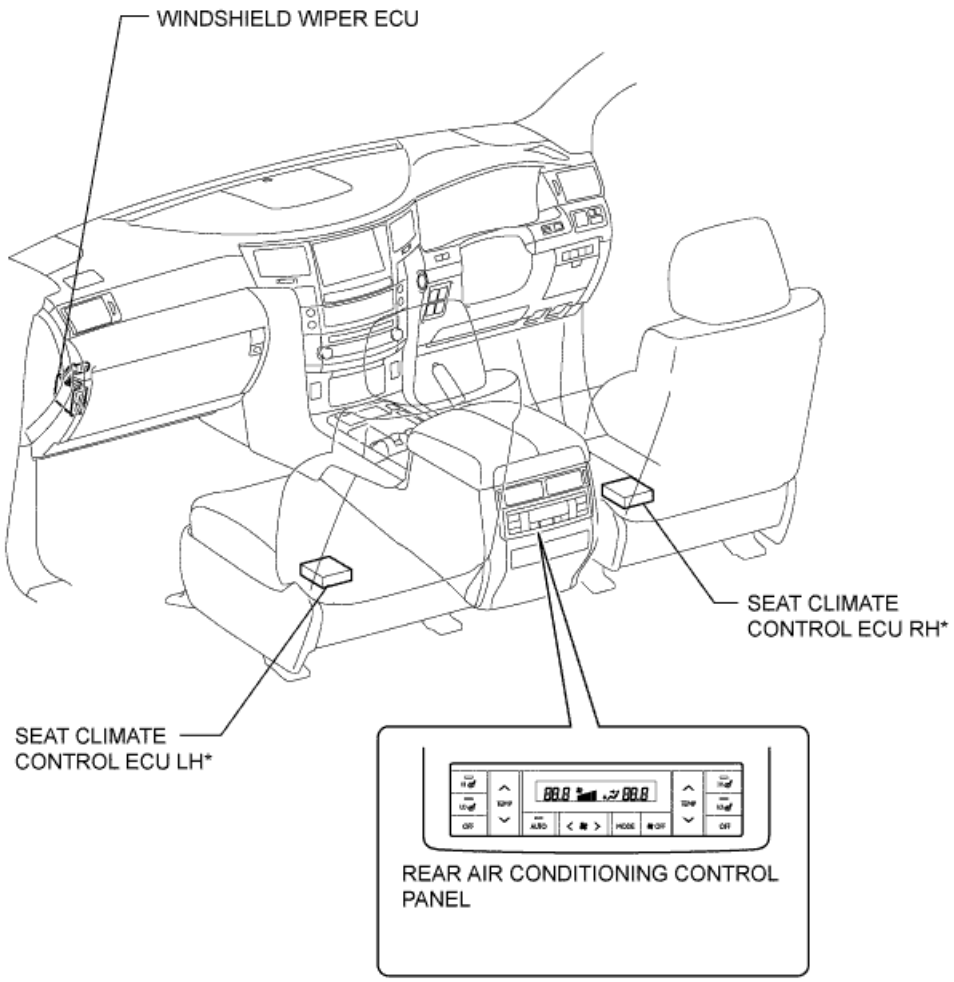
for LHD:



*: w/ Climate Control Seat System

H

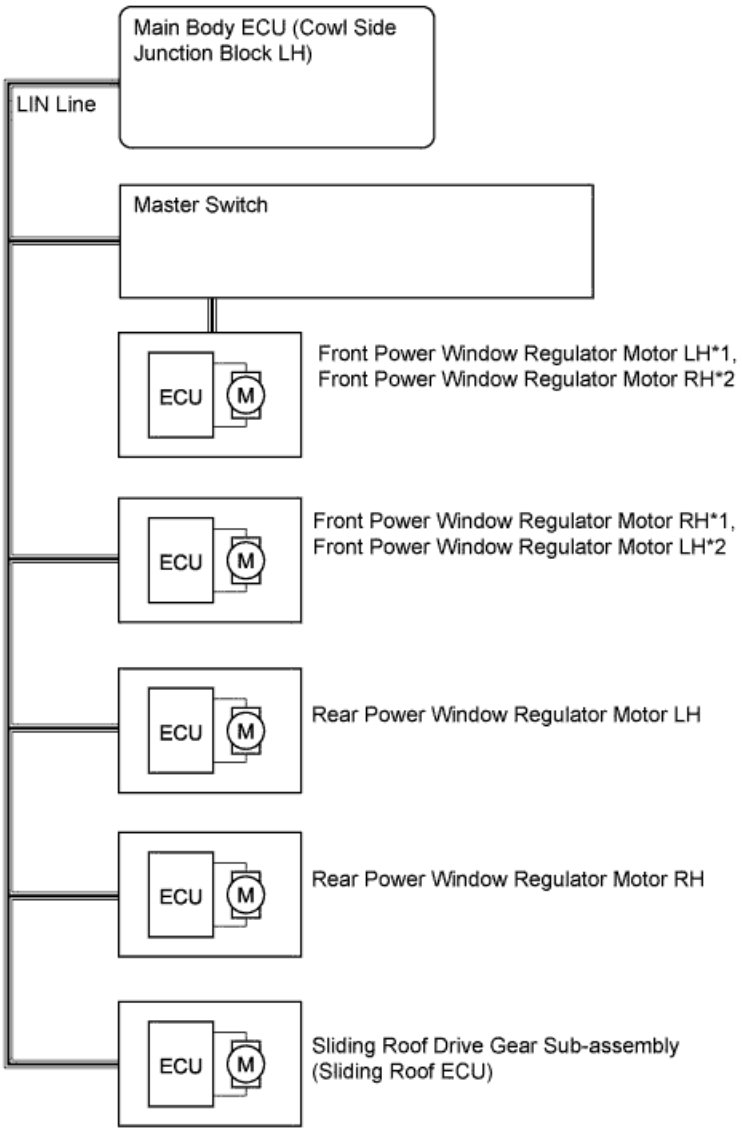
for RHD:



*: w/ Climate Control Seat System

for Preparation Click here

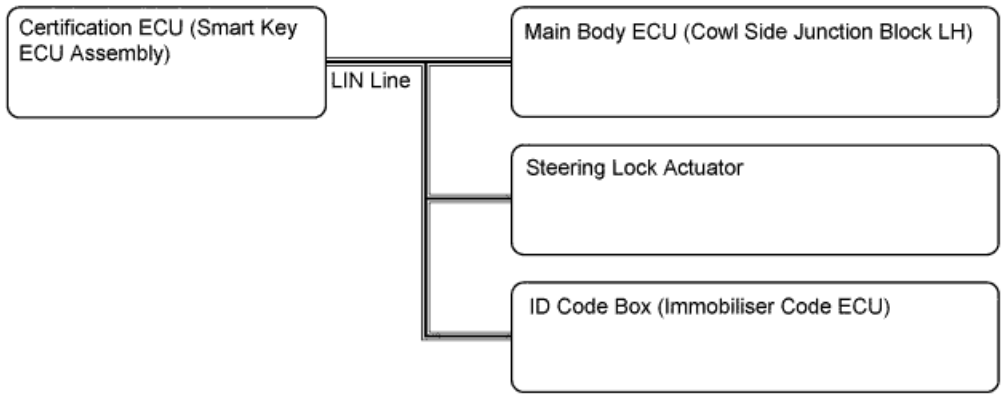
LIN Communication Bus between Components Related to Window and Sliding Roof:



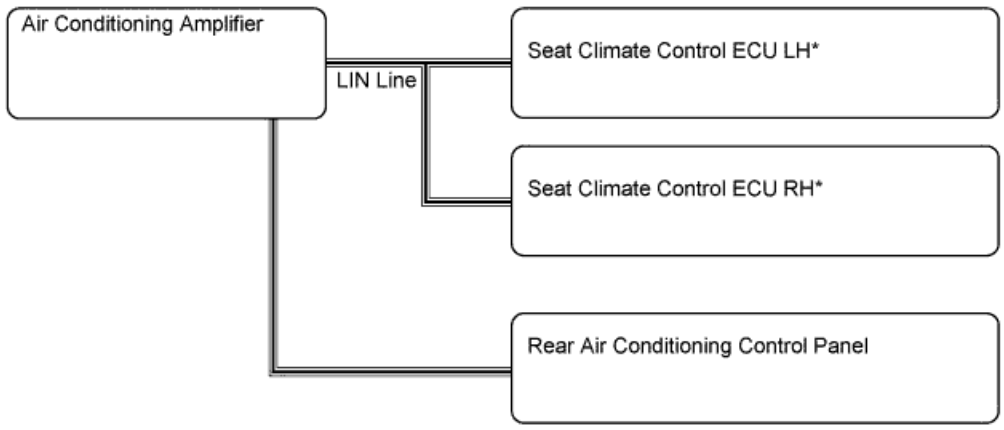
*1: for LHD

*2: for RHD

LIN Communication Bus between Components Related to Certification ECU:

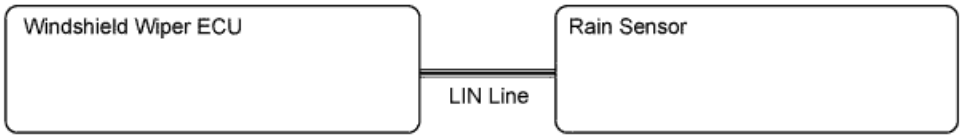


LIN Communication between Components Related to Air Conditioning:

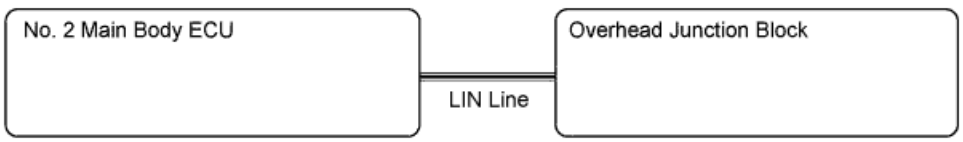


*: w/ Climate Control Seat System

LIN Communication between Components Related to Rain Sensor:



LIN Communication between Components Related to No. 2 Main Body ECU:



for Preparation Click here

LIN COMMUNICATION SYSTEM DESCRIPTION

The LIN communication system is used for communication between the components listed below. Each part of the LIN communication system has a component as a control master.

a. Window and Sliding Roof Components that Use LIN Communication Bus:

HINT:

*: Control Master

i. Main Body ECU (Cowl Side Junction Block LH)*
ii. Master Switch
iii. Front Power Window Regulator Motor LH
iv. Front Power Window Regulator Motor RH
v. Rear Power Window Regulator Motor LH
vi. Rear Power Window Regulator Motor RH
vii. Sliding Roof ECU

b. Certification Components that Use LIN Communication Bus:

HINT:

*: Control Master

i. Certification ECU (Smart Key ECU Assembly)*
ii. Main Body ECU (Cowl Side Junction Block LH)
iii. Steering Lock Actuator
iv. ID Code Box (Immobiliser Code ECU)

c. Air conditioning Components that Use LIN Communication Bus:

HINT:

*: Control Master

i. Air Conditioning Amplifier*
ii. Front Air Conditioning Control Panel (w/o Navigation System)
iii. Rear Air Conditioning Control Panel

d. Rain Sensor Components that Use LIN Communication:

HINT:

*: Control Master

i. Windshield Wiper ECU*
ii. Rain Sensor

e. No. 2 Main Body ECU Components that Use LIN Communication:

HINT:

*: Control Master

i. No. 2 Main Body ECU*

ii. Overhead Junction Block

LIN COMMUNICATION SYSTEM DTC

The control master components shown below store LIN communication system DTCs when there is a malfunction in the LIN communication. If LIN communication stops, the control master of that part of the LIN communication system store DTCs.

a. Main Body ECU (Cowl Side Junction Block LH)

b. Certification ECU (Smart Key ECU Assembly)

c. Air Conditioning Amplifier

for Preparation Click here

HINT:

- **Use these procedures to troubleshoot the LIN communication system.**
- ***: Use the intelligent tester.**

1.VEHICLE BROUGHT TO WORKSHOP

NEXT

2.INSPECT BATTERY VOLTAGE

Standard voltage:
11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

3.INSPECT COMMUNICATION FUNCTION OF CAN COMMUNICATION SYSTEM*

a. Using the intelligent tester, inspect the CAN communication function to ensure there are no malfunctions in the communication system (Click here).

Result

Result	Proceed to
No DTCs output	A
DTCs output (for LHD)	B
DTCs output (for RHD)	C

B. Go to CAN COMMUNICATION SYSTEM (Click here)

C. Go to CAN COMMUNICATION SYSTEM (Click here)

A

4.INSPECT COMMUNICATION FUNCTION OF LIN COMMUNICATION SYSTEM*

a. Using the intelligent tester, inspect the LIN communication function to ensure there are no malfunctions in the communication system.

Result

Result	Proceed to
No DTCs output	A
DTCs output	B

B. Go to DIAGNOSTIC TROUBLE CODE CHART (Click here)

A

5.PROBLEM SYMPTOMS TABLE

a. Refer to the Problem Symptoms Table (Click here).

Result

Result	Proceed to
Fault is not listed in problem symptoms table	A
Fault is listed in problem symptoms table	B

B. → Go to step 7

A

6.OVERALL ANALYSIS AND TROUBLESHOOTING*

a. Data List / Active Test (Click here)

b. Terminals of ECU (Click here)

NEXT

7.ADJUST, REPAIR OR REPLACE

NEXT

END

for Preparation Click here

HINT:

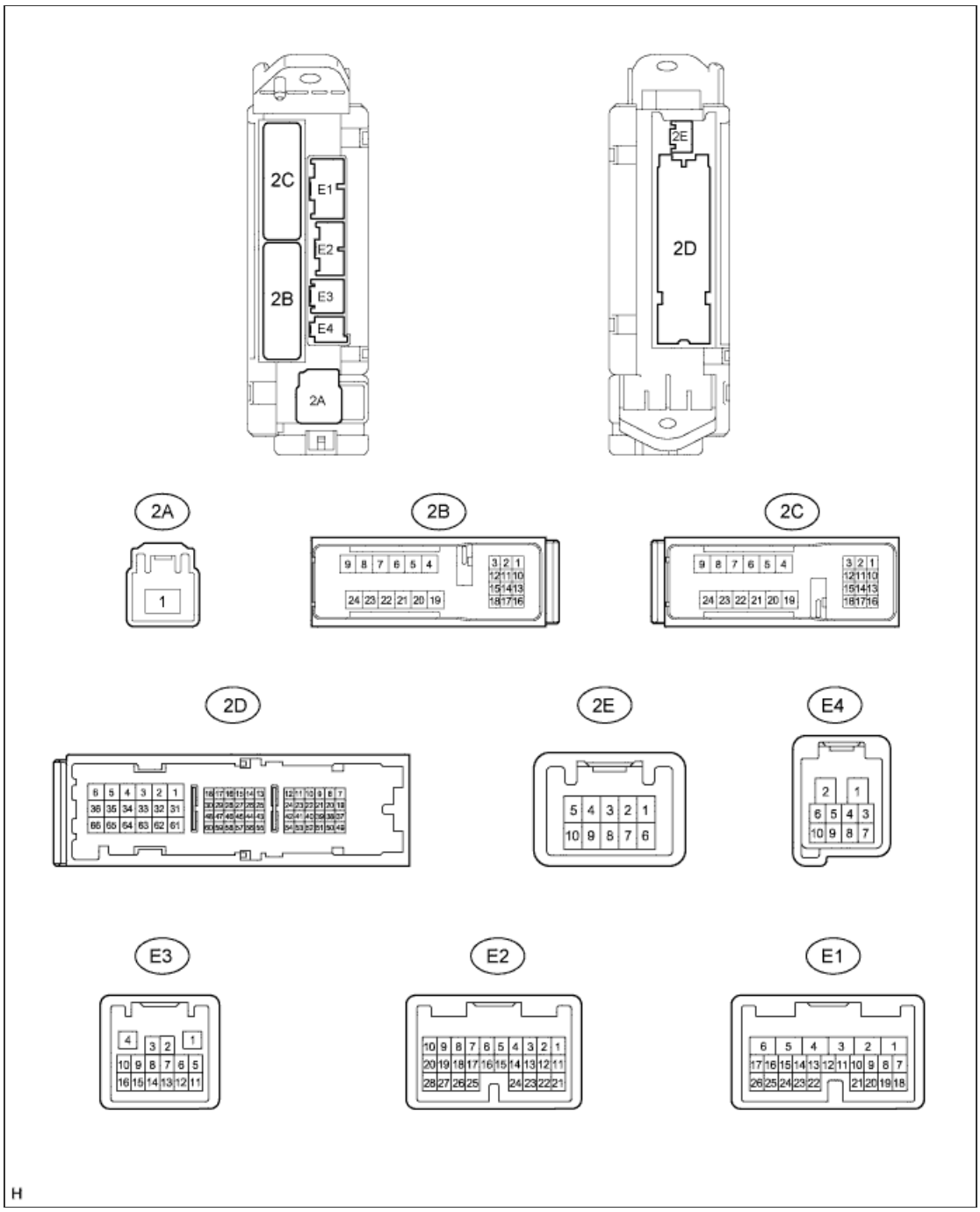
Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

LIN Communication System

Symptom	Suspected Area	See page
Rain sensor LIN communication malfunction	LIN communication line	Click here
	Rain sensor	Click here
	Windshield wiper ECU	Click here
Air conditioning LIN communication malfunction	LIN communication line	Click here
	Rear air conditioning control panel	Click here
	Air conditioning amplifier	Click here

for Preparation Click here

CHECK MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)



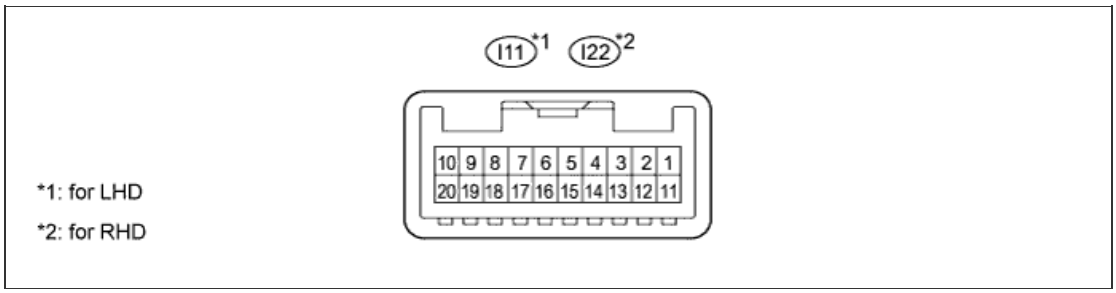
a. Disconnect the 2D, E1, E2 and E3 ECU connectors.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
2D-62 (GND2) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
E3-1 (GND3) - Body ground	BR - Body ground	Ground	Always	Below 1 Ω
E2-1 (AM2) - 2D-62 (GND2)	W - W-B	Battery power supply	Always	11 to 14 V
E1-6 (AM1) - 2D-62 (GND2)	W - W-B	Battery power supply	Always	11 to 14 V

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK MASTER SWITCH



a. Disconnect the I11*1 or I22*2 master switch connector.

b. Measure the resistance and voltage according to the value(s) in the table below.
*1: for LHD
*2: for RHD

for LHD

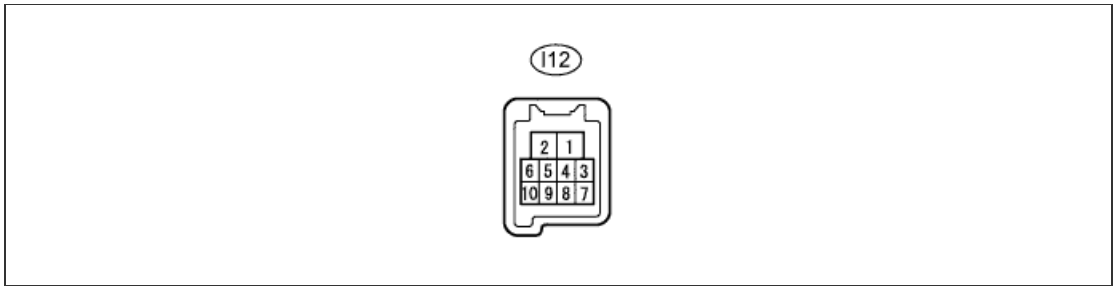
Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
I11-11 (B) - I11-12 (GND)	L - W-B	Ignition power supply	Engine switch off	Below 1 Ω
I11-11 (B) - I11-12 (GND)	L - W-B	Ignition power supply	Engine switch on (IG)	11 to 14 V
I11-12 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

for RHD

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
I22-11 (B) - I22-12 (GND)	L - W-B	Ignition power supply	Engine switch off	Below 1 Ω
I22-11 (B) - I22-12 (GND)	L - W-B	Ignition power supply	Engine switch on (IG)	11 to 14 V
I22-12 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK FRONT POWER WINDOW REGULATOR MOTOR LH



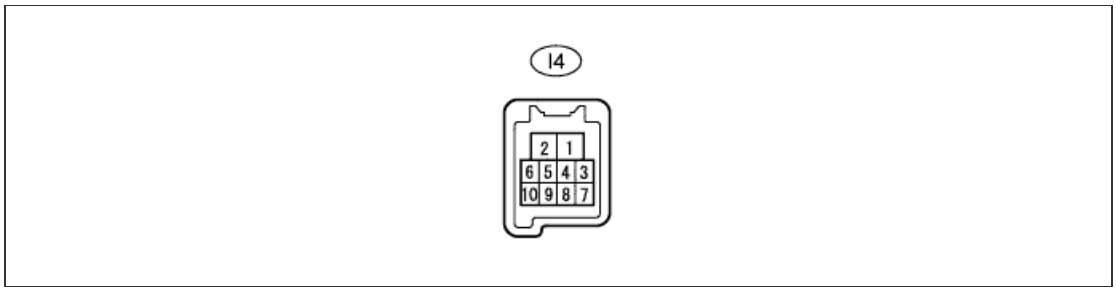
a. Disconnect the I12 motor connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
I12-2 (B) - I12-1 (GND)	L - W-B	Battery power supply	Always	11 to 14 V
I12-1 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK FRONT POWER WINDOW REGULATOR MOTOR ASSEMBLY RH



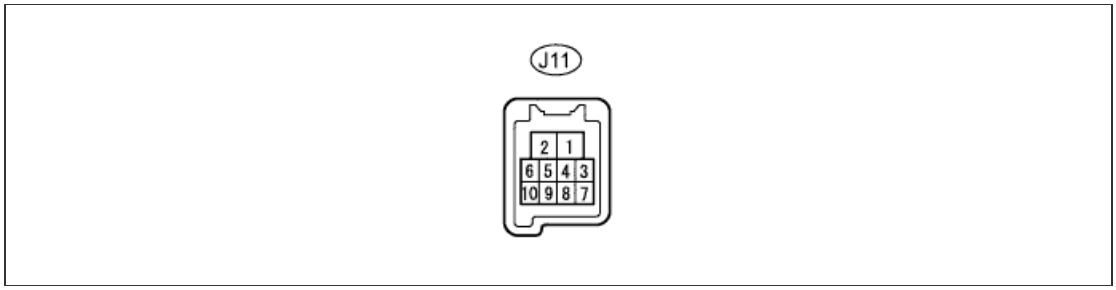
a. Disconnect the I4 motor connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
I4-2 (B) - I4-1 (GND)	L - W-B	Battery power supply	Always	11 to 14 V
I4-1 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK REAR POWER WINDOW REGULATOR MOTOR ASSEMBLY LH



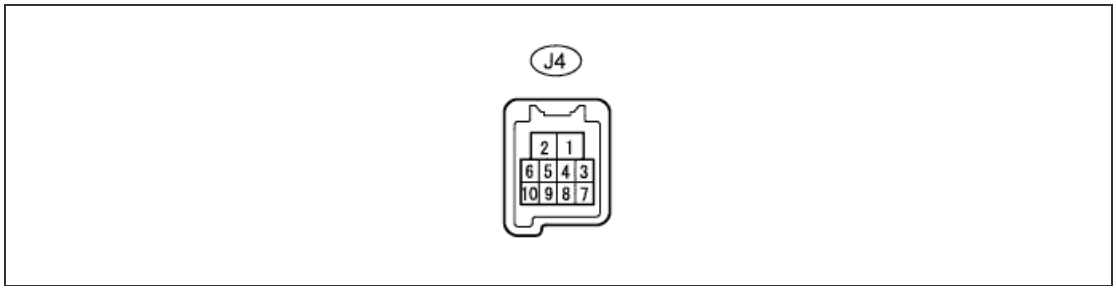
a. Disconnect the J11 motor connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
J11-2 (B) - J11-1 (GND)	L - W-B	Battery power supply	Always	11 to 14 V
J11-1 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK REAR POWER WINDOW REGULATOR MOTOR ASSEMBLY RH



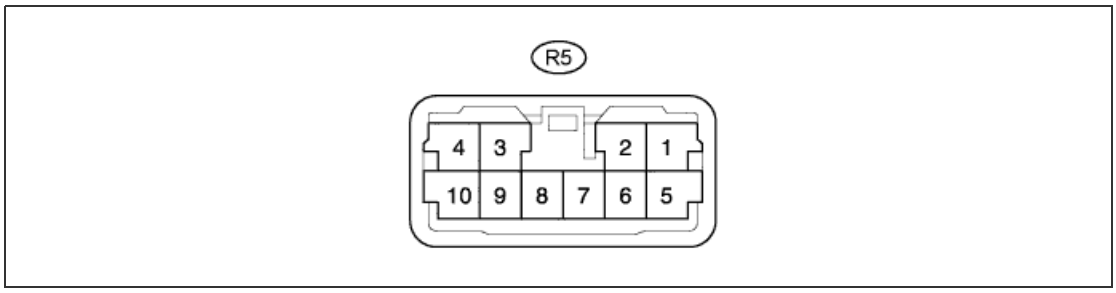
a. Disconnect the J4 motor connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
J4-2 (B) - J4-1 (GND)	L - W-B	Battery power supply	Always	11 to 14 V
J4-1 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK SLIDING ROOF ECU



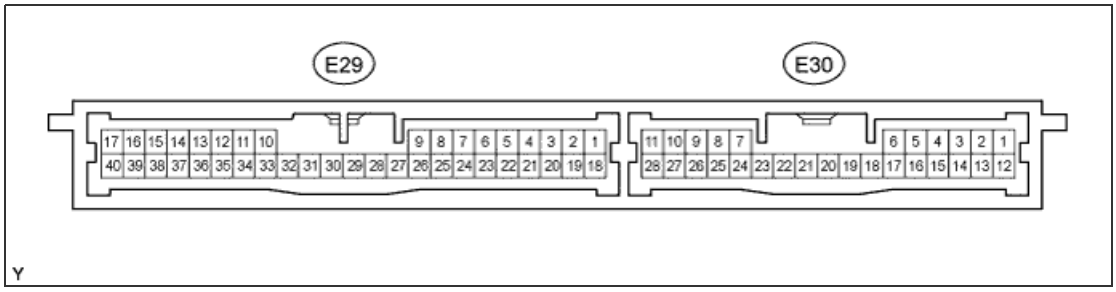
a. Disconnect the R5 ECU connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
R5-1 (B) - R5-2 (E)	L - W-B	Battery power supply	Always	11 to 14 V
R5-2 (E) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)



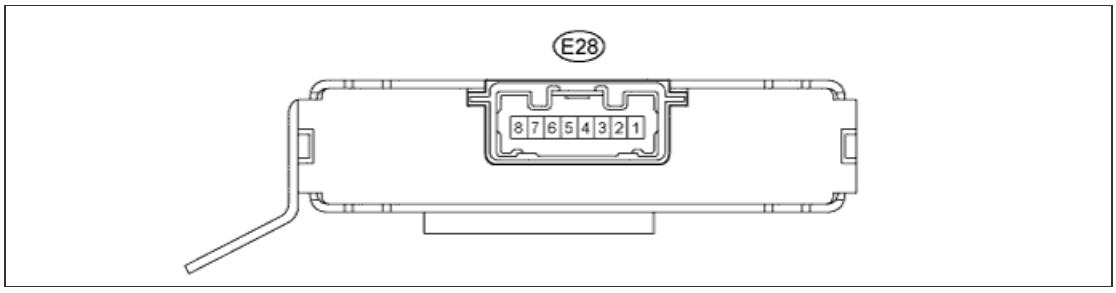
a. Disconnect the E29 ECU connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
E29-1 (+B) - E29-17 (E)	B - W-B	Battery power supply	Always	11 to 14 V
E29-17 (E) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK ID CODE BOX (IMMOBILISER CODE ECU)



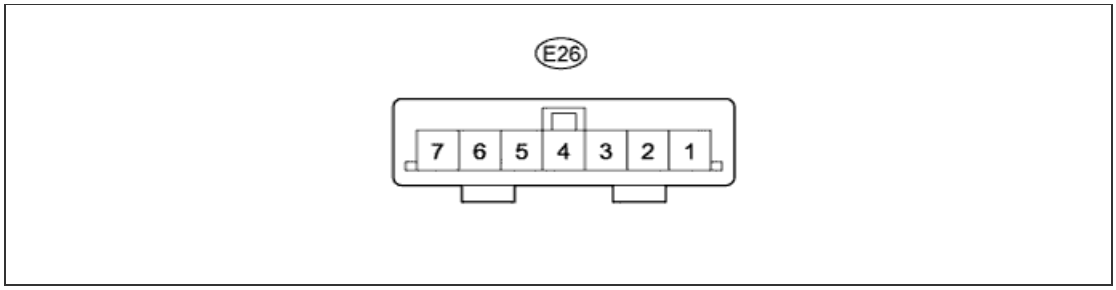
a. Disconnect the E28 ECU connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
E28-1 (+B) - E28-8 (GND)	B - W-B	Battery power supply	Always	11 to 14 V
E28-8 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK STEERING LOCK ECU



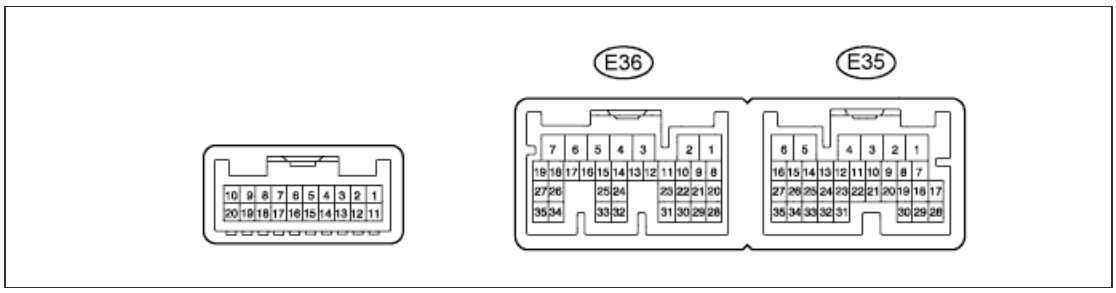
a. Disconnect the E26 ECU connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
E26-7 (B) - E26-1 (GND)	R - W-B	Battery power supply	Always	11 to 14 V
E26-1 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK AIR CONDITIONING AMPLIFIER (A/C ECU)



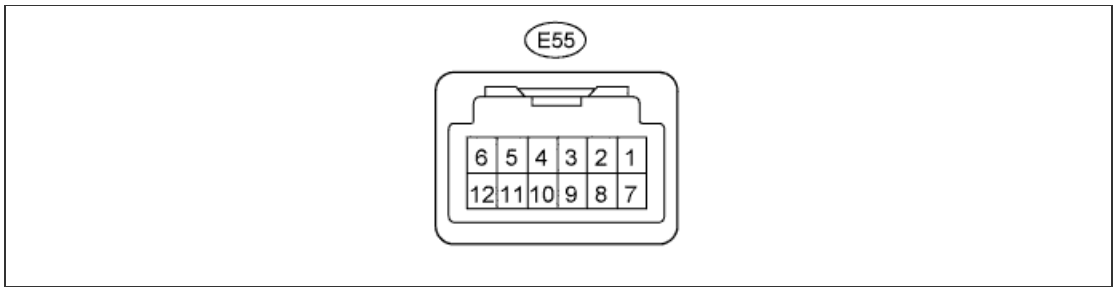
a. Disconnect the E36 amplifier connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
E36-5 (IG+) - E36-1 (GND)	G - W-B	IG power supply	Engine switch off	Below 1 V
E36-5 (IG+) - E36-1 (GND)	G - W-B	IG power supply	Engine switch on (IG)	11 to 14 V
E36-6 (+B1) - E36-1 (GND)	R - W-B	Battery power supply	Always	11 to 14 V
E36-7 (+B2) - E36-1 (GND)	R - W-B	Battery power supply	Always	11 to 14 V
E36-1 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK REAR AIR CONDITIONING CONTROL PANEL



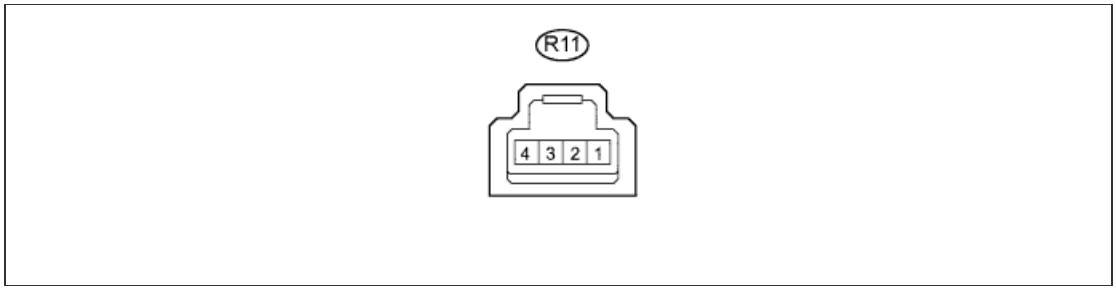
a. Disconnect the E55 panel connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
E55-6 (IG) - E55-1 (E)	G - W-B	IG power supply	Engine switch off	Below 1 V
E55-1 (E) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK RAIN SENSOR



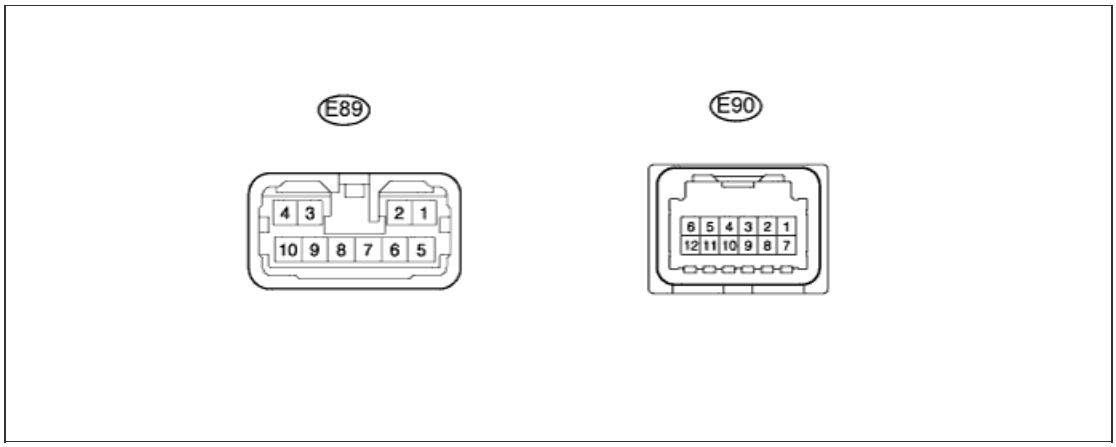
a. Disconnect the R11 rain sensor connector.

b. Measure the voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
R11-4 (SIG) - Body ground	G - Body ground	IG signal circuit	Engine switch off	Below 1 V
			Engine switch on (IG)	11 to 14 V
R11-1 (ES) - Body ground	W - Body ground	Ground circuit	Always	Below 1 V

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK WINDSHIELD WIPER ECU



a. Disconnect the E89 and E90 ECU connectors.

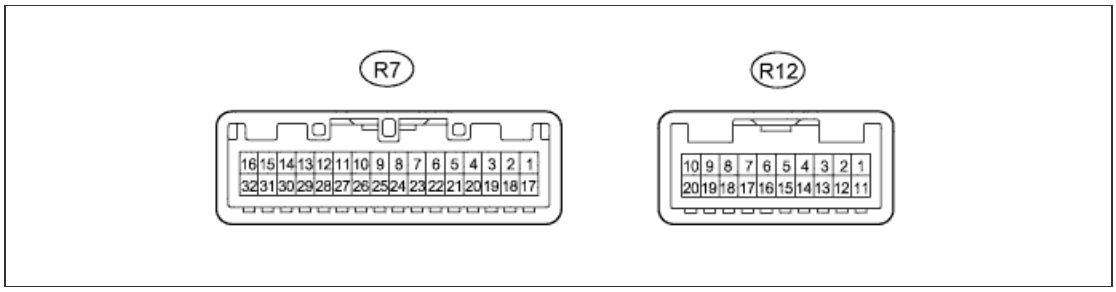
b. Measure the voltage and resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition

E89-5 (IG1I) - E90-10 (E)	G - W-B	Power source	Engine switch off	Below 1 V
E89-5 (IG1I) - E90-10 (E)	G - W-B	Power source	Engine switch on (IG)	11 to 14 V
E90-10 (E) - Body ground	W-B - Body ground	Power ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK OVERHEAD JUNCTION BLOCK



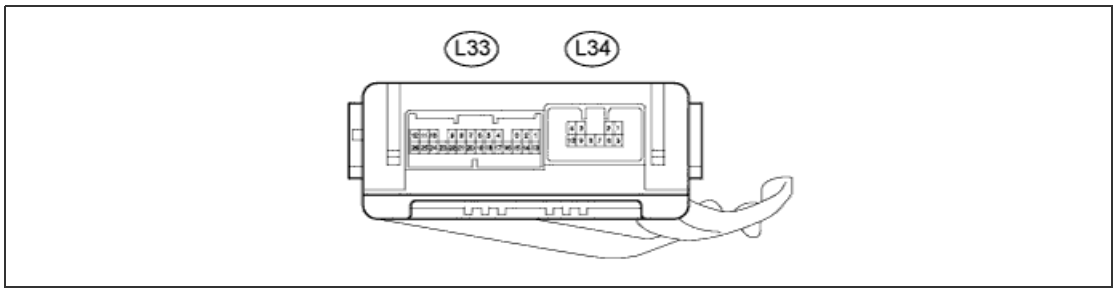
a. Disconnect the R7 block connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
R7-16 (GND9) - Body ground	W-B - Body ground	Body ground	Always	Below 1 V
R7-6 (+B2) - Body ground	R - Body ground	Battery power supply	Always	11 to 14 V

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK NO. 2 MAIN BODY ECU



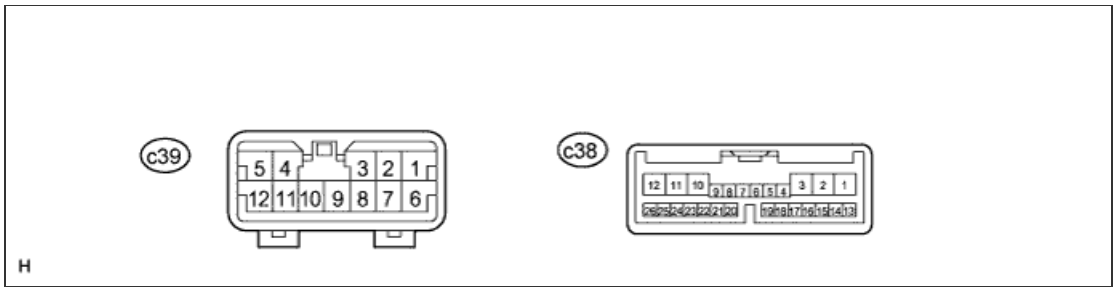
a. Disconnect the L33 and L34 ECU connectors.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
L33-7 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
L34-7 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
L33-14 (BECU) - Body ground	R - Body ground	Battery power supply	Always	11 to 14 V

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK SEAT CLIMATE CONTROL ECU LH (w/ Climate Control Seat System)



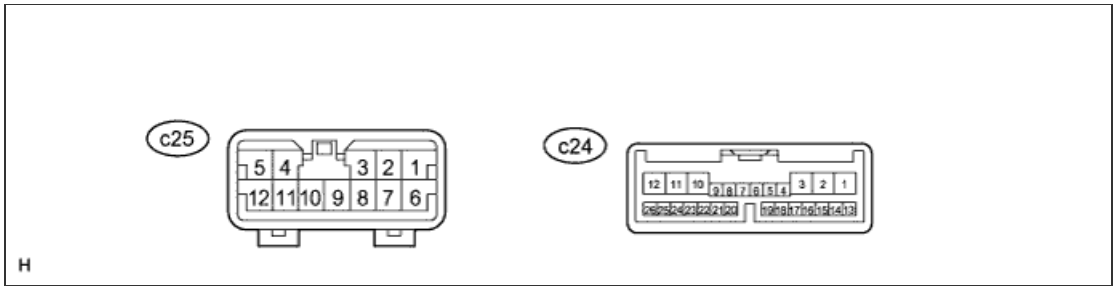
a. Disconnect the c38 ECU connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
c38-12 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
c38-2 (B) - Body ground	G - Body ground	Battery power supply	Always	11 to 14 V
c38-1 (IG) - Body ground	G - Body ground	IG power supply	Engine switch off	Below 1 V
c38-1 (IG) - Body ground	G - Body ground	IG power supply	Engine switch on (IG)	11 to 14 V

If the result is not as specified, there may be a malfunction on the wire harness side.

CHECK SEAT CLIMATE CONTROL ECU RH (w/ Climate Control Seat System)



a. Disconnect the c24 ECU connector.

b. Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
c24-12 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
c24-2 (B) - Body ground	G - Body ground	Battery power supply	Always	11 to 14 V
c24-1 (IG) - Body ground	G - Body ground	IG power supply	Engine switch off	Below 1 V
c24-1 (IG) - Body ground	G - Body ground	IG power supply	Engine switch on (IG)	11 to 14 V

If the result is not as specified, there may be a malfunction on the wire harness side.

for Preparation Click here

CHECK DTC

a. Connect the intelligent tester to the DLC3.

b. Turn the engine switch on (IG).

c. Turn the intelligent tester on.

d. Enter the following menus: Body / (desired system) / Trouble Codes.

e. Read the DTCs.

CLEAR DTC

a. Connect the intelligent tester to the DLC3.

b. Turn the engine switch on (IG).

c. Turn the intelligent tester on.

d. Enter the following menus: Body / (desired system) / Trouble Codes.

e. Clear the DTCs.

for Preparation Click here

READ DATA LIST

HINT:

Using the intelligent tester to read the Data List allows values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

a. Connect the intelligent tester to the DLC3.

b. Turn the engine switch on (IG).

c. Turn the intelligent tester on.

d. Enter the following menus: Body / Main Body / Data List.

e. According to the display on the intelligent tester, read the Data List.

Main Body

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Communication D-Door Motor	Connection status between power window regulator motor (for driver side) and main body ECU (cowl side junction block LH) / OK or STOP	OK: Connection STOP: No connection	When there is a malfunction, a DTC is stored.
Communication P-Door Motor	Connection status between power window regulator motor (for front passenger side) and main body ECU (cowl side junction block LH) / OK or STOP	OK: Connection STOP: No connection	When there is a malfunction, a DTC is stored.
Communication RR-Door Motor	Connection status between power window regulator motor (for rear RH) and main body ECU (cowl side junction block LH) / OK or STOP	OK: Connection STOP: No connection	When there is a malfunction, a DTC is stored.
Communication RL-Door Motor	Connection status between power window regulator motor (for rear LH) and main body ECU (cowl side junction block LH) / OK or STOP	OK: Connection STOP: No connection	When there is a malfunction, a DTC is stored.
Communication Slide Roof	Connection status between sliding roof ECU and main body ECU (cowl side junction block LH) / OK or STOP	OK: Connection STOP: No connection	When there is a malfunction, a DTC is stored.
Communication Master SW	Connection status between power window ECU (master switch) and main body ECU (cowl side junction block LH) / OK or STOP	OK: Connection STOP: No connection	When there is a malfunction, a DTC is stored.
Number of Trouble Codes	Number of trouble codes / Min.: 0, Max.: 255	Number of DTCs will be displayed	-

for Preparation Click here

HINT:

If a trouble code is output during the DTC check, inspect the trouble areas listed for that code. For details of the code, refer to the "See page" below.

LIN Communication System

DTC Code	Detection Item	Trouble Area	See page
B1206	P/W Master Switch Communication Stop	- Main body ECU (cowl side junction block LH) - Master switch - Harness or connector	Click here
B1273	Sliding Roof ECU Communication Stop	- Main body ECU (cowl side junction block LH) - Sliding roof ECU - Harness or connector	Click here
B1478	Climate Control Seat ECU Communication Error	- Air conditioning amplifier - Seat climate control ECU LH - Seat climate control ECU RH - Harness or connector	Click here
B2287	LIN Communication Master Malfunction	- Main body ECU (cowl side junction block LH) - Certification ECU (smart key ECU assembly) - Harness or connector	Click here
B2321	Driver Side Door ECU Communication Stop	- Main body ECU (cowl side junction block LH) - Front power window regulator motor RH (for RHD) - Front power window regulator motor LH (for LHD) - Harness or connector	Click here
B2322	Front Passenger Side Door ECU Communication Stop	- Main body ECU (cowl side junction block LH) - Front power window regulator motor LH (for RHD) - Front power window regulator motor RH (for LHD) - Harness or connector	Click here
B2323	Rear Door RH ECU Communication Stop	- Main body ECU (cowl side junction block LH) - Rear power window regulator motor RH - Harness or connector	Click here
B2324	Rear Door LH ECU Communication Stop	- Main body ECU (cowl side junction block LH) - Rear power window regulator motor LH - Harness or connector	Click here
B2325	LIN Communication Bus Malfunction	- Main body ECU (cowl side junction block LH) - Master switch - Front power window regulator motor LH - Front power window regulator motor RH - Rear power window regulator motor LH - Rear power window regulator motor RH - Sliding roof ECU (w/ Sliding Roof System) - Harness or connector	Click here
B2405	Sub Bus LIN Module Communication Malfunction	- Overhead junction block - No. 2 main body ECU - Harness or connector	Click here
B2785	Communication Malfunction between ECUs Connected by LIN	- Certification ECU (smart key ECU assembly) - Main body ECU (cowl side junction block LH) - ID code box (immobiliser code ECU) - Steering lock actuator (steering lock ECU) - Harness or connector	Click here
B2786	No Response from Steering Lock ECU	- Certification ECU (smart key ECU assembly) - Steering lock actuator (steering lock ECU) - Harness or connector	Click here
B2789	No Response from ID BOX	- Certification ECU (smart key ECU assembly) - ID code box (immobiliser code ECU) - Harness or connector	Click here

DTC B1206 P/W Master Switch Communication Stop

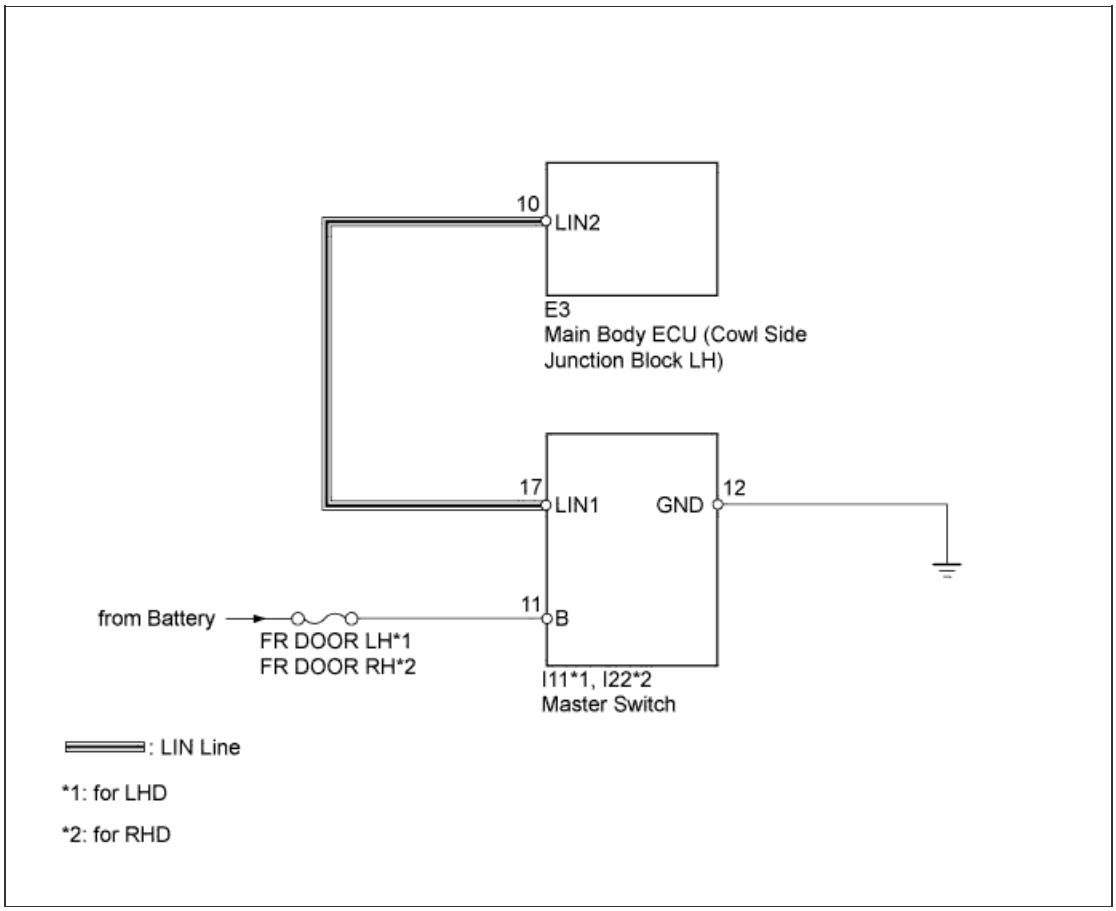
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the master switch and main body ECU (cowl side junction block LH) stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B1206	No communication between the master switch and main body ECU (cowl side junction block LH) for 10 seconds or more.	• Master switch • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2325 is stored when the communication between the master switch and main body ECU (cowl side junction block LH) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B1206 is output	A
DTC B1206 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - MASTER SWITCH)

a. Disconnect the E3 ECU connector.

b. Disconnect the I11*1 or I22*2 switch connector.

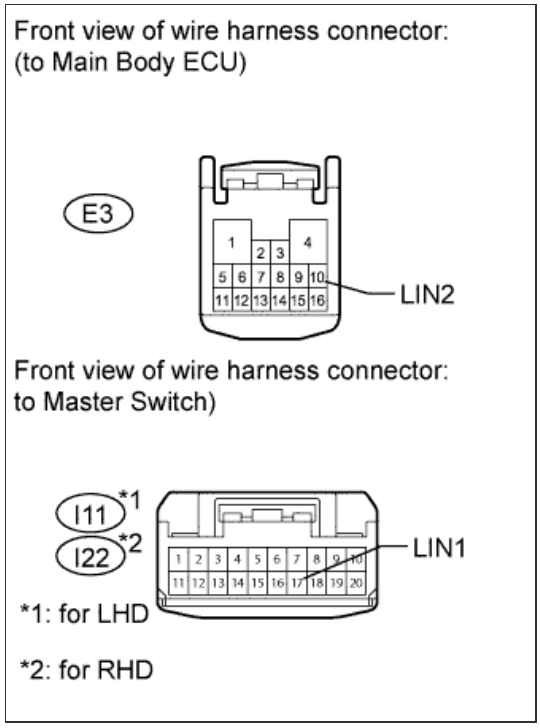
c. Measure the resistance and voltage according to the value(s) in the tables below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - I11-17 (LIN1)*1 or I22-17 (LIN1)*2	Always	Below 1 Ω
E3-10 (LIN2) - Body ground	Always	10 kΩ or higher

Standard Voltage:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - Body ground	Always	Below 1 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (MASTER SWITCH - BATTERY AND BODY GROUND)

a. Disconnect the I11*1 or I22*2 switch connector.

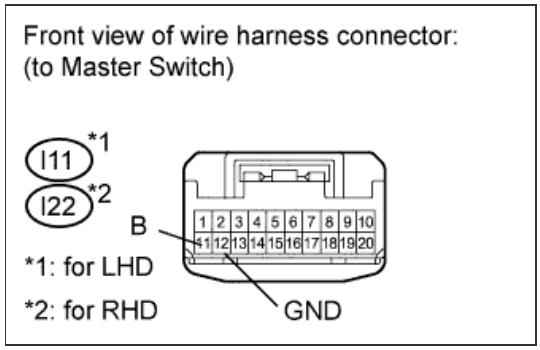
b. Measure the resistance and voltage according to the value(s) in the tables below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
I11-12 (GND)*1 or I22-12 (GND)*2 - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
I11-11 (B)*1 or I22-11 (B)*2 - Body ground	Always	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE MASTER SWITCH ASSEMBLY

a. Temporarily replace the master switch assembly with a new or normally functioning one (Click here).

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B1206 is not output	A
DTC B1206 is output	B

B → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

A

END (MASTER SWITCH IS DEFECTIVE)

DTC B2324 Rear Door LH ECU Communication Stop

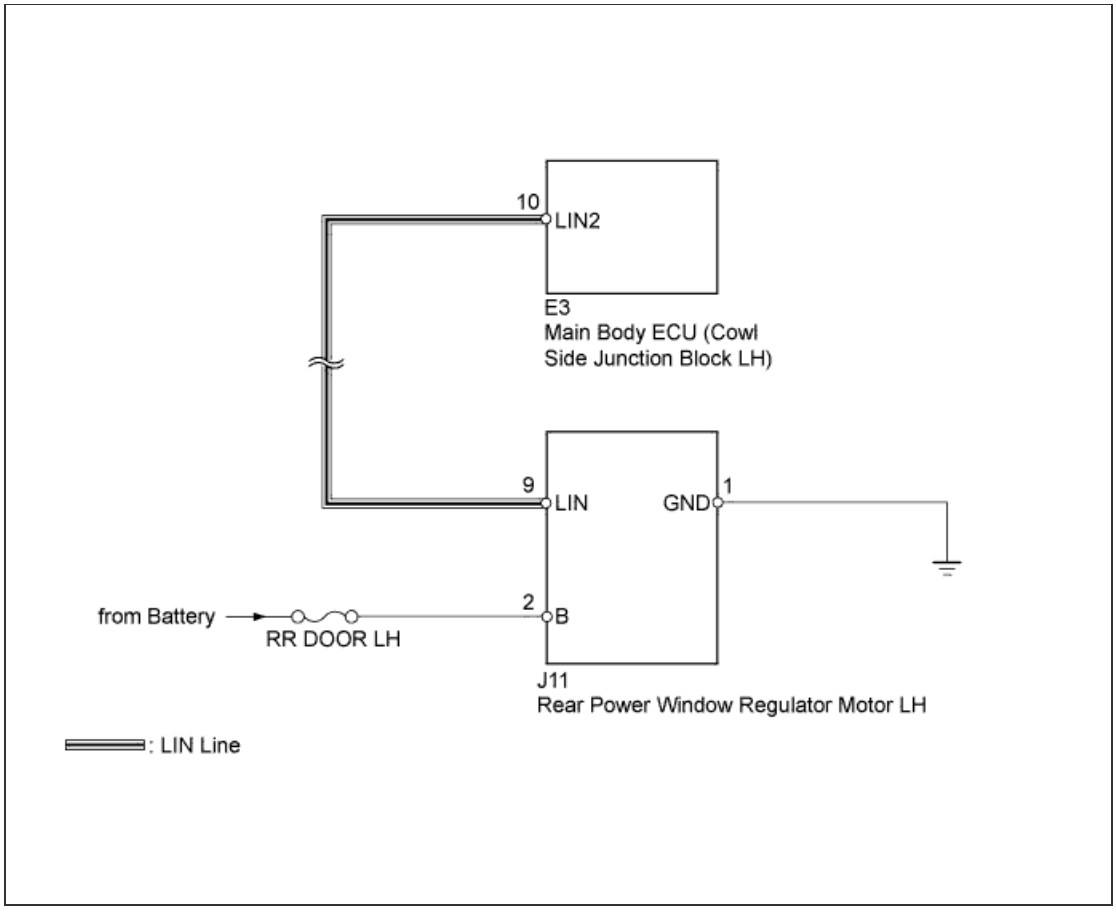
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the rear power window regulator motor LH and main body ECU (cowl side junction block LH) stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B2324	No communication between the rear power window regulator motor LH and main body ECU (cowl side junction block LH) for 10 seconds or more.	• Rear power window regulator motor LH • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2325 is stored when the communication between the rear power window regulator motor and main body ECU (cowl side junction block LH) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2324 is output	A
DTC B2324 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - REAR POWER WINDOW REGULATOR MOTOR LH)

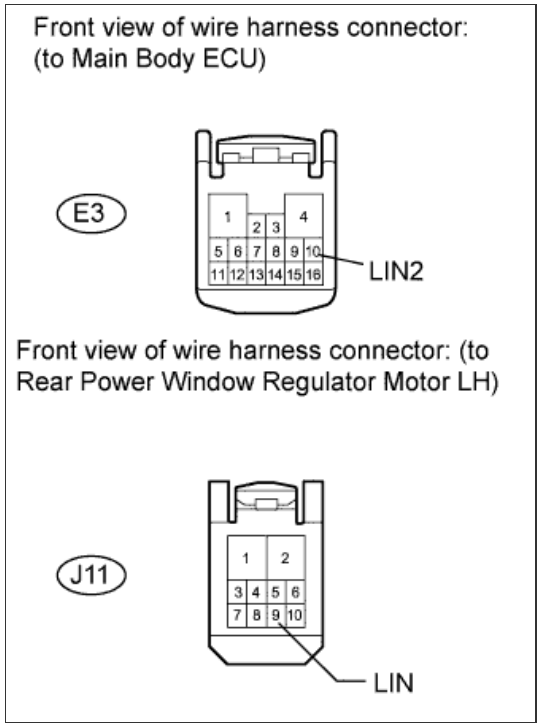
a. Disconnect the E3 ECU connector.

b. Disconnect the J11 motor connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - J11-9 (LIN)	Always	Below 1 Ω
E3-10 (LIN2) or J11-9 (LIN) - Body ground	Always	10 kΩ or higher



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (REAR POWER WINDOW REGULATOR MOTOR - BATTERY AND BODY GROUND)

a. Disconnect the J11 motor connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

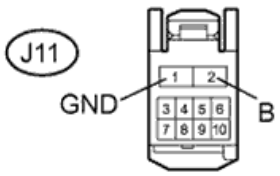
Standard Resistance:

Tester Connection	Condition	Specified Condition
J11-1 (GND) - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
J11-2 (B) - Body ground	Always	11 to 14 V

Front view of wire harness connector:
(to Rear Power Window Regulator Motor LH)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE REAR POWER WINDOW REGULATOR MOTOR ASSEMBLY LH

a. Temporarily replace the rear power window regulator motor LH with a new or normally functioning one (Click here).

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2324 is not output	A
DTC B2324 is output	B

B → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

A

END (REAR POWER WINDOW REGULATOR MOTOR LH IS DEFECTIVE)

DTC B1273 Sliding Roof ECU Communication Stop

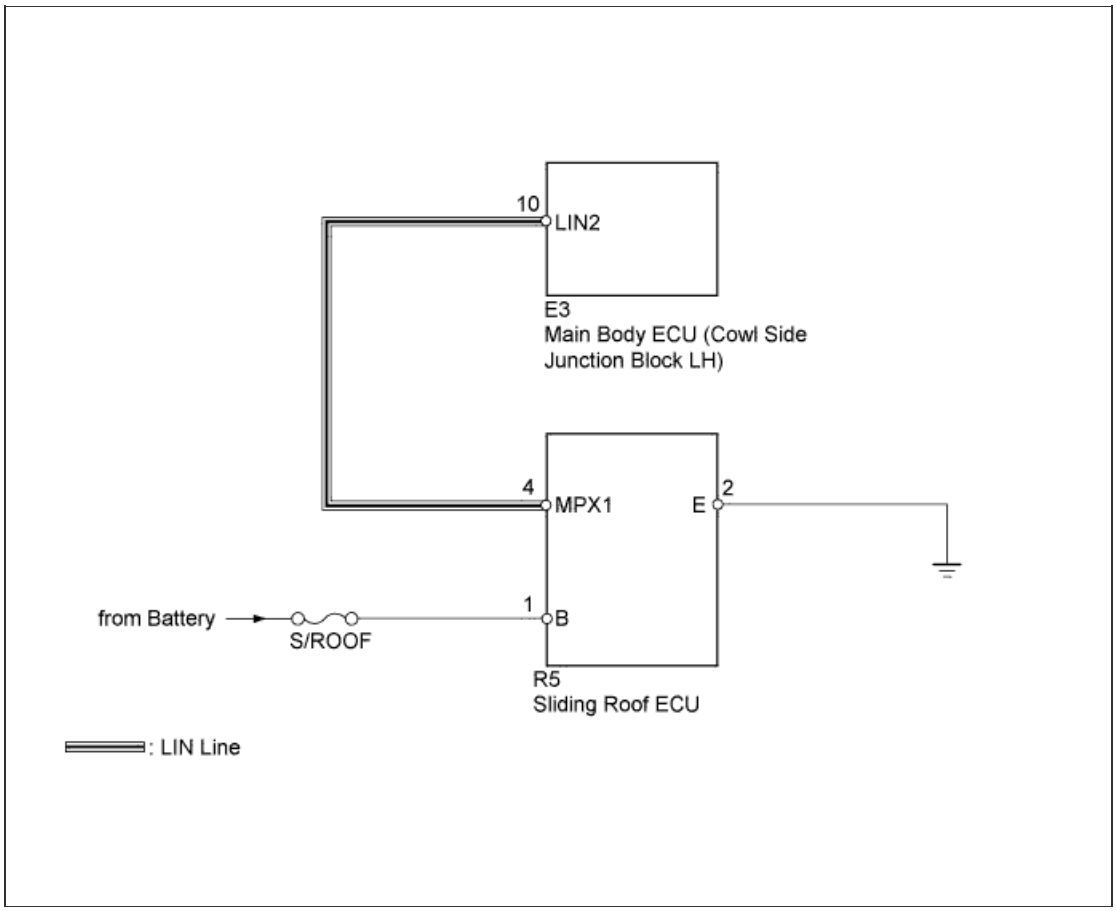
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the sliding roof ECU and main body ECU (cowl side junction block LH) stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B1273	No communication between the sliding roof ECU and main body ECU (cowl side junction block LH) for 10 seconds or more.	• Sliding roof ECU • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2325 is stored when the communication between the sliding roof ECU and main body ECU (cowl side junction block LH) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B1273 is output	A
DTC B1273 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - SLIDING ROOF ECU)

a. Disconnect the E3 and R5 ECU connectors.

b. Measure the resistance and voltage according to the value(s) in the tables below.

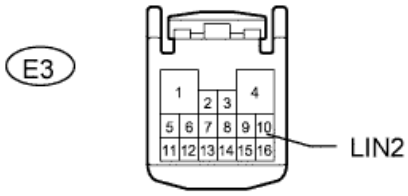
Standard Resistance:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - R5-4 (MPX1)	Always	Below 1 Ω
E3-10 (LIN2) or R5-4 (MPX1) - Body ground	Always	10 kΩ or higher

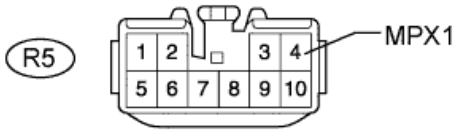
Standard Voltage:

Tester Connection	Condition	Specified Condition
R5-4 (MPX1) - Body ground	Always	Below 1 V

Front view of wire harness connector:
(to Main Body ECU)



Front view of wire harness connector:
(to Sliding Roof ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (SLIDING ROOF ECU - BATTERY AND BODY GROUND)

a. Disconnect the R5 ECU connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

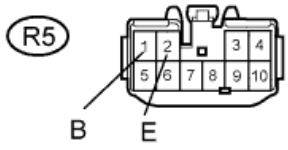
Standard Resistance:

Tester Connection	Condition	Specified Condition
R5-2 (E) - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
R5-1 (B) - Body ground	Always	11 to 14 V

Front view of wire harness connector:
(to Sliding Roof ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE SLIDING ROOF ECU

a. Temporarily replace the sliding roof ECU with a new or normally functioning one (Click here).

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B1273 is not output	A
DTC B1273 is output	B

B → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

A

END (SLIDING ROOF ECU IS DEFECTIVE)

DTC B2325 LIN Communication Bus Malfunction

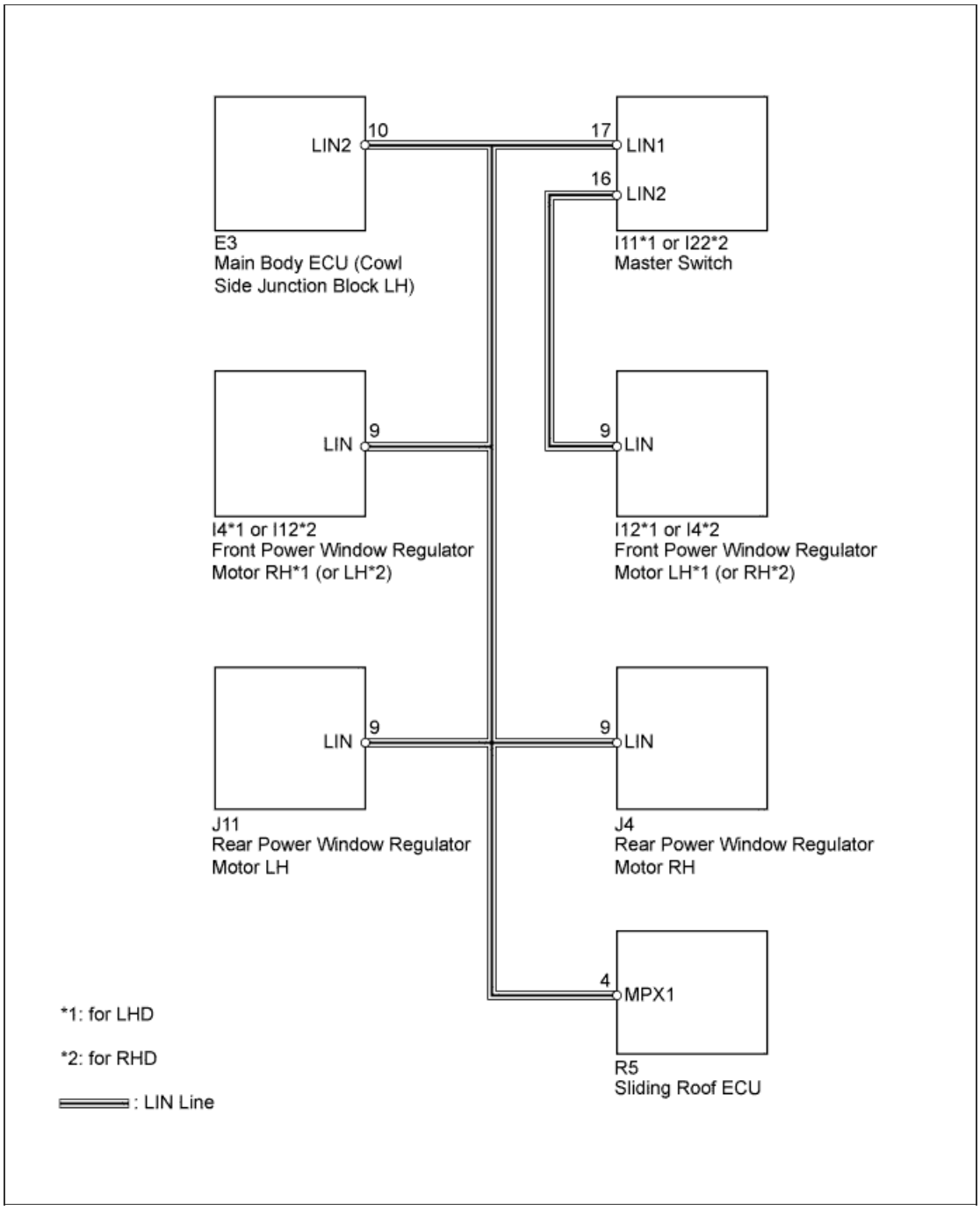
for Preparation Click here

DESCRIPTION

The main body ECU (cowl side junction block LH) intermittently monitors the LIN communication bus between the components related to the door and sliding roof. DTC B2325 is stored when a malfunction in the LIN communication bus between the components related to the doors and sliding roof is detected consecutively 3 times.

DTC Code	DTC Detection Condition	Trouble Area
B2325	The main body ECU (cowl side junction block LH) detects a malfunction in the LIN communication bus between components related to the doors and sliding roof consecutively 3 times.	• Master switch • Front power window regulator motor LH • Front power window regulator motor RH • Rear power window regulator motor LH • Rear power window regulator motor RH • Sliding roof ECU • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

When DTC B2325 and a LIN communication stop DTC are output simultaneously, first perform the troubleshooting for the LIN communication stop DTC. Then perform the troubleshooting for DTC B2325.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2325 is output	A
DTC B2325 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - MASTER SWITCH)

a. Disconnect the E3 ECU connector.

b. Disconnect the I11*1 or I22*2 switch connector.

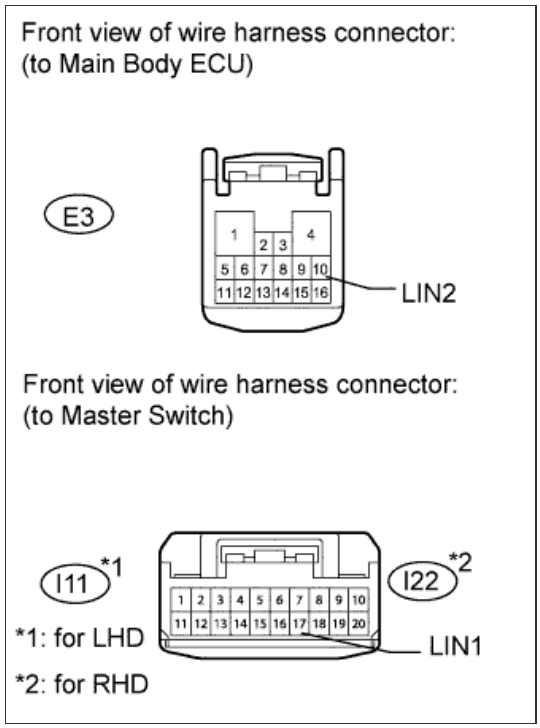
c. Measure the resistance and voltage according to the value(s) in the tables below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - I11-17 (LIN1)*1 or I22-17 (LIN1)*2	Always	Below 1 Ω
E3-10 (LIN2) - Body ground	Always	10 kΩ or higher

Standard Voltage:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - Body ground	Always	Below 1 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CLEAR DTC

a. Reconnect the E3 ECU connector.

b. Disconnect the I11*1 or I22*2 switch connector.

c. Clear the DTC (Click here).

*1: for LHD
*2: for RHD

NEXT

5.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2325 is output	A
DTC B2325 is not output	B

B → REPLACE MASTER SWITCH (Click here)

A

6.CLEAR DTC

a. Reconnect the I11*1 or I22*2 switch connector.
*1: for LHD
*2: for RHD

b. Disconnect the I12 motor connector.

c. Clear the DTC (Click here).

NEXT

7.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2325 is output	A
DTC B2325 is not output	B

B → REPLACE FRONT POWER WINDOW REGULATOR MOTOR LH (Click here)

A

8.CLEAR DTC

a. Reconnect the I12 motor connector.

b. Disconnect the I4 motor connector.

c. Clear the DTC (Click here).

NEXT

9.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2325 is output	A
DTC B2325 is not output	B

B → REPLACE FRONT POWER WINDOW REGULATOR MOTOR RH (Click here)

A

10.CLEAR DTC

a. Reconnect the I4 motor connector.

b. Disconnect the J4 motor connector.

c. Clear the DTC (Click here).

NEXT

11.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2325 is output	A
DTC B2325 is not output	B

B → REPLACE REAR POWER WINDOW REGULATOR MOTOR LH (**Click here**)

A

12.CLEAR DTC

a. Reconnect the J4 motor connector.

b. Disconnect the J11 motor connector.

c. Clear the DTC (Click here).

NEXT

13.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2325 is output	A
DTC B2325 is not output	B

B → REPLACE REAR POWER WINDOW REGULATOR MOTOR RH (**Click here**)

A

14.CLEAR DTC

a. Reconnect the J11 motor connector.

b. Disconnect the R5 ECU connector.

c. Clear the DTC (Click here).

NEXT

15.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2325 is output	A
DTC B2325 is not output	B

REPLACE SLIDING ROOF DRIVE GEAR SUB-ASSEMBLY (**Click**

B

here)

A

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

DTC B1478 Climate Control Seat ECU Communication Error

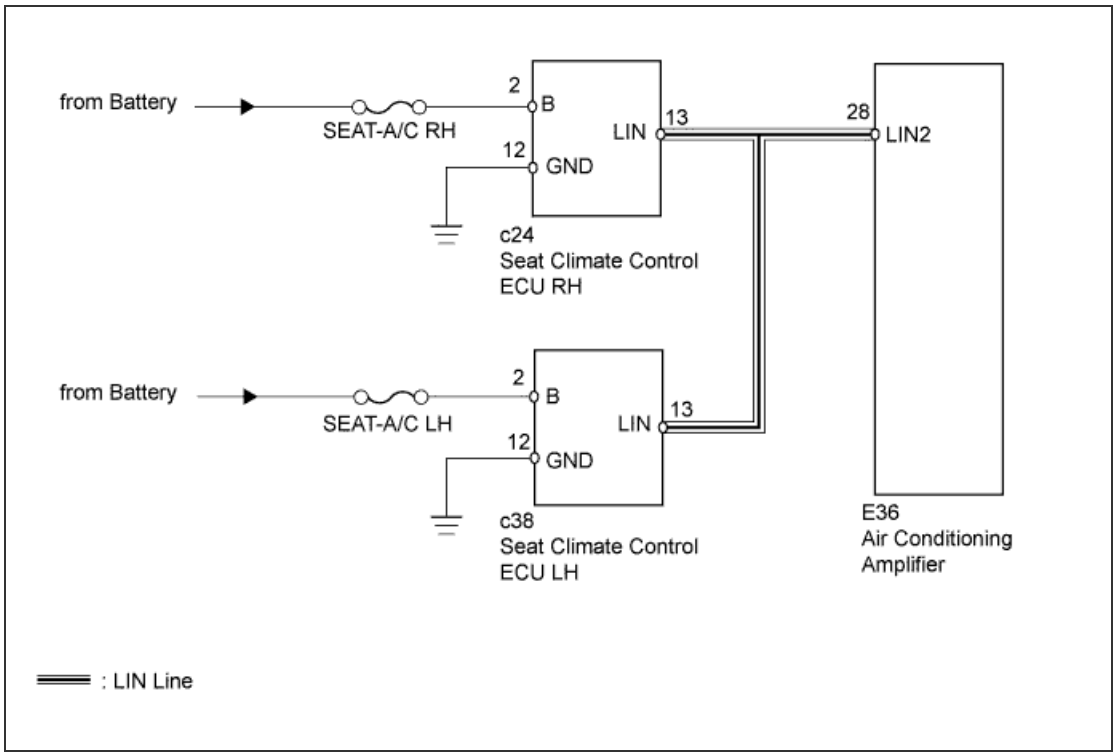
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the air conditioning amplifier) and seat climate control ECUs stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B1478	No communication between the air conditioning amplifier and seat climate control ECUs for 10 seconds or more.	• Air conditioning amplifier • Seat climate control ECU LH • Seat climate control ECU RH • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2785 is stored when the communication between the ID code box (immobiliser code ECU) and certification ECU (smart key ECU assembly) stops.

1.CLEAR DTC

a. Clear the DTC (Click here)

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here)

Result

Result	Proceed to
DTC B1478 is output	A
DTC B1478 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (AIR CONDITIONING AMPLIFIER - SEAT CLIMATE CONTROL ECU)

a. Disconnect the E36 amplifier connector.

b. Disconnect the c24 and c38 ECU connectors.

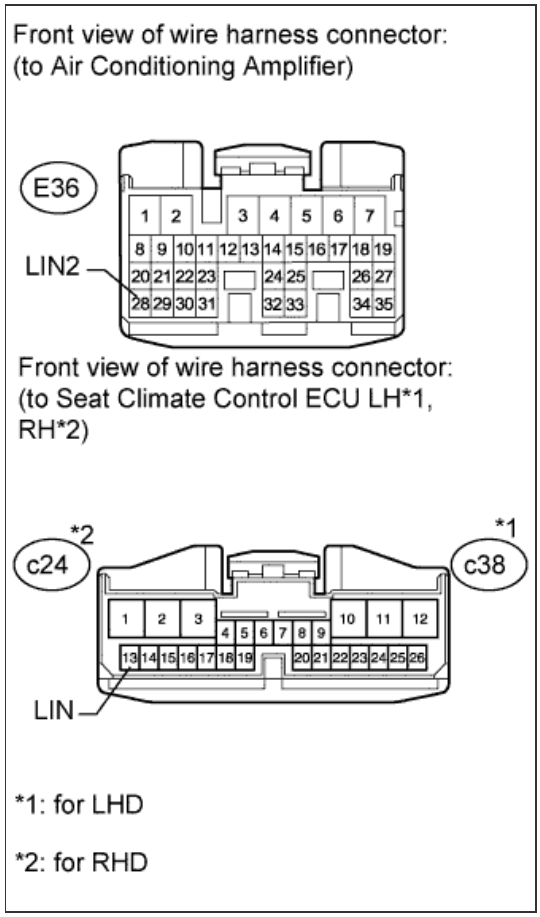
c. Measure the resistance and voltage according to the value(s) in the tables below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E36-28 (LIN2) - c24-13 (LIN)	Always	Below 1 Ω
E36-28 (LIN2) - c38-13 (LIN)	Always	Below 1 Ω
E36-28 (LIN2) - Body ground	Always	10 kΩ or higher

Standard Voltage:

Tester Connection	Condition	Specified Condition
E36-28 (LIN2) - Body ground	Always	Below 1 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (SEAT CLIMATE CONTROL ECU - BATTERY AND BODY GROUND)

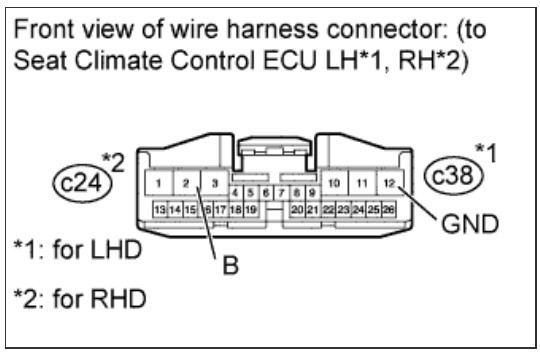
a. Disconnect the c24 and c38 ECU connectors.

b. Measure the resistance and voltage according to the value(s) in the tables below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
c24-12 (GND) - Body ground	Always	Below 1 Ω
c38-12 (GND) - Body ground	Always	Below 1 Ω

Standard Voltage:



Tester Connection	Condition	Specified Condition
c24-2 (B) - Body ground	Always	11 to 14 V
c38-2 (B) - Body ground	Always	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.CHECK SEAT CLIMATE CONTROL ECU LH

a. Temporarily replace the seat climate control ECU LH with a new or normally functioning one (Click here).

b. Check that the driver side seat climate control function is normal.

OK:
Driver side seat climate control function is normal.

NG → Go to step 6

OK

END (SEAT CLIMATE CONTROL ECU LH IS DEFECTIVE)

6.CHECK SEAT CLIMATE CONTROL ECU RH

a. Temporarily replace the seat climate control ECU RH with a new or normally functioning one (Click here).

b. Check that the driver side seat climate control function is normal.

OK:
Front passenger side seat climate control function is normal.

NG → REPLACE AIR CONDITIONING AMPLIFIER (Click here)

OK

END (SEAT CLIMATE CONTROL ECU RH IS DEFECTIVE)

DTC B2405 Sub Bus LIN Module Communication Malfunction

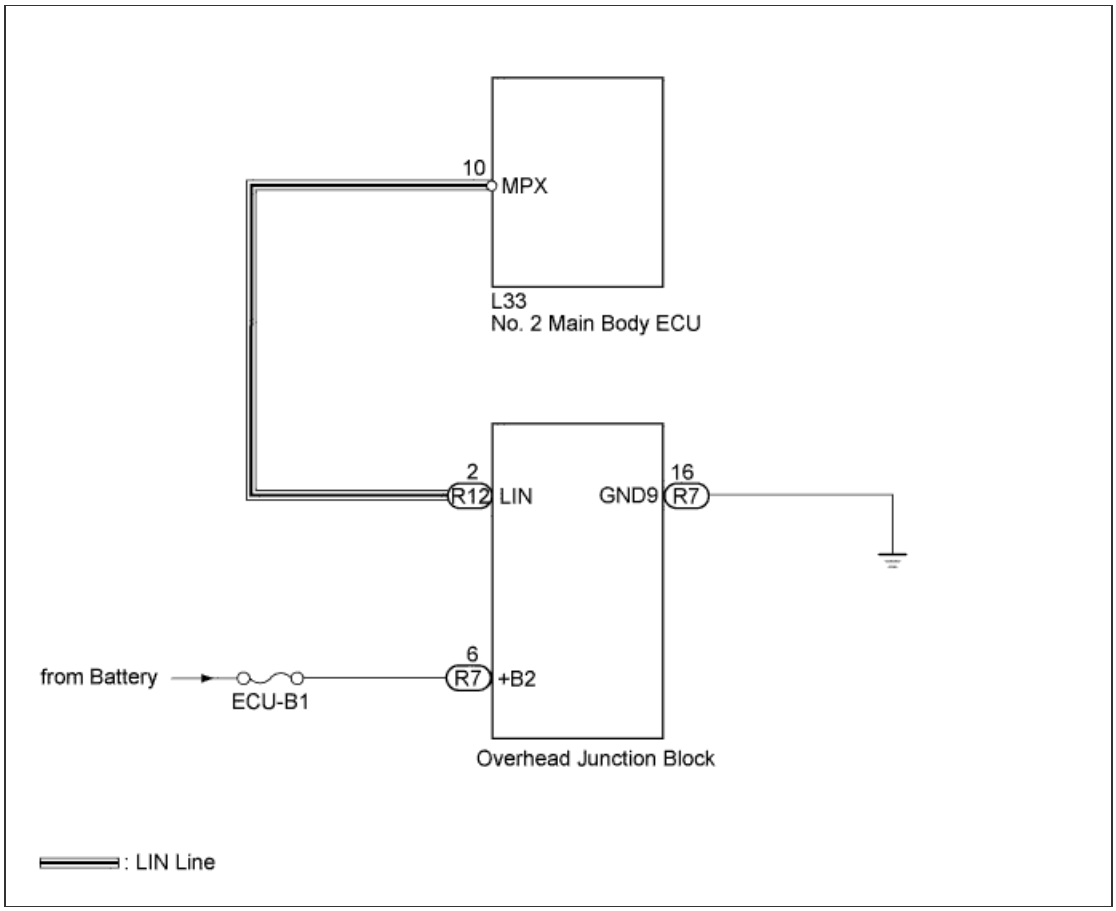
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the No. 2 main body ECU and overhead junction block stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B2405	No communication between No. 2 main body ECU and overhead junction block for 10 seconds or more	• Overhead junction block • No. 2 main body ECU • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

1.CHECK HARNESS AND CONNECTOR (NO. 2 MAIN BODY ECU - OVERHEAD JUNCTION BLOCK)

a. Disconnect the L33 ECU connector.

b. Disconnect the R12 junction block connector.

c. Measure the resistance and voltage according to the value(s) in the tables below.

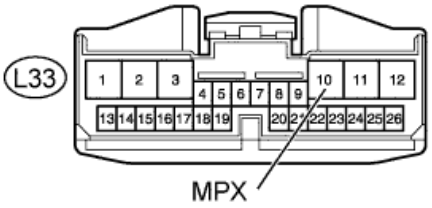
Standard Resistance:

Tester Connection	Condition	Specified Condition
L33-10 (MPX) - R12-2 (LIN)	Always	Below 1 Ω
L33-10 (MPX) - Body ground	Always	10 kΩ or higher

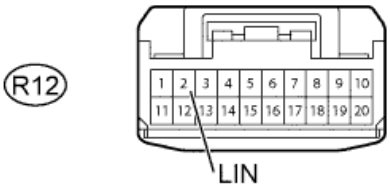
Standard Voltage:

Tester Connection	Condition	Specified Condition
L33-9 (LIN) - Body ground	Always	Below 1 V

Front view of wire harness connector:
(to No. 2 Main Body ECU)



Front view of wire harness connector:
(to Overhead Junction Block)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

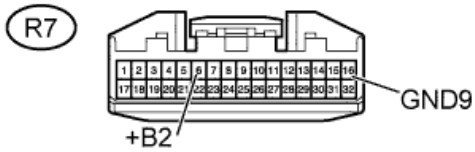
OK

2.CHECK HARNESS AND CONNECTOR (OVERHEAD JUNCTION BLOCK - BATTERY AND BODY GROUND)

a. Disconnect the R7 junction block connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

Front view of wire harness connector:
(to Overhead Junction Block)



Standard Resistance:

Tester Connection	Condition	Specified Condition
R7-16 (GND9) - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
R7-6 (+B2) - Body ground	Always	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

3.CHECK OVERHEAD JUNCTION BLOCK

a. Temporarily replace the overhead junction block with a new or normally functioning one (Click here).

b. Clear the DTC (Click here).

NEXT

4.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result:

Result	Proceed to
DTC B2405 output does not reoccur	A
DTC B2405 output reoccurs	B

B → REPLACE NO. 2 MAIN BODY ECU (Click here)

A → END (OVERHEAD JUNCTION BLOCK IS DEFECTIVE)

DTC B2287 LIN Communication Master Malfunction

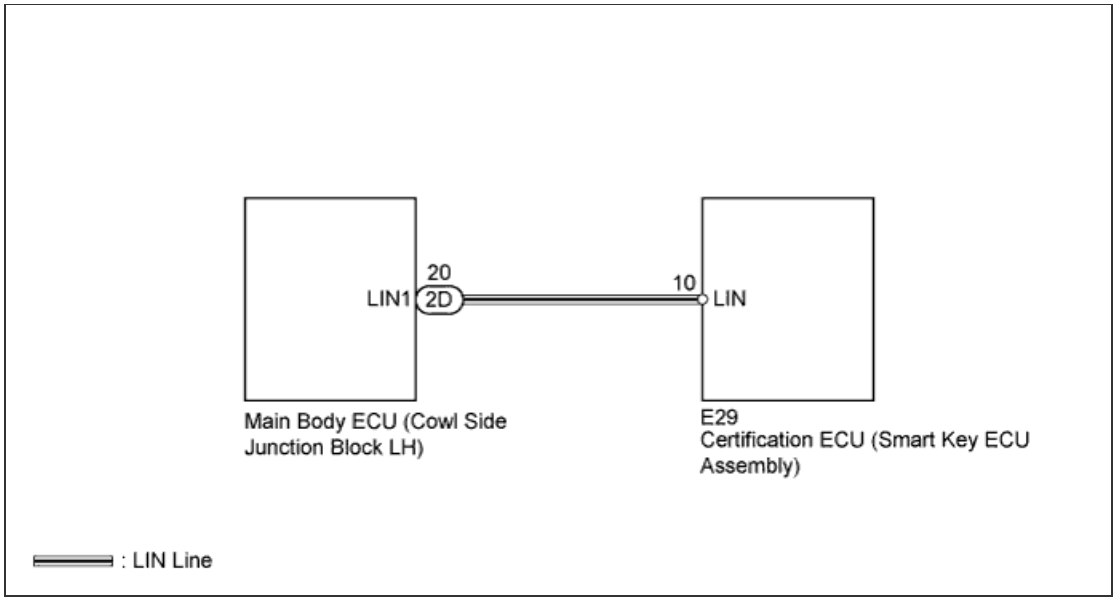
for Preparation Click here

DESCRIPTION

This DTC is stored there is an open, short or ECU communication malfunction between the main body ECU (cowl side junction block LH) and certification ECU (smart key ECU assembly).

DTC Code	DTC Detection Condition	Trouble Area
B2287	There is an open, short or ECU communication malfunction between the main body ECU (cowl side junction block LH) and certification ECU (smart key ECU assembly).	• Certification ECU (smart key ECU assembly) • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

When DTC B2287 and B2785 are output simultaneously, perform the troubleshooting for DTC B2785 first (Click here).

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

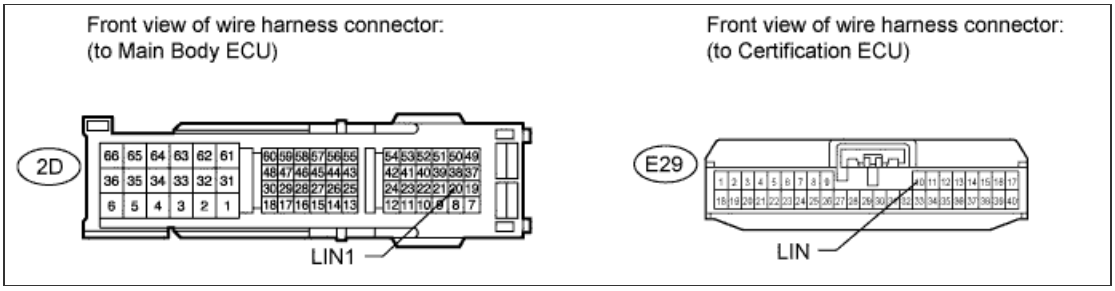
Result

Result	Proceed to
DTC B2287 is output	A
DTC B2287 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU - MAIN BODY ECU)



a. Disconnect the E29 and 2D ECU connectors.

b. Measure the resistance and voltage according to the value(s) in the tables below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E29-10 (LIN) - 2D-20 (LIN1)	Always	Below 1 Ω
E29-10 (LIN) or 2D-20 (LIN1) - Body ground	Always	10 kΩ or higher

Standard Voltage:

Tester Connection	Condition	Specified Condition
E29-10 (LIN) or 2D-20 (LIN1) - Body ground	Always	Below 1 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

a. Temporarily replace the main body ECU (cowl side junction block LH) with a new or normally functioning one.

b. Clear the DTC (Click here).

NEXT

5.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2287 is not output	A
DTC B2287 is output	B

B → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

A

END (MAIN BODY ECU IS DEFECTIVE)

DTC B2785 Communication Malfunction between ECUs Connected by LIN

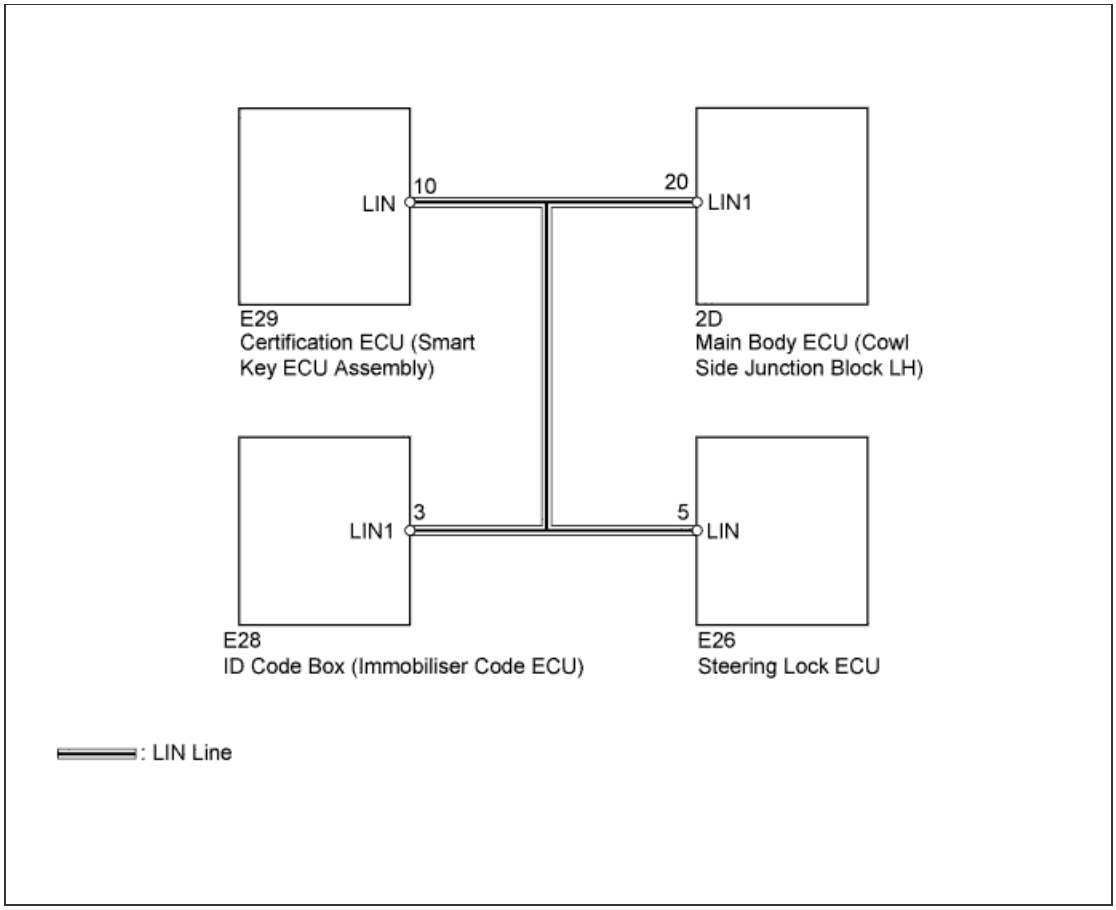
for Preparation Click here

DESCRIPTION

The certification ECU (smart key ECU assembly) intermittently monitors the LIN communication bus between the components related to certification. DTC B2785 is output when a malfunction in the LIN communication bus between the components related to certification is detected continuously 3 times.

DTC Code	DTC Detection Condition	Trouble Area
B2785	The certification ECU (smart key ECU assembly) detects a malfunction in the LIN communication bus between components related to certification continuously 3 times.	• Certification ECU (smart key ECU assembly) • Main body ECU (cowl side junction block LH) • ID code box (immobiliser code ECU) • Steering lock ECU • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

When DTC B2785 and B2287 are output simultaneously, perform the troubleshooting for DTC B2785 first.

1.CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU - MASTER SWITCH)

a. Disconnect the 2D and E29 ECU connectors

a. Disconnect the 2D and E29 ECU connectors.

b. Measure the resistance and voltage according to the value(s) in the table below.

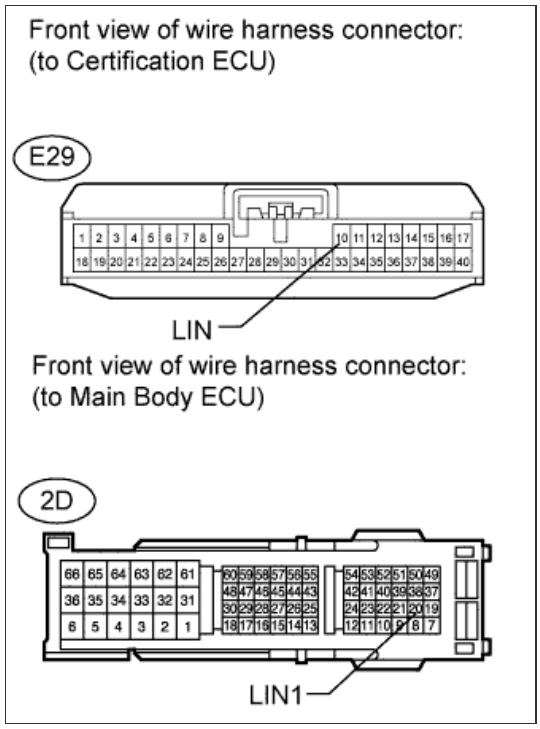
Standard Resistance:

Tester Connection	Condition	Specified Condition
E29-10 (LIN) - 2D-20 (LIN1)	Always	Below 1 Ω
E29-10 (LIN) - Body ground	Always	10 kΩ or higher

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
E29-10 (LIN) - Body ground	Always	Below 1 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

2.CHECK FOR DTC

a. Reconnect the E26 and E29 ECU connectors.

b. Reconnect the E28 box connector.

c. Clear the DTC (Click here).

d. Recheck for DTCs.

Result

Result	Proceed to
DTC B2785 is output	A
DTC B2785 is not output	B

B → Go to step 5

A

3.CHECK FOR DTC

a. Reconnect the 2D ECU connector.

b. Disconnect the E26 ECU connector.

c. Clear the DTC (Click here).

d. Recheck for DTCs.

Result

Result	Proceed to
DTC B2785 is output	A
DTC B2785 is not output	B

B → Go to step 7

A

4.CHECK FOR DTC

a. Reconnect the E26 ECU connector.

b. Disconnect the E28 box ECU connector.

c. Clear the DTC (Click here).

d. Recheck for DTCs.

Result

Result	Proceed to
DTC B2785 is output	A
DTC B2785 is not output	B

B → Go to step 9

A

REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

5.REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

a. Temporarily replace the main body ECU (cowl side junction block LH) with a new or normally functioning one.

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs.

Result

Result	Proceed to
DTC B2785 is not output	A
DTC B2785 is output	B

B → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

A

END (MAIN BODY ECU IS DEFECTIVE)

7.REPLACE STEERING LOCK ECU (STEERING LOCK ACTUATOR ASSEMBLY)

a. Temporarily replace the steering lock ECU with a new or normally functioning one (Click here).

b. Clear the DTC (Click here).

NEXT

8.CHECK FOR DTC

a. Recheck for DTCs.

Result

Result	Proceed to
DTC B2785 is not output	A
DTC B2785 is output	B

B → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

A

END (STEERING LOCK ECU IS DEFECTIVE)

9.REPLACE ID CODE BOX (IMMOBILISER CODE ECU)

a. Temporarily replace the ID code box immobiliser code ECU with a new or normally functioning one.

b. Clear the DTC (Click here).

NEXT

10.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2785 is not output	A
DTC B2785 is output	B

B → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

A

END (ID CODE BOX IS DEFECTIVE)

DTC B2321 Driver Side Door ECU Communication Stop

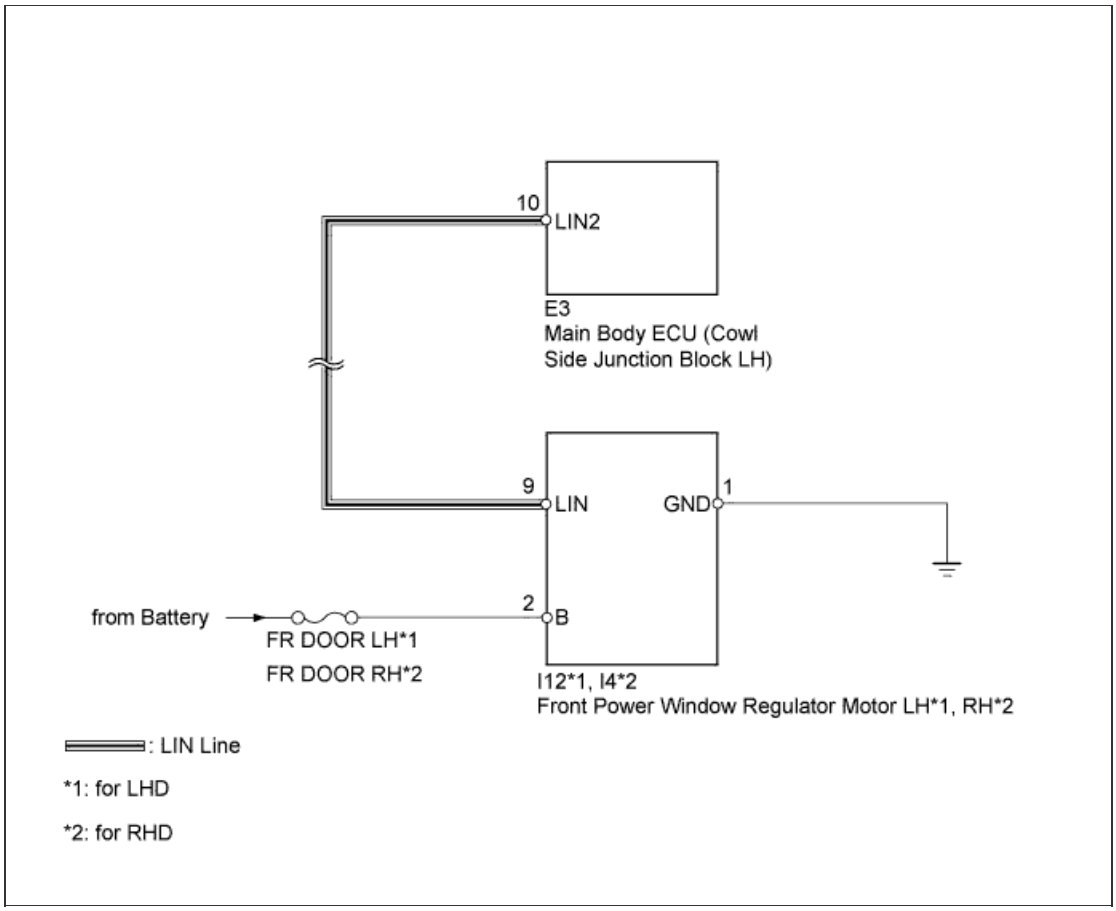
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the front power window regulator motor LH*1 (RH*2) and main body ECU (cowl side junction block LH) stops for 10 seconds or more.
*1: for LHD
*2: for RHD

DTC Code	DTC Detection Condition	Trouble Area
B2321	No communication between the front power window regulator motor LH*1 or RH*2 and main body ECU (cowl side junction block LH) for 10 seconds or more.	• Front power window regulator motor LH*1 • Front power window regulator motor RH*2 • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2325 is stored when the communication between the front power window regulator motor and main body ECU (cowl side junction block LH) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2321 is output	A
DTC B2321 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - FRONT POWER WINDOW REGULATOR MOTOR)

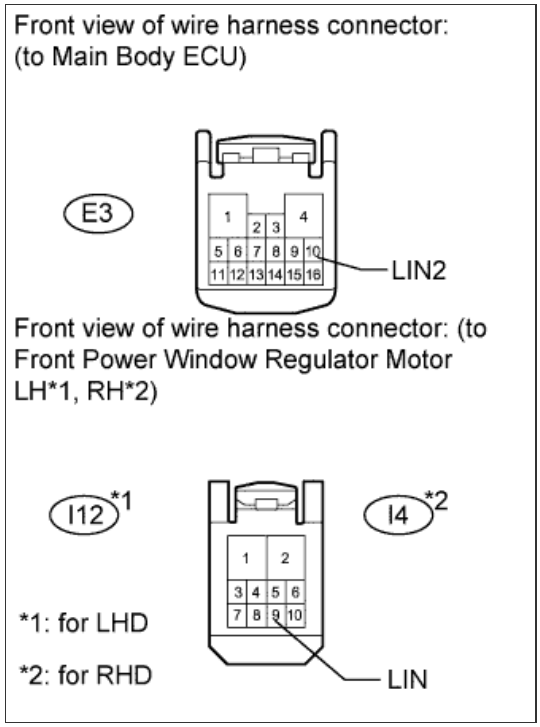
a. Disconnect the E3 ECU connector.

b. Disconnect the I12*1 or I4*2 motor connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - I12-9 (LIN)*1 or I4-9 (LIN)*2	Always	Below 1 Ω



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (FRONT POWER WINDOW REGULATOR - BATTERY AND BODY GROUND)

a. Disconnect the I12*1 or I4*2 motor connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

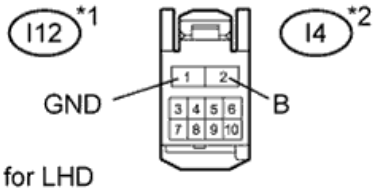
Standard Resistance:

Tester Connection	Condition	Specified Condition
I12-1 (GND)*1 or I4-1 (GND)*2 - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
I12-2 (B)*1 or I4-2 (B)*2 - Body ground	Always	11 to 14 V

Front view of wire harness connector: (to Front Power Window Regulator Motor LH*1, RH*2)



*1: for LHD

*2: for RHD

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE FRONT POWER WINDOW REGULATOR MOTOR ASSEMBLY

a. Temporarily replace the front power window regulator motor LH*1 or RH*2 with a new or normally functioning one (Click here).
*1: for LHD
*2: for RHD

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2321 is not output	A
DTC B2321 is output	B

B → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

A

END (FRONT POWER WINDOW REGULATOR MOTOR IS DEFECTIVE)

DTC B2786 No Response from Steering Lock ECU

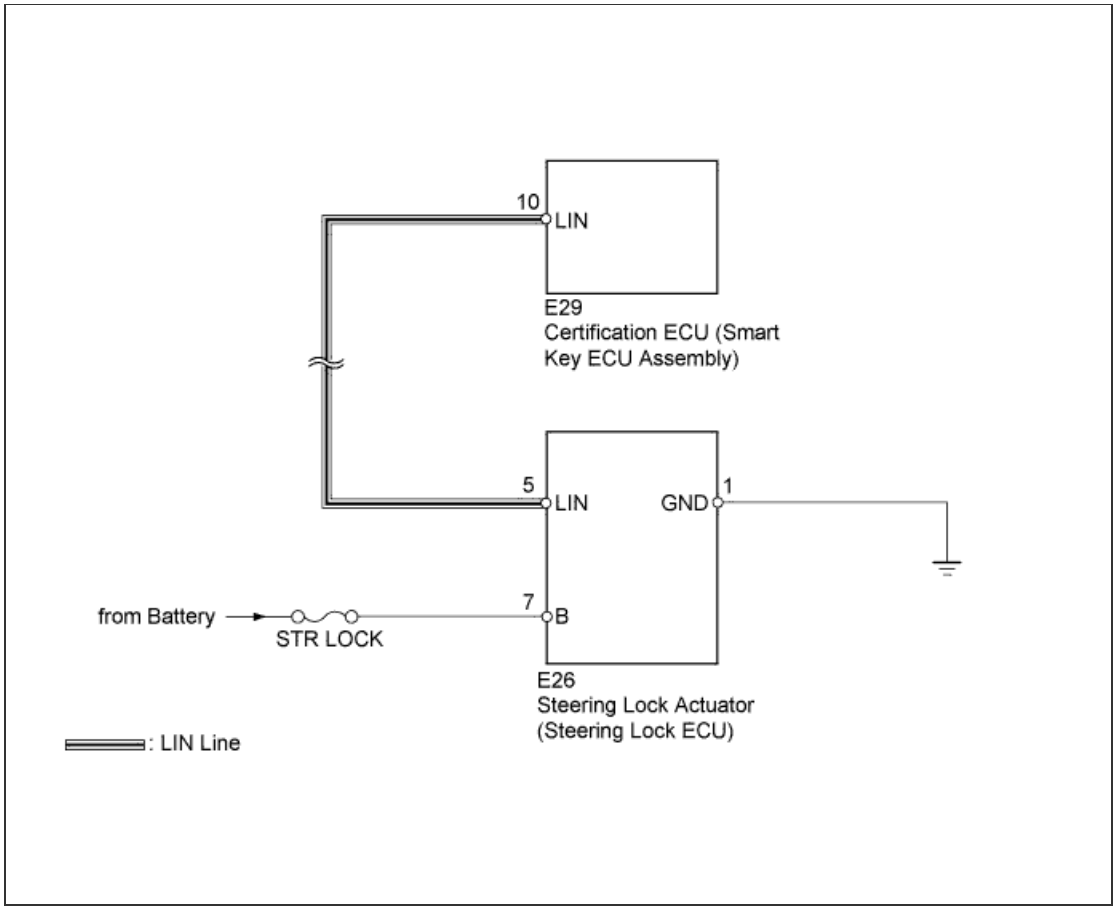
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the certification ECU (smart key ECU assembly) and steering lock actuator (steering lock ECU) stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B2786	Periodic transmission from the steering lock ECU stops for 10 seconds or more.	• Steering lock actuator (Steering lock ECU) • Certification ECU (smart key ECU assembly) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2785 is stored when the communication between the steering lock ECU and certification ECU (smart key ECU assembly) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2786 is output	A
DTC B2786 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

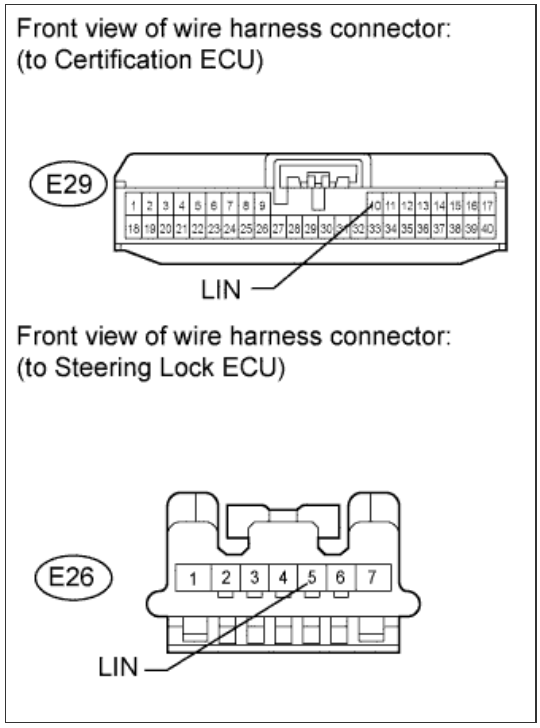
3.CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU - STEERING LOCK ECU)

a. Disconnect the E29 and E26 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E29-10 (LIN) - E26-5 (LIN)	Always	Below 1 Ω
E29-10 (LIN) or E26-5 (LIN) - Body ground	Always	10 kΩ or higher



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (STEERING LOCK ACTUATOR - BATTERY AND BODY GROUND)

a. Disconnect the E26 ECU connector.

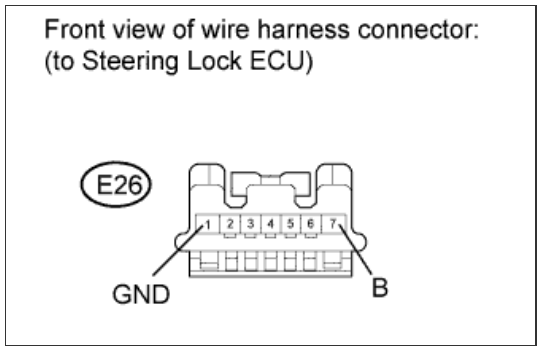
b. Measure the resistance and voltage according to the value(s) in the tables below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E26-1 (GND) - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
E26-7 (B) - Body ground	Always	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE STEERING LOCK ACTUATOR ASSEMBLY

a. Temporarily replace the steering lock actuator with a new or normally functioning one (Click here).

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2786 is not output	A
DTC B2786 is output	B

B → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

A

END (STEERING LOCK ECU IS DEFECTIVE)

DTC B2322 Front Passenger Side Door ECU Communication Stop

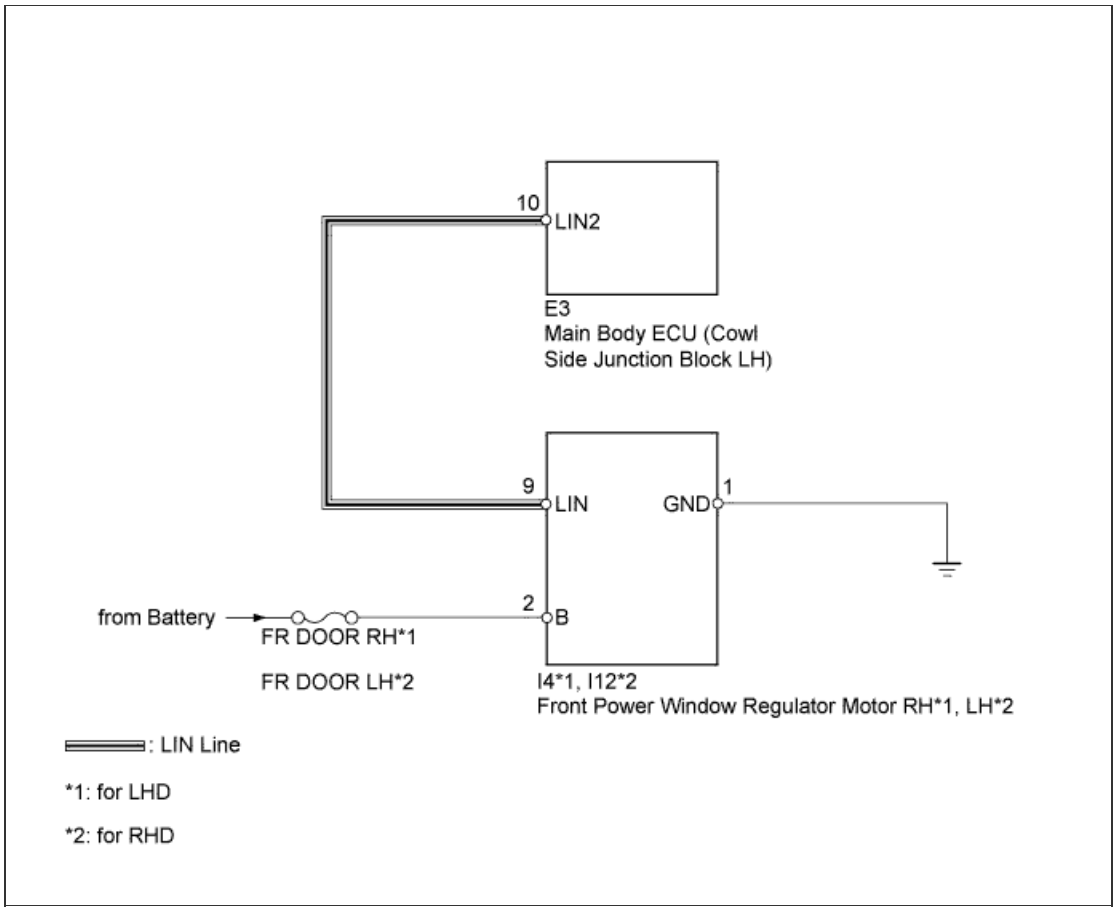
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the front power window regulator motor RH*1 or LH*2 and main body ECU (cowl side junction block LH) stops for 10 seconds or more.
*1: for LHD
*2: for RHD

DTC Code	DTC Detection Condition	Trouble Area
B2322	No communication between the front power window regulator motor RH*1 or LH*2 and main body ECU (cowl side junction block LH) for 10 seconds or more.	• Front power window regulator motor RH*1 • Front power window regulator motor LH*2 • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2325 is stored when the communication between the front power window regulator motor and main body ECU (cowl side junction block LH) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2322 is output	A
DTC B2322 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - FRONT POWER WINDOW REGULATOR MOTOR)

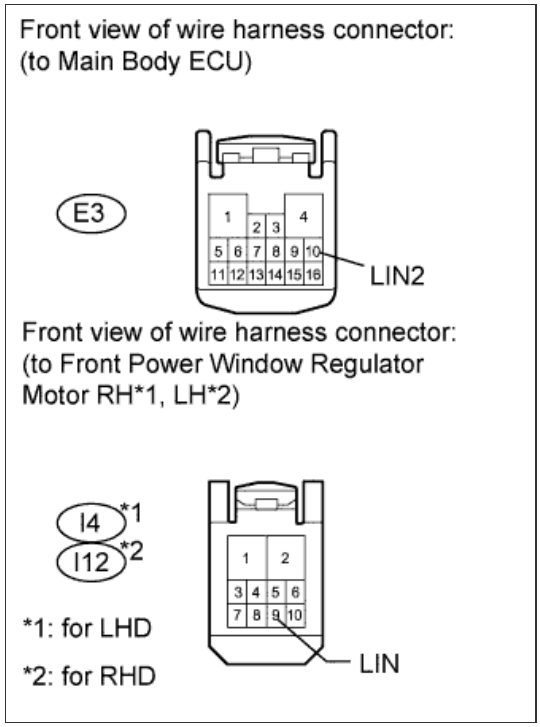
a. Disconnect the E3 ECU connector.

b. Disconnect the I4*1 or I12*2 motor connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - I4-9 (LIN)*1 or I12-9 (LIN)*2	Always	Below 1 Ω



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (FRONT POWER WINDOW REGULATOR - BATTERY AND BODY GROUND)

a. Disconnect the I4*1 or I12*2 motor connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

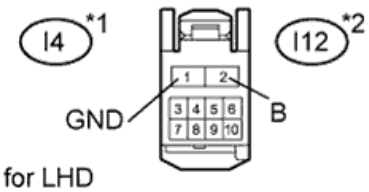
Standard Resistance:

Tester Connection	Condition	Specified Condition
I4-1 (GND)*1 or I12-1 (GND)*2 - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
I4-2 (B)*1 or I12-2 (B)*2 - Body ground	Always	11 to 14 V

Front view of wire harness connector:
(to Front Power Window Regulator Motor RH*1, LH*2)



*1: for LHD

*2: for RHD

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE FRONT POWER WINDOW REGULATOR MOTOR ASSEMBLY

a. Temporarily replace the front power window regulator motor assembly RH*1 or LH*2 with a new or normally functioning one (Click here).
*1: for LHD
*2: for RHD

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2322 is not output	A
DTC B2322 is output	B

B → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

A

END (FRONT POWER WINDOW REGULATOR MOTOR IS DEFECTIVE)

DTC B2789 No Response from ID BOX

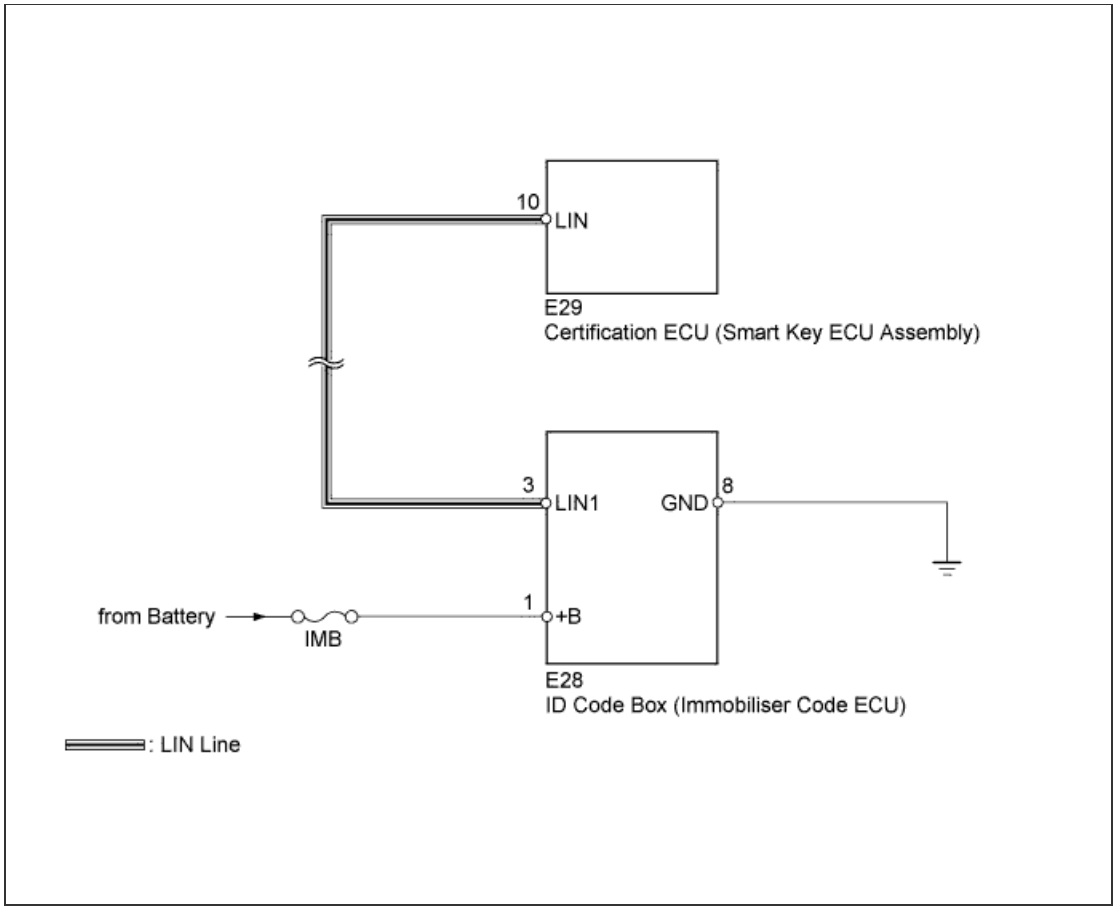
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the certification ECU (smart key ECU assembly) and ID code box (immobiliser code ECU) stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B2789	No communication between the certification ECU (smart key ECU assembly) and ID code box (immobiliser code ECU) for 10 seconds or more.	• ID code box (immobiliser code ECU) • Certification ECU (smart key ECU assembly) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2785 is stored when the communication between the ID code box (immobiliser code ECU) and certification ECU (smart key ECU assembly) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2789 is output	A
DTC B2789 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU - ID CODE BOX)

a. Disconnect the E29 ECU connector.

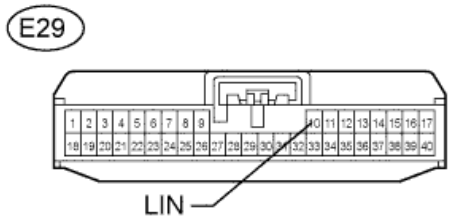
b. Disconnect the E28 box connector.

c. Measure the resistance according to the value(s) in the table below.

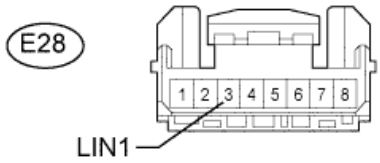
Standard Resistance:

Tester Connection	Condition	Specified Condition
E29-10 (LIN) - E28-3 (LIN1)	Always	Below 1 Ω
E29-10 (LIN) or E28-3 (LIN1) - Body ground	Always	10 kΩ or higher

Front view of wire harness connector:
(to Certification ECU)



Front view of wire harness connector:
(to ID Code Box)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (ID CODE BOX - BATTERY AND BODY GROUND)

a. Disconnect the E28 box connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

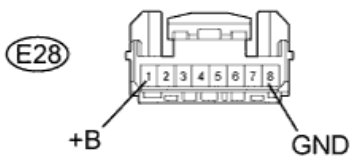
Standard Resistance:

Tester Connection	Condition	Specified Condition
E28-8 (GND) - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
E28-1 (+B) - Body ground	Always	11 to 14 V

Front view of wire harness connector:
(to ID Code Box)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE ID CODE BOX (IMMOBILISER CODE ECU)

a. Temporarily replace the ID code box (immobiliser code ECU) with a new or normally functioning one.

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2789 is output	A
DTC B2789 is not output	B

B → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

A

END (ID CODE BOX IS DEFECTIVE)

DTC B2323 Rear Door RH ECU Communication Stop

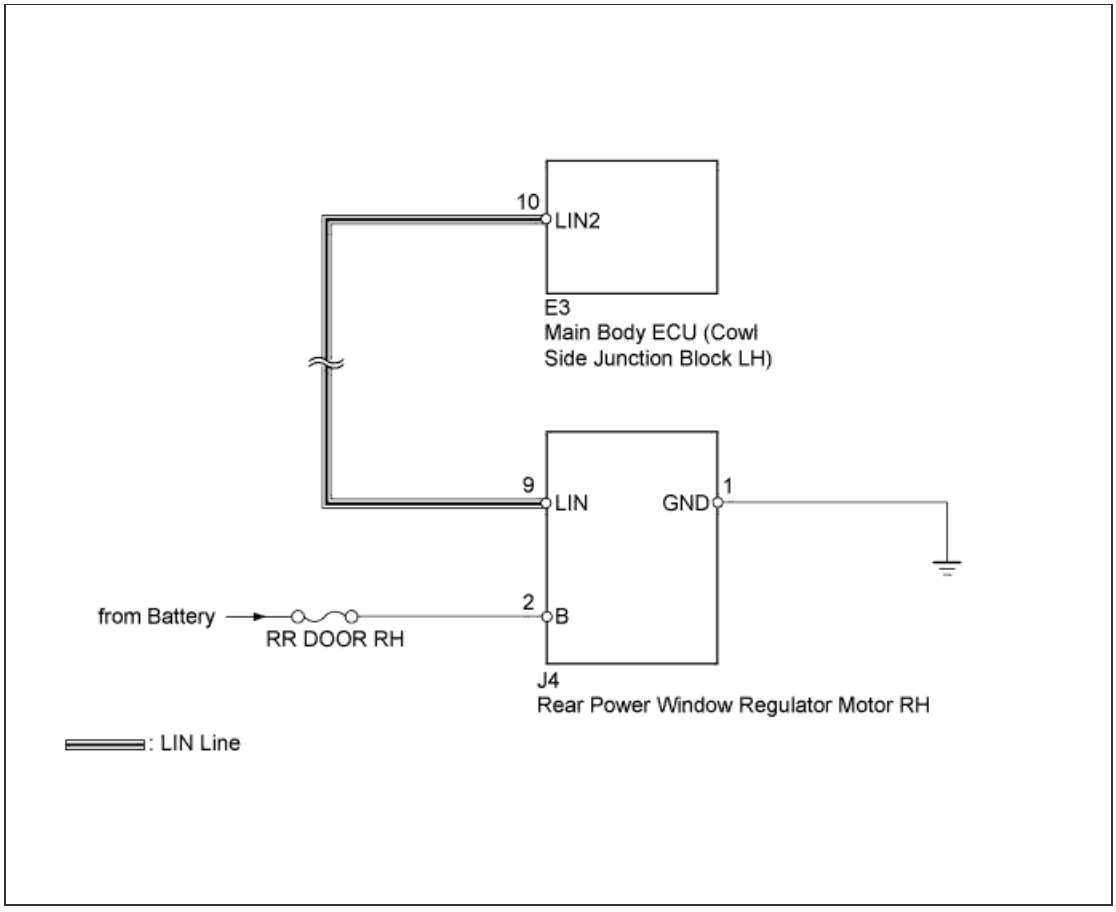
for Preparation Click here

DESCRIPTION

This DTC is stored when LIN communication between the rear power window regulator motor RH and main body ECU (cowl side junction block LH) stops for 10 seconds or more.

DTC Code	DTC Detection Condition	Trouble Area
B2323	No communication between the rear power window regulator motor RH and main body ECU (cowl side junction block LH) for 10 seconds or more.	• Rear power window regulator motor RH • Main body ECU (cowl side junction block LH) • Harness or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

HINT:

DTC B2325 is stored when the communication between the rear power window regulator motor and main body ECU (cowl side junction block LH) stops.

1.CLEAR DTC

a. Clear the DTC (Click here).

NEXT

2.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2323 is output	A
DTC B2323 is not output	B

B → USE SIMULATION METHOD TO CHECK (Click here)

A

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - REAR POWER WINDOW REGULATOR MOTOR RH)

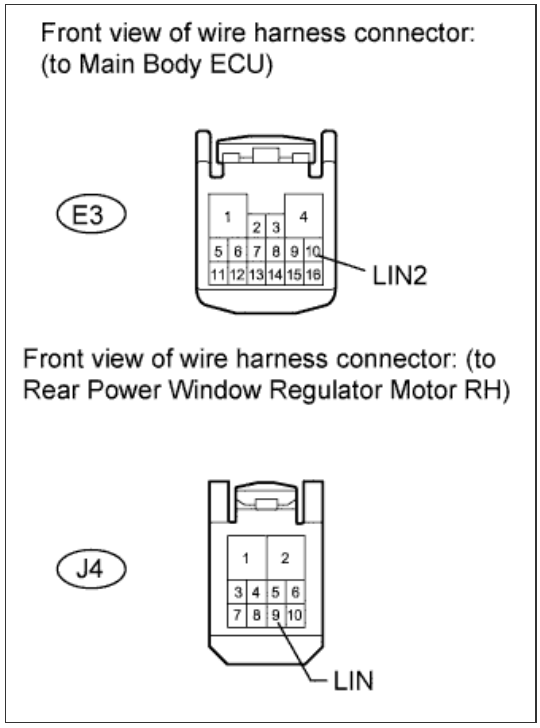
a. Disconnect the E3 ECU connector.

b. Disconnect the J4 motor connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E3-10 (LIN2) - J4-9 (LIN)	Always	Below 1 Ω
E3-10 (LIN2) or J4-9 (LIN) - Body ground	Always	10 kΩ or higher



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4.CHECK HARNESS AND CONNECTOR (REAR POWER WINDOW REGULATOR MOTOR - BATTERY AND BODY GROUND)

a. Disconnect the J4 motor connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

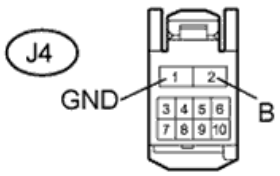
Standard Resistance:

Tester Connection	Condition	Specified Condition
J4-1 (GND) - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
J4-2 (B) - Body ground	Always	11 to 14 V

Front view of wire harness connector:
(to Rear Power Window Regulator Motor RH)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5.REPLACE REAR POWER WINDOW REGULATOR MOTOR ASSEMBLY RH

a. Temporarily replace the rear power window regulator motor RH with a new or normally functioning one (Click here).

b. Clear the DTC (Click here).

NEXT

6.CHECK FOR DTC

a. Recheck for DTCs (Click here).

Result

Result	Proceed to
DTC B2323 is not output	A
DTC B2323 is output	B

B → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

A

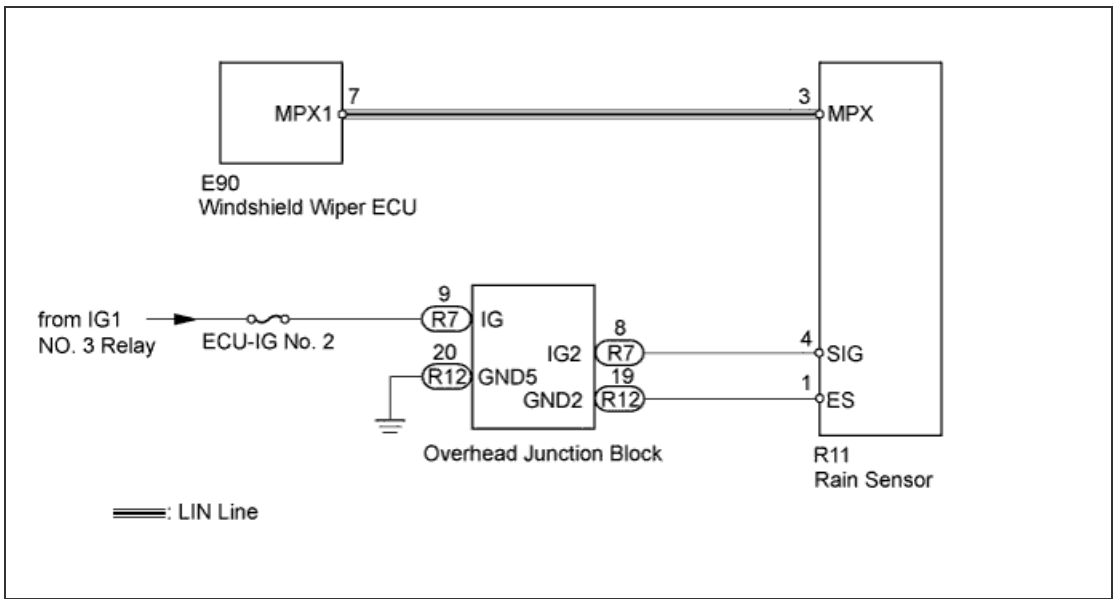
END (REAR POWER WINDOW REGULATOR MOTOR RH IS DEFECTIVE)

for Preparation Click here

DESCRIPTION

The LIN communication of the components related to the rain sensor occurs between the rain sensor and windshield wiper ECU.

WIRING DIAGRAM



INSPECTION PROCEDURE

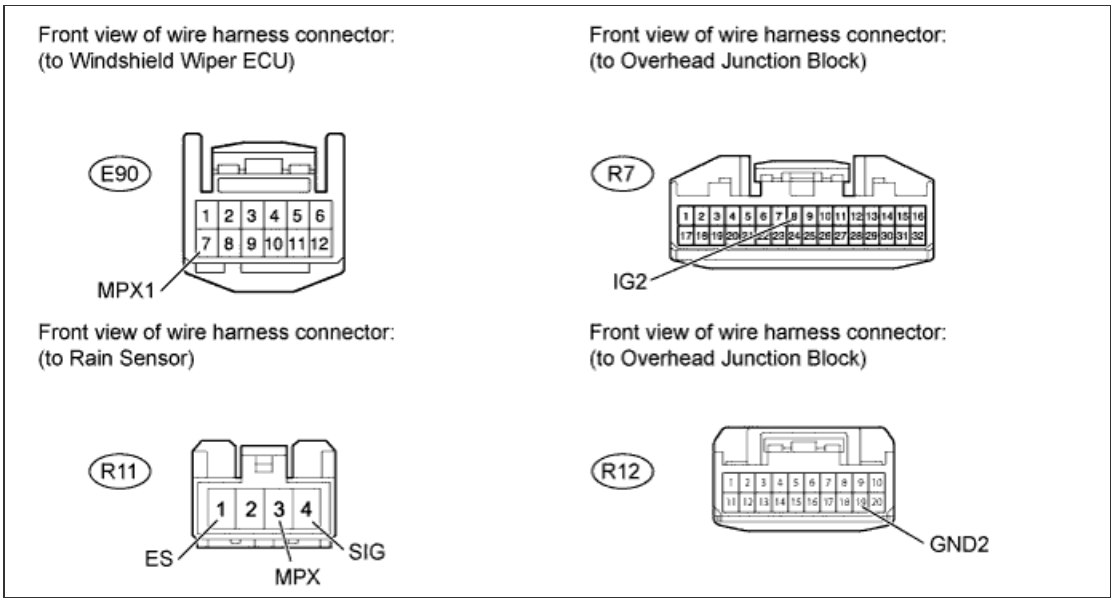
NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

1.CHECK HARNESS AND CONNECTOR (RAIN SENSOR - WINDSHIELD WIPER ECU AND OVERHEAD JUNCTION BLOCK)

a. Disconnect the E90 ECU connector.



b. Disconnect the R11 sensor connector.

c. Disconnect the R7 and R12 junction block connectors.

d. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
R11-3 (MPX) - E90-7 (MPX1)	Always	Below 1 Ω
R11-4 (SIG) - R7-8 (IG2)	Always	Below 1 Ω
R11-1 (ES) - R12-19 (GND2)	Always	Below 1 Ω
R11-3 (MPX) - Body ground	Always	10 kΩ or higher
R11-4 (SIG) - Body ground	Always	10 kΩ or higher
R11-1 (ES) - Body ground	Always	10 kΩ or higher

e. Reconnect the R7 and R12 junction block connectors.

f. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
R11-4 (SIG) - Body ground	Engine switch on (IG)	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ↓

2.REPLACE RAIN SENSOR

a. Temporarily replace the rain sensor with a new one (Click here).

b. Check the rain sensor function is normal.

OK:
Rain sensor function is normal

NG → REPLACE WINDSHIELD WIPER ECU (Click here)

OK ↓

END (RAIN SENSOR IS DEFECTIVE)

for Preparation Click here

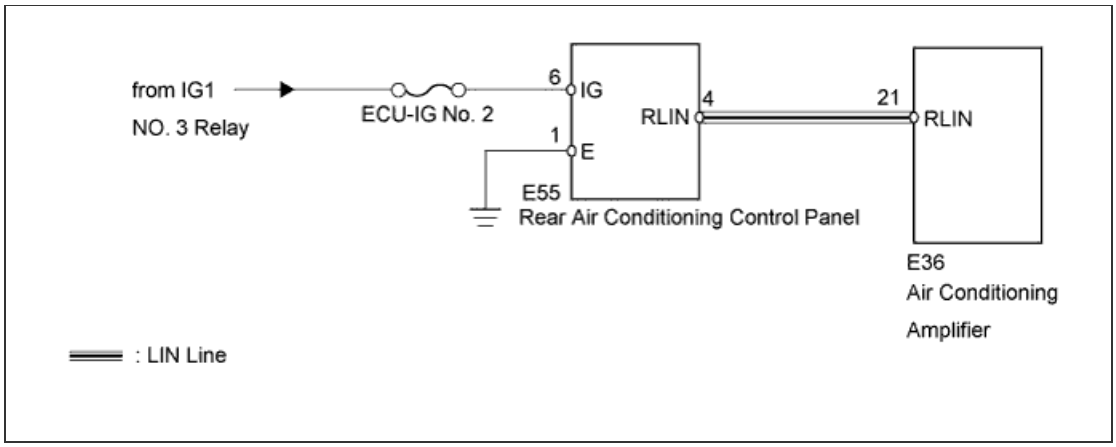
DESCRIPTION

The LIN communication of the components related to the rear heater occurs between the air conditioning amplifier (A/C ECU) and rear air conditioning control panel.

HINT:

"Rear heater control panel" refers to the rear air conditioning control panel.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

When using the intelligent tester with the engine switch off to troubleshoot:

Connect the intelligent tester to the vehicle, and turn a courtesy switch on and off at 1.5 second intervals until communication between the intelligent tester and vehicle begins.

1.CHECK HARNESS AND CONNECTOR (AIR CONDITIONING AMPLIFIER - REAR AIR CONDITIONING CONTROL PANEL)

a. Disconnect the E36 amplifier connector.

b. Disconnect the E55 panel connector.

c. Measure the resistance and voltage according to the value(s) in the tables below.

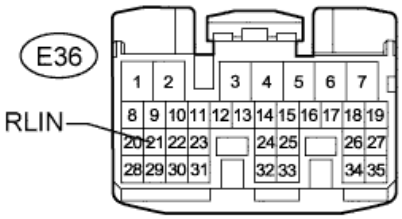
Standard Resistance:

Tester Connection	Condition	Specified Condition
E36-21 (RLIN) - E55-4 (RLIN)	Always	Below 1 Ω
E36-21 (RLIN) - Body ground	Always	10 kΩ or higher

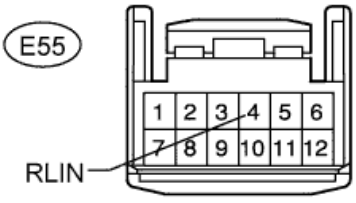
Standard Voltage:

Tester Connection	Condition	Specified Condition
E36-21 (RLIN) - Body ground	Always	Below 1 V

Front view of wire harness connector:
(to Air Conditioning Amplifier)



Front view of wire harness connector:
(to Rear Air Conditioning Control Panel)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

2.CHECK REAR AIR CONDITIONING CONTROL PANEL (BATTERY VOLTAGE AND BODY GROUND)

a. Disconnect the E55 panel connector.

b. Measure the resistance and voltage according to the value(s) in the tables below.

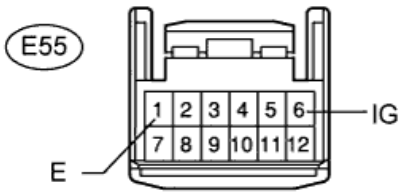
Standard Resistance:

Tester Connection	Condition	Specified Condition
E55-1 (E) - Body ground	Always	Below 1 Ω

Standard Voltage:

Tester Connection	Condition	Specified Condition
E55-6 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Rear Air Conditioning Control Panel)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

3.CHECK REAR AIR CONDITIONING CONTROL PANEL

a. Temporarily replace the rear air conditioning control panel with a new or normally functioning one (Click here).

b. Check that the rear air conditioning function is normal.

OK:
Rear air conditioning function is normal.

NG → REPLACE AIR CONDITIONING AMPLIFIER (**Click here**)

OK

END (REAR AIR CONDITIONING CONTROL PANEL IS DEFECTIVE)

for Preparation Click here

1.STEERING SYSTEM HANDLING PRECAUTIONS

a. Care must be taken when replacing parts. Incorrect replacement could affect the performance of the steering system and result in hazards when driving.

2.SRS AIRBAG SYSTEM HANDLING PRECAUTIONS

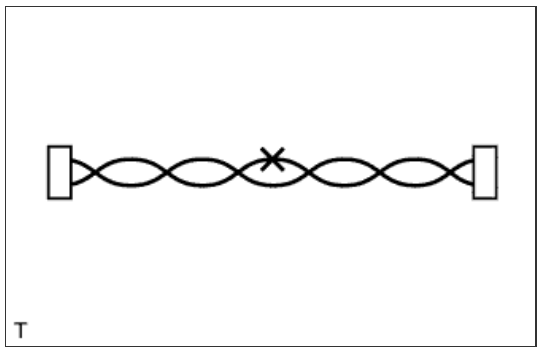
a. This vehicle is equipped with an SRS (Supplemental Restraint System), such as the driver airbag and front passenger airbag. Failure to carry out service operations in the correct sequence could cause unexpected SRS deployment during servicing and may lead to a serious accident. Before servicing (including installation/removal, inspection and replacement of parts), be sure to read the precautionary notice for the Supplemental Restraint System (Click here).

3.BUS LINE REPAIR

a. After repairing the bus line with solder, wrap the repaired part with vinyl tape (Click here).

NOTICE:

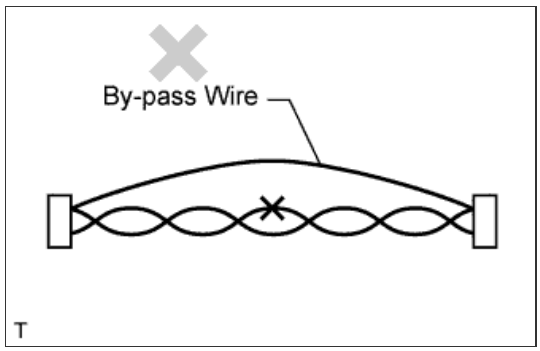
- **The CANL bus line and CANH bus line must be installed together.**
- **When installing the CAN bus lines, make sure to twist them.**
- **CAN bus lines are likely to be influenced by noise if the bus lines are not twisted together.**
- **The difference in length between the CANL bus line and CANH bus line should be less than 100 mm (3.94 in.).**
- **Leave approximately 80 mm (3.15 in.) loose in the twisted wires around the connectors.**



b. Do not use by-pass wiring between the connectors.

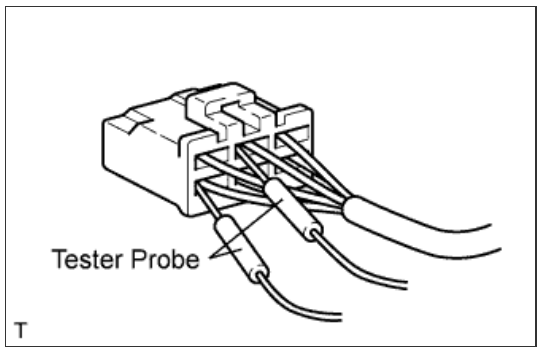
NOTICE:

The feature of the twisted wire harness will be lost if bypass wiring is used.

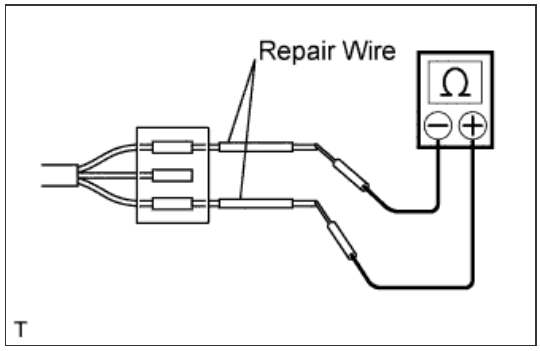


4.CONNECTOR HANDLING

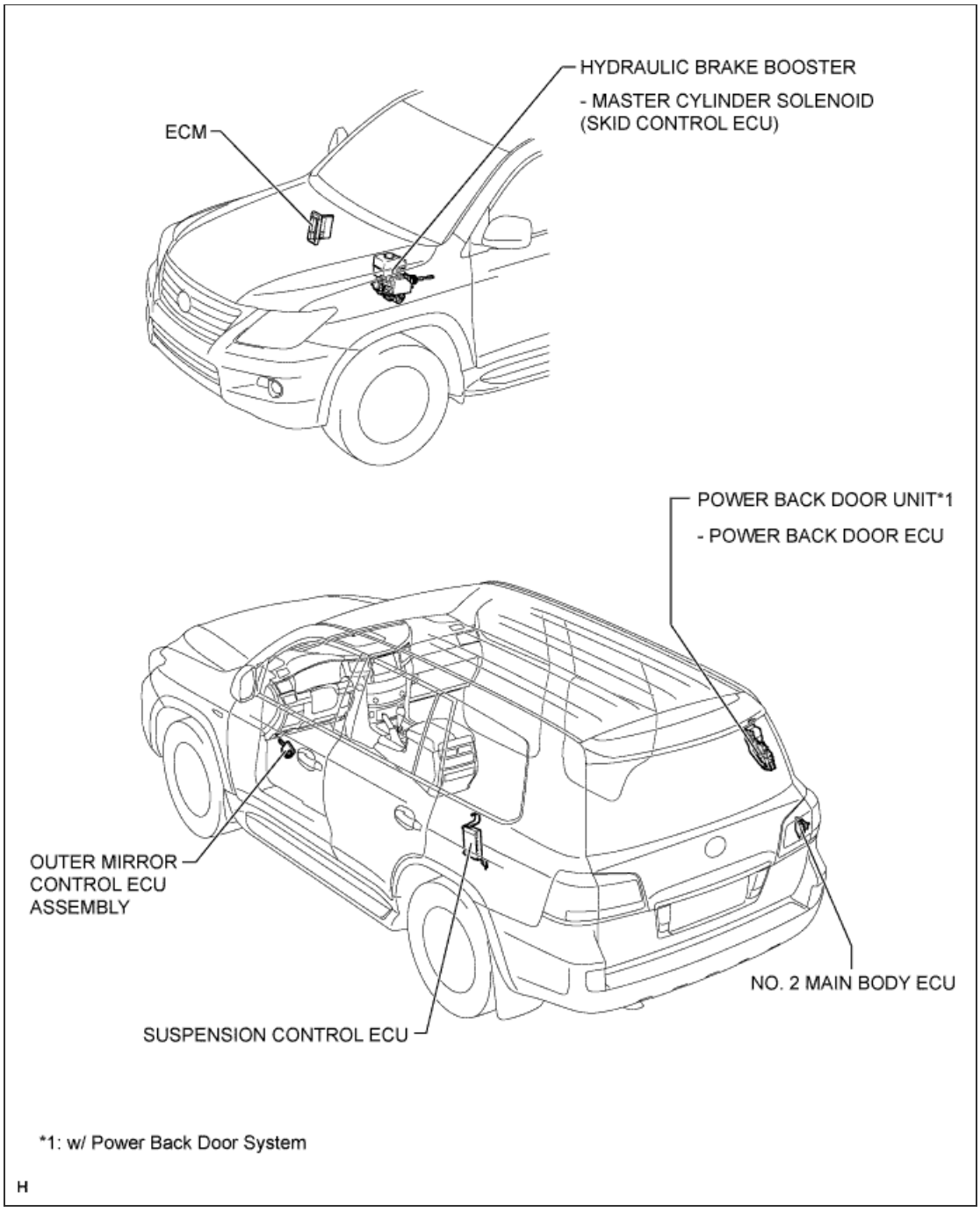
a. When inserting probes into a connector, insert them from the rear of the connector.

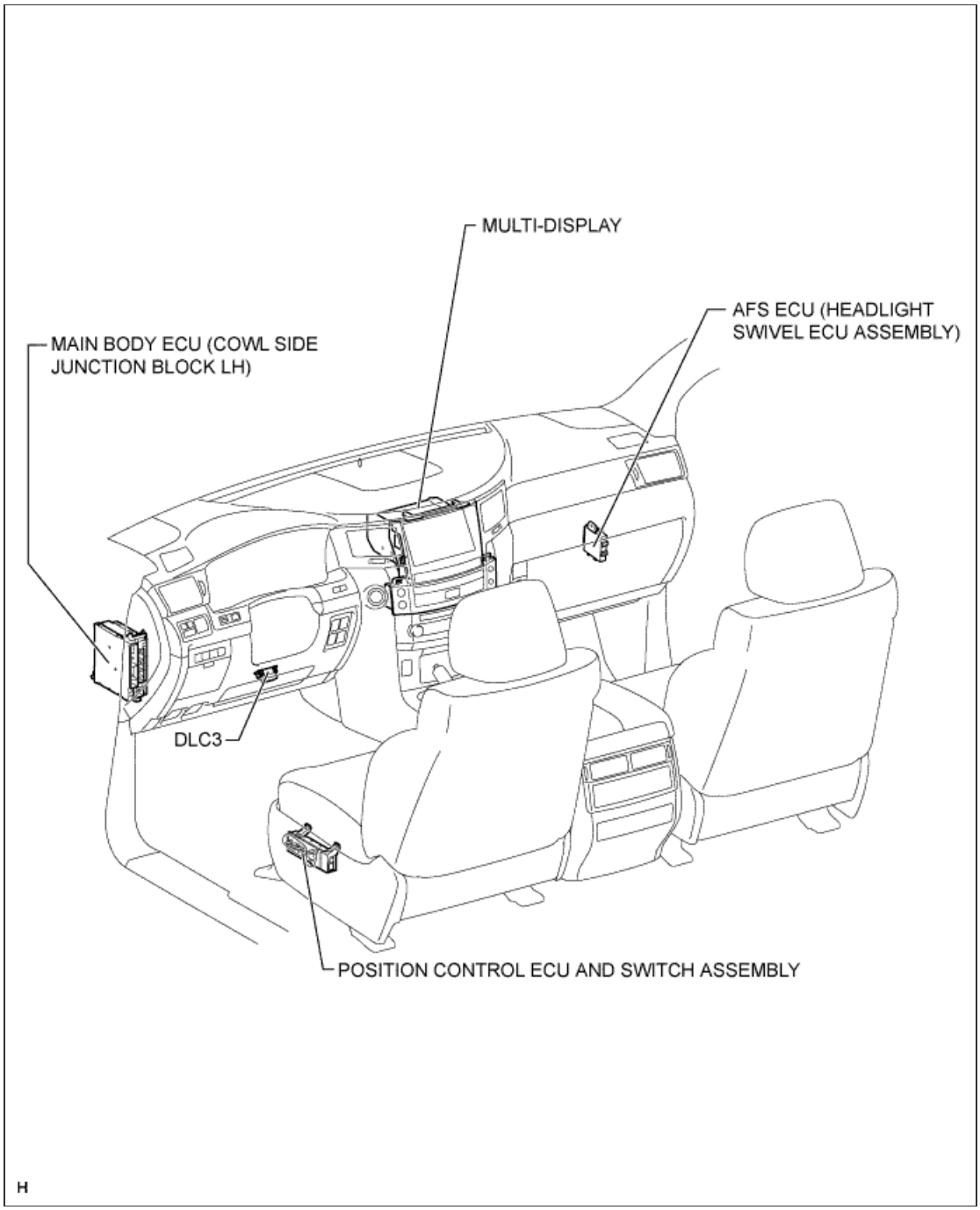


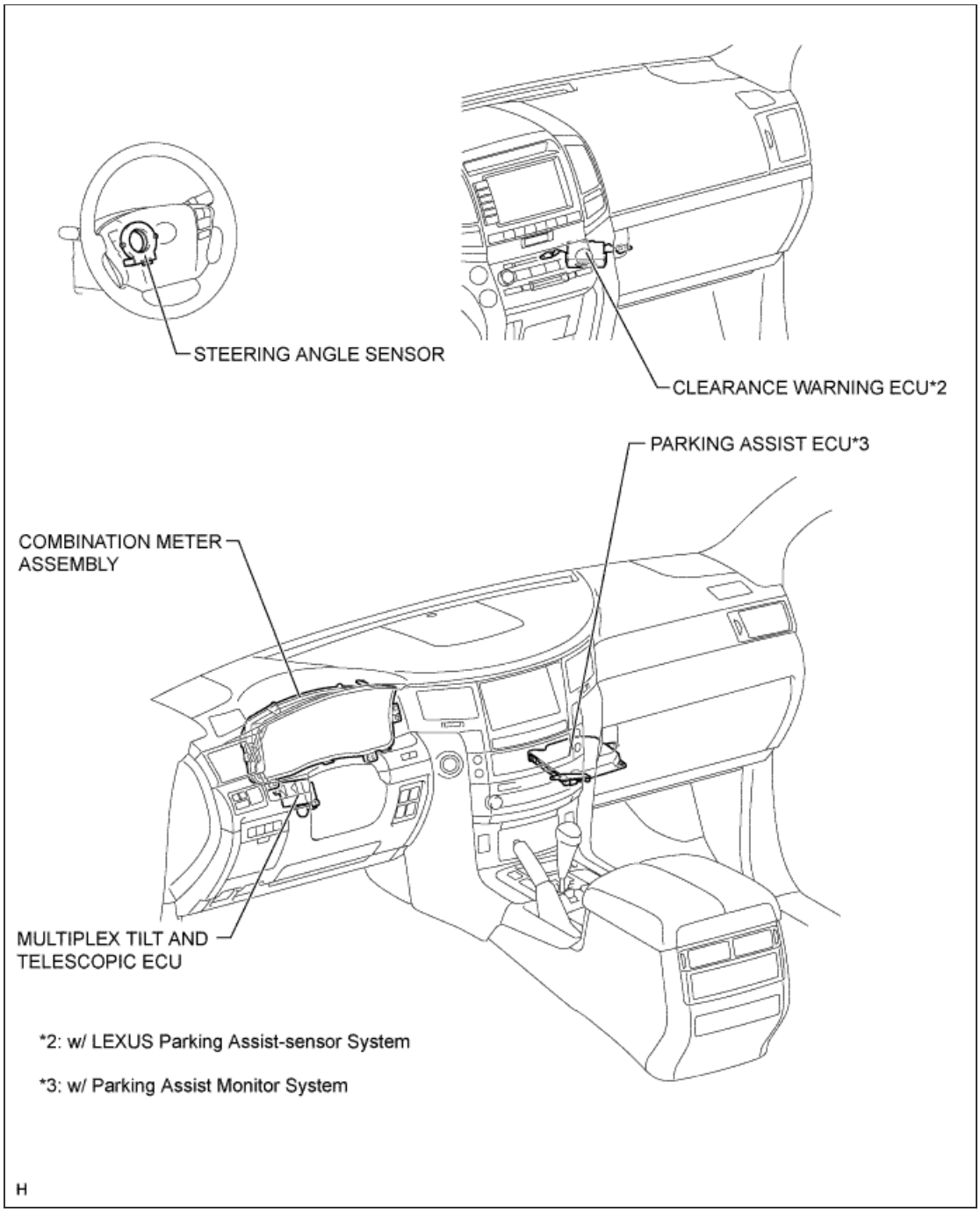
b. Use a repair wire to check the connector if it is impossible to check resistance from the rear of the connector.

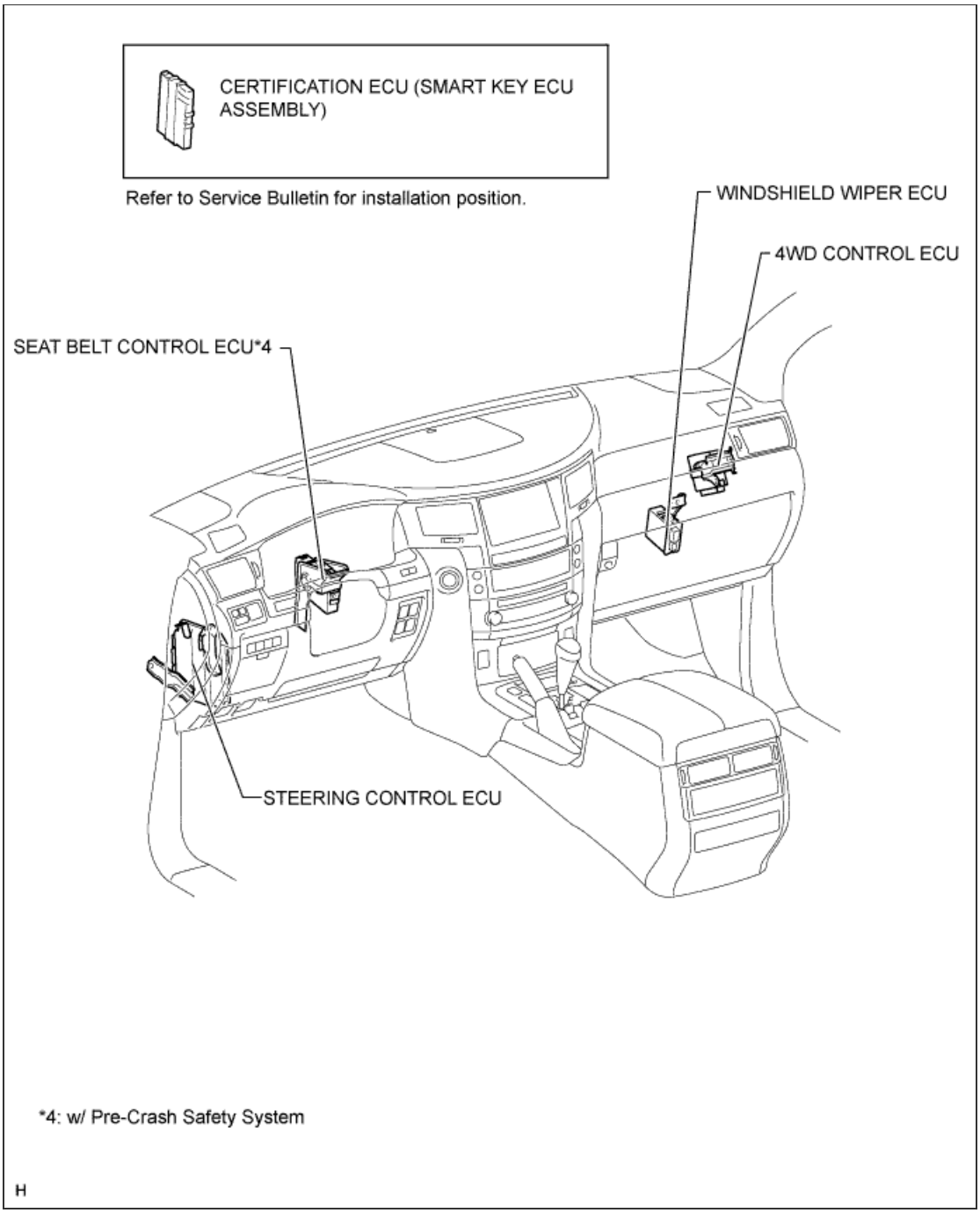


for Preparation Click here



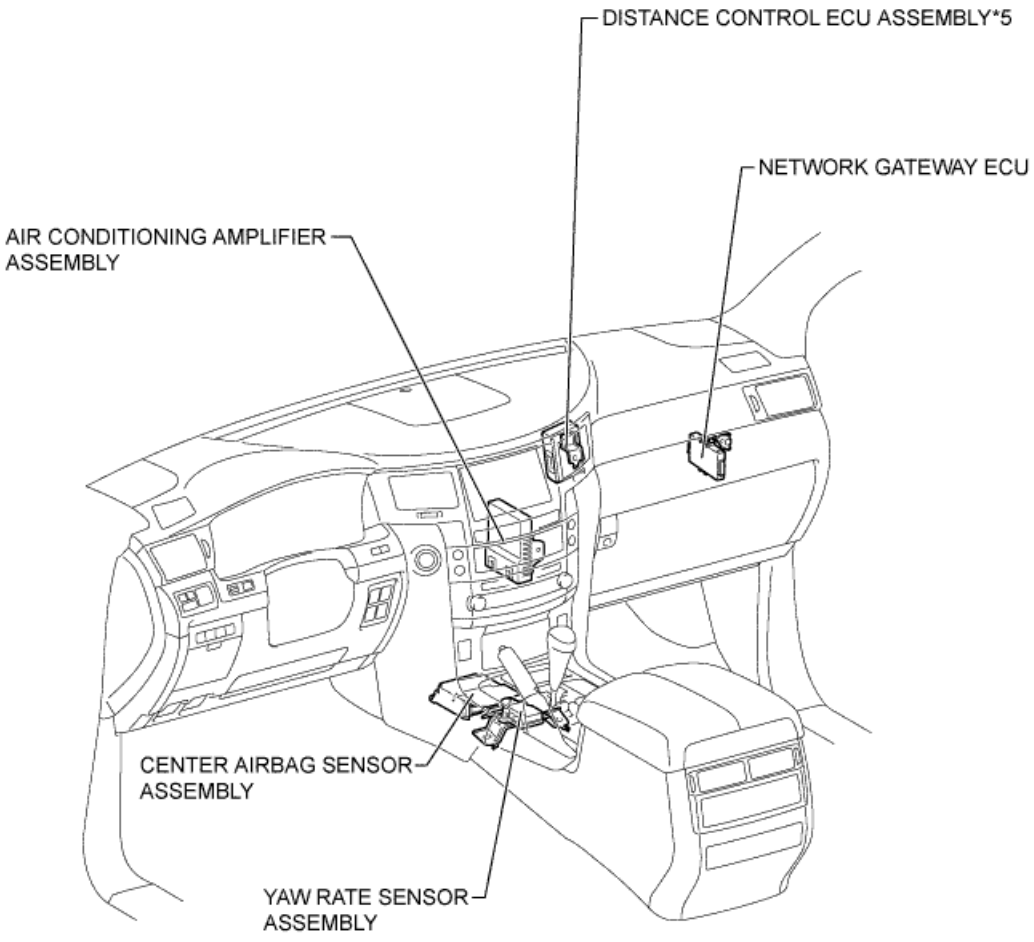

MULTI-DISPLAY
AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY)
MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)
DLC3
POSITION CONTROL ECU AND SWITCH ASSEMBLY
H


STEERING ANGLE SENSOR
CLEARANCE WARNING ECU*2
PARKING ASSIST ECU*3
COMBINATION METER ASSEMBLY
MULTIPLEX TILT AND TELESCOPIC ECU
*2: w/ LEXUS Parking Assist-sensor System
*3: w/ Parking Assist Monitor System
H



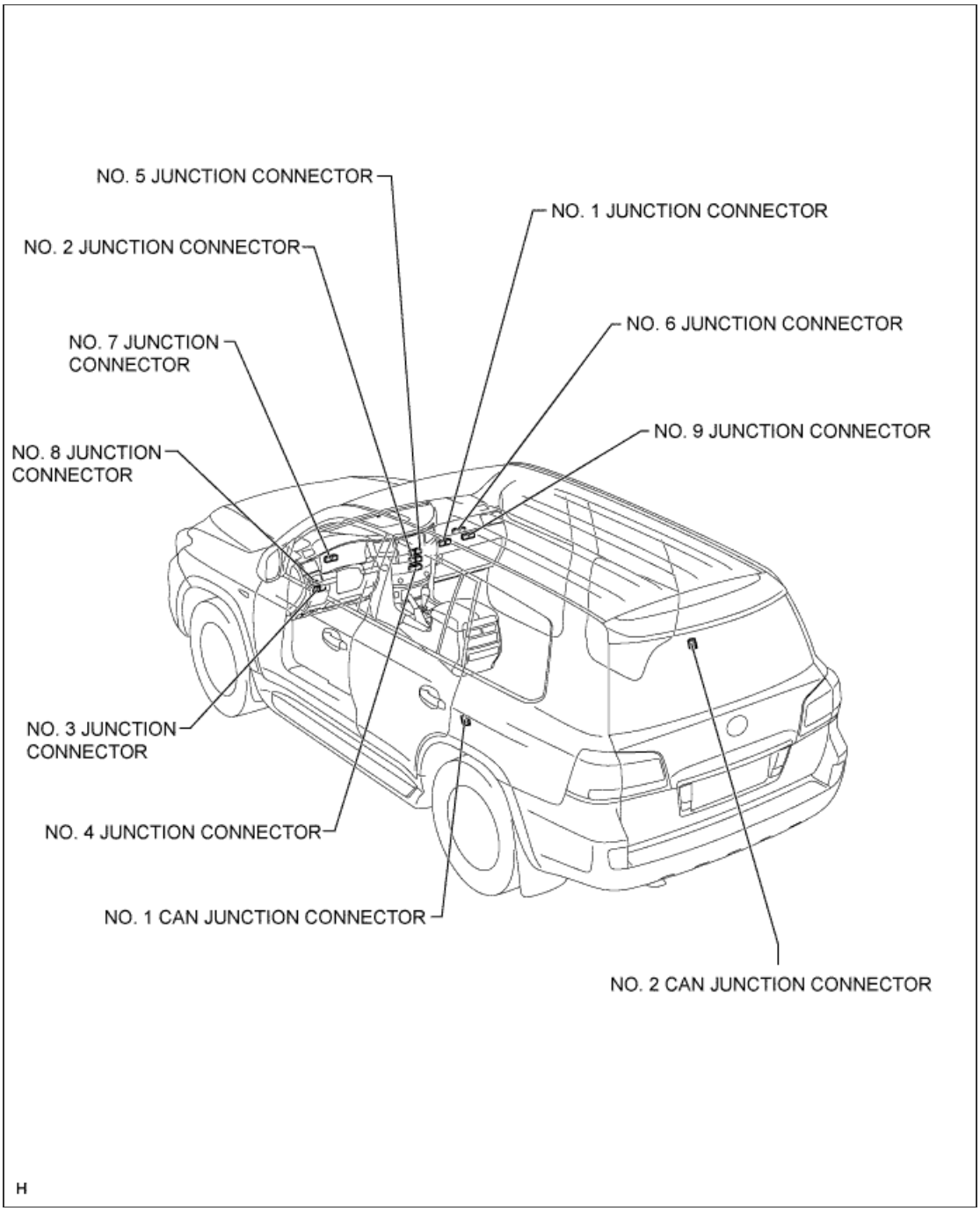
*4: w/ Pre-Crash Safety System

H

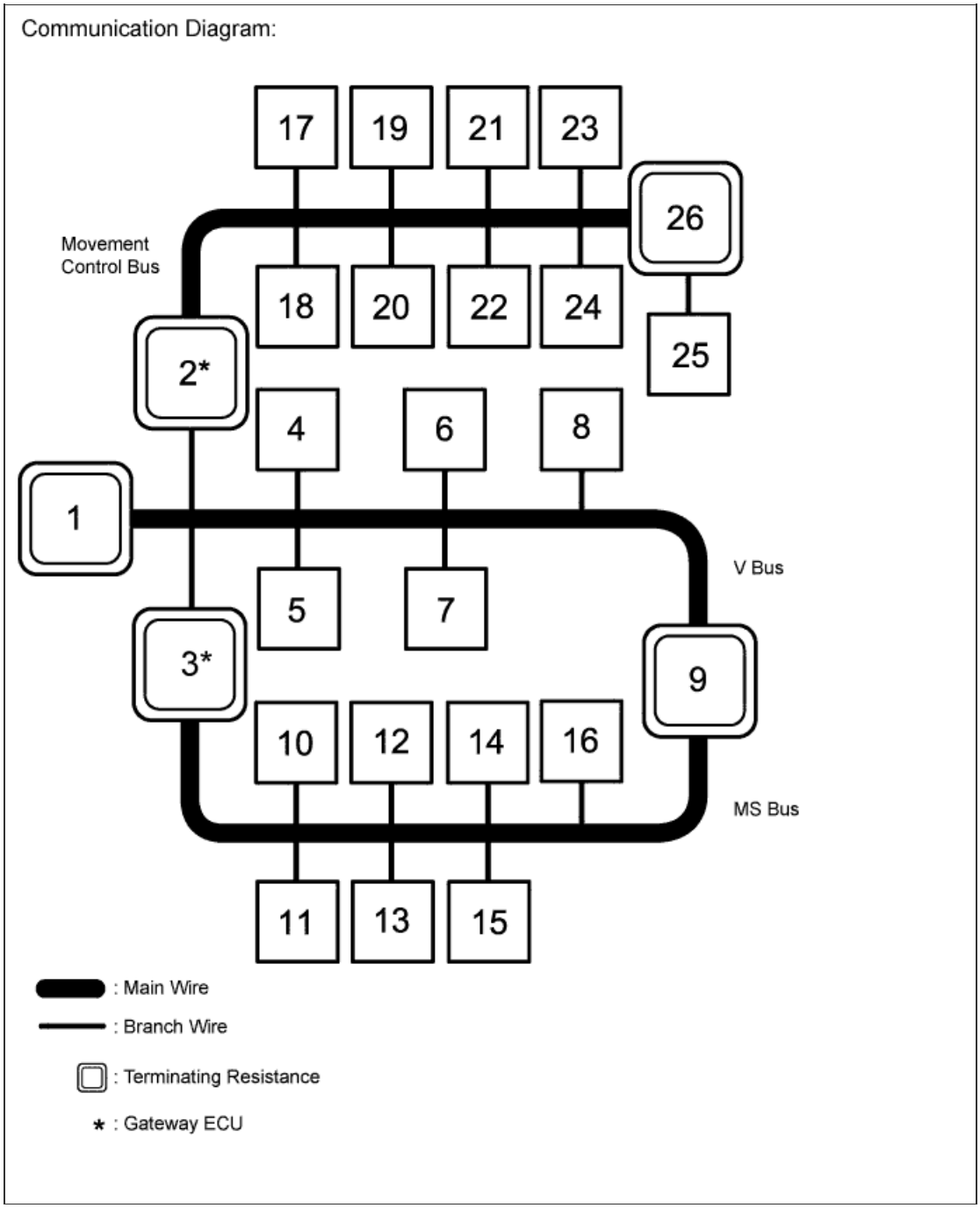


*5: w/ Dynamic Radar Cruise Control System

H


NO. 5 JUNCTION CONNECTOR
NO. 1 JUNCTION CONNECTOR
NO. 2 JUNCTION CONNECTOR
NO. 6 JUNCTION CONNECTOR
NO. 7 JUNCTION CONNECTOR
NO. 9 JUNCTION CONNECTOR
NO. 8 JUNCTION CONNECTOR
NO. 3 JUNCTION CONNECTOR
NO. 4 JUNCTION CONNECTOR
NO. 1 CAN JUNCTION CONNECTOR
NO. 2 CAN JUNCTION CONNECTOR
H

for Preparation Click here

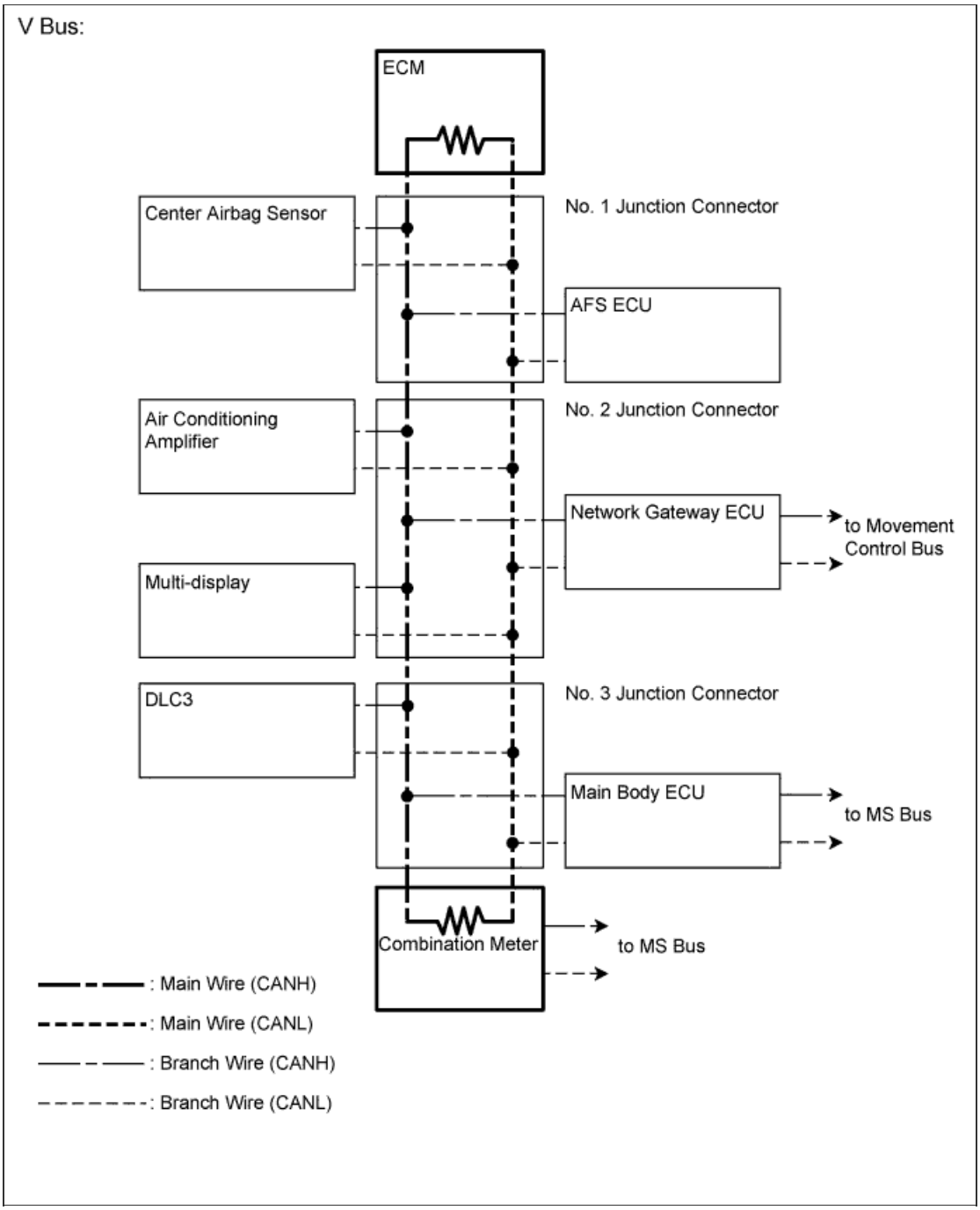


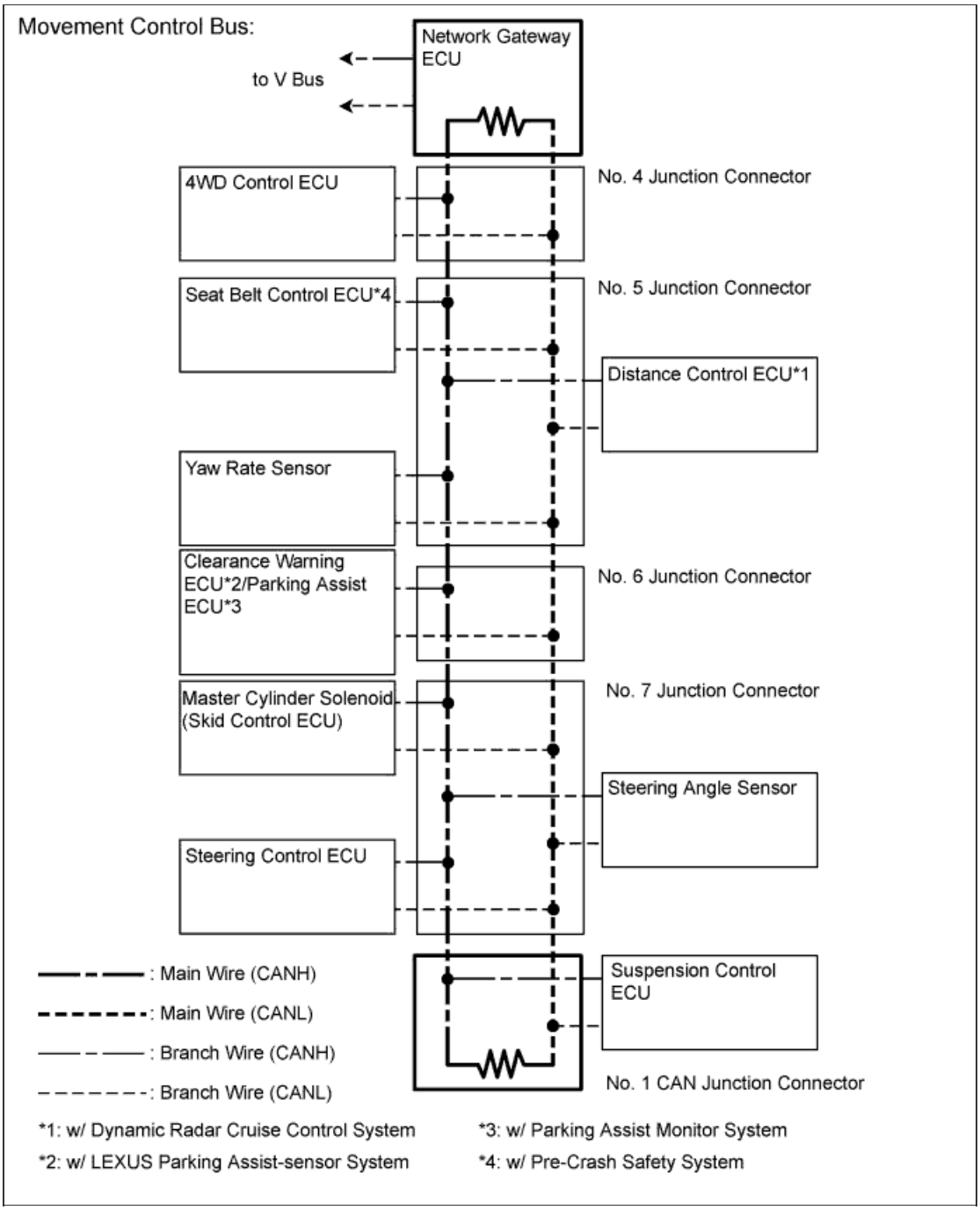
No.	ECU/Sensor Name
1	ECM
2	Network Gateway ECU
3	Main Body ECU (Cowl Side Junction Block LH)
4	DLC3
5	Air Conditioning Amplifier
6	Center Airbag Sensor
7	Multi-display
8	AFS ECU (Headlight Swivel ECU)
9	Combination Meter
10	Certification ECU (Smart Key ECU)
11	Multiplex Tilt and Telescopic ECU

12	Outer Mirror Control ECU
13	Position Control ECU and Switch
14	No. 2 Main Body ECU
15	Power Back Door Unit (Back Door ECU)*1
16	Windshield Wiper ECU
17	Master Cylinder Solenoid (Skid Control ECU)
18	Yaw Rate Sensor
19	Steering Angle Sensor
20	4WD Control ECU
21	Parking Assist ECU*2 Clearance Warning ECU*3
22	Seat Belt Control ECU*4
23	Distance Control ECU*5
24	Steering Control ECU
25	Suspension Control ECU
26	No. 1 CAN Junction Connector

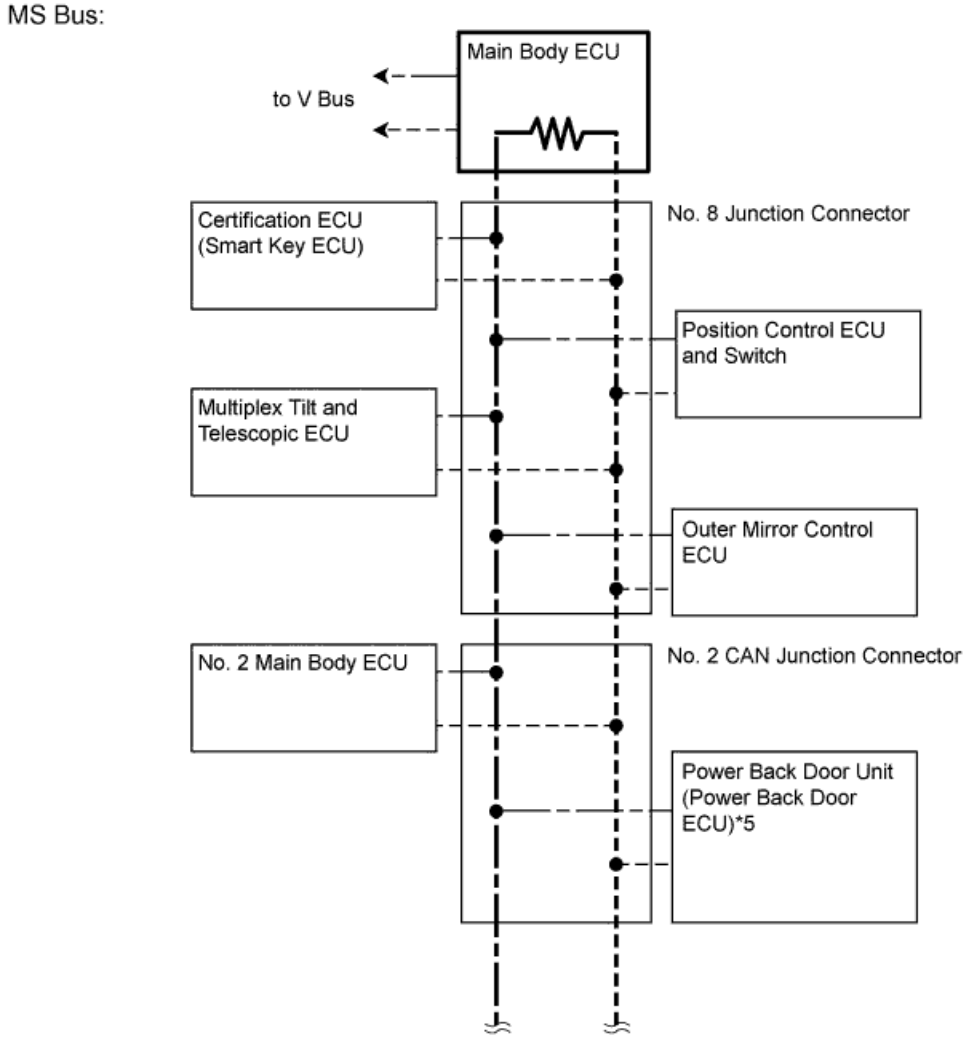
*1: w/ Power Back Door System
*2: w/ Parking Assist Monitor System
*3: w/ LEXUS Parking Assist-sensor System
*4: w/ Pre-Crash Safety System
*5: w/ Dynamic Radar Cruise Control System

V Bus:


ECM
Center Airbag Sensor
No. 1 Junction Connector
AFS ECU
Air Conditioning Amplifier
No. 2 Junction Connector
Network Gateway ECU
to Movement Control Bus
Multi-display
DLC3
No. 3 Junction Connector
Main Body ECU
to MS Bus
Combination Meter
to MS Bus
: Main Wire (CANH)
: Main Wire (CANL)
: Branch Wire (CANH)
: Branch Wire (CANL)


Movement Control Bus:
Network Gateway ECU
to V Bus
4WD Control ECU
No. 4 Junction Connector
Seat Belt Control ECU*4
No. 5 Junction Connector
Distance Control ECU*1
Yaw Rate Sensor
Clearance Warning ECU*2/Parking Assist ECU*3
No. 6 Junction Connector
Master Cylinder Solenoid (Skid Control ECU)
No. 7 Junction Connector
Steering Angle Sensor
Steering Control ECU
Suspension Control ECU
No. 1 CAN Junction Connector
: Main Wire (CANH)
: Main Wire (CANL)
: Branch Wire (CANH)
: Branch Wire (CANL)
*1: w/ Dynamic Radar Cruise Control System
*2: w/ LEXUS Parking Assist-sensor System
*3: w/ Parking Assist Monitor System
*4: w/ Pre-Crash Safety System

MS Bus:



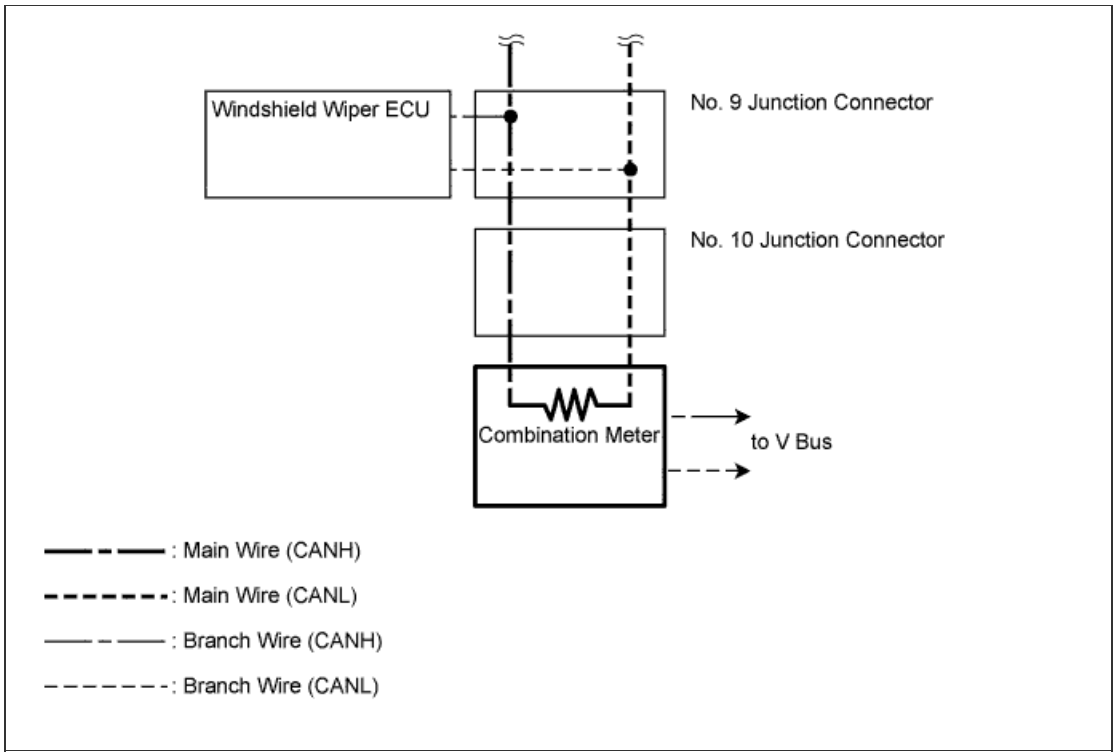
: Main Wire (CANH)

: Main Wire (CANL)

: Branch Wire (CANH)

: Branch Wire (CANL)

*5: w/ Power Back Door System



HINT:

- **The master cylinder solenoid (skid control ECU) stores steering sensor and yaw rate sensor DTCs and performs DTC communication by receiving information from the steering sensor and yaw rate sensor.**
- **The ECM uses the CAN communication system to perform DTC communication instead of the conventional communication line (SIL).**

for Preparation Click here

BRIEF DESCRIPTION

a. The CAN (Controller Area Network) is a serial data communication system for real time application. It is a vehicle multiplex communication system which has a high communication speed (500 kbps, 250 kbps) and the ability to detect malfunctions.

b. By pairing the CANH and CANL bus lines, the CAN performs communication based on differential voltages.

c. Many ECUs (sensors) installed on the vehicle operate by sharing information and communicating with each other.

d. The CAN has 2 resistors of 120 Ω which are necessary to communicate with the main wire.

DEFINITION OF TERMS

a. Main wire

    i. The main wire is a wire harness between the 2 termination circuits on the bus (communication line). This is the main bus in the CAN communication system.

b. Branch wire

    i. The branch wire is a wire harness which diverges from the main wire to an ECU or sensor.

c. Termination circuits

    i. The termination circuit is a circuit which converts the communication current of the CAN communication into the bus voltage. It consists of a resistor and condenser. 2 termination circuits are necessary on a bus.

d. CAN junction connector

    i. The CAN junction connector is designed so that it can be used with CAN communication which has a termination circuit and CAN communication which does not have a termination circuit.

CIRCUIT DESCRIPTION

a. The V bus, movement control bus and MS bus each have termination circuits with resistance of 120 Ω x 2. High speed communication at 500 kbps and 250 kbps is possible.

ECU OR SENSOR WHICH COMMUNICATE VIA CAN COMMUNICATION SYSTEM

a. Master cylinder solenoid (skid control ECU)

b. Air conditioning amplifier

c. ECM

d. Main body ECU (cowl side junction block LH)

e. Combination meter

f. Center airbag sensor

g. Multi-display

h. Steering angle sensor

i. Yaw rate sensor

j. Seat belt control ECU*1

k. Clearance warning ECU*2

l. Parking assist ECU*3

m. Outer mirror control ECU

n. Multiplex tilt and telescopic ECU

o. Certification ECU (smart key ECU)

p. Position control ECU and switch

q. Network gateway ECU

r. 4WD control ECU

s. No. 2 main body ECU

t. Power back door unit (power back door ECU)*4

u. Distance control ECU*5

v. Steering control ECU

w. Suspension control ECU

x. AFS ECU (headlight swivel ECU)

y. Windshield wiper ECU

*1: w/ Pre-Crash Safety System
*2: w/ LEXUS Parking Assist-sensor System
*3: w/ Parking Assist Monitor System
*4: w/ Power Back Door System
*5: w/ Dynamic Radar Cruise Control System

DIAGNOSTIC CODES FOR CAN COMMUNICATION SYSTEM

a. DTCs for the CAN communication system are as follows: U0073, U0100, U0101, U0114/38, U0122, U0123, U0124, U0126, U0129, U0130, U0132, U0140, U0141, U0151, U0155, U0199, U0208, U0230, U0327, U1002 (CAN MS BUS), U1002 (CAN No. 2 BUS), U1100, U1101, U1110, U1111, U1115, U1126, B1499, B2427, B2621, B2624, C1AEF and C2179.

NOTES REGARDING TROUBLESHOOTING

a. Trouble in the CAN bus (communication line) can be checked through the DLC3 (except when there is a wire break in the branch wire of the DLC3).

b. DTCs regarding the CAN communication system can be checked using the intelligent tester.

c. The CAN communication system cannot detect trouble in the branch line of the DLC3 even though the DLC3 is also connected to the CAN communication system.

HOW TO DISTINGUISH CAN JUNCTION CONNECTOR CONNECTOR

a. In the CAN communication system, the shape of all connectors connected to the CAN junction connector is the same.
The connectors connected to the CAN junction connector can be distinguished by the colors of the bus line and the connecting side of the connector.

HINT:

See "Terminals of ECU" (Click here) for bus line color or the type of connecting surface.

for Preparation Click here

BRIEF DESCRIPTION

a. The CAN (Controller Area Network) is a serial data communication system for real time application. It is a vehicle multiplex communication system which has a high communication speed (500 kbps, 250 kbps) and the ability to detect malfunctions.

b. By pairing the CANH and CANL bus lines, the CAN performs communication based on differential voltages.

c. Many ECUs (sensors) installed on the vehicle operate by sharing information and communicating with each other.

d. The CAN has 2 resistors of 120 Ω which are necessary to communicate with the main wire.

DEFINITION OF TERMS

a. Main wire

    i. The main wire is a wire harness between the 2 termination circuits on the bus (communication line). This is the main bus in the CAN communication system.

b. Branch wire

    i. The branch wire is a wire harness which diverges from the main wire to an ECU or sensor.

c. Termination circuits

    i. The termination circuit is a circuit which converts the communication current of the CAN communication into the bus voltage. It consists of a resistor and condenser. 2 termination circuits are necessary on a bus.

d. CAN junction connector

    i. The CAN junction connector is designed so that it can be used with CAN communication which has a termination circuit and CAN communication which does not have a termination circuit.

CIRCUIT DESCRIPTION

a. The V bus, movement control bus and MS bus each have termination circuits with resistance of 120 Ω x 2. High speed communication at 500 kbps and 250 kbps is possible.

ECU OR SENSOR WHICH COMMUNICATE VIA CAN COMMUNICATION SYSTEM

a. Master cylinder solenoid (skid control ECU)

b. Air conditioning amplifier

c. ECM

d. Main body ECU (cowl side junction block LH)

e. Combination meter

f. Center airbag sensor

g. Display and navigation module display

h. Steering angle sensor

i. Yaw rate sensor

j. Seat belt control ECU*1

k. Clearance warning ECU*2

l. Parking assist ECU*3

m. Outer mirror control ECU

n. Multiplex tilt and telescopic ECU

o. Certification ECU (smart key ECU)

p. Position control ECU and switch

q. Network gateway ECU

r. 4WD control ECU

s. No. 2 main body ECU

t. Power back door unit (power back door ECU)*4

u. Distance control ECU*5

v. Steering control ECU

w. Suspension control ECU

x. AFS ECU (headlight swivel ECU)

y. Windshield wiper ECU

*1: w/ Pre-Crash Safety System
*2: w/ LEXUS Parking Assist-sensor System
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*4: w/ Power Back Door System
*5: w/ Dynamic Radar Cruise Control System

DIAGNOSTIC CODES FOR CAN COMMUNICATION SYSTEM

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NOTES REGARDING TROUBLESHOOTING

a. Trouble in the CAN bus (communication line) can be checked through the DLC3 (except when there is a wire break in the branch wire of the DLC3).

b. DTCs regarding the CAN communication system can be checked using the intelligent tester.

c. The CAN communication system cannot detect trouble in the branch line of the DLC3 even though the DLC3 is also connected to the CAN communication system.

HOW TO DISTINGUISH CAN JUNCTION CONNECTOR CONNECTOR

a. In the CAN communication system, the shape of all connectors connected to the CAN junction connector is the same.
The connectors connected to the CAN junction connector can be distinguished by the colors of the bus line and the connecting side of the connector.

HINT:

See "Terminals of ECU" (Click here) for bus line color or the type of connecting surface.

for Preparation Click here

Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **DTCs for the CAN communication system are as follows: U0073, U0100, U0101, U0114/38, U0122, U0123, U0124, U0126, U0129, U0130, U0132, U0140, U0141, U0151, U0155, U0199, U0208, U0230, U0327, U1002 (CAN MS BUS), U1002 (CAN No. 2 BUS), U1100, U1101, U1110, U1111, U1115, U1126, B1499, B2427, B2621, B2624, C1AEF and C2179.**
- **Refer to the troubleshooting procedures of each system if DTCs regarding the CAN communication system are not output.**
- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

HINT:

- **Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.**
- ***: Use the intelligent tester.**

1.VEHICLE BROUGHT TO WORKSHOP

NEXT

2.INSPECT BATTERY VOLTAGE

Standard voltage:
11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

3.CHECK AND CLEAR DTC*

a. Using the intelligent tester, perform the all DTCs check.

NOTICE:

- **If there is a CAN communication trouble code that indicates that an ECU or sensor has a power malfunction or interior malfunction which is causing a communication stop, the problem may not be in the communication line.**
- **When CAN communication related connectors are disconnected with the engine switch on (IG) or on (ACC), the ECU related to the connector and ECUs of related systems will store a CAN communication DTC.**

NEXT

4.CHECK INSTALLED SYSTEMS (ECU AND SENSOR) THAT USE CAN COMMUNICATION

a. Based on the vehicle equipment and specifications, confirm the systems that use CAN communication (Click here).

NEXT

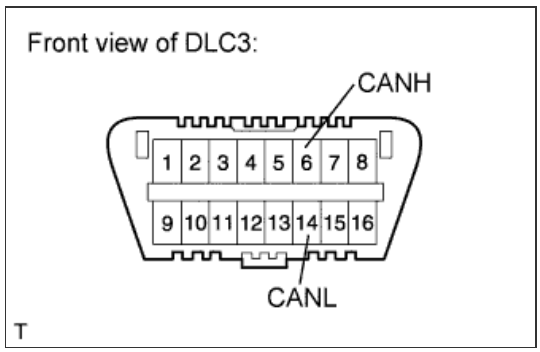
5.CHECK DLC3 BRANCH WIRE AND V BUS CIRCUIT MAIN WIRE (CANH - CANL)

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

b. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Proceed to
6 (CANH) - 14 (CANL)	Engine switch off	OK (54 to 69 Ω)	A
6 (CANH) - 14 (CANL)	Engine switch off	NG (70 Ω or higher)	B
6 (CANH) - 14 (CANL)	Engine switch off	NG (Below 54 Ω)	C



B. Go to CAN MAIN WIRE FOR DISCONNECTION (Click here)

C. Go to CHECK CAN BUS LINES FOR SHORT CIRCUIT (Click here)

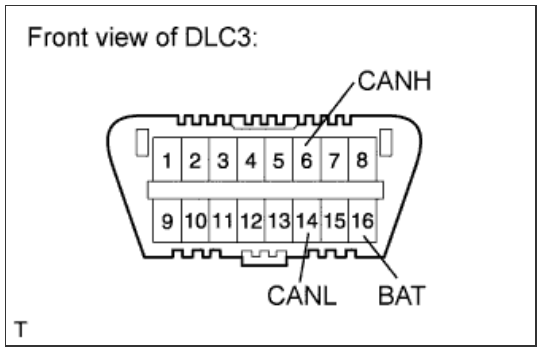
A

6.CHECK V BUS CIRCUIT +B (CANH, CANL - BAT)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 16 (BAT)	Engine switch off	6 kΩ or higher
14 (CANL) - 16 (BAT)	Engine switch off	6 kΩ or higher



NG. Go to CHECK CAN BUS LINE FOR SHORT TO +B (Click here)

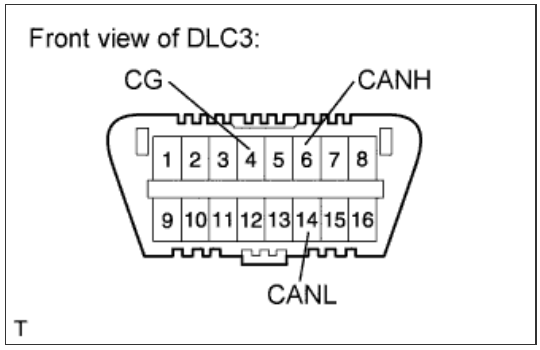
OK

7.CHECK V BUS CIRCUIT GND (CANH, CANL - CG)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 4 (CG)	Engine switch off	200 Ω or higher
14 (CANL) - 4 (CG)	Engine switch off	200 Ω or higher



NG. Go to CHECK CAN BUS LINE FOR SHORT TO GND (Click here)

OK

8.CHECK ECUS CONNECTED TO CAN BUS*

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Select "Bus Check" from "System Select".

c. Wait 1 minute and then check the display of the connected ECUs and sensors.

Result

Inspection Result	Proceed to
All ECUs and sensors connected to the CAN communication system are displayed on the screen.	A
Except for the main body ECU (cowl side junction block LH), no ECUs connected to the MS bus are displayed. The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (the MS bus main wire open or short malfunction).	B
No ECUs connected to the MS bus are displayed (the branch wire between the main body ECU (cowl side junction block LH) and V bus circuit is open).	C
Except for the network gateway ECU, no ECUs connected to the movement control bus are displayed. The network gateway ECU outputs the movement control bus trouble code (U1002) (the movement control bus main wire open or short malfunction).	D
No ECUs connected to the movement control bus are displayed (the branch wire between the network gateway ECU and movement control bus is open).	E
An ECU or sensor that should be connected to the CAN communication system is not displayed (the ECU or sensor branch wire is open).	F
An ECU or sensor that should be connected to the CAN communication system is not displayed or display is intermittent during check (the ECU or sensor branch wire is open on one side).	G

NOTICE:

The ECUs and sensors that are not present will not be displayed. Be careful not to mistake them for communication stop malfunctions.

HINT:

- **If the display of an ECU is intermittent during the check, one side of an ECU or sensor branch wire is open (The signal of the ECU is treated as noise, which affects the response and display of the intelligent tester).**
- **The main body ECU (cowl side junction block LH) checks for proper ECU communication for ECUs that are connected to the CAN MS bus circuit, and the results are displayed on the intelligent tester.**
- **The gateway ECU built into the main body ECU (cowl side junction block LH) may be malfunctioning if both of the following occurs: 1) all ECUs connected to the MS bus are not displayed on the intelligent tester; and 2) DTC U1002 is not output.**
- **If communication stops between an ECU and the main body ECU (cowl side junction block LH) or network gateway ECU for 10 seconds or more, the ECU disappears from the intelligent tester display.**
- **For communication stop mode of ECUs connected to the CAN MS bus circuit or movement control bus, refer to the DTC flowchart of the respective communication stop.**

B.	Go to DTC U1002 FLOWCHART (Click here)
C.	Go to MAIN BODY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)
D.	Go to DTC U1002 FLOWCHART (Click here)
E.	Go to NETWORK GATEWAY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)
F.	Go to PROBLEM SYMPTOMS TABLE (Click here)
G.	Go to OPEN IN ONE SIDE OF CAN BRANCH WIRE FLOWCHART (Click here)

A

9.CHECK COMMUNICATION MALFUNCTION DTC (PAST DTC CHECK)*

a. Select "Bus Check" from "System Select".

b. Write down all of the DTCs stored in each ECU.

HINT:

- **If there are communication malfunction DTCs stored but the intelligent tester "Bus Check - Communication Bus Check" screen displays all of the ECUs and sensors connected to the CAN system, the communication malfunction DTCs may be past malfunctions that are no longer present.**
- **For V bus main wire malfunctions, related ECUs are also detected. Therefore, determine the malfunctioning area based on all of the DTCs that are output.**
- **For MS bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the main body ECU (cowl side junction block LH).**
- **For movement control bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the network gateway ECU.**

Result

Inspection Result	Proceed to
An ECU connected to the V bus main wire has stored a communication trouble code (V bus main wire past malfunction).	A
The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (MS bus past malfunction).	B
The main body ECU (cowl side junction block LH) outputs a trouble code other than MS bus trouble code (U1002) (past malfunction of ECU branch wire connected to MS bus).	C
The network gateway ECU outputs the movement control bus trouble code (U1002) (movement control bus past malfunction).	D
The network gateway ECU outputs a trouble code other than movement control bus trouble code (U1002) (past malfunction of branch wire connected to movement control bus).	E

B.	**Go to DTC U1002 FLOWCHART (Click here)**
C.	**Go to PROBLEM SYMPTOMS TABLE (Click here)**
D.	**Go to DTC U1002 FLOWCHART (Click here)**
E.	**Go to PROBLEM SYMPTOMS TABLE (Click here)**

A

10.CHECK DTC COMBINATION TABLE (V BUS CIRCUIT BRANCH WIRE OPEN PAST MALFUNCTION)

a. Based on the combination of stored CAN communication system DTCs, determine which ECUs and sensors have a communication stop malfunction (Click here).

NEXT

11.PERFORM MALFUNCTION SIMULATION TEST (V BUS CIRCUIT MAIN WIRE PAST MALFUNCTION)*

a. Using the intelligent tester, clear all DTCs.

b. Perform a malfunction simulation test on all harnesses and connectors related to the V bus circuit main wire.

c. Check the DTCs that were stored as a result of the malfunction simulation test. Then determine the malfunctioning area.

NEXT

12.ADJUST, REPAIR AND REPLACE

NEXT

13.CONFIRMATION TEST


NEXT
END

for Preparation Click here

Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **DTCs for the CAN communication system are as follows: U0073, U0100, U0101, U0114/38, U0122, U0123, U0124, U0126, U0129, U0130, U0132, U0140, U0141, U0151, U0155, U0164, U0199, U0208, U0230, U0327, U1002 (CAN MS BUS), U1002 (CAN No. 2 BUS), U1100, U1101, U1110, U1111, U1115, U1126, B1499, B2427, B2621, B2624, C1AEF and C2179.**
- **Refer to the troubleshooting procedures of each system if DTCs regarding the CAN communication system are not output.**
- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

HINT:

- **Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.**
- ***: Use the intelligent tester.**

1.VEHICLE BROUGHT TO WORKSHOP

NEXT

2.INSPECT BATTERY VOLTAGE

Standard voltage:
11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

3.CHECK AND CLEAR DTC*

a. Using the intelligent tester, perform the all DTCs check.

NOTICE:

- **If there is a CAN communication trouble code that indicates that an ECU or sensor has a power malfunction or interior malfunction which is causing a communication stop, the problem may not be in the communication line.**
- **When CAN communication related connectors are disconnected with the engine switch on (IG) or on (ACC), the ECU related to the connector and ECUs of related systems will store a CAN communication DTC.**

NEXT

4.CHECK INSTALLED SYSTEMS (ECU AND SENSOR) THAT USE CAN COMMUNICATION

a. Based on the vehicle equipment and specifications, confirm the systems that use CAN communication (Click here).

NEXT

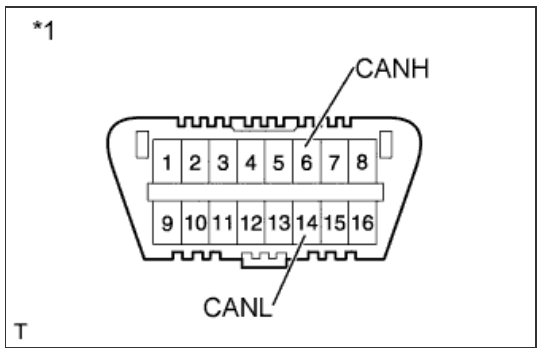
5.CHECK DLC3 BRANCH WIRE AND V BUS CIRCUIT MAIN WIRE (CANH - CANL)

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

b. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Proceed to
6 (CANH) - 14 (CANL)	Engine switch off	OK (54 to 69 Ω)	A
6 (CANH) - 14 (CANL)	Engine switch off	NG (70 Ω or higher)	B
6 (CANH) - 14 (CANL)	Engine switch off	NG (Below 54 Ω)	C



Text in Illustration

*1	DLC3

B. → Go to CAN MAIN WIRE FOR DISCONNECTION (Click here)

C. → Go to CHECK CAN BUS LINES FOR SHORT CIRCUIT (Click here)

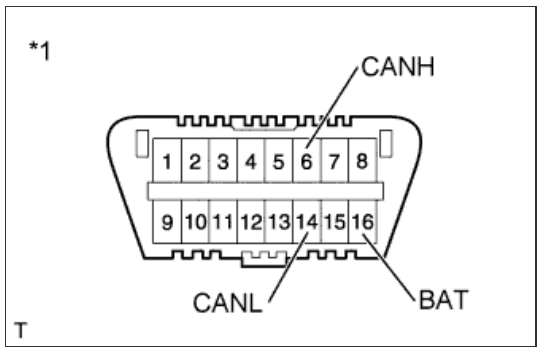
A

6.CHECK V BUS CIRCUIT +B (CANH, CANL - BAT)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 16 (BAT)	Engine switch off	6 kΩ or higher
14 (CANL) - 16 (BAT)	Engine switch off	6 kΩ or higher



Text in Illustration

*1	DLC3

NG. → Go to CHECK CAN BUS LINE FOR SHORT TO +B (Click here)

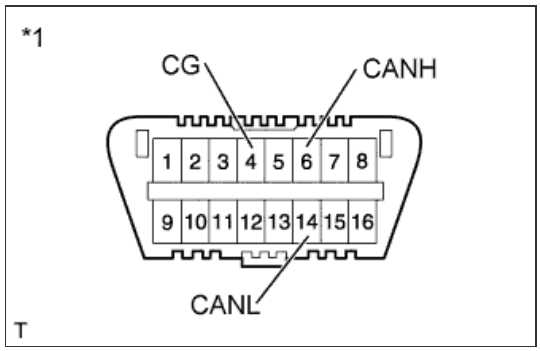
OK

7.CHECK V BUS CIRCUIT GND (CANH, CANL - CG)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 4 (CG)	Engine switch off	200 Ω or higher
14 (CANL) - 4 (CG)	Engine switch off	200 Ω or higher



Text in Illustration

*1	DLC3

NG. → Go to CHECK CAN BUS LINE FOR SHORT TO GND (Click here)

OK

8.CHECK ECUS CONNECTED TO CAN BUS*

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Select "Bus Check" from "System Select".

c. Wait 1 minute and then check the display of the connected ECUs and sensors.

Result

Inspection Result	Proceed to
All ECUs and sensors connected to the CAN communication system are displayed on the screen.	A
Except for the main body ECU (cowl side junction block LH), no ECUs connected to the MS bus are displayed. The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (the MS bus main wire open or short malfunction).	B
No ECUs connected to the MS bus are displayed (the branch wire between the main body ECU (cowl side junction block LH) and V bus circuit is open).	C
Except for the network gateway ECU, no ECUs connected to the movement control bus are displayed. The network gateway ECU outputs the movement control bus trouble code (U1002) (the movement control bus main wire open or short malfunction).	D
No ECUs connected to the movement control bus are displayed (the branch wire between the network gateway ECU and movement control bus is open).	E
An ECU or sensor that should be connected to the CAN communication system is not displayed (the ECU or sensor branch wire is open).	F
An ECU or sensor that should be connected to the CAN communication system is not displayed or display is intermittent during check (the ECU or sensor branch wire is open on one side).	G

NOTICE:

The ECUs and sensors that are not present will not be displayed. Be careful not to mistake them for communication stop malfunctions.

HINT:

- **If the display of an ECU is intermittent during the check, one side of an ECU or sensor branch wire is open (The signal of the ECU is treated as noise, which affects the response and display of the intelligent tester).**
- **The main body ECU (cowl side junction block LH) checks for proper ECU communication for ECUs that are connected to the CAN MS bus circuit, and the results are displayed on the intelligent tester.**
- **The gateway ECU built into the main body ECU (cowl side junction block LH) may be malfunctioning if both of the following occurs: 1) all ECUs connected to the MS bus are not displayed on the intelligent tester; and 2) DTC U1002 is not output.**
- **If communication stops between an ECU and the main body ECU (cowl side junction block LH) or network gateway ECU for 10 seconds or more, the ECU disappears from the intelligent tester display.**
- **For communication stop mode of ECUs connected to the CAN MS bus circuit or movement control bus, refer to the DTC flowchart of the respective communication stop.**

B. → Go to DTC U1002 FLOWCHART (Click here)

C. → Go to MAIN BODY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)

D. → Go to DTC U1002 FLOWCHART (Click here)

E. → Go to NETWORK GATEWAY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)

F. → Go to PROBLEM SYMPTOMS TABLE (Click here)

G. → Go to OPEN IN ONE SIDE OF CAN BRANCH WIRE FLOWCHART (Click here)

A

9.CHECK COMMUNICATION MALFUNCTION DTC (PAST DTC CHECK)*

a. Select "Bus Check" from "System Select".

b. Write down all of the DTCs stored in each ECU.

HINT:

- **If there are communication malfunction DTCs stored but the intelligent tester "Bus Check - Communication Bus Check" screen displays all of the ECUs and sensors connected to the CAN system, the communication malfunction DTCs may be past malfunctions that are no longer present.**
- **For V bus main wire malfunctions, related ECUs are also detected. Therefore, determine the malfunctioning area based on all of the DTCs that are output.**
- **For MS bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the main body ECU (cowl side junction block LH).**
- **For movement control bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the network gateway ECU.**

Result

Inspection Result	Proceed to
An ECU connected to the V bus main wire has stored a communication trouble code (V bus main wire past malfunction).	A
The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (MS bus past malfunction).	B
The main body ECU (cowl side junction block LH) outputs a trouble code other than MS bus trouble code (U1002) (past malfunction of ECU branch wire connected to MS bus).	C
The network gateway ECU outputs the movement control bus trouble code (U1002) (movement control bus past malfunction).	D
The network gateway ECU outputs a trouble code other than movement control bus trouble code (U1002) (past malfunction of branch wire connected to movement control bus).	E

B. Go to DTC U1002 FLOWCHART (Click here)

C. Go to PROBLEM SYMPTOMS TABLE (Click here)

D. Go to DTC U1002 FLOWCHART (Click here)

E. Go to PROBLEM SYMPTOMS TABLE (Click here)

A

10.CHECK DTC COMBINATION TABLE (V BUS CIRCUIT BRANCH WIRE OPEN PAST MALFUNCTION)

a. Based on the combination of stored CAN communication system DTCs, determine which ECUs and sensors have a communication stop malfunction (Click here).

NEXT

11.PERFORM MALFUNCTION SIMULATION TEST (V BUS CIRCUIT MAIN WIRE PAST MALFUNCTION)*

a. Using the intelligent tester, clear all DTCs.

b. Perform a malfunction simulation test on all harnesses and connectors related to the V bus circuit main wire.

c. Check the DTCs that were stored as a result of the malfunction simulation test. Then determine the malfunctioning area.

NEXT

12.ADJUST, REPAIR AND REPLACE

NEXT

13.CONFIRMATION TEST

NEXT

END

for Preparation Click here

HINT:

- **Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.**
- **Inspect the fuses and relays related to this system before inspecting the suspected areas below.**

Result List of Check CAN Bus Line

Symptom	Suspected Area	See page
The result of "How to Proceed with Troubleshooting" is "Open in CAN Main Wire".	Open in CAN Main Wire	Click here
The result of "How to Proceed with Troubleshooting" is "Short in CAN Bus Lines".	Short in CAN Bus Lines	Click here
The result of "How to Proceed with Troubleshooting" is "Short to +B in CAN Bus Line".	Short to B+ in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Short to GND in CAN Bus Line".	Short to GND in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Open in One Side of CAN Branch Line".	Open in One Side of CAN Branch Line	Click here

Communication Stop Mode Table

Symptom	Suspected Area	See page
"Air Conditioner" not displayed on the intelligent tester.	Air Conditioning Amplifier Communication Stop Mode	Click here
"CAN Gateway" not displayed on the intelligent tester.	Gateway ECU Communication Stop Mode	Click here
"Engine" not displayed on the intelligent tester.	ECM Communication Stop Mode	Click here
"Main Body" not displayed on the intelligent tester.	Main Body ECU (cowl side junction block LH) Communication Stop Mode	Click here
"Combination Meter" not displayed on the intelligent tester.	Combination Meter ECU Communication Stop Mode	Click here
"SRS Airbag" not displayed on the intelligent tester.	Airbag ECU Communication Stop Mode	Click here
"AFS/HL AutoLeveling" not displayed on the intelligent tester.	AFS ECU Communication Stop Mode	Click here
"AVN" not displayed on the intelligent tester.	Display and Navigation Assembly Communication Stop Mode	Click here

for Preparation Click here

HINT:

- **Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.**
- **Inspect the fuses and relays related to this system before inspecting the suspected areas below.**

Result List of Check CAN Bus Line

Symptom	Suspected Area	See page
The result of "How to Proceed with Troubleshooting" is "Open in CAN Main Wire".	Open in CAN Main Wire	Click here
The result of "How to Proceed with Troubleshooting" is "Short in CAN Bus Lines".	Short in CAN Bus Lines	Click here
The result of "How to Proceed with Troubleshooting" is "Short to +B in CAN Bus Line".	Short to B+ in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Short to GND in CAN Bus Line".	Short to GND in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Open in One Side of CAN Branch Line".	Open in One Side of CAN Branch Line	Click here

Communication Stop Mode Table

Symptom	Suspected Area	See page
"Air Conditioner" not displayed on the intelligent tester.	Air Conditioning Amplifier Communication Stop Mode	Click here
"CAN Gateway" not displayed on the intelligent tester.	Gateway ECU Communication Stop Mode	Click here
"Engine" not displayed on the intelligent tester.	ECM Communication Stop Mode	Click here
"Main Body" not displayed on the intelligent tester.	Main Body ECU (cowl side junction block LH) Communication Stop Mode	Click here
"Combination Meter" not displayed on the intelligent tester.	Combination Meter ECU Communication Stop Mode	Click here
"SRS Airbag" not displayed on the intelligent tester.	Airbag ECU Communication Stop Mode	Click here
"AFS/HL AutoLeveling" not displayed on the intelligent tester.	AFS ECU Communication Stop Mode	Click here
"AVN" not displayed on the intelligent tester.	Display and Navigation Assembly Communication Stop Mode	Click here

for Preparation Click here

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

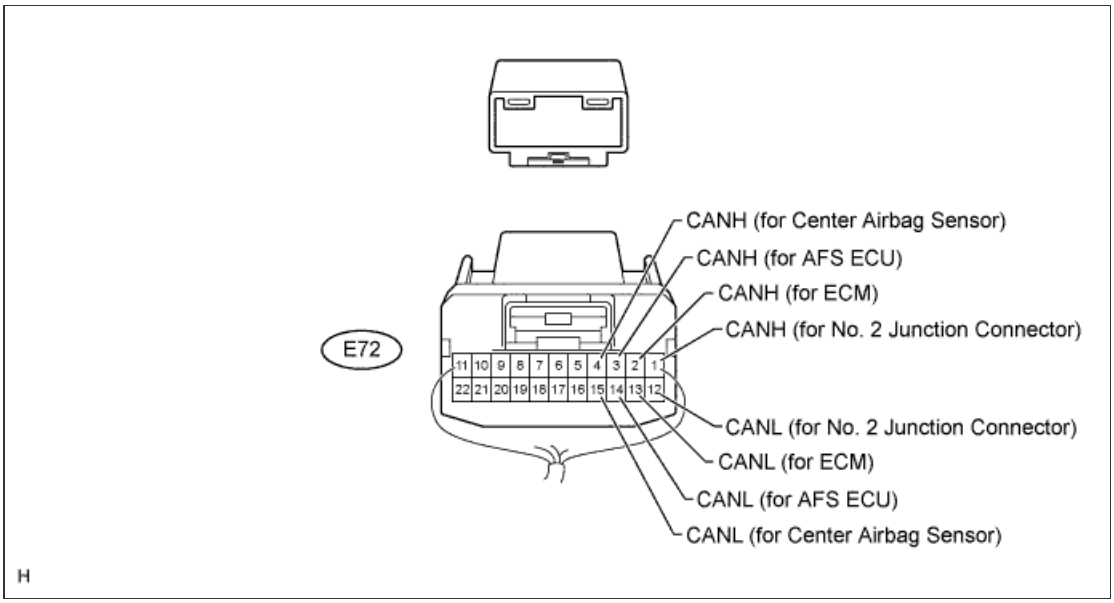
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

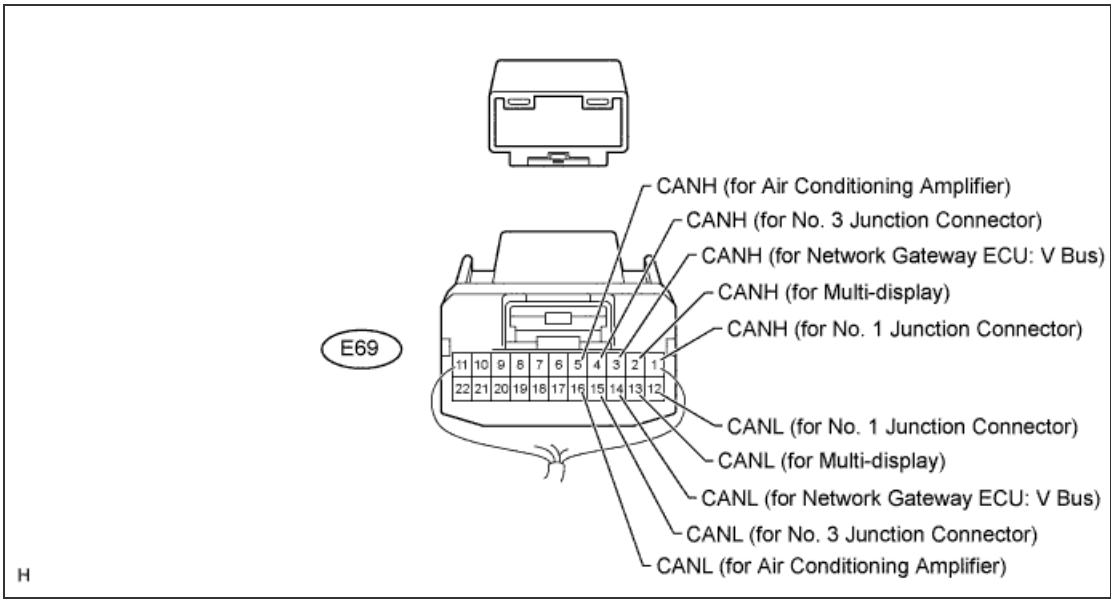
JUNCTION CONNECTOR

a. NO. 1 JUNCTION CONNECTOR



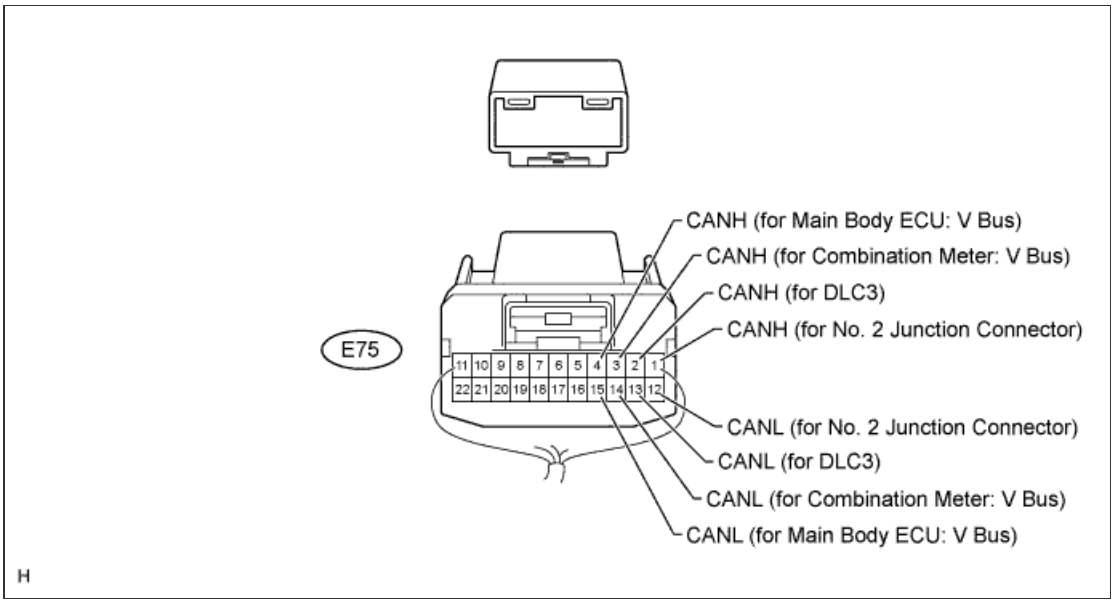
No. 1 Junction Connector	Wiring Color	Connect to
E72-1 (CANH)	Y	No. 2 junction connector
E72-12 (CANL)	B	
E72-2 (CANH)	P	ECM
E72-13 (CANL)	B	
E72-3 (CANH)	LG	AFS ECU (headlight swivel ECU)
E72-14 (CANL)	B	
E72-4 (CANH)	GR	Center airbag sensor
E72-15 (CANL)	B	

b. NO. 2 JUNCTION CONNECTOR



No. 2 Junction Connector	Wiring Color	Connect to
E69-1 (CANH)	Y	No. 1 junction connector
E69-12 (CANL)	B	
E69-2 (CANH)	P	Multi-display
E69-13 (CANL)	B	
E69-3 (CANH)	BR	Network gateway ECU (V bus)
E69-14 (CANL)	B	
E69-4 (CANH)	W	No. 3 junction connector
E69-15 (CANL)	B	
E69-5 (CANH)	G	Air conditioning amplifier
E69-16 (CANL)	B	

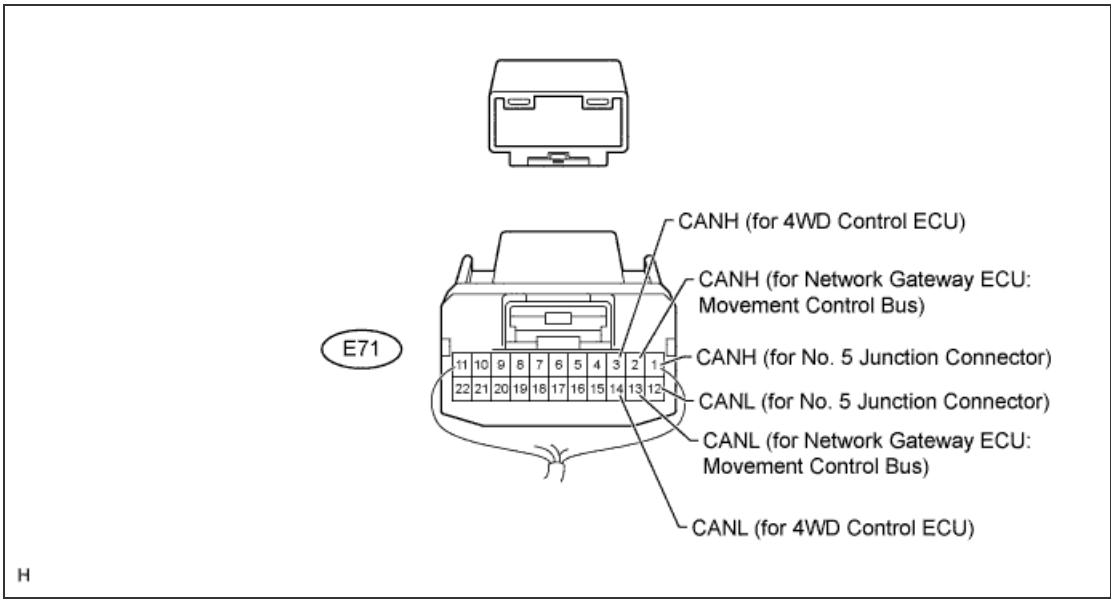
c. NO. 3 JUNCTION CONNECTOR



No. 3 Junction Connector	Wiring Color	Connect to
E75-1 (CANH)	W	No. 2 junction connector
E75-12 (CANL)	B	
E75-2 (CANH)	G	DLC3
E75-13 (CANL)	B	

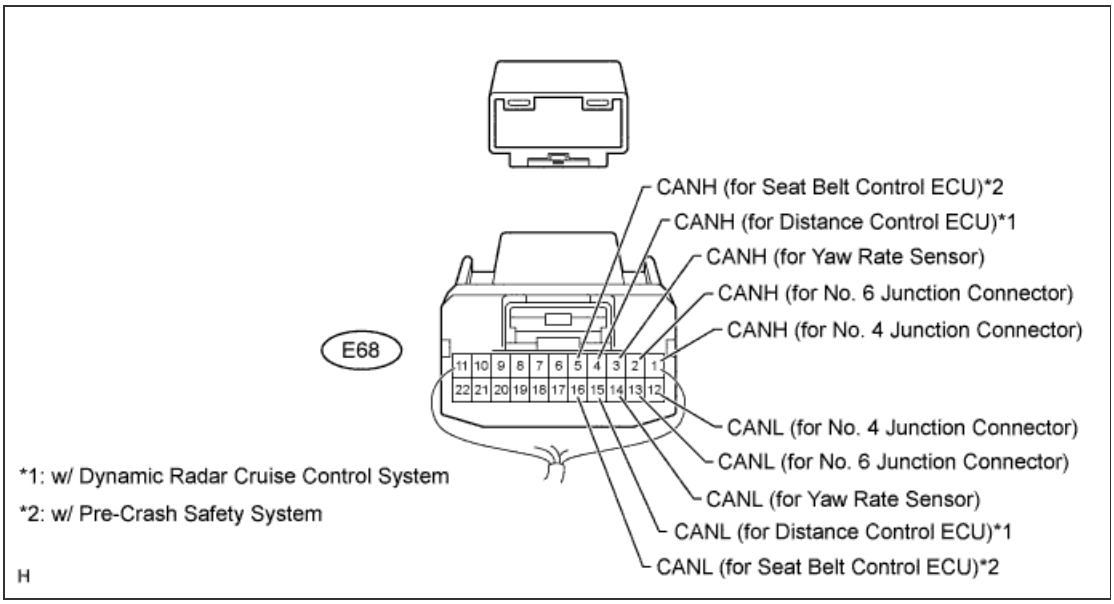
E75-3 (CANH)	V	Combination meter (V bus)
E75-14 (CANL)	B	
E75-4 (CANH)	SB	Main body ECU (cowl side junction block LH) (V bus)
E75-15 (CANL)	B	

d. NO. 4 JUNCTION CONNECTOR



No. 4 Junction Connector	Wiring Color	Connect to
E71-1 (CANH)	W	No. 5 junction connector
E71-12 (CANL)	L	
E71-2 (CANH)	SB	Network gateway ECU (movement control bus)
E71-13 (CANL)	L	
E71-3 (CANH)	P	4WD control ECU
E71-14 (CANL)	L	

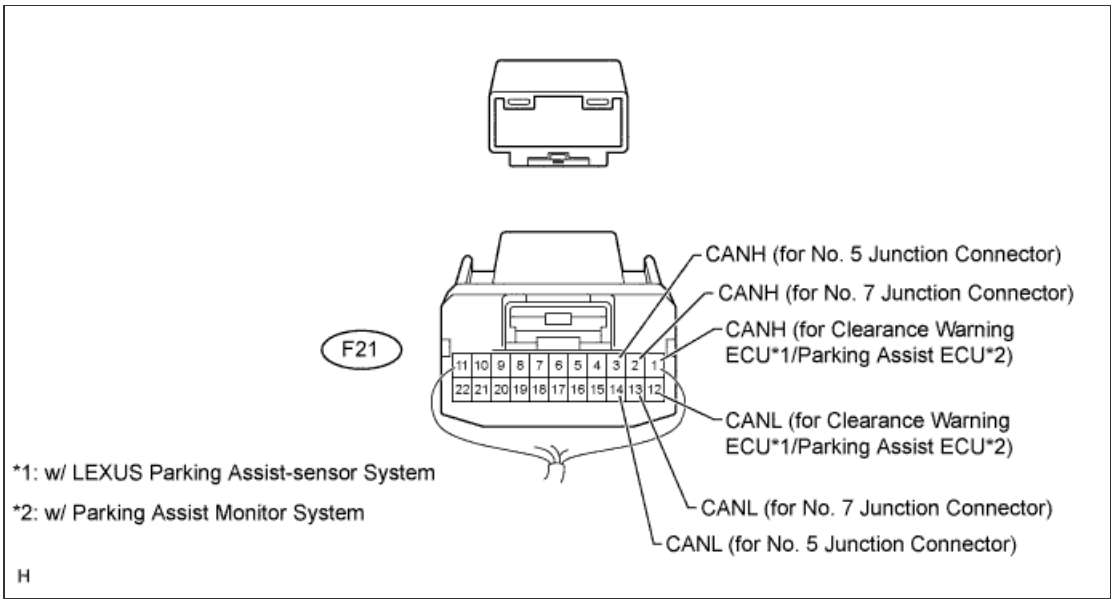
e. NO. 5 JUNCTION CONNECTOR



No. 5 Junction Connector	Wiring Color	Connect to
E68-1 (CANH)	W	No. 4 junction connector
E68-12 (CANL)	L	
E68-2 (CANH)	Y	No. 6 junction connector
E68-13 (CANL)	L	
E68-3 (CANH)	BR	Yaw rate sensor
E68-14 (CANL)	L	
E68-4 (CANH)*1	SB	Distance control ECU
E68-15 (CANL)*1	L	
E68-5 (CANH)*2	G	Seat belt control ECU
E68-16 (CANL)*2	L	

*1: w/ Dynamic Radar Cruise Control System
*2: w/ Pre-Crash Safety System

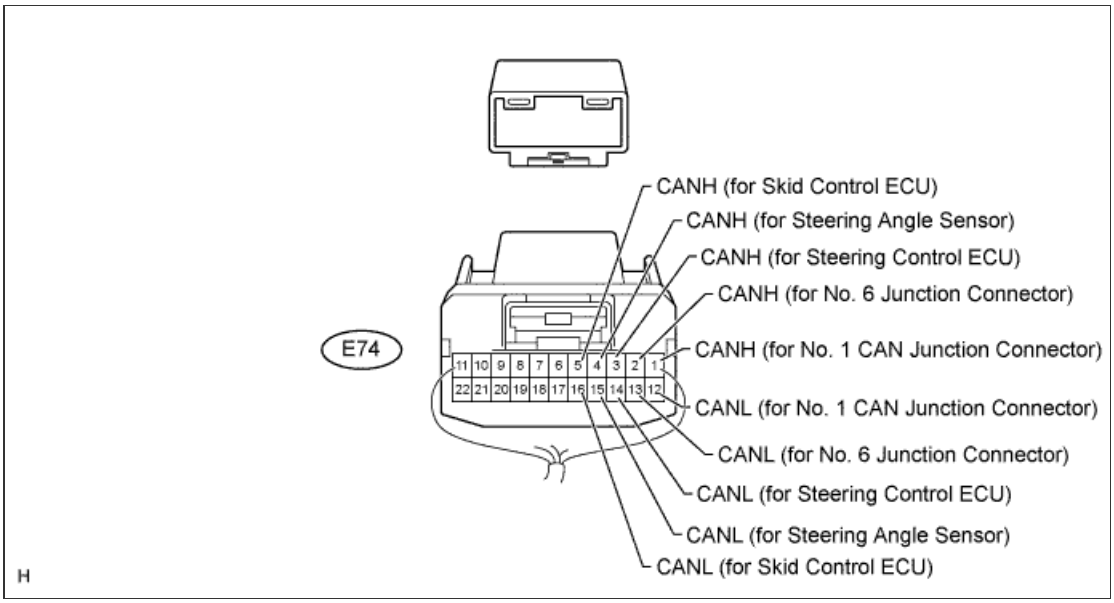
f. NO. 6 JUNCTION CONNECTOR



No. 6 Junction Connector	Wiring Color	Connect to
F21-1 (CANH)*1	V	Clearance warning ECU
F21-12 (CANL)*1	L	
F21-1 (CANH)*2	V	Parking assist ECU
F21-12 (CANL)*2	L	
F21-2 (CANH)	Y	No. 7 junction connector
F21-13 (CANL)	L	
F21-3 (CANH)	Y	No. 5 junction connector
F21-14 (CANL)	L	

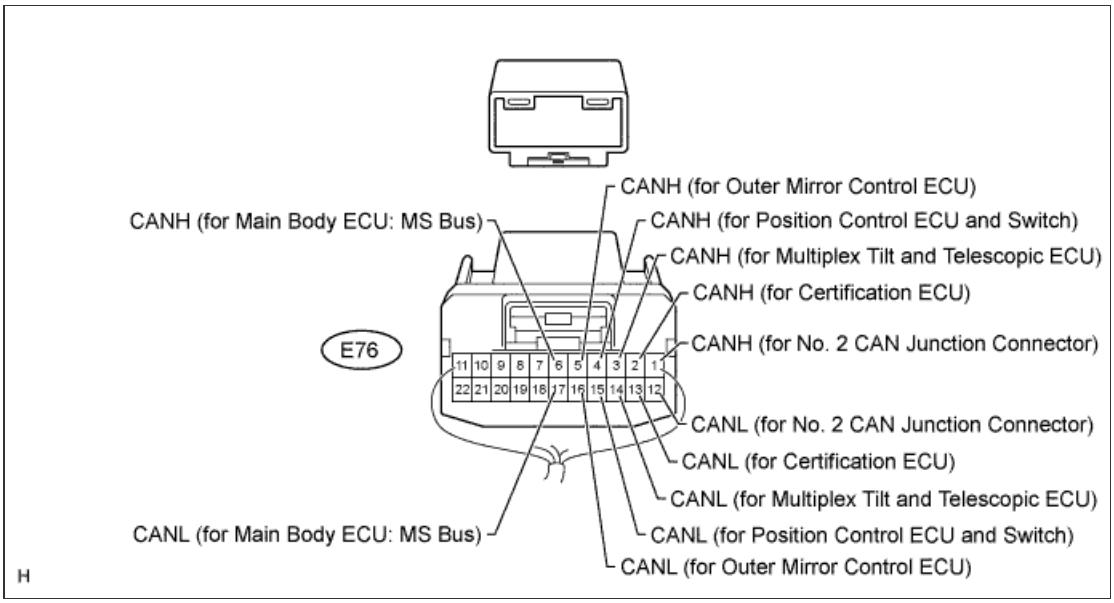
*1: w/ LEXUS Parking Assist-sensor System
*2: w/ Parking Assist Monitor System

g. NO. 7 JUNCTION CONNECTOR



No. 7 Junction Connector	Wiring Color	Connect to
E74-1 (CANH)	W	No. 1 CAN junction connector
E74-12 (CANL)	L	
E74-2 (CANH)	Y	No. 6 junction connector
E74-13 (CANL)	L	
E74-3 (CANH)	LG	Steering control ECU
E74-14 (CANL)	L	
E74-4 (CANH)	GR	Steering angle sensor
E74-15 (CANL)	L	
E74-5 (CANH)	V	Master cylinder solenoid (skid control ECU)
E74-16 (CANL)	L	

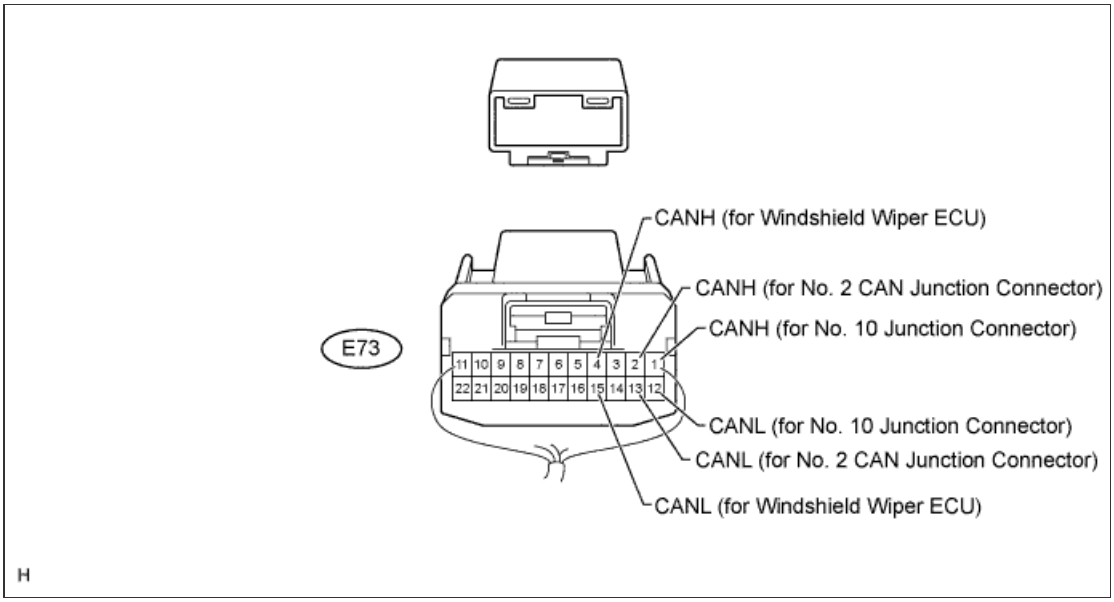
h. NO. 8 JUNCTION CONNECTOR



No. 8 Junction Connector	Wiring Color	Connect to
E76-1 (CANH)	W	No. 2 CAN junction connector
E76-12 (CANL)	R	
E76-2 (CANH)	LG	Certification ECU (smart key ECU)
E76-13 (CANL)	R	
E76-3 (CANH)	P	

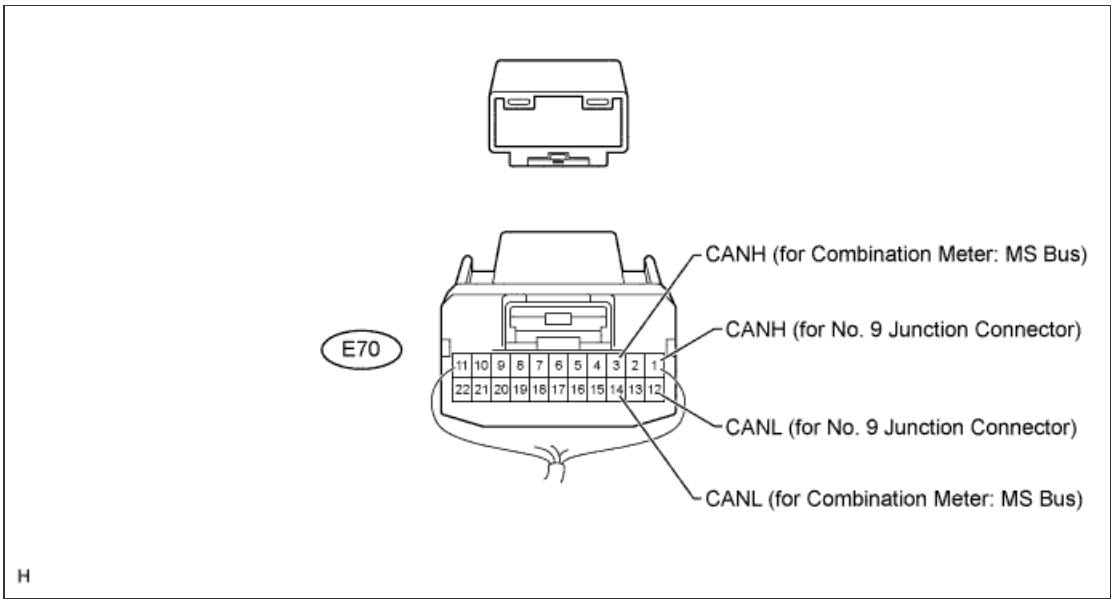
E76-14 (CANL)	R	Multiplex tilt and telescopic ECU
E76-4 (CANH)	V	Position control ECU and switch
E76-15 (CANL)	R	
E76-5 (CANH)	BR	Outer mirror control ECU
E76-16 (CANL)	R	
E76-6 (CANH)	GR	Main body ECU (cowl side junction block LH) (MS bus)
E76-17 (CANL)	R	

i. NO. 9 JUNCTION CONNECTOR



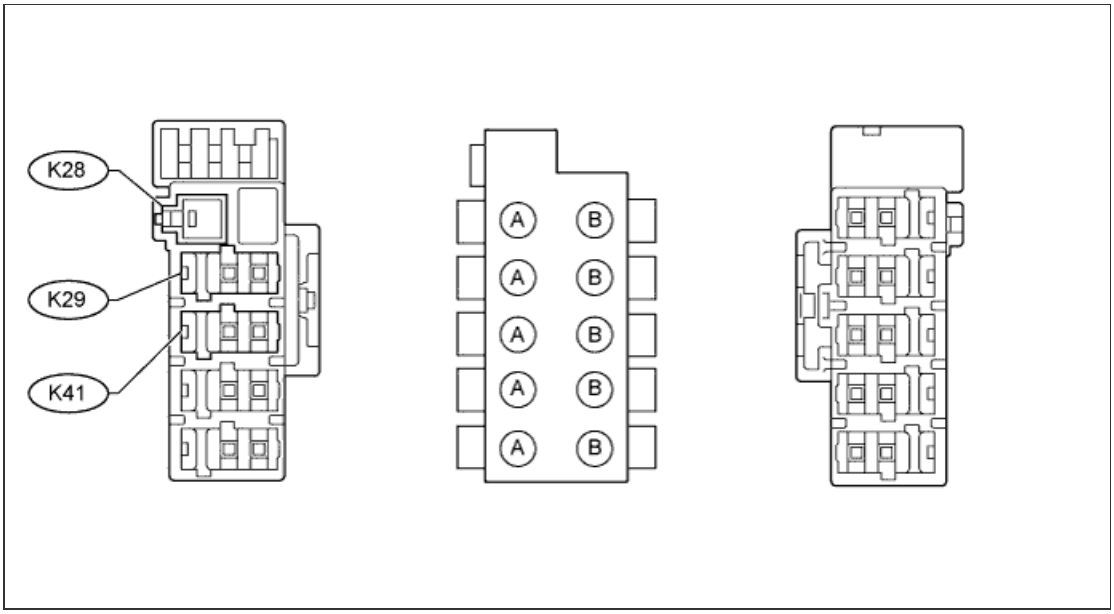
No. 9 Junction Connector	Wiring Color	Connect to
E73-1 (CANH)	W	No. 10 junction connector
E73-12 (CANL)	R	
E73-2 (CANH)	Y	No. 2 CAN junction connector
E73-13 (CANL)	R	
E73-4 (CANH)	LG	Windshield wiper ECU
E73-15 (CANL)	R	

j. NO. 10 JUNCTION CONNECTOR



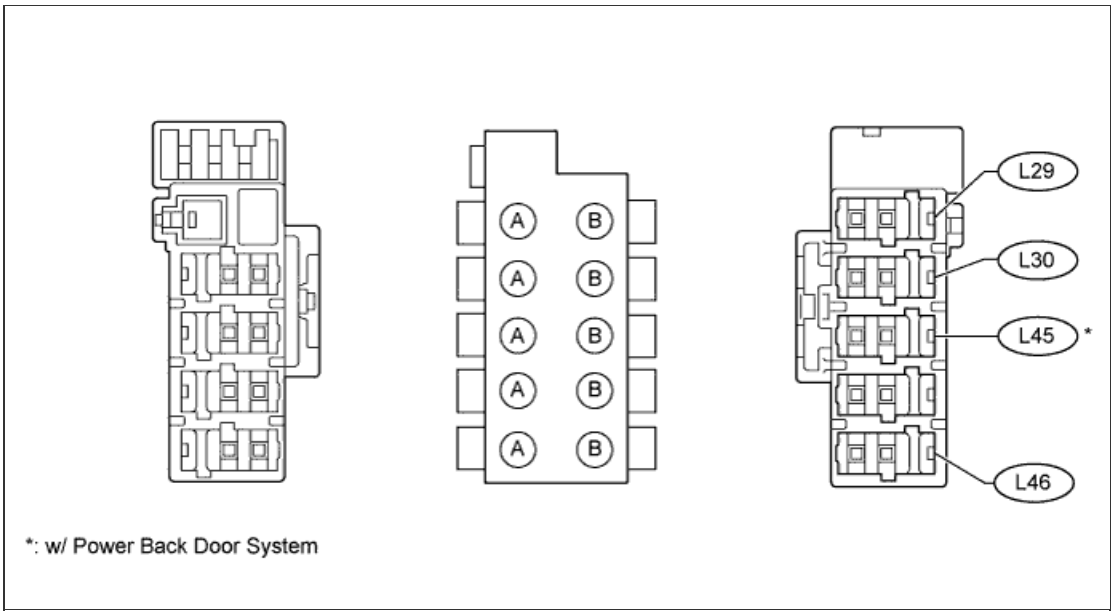
No. 10 Junction Connector	Wiring Color	Connect to
E70-1 (CANH)	W	No. 9 Junction Connector
E70-12 (CANL)	R	
E70-3 (CANH)	LG	Combination Meter (MS bus)
E70-14 (CANL)	R	

k. NO. 1 CAN JUNCTION CONNECTOR



Junction Connector A Side	Wiring Color (CANH Side)	Wiring Color (CANL Side)
Body ground (K28)	-	W-B
No. 7 junction connector (K29)	W	L
Suspension control ECU (K41)	V	L

l. NO. 2 CAN JUNCTION CONNECTOR

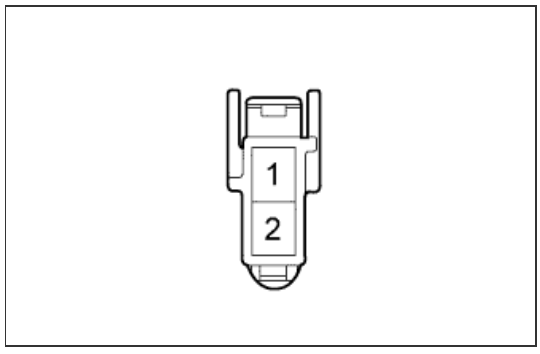


Junction Connector B Side	Wiring Color (CANH Side)	Wiring Color (CANL Side)
No. 8 junction connector (L29)	W	R
No. 9 junction connector (L30)	Y	R
Power back door ECU (L45)*	V	R
No. 2 main body ECU (L46)	LG	R

*: w/ Power Back Door System

TERMINALS OF CONNECTORS FOR JUNCTION CONNECTOR (CAN JUNCTION CONNECTOR)

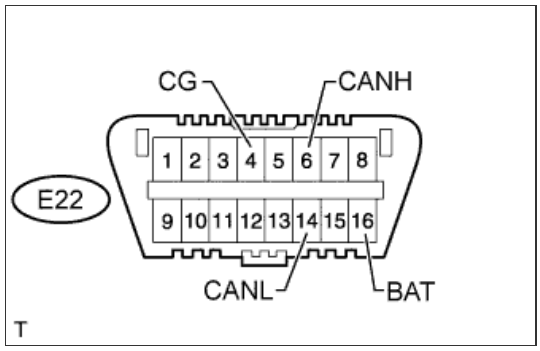
Terminal No.	Symbol
1	CANH
2	CANL



CHECK DLC3

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

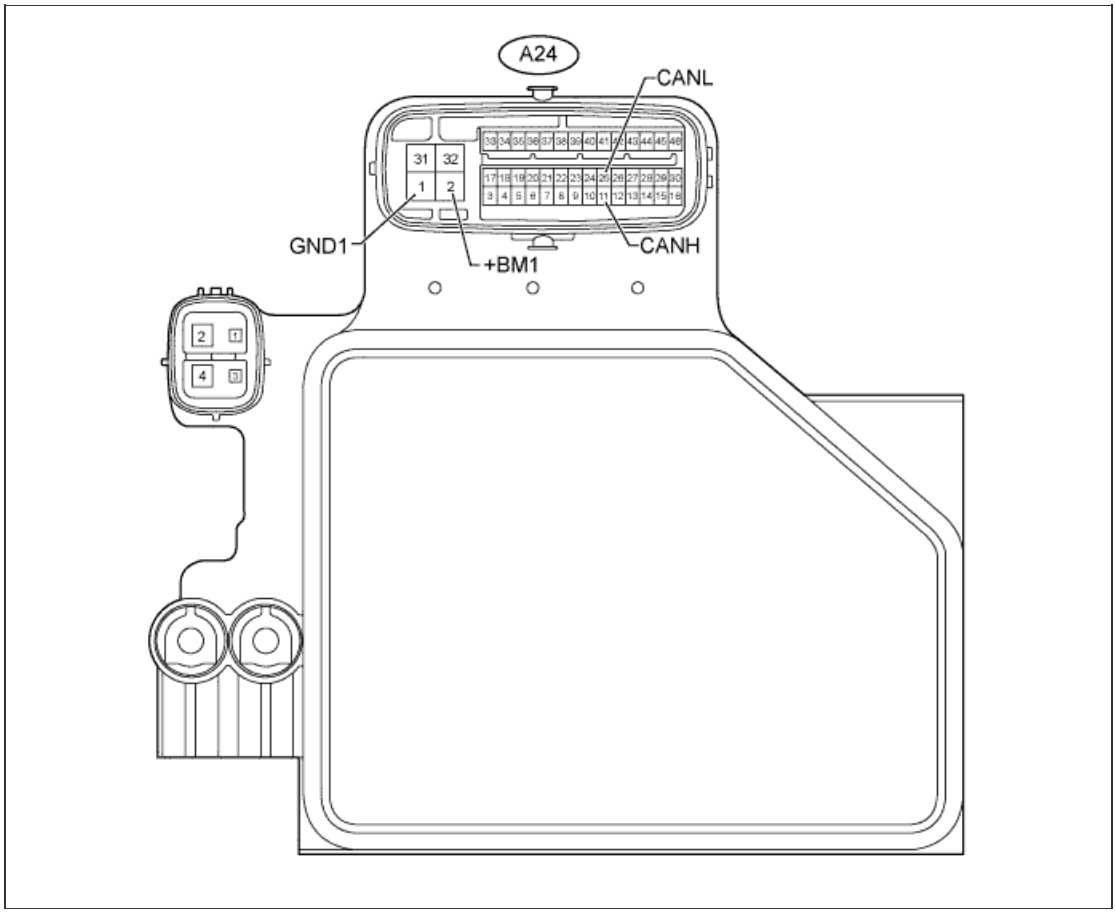
b. Measure the resistance according to the value(s) in the table below.



Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	G - B	Engine switch off	54 to 69 Ω
E22-6 (CANH) - E22-4 (CG)	G - W-B	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	B - W-B	Engine switch off	200 Ω or higher
E22-6 (CANH) - E22-16 (BAT)	G - O	Engine switch off	6 kΩ or higher

E22-14 (CANL) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

CHECK MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

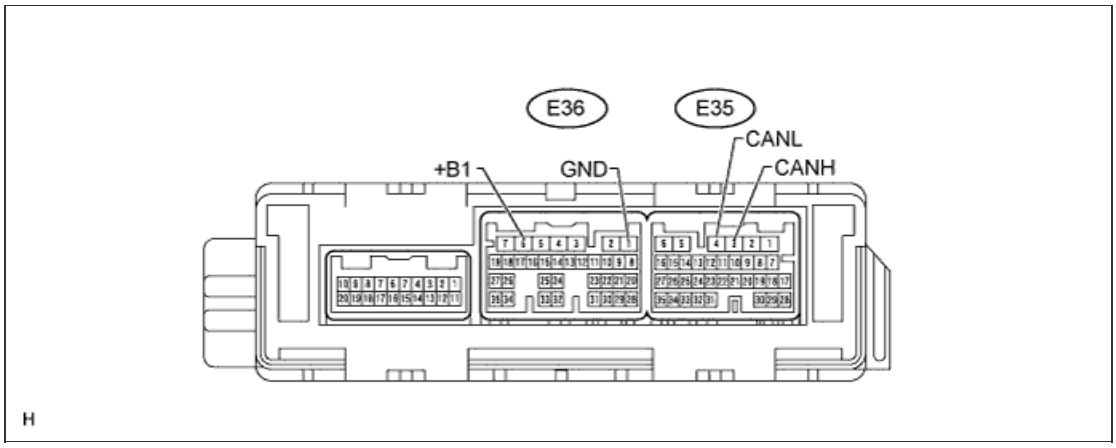


a. Disconnect the A24 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	V - L	Engine switch off	54 to 69 Ω
A24-11 (CANH) - A24-1 (GND1)	V - W-B	Engine switch off	200 Ω or higher
A24-25 (CANL) - A24-1 (GND1)	L - W-B	Engine switch off	200 Ω or higher
A24-11 (CANH) - A24-2 (+BM1)	V - B	Engine switch off	6 kΩ or higher
A24-25 (CANL) - A24-2 (+BM1)	L - B	Engine switch off	6 kΩ or higher

CHECK AIR CONDITIONING AMPLIFIER

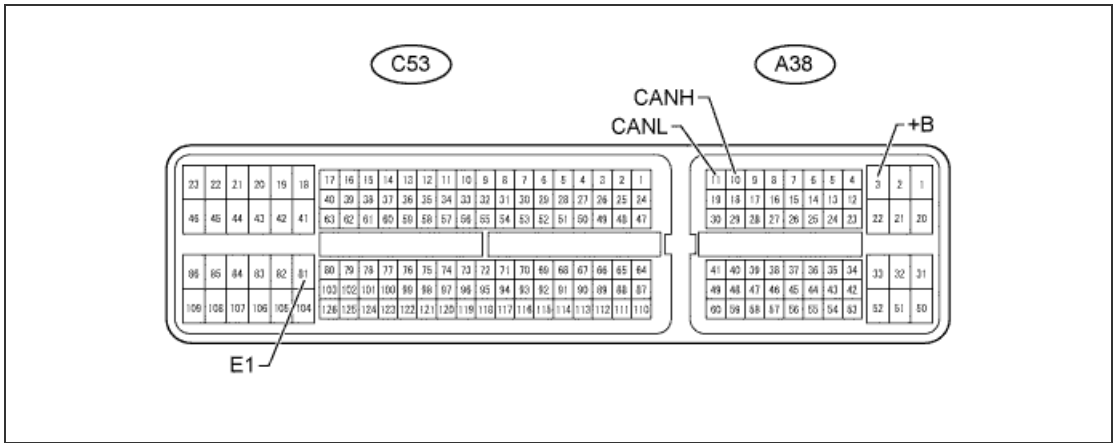


a. Disconnect the E35 and E36 amplifier connectors.

b. Measure the voltage and resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	G - B	Engine switch off	54 to 69 Ω
E35-3 (CANH) - E36-1 (GND)	G - W-B	Engine switch off	200 Ω or higher
E35-4 (CANL) - E36-1 (GND)	B - W-B	Engine switch off	200 Ω or higher
E35-3 (CANH) - E36-6 (+B1)	G - R	Engine switch off	6 kΩ or higher
E35-4 (CANL) - E36-6 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK ECM

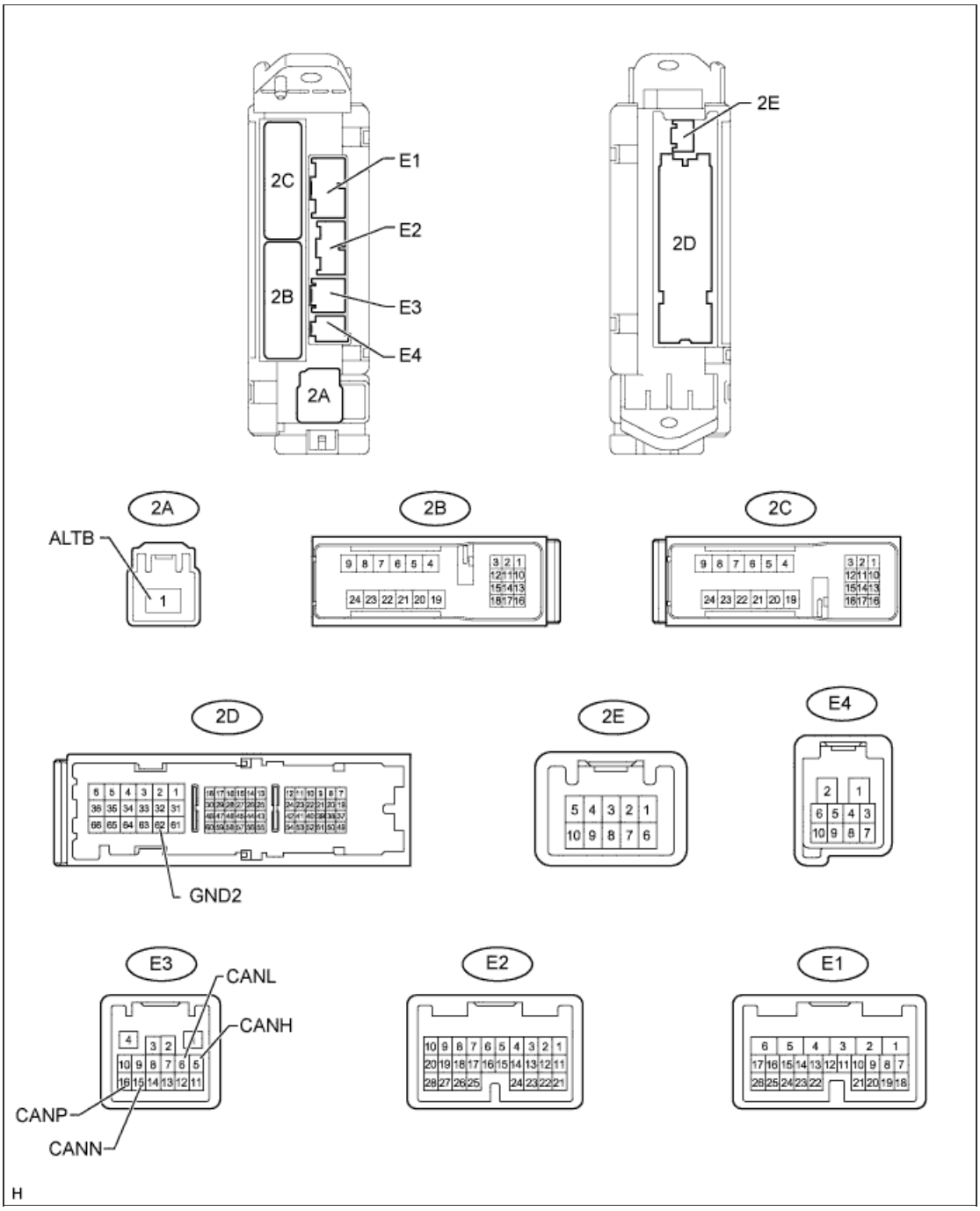


a. Disconnect the A38 and C53 ECM connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A38-10 (CANH) - A38-11 (CANL)	P - B	Engine switch off	108 to 132 Ω
A38-10 (CANH) - C53-81 (E1)	P - W-B	Engine switch off	200 Ω or higher
A38-11 (CANL) - C53-81 (E1)	B - W-B	Engine switch off	200 Ω or higher
A38-10 (CANH) - A38-3 (+B)	P - B	Engine switch off	6 kΩ or higher
A38-11 (CANL) - A38-3 (+B)	B - B	Engine switch off	6 kΩ or higher

CHECK MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)



a. Disconnect the E3 ECU connector.

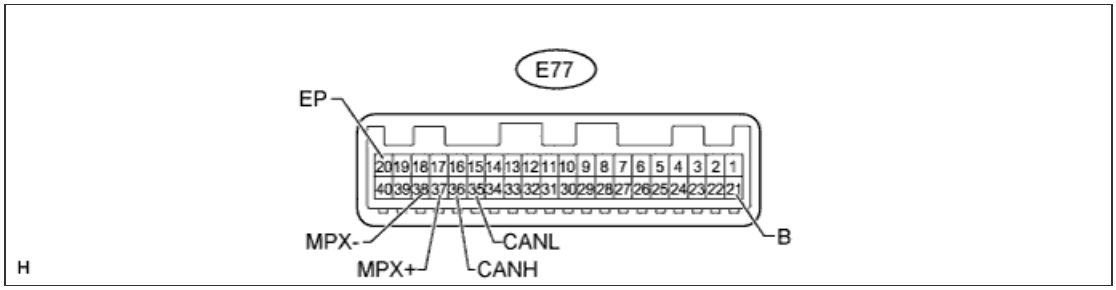
b. Disconnect the 2A and 2D junction connectors.

c. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)*1	SB - B	Engine switch off	54 to 69 Ω
E3-5 (CANH) - 2D-62 (GND2)*1	SB - W-B	Engine switch off	200 Ω or higher
E3-6 (CANL) - 2D-62 (GND2)*1	B - W-B	Engine switch off	200 Ω or higher
E3-5 (CANH) - 2A-1 (ALTB)*1	SB - B	Engine switch off	6 kΩ or higher
E3-6 (CANL) - 2A-1 (ALTB)*1	B - B	Engine switch off	6 kΩ or higher
E3-16 (CANP) - E3-15 (CANN)*2	GR - R	Engine switch off	108 to 132 Ω
E3-16 (CANP) - 2D-62 (GND2)*2	GR - W-B	Engine switch off	200 Ω or higher
E3-15 (CANN) - 2D-62 (GND2)*2	R - W-B	Engine switch off	200 Ω or higher
E3-16 (CANP) - 2A-1 (ALTB)*2	GR - B	Engine switch off	6 kΩ or higher
E3-15 (CANN) - 2A-1 (ALTB)*2	R - B	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK COMBINATION METER



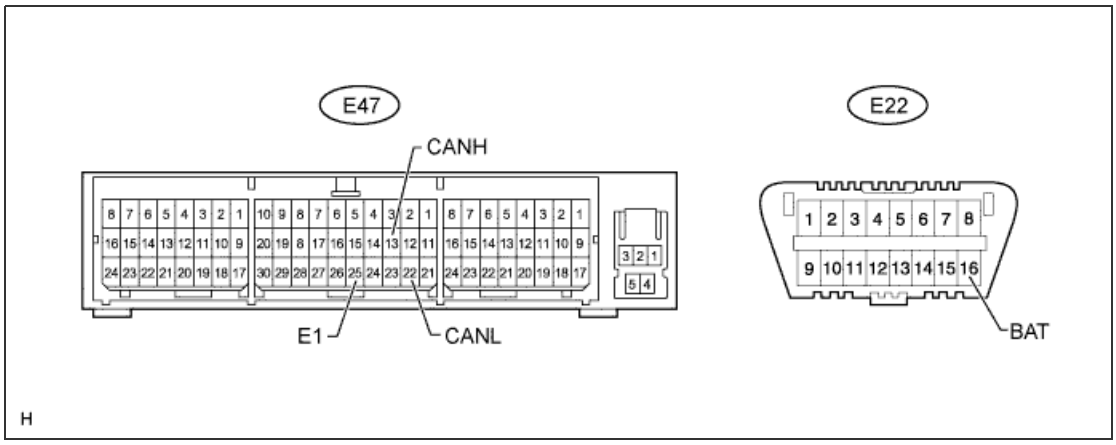
a. Disconnect the E77 meter connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)*1	V - B	Engine switch off	108 to 132 Ω
E77-36 (CANH) - E77-20 (EP)*1	V - W-B	Engine switch off	200 Ω or higher
E77-35 (CANL) - E77-20 (EP)*1	B - W-B	Engine switch off	200 Ω or higher
E77-36 (CANH) - E77-21 (B)*1	V - R	Engine switch off	6 kΩ or higher
E77-35 (CANL) - E77-21 (B)*1	B - R	Engine switch off	6 kΩ or higher
E77-37 (MPX+) - E77-38 (MPX-)*2	LG - R	Engine switch off	108 to 132 Ω
E77-37 (MPX+) - E77-20 (EP)*2	LG - W-B	Engine switch off	200 Ω or higher
E77-38 (MPX-) - E77-20 (EP)*2	R - W-B	Engine switch off	200 Ω or higher
E77-37 (MPX+) - E77-21 (B)*2	LG - R	Engine switch off	6 kΩ or higher
E77-38 (MPX-) - E77-21 (B)*2	R - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK CENTER AIRBAG SENSOR



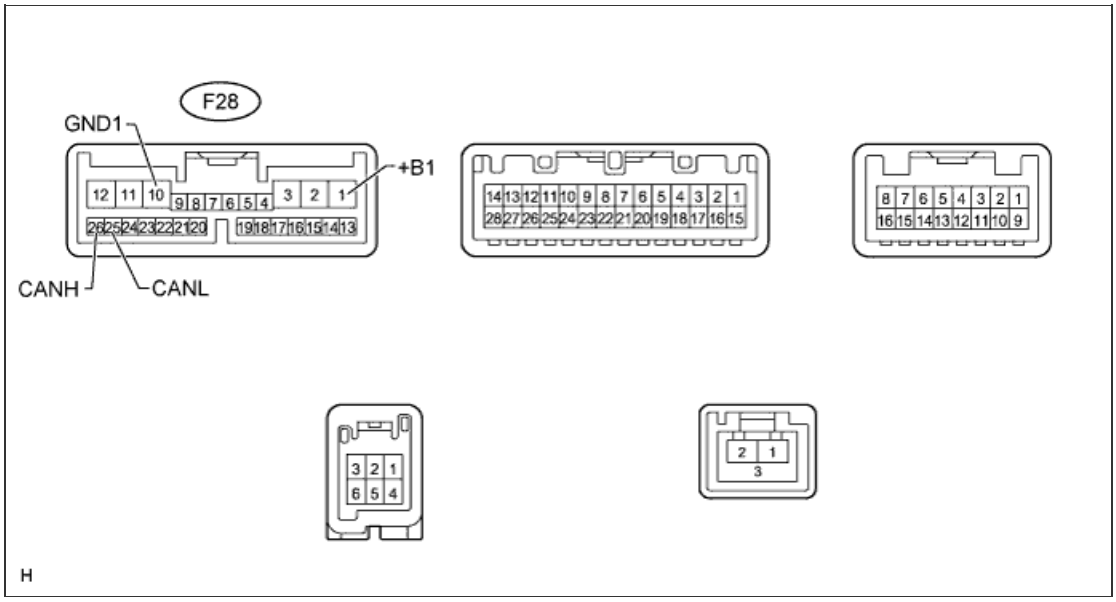
a. Disconnect the E47 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	GR - B	Engine switch off	54 to 69 Ω
E47-13 (CANH) - E47-25 (E1)	GR - W-B	Engine switch off	200 Ω or higher

E47-22 (CANL) - E47-25 (E1)	B - W-B	Engine switch off	200 Ω or higher
E47-13 (CANH) - E22-16 (BAT)	GR - O	Engine switch off	6 kΩ or higher
E47-22 (CANL) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

CHECK MULTI-DISPLAY

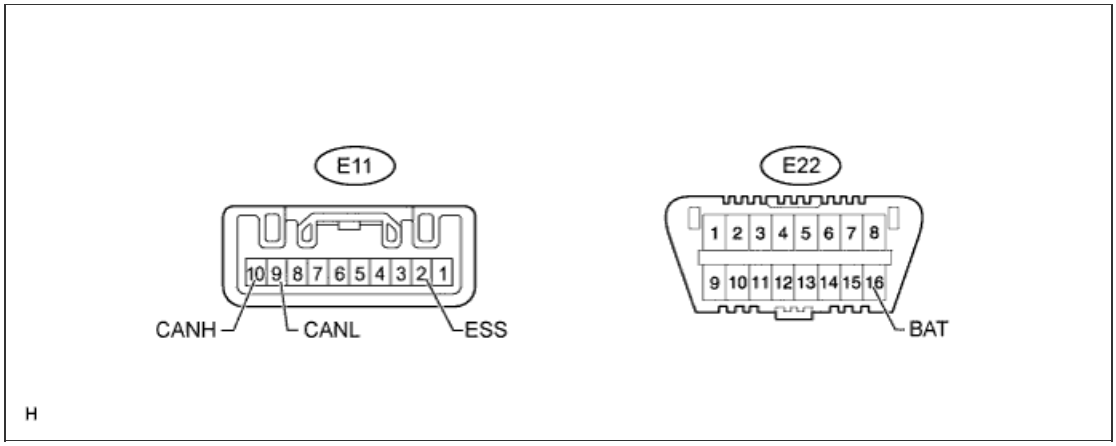


a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F28-26 (CANH) - F28-25 (CANL)	P - B	Engine switch off	54 to 69 Ω
F28-26 (CANH) - F28-10 (GND1)	P - W-B	Engine switch off	200 Ω or higher
F28-25 (CANL) - F28-10 (GND1)	B - W-B	Engine switch off	200 Ω or higher
F28-26 (CANH) - F28-1 (+B1)	P - R	Engine switch off	6 kΩ or higher
F28-25 (CANL) - F28-1 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK STEERING ANGLE SENSOR



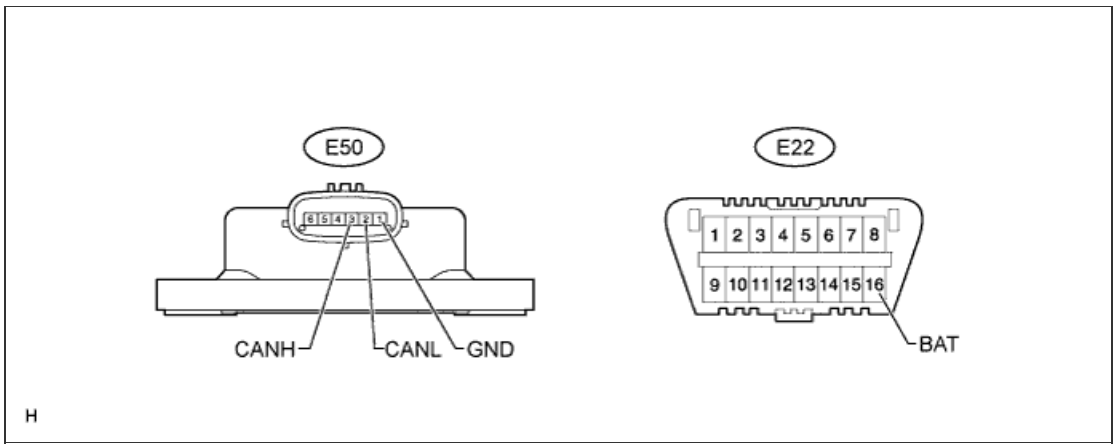
a. Disconnect the E11 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E11-10 (CANH) - E11-9 (CANL)	GR - L	Engine switch off	54 to 69 Ω

E11-10 (CANH) - E11-2 (ESS)	GR - W-B	Engine switch off	200 Ω or higher
E11-9 (CANL) - E11-2 (ESS)	L - W-B	Engine switch off	200 Ω or higher
E11-10 (CANH) - E22-16 (BAT)	GR - O	Engine switch off	6 kΩ or higher
E11-9 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK YAW RATE SENSOR



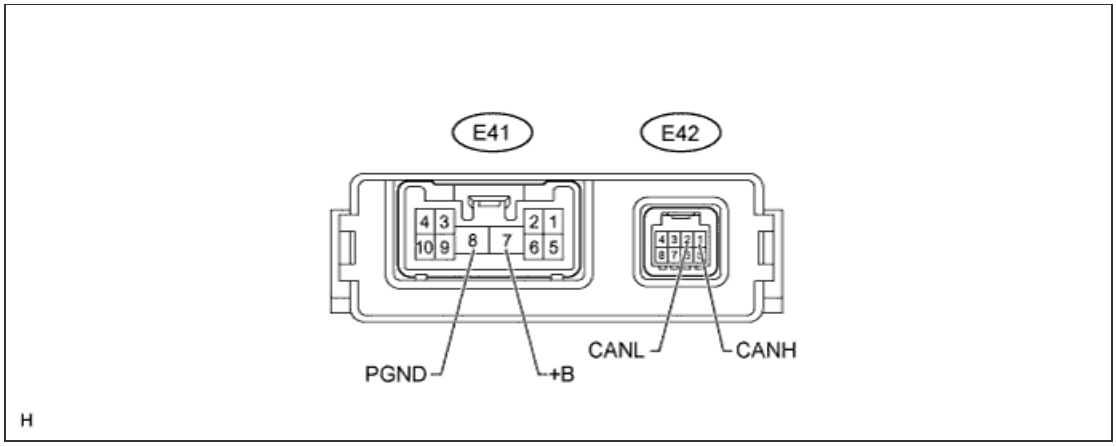
a. Disconnect the E50 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	BR - L	Engine switch off	54 to 69 Ω
E50-3 (CANH) - E50-1 (GND)	BR - W-B	Engine switch off	200 Ω or higher
E50-2 (CANL) - E50-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
E50-3 (CANH) - E22-16 (BAT)	BR - O	Engine switch off	6 kΩ or higher
E50-2 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK SEAT BELT CONTROL ECU

For vehicles with the pre-crash safety system only.

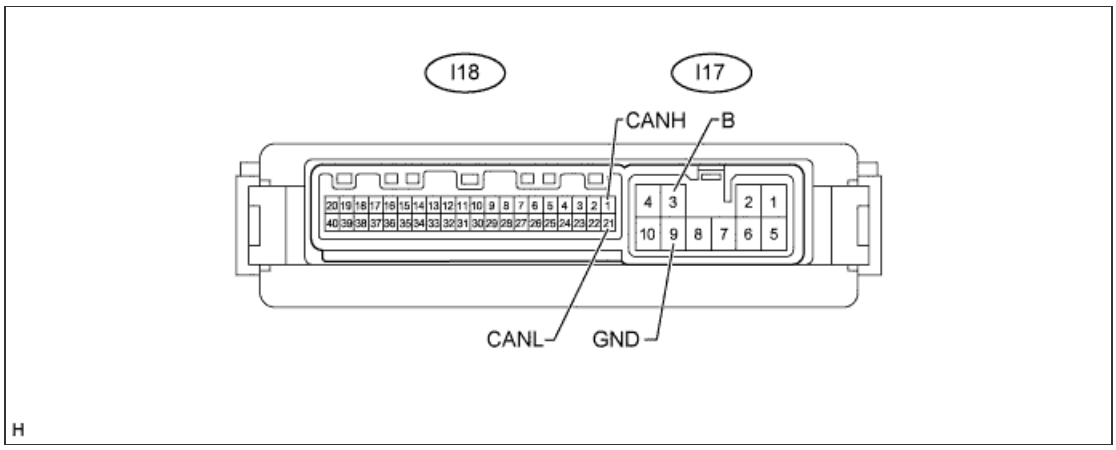


a. Disconnect the E41 and E42 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E42-1 (CANH) - E42-2 (CANL)	G - L	Engine switch off	54 to 69 Ω
E42-1 (CANH) - E41-8 (PGND)	G - W-B	Engine switch off	200 Ω or higher
E42-2 (CANL) - E41-8 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E42-1 (CANH) - E41-7 (+B)	G - R	Engine switch off	6 kΩ or higher
E42-2 (CANL) - E41-7 (+B)	L - R	Engine switch off	6 kΩ or higher

CHECK OUTER MIRROR CONTROL ECU

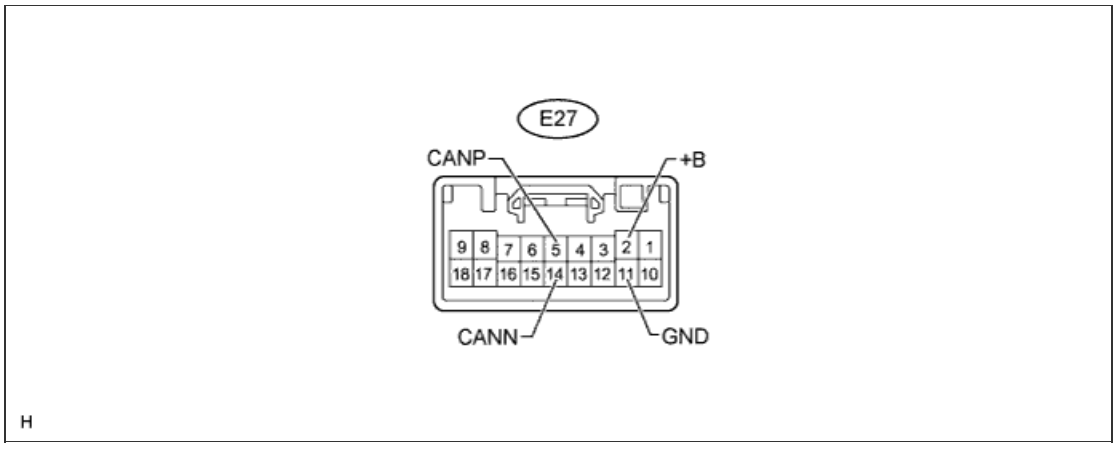


a. Disconnect the I18 and I17 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
I18-1 (CANH) - I18-21 (CANL)	BR - R	Engine switch off	54 to 69 Ω
I18-1 (CANH) - I17-9 (GND)	BR - W-B	Engine switch off	200 Ω or higher
I18-21 (CANL) - I17-9 (GND)	R - W-B	Engine switch off	200 Ω or higher
I18-1 (CANH) - I17-3 (B)	BR - R	Engine switch off	6 kΩ or higher
I18-21 (CANL) - I17-3 (B)	R - R	Engine switch off	6 kΩ or higher

CHECK MULTIPLEX TILT AND TELESCOPIC ECU

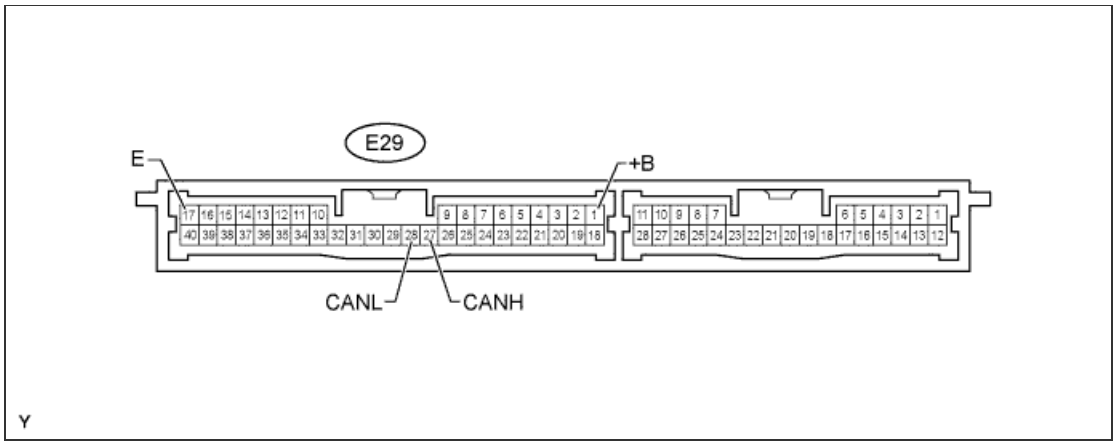


a. Disconnect the E27 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E27-5 (CANP) - E27-14 (CANN)	P - R	Engine switch off	54 to 69 Ω
E27-5 (CANP) - E27-11 (GND)	P - W-B	Engine switch off	200 Ω or higher
E27-14 (CANN) - E27-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
E27-5 (CANP) - E27-2 (+B)	P - L	Engine switch off	6 kΩ or higher
E27-14 (CANN) - E27-2 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK CERTIFICATION ECU (SMART KEY ECU)

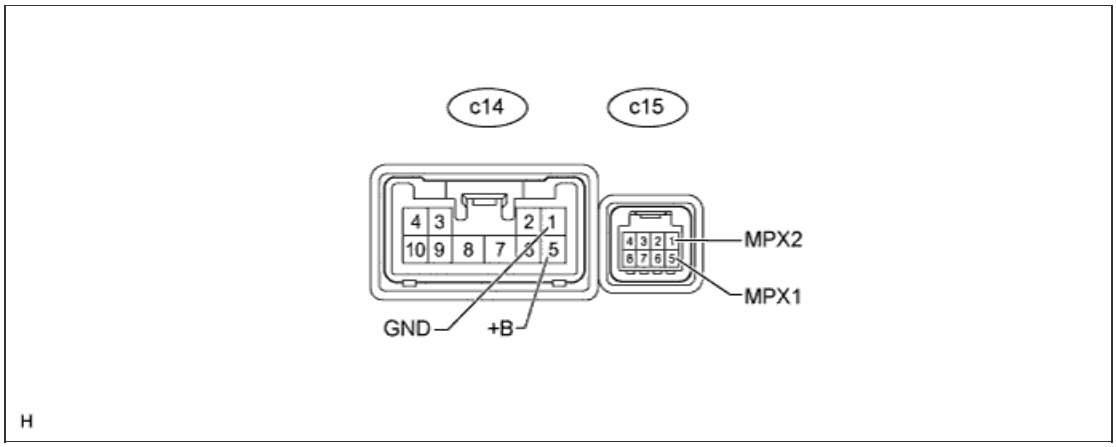


a. Disconnect the E29 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E29-27 (CANH) - E29-28 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E29-27 (CANH) - E29-17 (E)	LG - W-B	Engine switch off	200 Ω or higher
E29-28 (CANL) - E29-17 (E)	R - W-B	Engine switch off	200 Ω or higher
E29-27 (CANH) - E29-1 (+B)	LG - B	Engine switch off	6 kΩ or higher
E29-28 (CANL) - E29-1 (+B)	R - B	Engine switch off	6 kΩ or higher

CHECK POSITION CONTROL ECU AND SWITCH

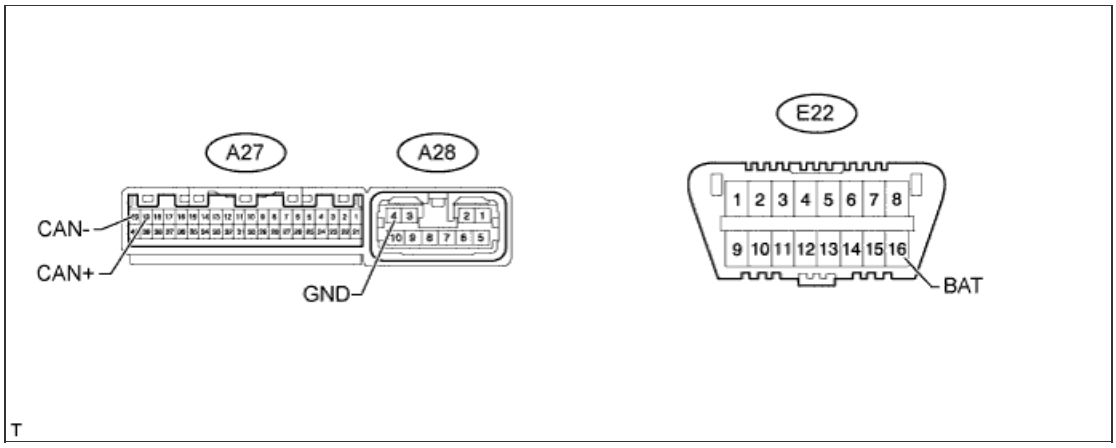


a. Disconnect the c14 and c15 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
c15-5 (MPX1) - c15-1 (MPX2)	V - R	Engine switch off	54 to 69 Ω
c15-5 (MPX1) - c14-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
c15-1 (MPX2) - c14-1 (GND)	R - W-B	Engine switch off	200 Ω or higher
c15-5 (MPX1) - c14-5 (+B)	V - L	Engine switch off	6 kΩ or higher
c15-1 (MPX2) - c14-5 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK 4WD CONTROL ECU

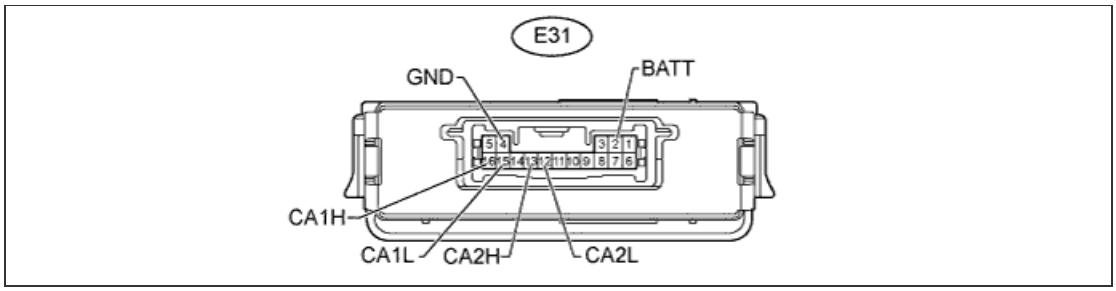


a. Disconnect the A27 and A28 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A27-19 (CAN+) - A27-20 (CAN-)	P - L	Engine switch off	54 to 69 Ω
A27-19 (CAN+) - A28-4 (GND)	P - W	Engine switch off	200 Ω or higher
A27-20 (CAN-) - A28-4 (GND)	L - W	Engine switch off	200 Ω or higher
A27-19 (CAN+) - E22-16 (BAT)	P - O	Engine switch off	6 kΩ or higher
A27-20 (CAN-) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK NETWORK GATEWAY ECU



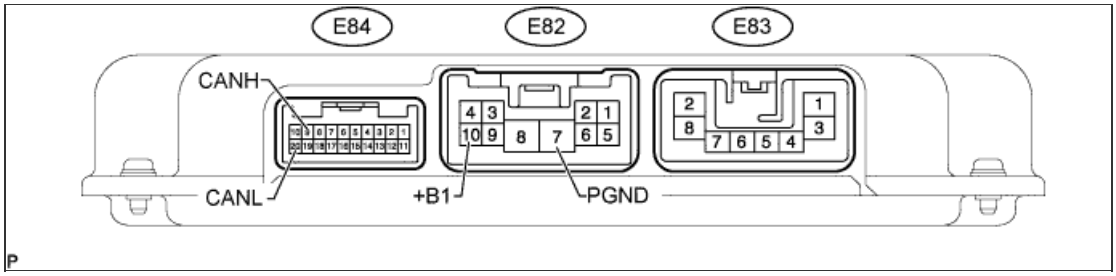
a. Disconnect the E31 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)*1	BR - B	Engine switch off	54 to 69 Ω
E31-16 (CA1H) - E31-4 (GND)*1	BR - W-B	Engine switch off	200 Ω or higher
E31-15 (CA1L) - E31-4 (GND)*1	B - W-B	Engine switch off	200 Ω or higher
E31-16 (CA1H) - E31-2 (BATT)*1	BR - R	Engine switch off	6 kΩ or higher
E31-15 (CA1L) - E31-2 (BATT)*1	B - R	Engine switch off	6 kΩ or higher
E31-13 (CA2H) - E31-12 (CA2L)*2	SB - L	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E31-4 (GND)*2	SB - W-B	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E31-4 (GND)*2	L - W-B	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E31-2 (BATT)*2	SB - R	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E31-2 (BATT)*2	L - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For movement control bus

CHECK STEERING CONTROL ECU

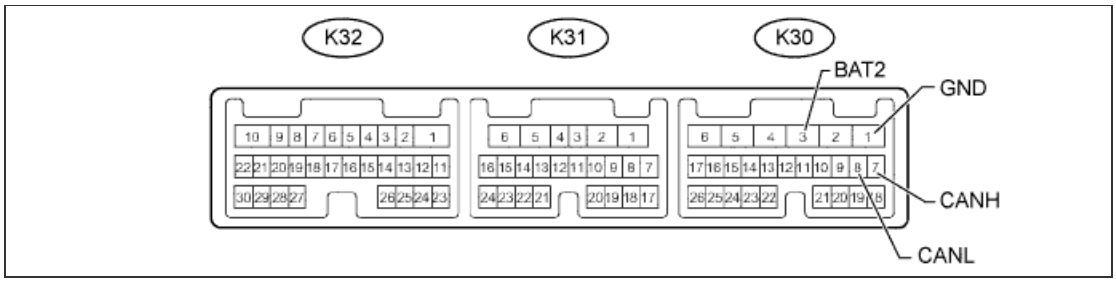


a. Disconnect the E82 and E84 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E84-9 (CANH) - E84-20 (CANL)	LG - L	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-7 (PGND)	LG - W-B	Engine switch off	200 Ω or higher
E84-20 (CANL) - E82-7 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-10 (+B1)	LG - R	Engine switch off	6 kΩ or higher
E84-20 (CANL) - E82-10 (+B1)	L - R	Engine switch off	6 kΩ or higher

CHECK SUSPENSION CONTROL ECU

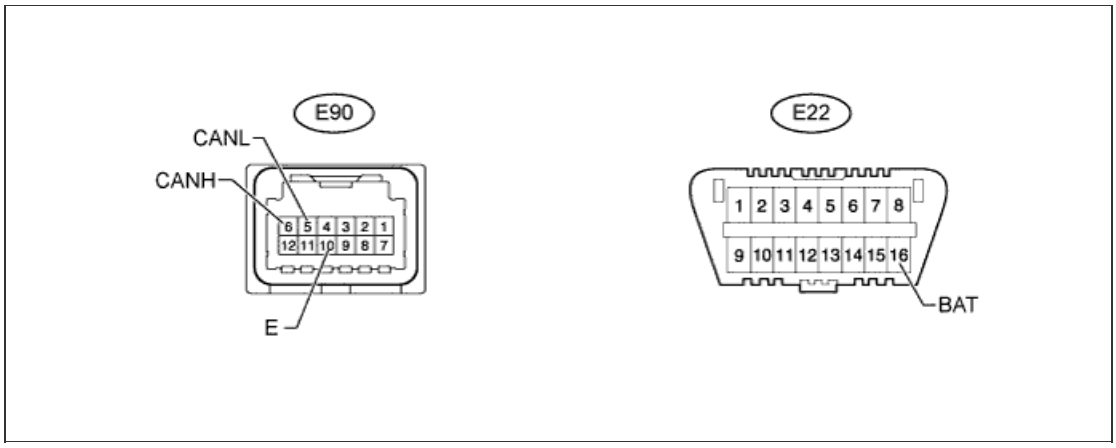


a. Disconnect the K30 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
K30-7 (CANH) - K30-8 (CANL)	V - L	Engine switch off	54 to 69 Ω
K30-7 (CANH) - K30-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
K30-8 (CANL) - K30-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
K30-7 (CANH) - K30-3 (BAT2)	V - R	Engine switch off	6 kΩ or higher
K30-8 (CANL) - K30-3 (BAT2)	L - R	Engine switch off	6 kΩ or higher

CHECK WINDSHIELD WIPER ECU



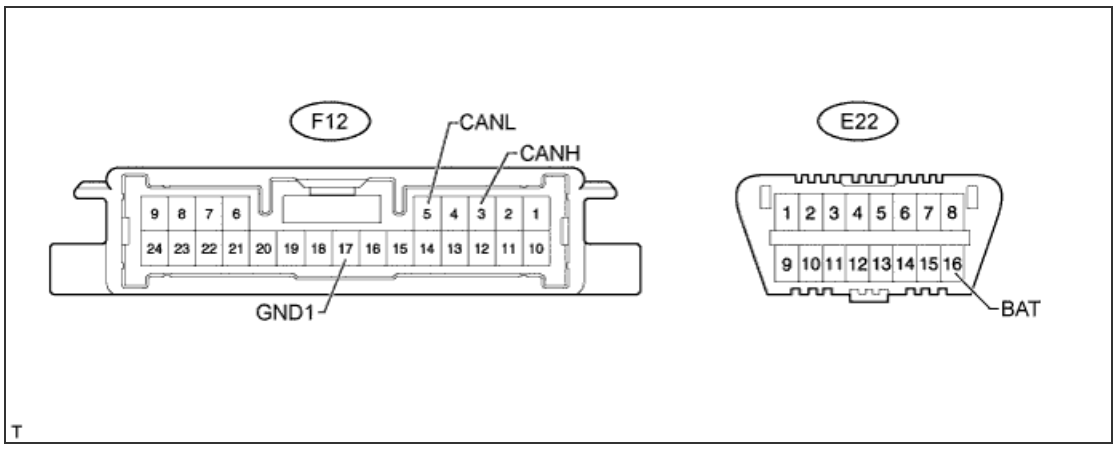
a. Disconnect the E90 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E90-6 (CANH) - E90-5 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E90-6 (CANH) - E90-10 (E)	LG - W-B	Engine switch off	200 Ω or higher
E90-5 (CANL) - E90-10 (E)	R - W-B	Engine switch off	200 Ω or higher
E90-6 (CANH) - E22-16 (BAT)	LG - O	Engine switch off	6 kΩ or higher
E90-5 (CANL) - E22-16 (BAT)	R - O	Engine switch off	6 kΩ or higher

CHECK CLEARANCE WARNING ECU

For vehicles with the LEXUS parking assist-sensor system only.



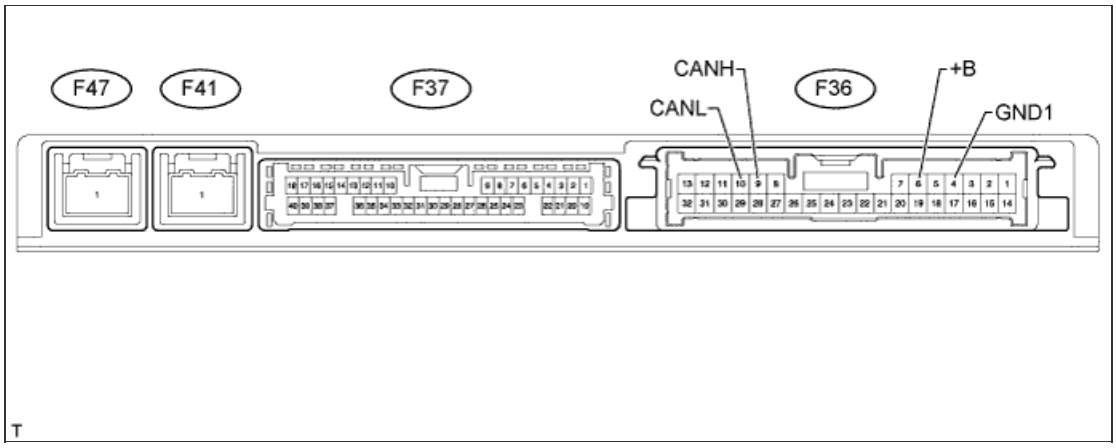
a. Disconnect F12 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F12-3 (CANH) - F12-5 (CANL)	V - L	Engine switch off	54 to 69 Ω
F12-3 (CANH) - F12-17 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F12-5 (CANL) - F12-17 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F12-3 (CANH) - E22-16 (BAT)	V - O	Engine switch off	6 kΩ or higher
F12-5 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK PARKING ASSIST ECU

For vehicles with the parking assist monitor system only.



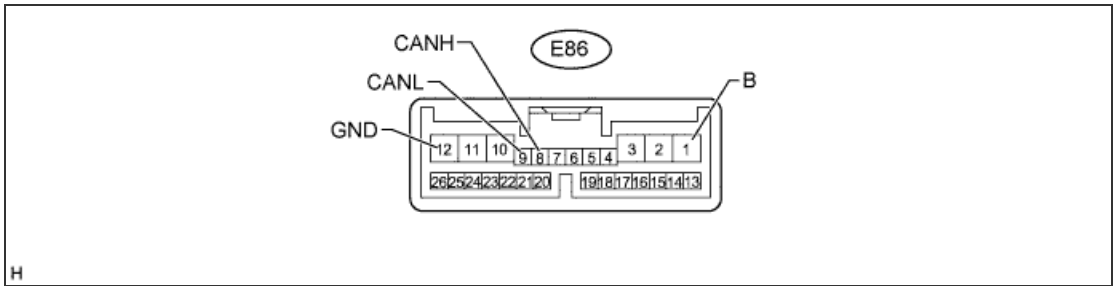
a. Disconnect the F36 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F36-9 (CANH) - F36-10 (CANL)	V - L	Engine switch off	54 to 69 Ω
F36-9 (CANH) - F36-4 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F36-10 (CANL) - F36-4 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F36-9 (CANH) - F36-6 (+B)	V - L	Engine switch off	6 kΩ or higher
F36-10 (CANL) - F36-6 (+B)	L - L	Engine switch off	6 kΩ or higher

CHECK DISTANCE CONTROL ECU

For vehicles with the dynamic radar cruise control system only.



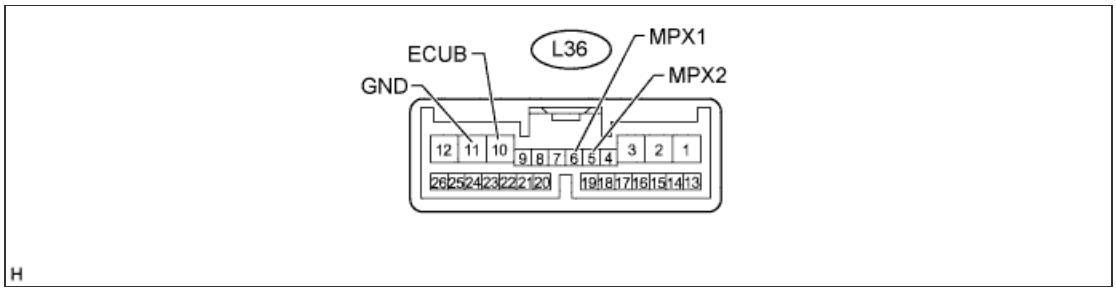
a. Disconnect the E86 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E86-8 (CANH) - E86-9 (CANL)	SB - L	Engine switch off	54 to 69 Ω
E86-8 (CANH) - E86-12 (GND)	SB - BR	Engine switch off	200 Ω or higher
E86-9 (CANL) - E86-12 (GND)	L - BR	Engine switch off	200 Ω or higher
E86-8 (CANH) - E86-1 (B)	SB - R	Engine switch off	6 kΩ or higher
E86-9 (CANL) - E86-1 (B)	L - R	Engine switch off	6 kΩ or higher

CHECK POWER BACK DOOR UNIT (POWER BACK DOOR ECU)

For vehicles with the power back door system only.

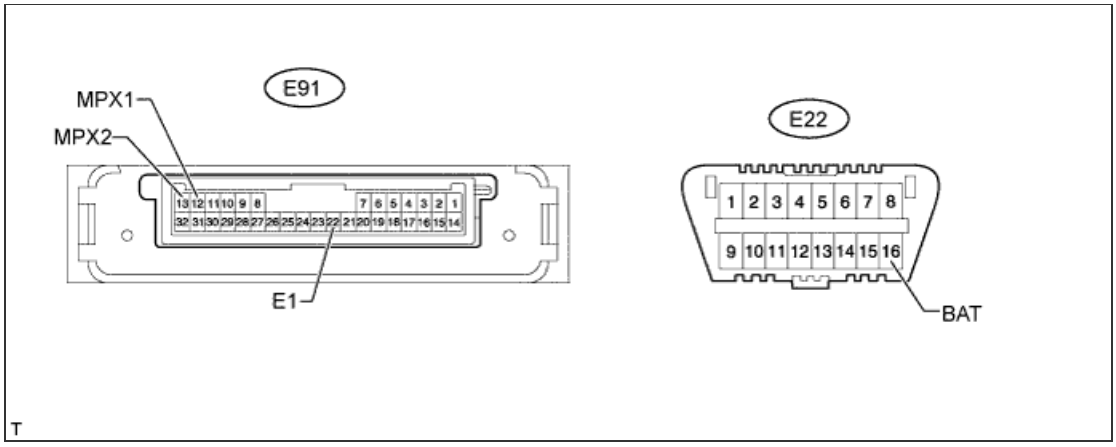


a. Disconnect the L36 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L36-6 (MPX1) - L36-5 (MPX2)	V - R	Engine switch off	54 to 69 Ω
L36-6 (MPX1) - L36-11 (GND)	V - W-B	Engine switch off	200 Ω or higher
L36-5 (MPX2) - L36-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
L36-6 (MPX1) - L36-10 (ECUB)	V - R	Engine switch off	6 kΩ or higher
L36-5 (MPX2) - L36-10 (ECUB)	R - R	Engine switch off	6 kΩ or higher

CHECK AFS ECU (HEADLIGHT SWIVEL ECU)

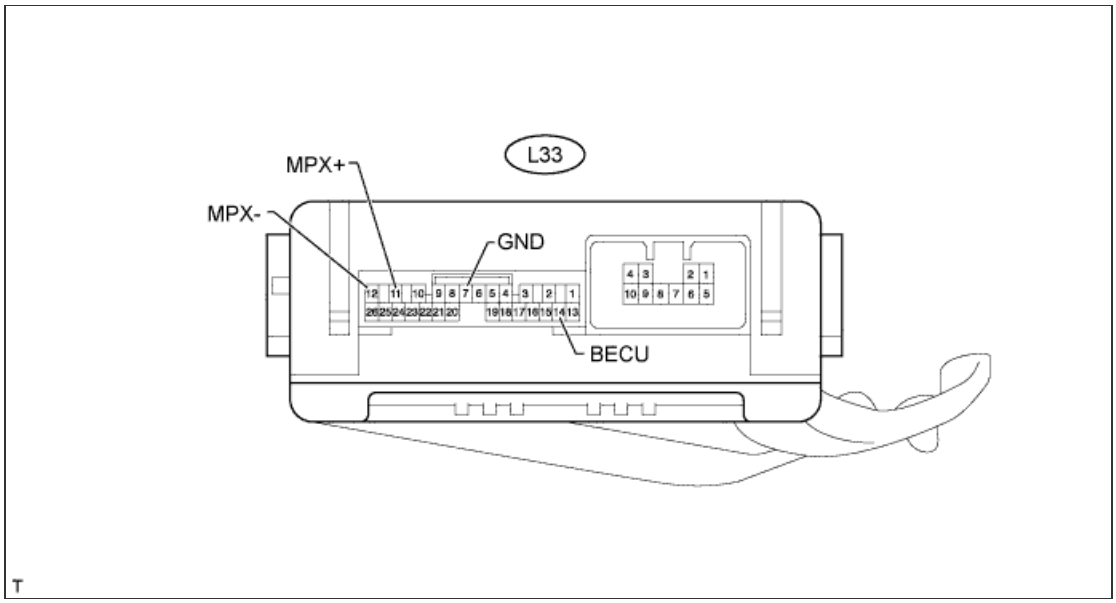


a. Disconnect the E91 unit connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	LG - B	Engine switch off	54 to 69 Ω
E91-12 (MPX1) - E91-22 (E1)	LG - W-B	Engine switch off	200 Ω or higher
E91-13 (MPX2) - E91-22 (E1)	B - W-B	Engine switch off	200 Ω or higher
E91-12 (MPX1) - E22-16 (BAT)	LG - O	Engine switch off	6 kΩ or higher
E91-13 (MPX2) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

CHECK NO. 2 MAIN BODY ECU



a. Disconnect the L33 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L33-11 (MPX+) - L33-12 (MPX-)	LG - R	Engine switch off	54 to 69 Ω
L33-11 (MPX+) - L33-7 (GND)	LG - W-B	Engine switch off	200 Ω or higher
L33-12 (MPX-) - L33-7 (GND)	R - W-B	Engine switch off	200 Ω or higher
L33-11 (MPX+) - L33-14 (BECU)	LG - R	Engine switch off	6 kΩ or higher
L33-12 (MPX-) - L33-14 (BECU)	R - R	Engine switch off	6 kΩ or higher

for Preparation Click here

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

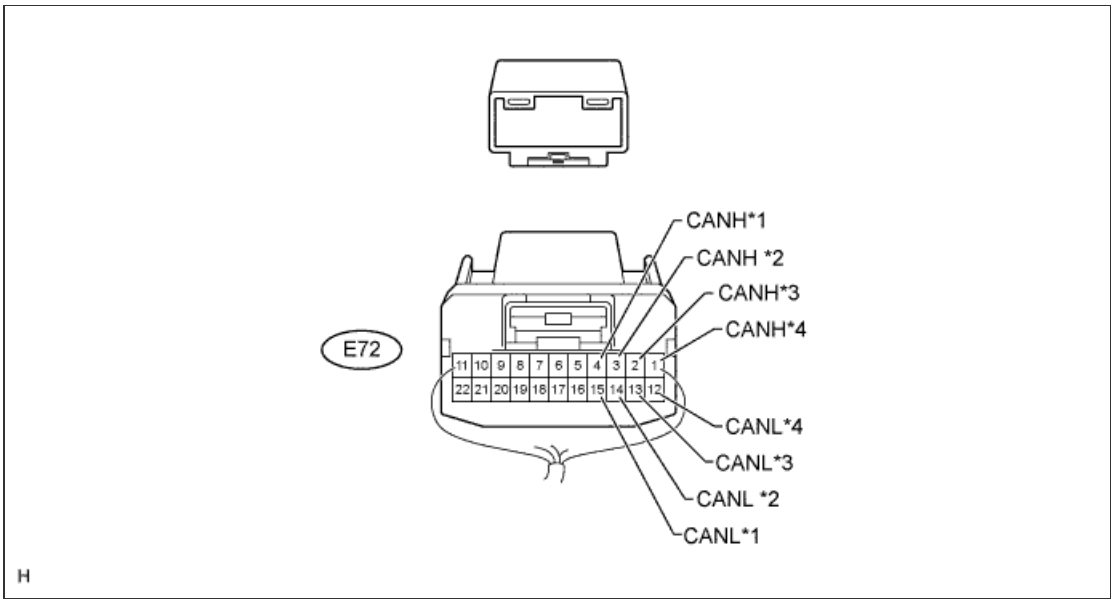
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

JUNCTION CONNECTOR

a. NO. 1 JUNCTION CONNECTOR

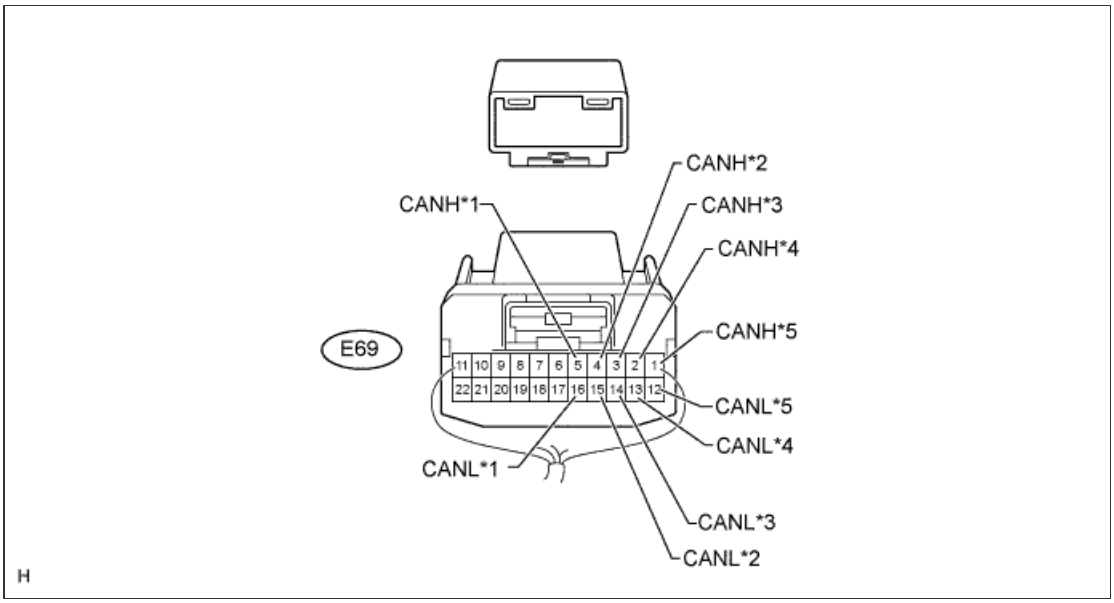


Text in Illustration

*1	to Center Airbag Sensor	*2	to AFS ECU
*3	to ECM	*4	to No. 2 Junction Connector

No. 1 Junction Connector	Wiring Color	Connect to
E72-1 (CANH)	Y	No. 2 junction connector
E72-12 (CANL)	B	
E72-2 (CANH)	P	ECM
E72-13 (CANL)	B	
E72-3 (CANH)	LG	AFS ECU (headlight swivel ECU)
E72-14 (CANL)	B	
E72-4 (CANH)	GR	Center airbag sensor
E72-15 (CANL)	B	

b. NO. 2 JUNCTION CONNECTOR

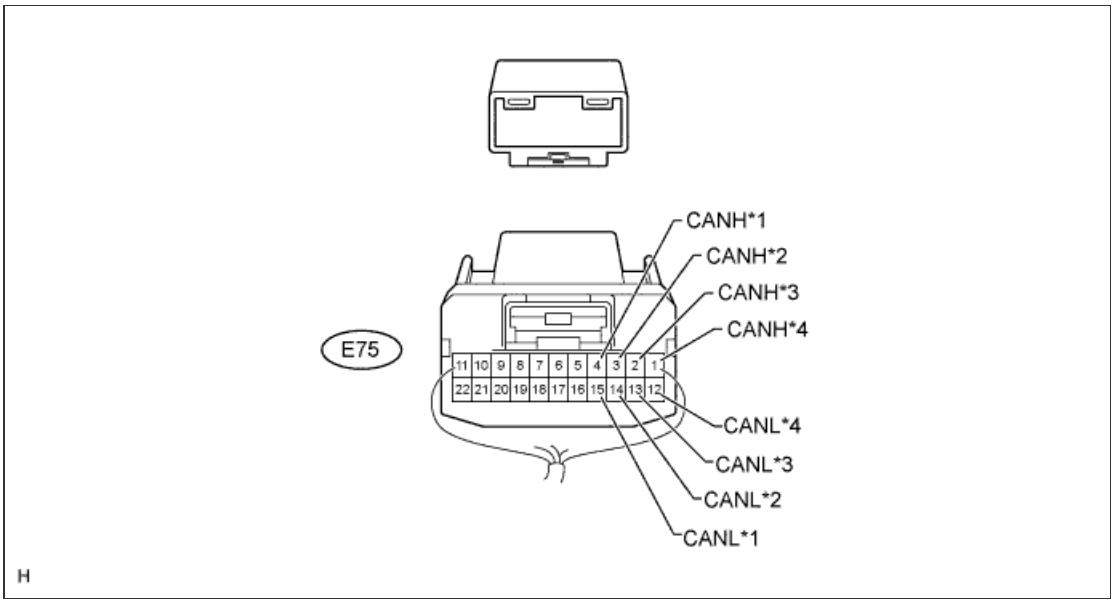


Text in Illustration

*1	to Air Conditioning Amplifier	*2	to No. 3 Junction Connector
*3	to Network Gateway ECU: V Bus	*4	to Display and Navigation Module Display
*5	to No. 1 Junction Connector	-	-

No. 2 Junction Connector	Wiring Color	Connect to
E69-1 (CANH)	Y	No. 1 junction connector
E69-12 (CANL)	B	
E69-2 (CANH)	P	Display and navigation module display
E69-13 (CANL)	B	
E69-3 (CANH)	BR	Network gateway ECU (V bus)
E69-14 (CANL)	B	
E69-4 (CANH)	W	No. 3 junction connector
E69-15 (CANL)	B	
E69-5 (CANH)	G	Air conditioning amplifier
E69-16 (CANL)	B	

c. NO. 3 JUNCTION CONNECTOR

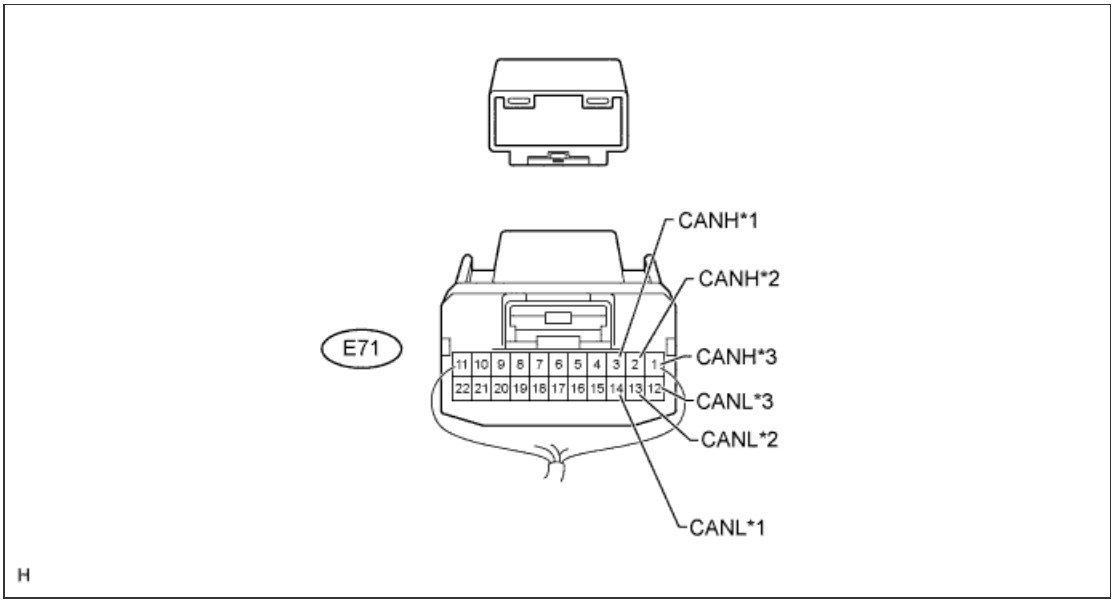


Text in Illustration

*1	to Main Body ECU: V Bus	*2	to Combination Meter: V Bus
*3	to DLC3	*4	to No. 2 Junction Connector

No. 3 Junction Connector	Wiring Color	Connect to
E75-1 (CANH)	W	No. 2 junction connector
E75-12 (CANL)	B	
E75-2 (CANH)	G	DLC3
E75-13 (CANL)	B	
E75-3 (CANH)	V	Combination meter (V bus)
E75-14 (CANL)	B	
E75-4 (CANH)	SB	Main body ECU (cowl side junction block LH) (V bus)
E75-15 (CANL)	B	

d. NO. 4 JUNCTION CONNECTOR

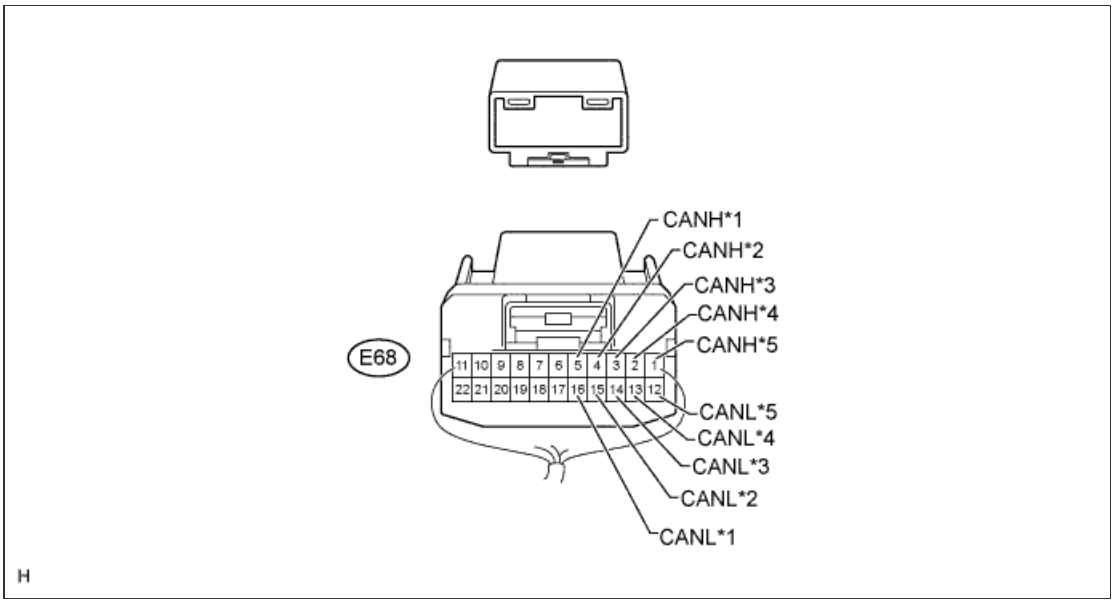


Text in Illustration

*1	to 4WD Control ECU	*2	to Network Gateway ECU: Movement Control Bus
*3	to No. 5 Junction Connector	-	-

No. 4 Junction Connector	Wiring Color	Connect to
E71-1 (CANH)	W	No. 5 junction connector
E71-12 (CANL)	L	
E71-2 (CANH)	SB	Network gateway ECU (movement control bus)
E71-13 (CANL)	L	
E71-3 (CANH)	P	4WD control ECU
E71-14 (CANL)	L	

e. NO. 5 JUNCTION CONNECTOR



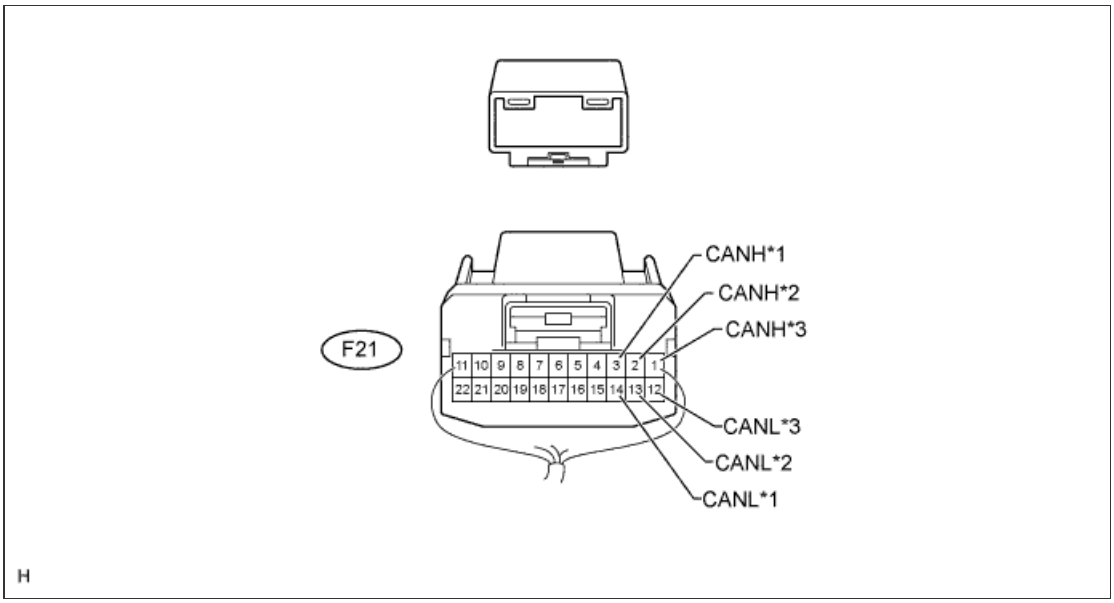
Text in Illustration

*1	to Seat Belt Control ECU (w/ Pre-Crash Safety System)	*2	to Display Control ECU (w/ Dynamic Radar Cruise Control System)
*3	to Yaw Rate Sensor	*4	to No. 6 Junction Connector
*5	to No. 4 Junction Connector	-	-

No. 5 Junction Connector	Wiring Color	Connect to
E68-1 (CANH)	W	No. 4 junction connector
E68-12 (CANL)	L	
E68-2 (CANH)	Y	No. 6 junction connector
E68-13 (CANL)	L	
E68-3 (CANH)	BR	Yaw rate sensor
E68-14 (CANL)	L	
E68-4 (CANH)*1	SB	Distance control ECU
E68-15 (CANL)*1	L	
E68-5 (CANH)*2	G	Seat belt control ECU
E68-16 (CANL)*2	L	

*1: w/ Dynamic Radar Cruise Control System
*2: w/ Pre-Crash Safety System

f. NO. 6 JUNCTION CONNECTOR



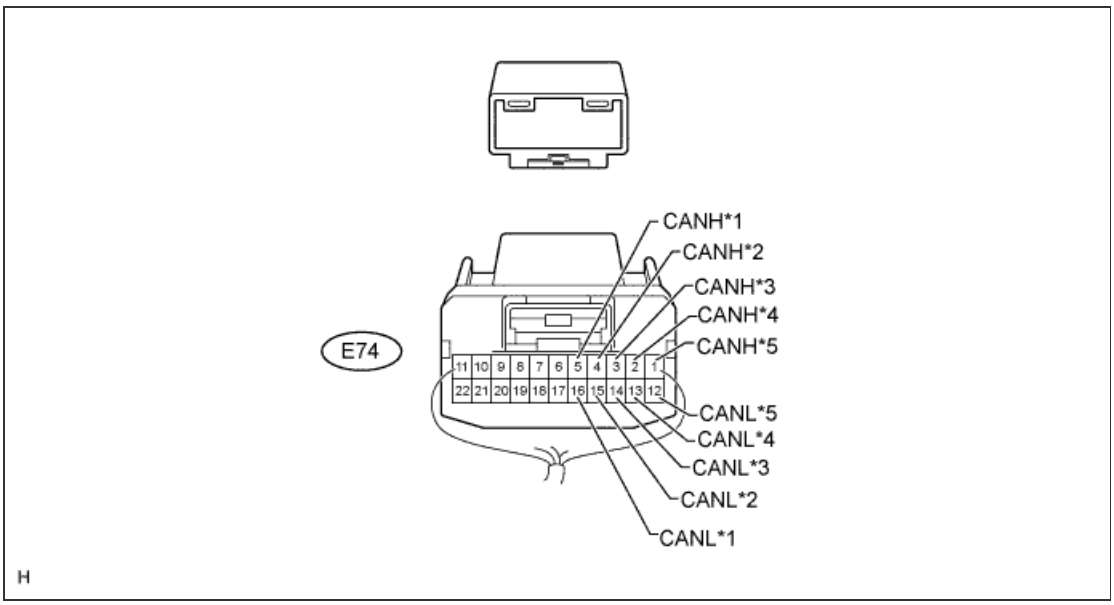
Text in Illustration

*1	to No. 5 Junction Connector	*2	to No. 7 Junction Connector
*3	• to Clearance Warning ECU (w/ LEXUS Parking Assist-sensor System) • to Parking Assist ECU (w/o Parking Assist Monitor System)	-	-

No. 6 Junction Connector	Wiring Color	Connect to
F21-1 (CANH)*1	V	Clearance warning ECU
F21-12 (CANL)*1	L	
F21-1 (CANH)*2	V	Parking assist ECU
F21-12 (CANL)*2	L	
F21-2 (CANH)	Y	No. 7 junction connector
F21-13 (CANL)	L	
F21-3 (CANH)	Y	No. 5 junction connector
F21-14 (CANL)	L	

*1: w/ LEXUS Parking Assist-sensor System
*2: w/ Parking Assist Monitor System

g. NO. 7 JUNCTION CONNECTOR

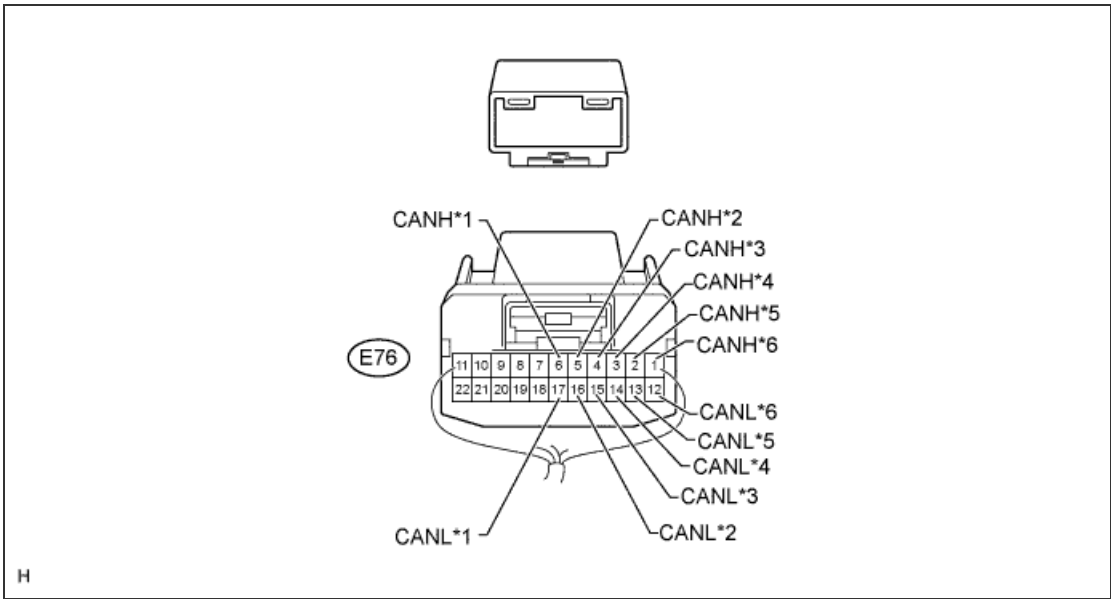


Text in Illustration

*1	to Skid Control ECU	*2	to Steering Angle Sensor
*3	to Steering Control ECU	*4	to No. 6 Junction Connector
*5	to No. 1 CAN Junction Connector	-	-

No. 7 Junction Connector	Wiring Color	Connect to
E74-1 (CANH)	W	No. 1 CAN junction connector
E74-12 (CANL)	L	
E74-2 (CANH)	Y	No. 6 junction connector
E74-13 (CANL)	L	
E74-3 (CANH)	LG	Steering control ECU
E74-14 (CANL)	L	
E74-4 (CANH)	GR	Steering angle sensor
E74-15 (CANL)	L	
E74-5 (CANH)	V	Master cylinder solenoid (skid control ECU)
E74-16 (CANL)	L	

h. NO. 8 JUNCTION CONNECTOR

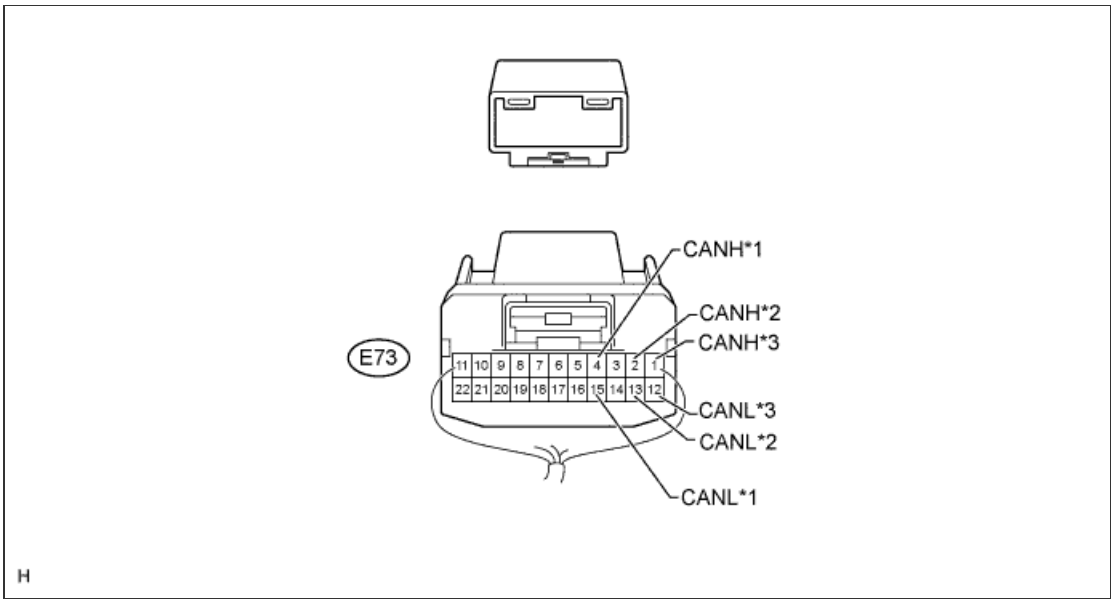


Text in Illustration

*1	to Main Body ECU: MS Bus	*2	to Outer Mirror Control ECU
*3	to Position Control ECU and Switch	*4	to Multiplex Tilt and Telescopic ECU
*5	to Certification ECU	*6	to No. 2 CAN Junction Connector

No. 8 Junction Connector	Wiring Color	Connect to
E76-1 (CANH)	W	No. 2 CAN junction connector
E76-12 (CANL)	R	
E76-2 (CANH)	LG	Certification ECU (smart key ECU)
E76-13 (CANL)	R	
E76-3 (CANH)	P	Multiplex tilt and telescopic ECU
E76-14 (CANL)	R	
E76-4 (CANH)	V	Position control ECU and switch
E76-15 (CANL)	R	
E76-5 (CANH)	BR	Outer mirror control ECU
E76-16 (CANL)	R	
E76-6 (CANH)	GR	Main body ECU (cowl side junction block LH) (MS bus)
E76-17 (CANL)	R	

i. NO. 9 JUNCTION CONNECTOR

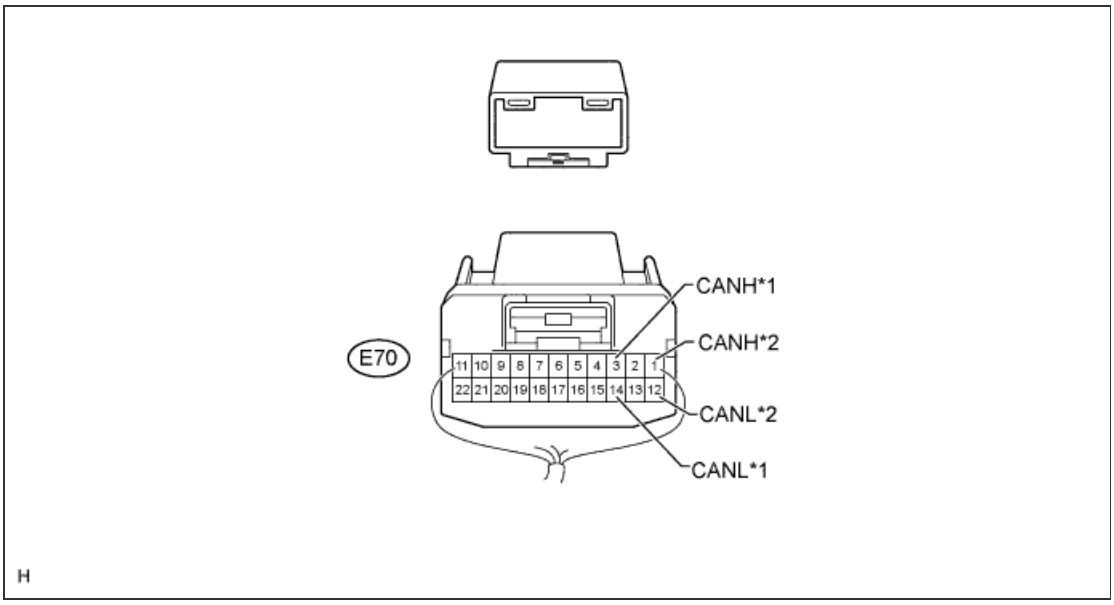


Text in Illustration

*1	to Windshield Wiper ECU	*2	to No. 2 CAN Junction Connector
*3	to No. 10 Junction Connector	-	-

No. 9 Junction Connector	Wiring Color	Connect to
E73-1 (CANH)	W	No. 10 junction connector
E73-12 (CANL)	R	
E73-2 (CANH)	Y	No. 2 CAN junction connector
E73-13 (CANL)	R	
E73-4 (CANH)	LG	Windshield wiper ECU
E73-15 (CANL)	R	

j. NO. 10 JUNCTION CONNECTOR

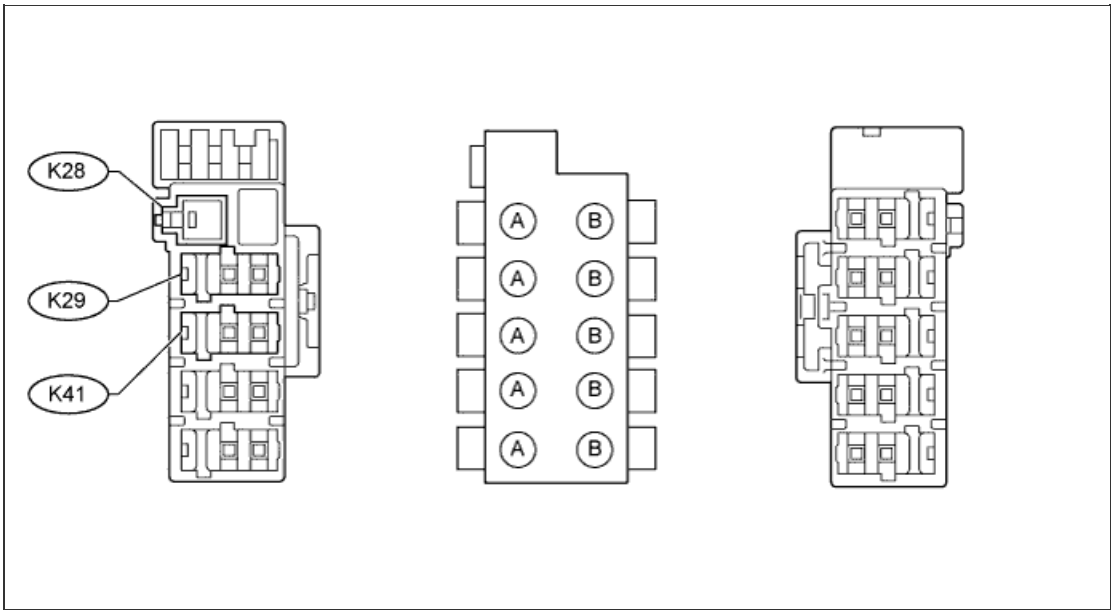


Text in Illustration

*1 to Combination Meter: MS Bus *2 to No. 9 Junction Connector

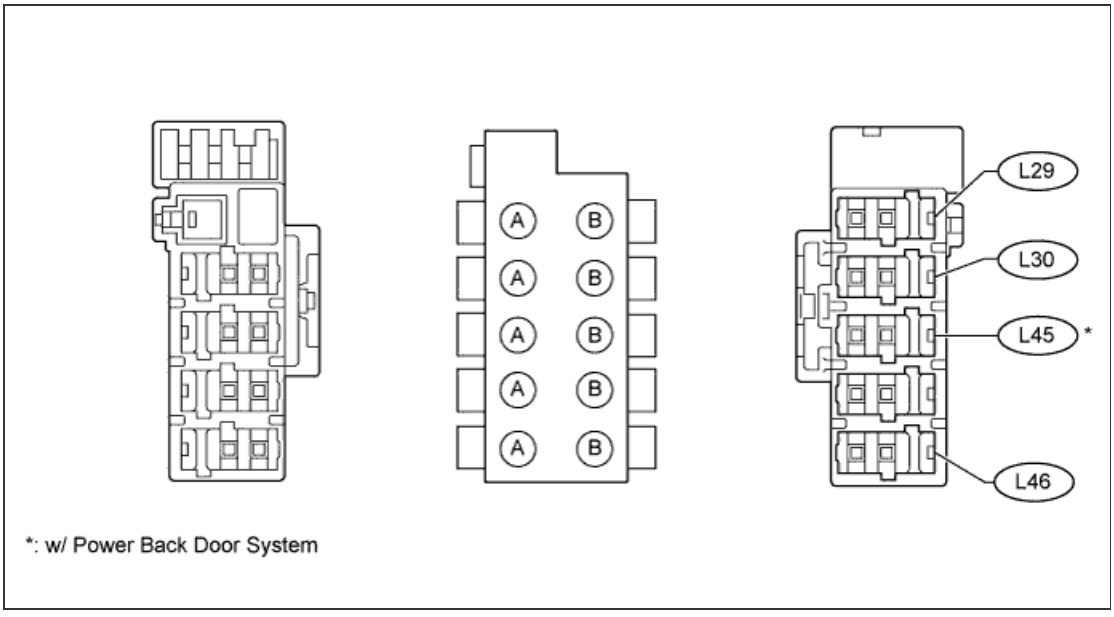
No. 10 Junction Connector	Wiring Color	Connect to
E70-1 (CANH)	W	No. 9 Junction Connector
E70-12 (CANL)	R	
E70-3 (CANH)	LG	Combination Meter (MS bus)
E70-14 (CANL)	R	

k. NO. 1 CAN JUNCTION CONNECTOR



Junction Connector A Side	Wiring Color (CANH Side)	Wiring Color (CANL Side)
Body ground (K28)	-	W-B
No. 7 junction connector (K29)	W	L
Suspension control ECU (K41)	V	L

l. NO. 2 CAN JUNCTION CONNECTOR



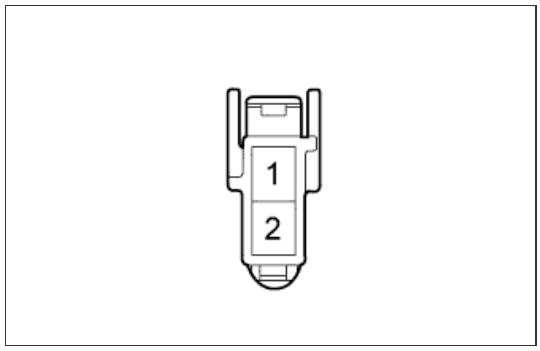
Junction Connector B Side	Wiring Color (CANH Side)	Wiring Color (CANL Side)

No. 8 junction connector (L29)	W	R
No. 9 junction connector (L30)	Y	R
Power back door ECU (L45)*	V	R
No. 2 main body ECU (L46)	LG	R

*: w/ Power Back Door System

TERMINALS OF CONNECTORS FOR JUNCTION CONNECTOR (CAN JUNCTION CONNECTOR)

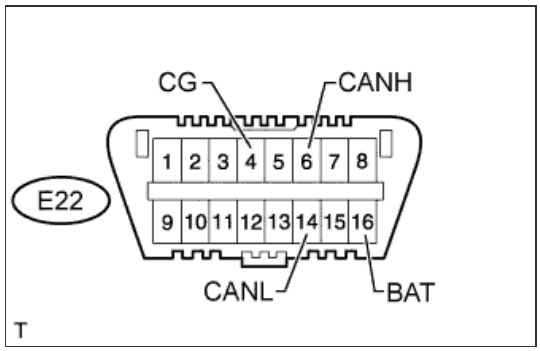
Terminal No.	Symbol
1	CANH
2	CANL



CHECK DLC3

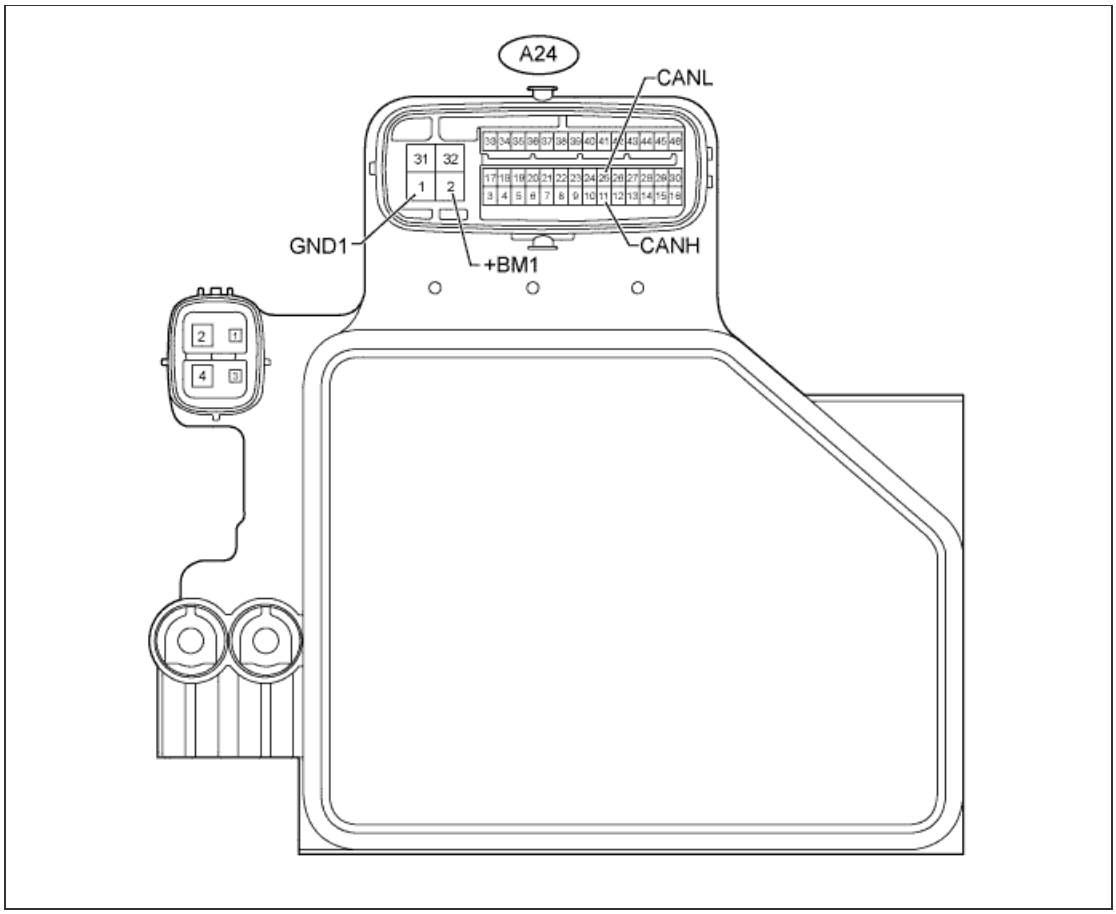
a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

b. Measure the resistance according to the value(s) in the table below.



Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	G - B	Engine switch off	54 to 69 Ω
E22-6 (CANH) - E22-4 (CG)	G - W-B	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	B - W-B	Engine switch off	200 Ω or higher
E22-6 (CANH) - E22-16 (BAT)	G - BE	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	B - BE	Engine switch off	6 kΩ or higher

CHECK MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

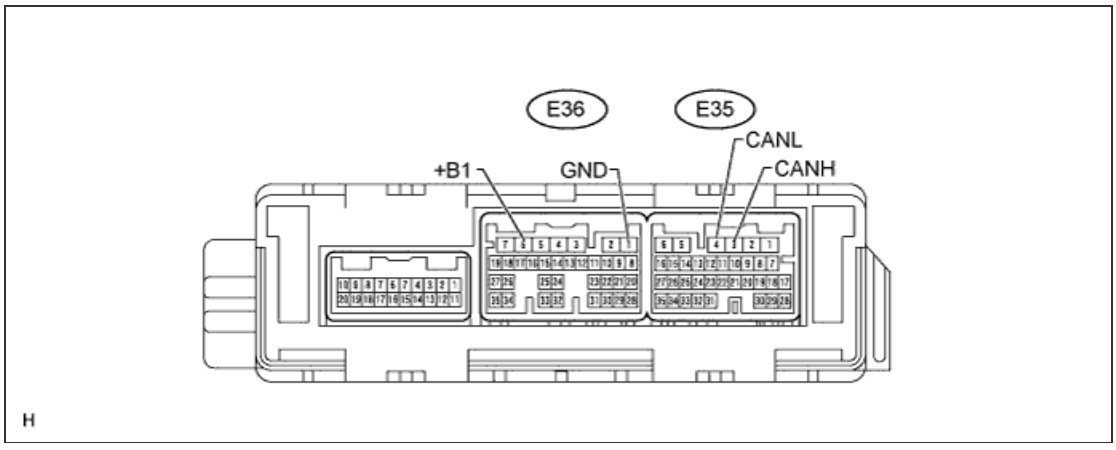


a. Disconnect the A24 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	V - L	Engine switch off	54 to 69 Ω
A24-11 (CANH) - A24-1 (GND1)	V - W-B	Engine switch off	200 Ω or higher
A24-25 (CANL) - A24-1 (GND1)	L - W-B	Engine switch off	200 Ω or higher
A24-11 (CANH) - A24-2 (+BM1)	V - B	Engine switch off	6 kΩ or higher
A24-25 (CANL) - A24-2 (+BM1)	L - B	Engine switch off	6 kΩ or higher

CHECK AIR CONDITIONING AMPLIFIER



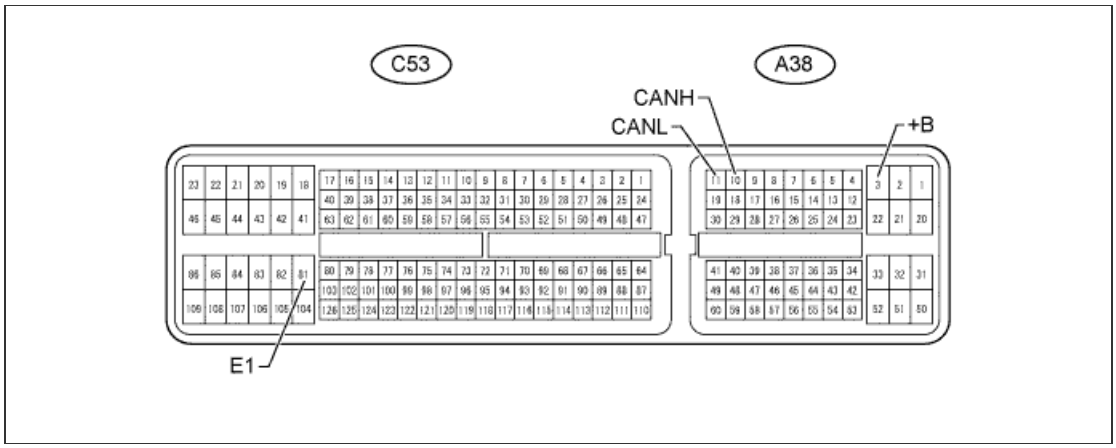
a. Disconnect the E35 and E36 amplifier connectors.

b. Measure the voltage and resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Condition	Specified Condition

E35-3 (CANH) - E35-4 (CANL)	G - B	Engine switch off	54 to 69 Ω
E35-3 (CANH) - E36-1 (GND)	G - W-B	Engine switch off	200 Ω or higher
E35-4 (CANL) - E36-1 (GND)	B - W-B	Engine switch off	200 Ω or higher
E35-3 (CANH) - E36-6 (+B1)	G - R	Engine switch off	6 kΩ or higher
E35-4 (CANL) - E36-6 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK ECM

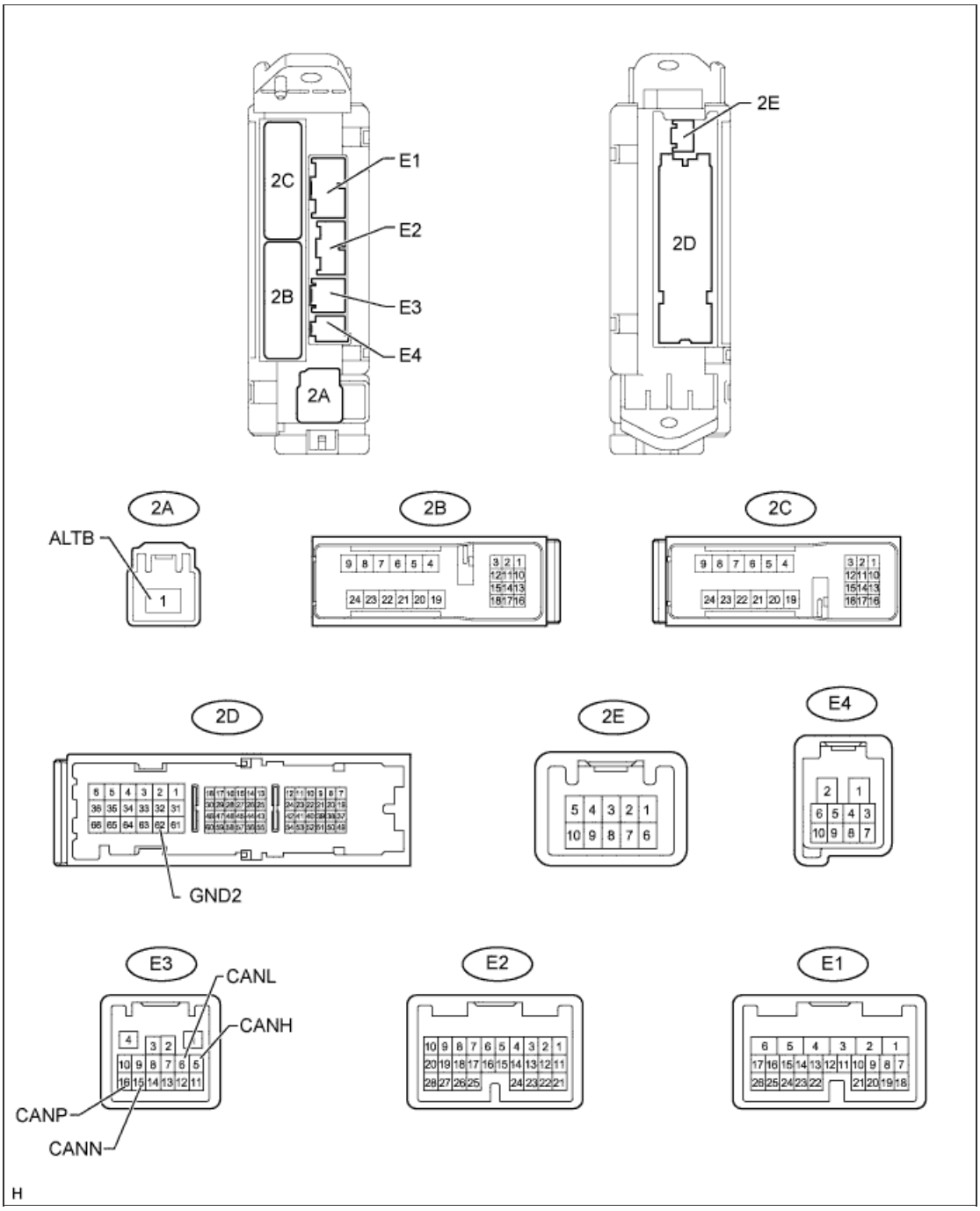


a. Disconnect the A38 and C53 ECM connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A38-10 (CANH) - A38-11 (CANL)	P - B	Engine switch off	108 to 132 Ω
A38-10 (CANH) - C53-81 (E1)	P - W-B	Engine switch off	200 Ω or higher
A38-11 (CANL) - C53-81 (E1)	B - W-B	Engine switch off	200 Ω or higher
A38-10 (CANH) - A38-3 (+B)	P - B	Engine switch off	6 kΩ or higher
A38-11 (CANL) - A38-3 (+B)	B - B	Engine switch off	6 kΩ or higher

CHECK MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)



a. Disconnect the E3 ECU connector.

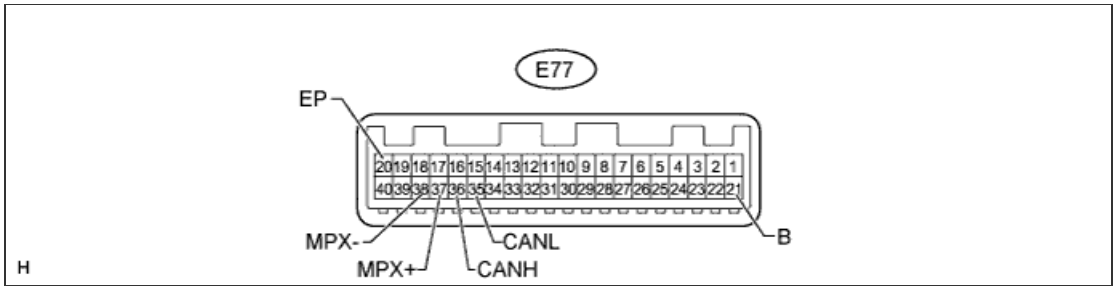
b. Disconnect the 2A and 2D junction connectors.

c. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)*1	SB - B	Engine switch off	54 to 69 Ω
E3-5 (CANH) - 2D-62 (GND2)*1	SB - W-B	Engine switch off	200 Ω or higher
E3-6 (CANL) - 2D-62 (GND2)*1	B - W-B	Engine switch off	200 Ω or higher
E3-5 (CANH) - 2A-1 (ALTB)*1	SB - B	Engine switch off	6 kΩ or higher
E3-6 (CANL) - 2A-1 (ALTB)*1	B - B	Engine switch off	6 kΩ or higher
E3-16 (CANP) - E3-15 (CANN)*2	GR - R	Engine switch off	108 to 132 Ω
E3-16 (CANP) - 2D-62 (GND2)*2	GR - W-B	Engine switch off	200 Ω or higher
E3-15 (CANN) - 2D-62 (GND2)*2	R - W-B	Engine switch off	200 Ω or higher
E3-16 (CANP) - 2A-1 (ALTB)*2	GR - B	Engine switch off	6 kΩ or higher
E3-15 (CANN) - 2A-1 (ALTB)*2	R - B	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK COMBINATION METER



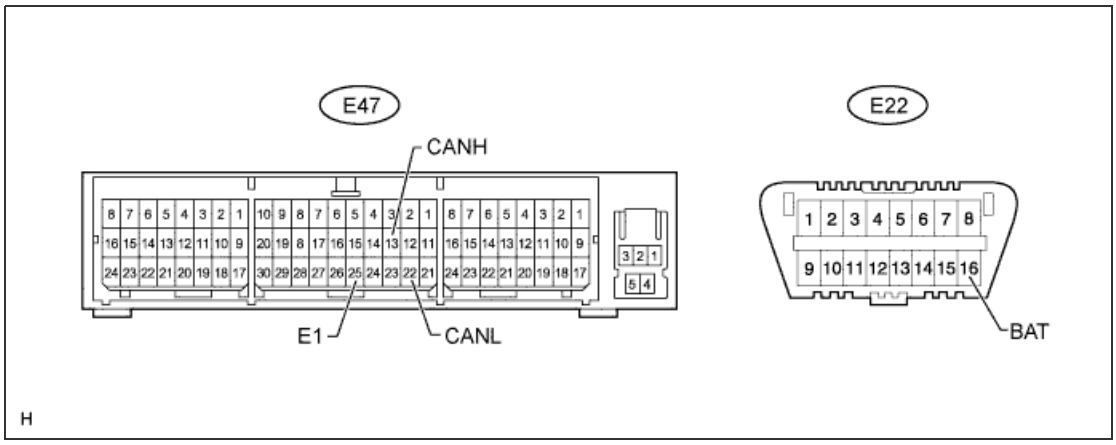
a. Disconnect the E77 meter connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)*1	V - B	Engine switch off	108 to 132 Ω
E77-36 (CANH) - E77-20 (EP)*1	V - W-B	Engine switch off	200 Ω or higher
E77-35 (CANL) - E77-20 (EP)*1	B - W-B	Engine switch off	200 Ω or higher
E77-36 (CANH) - E77-21 (B)*1	V - R	Engine switch off	6 kΩ or higher
E77-35 (CANL) - E77-21 (B)*1	B - R	Engine switch off	6 kΩ or higher
E77-37 (MPX+) - E77-38 (MPX-)*2	LG - R	Engine switch off	108 to 132 Ω
E77-37 (MPX+) - E77-20 (EP)*2	LG - W-B	Engine switch off	200 Ω or higher
E77-38 (MPX-) - E77-20 (EP)*2	R - W-B	Engine switch off	200 Ω or higher
E77-37 (MPX+) - E77-21 (B)*2	LG - R	Engine switch off	6 kΩ or higher
E77-38 (MPX-) - E77-21 (B)*2	R - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK CENTER AIRBAG SENSOR



a. Disconnect the E47 sensor connector.

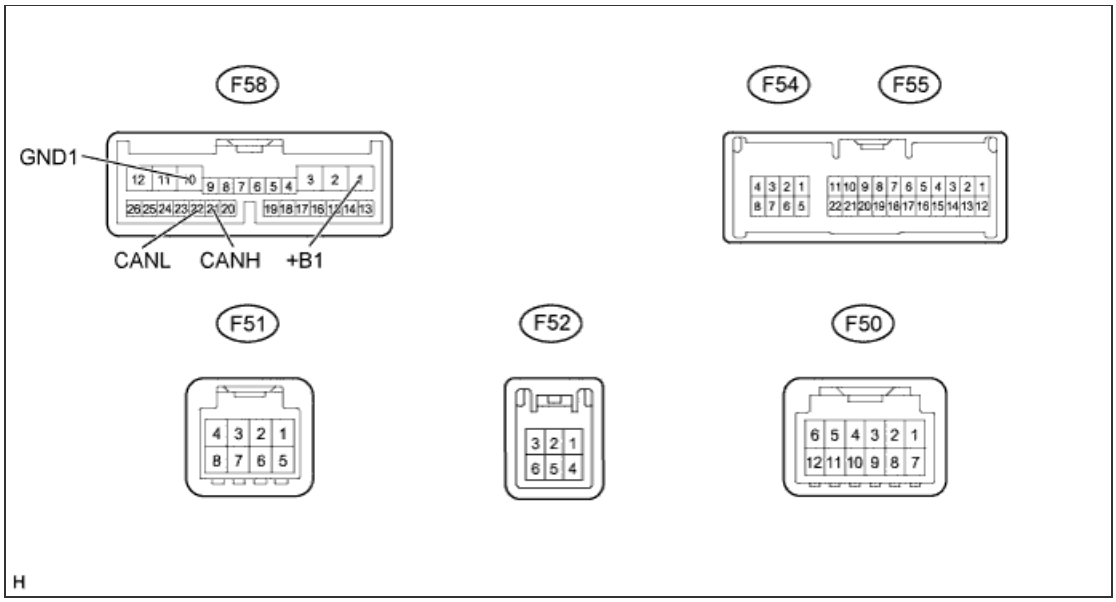
b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	GR - B	Engine switch off	54 to 69 Ω
E47-13 (CANH) - E47-25 (E1)	GR - W-B	Engine switch off	200 Ω or higher

E47-22 (CANL) - E47-25 (E1)	B - W-B	Engine switch off	200 Ω or higher
E47-13 (CANH) - E22-16 (BAT)	GR - BE	Engine switch off	6 kΩ or higher
E47-22 (CANL) - E22-16 (BAT)	B - BE	Engine switch off	6 kΩ or higher

CHECK DISPLAY AND NAVIGATION MODULE DISPLAY

For vehicles with the navigation system only.

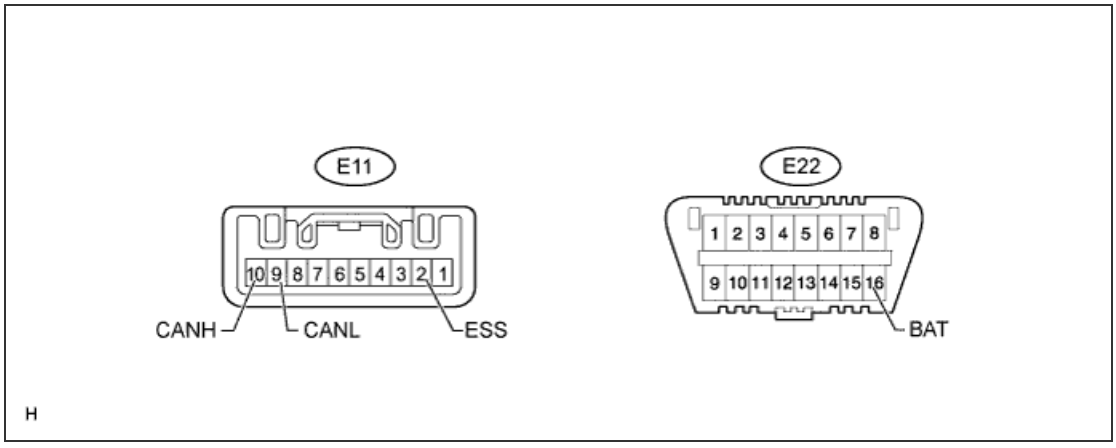


a. Disconnect the F58 display connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F58-21 (CANH) - F58-22 (CANL)	P - B	Engine switch off	54 to 69 Ω
F58-21 (CANH) - F58-10 (GND1)	P - W-B	Engine switch off	200 Ω or higher
F58-22 (CANL) - F58-10 (GND1)	B - W-B	Engine switch off	200 Ω or higher
F58-21 (CANH) - F58-1 (+B1)	P - R	Engine switch off	6 kΩ or higher
F58-22 (CANL) - F58-1 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK STEERING ANGLE SENSOR



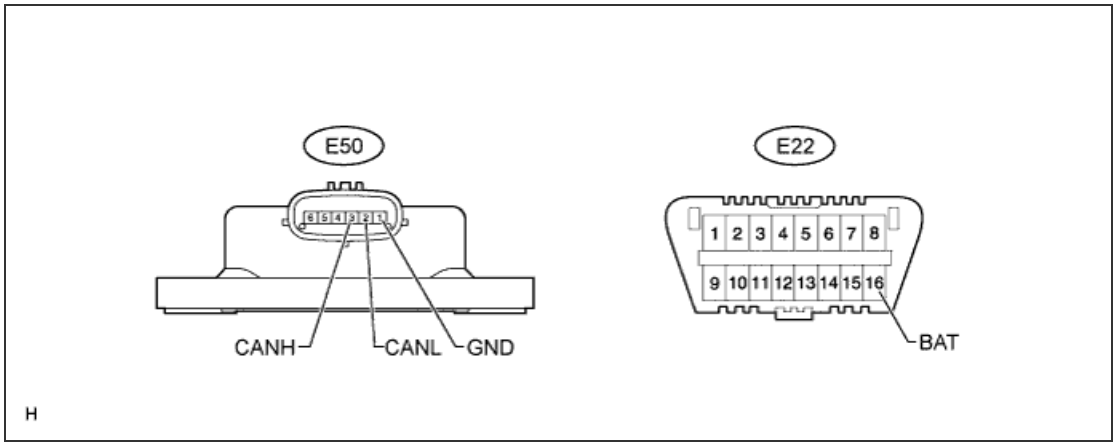
a. Disconnect the E11 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E11-10 (CANH) - E11-9			

(CANL)	GR - L	Engine switch off	54 to 69 Ω
E11-10 (CANH) - E11-2 (ESS)	GR - W-B	Engine switch off	200 Ω or higher
E11-9 (CANL) - E11-2 (ESS)	L - W-B	Engine switch off	200 Ω or higher
E11-10 (CANH) - E22-16 (BAT)	GR - BE	Engine switch off	6 kΩ or higher
E11-9 (CANL) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK YAW RATE SENSOR



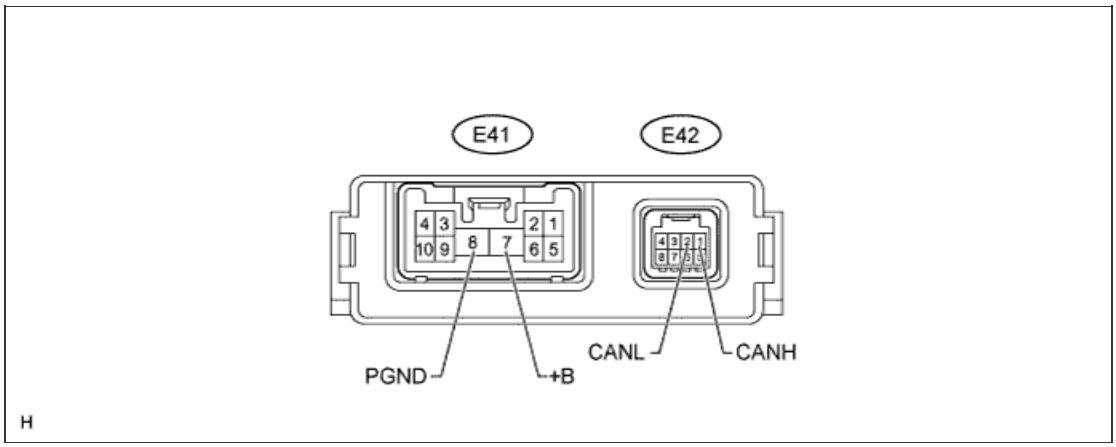
a. Disconnect the E50 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	BR - L	Engine switch off	54 to 69 Ω
E50-3 (CANH) - E50-1 (GND)	BR - W-B	Engine switch off	200 Ω or higher
E50-2 (CANL) - E50-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
E50-3 (CANH) - E22-16 (BAT)	BR - BE	Engine switch off	6 kΩ or higher
E50-2 (CANL) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK SEAT BELT CONTROL ECU

For vehicles with the pre-crash safety system only.



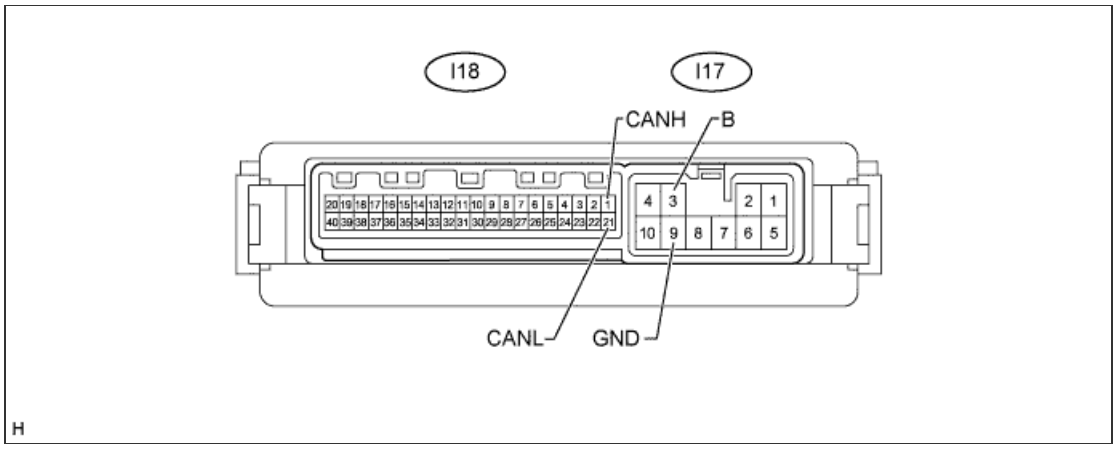
a. Disconnect the E41 and E42 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E42-1 (CANH) - E42-2 (CANL)	G - L	Engine switch off	54 to 69 Ω
E42-1 (CANH) - E41-8 (PGND)	G - W-B	Engine switch off	200 Ω or higher
E42-2 (CANL) - E41-8 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E42-1 (CANH) - E41-7 (+B)	G - R	Engine switch off	6 kΩ or higher

E42-2 (CANL) - E41-7 (+B)	L - R	Engine switch off	6 kΩ or higher

CHECK OUTER MIRROR CONTROL ECU

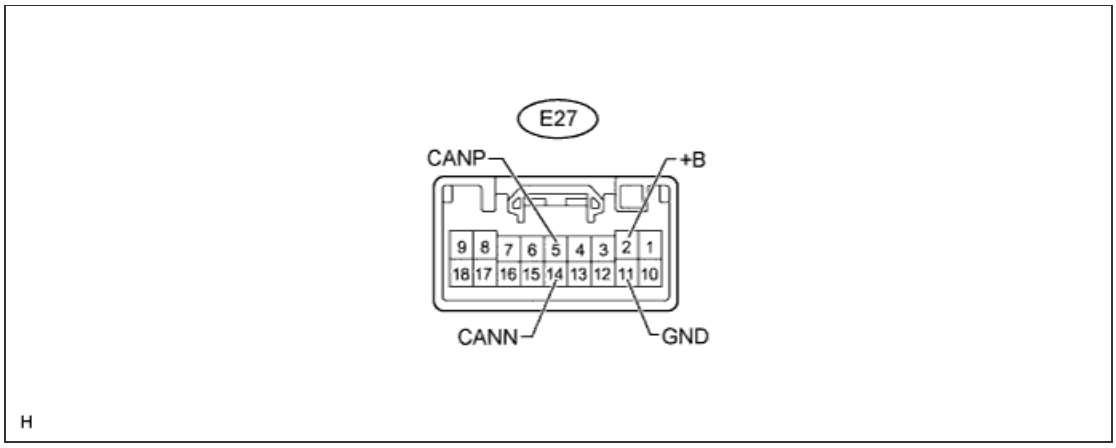


a. Disconnect the I18 and I17 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
I18-1 (CANH) - I18-21 (CANL)	BR - R	Engine switch off	54 to 69 Ω
I18-1 (CANH) - I17-9 (GND)	BR - W-B	Engine switch off	200 Ω or higher
I18-21 (CANL) - I17-9 (GND)	R - W-B	Engine switch off	200 Ω or higher
I18-1 (CANH) - I17-3 (B)	BR - R	Engine switch off	6 kΩ or higher
I18-21 (CANL) - I17-3 (B)	R - R	Engine switch off	6 kΩ or higher

CHECK MULTIPLEX TILT AND TELESCOPIC ECU

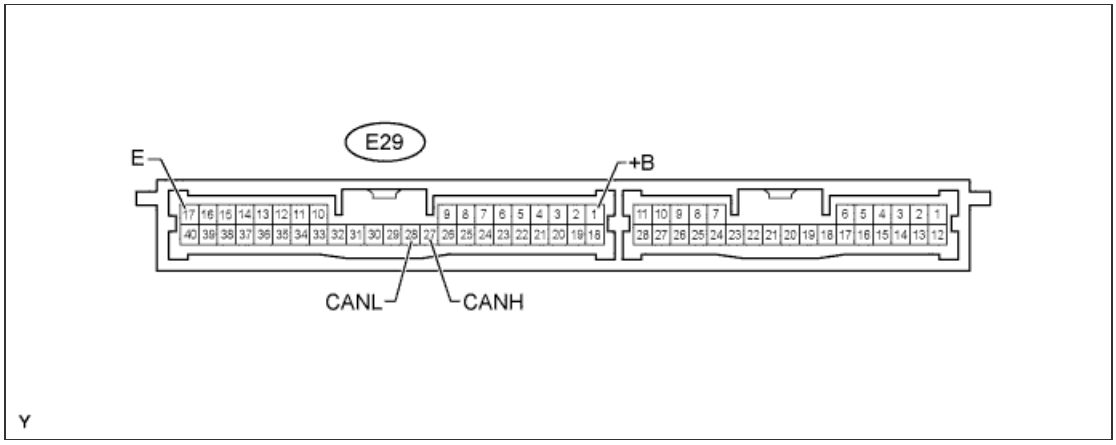


a. Disconnect the E27 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E27-5 (CANP) - E27-14 (CANN)	P - R	Engine switch off	54 to 69 Ω
E27-5 (CANP) - E27-11 (GND)	P - W-B	Engine switch off	200 Ω or higher
E27-14 (CANN) - E27-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
E27-5 (CANP) - E27-2 (+B)	P - L	Engine switch off	6 kΩ or higher
E27-14 (CANN) - E27-2 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK CERTIFICATION ECU (SMART KEY ECU)

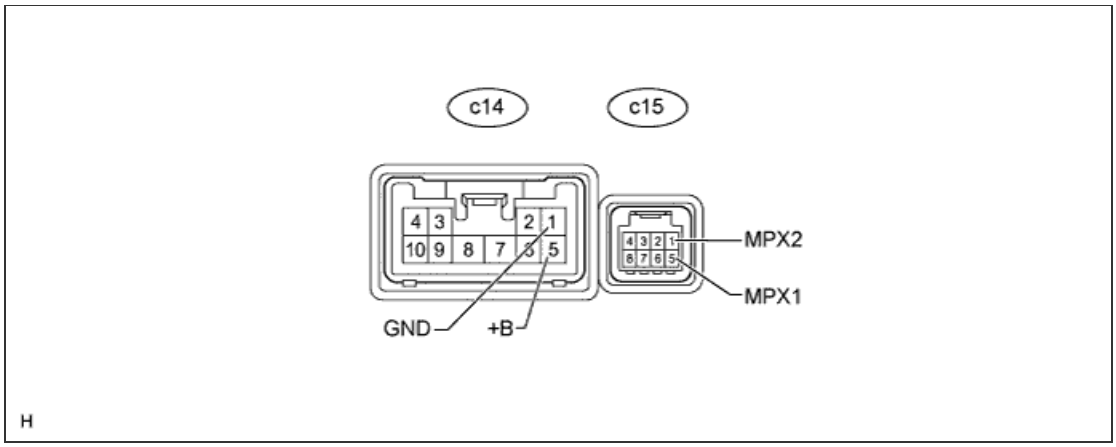


a. Disconnect the E29 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E29-27 (CANH) - E29-28 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E29-27 (CANH) - E29-17 (E)	LG - W-B	Engine switch off	200 Ω or higher
E29-28 (CANL) - E29-17 (E)	R - W-B	Engine switch off	200 Ω or higher
E29-27 (CANH) - E29-1 (+B)	LG - B	Engine switch off	6 kΩ or higher
E29-28 (CANL) - E29-1 (+B)	R - B	Engine switch off	6 kΩ or higher

CHECK POSITION CONTROL ECU AND SWITCH

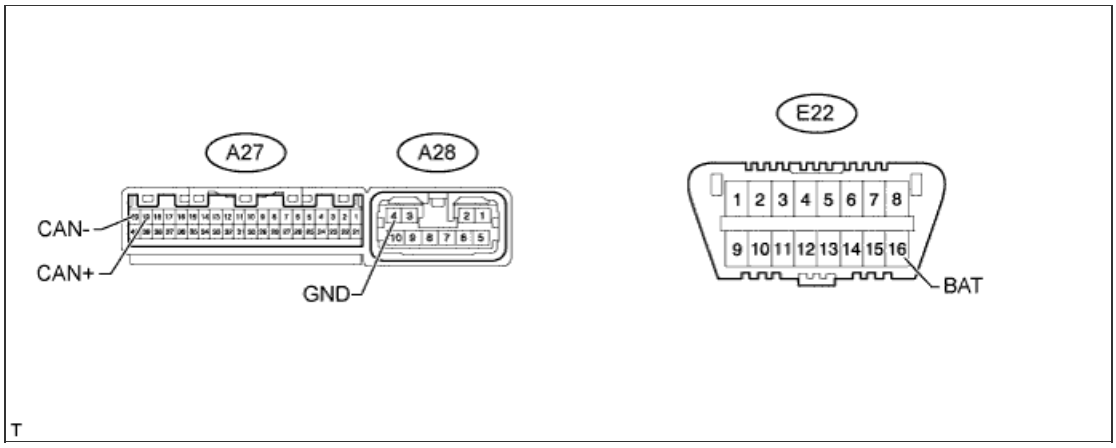


a. Disconnect the c14 and c15 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
c15-5 (MPX1) - c15-1 (MPX2)	V - R	Engine switch off	54 to 69 Ω
c15-5 (MPX1) - c14-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
c15-1 (MPX2) - c14-1 (GND)	R - W-B	Engine switch off	200 Ω or higher
c15-5 (MPX1) - c14-5 (+B)	V - L	Engine switch off	6 kΩ or higher
c15-1 (MPX2) - c14-5 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK 4WD CONTROL ECU

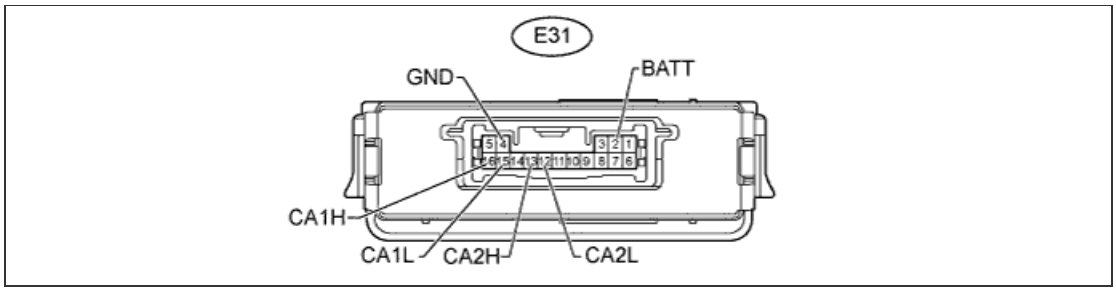


a. Disconnect the A27 and A28 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A27-19 (CAN+) - A27-20 (CAN-)	P - L	Engine switch off	54 to 69 Ω
A27-19 (CAN+) - A28-4 (GND)	P - W	Engine switch off	200 Ω or higher
A27-20 (CAN-) - A28-4 (GND)	L - W	Engine switch off	200 Ω or higher
A27-19 (CAN+) - E22-16 (BAT)	P - BE	Engine switch off	6 kΩ or higher
A27-20 (CAN-) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK NETWORK GATEWAY ECU



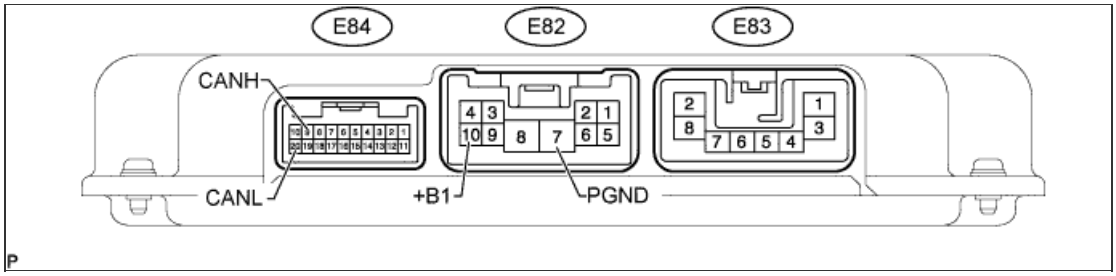
a. Disconnect the E31 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)*1	BR - B	Engine switch off	54 to 69 Ω
E31-16 (CA1H) - E31-4 (GND)*1	BR - W-B	Engine switch off	200 Ω or higher
E31-15 (CA1L) - E31-4 (GND)*1	B - W-B	Engine switch off	200 Ω or higher
E31-16 (CA1H) - E31-2 (BATT)*1	BR - R	Engine switch off	6 kΩ or higher
E31-15 (CA1L) - E31-2 (BATT)*1	B - R	Engine switch off	6 kΩ or higher
E31-13 (CA2H) - E31-12 (CA2L)*2	SB - L	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E31-4 (GND)*2	SB - W-B	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E31-4 (GND)*2	L - W-B	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E31-2 (BATT)*2	SB - R	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E31-2 (BATT)*2	L - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For movement control bus

CHECK STEERING CONTROL ECU

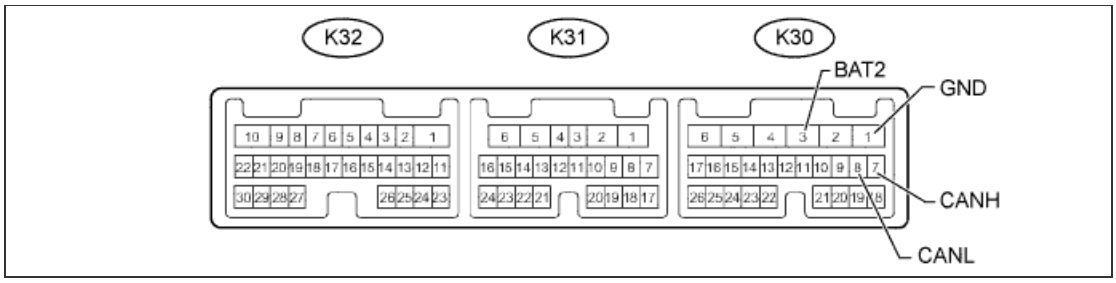


a. Disconnect the E82 and E84 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E84-9 (CANH) - E84-20 (CANL)	LG - L	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-7 (PGND)	LG - W-B	Engine switch off	200 Ω or higher
E84-20 (CANL) - E82-7 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-10 (+B1)	LG - R	Engine switch off	6 kΩ or higher
E84-20 (CANL) - E82-10 (+B1)	L - R	Engine switch off	6 kΩ or higher

CHECK SUSPENSION CONTROL ECU

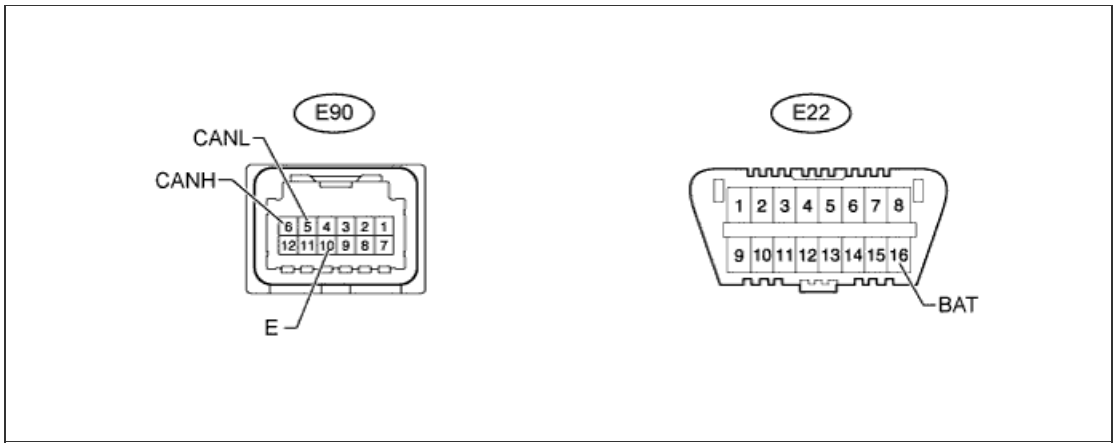


a. Disconnect the K30 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
K30-7 (CANH) - K30-8 (CANL)	V - L	Engine switch off	54 to 69 Ω
K30-7 (CANH) - K30-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
K30-8 (CANL) - K30-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
K30-7 (CANH) - K30-3 (BAT2)	V - R	Engine switch off	6 kΩ or higher
K30-8 (CANL) - K30-3 (BAT2)	L - R	Engine switch off	6 kΩ or higher

CHECK WINDSHIELD WIPER ECU



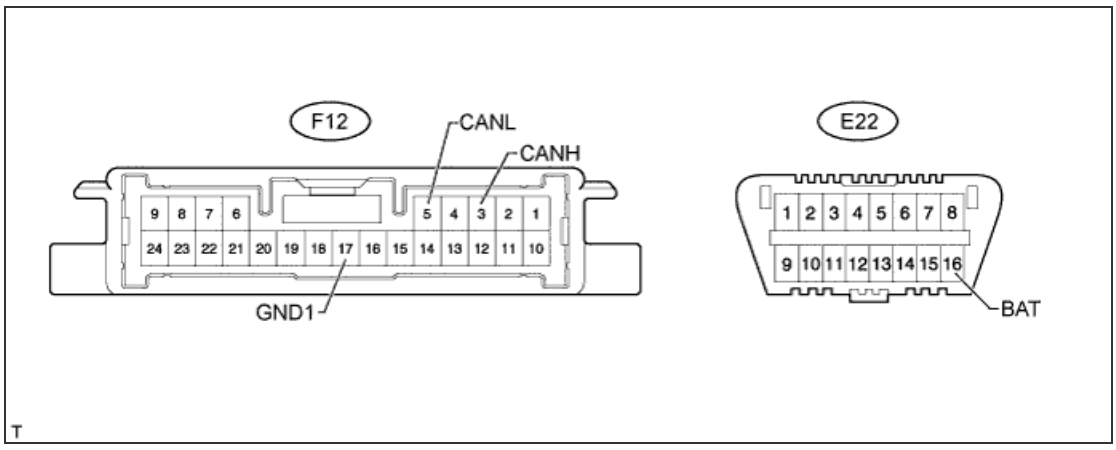
a. Disconnect the E90 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E90-6 (CANH) - E90-5 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E90-6 (CANH) - E90-10 (E)	LG - W-B	Engine switch off	200 Ω or higher
E90-5 (CANL) - E90-10 (E)	R - W-B	Engine switch off	200 Ω or higher
E90-6 (CANH) - E22-16 (BAT)	LG - BE	Engine switch off	6 kΩ or higher
E90-5 (CANL) - E22-16 (BAT)	R - BE	Engine switch off	6 kΩ or higher

CHECK CLEARANCE WARNING ECU

For vehicles with the LEXUS parking assist-sensor system only.



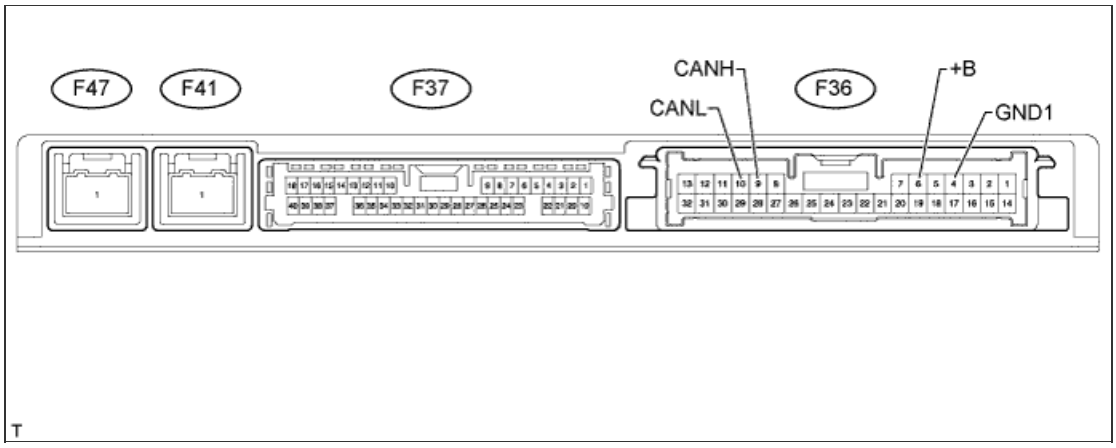
a. Disconnect F12 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F12-3 (CANH) - F12-5 (CANL)	V - L	Engine switch off	54 to 69 Ω
F12-3 (CANH) - F12-17 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F12-5 (CANL) - F12-17 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F12-3 (CANH) - E22-16 (BAT)	V - BE	Engine switch off	6 kΩ or higher
F12-5 (CANL) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK PARKING ASSIST ECU

For vehicles with the parking assist monitor system only.



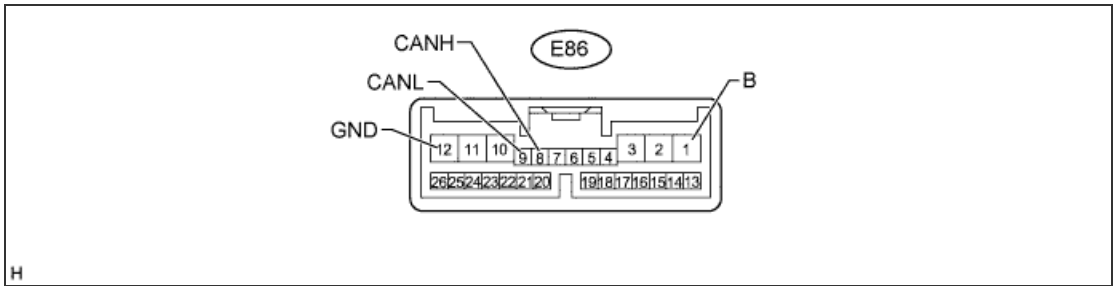
a. Disconnect the F36 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F36-9 (CANH) - F36-10 (CANL)	V - L	Engine switch off	54 to 69 Ω
F36-9 (CANH) - F36-4 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F36-10 (CANL) - F36-4 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F36-9 (CANH) - F36-6 (+B)	V - L	Engine switch off	6 kΩ or higher
F36-10 (CANL) - F36-6 (+B)	L - L	Engine switch off	6 kΩ or higher

CHECK DISTANCE CONTROL ECU

For vehicles with the dynamic radar cruise control system only.



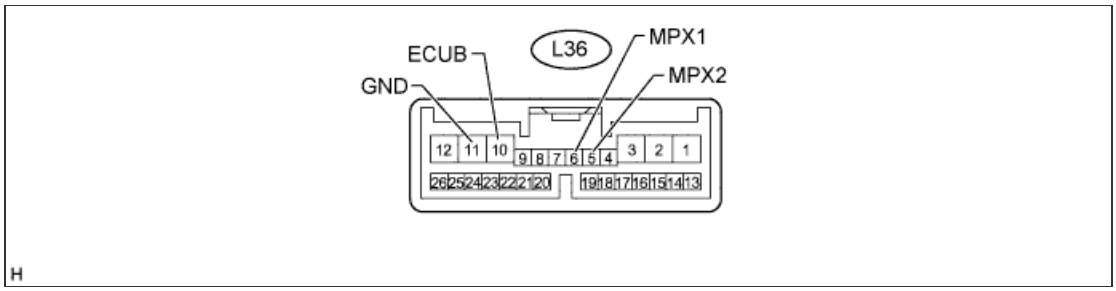
a. Disconnect the E86 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E86-8 (CANH) - E86-9 (CANL)	SB - L	Engine switch off	54 to 69 Ω
E86-8 (CANH) - E86-12 (GND)	SB - BR	Engine switch off	200 Ω or higher
E86-9 (CANL) - E86-12 (GND)	L - BR	Engine switch off	200 Ω or higher
E86-8 (CANH) - E86-1 (B)	SB - R	Engine switch off	6 kΩ or higher
E86-9 (CANL) - E86-1 (B)	L - R	Engine switch off	6 kΩ or higher

CHECK POWER BACK DOOR UNIT (POWER BACK DOOR ECU)

For vehicles with the power back door system only.

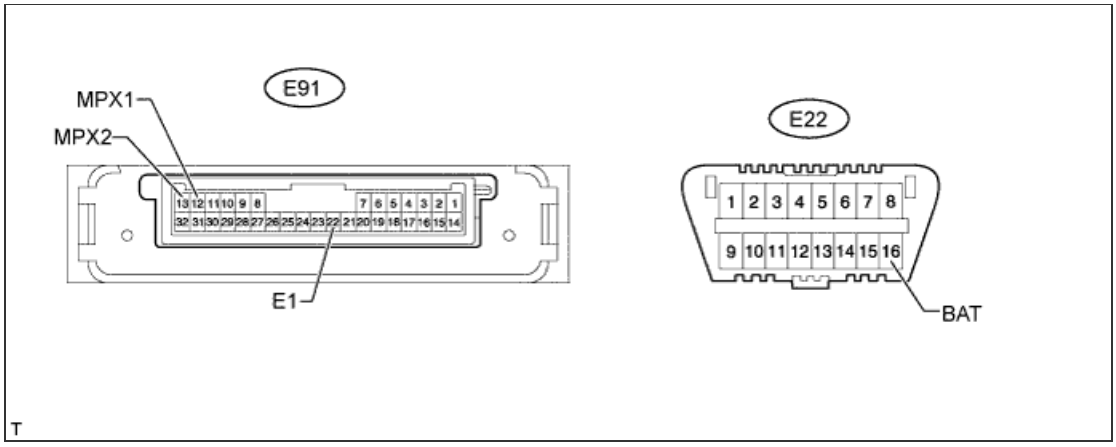


a. Disconnect the L36 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L36-6 (MPX1) - L36-5 (MPX2)	V - R	Engine switch off	54 to 69 Ω
L36-6 (MPX1) - L36-11 (GND)	V - W-B	Engine switch off	200 Ω or higher
L36-5 (MPX2) - L36-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
L36-6 (MPX1) - L36-10 (ECUB)	V - R	Engine switch off	6 kΩ or higher
L36-5 (MPX2) - L36-10 (ECUB)	R - R	Engine switch off	6 kΩ or higher

CHECK AFS ECU (HEADLIGHT SWIVEL ECU)

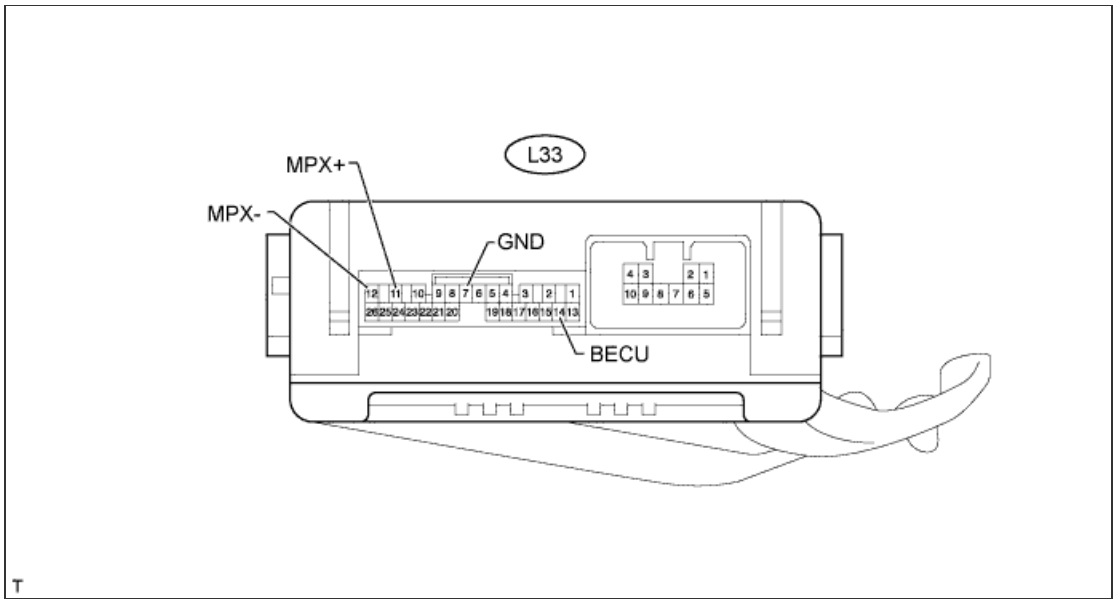


a. Disconnect the E91 unit connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	LG - B	Engine switch off	54 to 69 Ω
E91-12 (MPX1) - E91-22 (E1)	LG - W-B	Engine switch off	200 Ω or higher
E91-13 (MPX2) - E91-22 (E1)	B - W-B	Engine switch off	200 Ω or higher
E91-12 (MPX1) - E22-16 (BAT)	LG - BE	Engine switch off	6 kΩ or higher
E91-13 (MPX2) - E22-16 (BAT)	B - BE	Engine switch off	6 kΩ or higher

CHECK NO. 2 MAIN BODY ECU



a. Disconnect the L33 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L33-11 (MPX+) - L33-12 (MPX-)	LG - R	Engine switch off	54 to 69 Ω
L33-11 (MPX+) - L33-7 (GND)	LG - W-B	Engine switch off	200 Ω or higher
L33-12 (MPX-) - L33-7 (GND)	R - W-B	Engine switch off	200 Ω or higher
L33-11 (MPX+) - L33-14 (BECU)	LG - R	Engine switch off	6 kΩ or higher
L33-12 (MPX-) - L33-14 (BECU)	R - R	Engine switch off	6 kΩ or higher

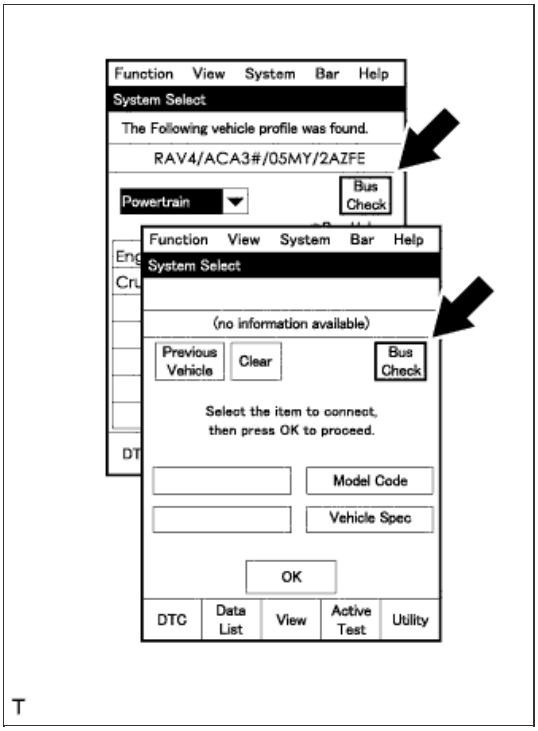
for Preparation Click here

BUS CHECK (COMMUNICATION MALFUNCTION ECU)

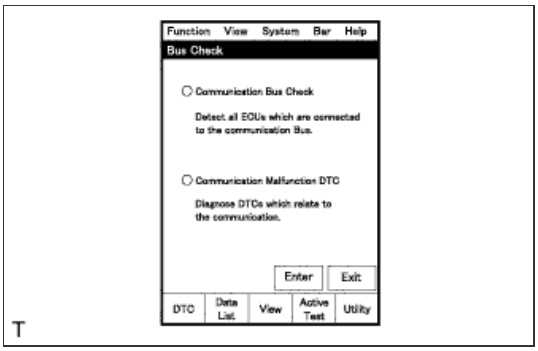
HINT:

Only CAN communication system DTCs for each ECU can be displayed on the intelligent tester.

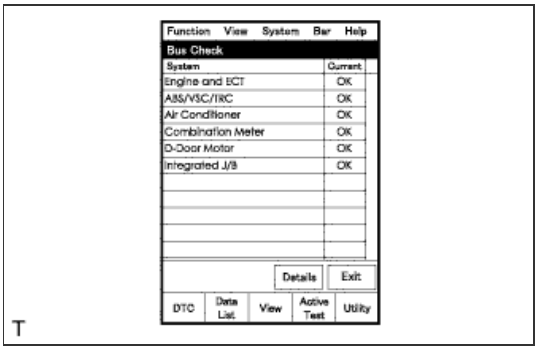
a. Select "Bus Check" from the "System Select" screen on the intelligent tester.



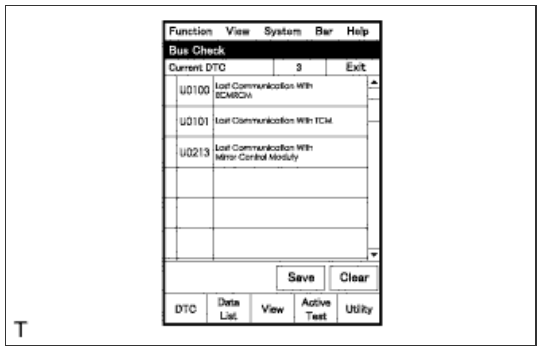
b. Select "Communication Malfunction DTC" from the "Bus Check" screen, and then select "Enter".



c. Select the system of the DTC to be checked and select "Details".



d. CAN communication system DTCs are displayed.

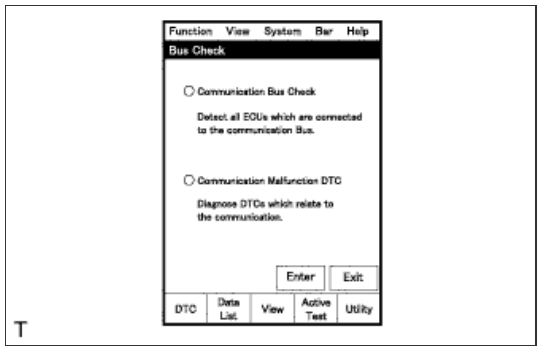


BUS CHECK (COMMUNICATION BUS CHECK)

HINT:

The ECUs and sensors that are properly connected to the CAN communication system can be displayed using the intelligent tester.

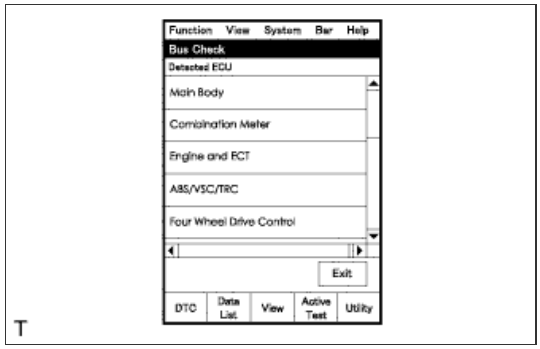
a. Select "Communication Bus Check" from the "Bus Check" screen.



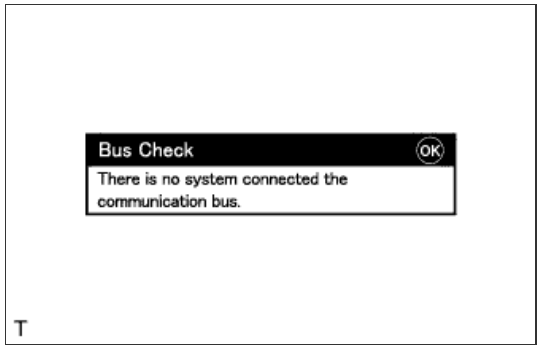
b. The screen displays the ECUs and sensors that are properly connected to the CAN communication system.

HINT:

If any properly connected ECUs or sensors are not displayed, there is a communication stop in the system (Click here).



c. "There is no system connected to the communication bus" is displayed if there are no ECUs or sensors connected to the CAN bus.



CHECK INSTALLED SYSTEMS (ECUS AND SENSORS) THAT USE CAN COMMUNICATION

a. Systems (ECUs and sensors) that use CAN communication vary depending on the optional settings of the vehicle. Check which systems (ECUs and sensors) are installed on the vehicle.

ECU/Sensor Name	Intelligent Tester Display	Installed on
Master cylinder solenoid (skid control ECU)	ABS/VSC/TRAC	All vehicles
Air conditioning amplifier	Air Conditioner	All vehicles

ECM	Engine	All vehicles
Main body ECU (cowl side junction block LH)	Main Body	All vehicles
Combination meter	Combination Meter	All vehicles
Center airbag sensor	SRS Airbag	All vehicles
Multi-display	AVN	All vehicles
Steering control ECU	VGRS	All vehicles
Steering angle sensor	Steering Angle Sensor	All vehicles
Yaw rate sensor	Yaw Rate / Deceleration Sensor	All vehicles
Seat belt control ECU	Pre-crash Seat Belt	Vehicles with pre-crash safety system
Clearance warning ECU	Clearance Sonar	Vehicles with LEXUS parking assist-sensor system
Parking assist ECU	Parking Assist Monitor	Vehicles with parking assist monitor system
Outer mirror control ECU	Driver Door/Mirror	All vehicles
Multiplex tilt and telescopic ECU	Tilt&Telescopic	All vehicles
Certification ECU (smart key ECU)	Entry & Start / Wireless Tuner	All vehicles
Position control ECU and switch	Driver Seat	All vehicles
Network gateway ECU	CAN Gateway	All vehicles
4WD control ECU	Four Wheel Drive Control	All vehicles
No. 2 main body ECU	Body No.4	All vehicles
Windshield wiper ECU	Rain Sensor	All vehicles
Distance control ECU)	Cruise Control (ACC)	Vehicles with dynamic radar cruise control system
AFS ECU (headlight swivel ECU)	AFS/HL AutoLeveling	All vehicles
Steering control ECU	VGRS	All vehicles
Power back door unit (power back door ECU)	Power Back Door	Vehicles with power back door system

DTC TABLE BY ECU

HINT:

- **In the CAN communication system, CAN communication system DTCs stored by the ECU can be output by using the intelligent tester.**
- **If CAN communication system DTCs are output, the trouble cannot be determined solely from the DTCs. Perform troubleshooting according to "How to Proceed with Troubleshooting".**

a. MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0073	Control Module Communication Bus OFF
U0100	Lost Communication with ECM/PCM "A"
U0114/38	Lost Communication with 4WD Control ECU
U0123	Lost Communication with Yaw Rate Sensor Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module

b. ECM/ECT

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0101	Lost Communication with TCM
U0122	Lost Communication with Vehicle Dynamics Control Module

U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U1101	Lost Communication with Distance Control ECU

c. MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0141	Lost Communication with Body Control Module "A"
U0199	Lost Communication with "Door Control Module A"
U0208	Lost Communication with "Seat Control Module A"
U0230	Lost Communication with Rear Gate Module
U0327	Software Incompatibility with Vehicle Security Control Module
U1002 (CAN MS BUS)	Lost Communication with Gateway Module (Main Body ECU)
U1111	Lost Communication with Front Controller Module
U1115	Lost Communication with Tilt and Telescopic Module

d. COMBINATION METER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0129	Lost Communication with Brake System Control Module

e. SEAT BELT CONTROL ECU
For vehicles with the pre-crash safety system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0151	Lost Communication with Airbag ECU
U1101	Lost Communication with Distance Control ECU

f. MULTIPLEX TILT AND TELESCOPIC ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2621	Communication Interruption
B2624*	Vehicle Speed Malfunction

HINT:

*: Refer to the Power Tilt and Power Telescopic Steering Column System (Click here).

g. MULTI-DISPLAY

HINT:

The multi-display is connected to the CAN communication system but CAN communication DTCs are not stored.

h. OUTER MIRROR CONTROL ECU

HINT:

The outer mirror control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

i. CENTER AIRBAG SENSOR

HINT:

The center airbag sensor is connected to the CAN communication system but CAN communication DTCs are not stored.

j. CERTIFICATION ECU (SMART KEY ECU)

HINT:

The certification ECU (smart key ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

k. AIR CONDITIONING AMPLIFIER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B1499	Multiplex Communication Circuit

l. POSITION CONTROL ECU AND SWITCH

HINT:

The position control ECU and switch is connected to the CAN communication system but CAN communication DTCs are not stored.

m. NETWORK GATEWAY ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0132	Lost Communication with Ride Level Control Module
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module (Network Gateway ECU)
U1100	Lost Communication with Seat Belt Control Module
U1101	Lost Communication with Distance Control ECU
U1110	Lost Communication with Clearance Sonar Module
U1126	Lost Communication with Parking Assist ECU

n. CLEARANCE WARNING ECU
For vehicles with the LEXUS parking assist-sensor system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
C1AEF	Shift Position Information
U0155	Lost Communication with Instrument Panel Cluster Control Module

o. PARKING ASSIST ECU
For vehicles with the parking assist monitor system only.

HINT:

The parking assist ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

p. 4WD CONTROL ECU

HINT:

The 4WD control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

q. NO. 2 MAIN BODY ECU

HINT:

The No. 2 main body ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

r. WINDSHIELD WIPER ECU

HINT:

The windshield wiper ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

s. POWER BACK DOOR UNIT (POWER BACK DOOR ECU)
For vehicles with the power back door system only.

HINT:

The power back door unit (power back door ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

t. SUSPENSION CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0101	Lost Communication with TCM
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0140	Lost Communication with Main Body ECU

u. DISTANCE CONTROL ECU
For vehicles with the dynamic radar cruise control system only.

HINT:

The distance control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

v. AFS ECU (HEADLIGHT SWIVEL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2427	CAN Communication Malfunction

w. STEERING CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0126	Lost Communication with Steering Angle Sensor Module

DTC COMBINATION TABLE

*4: The ECM receives diagnosis data from the distance control ECU and stores a DTC.
*5: The seat belt control ECU receives diagnosis data from the distance control ECU and stores a DTC.

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Main Body ECU Communication Stop Mode	Combination Meter Communication Stop Mode	Center Airbag Sensor Communication Stop Mode	Air Conditioning Amplifier Communication Stop Mode

Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with 4WD Control ECU	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
			• Main Body				

Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	○*1	○	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	○	○	X	○*1
Steering Control ECU	U0126	Shift Position Information	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	○	X	X
			• ECM				

AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X	X
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
		Lost Communication					

	U1111	with Body No. 5 Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Multi-display Communication Stop Mode	AFS ECU Communication Stop Mode	ECM Communication Stop Mode	Network Gateway ECU Communication Stop Mode
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-

Master Cylinder Solenoid (Skid Control ECU)	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2	○*1, *2
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2, *4	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	○	○
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	○	○
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	○	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
		Vehicle Speed					

	B2624	Malfunction	Combination Meter	X	X	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*3	○*1, *3
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	○*3	○*1, *3
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	X	X	X	X
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	○*1
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	○	○*1
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	○*1
			• ECM • Master Cylinder Solenoid (Skid Control				

AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	X	○*1	○	○*1
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*5	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	○*1
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	X
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
		Lost Communication					

	U0199	with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				Network Gateway ECU Communication Stop Mode	Clearance Warning ECU Communication Stop Mode	Parking Assist ECU Communication Stop Mode	Skid Control ECU Communication Stop Mode
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	○*1
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*2	X	X	○*1

Master Cylinder Solenoid (Skid Control ECU)	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	○*1
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	○*1
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	○*1
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	○	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	○	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	○	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
	U0100	Lost Communication with ECM/PCM	ECM	○*3	X	X	X

		"A"					
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
Suspension Control ECU	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	X
	U0101	Lost Communication with TCM	ECT	○*3	X	X	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Control ECU	X	X	X	X
Steering Control ECU	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	○	○*1	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	○	○*1	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering	○	X	X	○

			Control ECU • Main Body ECU (Cowl Side Junction Block LH)				
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	X
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	○	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
		Lost					

Network Gateway ECU	U1100	Communication with Seat Belt Control Module	Seat Belt Control ECU	○	X	X	X
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	○	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	○	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	○	X	○	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○	○	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	○	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				4WD Control ECU Communication Stop Mode	Steering Angle Sensor Communication Stop Mode	Yaw Rate Sensor Communication Stop Mode	Distance Control ECU Communication Stop Mode
Master Cylinder	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	○	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor	Steering Angle Sensor	X	○	X	X

Solenoid (Skid Control ECU)		Module					
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	○	○	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	○*1, *4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○*1, *4
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○*4	○*1, *4
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*4	X	○*1, *4
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1, *4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	○
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	○
	1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
		Lost Communication with Vehicle	Master Cylinder Solenoid (Skid Control				

Suspension Control ECU	U0122	Dynamics Control Module	ECU)	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○*3	X	X	X
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl	X	○	X	X

			Side Junction Block LH)				
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	X	X
		Lost					

Network Gateway ECU	U0132	Communication with Ride Level Control Module	Suspension Control ECU	X	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode		
				Movement Control Bus		
				Steering Control ECU Communication Stop Mode	Suspension Control ECU Communication Stop Mode	Seat Belt Control ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X

	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	○	X	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-
Suspension	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*1	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	○*1	X

Control ECU	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	○*1	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	○*1	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	○*1	X
	U0101	Lost Communication with TCM	ECT	X	○*1	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*1	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	○*1

	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○*1
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	○
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	X	○	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X

	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Outer Mirror Control ECU Communication Stop Mode	Windshield Wiper ECU Communication Stop Mode	Multiplex Tilt and Telescopic ECU Communication Stop Mode	Position Control ECU and Switch Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
		Lost Communication					

ECM	U0123	with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	○*1	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	○*1	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication	ECT	-	-	-	-

		with TCM					
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-

Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	X	X	X	X
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	X	X
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	X	X	X
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	X	X	X	X
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	○	X
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	○	X	X
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	○	X	X	X
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle	Master Cylinder Solenoid (Skid Control	-	-	-	-

		Dynamics Control Module	ECU)				
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Power Back Door ECU Communication Stop Mode	No. 2 Main Body ECU Communication Stop Mode	Certification ECU Communication Stop Mode	Main Body ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
		Lost Communication					

ECM	U0126	with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	X	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	X	○
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	-	-	-	-
Air Conditioning		Multiplex	• Main Body ECU (Cowl Side				

Amplifier	B1499	Communication Circuit	Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1002 (CAN MS BUS)	Lost Communication with Gateway	MS Bus Network Malfunction	X	X	X	○

		Module					
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	○	○
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	○	X	○
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	○	X	X	○
Main Body ECU (Cowl Side Junction Block LH)	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	X	○
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	X	X	○
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	X	X	X	○
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
Network Gateway ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
		Lost					

	U1126	Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

HINT:

○: Stored.

x: When one side of branch wire is open, storage may occur.

*1: Only stored when communication recovery has occurred. During communication stop, cannot be stored.

*2: Stored when vehicle speed is 15 km/h (9 mph) or more.

*3: Stored when vehicle speed is 30 km/h (18 mph) or more.

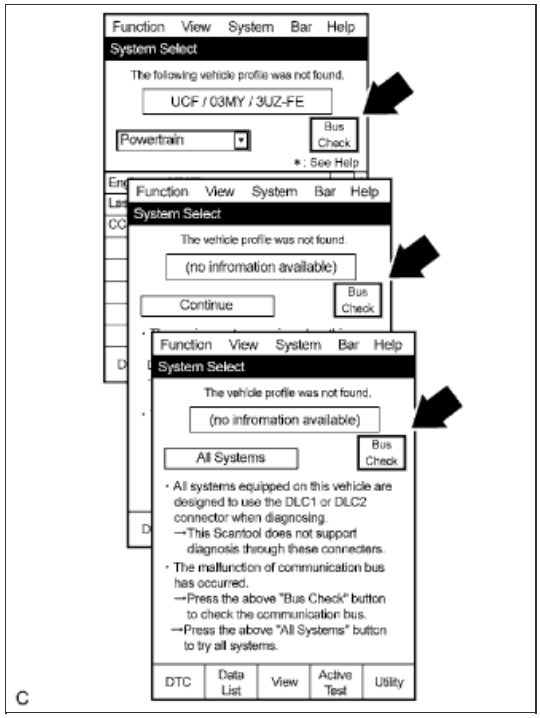
for Preparation Click here

BUS CHECK (COMMUNICATION MALFUNCTION ECU)

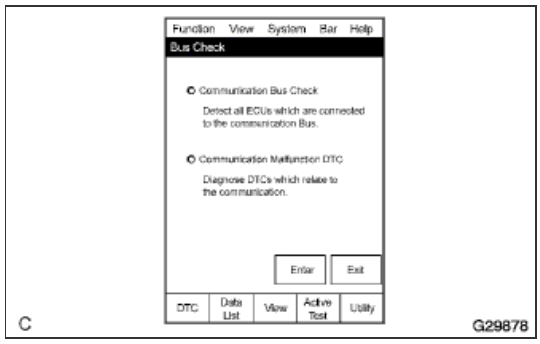
HINT:

Only CAN communication system DTCs for each ECU can be displayed on the intelligent tester.

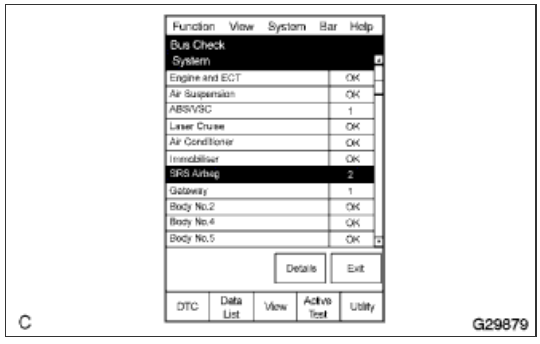
a. Select "Bus Check" from the "System Select" screen on the intelligent tester.



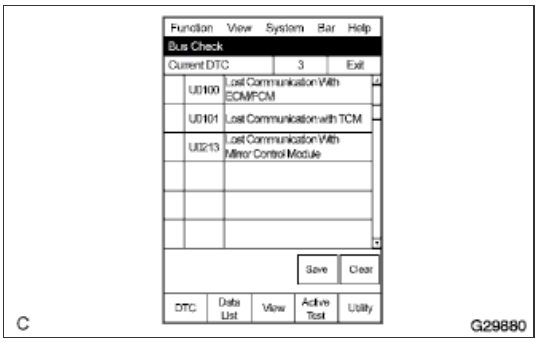
b. Select "Communication Malfunction DTC" from the "Bus Check" screen, and then select "Enter".



c. Select the system of the DTC to be checked and select "Details".



d. CAN communication system DTCs are displayed.

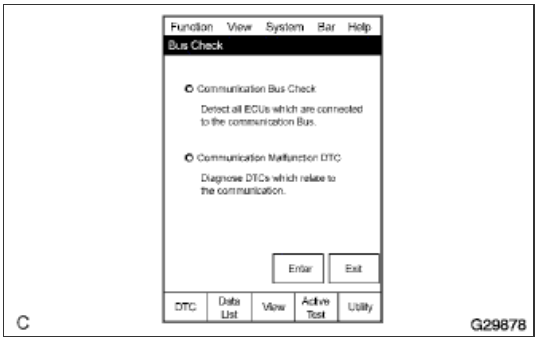


BUS CHECK (COMMUNICATION BUS CHECK)

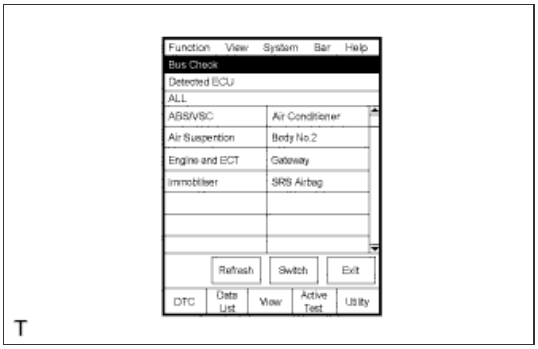
HINT:

The ECUs and sensors that are properly connected to the CAN communication system can be displayed using the intelligent tester.

a. Select "Communication Bus Check" from the "Bus Check" screen.

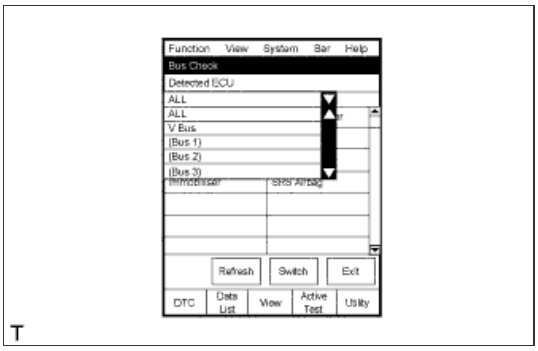


b. The screen displays the ECUs and sensors that are properly connected to the CAN communication system.



HINT:

- **If any properly connected ECUs or sensors are not displayed, there is a communication stop in the system (Click here).**



- **The default item displayed in the combo box is "ALL". When checking the ECUs (sensors) connected to each bus, pull down the combo box and select the bus to be checked from the drop down list. The drop down list displays "ALL", "V Bus", and the names of the remaining buses.**

Combo Box	Display Content
ALL	All ECUs (sensors) connected to the CAN bus
V Bus	ECUs (sensors) connected to the V bus
Bus Name	ECUs (sensors) connected to the selected bus

- **The connection status (shown below) is indicated by the background color displayed behind the system name.**

ECU (Sensor) on V Bus

Background Color	Connection Status
White	Detected normally
Yellow	Could not be detected in the past, but is currently detected
Red	Detected in the past, but cannot be detected now

Not displayed	Has never been detected

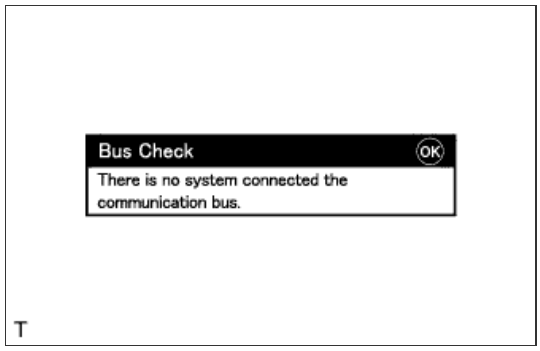
ECU (Sensor) with no Data Monitor History

Background Color	Connection Status
White	Detected normally
Yellow	Could not be detected in the past, but is currently detected
Red	Detected in the past, but cannot be detected now
Not displayed	Has never been detected

ECU (Sensor) with no Data Monitor History

Background Color	Connection Status
White	Detected normally
Yellow	Could not be detected in the past, but is currently detected
Red	Detected in the past, but cannot be detected now
Red	Has never been detected bus has connection history
Not displayed	Has never been detected and has no connection history

c. "There is no system connected to the communication bus" is displayed if there are no ECUs or sensors connected to the CAN bus.



CHECK INSTALLED SYSTEMS (ECUS AND SENSORS) THAT USE CAN COMMUNICATION

a. Systems (ECUs and sensors) that use CAN communication vary depending on the optional settings of the vehicle. Check which systems (ECUs and sensors) are installed on the vehicle.

ECU/Sensor Name	Intelligent Tester Display	Installed on
Master cylinder solenoid (skid control ECU)	ABS/VSC/TRAC	All vehicles
Air conditioning amplifier	Air Conditioner	All vehicles
ECM	Engine	All vehicles
Main body ECU (cowl side junction block LH)	Main Body	All vehicles
Combination meter	Combination Meter	All vehicles
Center airbag sensor	SRS Airbag	All vehicles
Display and navigation module display	AVN1	All vehicles
Steering control ECU	VGRS	All vehicles
Steering angle sensor	Steering Angle Sensor	All vehicles
Yaw rate sensor	Yaw Rate / Deceleration Sensor	All vehicles
Seat belt control ECU	Pre-crash Seat Belt	Vehicles with pre-crash safety system
Clearance warning ECU	Clearance Sonar	Vehicles with LEXUS parking assist-sensor system
Parking assist ECU	Parking Assist Monitor	Vehicles with parking assist monitor

		system
Outer mirror control ECU	Driver Door/Mirror	All vehicles
Multiplex tilt and telescopic ECU	Tilt&Telescopic	All vehicles
Certification ECU (smart key ECU)	Entry & Start / Wireless Tuner	All vehicles
Position control ECU and switch	Driver Seat	All vehicles
Network gateway ECU	CAN Gateway	All vehicles
4WD control ECU	Four Wheel Drive Control	All vehicles
No. 2 main body ECU	Body No.4	All vehicles
Windshield wiper ECU	Rain Sensor	All vehicles
Distance control ECU)	Cruise Control (ACC)	Vehicles with dynamic radar cruise control system
AFS ECU (headlight swivel ECU)	AFS/HL AutoLeveling	All vehicles
Steering control ECU	VGRS	All vehicles
Power back door unit (power back door ECU)	Power Back Door	Vehicles with power back door system

DTC TABLE BY ECU

HINT:

- **In the CAN communication system, CAN communication system DTCs stored by the ECU can be output by using the intelligent tester.**
- **If CAN communication system DTCs are output, the trouble cannot be determined solely from the DTCs. Perform troubleshooting according to "How to Proceed with Troubleshooting".**

a. MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0073	Control Module Communication Bus OFF
U0100	Lost Communication with ECM/PCM "A"
U0114/38	Lost Communication with 4WD Control ECU
U0123	Lost Communication with Yaw Rate Sensor Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module

b. ECM/ECT

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U1101	Lost Communication with Distance Control ECU

c. MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0141	Lost Communication with Body Control Module "A"
U0199	Lost Communication with "Door Control Module A"
U0208	Lost Communication with "Seat Control Module A"
U0230	Lost Communication with Rear Gate Module

U0327	Software Incompatibility with Vehicle Security Control Module
U1002 (CAN MS BUS)	Lost Communication with Gateway Module (Main Body ECU)
U1111	Lost Communication with Front Controller Module
U1115	Lost Communication with Tilt and Telescopic Module

d. COMBINATION METER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0129	Lost Communication with Brake System Control Module

e. SEAT BELT CONTROL ECU
For vehicles with the pre-crash safety system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0151	Lost Communication with Airbag ECU
U1101	Lost Communication with Distance Control ECU

f. MULTIPLEX TILT AND TELESCOPIC ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2621	Communication Interruption
B2624*	Vehicle Speed Malfunction

HINT:

*: Refer to the Power Tilt and Power Telescopic Steering Column System (Click here).

g. DISPLAY AND NAVIGATION MODULE DISPLAY

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0073	Control Module Communication Bus OFF
U0100	Lost Communication with ECM/PCM "A"
U0126	Lost Communication with Steering Angle Sensor Module
U0129	Lost Communication with Brake System Control Module
U0155	Lost Communication with Combination Meter
U0164	Lost Communication with A/C ECU
U1110	Lost Communication with Clearance Sonar Module

h. OUTER MIRROR CONTROL ECU

HINT:

The outer mirror control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

i. CENTER AIRBAG SENSOR

HINT:

The center airbag sensor is connected to the CAN communication system but CAN communication DTCs are not stored.

j. CERTIFICATION ECU (SMART KEY ECU)

HINT:

The certification ECU (smart key ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

k. AIR CONDITIONING AMPLIFIER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B1499	Multiplex Communication Circuit

l. POSITION CONTROL ECU AND SWITCH

HINT:

The position control ECU and switch is connected to the CAN communication system but CAN communication DTCs are not stored.

m. NETWORK GATEWAY ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0132	Lost Communication with Ride Level Control Module
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module (Network Gateway ECU)
U1100	Lost Communication with Seat Belt Control Module
U1101	Lost Communication with Distance Control ECU
U1110	Lost Communication with Clearance Sonar Module
U1126	Lost Communication with Parking Assist ECU

n. CLEARANCE WARNING ECU
For vehicles with the LEXUS parking assist-sensor system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
C1AEF	Shift Position Information
U0155	Lost Communication with Instrument Panel Cluster Control Module

o. PARKING ASSIST ECU
For vehicles with the parking assist monitor system only.

HINT:

The parking assist ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

p. 4WD CONTROL ECU

HINT:

The 4WD control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

q. NO. 2 MAIN BODY ECU

HINT:

The No. 2 main body ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

r. WINDSHIELD WIPER ECU

HINT:

The windshield wiper ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

s. POWER BACK DOOR UNIT (POWER BACK DOOR ECU)
For vehicles with the power back door system only.

HINT:

The power back door unit (power back door ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

t. SUSPENSION CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0101	Lost Communication with TCM
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0140	Lost Communication with Main Body ECU

u. DISTANCE CONTROL ECU
For vehicles with the dynamic radar cruise control system only.

HINT:

The distance control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

v. AFS ECU (HEADLIGHT SWIVEL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2427	CAN Communication Malfunction

w. STEERING CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0126	Lost Communication with Steering Angle Sensor Module

DTC COMBINATION TABLE

*4: The ECM receives diagnosis data from the distance control ECU and stores a DTC.
*5: The seat belt control ECU receives diagnosis data from the distance control ECU and stores a DTC.
*6: Only stored while malfunction continues.

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Main Body ECU Communication Stop Mode	Combination Meter Communication Stop Mode	Center Airbag Sensor Communication Stop Mode	Air Conditioning Amplifier Communication Stop Mode
	U0123	Lost Communication with Yaw Rate Sensor Module		-	-	-	-

Master Cylinder Solenoid (Skid Control ECU)	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with 4WD Control ECU	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
		Vehicle Speed					

	B2624	Malfunction	Combination Meter	○*1	○	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	○	○	X	○*1
Steering Control ECU	U0126	Shift Position Information	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	○	X	X
AFS ECU (Headlight	B2427	CAN Communication	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle	○	X	X	X

Swivel ECU)		Malfunction	Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)				
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○	X
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	X
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	X	X	X	○
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	X	○	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X	X
	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
		Software					

Main Body ECU (Cowl Side Junction Block LH)	U0327	Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Body No. 5 Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-

	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Display and Navigation Assembly Communication Stop Mode	AFS ECU Communication Stop Mode	ECM Communication Stop Mode	Network Gateway ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2	○*1, *2
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2, *4	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
		Lost Communication	Master Cylinder				

	U0122	with Vehicle Dynamics Control Module	Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	○	○
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	○	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*3	○*1, *3
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	○*3	○*1, *3
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-

Steering Control ECU	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	○*1
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	○	○*1
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	○*1
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	X	○*1	○	○*1
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*5	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	○*1
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	○*1	X	X	X
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	○*1	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○*1	X	X	○*1
	U0155	Lost Communication with Combination Meter	Combination Meter	○*1	X	X	X
		Lost Communication					

	U0126	with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*1	X	○	X
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X	○*1
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	X
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control	Steering Control ECU	-	-	-	-

Network Gateway ECU		Module					
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				Network Gateway ECU Communication Stop Mode	Clearance Warning ECU Communication Stop Mode	Parking Assist ECU Communication Stop Mode	Skid Control ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	○*1
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*2	X	X	○*1
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	○*1
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	○*1
			• Yaw Rate				

	U0073	Control Module Communication Bus OFF	Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	○*1
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*4
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	○	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	○	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	○*3	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
		Lost Communication with Lateral					

	U0124	Acceleration Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	X
	U0101	Lost Communication with TCM	ECT	○*3	X	X	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Control ECU	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	○	○*1	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	○	○*1	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X	○
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U1101	Lost Communication with Distance	Distance Control ECU	X	X	X	X

		Control ECU					
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	○	X	X	X
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○*1	○	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X	○
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
		Lost					

	U1115	Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	○	X	X	X
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	○	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	○	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	○	X	○	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○	○	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	○	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				4WD Control ECU Communication Stop Mode	Steering Angle Sensor Communication Stop Mode	Yaw Rate Sensor Communication Stop Mode	Distance Control ECU Communication Stop Mode
	U0123	Lost Communication with Yaw Rate		X	X	○	X

Master Cylinder Solenoid (Skid Control ECU)		Sensor Module	Yaw Rate Sensor				
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	○	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	○*1, *4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○*1, *4
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○*4	○*1, *4
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*4	X	○*1, *4
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1, *4
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	○
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-

	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○*3	X	X	X
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	X
			• ECM • Master Cylinder Solenoid (Skid				

AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	X	○	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	X
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
		Lost					

Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	X	X
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	X	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X

		Control Module					
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode		
				Movement Control Bus		
				Steering Control ECU Communication Stop Mode	Suspension Control ECU Communication Stop Mode	Seat Belt Control ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control	Master Cylinder Solenoid (Skid Control ECU)	X	X	X

		Module				
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*1	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	○*1	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	○*1	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	○*1	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	○*1	X
	U0101	Lost Communication with TCM	ECT	X	○*1	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X
	U0100	Lost Communication	ECM	○*1	X	X

		with ECM/PCM "A"				
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	○*1
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○*1
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
		Lost				

Combination Meter	U0129	Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	○
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	X	○	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control	Master Cylinder Solenoid (Skid Control ECU)	X	X	X

	Module					
U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X	
U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X	

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Outer Mirror Control ECU Communication Stop Mode	Windshield Wiper ECU Communication Stop Mode	Multiplex Tilt and Telescopic ECU Communication Stop Mode	Position Control ECU and Switch Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
		Lost Communication					

ECM	U0126	with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	○*1	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	○*1	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	-	-	-	-
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-

Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Display and	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
		Lost Communication					

Navigation Module Display	U0155	with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	X	X	X	X
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	X	X
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	X	X	X
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	X	X	X	X
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	○	X
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	○	X	X
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	○	X	X	X
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level	Suspension Control ECU	-	-	-	-

		Control Module					
Network Gateway ECU	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Power Back Door ECU Communication Stop Mode	No. 2 Main Body ECU Communication Stop Mode	Certification ECU Communication Stop Mode	Main Body ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-

	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	X	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
		Lost Communication					

Suspension Control ECU	U0130	with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	-	-	-	-
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
		Lost Communication	Master Cylinder				

Seat Belt Control ECU	U0122	with Vehicle Dynamics Control Module	Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	X	X	X	○
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	○	○
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	○	X	○
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	○	X	X	○
		Lost Communication					

LH)	U0208	with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	X	○
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	X	X	○
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	X	X	X	○
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

HINT:

○: Stored.

x: When one side of branch wire is open, storage may occur.

*1: Only stored when communication recovery has occurred. During communication stop, cannot be stored.

*2: Stored when vehicle speed is 15 km/h (9 mph) or more.

*3: Stored when vehicle speed is 30 km/h (18 mph) or more.

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FAIL-SAFE FUNCTION

a. When communication fails in any of the main wires (communication lines) due to a short circuit or other causes, the fail-safe function, which is specified for each system, operates to prevent the system from malfunctioning.

b. The table below shows the effects on each system when communication is impossible. For further details, refer to each system.

System	Function	Control Description	1. Control Master 2. System Related 3. Control Actuator	Related ECU	Fail-safe Function System Behavior	Indicator and Buzzer Behavior or User Notification
Airbag (ABG)	TC DTC/output service	When TC is on, DTCs (warning light turn on/turn off request signals) are output.	1. Center Airbag Sensor 2. - 3. Combination Meter	• Center Airbag Sensor • Combination Meter	-	-
	Event recorder (EDR)	Records the vehicle information during a collision (the vehicle speed, accelerator pedal opening angle, shift position, etc.).	1. Center Airbag Sensor 2. Combination Meter, ECM 3. -	• Center Airbag Sensor • Combination Meter • ECM	-	-
	SRS warning light control	Turns the SRS warning light on/off.	1. Combination Meter 2. Center Airbag Sensor 3. -	• Center Airbag Sensor • Combination Meter	The SRS warning light turns on.	-
	Information output function (Refer to related system for control description details)	The collision detection signal stops the fuel pump during a collision.	1. ECM 2. Center Airbag Sensor 3. -	• ECM • Center Airbag Sensor	-	-
		The driver/passenger seat buckle switch stops PSB control when the seat belt is not fastened.	1. Seat Belt Control ECU, Combination Meter 2. Center Airbag Sensor 3. -	• Seat Belt Control ECU • Combination Meter	-	-
		The passenger seat occupant detection signal turns on the seat belt warning light when the seat belt is not fastened.	1. Combination Meter 2. Center Airbag Sensor 3. -	Combination Meter	-	-
	Warning light control	BRL, ABS, VSC-OFF, SLIP and CRAWL light control (turn on/off, blink, DTC output).	1. Master Cylinder Solenoid (Skid Control ECU) 2. - 3. Combination Meter	Combination Meter	-	-
	ABS control	ABS control according to the G sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. Yaw Rate Sensor 3. Master Cylinder Solenoid (Skid Control ECU)	Yaw Rate Sensor	The ABS does not operate.	ABS warning light turns on.
			1. Master Cylinder Solenoid (Skid			

Brake (VSC)	TRC control CRAWL control	Brake control and engine torque control during acceleration slip.	(Skid Control ECU) 2. ECM, 4WD Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	• ECM • 4WD Control ECU	TRC does not operate.	VSC OFF indicator light turns on. CRAWL indicator light turns on.
	VSC control	VSC control according to the yaw rate and steering angle sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM, 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Steering Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	• ECM • Steering Angle Sensor • Yaw Rate Sensor • Steering Control ECU • 4WD Control ECU	VSC does not operate.	ABS and VSC warning lights turn on.
	ACC control	The brake control according to the request from the distance control ECU via the ECM.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM 3. Master Cylinder Solenoid (Skid Control ECU)	ECM	ACC does not operate.	VSC warning light turns on.
Dynamic Radar Cruise Control (ACC)	ACC	Acceleration/deceleration control when following the vehicle in front.	1. - 2. ECM 3. ECM	ECM	ACC control is canceled.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. Master Cylinder Solenoid (Skid Control ECU)	Master Cylinder Solenoid (Skid Control ECU)	-	-
			1. Distance Control ECU 2. - 3. -	-	-	-
			1. - 2. Steering Control ECU 3. -	Steering Control ECU	-	-
			1. - 2. Combination	Combination Meter	-	-

			3. Meter 3. -	[illegible]		
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	-	-
Dynamic Radar Cruise Control (ACC)	PSC	Seat belt and brake control immediately before a collision.	1. - 2. ECM 3. -	ECM	Radar linked PCS control stops.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	PCS control stops.	
			1. Distance Control ECU 2. - 3. -	-	-	-
			1. - 2. Steering Control ECU 3. -	Steering Control ECU	-	-
			1. - 2. - 3. Seat Belt Control ECU	Seat Belt Control ECU	-	-
Tilt and Telescopic (TAT)	Microcomputer preset steering	Automatically begins the steering auto away/auto return when the engine switch is turned on (IG) or off.	1. Multiplex Tilt and Telescopic ECU 2. Position Control ECU and Switch, Main Body ECU (Cowl Side Junction Block LH) (V Bus), Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Combination Meter 3. Multiplex Tilt and Telescopic ECU	Main Body ECU (Cowl Side Junction Block LH)	The power tilt and power telescopic steering column system does not operate.	-
				Position Control ECU and Switch	Memory restore control does not operate.	-
				Combination Meter	Auto return/auto away control does not operate.	-
	Switching control between High and Low	Switching between High and Low is prohibited during the following conditions: 1) When there is a vehicle speed violation, engine speed violation, or large difference in wheel speeds, 2) when the shift lever is not in N, or 3) when the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	Switching between High and Low is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if switching between High and Low can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or 4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
			[illegible]	[illegible]	[illegible]	[illegible]

Mechanical 4WD (FWM)	Neutral switching control	Switching to neutral is prohibited during the following conditions: 1) When there is a vehicle speed violation or engine speed violation, or 2) when the shift lever is not in N or the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	Switching to neutral is prohibited.	4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Center differential lock switching control (between Free and Lock)	Center differential lock switching is prohibited when there is a vehicle speed violation or large difference in wheel speeds.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Center differential lock switching is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if center differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
Mechanical 4WD (FWM)	Rear differential lock switching control (between Rr Free and Rr Lock)	Rear differential lock switching is prohibited when there is a vehicle speed violation.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Rear differential lock switching is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if rear differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	L4F switching control	Switching to L4F is prohibited and the operation is performed with L4L when VSC is malfunctioning.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	L4F switching is prohibited and the operation is performed with L4L.	No user notification.
	Specialized control when temperature is low	Changes the ACT conductive current value according to the temperature (low temperature use or normal temperature use).	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Air Conditioning Amplifier, ECM 3. -	• Air Conditioning Amplifier • ECM	Changes the temperature used for the calculation of ACT temperature adjustment control.	No user notification.
Mechanical 4WD (FWM)	Specialized control during wheel speed failure	When there is a wheel speed failure, switching is permitted only when specified conditions are met (the wheel speed malfunction is 1 wheel or more and 3 wheels or less, the brake is applied, the engine speed is low, and all normal wheel speeds are low).	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	If the wheel speed malfunction is 1 wheel or more and 3 wheels or less, only when the wheel speed failure specified conditions are met, switching is permitted. When 4 wheels are malfunctioning, switching is prohibited	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).

					(the wheel speed failure specialized control does not operate).	
Mechanical 4WD (FWM)	Indicator and buzzer signal output	Signal output of the indicator and buzzer condition that indicates the actuator position and switching status.	1. 4WD Control ECU 2. - 3. -	-	-	-
	High-Low actuator failure signal output	When the High-Low actuator limit switch is malfunctioning, a signal is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
	C/C cancel signal output	Outputs a cruise control cancel signal when center differential switching is not completed even though 5 sec. or more have elapsed from the start of switching.	1. 4WD Control ECU 2. - 3. -	-	-	-
	L4 status signal condition output	A signal is output when switching between the L4F and L4L position is completed.	1. 4WD Control ECU 2. - 3. -	-	-	-
	C/D lock condition signal output	CDL switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
	R/D lock condition signal output	R switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
	T/F N condition signal output	NP switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
Gasoline Engine	Engine control system	Adjusts the fuel injection volume according to each sensor value and controls the engine.	1. ECM 2. - 3. -	-	-	-
	ECT control system	Changes the ECT shift position based on the vehicle speed and torque.	1. ECM 2. - 3. -	-	-	-
	Cruise control system	Maintains a constant vehicle speed and drives the vehicle.	1. ECM 2. - 3. -	-	-	-
Power	Power back door operation conditions	Prohibits the power back door operation according to the vehicle state (the engine switch, shift position, vehicle speed, and lock position).	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) Main Body ECU (Cowl Side Junction Block LH) (V Bus), Combination Meter, ECM 3. -	• ECM • Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	The power back door system does not operate (when the start signal is received, the buzzer sounds a warning that the conditions are not met).	-
	Power back door operation requests	Receives the power back door close/open operation trigger from the operation switch or wireless switch and begins the power back door operation.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-	-
			1. - 2. Main body ECU (Cowl Side Junction Block LH)	• Main Body ECU (Cowl Side Junction Block LH)	The power back door system does not	

Back Door (BKD)			(MS Bus), Certification ECU (Smart Key ECU) 3. -	Block LH) • Certification ECU (Smart Key ECU)	operate.	
	Power back door operation status output	Sends the hazard illumination request when the power back door operation begins and back door unlock request.	1. Power Back Door Unit (Power Back Door ECU) 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	Main Body ECU (Cowl Side Junction Block LH)	When the back door operation begins, the hazard warning lights may not illuminate.	-
			1. - 2. - 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Main Body ECU (Cowl Side Junction Block LH)	-	-
	DTC transmission/reception	Performs the power back door customization, malfunction detection, Active Test, etc.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	DTC function does not operate.	-
Active Height Control Suspension (4-WHEEL AHC)	Damping force control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the damping force of the shock absorbers.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-	-
			1. - 2. ECM 3. -	ECM	Damping force control is prohibited.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)		-
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		-
			1. - 2. Steering Control ECU 3. -	Steering Control ECU		-
Active Height Control Suspension (4-WHEEL AHC)	Spring switching control is prohibited	Based on the information from the master cylinder solenoid (skid control ECU), steering control ECU, yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the front spring constant value (ON/OFF).	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Spring switching control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1			

			1. - 2. Steering Control ECU 3. -	Steering Control ECU		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-	-
			1. Suspension Control ECU 2. ECM 3. Suspension Control ECU	ECM	Vehicle height control is prohibited.	-
			1. - 2. ECM 3. -	ECT	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Vehicle height control is prohibited.	-
			1. - 2. 4WD Control ECU 3. -	4WD Control ECU	-	-
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Vehicle height control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. - 2. Steering Control ECU 3. -	Steering Control ECU		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
Air Conditioner (ACN)	Air conditioning system	• Air conditioning vent temperature control according to the engine coolant temperature information. • Air conditioning vent switching control according to the engine coolant temperature information. • Air conditioning vent airflow amount control according to the engine coolant temperature information. • Compensation of the engine	1. Air Conditioning Amplifier 2. ECM 3. -	None	Coolant information: Control is performed by using the default value (80°C (176°F). Engine type: The condition is maintained (when unconfirmed, control is performed by using the default (507F)).	-

		of the engine coolant temperature information according to the engine type. • Compressor lock judgment value switching according to the engine type.				
Air Conditioner (ACN)	Air conditioning system	Compressor lock judgment by NE.	1. Air Conditioning Amplifier 2. ECM 3. -	None	NE: Control is performed by using the default value (0 km/h (0 mph)).	-
		The electric load control condition is limited according to the load control level.	1. Air Conditioning Amplifier 2. ECM 3. -	None	Load control: No load control (normal control).	-
		• Activation control according to the viscous heater activation permission information. • Activation control according to the PTC heater activation permission information.	1. Air Conditioning Amplifier 2. ECM 3. -	None	Permission information: Control is performed according to the operation prohibition state.	-
		• Air conditioning system operation status control and panel switch IND output control according to panel switch operation information. • Exhaust gas automatic air presence judgment and circulation control switching according to exhaust gas automatic air presence information.	1. Air Conditioning Amplifier 2. Multi-Display 3. -	Multi-display	None (Air conditioning system operation condition switching is not possible).	-
Air		Dimmer information output to the LIN panel according to the display dimmer information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	None	Condition is maintained (after the reset, the dimmer condition is fixed).	-
		PTC control switching based on the headlight illumination information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	None	PTC control (the headlight flickering countermeasure) is not performed.	-
			1. Air Conditioning			

Conditioner (ACN)	Air conditioning system	A/C control pattern switching based on the country specific information.	1. Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	None	Condition is maintained (when unconfirmed, control is performed according to the default value).	-
		Air conditioning system operation condition switching and the outside temperature display output adjustment according to the vehicle speed information.	1. Air Conditioning Amplifier 2. Combination Meter 3. -	None	• Decrease in reliability and consistency of the exterior temperature value of the outside temperature display. • Decrease in the optimum level of A/C vent airflow amount adjustment.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. Steering Angle Sensor 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• Initialization condition: Data output response request (STS=0). • When the trigger frame VSC 1S01 is not received from the master cylinder solenoid (skid control ECU), the data output response of the output response request changes from STS=0 to STS=1.	-
				Master Cylinder Solenoid (Skid Control ECU)	Communication is stopped after transmission is sent 4 times at 12 msec. intervals as the data output response non-request STS=0. When the above conditions are met, the sensor internal zero point memory invalid SAZS=1 and SFRZ=previous value + 1 during the next transmission.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. - 2. - 3. -	• Master Cylinder Solenoid (Skid Control ECU) • Steering Control ECU • ECM	Communication is stopped after transmission is sent 4 times at 12 millisecond intervals as the data output response non-request STS=0. When the above conditions are met, the sensor internal zero point memory invalid SAZA=1 and SFRZ=previous value + 1 during the next transmission.	Depends on the partner ECU specification.
			1. Position Control ECU and Switch 2. - 3. Position Control ECU	• Master Cylinder Solenoid (Skid Control ECU) • Steering	-	-

			and Switch	Control ECU • ECM		
			1. - 2. ECM 3. -	ECT	The memory restore function does not operate.	-
			1. - 2. ECM 3. -	ECM	The memory restore function does not operate.	-
		Memory restore function	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The memory restore function does not operate.	-
Seat (DST)	Seat system		1. - 2. Position Control ECU and Switch 3. -	Position Control ECU and Switch	The memory restore function does not operate.	-
		Memory call function	1. Position Control ECU and Switch 2. - 3. Position Control ECU and Switch	-	-	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	The memory call does not operate.	-
		Tilt and telescopic operation permission function	1. Position Control ECU and Switch 2. - 3. -	-	-	-
			1. - 2. Multiplex Tilt and Telescopic ECU 3. Multiplex Tilt and Telescopic ECU	Multiplex Tilt and Telescopic ECU	The tilt and telescopic operation does not operate.	-
	Mirror surface manual control	Function that adjusts the mirror surface with the manual switch.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The mirror surface manual adjustment function does not operate (stops if there is a disruption during the operation).	-
	Mirror surface memory control	Function that records the mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch, Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	The mirror surface recording function does not operate	-
	Mirror surface recovery control	Function that moves the mirror surface to the recorded mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch 3. -	Position Control ECU and Switch	The mirror surface recovery function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
			1. Outer Mirror Control ECU 2. Main Body			

Mirror (DRD)	Mirror surface reverse control	Function that tilts the mirror surface downward when the vehicle is moving in reverse.	ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), ECM 3. -	• Main Body ECU (Cowl Side Junction Block LH) • ECT	The reverse shift-linked function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Electric retract/return control	Function that retracts/returns the mirror housing.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), ECM 3. -	• Main Body ECU (Cowl Side Junction Block LH) • ECT	The mirror housing retract/return function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Foot light illumination control	Function that turns on/off the foot light illumination that is on the bottom of the mirror housing.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The foot light illumination turns off (if illuminated, turns off).	-
Wiper (FRN)	Front wiper control	System that operates the wiper HI and LO operation, vehicle speed sensing intermittent wiper function, vehicle speed switching function, washer linked function, and auto wiper.	1. Windshield Wiper ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	With the engine switch on (IG) and the wipers operating with the LO switch on, the intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)		-
			1. - 2. Combination Meter 3. -	Combination Meter	• With the engine switch on (IG) and the wipers operating with the LO switch on, the intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating. • With the engine switch on (IG), the	-

					• washer fluid delay timing becomes fixed. • With the engine switch on (IG), the intervals do not change according to the vehicle speed while the intermittent wiper function is operating.	
Wiper (FRN)	LIN communication control	System that assists the outer wiper function by communication with the windshield wiper ECU.	1. Windshield Wiper ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	With the engine switch on (IG), the disruption value data is routed to the rain sensor. Otherwise, the rain sensor operation depends on the specifications.	-
			1. - 2. Combination Meter 3. -	Combination Meter		-
Navigation (EMV)	Auto dimmer function and forced day screen function	Forced day screen switching, and auto dimmer function control.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. - 3. -	Main Body ECU (Cowl Side Junction Block LH)	The auto dimmer function and forced day screen function do not operate.	-
	Air conditioning function	Displays the air conditioning control screen by using the information from the air conditioning amplifier, and has a control function that notifies the air conditioning ECU of screen switch operating information.	1. - 2. Multi-display 3. -	-	-	-
			1. Air Conditioning Amplifier 2. - 3. -	Air Conditioning Amplifier (air conditioning functions)	• With the engine switch on (IG), the screen is displayed without air conditioning if ACN1S06 is not received for 10 sec. • Panel switch control, screen switch control, and voice control do not operate.	Warning function: The screen displays without the air conditioning. Warning function: Nothing. Behavior: The air conditioning control screen/panel indicator light and set temperature indicator turn on and do not change. Displayed using the EMV.
Navigation (EMV)	Country specification switching function	Function that changes the country specification based on the country specification information received from the vehicle.	1. - 2. Multi-display 3. -	-	-	-
			1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. - 3. -	Main Body ECU (Cowl Side Junction Block LH)	-	-
			1. - 2. Multi-display	-	-	-

			3. -			
	Clearance sonar screen display and clearance sonar cooperative display	System that displays the clearance sonar detection information.	1. Clearance Warning ECU 2. - 3. -	Clearance Warning ECU	The clearance sonar screen display is off (it is determined that the clearance sonar ECU is not present).	Warning function: Nothing. Behavior: Information menu screen "CLEAN SONAR" TSW is not displayed. Displayed using the EMV.
Navigation (EMV)	Clearance sonar screen display and clearance sonar cooperative display	System that displays the clearance sonar detection information.	1. ECM 2. - 3. -	ECT	Shift: Maintains previous value concerning R information, however there is no particular problem (Shift: Maintained in R). It is not possible to make the warning screen not display by shifting to N → R → N consecutively. However, it is possible to switch to the warning screen and cooperative screen (camera) if the normal shift operation is performed. Therefore, there is no problem (Shift: Maintained in a position other than R (default)). It is not possible to make the camera screen not display by shifting to P → N → R when starting. However, it is possible to switch to the warning screen and cooperative screen (camera) if the normal shift operation is performed. Therefore, there is no problem.	-
Navigation (EMV)	Clearance sonar settings	System that sets the operation of the clearance sonar.	1. - 2. Multi-display 3. -	-	-	-
			1. Clearance Warning ECU 2. - 3. -	Clearance Warning ECU	The clearance sonar screen display is off (it is determined that the clearance sonar ECU is not present).	Warning function: Nothing. Behavior: The information menu screen "CLEAN SONAR" TSW is not displayed. Displayed using the EMV.
No. 2 Body ECU (RRJ)	Rear wiper control	System that performs the rear wiper LO speed operation, washer linked function, intermittent wiper function, vehicle speed switching control, and reverse linked control.	1. No. 2 Main Body ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	With the engine switch on (IG), the rear wiper does not stop due to the rear upper door opening during the rear wiper operation.	-
			1. - 2. Combination Meter 3. -	Combination Meter	With the engine switch on (IG), the intermittent wiper function does not operate while the wipers are stopped due to the vehicle speed switching control not operating during the rear wiper operation.	-
			1. - 2. ECM 3. -	ECM	With the engine switch on (IG), the rear wiper does not activate due to the reverse operation control not operating when the front wiper is operating.	-
			1. - 2. Windshield Wiper ECU 3. -	Windshield Wiper ECU		-
			1. No. 2 Main Body ECU 2. - 3. -	-	-	-

	Lower door closer control	System that independently controls the internal closer motors (RH, LH) of the rear lower door at the same time.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Does not activate release, and does not release the lower door latch.	-
			1. - 2. Combination Meter 3. -	Combination Meter	With the engine switch on (IG), does not activate release, and does not release the lower door latch.	-
No. 2 Body ECU (RRJ)	Illumination control	System that fades the inside handle illumination, and step illumination in and out.	1. No. 2 Main Body ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Does not turn on the inside handle illumination or step illumination.	-
	LIN communication control	System that routes the CAN data to the overhead module using LIN communication.	1. No. 2 Main Body ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Routes the disrupted value data to the overhead module.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)		-
Variable Gear Ratio Steering (VGR)	VGRS system	System that changes the steering gear ratio based on the vehicle speed information and steering angle.	1. Steering Control ECU 2. - 3. Steering Control ECU	-	-	-
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor	VGRS system does not operate.	Master warning light illuminates and display is shown on multi-information display (meter display).
			1. - 2. ECM 3. -	ECM		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)		
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. Clearance Warning ECU 2. - 3. -	-	-	-
			1. - 2. Air Conditioning Amplifier 3. -	Air Conditioning Amplifier	The sonar system functions normally. Maintains distance by maintaining the outside temperature at 25°C (77°F).	-
			1. - 2. Windshield Wiper ECU 3. -	Windshield Wiper ECU	The sonar system functions normally. Operates the obstacle judgments with the wiper off (except in rain).	-
			1. - 2. ECM	ECM	If data received from the ECM is lost, the system is inoperable as control is performed with the	-

			3. -		is performed with the shift position data set to P.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The clearance sonar main switch indicator is maintained with the brightness as the previous value.	-
					The sonar system functions normally. Control is maintained with the country specification information as the previous value (with or without a warning sound).	-
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. - 2. Combination Meter 3. -	Combination Meter	If data received from the meter ECU is lost, the system is inoperable as the clearance sonar is controlled at 20 km/h (12.5 mph) or more.	-
			1. - 2. Multi-display 3. -	Multi-display	The sonar system functions normally. The clearance sonar customize information is maintained.	-
					The sonar system functions normally. Information on the camera presence is maintained.	-
					The sonar system functions normally. Notification on the screen that the clearance sonar is off is disabled.	-
AFS	Leveling	System that adjusts the beam axis direction of the headlights vertically according to the pitch angle requested by the wheel speed sensor and vehicle height sensor.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	• Leveling control continues. • Swivel control centers the headlights.	AFS OFF indicator light blinks.
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• Leveling control continues with the vehicle speed set to 0 km/h (0 mph). • Swivel control centers the headlights.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Steering Control ECU 3. -	Steering Control ECU	-	-
			1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	• Leveling control continues. • Swivel control	

AFS	Swivel	System that measures the turning diameter based on the wheel speed and steering angle, and then moves the headlights left and right according to the turning diameter.	3.		centers the headlights.	AFS OFF indicator blinks.
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• Leveling control continues with the vehicle speed set to 0. • Swivel control centers the headlights.	
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -	• Steering Angle Sensor • Steering Control ECU	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	• Level control continues. • Swivel control centers the headlights.	
	AFS indicator	Monitors for AFS system malfunctions and blinks the indicator of the meter when a malfunction is detected.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. AFS ECU (Headlight Swivel ECU)	-	-	-
			1. - 2. Combination Meter 3. -	Combination Meter	-	-
Rear View Monitor (DS2)	Rear view monitor system	System that displays the expected course lines in the back camera image of the display that links to the steering angle to assist in parking (garage parking, parallel parking, etc.).	1. Parking Assist ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECT	The rear view monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -	• Steering Angle Sensor • Steering Control ECU		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
	Wide view front and side monitor system	System that displays the front and side camera image on the display (the side monitor is linked with the steering angle to display the expected course lines).	1. Parking Assist ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECT	The wide view front and side monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -	• Steering Angle Sensor • Steering Control ECU		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
		When the VSC system suddenly brakes and/or the vehicle is unable to be	1. Seat Belt Control ECU 2. - 3. Seat Belt Control ECU	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control	Master Cylinder Solenoid (Skid Control	Detects that communication with the	-

		controlled (while spinning or drifting), the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened (receives the buckle switch information from the center airbag sensor) by tightening the seat belts to increase the occupant restraint.	(Skid Control ECU) 3. -	ECU)	seat belt control ECU is lost. Control is stopped.	
	PCS (brake linked)		1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Detects that communication with the seat belt control ECU is lost. Control is stopped (brake linked).	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
Pre-crash Seat Belt (PSB)	PCS (millimeter wave radar sensor linked)	When ACC determines that a collision is unavoidable based on the information from the millimeter wave radar sensor, the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened by tightening the seat belts to increase the occupant restraint.	1. Seat Belt Control ECU 2. - 3. -	-	-	-
			1. - 2. Distance Control ECU 3. -	Distance Control ECU	Detects that communication with the seat belt control ECU is lost. Control is stopped (millimeter wave radar sensor linked).	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
	Meter display request	Receives the seat belt control ECU malfunction information or ACC malfunction information, and requests the display of the indicator to the meter ("PCS" indicator turn off/turn on request). **HINT:** As long as there is a signal in the ACC frame, the blinking request outputs an illumination request to the combination meter. When communication with the ACC frame is lost, it is determined that a malfunction exists and an illumination request is output along with the malfunction. The priority order is determined by the combination meter. The illumination is the first priority.	1. Seat Belt Control ECU 2. - 3. -	-	-	Exclusive indicator "PCS" turns on.
			1. - 2. Combination Meter, Master Cylinder Solenoid (Skid Control ECU) 3. -	• Combination Meter • Master Cylinder Solenoid (Skid Control ECU) • Distance Control ECU		
			1. - 2. Combination Meter, Distance Control ECU 3. -	• Combination Meter • Distance Control ECU		
	2 digit DTC output	When terminal TC of the DLC3 is connected to terminal GND, a 2 digit DTC (BCD) is displayed by the blinking of "PCS".	1. Seat Belt Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	-	-
	Speedometer	Indicates the vehicle speed according to the vehicle speed signal.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	The speedometer indicates 0 km/h (0 mph).	-
			1. Combination Meter			

Meter (MET)	Tachometer	Indicates the engine speed according to the engine speed signal.	1. Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The tachometer indicates 0 rpm.	-
	ODO/TRIP meter	Calculates and displays the driven distance according to the vehicle speed pulse signal calculated value.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• The ODO/TRIP meter stops calculating and the last displayed value continues to be displayed. • Optitron meter: In multi-display. • Regular analog meter: Independent LCD.	-
	Engine coolant temperature gauge	Indicates the coolant temperature according to the engine coolant temperature signal.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The coolant temperature gauge displays less than the C mark.	-
Meter (MET)	Fuel gauge	Indicates the remaining fuel according to the fuel sender (direct line) input (uses the CAN communication (the vehicle speed signal) to determine if the vehicle is being driven or not).	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	Control is performed with the speed input as 0 km/h (0 mph).	-
	Oil pressure gauge	Indicates the engine oil pressure according to the oil pressure sender (direct line) input (uses the CAN communication to determine if the engine is on or off by the engine speed signal).	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The oil pressure gauge displays less than the L mark.	-
	Shift lever indicator	The shift information is displayed according to the shift position signal.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The shift lever indicator and shift position in the multi-information display turns off.	-
			1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	The speed warning buzzer does not sound (for Middle East).	-
				• Master Cylinder Solenoid (Skid Control ECU) • Main Body	Conditions for the seat belt buzzer not sounding: When VSC1S03 is lost: Does not sound. When BDB1S01 is lost:	-

Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various signals that are input.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	ECU (Cowl Side Junction Block LH)	Does not sound. When ECT1S90 is lost: Control is performed with B_R=0b.	
				• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	Conditions for the seat belt buzzer sounding: When VSC1S03 is lost: Control is performed with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost: Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
				• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	The door ajar driving warning buzzer does not sound.	-
Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various signals that are input.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The light reminder buzzer does not sound.	-
				Main Body ECU (Cowl Side Junction Block LH)	The sliding roof buzzer condition is maintained (until bus sleep).	-
			1. - 2. ECM 3. -	ECM	The A/T reverse buzzer does not sound.	-
				ECM	• The sports shift reject buzzer condition is maintained. • The radar cruise low speed buzzer does not sound. • The radar cruise warning buzzer does not sound.	-
			1. - 2. 4WD Control ECU 3. -	4WD Control ECU	The last state of the 4WD buzzer is maintained.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	The door control transmitter buzzer (single push, continuous push, and intermittent push) does not sound. The immobiliser verification completion notification buzzer does not sound.	-
			1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Master Cylinder (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	The ABS indicator turns on.	The ABS indicator turns on.
			1. - 2. Main Body			

Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	Brake warning light When VSC1S95 is lost: Illuminates. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	SLIP indicator light condition is maintained. VSC OFF indicator light condition is maintained. The downhill assist control indicator light condition is maintained. The CRAWL indicator light condition is maintained.	-
				Master Cylinder Solenoid (Skid Control ECU)	120 km/h (75 mph) speed warning turns off (for Middle East).	-
				Master Cylinder Solenoid (Skid Control ECU)	Control is performed with the speed condition as 0 km/h (0 mph) for the following display: FUEL FILTER clog indicator. The odometer calculation is stopped for the following display conditions: T-BELT indicator.	-
			1. - 2. AFS ECU 3. -	AFS ECU	Maintains the AFS OFF indicator condition.	-
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	When there is determined to be a disruption, the following indicators operate as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • DOOR indicator light • Driver side seat belt indicator light	-
				Main Body ECU (Cowl Side Junction Block LH)	When there is determined to be a disruption, the following indicators operate as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • FRONT FOG indicator light • REAR FOG indicator light • TAIL indicator • HEAD indicator • BEAM indicator	-

			1. - 2. Parking Assist ECU 3. -	Parking Assist ECU	CLEARANCE SONAR indicator light turns off.	-
			1. - 2. ECM 3. -	ECM	The A/T P warning light condition is maintained. The ECT PWR indicator light condition is maintained. The 2nd START indicator light condition is maintained. The CHARGE warning light condition is maintained. The CRUISE main indicator light condition is maintained.	-
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. ECM, 4WD Control ECU 3. -	• ECM • 4WD Control ECU	The A/T P warning light conditions are maintained.	-
			1. - 2. 4WD Control ECU 3. -	4WD Control ECU	The center differential lock indicator light turns off. The 4LO indicator light turns off.	-
			1. - 2. Seat Belt Control ECU 3. -	Seat Belt Control ECU	The PCS indicator light condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	Suspension Control ECU	The ACCESS MODE indicator light • When the engine switch is on (IG): The condition is maintained. • When the engine switch is off: Turns off.	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	The SRS warning light turns on.	The SRS warning indicator turns on.
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, radar cruise, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	Displays a blank screen and drive monitor operation and calculation of the following values stops: instant fuel economy, average fuel economy after refueling, distance to empty, average vehicle speed after engine start, driving distance after engine start.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Parking brake drag warning display conditions: When VSC1S03 is lost: Control is performed with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost: Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Main Body ECU (Cowl Side Junction			

			Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	The CRAWL system display is maintained. The VSC display is maintained.	-
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Control is performed with the speed condition as 0 km/h (0 mph) for the following displays: Door open while driving display, FUEL FILTER clog display. ODO calculation stops for the following display conditions: Oil maintenance display, T-BELT display.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	Conditions for the door open display and door open while driving display: VSC1S03: Control is performed with the vehicle speed as 0 km/h (0 mph). BSB1S01: Display state is maintained. BDB1S08: No display.	-
			1. - 2. Air Conditioning Amplifier 3. -	Air Conditioning Amplifier	The outside temperature display is "E".	The outside temperature display is "E" (in the meter).
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The shift lever display turns off.	-
				Main Body ECU (Cowl Side Junction Block LH)	The door control transmitter display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off.	-
				Main Body ECU (Cowl Side Junction Block LH)	The sliding roof open display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off.	-
			1. - 2. Parking Assist ECU 3. -	Parking Assist ECU	The clearance warning sonar display condition is maintained.	-
			1. - 2. ECM 3. -	ECM	The A/T shift position display turns off.	-
				ECM	The A/T OIL TEMP display state is maintained.	-
			1. - 2. Seat Belt Control ECU 3. -	Seat Belt Control ECU	The PCS display condition is maintained.	-
					The door control	

Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	transmitter display condition is maintained. The security display condition is maintained. The door control transmitter unlock mode display condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	Suspension Control ECU	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.
			1. - 2. Steering Control ECU 3. -	Steering Control ECU	"Check VGRS System" is displayed.	"Check VGRS System" is displayed.
	Illumination function	Controls dimming and meter illumination on/off according to the CAN signals.	1. Combination Meter 2. - 3. Combination Meter	Combination Meter	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Daytime brightness.	-
			1. - 2. ECM 3. -	ECM	-	-
Meter (MET)	Passenger seat belt warning indicator	Blinks the passenger seat belt warning indicator according to the CAN signals.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	The passenger seat belt warning indicator condition is maintained.	-
			1. - 2. - 3. Multi-display	Multi-display	-	-
Body (BDB)	Power supply switching control	The system that switches the power supply between +B, ACC, and IG.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. -	ECM	The forced engine switch off function does not operate.	-
				Combination Meter	When the power supply switching conditions are met, power supply switching control is permitted. When the power supply condition IG2 start/stop switch turns from off to on, the power supply condition is changed to IG1, and the IG relay output stops.	-
Body (BDB)	Security	The system that operates the warning when a theft is detected.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Certification ECU (Smart Key ECU)	The security control does not operate (The headlight/taillight warning output, horn warning output, and hazard warning light output do not operate). The forced door lock function lock output does not operate. The dome light warning control does not operate. The lighting system answer back control does not operate. (The taillight warning output and hazard warning light output do not operate).	-
				Certification ECU (Smart Key ECU)	When the security warning is operating, warning output stops during hazard warning light output	-

					light output.	
				Certification ECU (Smart Key ECU)	When the security warning is operating, the dome light turns off during dome light illumination.	-
	Entry and start/wireless	The system that operates the lock/unlock, engine switch, back door opener, warning, etc. by pressing the switch when the door control transmitter is within the vehicle detection area. The system that operates the vehicle lock/unlock, panic, back door opener, etc. by remote control.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Certification ECU (Smart Key ECU)	Entry and start/wireless control does not operate. The door lock/unlock control and entry and start back door opener control do not operate.	-
Body (BDB)	Vehicle speed linked auto lock	The system that locks the doors when the vehicle speed is 20 km/h (12 mph) or more.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	ECM	When the vehicle speed linked auto lock signal is lost, operation is permitted.	-
				Combination Meter	The vehicle speed linked auto lock does not operate.	-
	Shift linked auto lock/unlock	The system that unlocks all the doors when the shift lever is moved to P, and locks all doors when the shift lever is moved from P to another position while the engine is running.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	ECM	The shift linked auto lock/unlock function does not operate.	-
				Combination Meter	When the shift linked auto lock/unlock signal is lost, operation is permitted.	-
	DRL	The system that illuminates lights when driving the vehicle to improve the visibility of pedestrians and other vehicles in the daytime.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	ECM	DRL control does not operate. **HINT:** If operated once, the operation continues until the engine switch is turned off, even if the signal is lost.	-
	Boarding	System that controls the front (rear) dome light, door mirror foot light, center console spot light, and interior foot light.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Certification ECU (Smart Key ECU), Combination Meter, ECM, Parking Assist ECU 3. Outer Mirror Control ECU, No. 2 Main Body ECU, Main	Certification ECU (Smart Key ECU)	Front (rear) dome light, door mirror foot light, center console spot light, and interior foot light control does not operate.	-
				Combination Meter	While the interior foot light is illuminated, the center console does not turn off.	-
				ECM	When the interior foot light is illuminated, the dimmer operates. When the engine switch is on (IG), the door mirror foot light does not operate by the manual unlock.	-

			Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus)	Parking Assist ECU	When the side monitor is operating, the door mirror foot light can illuminate.	-
Body (BDB)	Back door	System that operates the hazard warning lights as an answer back when the power back door begins to operate.	1. Power Back Door Unit (Power Back Door ECU) 2. Power Back Door Unit (Power Back Door ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Power Back Door Unit (Power Back Door ECU)	The hazard warning light answer back does not operate when the back door begins to operate.	-
	Back door opener	The system that releases the door latch (turns opener motor on) by turning on the switch built into the outside door handle.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	Combination Meter	Prohibits the back door opener control.	-
	One motion power back door opener	System that unlocks and opens the back door in one motion when the wireless back door opening operation is performed.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Power Back Door Unit (Power Back Door ECU) 3. Power Back Door Unit (Power Back Door ECU)	Power Back Door Unit (Power Back Door ECU)	Back door opener control does not operate.	-
	Display automatic dimmer control	System that controls the brightness of the interior display/indicators, etc. only during twilight and nighttime by determining the time of day and using the light sensor signal.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Windshield Wiper ECU, No. 2 Main Body ECU, ECU, Combination Meter, Multi-display, Air Conditioning Amplifier, Clearance Warning ECU	Combination Meter	Operates the display automatic dimmer control when the tail cancel switch is on. When the value of the light sensor illumination intensity signal is less than the display dimmer value, the brightness of the vehicle interior display/indicator is dimmed.	-
	Power window	The system that operates power window control based on the request from wireless/entry and start control.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	Power window control does not operate. Power window control stops during wireless/entry power window control operation.	-
			1. Certification ECU (Smart Key ECU)			

			Key ECU) 2. - 3. -	-	-	-
Verification (IDT)	Entry function	Entry and start/lock/back door/warning, etc.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	• The entry lock/unlock does not operate. • The entry back door does not operate. • The entry and start warning message does not operate. • The key lock-in prevention function does not operate. • The entry illumination does not operate.	-
				Main Body ECU (Cowl Side Junction Block LH)	Package default setting.	-
			1. - 2. Combination Meter 3. -	Combination Meter	The vehicle speed is determined to be 0 km/h (0 mph).	-
				Combination Meter	-	-
	Wireless buzzer function	The wireless buzzer sounding control.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Does not sound even though there is a wireless buzzer request.	-
				Main Body ECU (Cowl Side Junction Block LH)	Package default settings.	-
			1. - 2. Suspension Control ECU 3. -	Suspension Control ECU	Does not sound even though there is an access mode warning buzzer request.	-
Verification (IDT)	Immobiliser function	The immobiliser control by the warning and remote engine start.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-
			1. - 2. ECM 3. -	ECM	The engine switch is forcibly turned off.	-
	Wireless function	Wireless electric wave information transmission.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	-	-
			1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-

	Security function	Security alarm control.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The alarm is not unset. The alarm is not set.	-
			1. - 2. ECM 3. -	ECM	The alarm is not unset by the engine start.	-
Movement Control Bus (CGW)	Movement control bus monitor function	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Seat Belt Control ECU 3. -	Seat Belt Control ECU	The reception interval counter (RAM and CAN controller initialization).	-
			1. Network Gateway ECU (Movement Control Bus) 2. Distance Control ECU 3. -	Distance Control ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Clearance Warning ECU 3. -	Clearance Warning ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Parking Assist ECU 3. -	Parking Assist ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. Network Gateway ECU (Movement Control Bus) 2. Suspension Control ECU 3. -	Suspension Control ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)		
			1. Network Gateway ECU (Movement Control Bus) 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
			1. Network Gateway ECU (Movement			

			(Movement Control Bus) 2. Steering Control ECU 3. -	Steering Control ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. 4WD Control ECU 3. -	4WD Control ECU		
Movement Control Bus (CGW)	Movement Control Bus (CGW)	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Parking Assist ECU, Master Cylinder Solenoid (Skid Control ECU), 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Distance Control ECU, Steering Control ECU, Seat Belt Control ECU, Suspension Control ECU 3. -	• Parking Assist ECU • Clearance Warning ECU • Master Cylinder Solenoid (Skid Control ECU) • 4WD Control ECU • Steering Angle Sensor • Yaw Rate Sensor • Distance Control ECU • Steering Control ECU • Seat Belt Control ECU • Suspension Control ECU	The reception interval counter (RAM and CAN controller initialization).	-

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FAIL-SAFE FUNCTION

a. When communication fails in any of the main wires (communication lines) due to a short circuit or other causes, the fail-safe function, which is specified for each system, operates to prevent the system from malfunctioning.

b. The table below shows the effects on each system when communication is impossible. For further details, refer to each system.

System	Function	Control Description	1. Control Master 2. System Related 3. Control Actuator	Fail-safe Function System Behavior	Indicator and Buzzer Behavior or User Notification
Airbag (ABG)	TC DTC/output service	When TC is on, DTCs (warning light turn on/turn off request signals) are output.	1. Center Airbag Sensor 2. - 3. Combination Meter	-	-
	Event recorder (EDR)	Records the vehicle information during a collision (the vehicle speed, accelerator pedal opening angle, shift position, etc.).	1. Center Airbag Sensor 2. Combination Meter, ECM 3. -	-	-
	SRS warning light control	Turns the SRS warning light on/off.	1. Combination Meter 2. Center Airbag Sensor 3. -	The SRS warning light turns on.	-
	Information output function (Refer to related system for control description details)	The collision detection signal stops the fuel pump during a collision.	1. ECM 2. Center Airbag Sensor 3. -	-	-
		The driver/passenger seat buckle switch stops PSB control when the seat belt is not fastened.	1. Seat Belt Control ECU 2. Center Airbag Sensor 3. -	-	-
		The passenger seat occupant detection signal turns on the seat belt warning light when the seat belt is not fastened.	1. Combination Meter 2. Center Airbag Sensor 3. -	-	-
	Warning light control	BRL, ABS, VSC-OFF, SLIP and CRAWL light control (turn on/off, blink, DTC output).	1. Master Cylinder Solenoid (Skid Control ECU) 2. - 3. Combination Meter	-	-
	ABS control	ABS control according to the G sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. Yaw Rate Sensor 3. Master	The ABS does not operate.	ABS warning light turns on.

			Cylinder Solenoid (Skid Control ECU)		
Brake (VSC)	TRC control CRAWL control	Brake control and engine torque control during acceleration slip.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM, 4WD Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	TRC does not operate.	VSC OFF indicator light turns on. CRAWL indicator light turns on.
	VSC control	VSC control according to the yaw rate and steering angle sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM, 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Steering Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	VSC does not operate.	ABS and VSC warning lights turn on.
	ACC control	The brake control according to the request from the distance control ECU via the ECM.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM 3. Master Cylinder Solenoid (Skid Control ECU)	ACC does not operate.	VSC warning light turns on.
			1. - 2. ECM 3. ECM	ACC control is canceled.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
			1. - 2. Master Cylinder Solenoid		

Dynamic Radar Cruise Control (ACC)	ACC	Acceleration/deceleration control when following the vehicle in front.	(Skid Control ECU) 3. Master Cylinder Solenoid (Skid Control ECU)	-	-
			1. Distance Control ECU 2. - 3. -	-	-
			1. - 2. Steering Control ECU 3. -	-	-
			1. - 2. Combination Meter 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	-	-
Dynamic Radar Cruise Control (ACC)	PCS	Seat belt and brake control immediately before a collision.	1. - 2. ECM 3. -	Radar linked PCS control stops.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. Master Cylinder Solenoid (Skid Control ECU)	PCS control stops.	
			1. Distance Control ECU 2. - 3. -	-	-
			1. - 2. Steering Control ECU 3. -	-	-
			1. - 2. - 3. Seat Belt Control ECU	-	-
			1. Multiplex Tilt and Telescopic ECU 2. Position Control ECU	The power tilt and power telescopic steering column system does not operate.	-
				Memory restore control does not operate.	-

Tilt and Telescopic (TAT)	Microcomputer preset steering	Automatically begins the steering auto away/auto return when the engine switch is turned on (IG) or off.	and Switch, Main Body ECU (Cowl Side Junction Block LH) (V Bus), Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Combination Meter 3. Multiplex Tilt and Telescopic ECU	Auto return/auto away control does not operate.	-
Mechanical 4WD (FWM)	Switching control between High and Low	Switching between High and Low is prohibited during the following conditions: 1) When there is a vehicle speed violation, engine speed violation, or large difference in wheel speeds, 2) when the shift lever is not in N, or 3) when the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	Switching between High and Low is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if switching between High and Low can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or 4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Neutral switching control	Switching to neutral is prohibited during the following conditions: 1) When there is a vehicle speed violation or engine speed violation, or 2) when the shift lever is not in N or the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	Switching to neutral is prohibited.	4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Center differential lock switching control (between Free and Lock)	Center differential lock switching is prohibited when there is a vehicle speed violation or large difference in wheel speeds.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Center differential lock switching is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if center differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Rear differential lock	Rear differential lock	1. 4WD Control ECU 2. - 3. -	-	-
			1. -	Rear differential lock switching is prohibited. **HINT:**	

Mechanical 4WD (FWM)	switching control (between Rr Free and Rr Lock)	switching is prohibited when there is a vehicle speed violation.	2. Master Cylinder Solenoid (Skid Control ECU) 3. -	When there is a wheel speed malfunction, function No. 7 is controlled to determine if rear differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	L4F switching control	Switching to L4F is prohibited and the operation is performed with L4L when VSC is malfunctioning.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	L4F switching is prohibited and the operation is performed with L4L.	No user notification.
	Specialized control when temperature is low	Changes the ACT conductive current value according to the temperature (low temperature use or normal temperature use).	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. Air Conditioning Amplifier, ECM 3. -	Changes the temperature used for the calculation of ACT temperature adjustment control.	No user notification.
Mechanical 4WD (FWM)	Specialized control during wheel speed failure	When there is a wheel speed failure, switching is permitted only when specified conditions are met (the wheel speed malfunction is 1 wheel or more and 3 wheels or less, the brake is applied, the engine speed is low, and all normal wheel speeds are low).	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	If the wheel speed malfunction is 1 wheel or more and 3 wheels or less, only when the wheel speed failure specified conditions are met, switching is permitted. When 4 wheels are malfunctioning, switching is prohibited (the wheel speed failure specialized control does not operate).	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
Mechanical 4WD (FWM)	Indicator and buzzer signal output	Signal output of the indicator and buzzer condition that indicates the actuator position and switching status.	1. 4WD Control ECU 2. - 3. -	-	-
	High-Low actuator failure signal output	When the High-Low actuator limit switch is malfunctioning, a signal is output.	1. 4WD Control ECU 2. - 3. -	-	-
	C/C cancel signal output	Outputs a cruise control cancel signal when center differential switching is not completed even though 5 sec. or more have elapsed from the start of switching.	1. 4WD Control ECU 2. - 3. -	-	-
	L4 status signal condition output	A signal is output when switching between the L4F and L4L position is completed.	1. 4WD Control ECU 2. - 3. -	-	-
	C/D lock condition signal output	CDL switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-

	R/D lock condition signal output	R switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-
	T/F N condition signal output	NP switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-
Gasoline Engine	Engine control system	Adjusts the fuel injection volume according to each sensor value and controls the engine.	1. ECM 2. - 3. -	-	-
	ECT control system	Changes the ECT shift position based on the vehicle speed and torque.	1. ECM 2. - 3. -	-	-
	Cruise control system	Maintains a constant vehicle speed and drives the vehicle.	1. ECM 2. - 3. -	-	-
Power Back Door (BKD)	Power back door operation conditions	Prohibits the power back door operation according to the vehicle state (the engine switch, shift position, vehicle speed, and lock position).	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) Main Body ECU (Cowl Side Junction Block LH) (V Bus), Combination Meter, ECM 3. -	The power back door system does not operate (when the start signal is received, the buzzer sounds a warning that the conditions are not met).	-
	Power back door operation requests	Receives the power back door close/open operation trigger from the operation switch or wireless switch and begins the power back door operation.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-
			1. - 2. Main body ECU (Cowl Side Junction Block LH) (MS Bus), Certification ECU (Smart Key ECU) 3. -	The power back door system does not operate.	
	Power back door	Sends the hazard illumination request when	1. Power Back Door Unit (Power Back Door ECU) 2. Main Body ECU (Cowl Side Junction Block LH) 3. Power Back	When the back door operation begins, the hazard warning lights may not illuminate.	-

	operation status output	the power back door operation begins and back door unlock request.	Door Unit (Power Back Door ECU)		
			1. - 2. - 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	-	-
	DTC transmission/reception	Performs the power back door customization, malfunction detection, Active Test, etc.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	DTC function does not operate.	-
Active Height Control Suspension (4-WHEEL AHC)	Damping force control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the damping force of the shock absorbers.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-
			1. - 2. ECM 3. -	Damping force control is prohibited.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -		-
			1. - 2. Steering Angle Sensor 3. -		-
			1. - 2. Steering Control ECU 3. -		-
Active Height Control Suspension (4-WHEEL AHC)	Spring switching control is prohibited	Based on the information from the master cylinder solenoid (skid control ECU), steering control ECU, yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the front spring constant value (ON/OFF).	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Spring switching control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -		
			1. -		

			2. Steering Control ECU 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-
			1. Suspension Control ECU 2. ECM 3. Suspension Control ECU	Vehicle height control is prohibited.	-
			1. - 2. ECM 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V bus) 3. -	Vehicle height control is prohibited.	-
			1. - 2. 4WD Control ECU 3. -	-	-
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Vehicle height control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -		
			1. - 2. Steering Control ECU 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
		• Air conditioning vent temperature control according to the engine coolant temperature information. • Air conditioning vent switching control according to the engine coolant temperature information.		Coolant information: Control is performed by	

Air Conditioner (ACN)	Air conditioning system	• Air conditioning vent airflow amount control according to the engine coolant temperature information. • Compensation of the engine coolant temperature information according to the engine type. • Compressor lock judgment value switching according to the engine type.	1. Air Conditioning Amplifier 2. ECM 3. -	using the default value (80°C (176°F). Engine type: The condition is maintained (when unconfirmed, control is performed by using the default (507F)).	-
Air Conditioner (ACN)	Air conditioning system	Compressor lock judgment by NE.	1. Air Conditioning Amplifier 2. ECM 3. -	NE: Control is performed by using the default value (0 km/h (0 mph)).	-
		The electric load control condition is limited according to the load control level.	1. Air Conditioning Amplifier 2. ECM 3. -	Load control: No load control (normal control).	-
		• Activation control according to the viscous heater activation permission information. • Activation control according to the PTC heater activation permission information.	1. Air Conditioning Amplifier 2. ECM 3. -	Permission information: Control is performed according to the operation prohibition state.	-
		• Air conditioning system operation status control and panel switch IND output control according to panel switch operation information. • Exhaust gas automatic air presence judgment and circulation control switching according to exhaust gas automatic air presence information.	1. Air Conditioning Amplifier 2. Display and Navigation Module Display 3. -	None (Air conditioning system operation condition switching is not possible).	-

Air Conditioner (ACN)	Air conditioning system	Dimmer information output to the LIN panel according to the display dimmer information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Condition is maintained (after the reset, the dimmer condition is fixed).	-
		PTC control switching based on the headlight illumination information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	PTC control (the headlight flickering countermeasure) is not performed.	-
		A/C control pattern switching based on the country specific information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Condition is maintained (when unconfirmed, control is performed according to the default value).	-
		Air conditioning system operation condition switching and the outside temperature display output adjustment according to the vehicle speed information.	1. Air Conditioning Amplifier 2. Combination Meter 3. -	• Decrease in reliability and consistency of the exterior temperature value of the outside temperature display. • Decrease in the optimum level of A/C vent airflow amount adjustment.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. Steering Angle Sensor 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	• Initialization condition: Data output response request (STS=0). • When the trigger frame VSC 1S01 is not received from the master cylinder solenoid (skid control ECU), the data output response of the output response request changes from STS=0 to STS=1.	-
				Communication is stopped after	

				transmission is sent 4 times at 12 msec. intervals as the data output response non-request STS=0. When the above conditions are met, the sensor internal zero point memory invalid SAZS=1 and SFRZ=previous value + 1 during the next transmission.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. Steering Angle Sensor 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Communication is stopped after transmission is sent 4 times at 12 millisecond intervals as the data output response non-request STS=0. When the above conditions are met, the sensor internal zero point memory invalid SAZA=1 and SFRZ=previous value + 1 during the next transmission.	Depends on the partner ECU specification.
Seat (DST)	Seat system	Memory restore function	1. Position Control ECU and Switch 2. - 3. Position Control ECU and Switch	-	-
			1. - 2. ECM 3. -	The memory restore function does not operate.	-
			1. - 2. ECM 3. -	The memory restore function does not operate.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	The memory restore function does not operate.	-
			1. - 2. Position Control ECU and Switch 3. -	The memory restore function does not operate.	-
		Memory call function	1. Position Control ECU and Switch 2. - 3. Position Control ECU and Switch	-	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	The memory call does not operate.	-
			1. Position Control ECU		

			and Switch 2. - 3. -	-	-
		Tilt and telescopic operation permission function	1. - 2. Multiplex Tilt and Telescopic ECU 3. Multiplex Tilt and Telescopic ECU	The tilt and telescopic operation does not operate.	-
Mirror (DRD)	Mirror surface manual control	Function that adjusts the mirror surface with the manual switch.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	The mirror surface manual adjustment function does not operate (stops if there is a disruption during the operation).	-
	Mirror surface memory control	Function that records the mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch, Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	The mirror surface recording function does not operate	-
	Mirror surface recovery control	Function that moves the mirror surface to the recorded mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch 3. -	The mirror surface recovery function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Mirror surface reverse control	Function that tilts the mirror surface downward when the vehicle is moving in reverse.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), ECM 3. -	The reverse shift-linked function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Electric retract/return control	Function that retracts/returns the mirror housing.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), ECM 3. -	The mirror housing retract/return function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
			1. Outer Mirror Control ECU		

	Foot light illumination control	Function that turns on/off the foot light illumination that is on the bottom of the mirror housing.	2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	The foot light illumination turns off (if illuminated, turns off).	-
Wiper (FRN)	Front wiper control	System that operates the wiper HI and LO operation, vehicle speed sensing intermittent wiper function, vehicle speed switching function, washer linked function, and auto wiper.	1. Windshield Wiper ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	With the engine switch on (IG) and the wipers operating with the LO switch on, the intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -		-
			1. - 2. Combination Meter 3. -	• With the engine switch on (IG) and the wipers operating with the LO switch on, the intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating. • With the engine switch on (IG), the washer fluid delay timing becomes fixed. • With the engine switch on (IG), the intervals do not change according to the vehicle speed while the intermittent wiper function is operating.	-
			1. Windshield Wiper ECU	-	-

			2. - 3. -		
Wiper (FRN)	LIN communication control	System that assists the outer wiper function by communication with the windshield wiper ECU.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	With the engine switch on (IG), the disruption value data is routed to the rain sensor. Otherwise, the rain sensor operation depends on the specifications.	-
			1. - 2. Combination Meter 3. -		-
Navigation (EMVN)	Air Conditioner Control	Controls all Air Conditioner functions.	1. Display and Navigation Module Display 2. Air Conditioning Amplifier 3. -	Clears display screens that do not respond to SW.	Displayed on-screen.
	Clearance Sonar Settings / Communication	Displays Sonar Status, and issues audible warnings.	1. Display and Navigation Module Display 2. ECM, Parking Assist ECU 3. -	Clears display screens that do not respond to SW.	Icon disappears.
	Destination ID	Determines the vehicle destination, and decides the display language, time zones, etc.	1. Display and Navigation Module Display (w/ Navigation System) 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	Destination data saved prior to system stoppage is used.	Cannot detect.
No. 2 Body ECU (RRJ)	Rear wiper control	System that performs the rear wiper LO speed operation, washer linked function, intermittent wiper function, vehicle speed switching control, and reverse linked control.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	With the engine switch on (IG), the rear wiper does not stop due to the rear upper door opening during the rear wiper operation.	-
			1. - 2. Combination Meter 3. -	With the engine switch on (IG), the intermittent wiper function does not operate while the wipers are stopped due to the vehicle speed switching control not operating during the rear wiper operation.	-
			1. - 2. ECM 3. -	With the engine switch on (IG), the rear wiper does not activate due to the reverse operation control not operating when the front wiper is	-
			1. - 2. Windshield		-

			3. Wiper ECU	operating.	
	Lower door closer control	System that independently controls the internal closer motors (RH, LH) of the rear lower door at the same time.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	Does not activate release, and does not release the lower door latch.	-
			1. - 2. Combination Meter 3. -	With the engine switch on (IG), does not activate release, and does not release the lower door latch.	-
No. 2 Body ECU (RRJ)	Illumination control	System that fades the inside handle illumination, and step illumination in and out.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Does not turn on the inside handle illumination or step illumination.	-
	LIN communication control	System that routes the CAN data to the overhead module using LIN communication.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Routes the disrupted value data to the overhead module.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -		-
Variable Gear Ratio Steering (VGR)	VGRS system	System that changes the steering gear ratio based on the vehicle speed information and steering angle.	1. Steering Control ECU 2. - 3. Steering Control ECU	-	-
			1. - 2. Steering Angle Sensor 3. -	VGRS system does not operate.	Master warning light illuminates and display is shown on multi-information display (meter display).
			1. - 2. ECM 3. -		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -		
			1. Clearance Warning ECU 2. -	-	-

			3. -		
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. - 2. Air Conditioning Amplifier 3. -	The sonar system functions normally. Maintains distance by maintaining the outside temperature at 25°C (77°F).	-
			1. - 2. Windshield Wiper ECU 3. -	The sonar system functions normally. Operates the obstacle judgments with the wiper off (except in rain).	-
			1. - 2. ECM 3. -	If data received from the ECM is lost, the system is inoperable as control is performed with the shift position data set to P.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	The clearance sonar main switch indicator is maintained with the brightness as the previous value.	-
				The sonar system functions normally. Control is maintained with the country specification information as the previous value (with or without a warning sound).	-
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. - 2. Combination Meter 3. -	If data received from the meter ECU is lost, the system is inoperable as the clearance sonar is controlled at 20 km/h (12.5 mph) or more.	-
			1. - 2. Display and Navigation Module Display 3. -	The sonar system functions normally. The clearance sonar customize information is maintained.	-
				The sonar system functions normally. Information on the camera presence is maintained.	-
				The sonar system functions normally. Notification on the screen that the clearance sonar is off is disabled.	-
AFS	Leveling	System that adjusts the beam axis direction of the headlights vertically according to the pitch	1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-
			1. - 2. ECM 3. -	• Leveling control continues. • Swivel control centers the headlights.	AFS OFF indicator
			1. - 2. Master Cylinder Solenoid (Skid	• Leveling control continues with the vehicle speed set to 0 km/h (0	

		angle requested by the wheel speed sensor and vehicle height sensor.	Control ECU) 3. -	mph). • Swivel control centers the headlights.	light blinks.
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Steering Control ECU 3. -	-	-
AFS	Swivel	System that measures the turning diameter based on the wheel speed and steering angle, and then moves the headlights left and right according to the turning diameter.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-
			1. - 2. ECM 3. -	• Leveling control continues. • Swivel control centers the headlights.	AFS OFF indicator blinks.
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	• Leveling control continues with the vehicle speed set to 0. • Swivel control centers the headlights.	
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Steering Angle Sensor 3. -	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	• Level control continues. • Swivel control centers the headlights.	
	AFS indicator	Monitors for AFS system malfunctions and blinks the indicator of the meter when a malfunction is detected.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. AFS ECU (Headlight Swivel ECU)	-	-
			1. - 2. Combination Meter	-	-

			3. -		
Rear View Monitor (DS2)	Rear view monitor system	System that displays the expected course lines in the back camera image of the display that links to the steering angle to assist in parking (garage parking, parallel parking, etc.).	1. Parking Assist ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	The rear view monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
	Wide view front and side monitor system	System that displays the front and side camera image on the display (the side monitor is linked with the steering angle to display the expected course lines).	1. Parking Assist ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	The wide view front and side monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
Pre-crash Seat Belt (PSB)	PCS (brake linked)	When the VSC system suddenly brakes and/or the vehicle is unable to be controlled (while spinning or drifting), the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened (receives the buckle switch information from the center airbag sensor) by tightening the seat belts to increase the occupant restraint.	1. Seat Belt Control ECU 2. - 3. Seat Belt Control ECU	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
			1. - 2. Distance Control ECU 3. -	-	-
			1. - 2. Center Airbag Sensor 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
	PCS (millimeter wave radar sensor linked)	When ACC determines that a collision is unavoidable based on the information from the millimeter wave radar sensor, the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened by tightening the seat belts to increase the occupant restraint.	1. Seat Belt Control ECU 2. - 3. -	-	-
			1. - 2. Distance Control ECU 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped (millimeter wave radar sensor linked).	-
			1. - 2. Center Airbag Sensor 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
		Receives the seat belt control ECU malfunction information or ACC malfunction information, and requests the display	1. Seat Belt Control ECU 2. - 3. -		
			1. -		

Pre-crash Seat Belt (PSB)	Meter display request	of the indicator to the meter ("PCS" indicator turn off/turn on request). **HINT:** As long as there is a signal in the ACC frame, the blinking request outputs an illumination request to the combination meter. When communication with the ACC frame is lost, it is determined that a malfunction exists and an illumination request is output along with the malfunction. The priority order is determined by the combination meter. The illumination is the first priority.	2. Combination Meter, Master Cylinder Solenoid (Skid Control ECU) 3. -	-	Exclusive indicator "PCS" turns on.
			1. - 2. Combination Meter, Distance Control ECU 3. -		
	2 digit DTC output	When terminal TC of the DLC3 is connected to terminal GND, a 2 digit DTC (BCD) is displayed by the blinking of "PCS".	1. Seat Belt Control ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	-	-
Meter (MET)	Speedometer	Indicates the vehicle speed according to the vehicle speed signal.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	The speedometer indicates 0 km/h (0 mph).	-
	Tachometer	Indicates the engine speed according to the engine speed signal.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The tachometer indicates 0 rpm.	-
	ODO/TRIP meter	Calculates and displays the driven distance according to the vehicle speed pulse signal calculated value.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	• The ODO/TRIP meter stops calculating and the last displayed value continues to be displayed. • Optitron meter: In multi-display. • Regular	-

				analog meter: Independent LCD.	
	Engine coolant temperature gauge	Indicates the coolant temperature according to the engine coolant temperature signal.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The coolant temperature gauge displays less than the C mark.	-
Meter (MET)	Fuel gauge	Indicates the remaining fuel according to the fuel sender (direct line) input (uses the CAN communication (the vehicle speed signal) to determine if the vehicle is being driven or not).	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Control is performed with the speed input as 0 km/h (0 mph).	-
	Oil pressure gauge	Indicates the engine oil pressure according to the oil pressure sender (direct line) input (uses the CAN communication to determine if the engine is on or off by the engine speed signal).	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The oil pressure gauge displays less than the L mark.	-
	Shift lever indicator	The shift information is displayed according to the shift position signal.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The shift lever indicator and shift position in the multi-information display turns off.	-
Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various signals that are input.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	The speed warning buzzer does not sound (for Middle East).	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder	Conditions for the seat belt buzzer not sounding: When VSC1S03 is lost: Does not sound. When BDB1S01 is lost: Does not sound. When ECT1S90 is lost: Control is performed with B_R=0b.	-
				Conditions for the seat belt buzzer sounding: When VSC1S03 is lost: Control is performed with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost:	-

			1. Solenoid (Skid Control ECU) 2. - 3. -	Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	
				The door ajar driving warning buzzer does not sound.	-
Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various signals that are input.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	The light reminder buzzer does not sound.	-
				The sliding roof buzzer condition is maintained (until bus sleep).	-
			1. - 2. ECM 3. -	The A/T reverse buzzer does not sound.	-
				• The sports shift reject buzzer condition is maintained. • The radar cruise low speed buzzer does not sound. • The radar cruise warning buzzer does not sound.	-
			1. - 2. 4WD Control ECU 3. -	The last state of the 4WD buzzer is maintained.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	The door control transmitter buzzer (single push, continuous push, and intermittent push) does not sound. The immobiliser verification completion notification buzzer does not sound.	-
			1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder (Skid Control ECU) 3. -	The ABS indicator turns on.	The ABS indicator turns on.
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side	Brake warning light When VSC1S95 is lost:	

Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	Illuminates. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	SLIP indicator light condition is maintained. VSC OFF indicator light condition is maintained. The downhill assist control indicator light condition is maintained. The CRAWL indicator light condition is maintained.	-
				120 km/h (75 mph) speed warning turns off (for Middle East).	-
				Control is performed with the speed condition as 0 km/h (0 mph) for the following display: FUEL FILTER clog indicator. The odometer calculation is stopped for the following display conditions: T-BELT indicator.	-
			1. - 2. AFS ECU 3. -	Maintains the AFS OFF indicator condition.	-
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	When there is determined to be a disruption, the following indicators operate as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • DOOR indicator light • Driver side seat belt indicator light	-
				When there is determined to be a disruption, the following indicators operate as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • FRONT FOG indicator light • REAR FOG indicator light • TAIL indicator • HEAD	-

				indicator • BEAM indicator	
			1. - 2. Parking Assist ECU 3. -	CLEARANCE SONAR indicator light turns off.	-
			1. - 2. ECM 3. -	The A/T P warning light condition is maintained. The ECT PWR indicator light condition is maintained. The 2nd START indicator light condition is maintained. The CHARGE warning light condition is maintained. The CRUISE main indicator light condition is maintained.	-
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. ECM, 4WD Control ECU 3. -	The A/T P warning light conditions are maintained.	-
			1. - 2. 4WD Control ECU 3. -	The center differential lock indicator light turns off. The 4LO indicator light turns off.	-
			1. - 2. Seat Belt Control ECU 3. -	The PCS indicator light condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	The ACCESS MODE indicator light • When the engine switch is on (IG): The condition is maintained. • When the engine switch is off: Turns off.	-
			1. - 2. Center Airbag Sensor 3. -	The SRS warning light turns on.	The SRS warning indicator turns on.
			1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	Displays a blank screen and drive monitor operation and calculation of the following values stops: instant fuel economy, average fuel economy after refueling, distance to empty, average vehicle speed after engine start, driving distance after engine start.	-
			1. - 2. Master	Parking brake drag warning display conditions: When VSC1S03 is lost:	

Meter (MET)	Multi-display	Displays information about the drive monitor, warning, radar cruise, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	Cylinder Solenoid (Skid Control ECU) 3. -	Control is performed with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost: Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	The CRAWL system display is maintained. The VSC display is maintained.	-
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Control is performed with the speed condition as 0 km/h (0 mph) for the following displays: Door open while driving display, FUEL FILTER clog display. ODO calculation stops for the following display conditions: Oil maintenance display, T-BELT display.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	Conditions for the door open display and door open while driving display: VSC1S03: Control is performed with the vehicle speed as 0 km/h (0 mph). BSB1S01: Display state is maintained. BDB1S08: No display.	-
			1. - 2. Air Conditioning Amplifier 3. -	The outside temperature display is "E".	The outside temperature display is "E" (in the meter).
		Displays information about	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus),	The shift lever display turns off.	-
				The door control transmitter display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch	-

			Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	is off: Turns off.	
Meter (MET)	Multi-display	the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.		The sliding roof open display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off.	-
			1. - 2. Parking Assist ECU 3. -	The clearance warning sonar display condition is maintained.	-
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. ECM 3. -	The A/T shift position display turns off.	-
				The A/T OIL TEMP display state is maintained.	-
			1. - 2. Seat Belt Control ECU 3. -	The PCS display condition is maintained.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	The door control transmitter display condition is maintained. The security display condition is maintained. The door control transmitter unlock mode display condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.
			1. - 2. Steering Control ECU 3. -	"Check VGRS System" is displayed.	"Check VGRS System" is displayed.
	Illumination function	Controls dimming and meter illumination on/off according to the CAN signals.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Daytime brightness.	-
			1. - 2. ECM 3. -	-	-
Meter (MET)	Passenger seat belt warning indicator	Blinks the passenger seat belt warning indicator according to the CAN signals.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Center Airbag Sensor 3. -	The passenger seat belt warning indicator condition is maintained.	-
			1. - 2. - 3. Display and Navigation Module Display	-	-

			1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Combination Meter, ECM 3. -	The forced engine switch off function does not operate.	-
Body (BDB)	Power supply switching control	The system that switches the power supply between +B, ACC, and IG.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. -	When the power supply switching conditions are met, power supply switching control is permitted. When the power supply condition IG2 start/stop switch turns from off to on, the power supply condition is changed to IG1, and the IG relay output stops.	-
Body (BDB)	Security	The system that operates the warning when a theft is detected.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	The security control does not operate (The headlight/taillight warning output, horn warning output, and hazard warning light output do not operate). The forced door lock function lock output does not operate. The dome light warning control does not operate. The lighting system answer back control does not operate. (The taillight warning output and hazard warning light output do not operate).	-
				When the security warning is operating, warning output stops during hazard warning light output.	-
				When the security warning is operating, the dome light turns off during dome light illumination.	-
	Entry and start/wireless	The system that operates the lock/unlock, engine switch, back door opener, warning, etc. by pressing the switch when the door control transmitter is within the vehicle detection area. The system that operates the vehicle lock/unlock, panic, back door opener, etc. by remote control.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Entry and start/wireless control does not operate. The door lock/unlock control and entry and start back door opener control do not operate.	-
	Vehicle speed linked auto lock	The system that locks the doors when the vehicle speed is 20 km/h (12 mph) or more.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	When the vehicle speed linked auto lock signal is lost, operation is permitted.	-
				The vehicle speed linked auto lock does not operate.	-

Body (BDB)	Shift linked auto lock/unlock	The system that unlocks all the doors when the shift lever is moved to P, and locks all doors when the shift lever is moved from P to another position while the engine is running.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	The shift linked auto lock/unlock function does not operate.	-
				When the shift linked auto lock/unlock signal is lost, operation is permitted.	-
	DRL	The system that illuminates lights when driving the vehicle to improve the visibility of pedestrians and other vehicles in the daytime.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	DRL control does not operate. **HINT:** If operated once, the operation continues until the engine switch is turned off, even if the signal is lost.	-
	Boarding	System that controls the front (rear) dome light, door mirror foot light, center console spot light, and interior foot light.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Certification ECU (Smart Key ECU), Combination Meter, ECM, Parking Assist ECU 3. Outer Mirror Control ECU, No. 2 Main Body ECU, Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus)	Front (rear) dome light, door mirror foot light, center console spot light, and interior foot light control does not operate.	-
				While the interior foot light is illuminated, the center console does not turn off.	-
				When the interior foot light is illuminated, the dimmer operates. When the engine switch is on (IG), the door mirror foot light does not operate by the manual unlock.	-
				When the side monitor is operating, the door mirror foot light can illuminate.	-
	Back door	System that operates the hazard warning lights as an answer back when the power back door begins to operate.	1. Power Back Door Unit (Power Back Door ECU) 2. Power Back Door Unit (Power Back Door ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	The hazard warning light answer back does not operate when the back door begins to operate.	-

Body (BDB)	Back door opener	The system that releases the door latch (turns opener motor on) by turning on the switch built into the outside door handle.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	Prohibits the back door opener control.	-
	One motion power back door opener	System that unlocks and opens the back door in one motion when the wireless back door opening operation is performed.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Power Back Door Unit (Power Back Door ECU) 3. Power Back Door Unit (Power Back Door ECU)	Back door opener control does not operate.	-
	Display automatic dimmer control	System that controls the brightness of the interior display/indicators, etc. only during twilight and nighttime by determining the time of day and using the light sensor signal.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Windshield Wiper ECU, No. 2 Main Body ECU, ECU, Combination Meter, Display and Navigation Module Display, Air Conditioning Amplifier, Clearance Warning ECU	Operates the display automatic dimmer control when the tail cancel switch is on. When the value of the light sensor illumination intensity signal is less than the display dimmer value, the brightness of the vehicle interior display/indicator is dimmed.	-
	Power window	The system that operates power window control based on the request from wireless/entry and start control.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. -	Power window control does not operate. Power window control stops during wireless/entry power window control operation.	-
			1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-
			1. -	• The entry lock/unlock does not operate. • The entry back door does not	

Verification (IDT)	Entry function	Entry and start/lock/back door/warning, etc.	2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	operate. • The entry and start warning message does not operate. • The key lock-in prevention function does not operate. • The entry illumination does not operate.	-
				Package default setting.	-
			1. - 2. Combination Meter 3. -	The vehicle speed is determined to be 0 km/h (0 mph).	-
				-	-
	Wireless buzzer function	The wireless buzzer sounding control.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Does not sound even though there is a wireless buzzer request.	-
				Package default settings.	-
			1. - 2. Suspension Control ECU 3. -	Does not sound even though there is an access mode warning buzzer request.	-
Verification (IDT)	Immobiliser function	The immobiliser control by the warning and remote engine start.	1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-
			1. - 2. ECM 3. -	The engine switch is forcibly turned off.	-
	Wireless function	Wireless electric wave information transmission.	1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	-	-
	Security function	Security alarm control.	1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction	The alarm is not unset. The alarm is not set.	-

			Block LH) (MS Bus) 3. -		
			1. - 2. ECM 3. -	The alarm is not unset by the engine start.	-
Movement Control Bus (CGW)	Movement control bus monitor function	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Seat Belt Control ECU 3. -	The reception interval counter (RAM and CAN controller initialization).	-
			1. Network Gateway ECU (Movement Control Bus) 2. Distance Control ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Clearance Warning ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Parking Assist ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Steering Angle Sensor 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Suspension Control ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Master Cylinder Solenoid (Skid Control ECU) 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Yaw Rate		

			1. Sensor 2. - 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Steering Control ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. 4WD Control ECU 3. -		
Movement Control Bus (CGW)	Movement Control Bus (CGW)	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Clearance Warning ECU, Parking Assist ECU, Master Cylinder Solenoid (Skid Control ECU), 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Distance Control ECU, Steering Control ECU, Seat Belt Control ECU, Suspension Control ECU 3. -	The reception interval counter (RAM and CAN controller initialization).	-

for Preparation Click here

HINT:

If a trouble code is displayed during the DTC check, inspect the trouble areas listed for that code. For details of the code, refer to the "See page" below.

CAN Communication System

DTC Code	Detection Item	Trouble Area	DTC Output from	See page
U0114/38	Lost Communication with 4WD Control ECU	- Power source circuit of 4WD control ECU - 4WD control ECU - 4WD control ECU branch wire or connector	Network gateway ECU	Click here
U0122	Lost Communication with Vehicle Dynamics Control Module	- Power source circuit of master cylinder solenoid (skid control ECU) - One side of CAN branch wire of other systems - Master cylinder solenoid (skid control ECU) - Master cylinder solenoid (skid control ECU) branch wire or connector	Network gateway ECU	Click here
U0123	Lost Communication with Yaw Rate Sensor Module	- Power source circuit of yaw rate sensor assembly - Yaw rate sensor assembly - Yaw rate sensor branch wire or connector	Network gateway ECU	Click here
U0124	Lost Communication with Lateral Acceleration Sensor Module	- Power source circuit of yaw rate sensor assembly - Yaw rate sensor assembly - Yaw rate sensor branch wire or connector	Network gateway ECU	Click here
U0126	Lost Communication with Steering Angle Sensor Module	- Power source circuit of steering angle sensor - One side of CAN branch wire of other systems - Steering angle sensor - Steering angle sensor branch wire or connector	Network gateway ECU	Click here
U0129	Lost Communication with Brake System Control Module	- Power source circuit of master cylinder solenoid (skid control ECU) - One side of CAN branch wire of other systems - Master cylinder solenoid (skid control ECU) - Master cylinder solenoid (skid control ECU) branch wire or connector	Network gateway ECU	Click here
U0130	Lost Communication with Steering Effort Control Module	- Power source circuit of steering control ECU - One side of CAN branch wire of other systems - Steering control ECU - Steering control ECU branch wire or connector	Network gateway ECU	Click here
U0132	Lost Communication with Suspension Control ECU	- Power source circuit of suspension control ECU - One side of CAN branch wire of other systems - Suspension control ECU - Suspension control ECU branch wire or connector	Network gateway ECU	Click here
U0141	Lost Communication with Body Control Module "A"	- Power source circuit of No. 2 main body ECU - No. 2 main body ECU - No. 2 main body ECU branch wire or connector	Main body ECU (cowl side junction block LH)	Click here
U0199	Lost Communication with "Door Control Module A"	- Power source circuit of outer mirror control ECU - Outer mirror control ECU - Outer mirror control ECU branch wire or connector	Main body ECU (cowl side junction block LH)	Click here
U0208	Lost Communication with "Seat Control Module A"	- Power source circuit of position control ECU and switch - Position control ECU and switch - Position control ECU and switch branch wire or connector	Main body ECU (cowl side junction block LH)	Click here
	Lost Communication with Rear Gate	- Power source circuit of power back door unit (power back door ECU)	Main body ECU (cowl side	Click

U0230	Module	- Power back door unit (power back door ECU) - Power back door unit (power back door ECU) branch wire or connector	junction block LH)	here
U0327	Software Incompatibility with Vehicle Security Control Module	- Power source circuit of certification ECU (smart key ECU assembly) - Certification ECU (smart key ECU assembly) - Certification ECU (smart key ECU assembly) branch wire or connector	Main body ECU (cowl side junction block LH)	Click here
U1002 (CAN MS BUS)	Lost Communication with Gateway Module (Main body ECU)	- MS bus circuit - Certification ECU (smart key ECU assembly) branch wire or connector - Position control ECU and switch branch wire or connector - Outer mirror control ECU branch wire or connector - Multiplex tilt and telescopic ECU branch wire or connector - Power back door unit (power back door ECU) branch wire or connector - Windshield wiper ECU branch wire or connector - No. 2 main body ECU branch wire or connector - Main body ECU (cowl side junction block LH) main wire or connector - Combination meter main wire or connector - Certification ECU (smart key ECU assembly) - Position control ECU and switch assembly - Outer mirror control ECU assembly - Multiplex tilt and telescopic ECU - Power back door unit (power back door ECU) - No. 2 main body ECU - Main body ECU (cowl side junction block LH) - Combination meter assembly - No. 8 junction connector - No. 9 junction connector - No. 10 junction connector - No. 2 CAN junction connector	Main body ECU (cowl side junction block LH)	Click here
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module (Network Gateway ECU)	- Movement control bus circuit - 4WD control ECU branch wire or connector - Yaw rate sensor branch wire or connector - Seat belt control ECU branch wire or connector - Distance control ECU branch wire or connector - Parking assist ECU branch wire or connector - Clearance warning ECU branch wire or connector - Master cylinder solenoid (skid control ECU) branch wire or connector - Steering angle sensor branch wire or connector - Network gateway ECU main wire or connector - Suspension control ECU branch wire or connector - Steering control ECU branch wire or connector - 4WD control ECU - Yaw rate sensor - Seat belt control ECU - Distance control ECU - Parking assist ECU - Clearance warning ECU - Master cylinder solenoid (skid control ECU) - Steering angle sensor - Suspension control ECU - Steering control ECU - Network gateway ECU - No. 4 junction connector - No. 5 junction connector - No. 6 junction connector - No. 7 junction connector - No. 1 CAN junction connector	Network gateway ECU	Click here
	Lost Communication with Seat Belt Control	- Power source circuit of seat belt control ECU - Seat belt control ECU		Click

U1100	ECU	- Seat belt control ECU branch wire or connector	Network gateway ECU	here
U1101	Lost Communication with Distance Control ECU	- Power source circuit of distance control ECU - Distance control ECU - Distance control ECU branch wire or connector	Network gateway ECU	Click here
U1110	Lost Communication with Clearance Sonar Module	- Power source circuit of clearance warning ECU assembly - Clearance warning ECU assembly - Clearance warning ECU branch wire or connector	Network gateway ECU	Click here
U1111	Lost Communication with Body No. 5 Module	- Power source circuit of windshield wiper ECU - Windshield wiper ECU - Windshield wiper ECU branch wire or connector	Main body ECU (cowl side junction block LH)	Click here
U1115	Lost Communication with Tilt and Telescopic Module	- Power source circuit of multiplex tilt and telescopic ECU - Multiplex tilt and telescopic ECU - Multiplex tilt and telescopic ECU branch wire or connector	Main body ECU (cowl side junction block LH)	Click here
U1126	Lost Communication with Parking Assist ECU	- Power source circuit of parking assist ECU - Parking assist ECU - Parking assist ECU branch wire or connector	Network gateway ECU	Click here

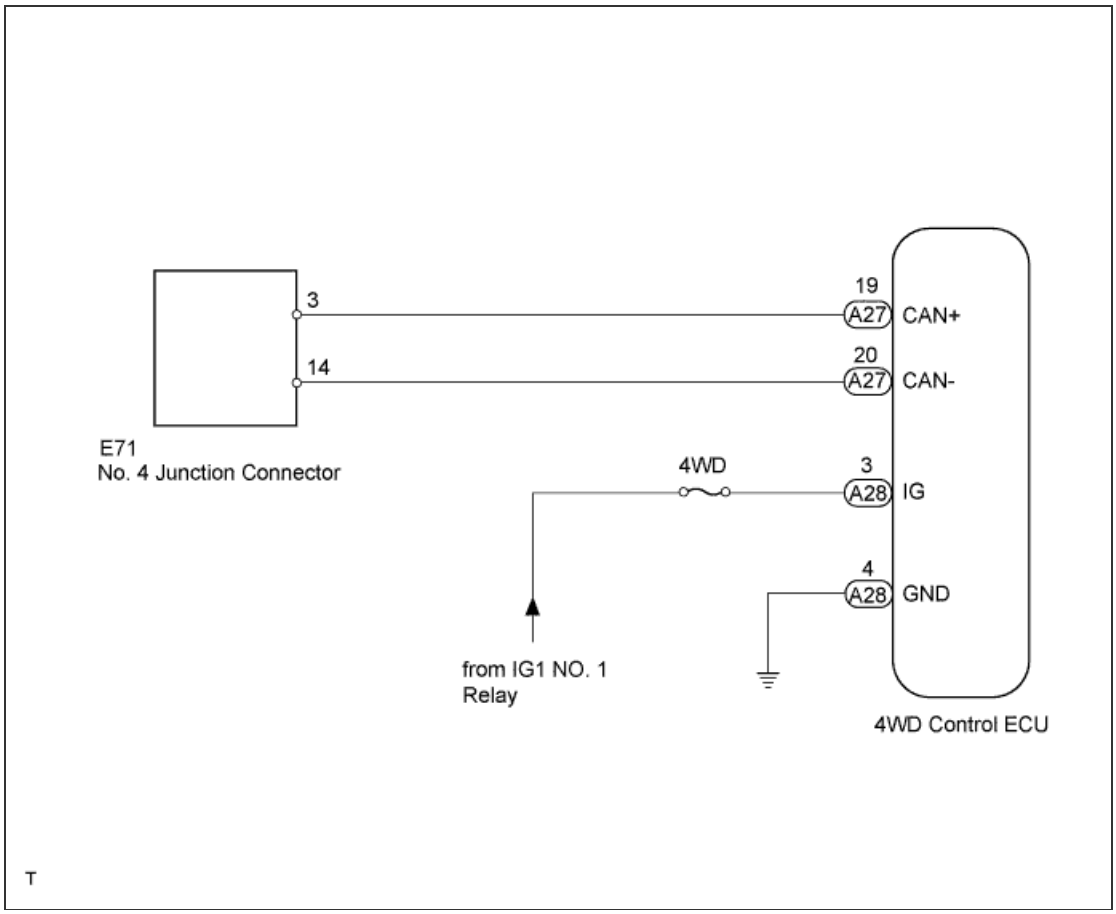
DTC U0114/38 Lost Communication with 4WD Control ECU

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0114/38	There is no communication from the 4WD control ECU.	• Power source circuit of 4WD control ECU • 4WD control ECU • 4WD control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistance of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

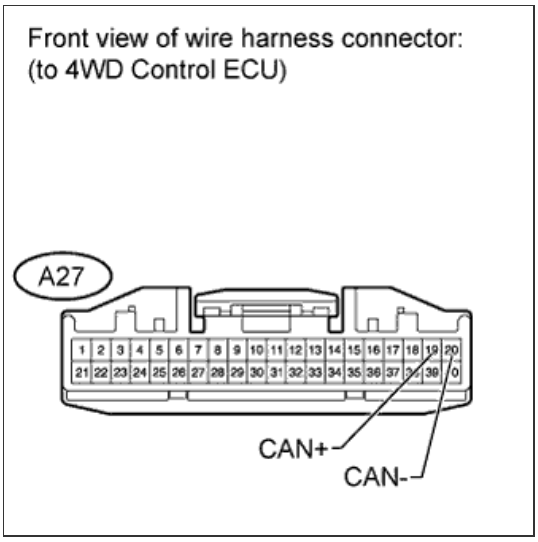
2.CHECK FOR OPEN IN CAN BUS WIRE (4WD CONTROL ECU BRANCH WIRE)

a. Disconnect the A27 4WD control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A27-19 (CAN+) - A27-20 (CAN-)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE 4WD CONTROL ECU BRANCH WIRE OR CONNECTOR (CAN+, CAN-)

OK

3.CHECK HARNESS AND CONNECTOR (4WD CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the A28 4WD control ECU connector.

c. Measure the resistance according to the value(s) in the table below.

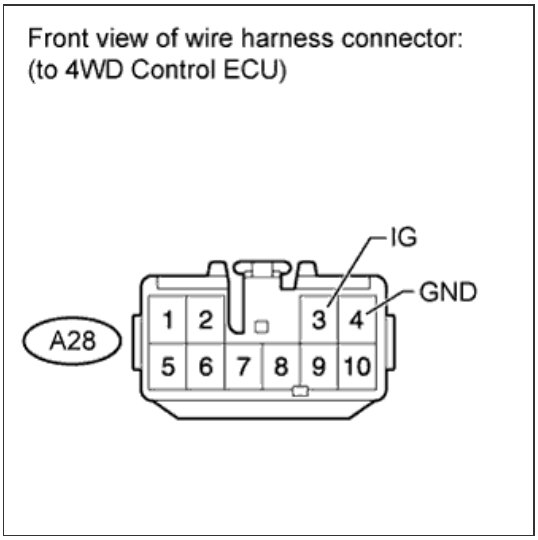
Standard Resistance:

Tester Connection	Condition	Specified Condition
A28-4 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
A28-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE 4WD CONTROL ECU (Click here)

DTC U0230 Lost Communication with Rear Gate Module

for Preparation Click here

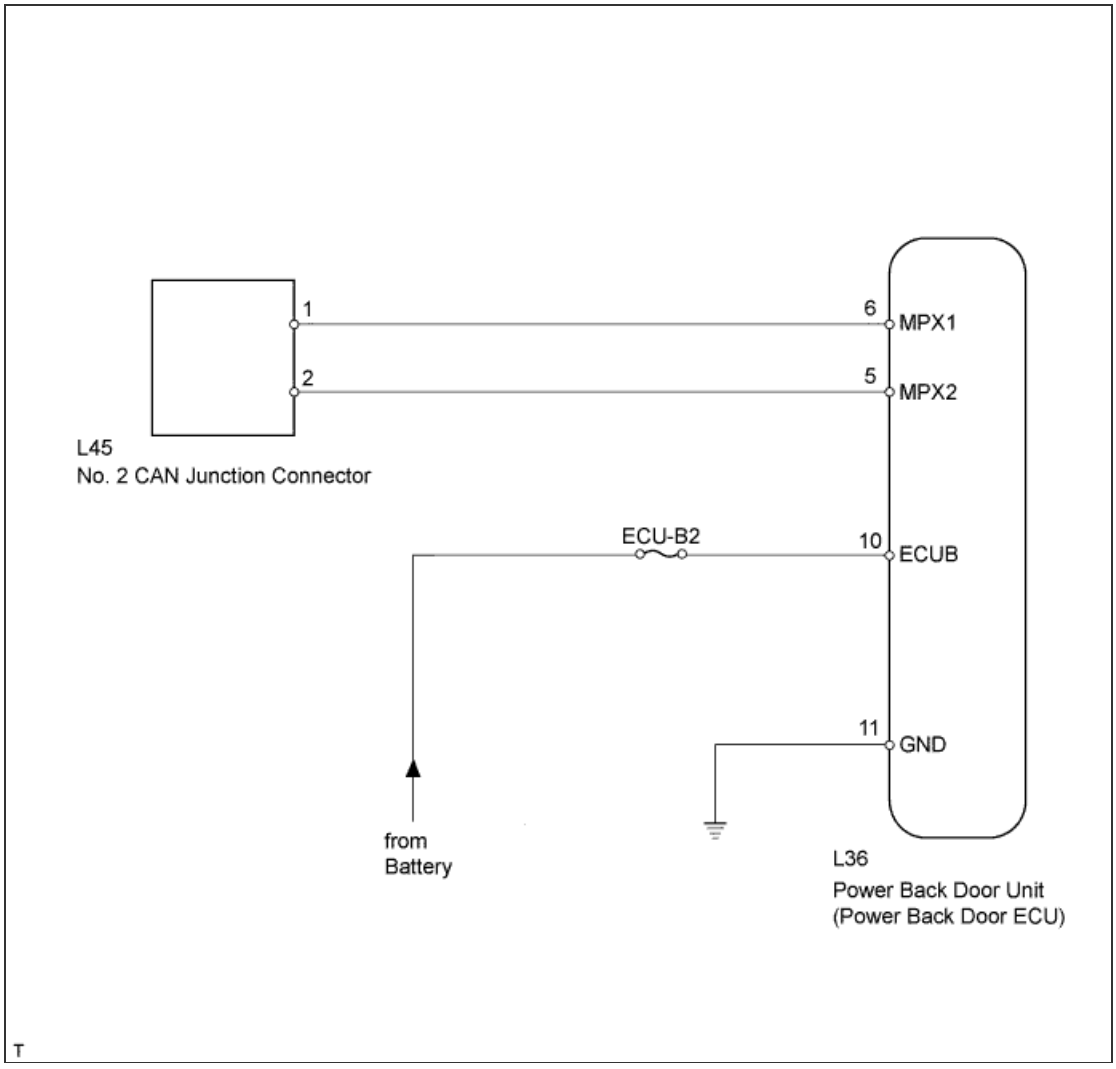
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0230	There is no communication from the power back door unit assembly (power back door ECU).	• Power source circuit of power back door unit assembly (power back door ECU) • Power back door unit assembly (power back door ECU) • Power back door unit assembly (power back door ECU) branch wire or connector

HINT:

For vehicles with the power back door system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

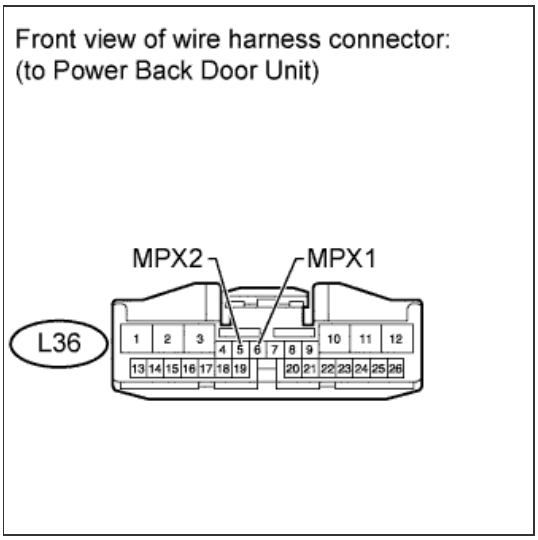
2.CHECK FOR OPEN IN CAN BUS WIRE (POWER BACK DOOR UNIT BRANCH WIRE)

a. Disconnect the L36 power back door unit (power back door ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE POWER BACK DOOR UNIT (POWER BACK DOOR ECU) BRANCH WIRE OR CONNECTOR (MPX1, MPX2)

OK

3.CHECK HARNESS AND CONNECTOR (POWER BACK DOOR UNIT - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the L36 power back door unit (power back door ECU) connector.

c. Measure the resistance according to the value(s) in the table below.

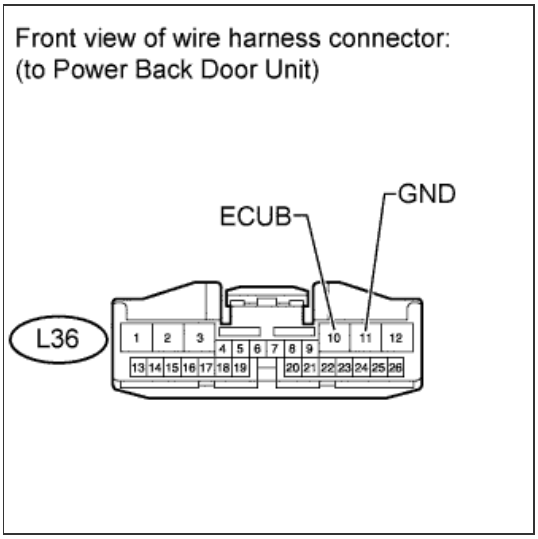
Standard Resistance:

Tester Connection	Condition	Specified Condition
L36-11 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
L36-10 (ECUB) - Body ground	Always	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE POWER BACK DOOR UNIT ASSEMBLY (POWER BACK DOOR ECU) (Click here)

DTC U0122 Lost Communication with Vehicle Dynamics Control Module

DTC U0129 Lost Communication with Brake System Control Module

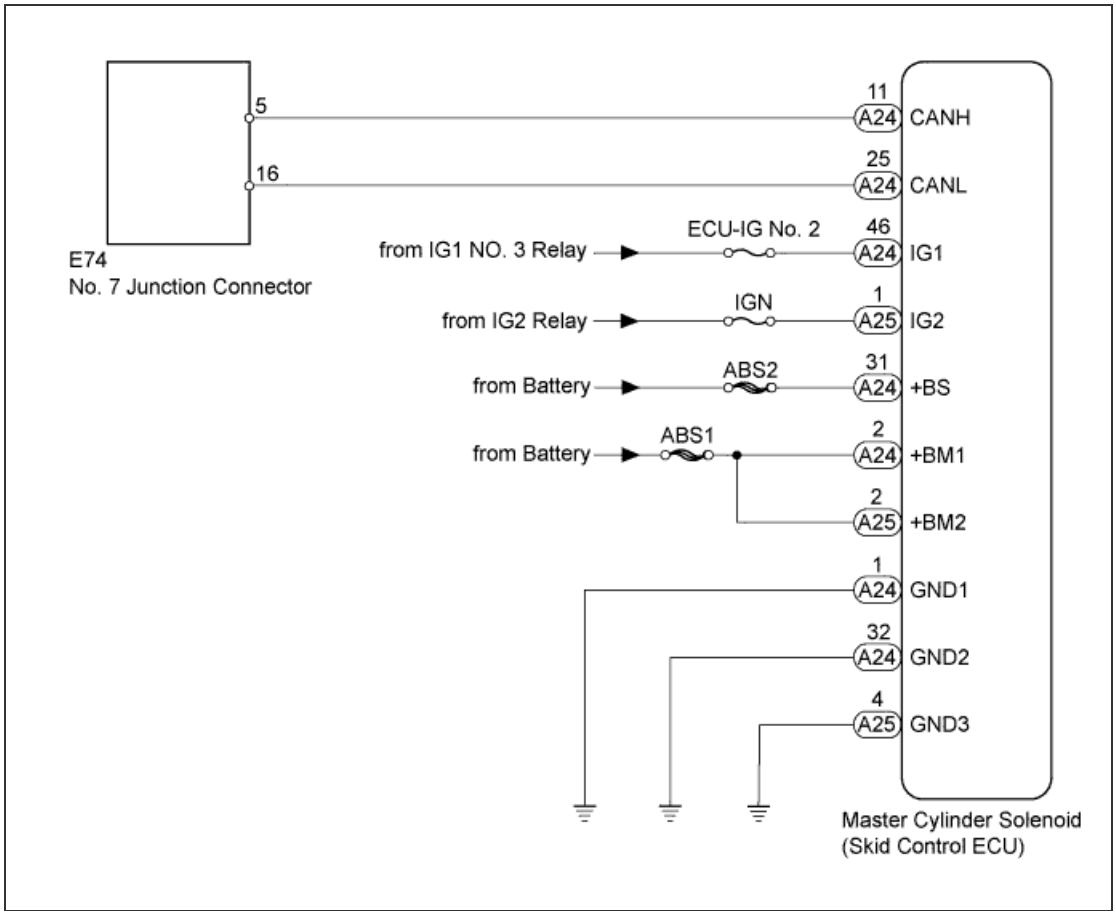
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DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0122	There is no communication from the master cylinder solenoid (skid control ECU).	• Power source circuit of master cylinder solenoid (skid control ECU) • One side of CAN branch wire of other systems • Master cylinder solenoid (skid control ECU) • Master cylinder solenoid (skid control ECU) branch wire or connector
U0129	There is no communication from the master cylinder solenoid (skid control ECU).	• Power source circuit of master cylinder solenoid (skid control ECU) • One side of CAN branch wire of other systems • Master cylinder solenoid (skid control ECU) • Master cylinder solenoid (skid control ECU) branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

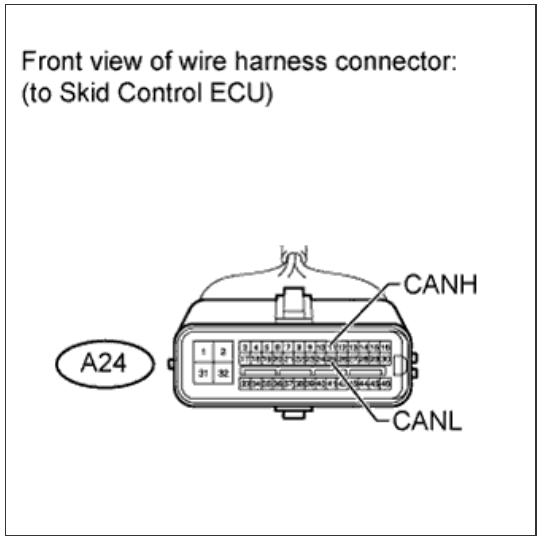
2.CHECK FOR OPEN IN CAN BUS WIRE (SKID CONTROL ECU BRANCH WIRE)

a. Disconnect the A24 master cylinder solenoid (skid control ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE SKID CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SKID CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the A24 and A25 master cylinder solenoid (skid control ECU) connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
A24-1 (GND1) - Body ground	Always	Below 1 Ω
A24-32 (GND2) - Body ground		
A25-4 (GND3) - Body ground		

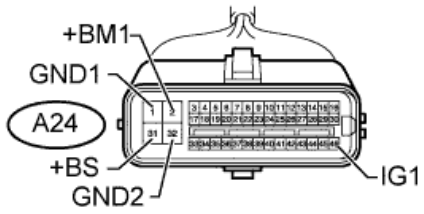
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

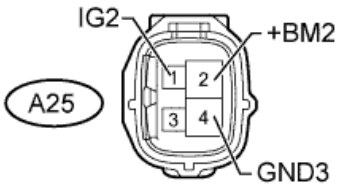
		Specified

Tester Connection	Switch Condition	Condition
A24-2 (+BM1) - Body ground	Always	11 to 14 V
A24-31 (+BS) - Body ground		
A25-2 (+BM2) - Body ground		
A24-46 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V
A25-1 (IG2) - Body ground		

Front view of wire harness connector:
(to Skid Control ECU)



Front view of wire harness connector:
(to Skid Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE MASTER CYLINDER SOLENOID (SKID CONTROL ECU) (Click here)

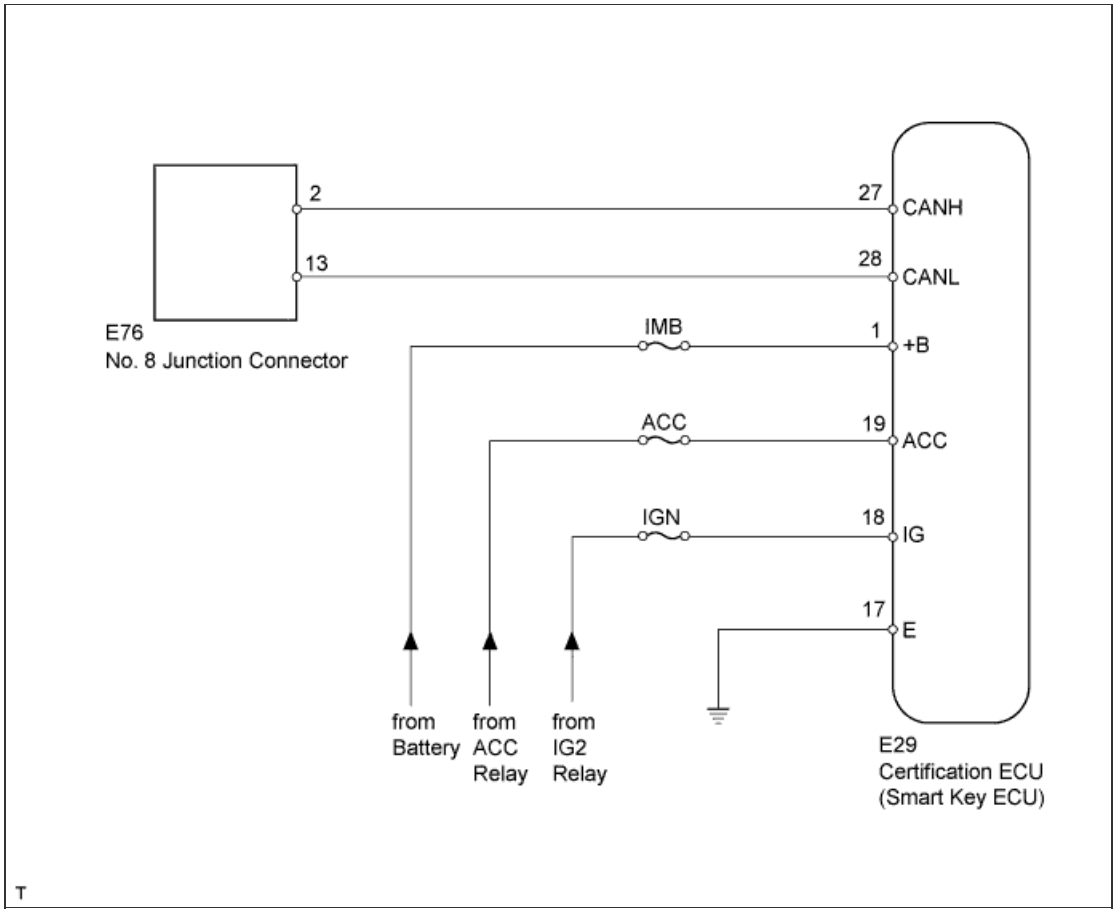
DTC U0327 Software Incompatibility with Vehicle Security Control Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0327	There is no communication from the certification ECU.	• Power source circuit of certification ECU (smart key ECU assembly) • Certification ECU (smart key ECU assembly) • Certification ECU (smart key ECU assembly) branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

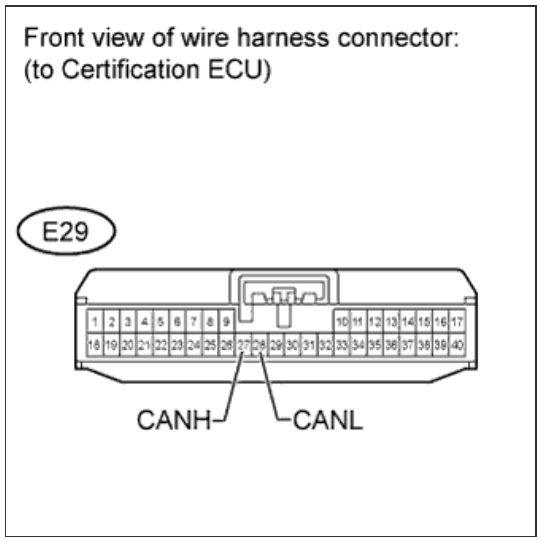
2.CHECK FOR OPEN IN CAN BUS WIRE (CERTIFICATION ECU BRANCH WIRE)

a. Disconnect the E29 certification ECU (smart key ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CERTIFICATION ECU (SMART KEY ECU) BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E29 certification ECU (smart key ECU) connector.

c. Measure the resistance according to the value(s) in the table below.

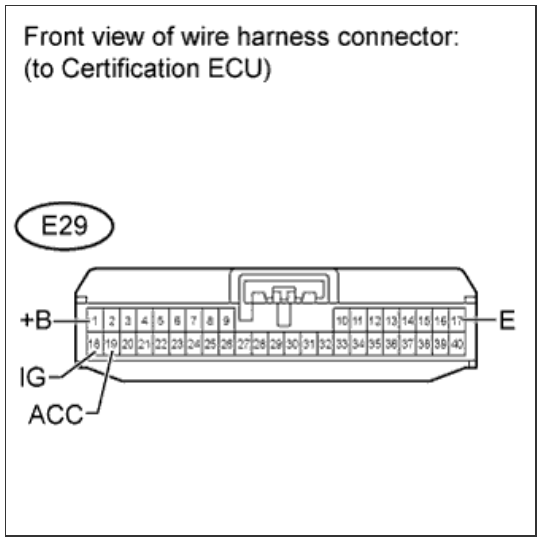
Standard Resistance:

Tester Connection	Condition	Specified Condition
E29-17 (E) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E29-1 (+B) - Body ground	Always	11 to 14 V
E29-19 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V
E29-18 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE CERTIFICATION ECU ASSEMBLY (SMART KEY ECU)

DTC U0122 Lost Communication with Vehicle Dynamics Control Module

DTC U0129 Lost Communication with Brake System Control Module

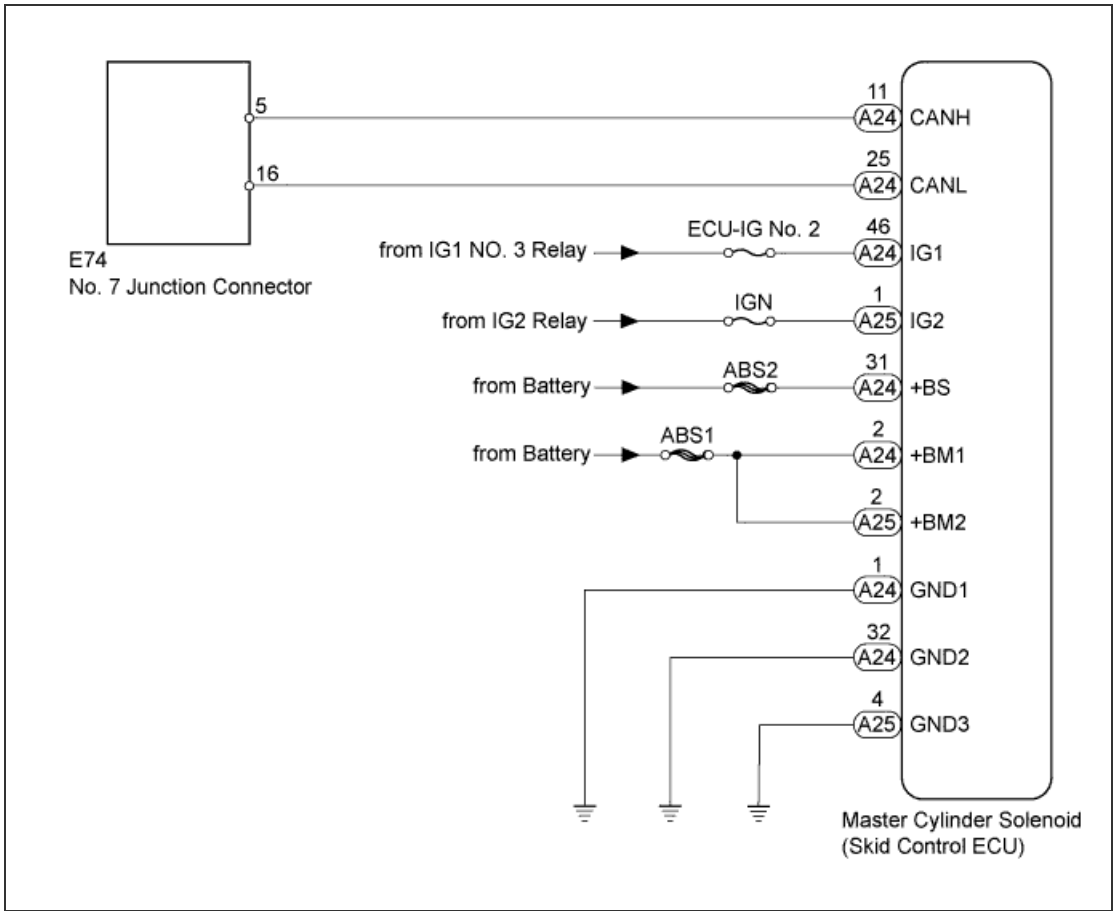
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0122	There is no communication from the master cylinder solenoid (skid control ECU).	• Power source circuit of master cylinder solenoid (skid control ECU) • One side of CAN branch wire of other systems • Master cylinder solenoid (skid control ECU) • Master cylinder solenoid (skid control ECU) branch wire or connector
U0129	There is no communication from the master cylinder solenoid (skid control ECU).	• Power source circuit of master cylinder solenoid (skid control ECU) • One side of CAN branch wire of other systems • Master cylinder solenoid (skid control ECU) • Master cylinder solenoid (skid control ECU) branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

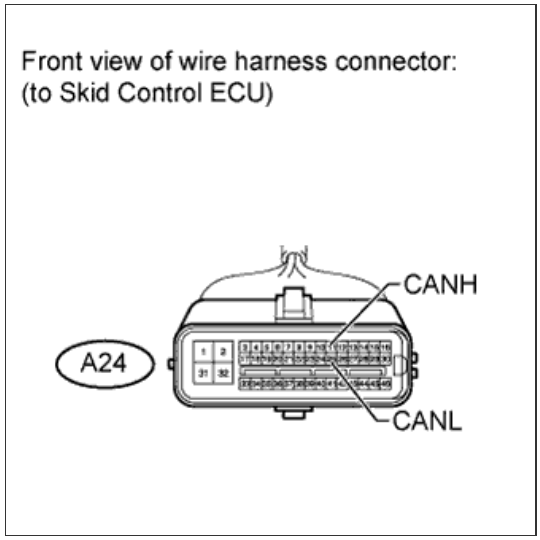
2.CHECK FOR OPEN IN CAN BUS WIRE (SKID CONTROL ECU BRANCH WIRE)

a. Disconnect the A24 master cylinder solenoid (skid control ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE SKID CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SKID CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the A24 and A25 master cylinder solenoid (skid control ECU) connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
A24-1 (GND1) - Body ground	Always	Below 1 Ω
A24-32 (GND2) - Body ground		
A25-4 (GND3) - Body ground		

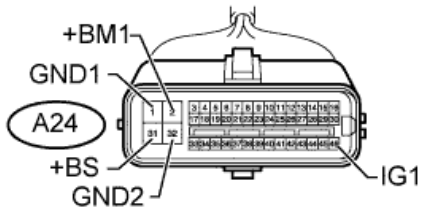
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

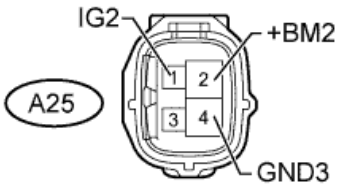
		Specified

Tester Connection	Switch Condition	Condition
A24-2 (+BM1) - Body ground	Always	11 to 14 V
A24-31 (+BS) - Body ground		
A25-2 (+BM2) - Body ground		
A24-46 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V
A25-1 (IG2) - Body ground		

Front view of wire harness connector:
(to Skid Control ECU)



Front view of wire harness connector:
(to Skid Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE MASTER CYLINDER SOLENOID (SKID CONTROL ECU) (Click here)

DTC U1002 (CAN MS BUS) Lost Communication with Gateway Module (Main body ECU)

for Preparation Click here

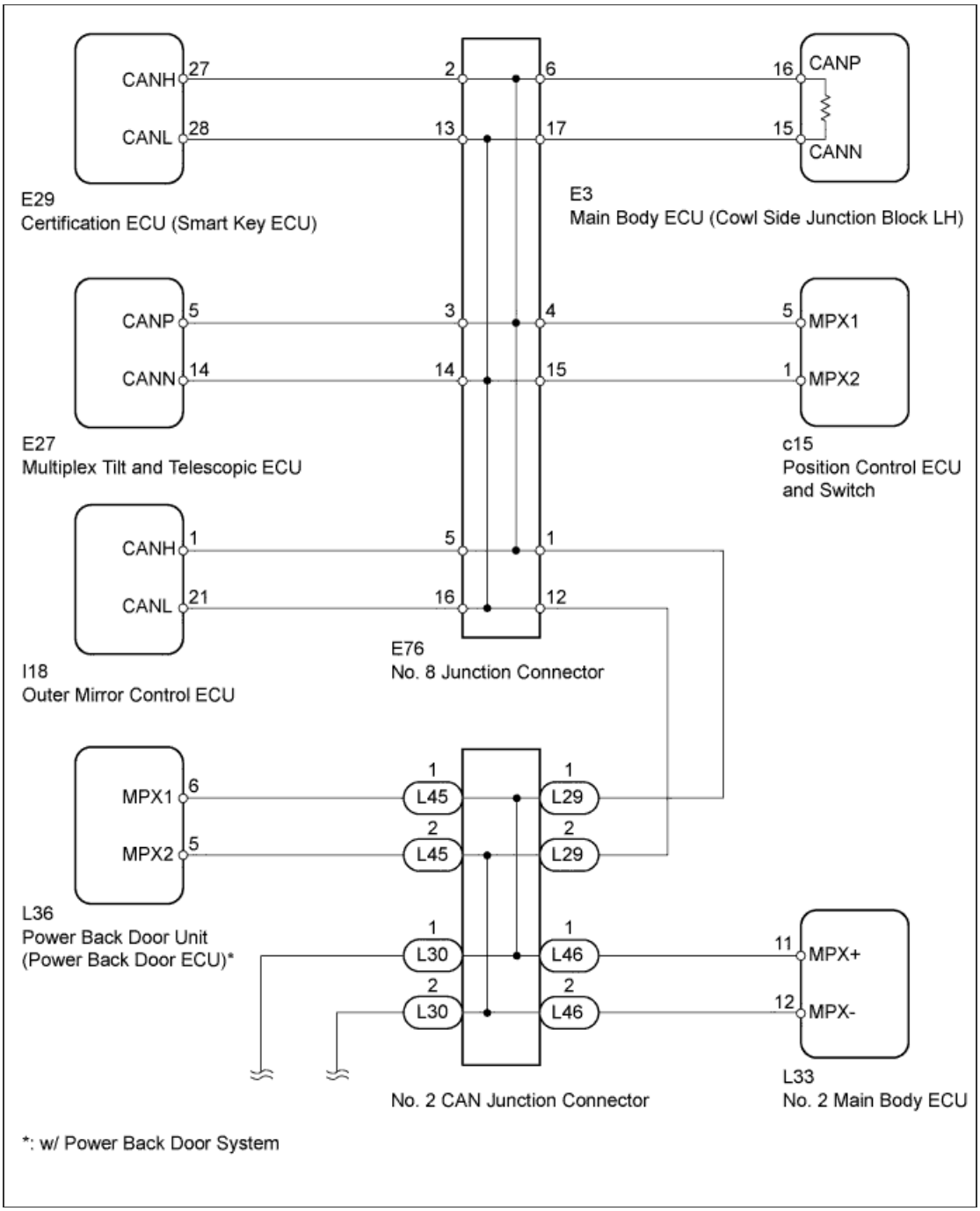
DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (one side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

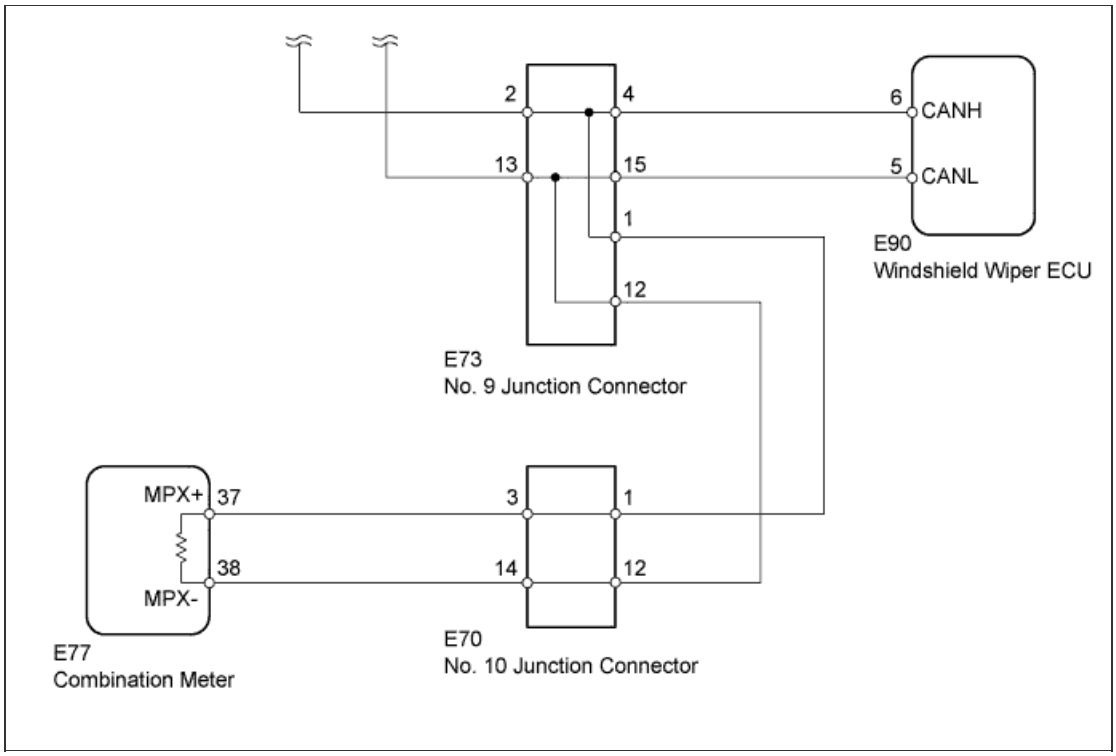
DTC Code	Symptom	Trouble Area
U1002 (CAN MS BUS)	Lost communication with the gateway module (main body ECU).	• MS bus circuit • Certification ECU (smart key ECU assembly) branch wire or connector • Position control ECU and switch branch wire or connector • Outer mirror control ECU branch wire or connector • Multiplex tilt and telescopic ECU branch wire or connector • Power back door unit (power back door ECU) branch wire or connector* • Windshield wiper ECU branch wire or connector • No. 2 main body ECU branch wire or connector • Main body ECU (cowl side junction block LH) main wire or connector • Combination meter main wire or connector • Certification ECU (smart key ECU assembly) • Position control ECU and switch assembly • Outer mirror control ECU assembly • Multiplex tilt and telescopic ECU • Power back door unit assembly (power back door ECU)* • No. 2 main body ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 8 junction connector • No. 9 junction connector • No. 10 junction connector • No. 2 CAN junction connector

*: w/ Power Back Door System

WIRING DIAGRAM



*: w/ Power Back Door System



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

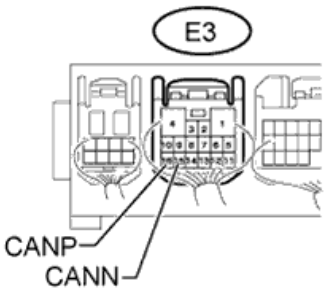
2.CHECK CAN BUS WIRE (MAIN WIRE FOR DISCONNECTION, BUS LINE FOR SHORT CIRCUIT)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Resistance Malfunction
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	54 to 69 Ω	Below 53 Ω: Short in line
			70 Ω or higher: Open in CAN main bus line
E3-16 (CANP) - 2A-1 (ALTB)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E3-15 (CANN) - 2A-1 (ALTB)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E3-16 (CANP) - 2D-62 (GND2)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short
E3-15 (CANN) - 2D-62 (GND2)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short

Component with harness connected:
(Main Body ECU)



T

Result

Result	Proceed to
NG - Open in CAN main bus line	A
NG - Short in line - +B short - Ground short	B
OK	C

B → Go to step 18

C → Go to step 55

A

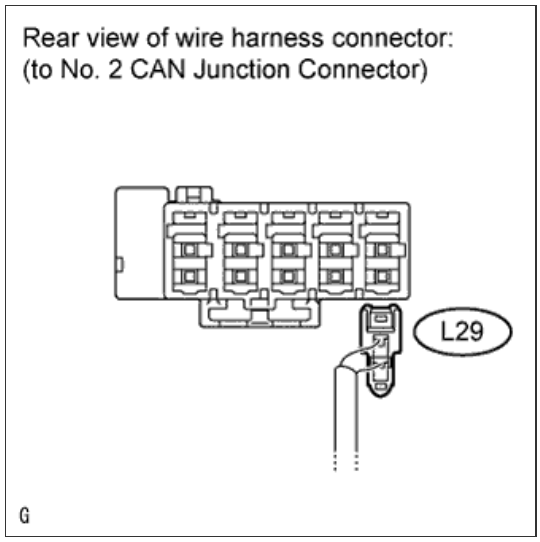
3.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - MAIN BODY ECU)

a. Disconnect the L29 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L29-1 (CANH) - L29-2 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 5

OK

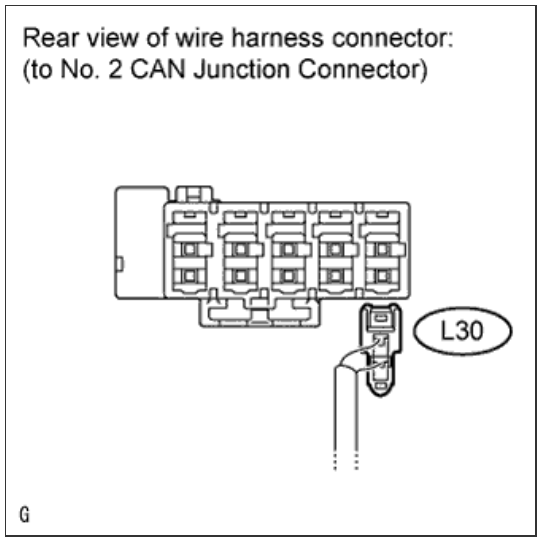
4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - COMBINATION METER)

a. Disconnect the L30 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L30-1 (CANH) - L30-2 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 2 CAN JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the L29 No. 2 CAN junction connector connector.

NEXT

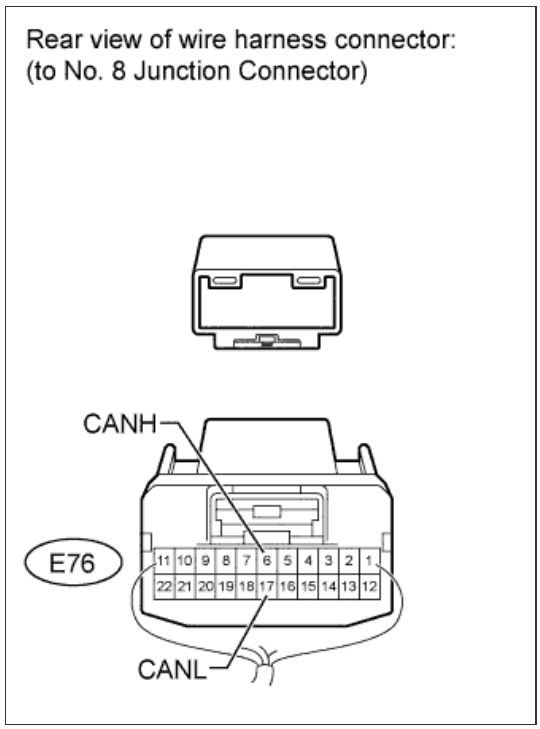
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 8 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Disconnect the E76 No. 8 junction connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E76-6 (CANH) - E76-17 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

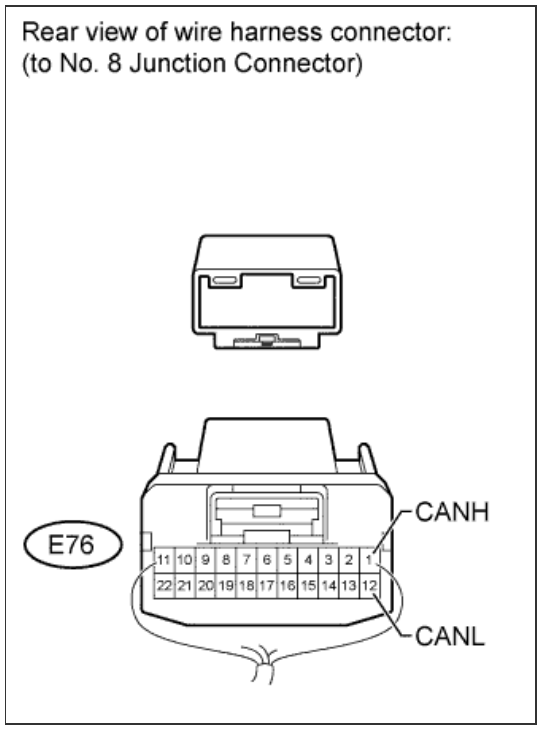
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E76-1 (CANH) - E76-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)

OK

REPAIR OR REPLACE NO. 8 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the E76 No. 8 junction connector connector.

NEXT

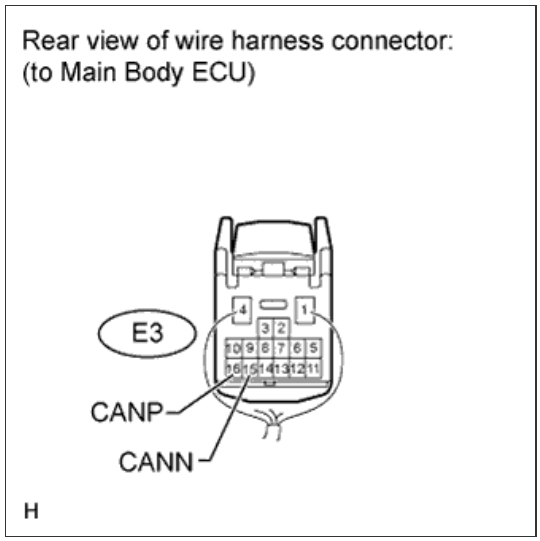
9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (MAIN BODY ECU - NO. 8 JUNCTION CONNECTOR)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (MAIN BODY ECU - NO. 8 JUNCTION CONNECTOR)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CONNECT CONNECTOR

a. Reconnect the L29 and L30 No. 2 CAN junction connector connectors.

NEXT

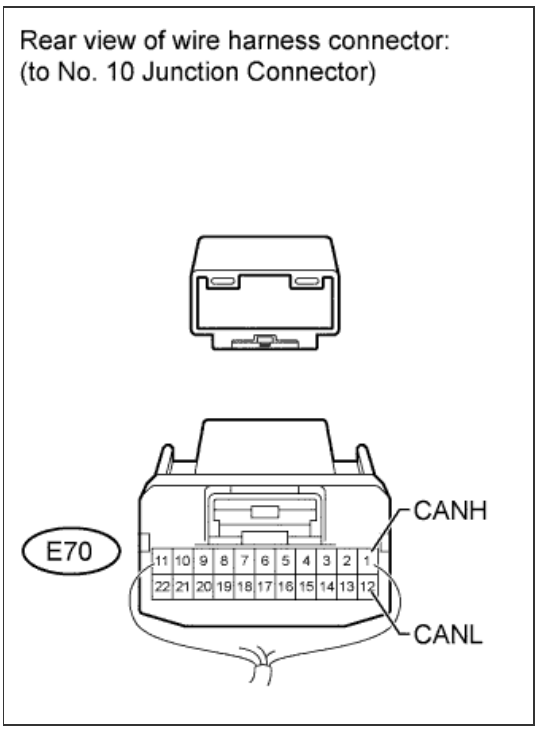
11.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)

a. Disconnect the E70 No. 10 junction connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E70-1 (CANH) - E70-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 15

OK

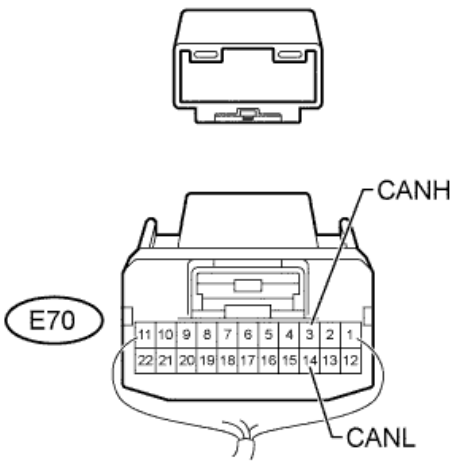
12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 10 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 10 Junction Connector)



NG → Go to step 13

OK

REPAIR OR REPLACE NO. 10 CAN JUNCTION CONNECTOR

13.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT

14.CHECK FOR OPEN IN CAN BUS MAIN WIRE (COMBINATION METER - NO. 10 JUNCTION CONNECTOR)

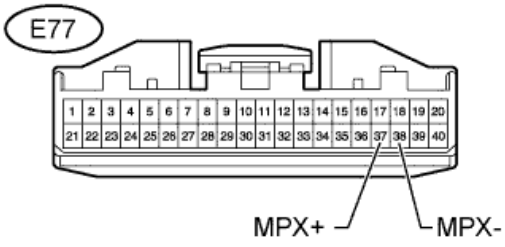
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	108 to 132 Ω

Front view of wire harness connector:
(to Combination Meter)



T

NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (COMBINATION METER - NO. 10 JUNCTION BLOCK)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

15.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT

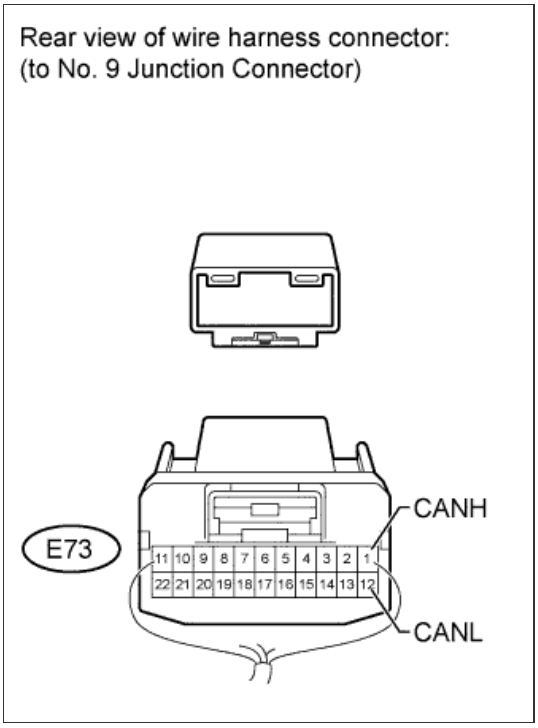
16.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)

a. Disconnect the E73 No. 9 junction connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E73-1 (CANH) - E73-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)

OK

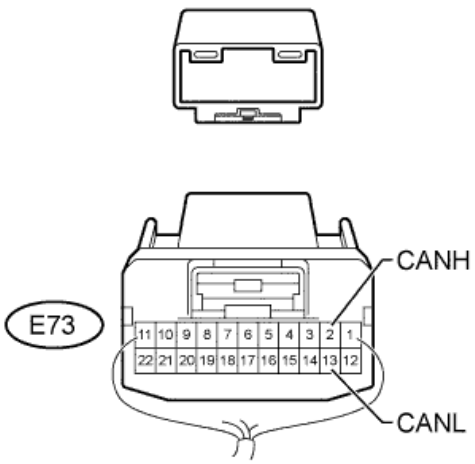
17.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E73-2 (CANH) - E73-13 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 9 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

OK

REPAIR OR REPLACE NO. 9 JUNCTION CONNECTOR

18.CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR SIDE)

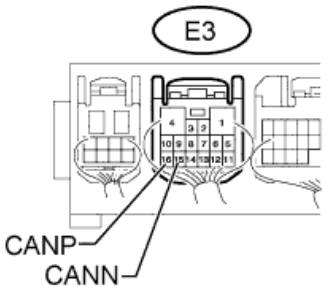
a. Disconnect the E70 No. 10 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

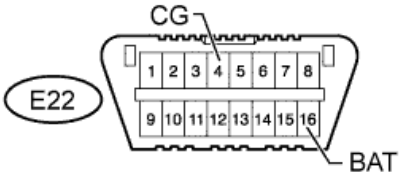
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Main Body ECU)



Front view of DLC3:



T

NG → Go to step 20

OK

19.CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

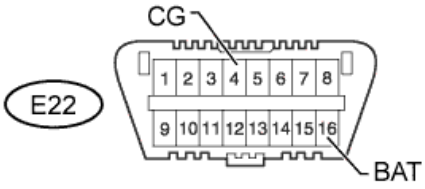
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	Below 1 Ω	NG
E70-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E70-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E70-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E70-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E70-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E70-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 10 Junction Connector)



Front view of DLC3:



NG → Go to step 37

OK

REPAIR OR REPLACE NO. 10 JUNCTION CONNECTOR

20.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT

21.CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

a. Disconnect the E73 No. 9 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

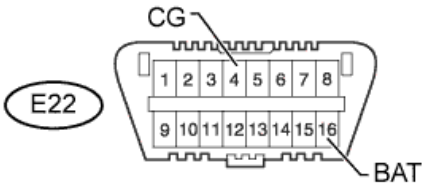
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E73-1 (CANH) - E73-12 (CANL)	Engine switch off	108 to 132 Ω
E73-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E73-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E73-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E73-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Rear view of wire harness connector:
(to No. 9 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 10 JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

OK

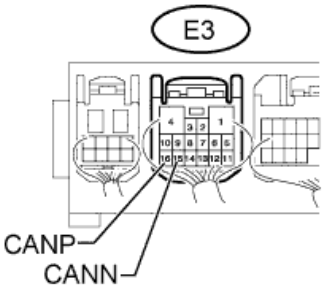
22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

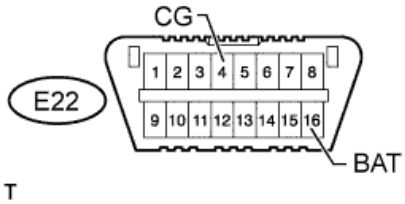
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Main Body ECU)



Front view of DLC3:



T

NG → Go to step 24

OK

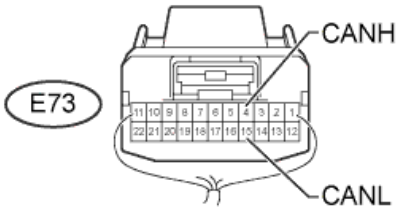
23.CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR - WINDSHIELD WIPER ECU)

a. Measure the resistance according to the value(s) in the table below.

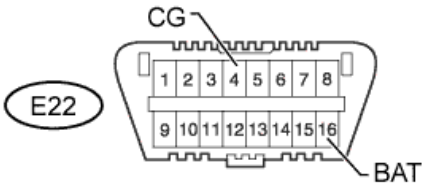
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E73-4 (CANH) - E73-15 (CANL)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E73-15 (CANL)	Engine switch off	Below 1 Ω	NG
E73-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E73-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 9 Junction Connector)



Front view of DLC3:



NG → Go to step 39

OK

REPAIR OR REPLACE NO. 9 JUNCTION CONNECTOR

24.CONNECT CONNECTOR

a. Reconnect the E73 No. 9 junction connector connector.

NEXT

25.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

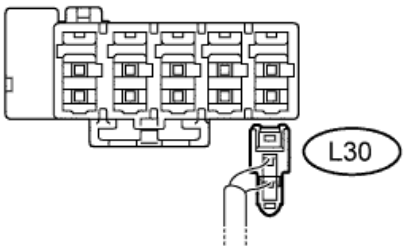
a. Disconnect the L30 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

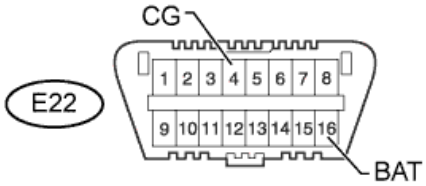
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L30-1 (CANH) - L30-2 (CANL)	Engine switch off	108 to 132 Ω
L30-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
L30-2 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
L30-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
L30-2 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Rear view of wire harness connector:
(to No. 2 CAN Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

OK

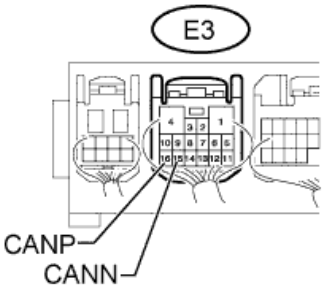
26.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

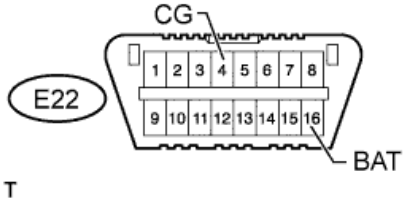
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Main Body ECU)



Front view of DLC3:



T

NG → Go to step 30

OK

Go to step 28

27.CONNECT CONNECTOR

a. Reconnect the E73 No. 9 junction connector connector.

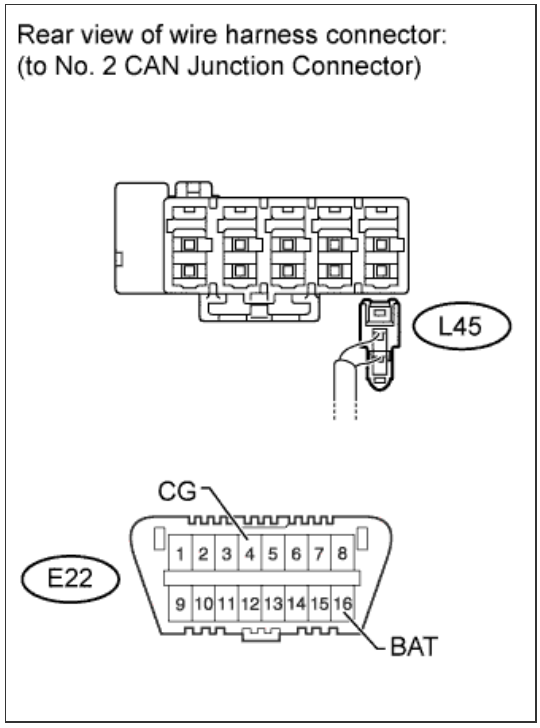
NEXT

28.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - POWER BACK DOOR UNIT)

NOTICE:

For vehicles without the power back door system, go to "Check for Short in CAN Bus Wires (No. 2 CAN Junction Connector - No. 2 Main Body ECU)".

a. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
L45-1 (CANH) - L45-2 (CANL)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - L45-2 (CANL)	Engine switch off	Below 1 Ω	NG
L45-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L45-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L45-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L45-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L45-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L45-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → Go to step 41

OK

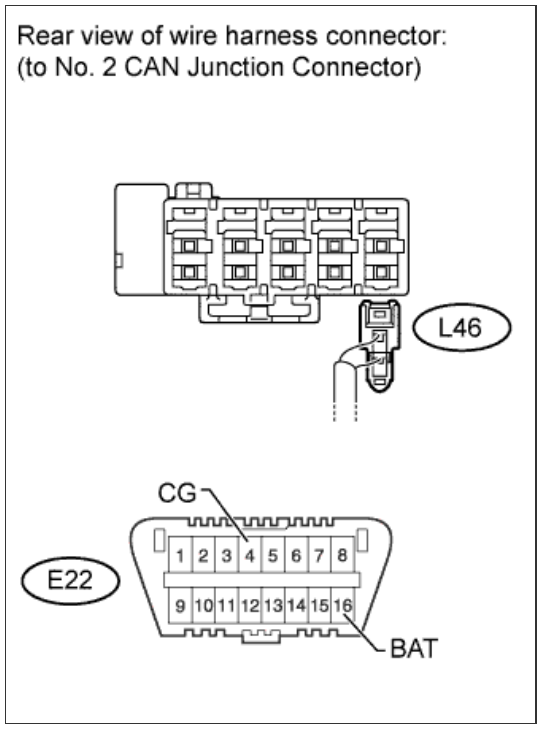
29.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 2 MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
L46-1 (CANH) - L46-2 (CANL)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - L46-2 (CANL)	Engine switch off	Below 1 Ω	NG
L46-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L46-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L46-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L46-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L46-2 (CANL) - E22-16	Engine switch		

(BAT)	off	1 Ω or higher	OK
L46-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L46-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 43

OK

REPLACE NO. 2 CAN JUNCTION CONNECTOR

30.CONNECT CONNECTOR

a. Reconnect the L29 and L30 No. 2 CAN junction connector connectors.

NEXT

Go to step 32

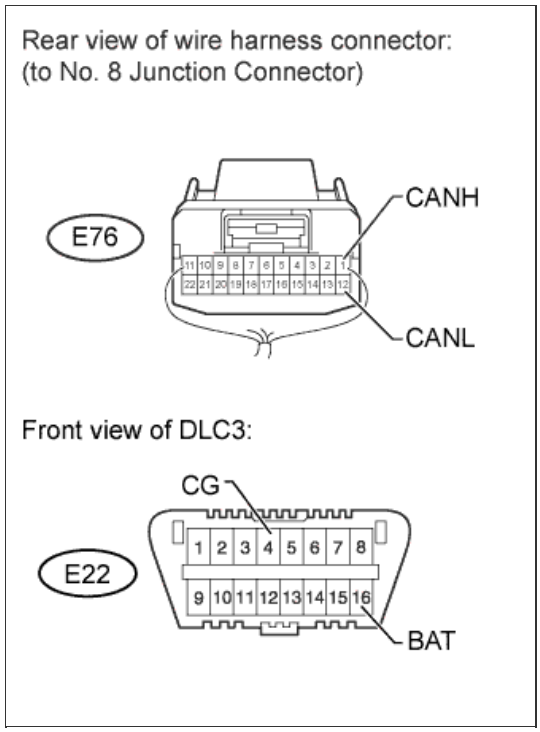
31.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 8 JUNCTION CONNECTOR)

a. Disconnect the E76 No. 8 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E76-1 (CANH) - E76-12 (CANL)	Engine switch off	108 to 132 Ω
E76-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E76-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E76-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E76-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)

OK

Go to step 27

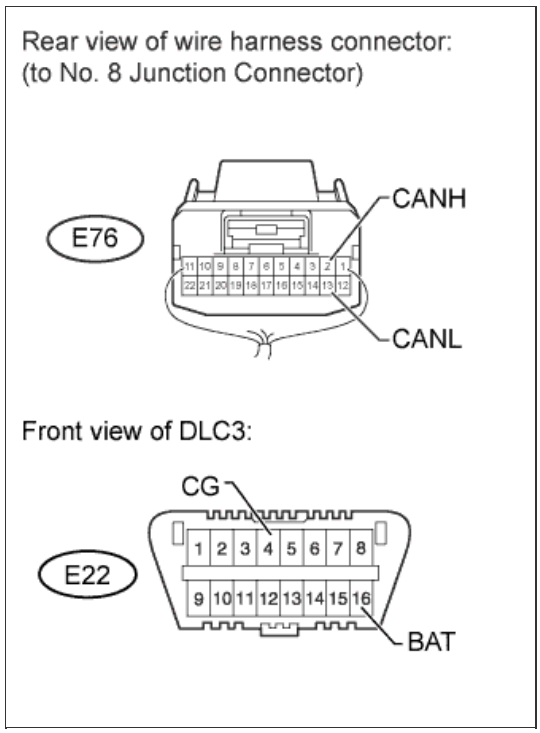
32.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - CERTIFICATION ECU)

a. Disconnect the E76 No. 8 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-2 (CANH) - E76-13 (CANL)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E76-13 (CANL)	Engine switch off	Below 1 Ω	NG
E76-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 45

OK

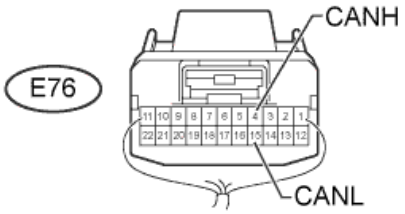
33.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - POSITION CONTROL ECU AND SWITCH)

a. Measure the resistance according to the value(s) in the table below.

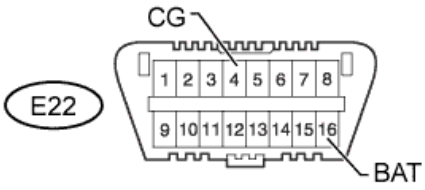
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-4 (CANH) - E76-15 (CANL)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E76-15 (CANL)	Engine switch off	Below 1 Ω	NG
E76-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 8 Junction Connector)



Front view of DLC3:



NG → Go to step 47

OK

34.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - MULTIPLEX TILT AND TELESCOPIC ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

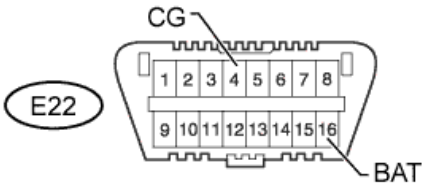
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-3 (CANH) - E76-14 (CANL)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E76-14 (CANL)	Engine switch off	Below 1 Ω	NG
E76-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

E76-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 8 Junction Connector)



Front view of DLC3:



NG → Go to step 49

OK

35.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - OUTER MIRROR CONTROL ECU)

a. Measure the resistance according to the value(s) in the table below.

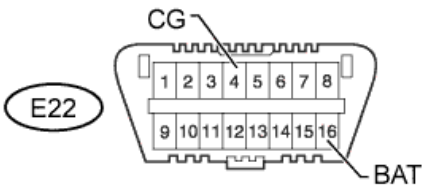
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-5 (CANH) - E76-16 (CANL)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E76-16 (CANL)	Engine switch off	Below 1 Ω	NG
E76-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 8 Junction Connector)



Front view of DLC3:



NG → Go to step 51

OK

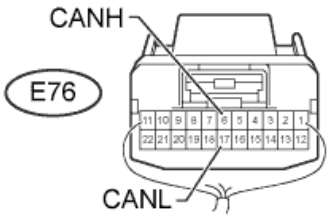
36.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

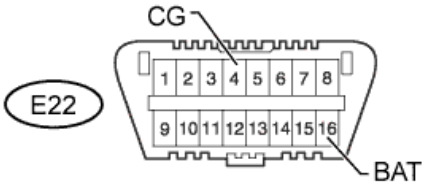
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-6 (CANH) - E76-17 (CANL)	Engine switch off	1 Ω or higher	OK
E76-6 (CANH) - E76-17 (CANL)	Engine switch off	Below 1 Ω	NG
E76-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-17 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-17 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-17 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-17 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 8 Junction Connector)



Front view of DLC3:



NG → Go to step 53

OK

REPAIR OR REPLACE NO. 8 JUNCTION CONNECTOR

37.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT

38.CHECK FOR SHORT IN CAN BUS WIRES (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

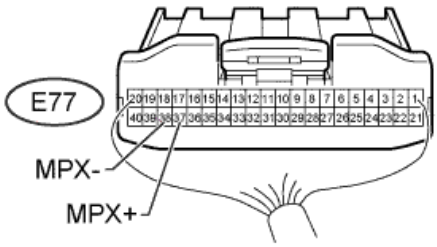
b. Measure the resistance according to the value(s) in the table below.

Result

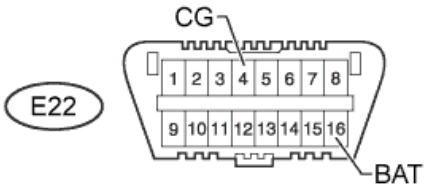
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	Below 1 Ω	NG
E77-37 (MPX+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E77-38 (MPX-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E77-38 (MPX-) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E77-37 (MPX+) - E22-	Engine	1 Ω or higher	OK

16 (BAT)	switch off		
E77-38 (MPX-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E77-38 (MPX-) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to Combination Meter)



Front view of DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (MPX+, MPX-)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

39.CONNECT CONNECTOR

a. Reconnect the E73 No. 9 junction connector connector.

NEXT

40.CHECK FOR SHORT IN CAN BUS WIRES (WINDSHIELD WIPER ECU)

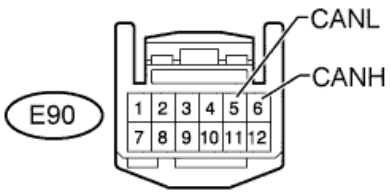
a. Disconnect the E90 windshield wiper ECU connector.

b. Measure the resistance according to the value(s) in the table below.

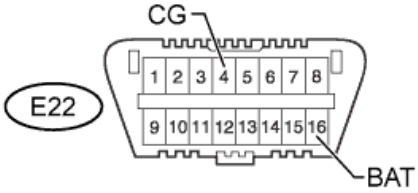
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	Below 1 Ω	NG
E90-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E90-5 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E90-5 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E90-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E90-5 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Windshield Wiper ECU)



Front view of DLC3:



E90-5 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO WINDSHIELD WIPER ECU (CANH, CANL)

OK

REPLACE WINDSHIELD WIPER ECU (Click here)

41.CONNECT CONNECTOR

a. Reconnect the E73 No. 9 junction connector connector.

NEXT

42.CHECK FOR SHORT IN CAN BUS WIRES (POWER BACK DOOR UNIT)

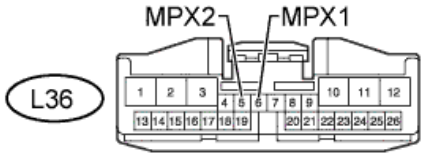
a. Disconnect the L36 power back door unit (power back door ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

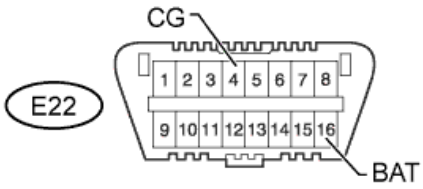
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	Below 1 Ω	NG
L36-6 (MPX1) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L36-5 (MPX2) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L36-5 (MPX2) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L36-6 (MPX1) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L36-5 (MPX2) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L36-5 (MPX2) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector: (to Power Back Door Unit)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO POWER BACK DOOR UNIT (POWER BACK DOOR ECU) (MPX1, MPX2)

OK

REPLACE POWER BACK DOOR UNIT ASSEMBLY (POWER BACK DOOR ECU) (Click here)

43.CONNECT CONNECTOR

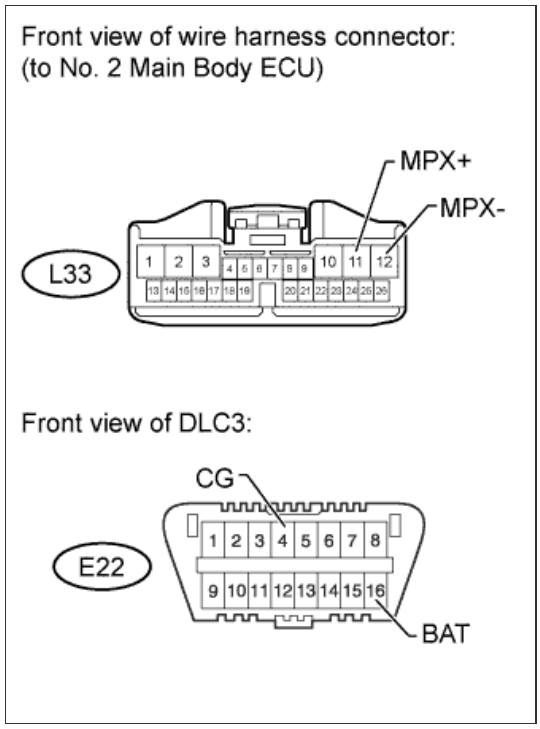
a. Reconnect the E73 No. 9 junction connector connector.

NEXT

44.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 MAIN BODY ECU)

a. Disconnect the L33 No. 2 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	Below 1 Ω	NG
L33-11 (MPX+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L33-12 (MPX-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L33-12 (MPX-) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L33-11 (MPX+) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L33-12 (MPX-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L33-12 (MPX-) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NO. 2 MAIN BODY ECU (MPX+, MPX-)

OK

REPLACE NO. 2 MAIN BODY ECU (Click here)

45.CONNECT CONNECTOR

a. Reconnect the E76 No. 8 junction connector connector.

NEXT

46.CHECK FOR SHORT IN CAN BUS WIRES (CERTIFICATION ECU (SMART KEY ECU ASSEMBLY))

a. Disconnect the E29 certification ECU (smart key ECU) connector.

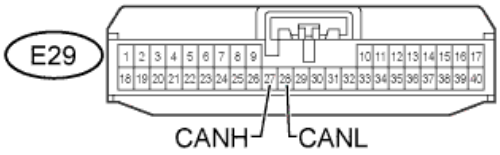
b. Measure the resistance according to the value(s) in the table below.

Result

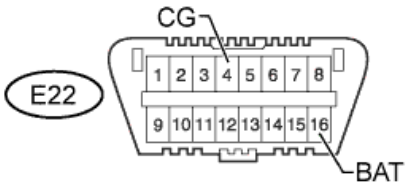
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	Below 1 Ω	NG
E29-27 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E29-28 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E29-28 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E29-27 (CANH) - E22-	Engine		

16 (BAT)	switch off	1 Ω or higher	OK
E29-28 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E29-28 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Certification ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) (CANH, CANL)

OK → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

47.CONNECT CONNECTOR

a. Reconnect the E76 No. 8 junction connector connector.

NEXT

48.CHECK FOR SHORT IN CAN BUS WIRES (POSITION CONTROL ECU AND SWITCH)

a. Disconnect the c15 position control ECU and switch connector.

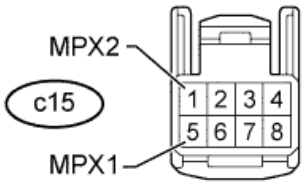
b. Measure the resistance according to the value(s) in the table below.

Result

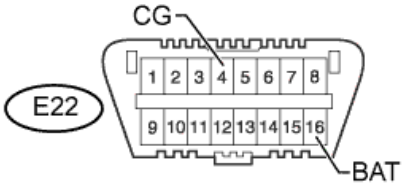
Tester Connection	Switch Condition	Measured Resistance	Proceed to
c15-5 (MPX1) - c15-1 (MPX2)	Engine switch off	1 Ω or higher	OK
c15-5 (MPX1) - c15-1 (MPX2)	Engine switch off	Below 1 Ω	NG
c15-5 (MPX1) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
c15-1 (MPX2) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
c15-5 (MPX1) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
c15-1 (MPX2) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
c15-5 (MPX1) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
c15-1 (MPX2) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
c15-5 (MPX1) - E22-	Engine		

16 (BAT)	switch off	Below 1 Ω	NG
c15-1 (MPX2) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Position Control ECU and Switch)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO POSITION CONTROL ECU AND SWITCH (MPX1, MPX2)

OK

REPLACE POSITION CONTROL ECU AND SWITCH ASSEMBLY (Click here)

49.CONNECT CONNECTOR

a. Reconnect the E76 No. 8 junction connector connector.

NEXT

50.CHECK FOR SHORT IN CAN BUS WIRES (MULTIPLEX TILT AND TELESCOPIC ECU)

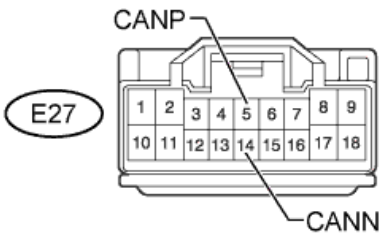
a. Disconnect the E27 multiplex tilt and telescopic ECU connector.

b. Measure the resistance according to the value(s) in the table below.

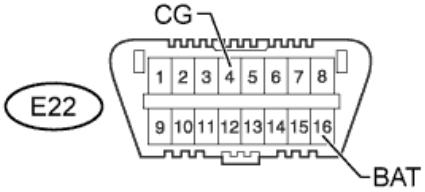
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	Below 1 Ω	NG
E27-5 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E27-14 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E27-14 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E27-5 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E27-14 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Multiplex Tilt and Telescopic ECU)



Front view of DLC3:



E27-14 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MULTIPLEX TILT AND TELESCOPIC ECU (CANP, CANN)

OK

REPLACE MULTIPLEX TILT AND TELESCOPIC ECU (Click here)

51.CONNECT CONNECTOR

a. Reconnect the E76 No. 8 junction connector connector.

NEXT

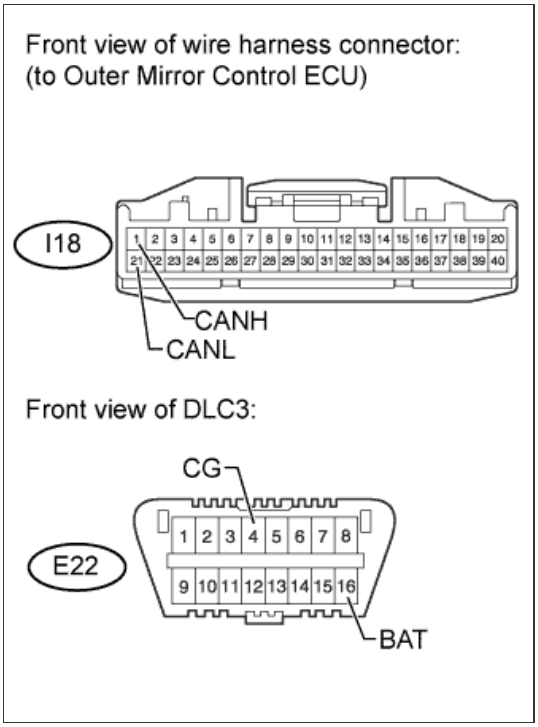
52.CHECK FOR SHORT IN CAN BUS WIRES (OUTER MIRROR CONTROL ECU)

a. Disconnect the I18 outer mirror control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
I18-1 (CANH) - I18-21 (CANL)	Engine switch off	1 Ω or higher	OK
I18-1 (CANH) - I18-21 (CANL)	Engine switch off	Below 1 Ω	NG
I18-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
I18-21 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
I18-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
I18-21 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
I18-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
I18-21 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
I18-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
I18-21 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO OUTER MIRROR CONTROL ECU (CANH, CANL)

OK

REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY (Click here)

53.CONNECT CONNECTOR

a. Reconnect the E76 No. 8 junction connector connector.

NEXT

54.CHECK FOR SHORT IN CAN BUS WIRES (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

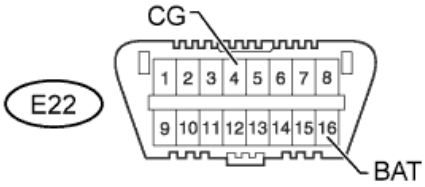
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	Below 1 Ω	NG
E3-16 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E3-15 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E3-15 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to Main Body ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANP, CANN)

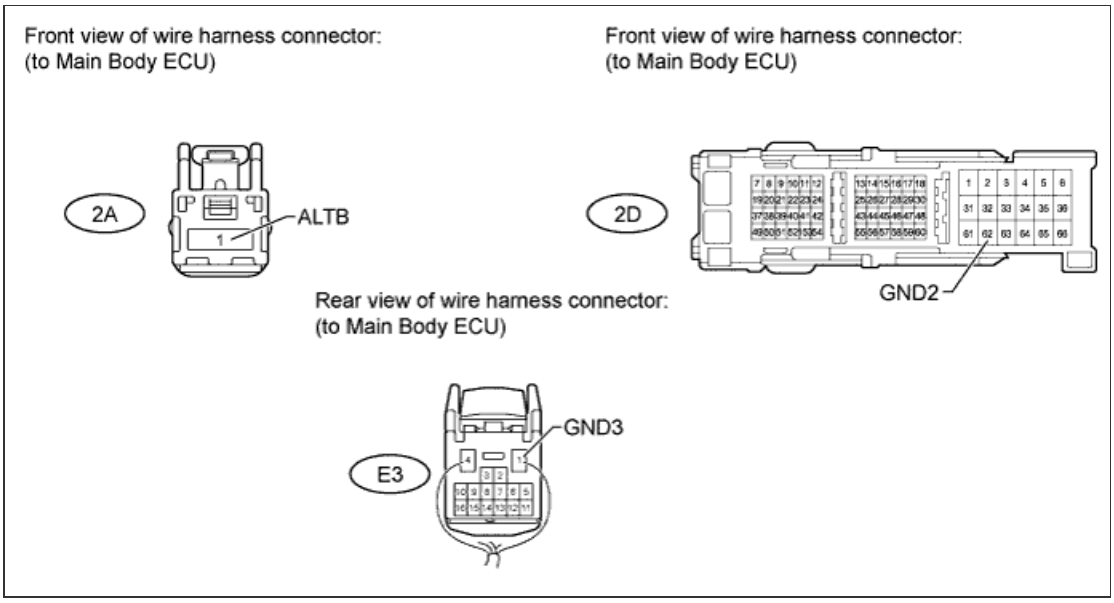
OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

55.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).



b. Disconnect the 2A, 2D and E3 main body ECU (cowl side junction block LH) connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
2D-62 (GND2) - Body ground	Always	Below 1 Ω
E3-1 (GND3) - Body ground		

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
2A-1 (ALTB) - Body ground	Always	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

DTC U0123 Lost Communication with Yaw Rate Sensor Module

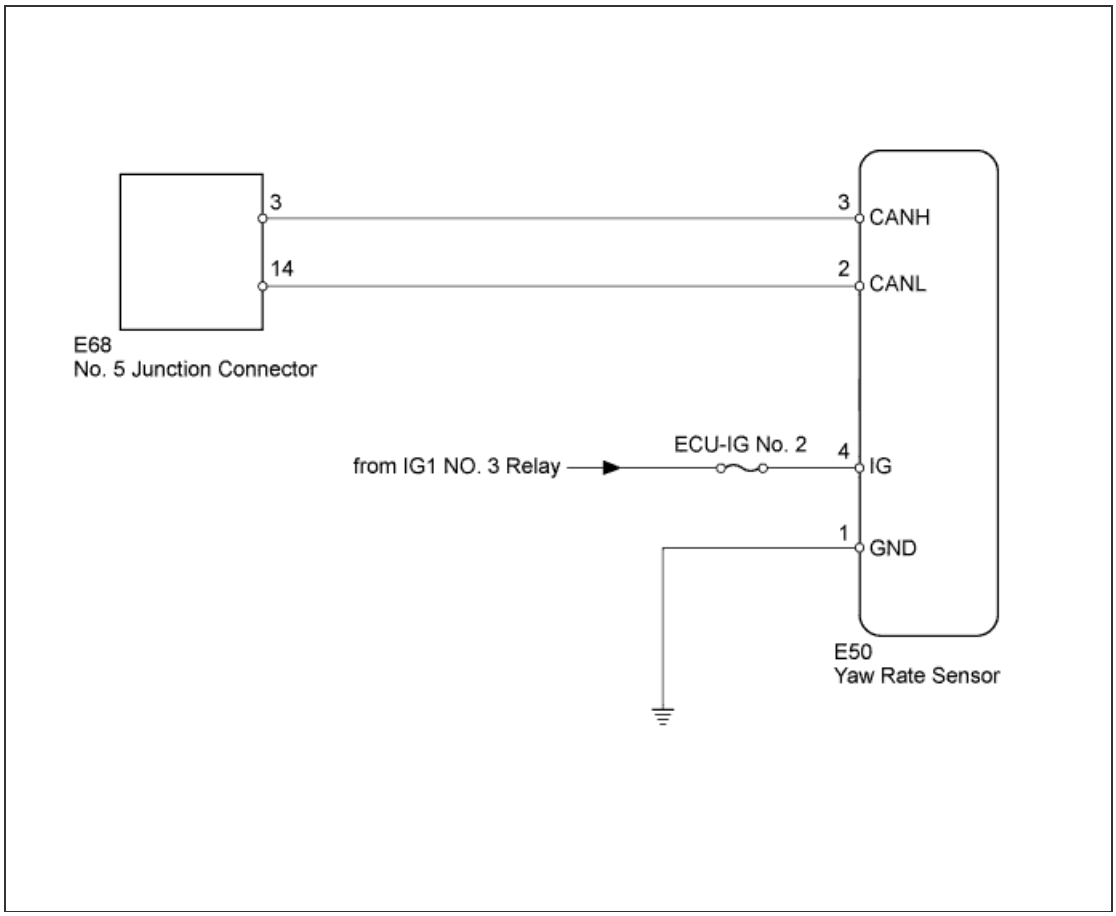
DTC U0124 Lost Communication with Lateral Acceleration Sensor Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0123	There is no communication from the yaw rate sensor.	• Power source circuit of yaw rate sensor assembly • Yaw rate sensor assembly • Yaw rate sensor branch wire or connector
U0124	There is no communication from the yaw rate sensor (lateral acceleration sensor).	• Power source circuit of yaw rate sensor assembly • Yaw rate sensor assembly • Yaw rate sensor branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

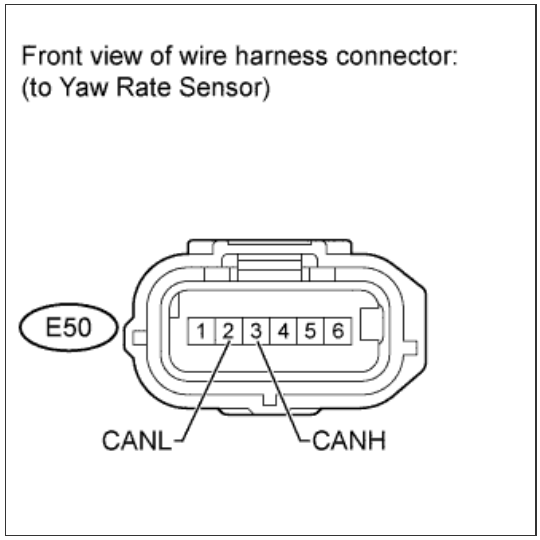
2.CHECK FOR OPEN IN CAN BUS WIRE (YAW RATE SENSOR BRANCH WIRE)

a. Disconnect the E50 yaw rate sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE YAW RATE SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (YAW RATE SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E50 yaw rate sensor connector.

c. Measure the resistance according to the value(s) in the table below.

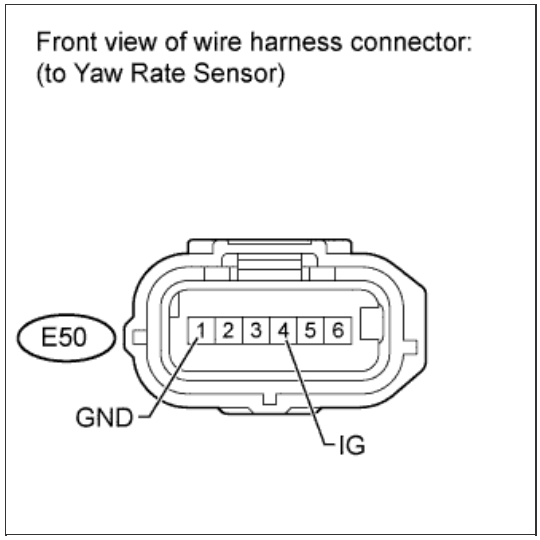
Standard Resistance:

Tester Connection	Condition	Specified Condition
E50-1 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E50-4 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE YAW RATE SENSOR ASSEMBLY (Click here)

DTC U1002 (CAN No. 2 BUS) Lost Communication with Gateway Module (Network Gateway ECU)

for Preparation Click here

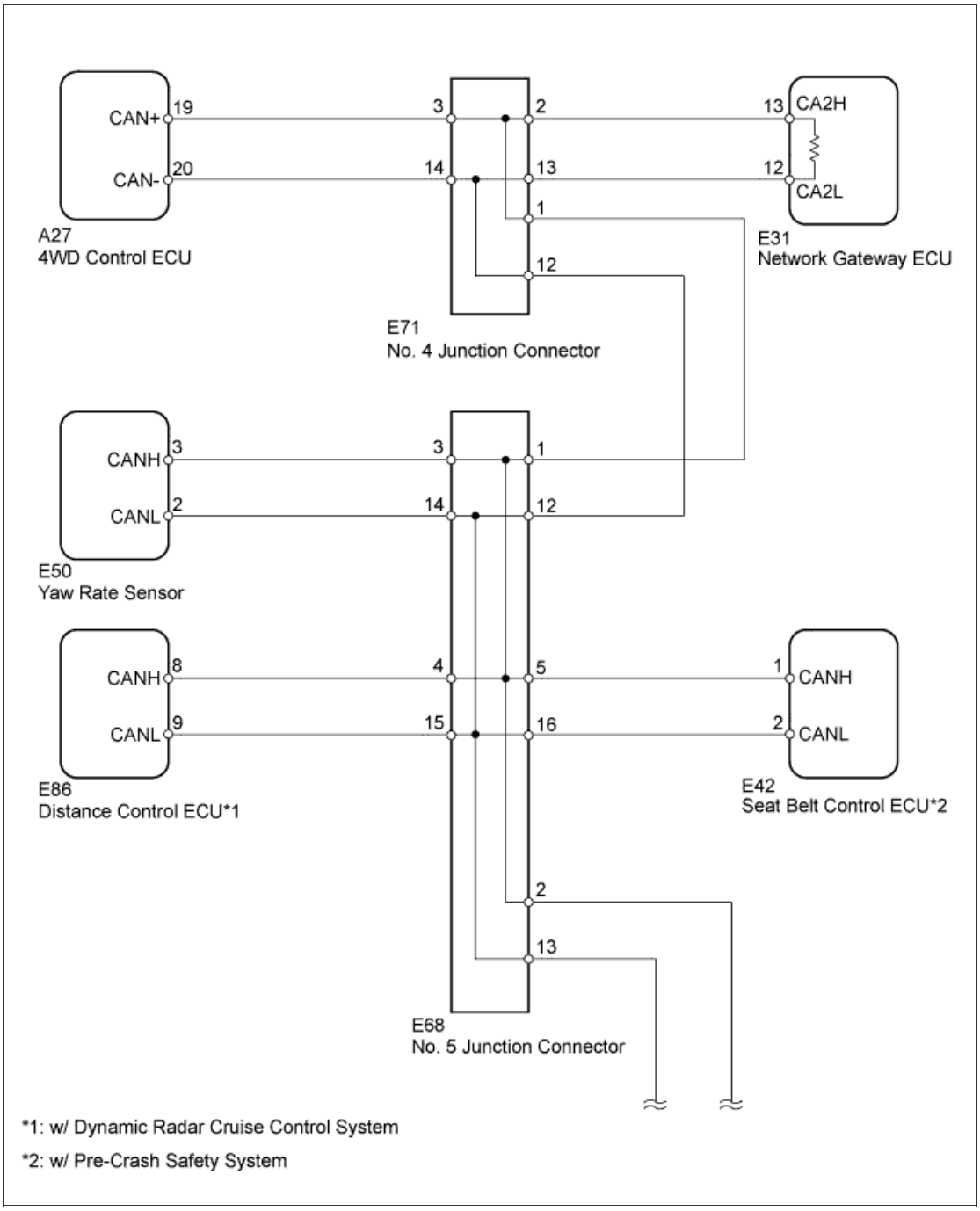
DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (one side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	Symptoms	Trouble Area
U1002 (CAN No. 2 BUS)	Lost communication with the gateway module (network gateway ECU).	• Movement control bus circuit • 4WD control ECU branch wire or connector • Yaw rate sensor branch wire or connector • Seat belt control ECU branch wire or connector*4 • Distance control ECU branch wire or connector*1 • Clearance warning ECU branch wire or connector*2 • Parking assist ECU branch wire or connector*3 • Master cylinder solenoid (skid control ECU) branch wire or connector • Steering angle sensor branch wire or connector • Network gateway ECU main wire or connector • Suspension control ECU branch wire or connector • Steering control ECU branch wire or connector • 4WD control ECU • Yaw rate sensor • Seat belt control ECU*4 • Distance control ECU*1 • Clearance warning ECU*2 • Parking assist ECU*3 • Master cylinder solenoid (skid control ECU) • Steering angle sensor • Suspension control ECU • Steering control ECU • Network gateway ECU • No. 4 junction connector • No. 5 junction connector • No. 6 junction connector • No. 7 junction connector • No. 1 CAN junction connector

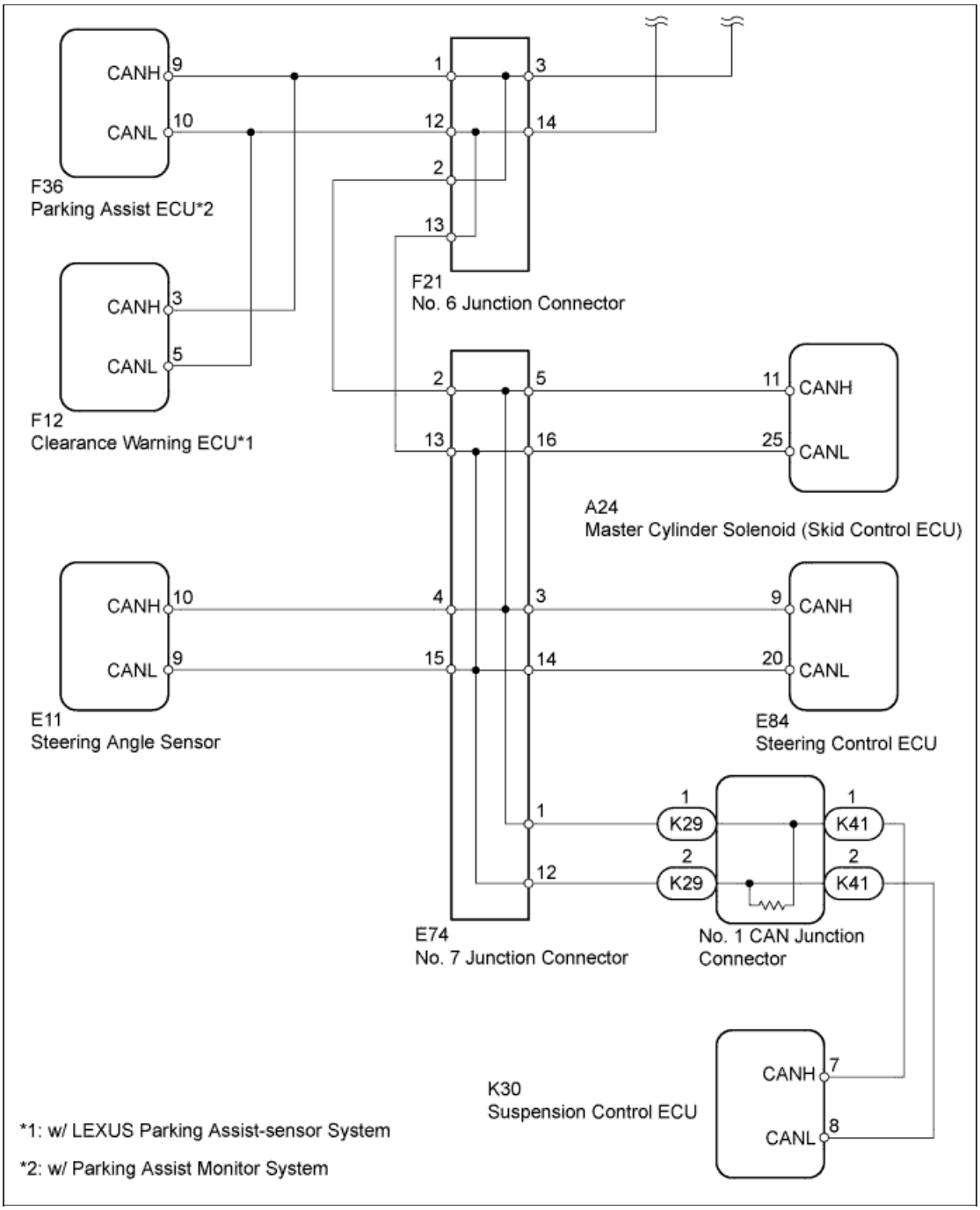
*1: w/ Dynamic Radar Cruise Control System
*2: w/ LEXUS Parking Assist-sensor System
*3: w/ Parking Assist Monitor System
*4: w/ Pre-Crash Safety System

WIRING DIAGRAM



*1: w/ Dynamic Radar Cruise Control System

*2: w/ Pre-Crash Safety System



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK CAN BUS WIRE (MAIN WIRE FOR DISCONNECTION, BUS LINE FOR SHORT CIRCUIT)

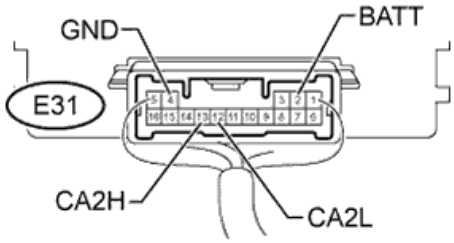
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Resistance Malfunction

E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	54 to 69 Ω	Below 53 Ω: Short in line
			70 Ω or higher: Open in CAN main bus line
E31-13 (CA2H) - E31-2 (BATT)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E31-12 (CA2L) - E31-2 (BATT)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E31-13 (CA2H) - E31-4 (GND)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short
E31-12 (CA2L) - E31-4 (GND)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short

Component with harness connected:
(Network Gateway ECU)



H

Result

Result	Proceed to
NG - Open in CAN main bus line	A
NG - Short in line - +B short - Ground short	B
OK	C

B → Go to step 18

C → Go to step 63

A

3.CHECK FOR OPEN IN MAIN BUS WIRE (NO. 7 CAN JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

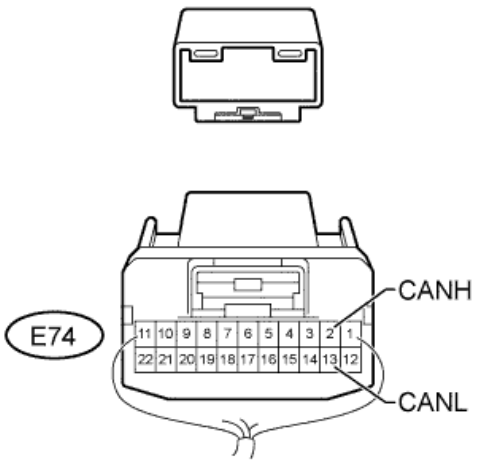
a. Disconnect the E74 No. 7 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E74-2 (CANH) - E74-13 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 7 Junction Connector)



NG → Go to step 5

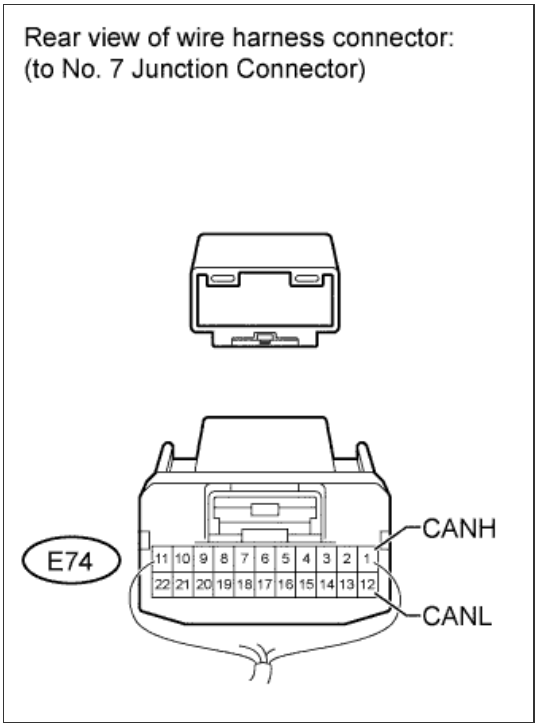
OK

4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 7 JUNCTION CONNECTOR - NO. 1 CAN JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E74-1 (CANH) - E74-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 14

OK

REPAIR OR REPLACE NO. 7 JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

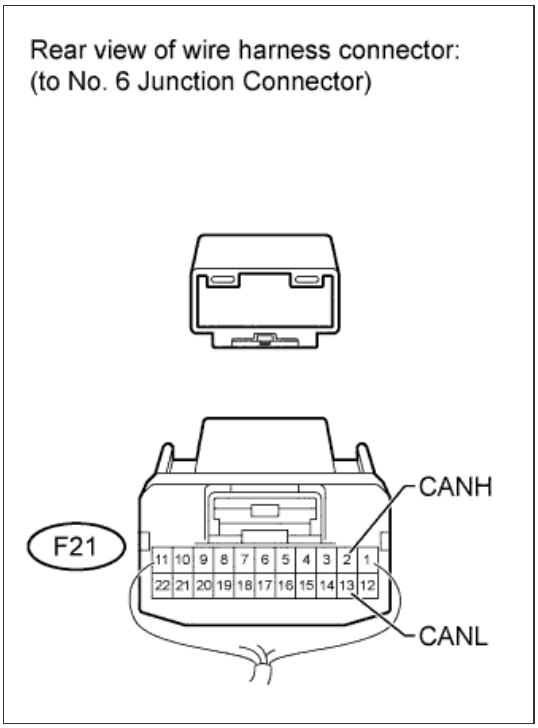
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 6 JUNCTION CONNECTOR - NO. 7 JUNCTION BLOCK)

a. Disconnect the F21 No. 6 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F21-2 (CANH) - F21-13 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 6 JUNCTION CONNECTOR - NO. 7 JUNCTION CONNECTOR)

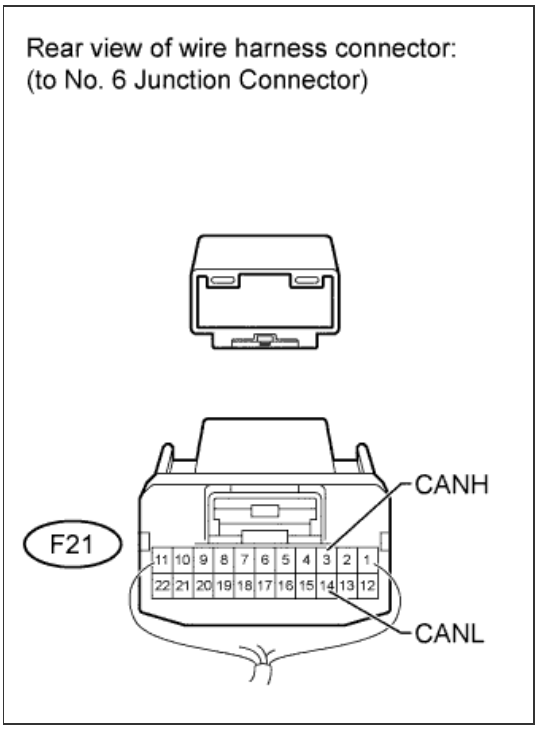
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 6 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F21-3 (CANH) - F21-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

OK

REPAIR OR REPLACE NO. 6 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

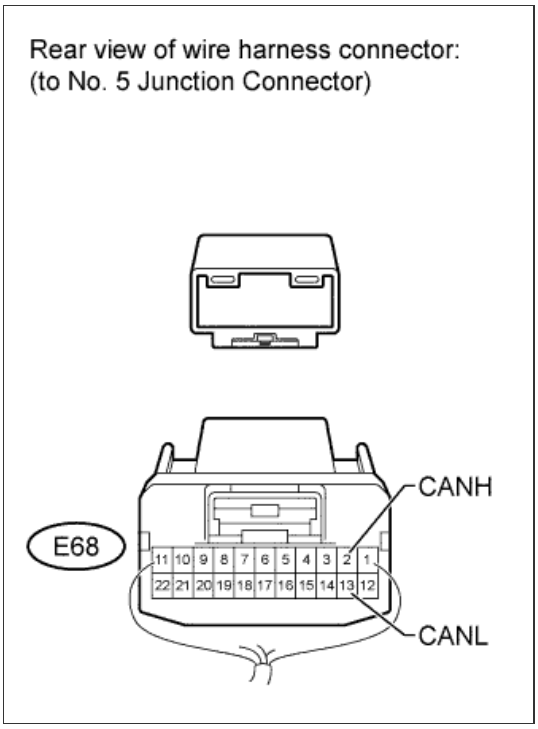
9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 5 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

a. Disconnect the E68 No. 5 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E68-2 (CANH) - E68-13 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 5 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

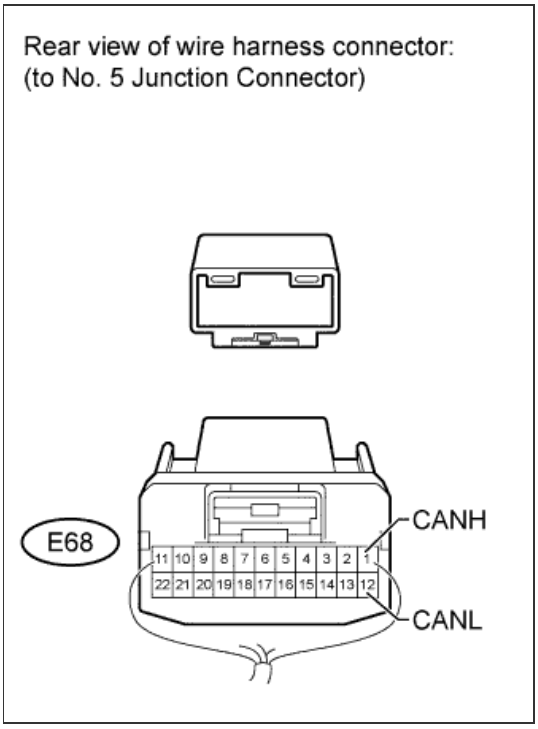
OK

10.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 5 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E68-1 (CANH) - E68-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 11

OK

REPAIR OR REPLACE NO. 5 JUNCTION CONNECTOR

11.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

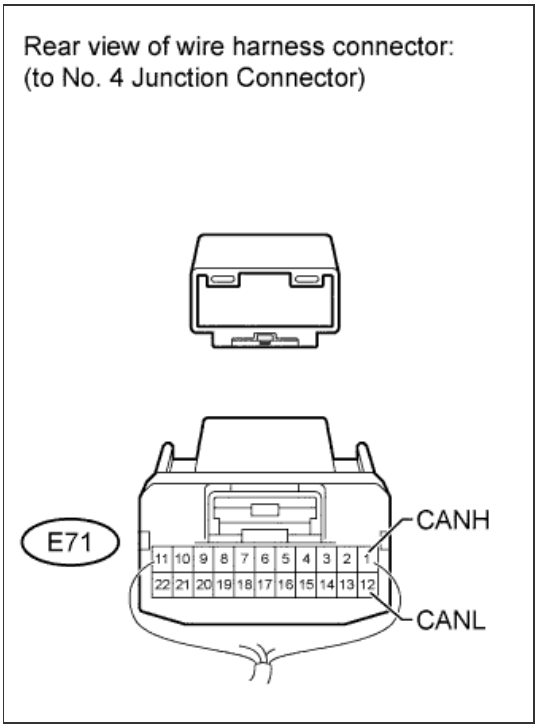
12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 4 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

a. Disconnect the E71 No. 4 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E71-1 (CANH) - E71-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 4 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

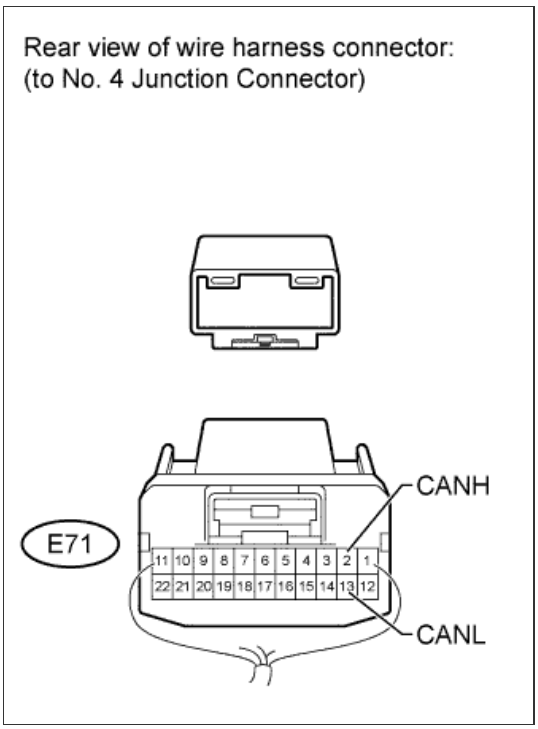
OK

13.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 4 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E71-2 (CANH) - E71-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 16

OK

REPAIR OR REPLACE NO. 4 CAN JUNCTION CONNECTOR

14.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

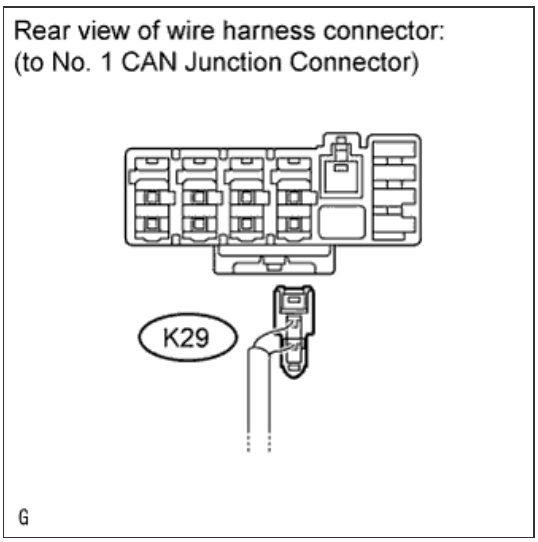
15.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 CAN JUNCTION CONNECTOR - NO. 7 JUNCTION CONNECTOR)

a. Disconnect the K29 No. 1 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
K29-1 (CANH) - K29-2 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 CAN JUNCTION CONNECTOR - NO. 7 JUNCTION CONNECTOR)

OK

REPAIR OR REPLACE NO. 1 CAN JUNCTION CONNECTOR

16.CONNECT CONNECTOR

a. Reconnect the E71 No. 4 junction connector connector.

NEXT

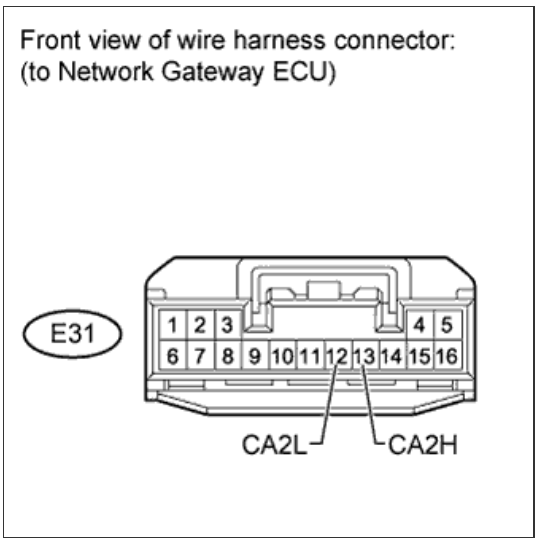
17.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NETWORK GATEWAY ECU - NO. 4 JUNCTION CONNECTOR)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO NETWORK GATEWAY ECU (NETWORK GATEWAY ECU - NO. 4 JUNCTION CONNECTOR)

OK

REPLACE NETWORK GATEWAY ECU

18.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR SIDE)

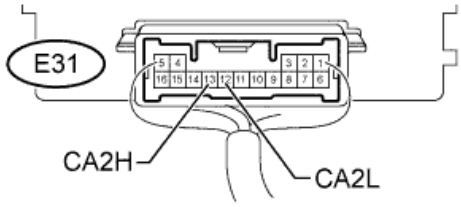
a. Disconnect the E74 No. 7 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

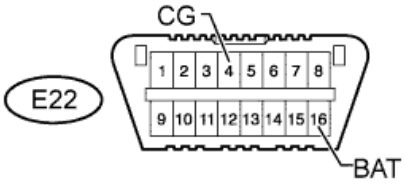
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Network Gateway ECU)



Front view of DLC3:



NG → Go to step 23

OK

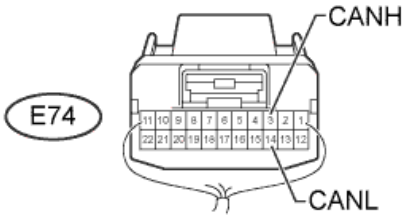
19.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - STEERING CONTROL ECU)

a. Measure the resistance according to the value(s) in the table below.

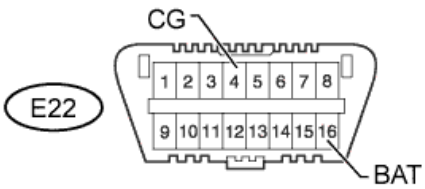
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-3 (CANH) - E74-14 (CANL)	Engine switch off	1 Ω or higher	OK
E74-3 (CANH) - E74-14 (CANL)	Engine switch off	Below 1 Ω	NG
E74-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 7 Junction Connector)



Front view of DLC3:



NG → Go to step 38

OK

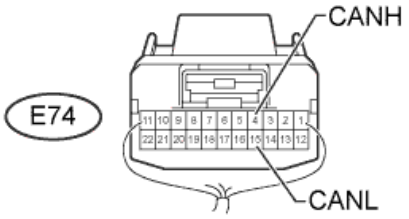
20.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - STEERING ANGLE SENSOR)

a. Measure the resistance according to the value(s) in the table below.

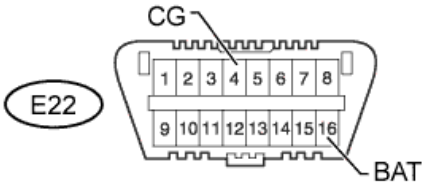
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-4 (CANH) - E74-15 (CANL)	Engine switch off	1 Ω or higher	OK
E74-4 (CANH) - E74-15 (CANL)	Engine switch off	Below 1 Ω	NG
E74-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 7 Junction Connector)



Front view of DLC3:



NG → Go to step 40

OK

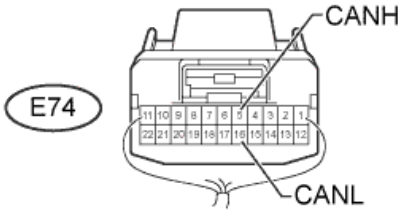
21.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - SKID CONTROL ECU)

a. Measure the resistance according to the value(s) in the table below.

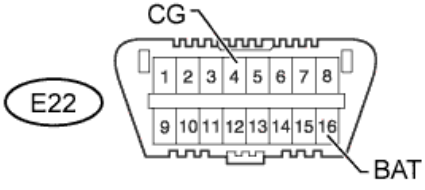
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-5 (CANH) - E74-16 (CANL)	Engine switch off	1 Ω or higher	OK
E74-5 (CANH) - E74-16 (CANL)	Engine switch off	Below 1 Ω	NG
E74-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 7 Junction Connector)



Front view of DLC3:



NG → Go to step 42

OK

22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - NO. 1 CAN JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

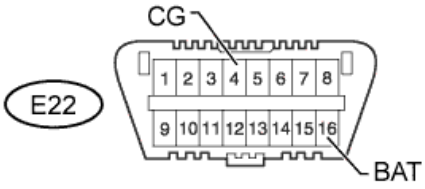
Result

Tester Connection	Switch Condition	Measured Resistance	Result
E74-1 (CANH) - E74-12 (CANL)	Engine switch off	1 Ω or higher	OK
E74-1 (CANH) - E74-12 (CANL)	Engine switch off	Below 1 Ω	NG
E74-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-12 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 7 Junction Connector)



Front view of DLC3:



NG → Go to step 44

OK

REPAIR OR REPLACE NO. 7 JUNCTION CONNECTOR

23.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

24.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

a. Disconnect the F21 No. 6 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

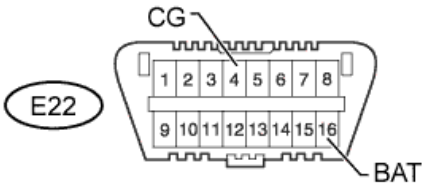
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F21-2 (CANH) - F21-13 (CANL)	Engine switch off	108 to 132 Ω
F21-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
F21-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
F21-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
F21-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Rear view of wire harness connector:
(to No. 6 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 7 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

OK

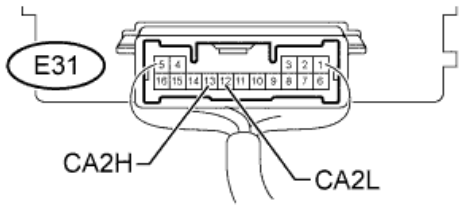
25.CHECK FOR SHORT IN CAN BUS WIRES (NO. 6 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

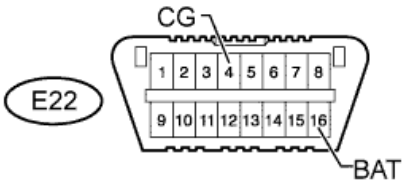
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Network Gateway ECU)



Front view of DLC3:



Result

Result	Proceed to
OK	A
NG (w/ LEXUS Parking Assist-sensor System)	B
NG (w/ Parking Assist Monitor System)	C
NG (w/o LEXUS Parking Assist-sensor System and Parking Assist Monitor System)	D

B → Go to step 26

C → Go to step 27

D → Go to step 28

A

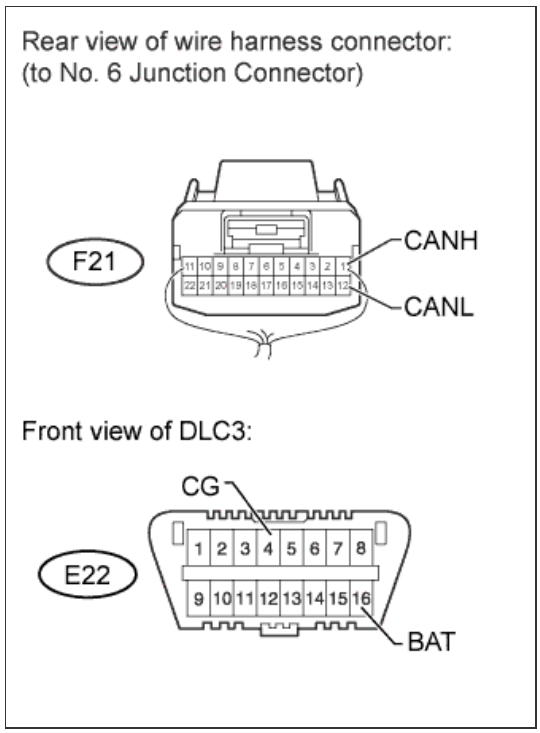
REPAIR OR REPLACE NO. 6 JUNCTION CONNECTOR

26.CHECK FOR SHORT IN CAN BUS WIRES (NO. 6 JUNCTION CONNECTOR - CLEARANCE WARNING ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 49

OK

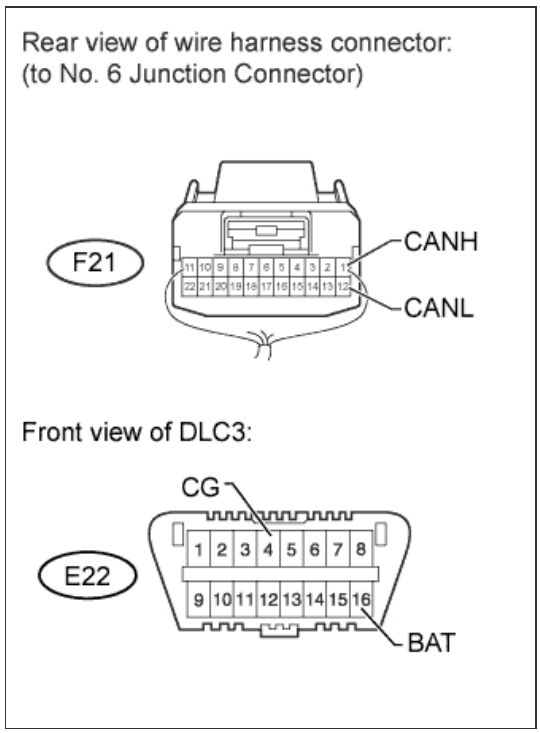
REPAIR OR REPLACE NO. 6 JUNCTION CONNECTOR

27.CHECK FOR SHORT IN CAN BUS WIRES (NO. 6 JUNCTION CONNECTOR - PARKING ASSIST ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-	Engine		



16 (BAT)	switch off	Below 1 Ω	NG

NG → Go to step 52

OK

REPAIR OR REPLACE NO. 6 JUNCTION CONNECTOR

28.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

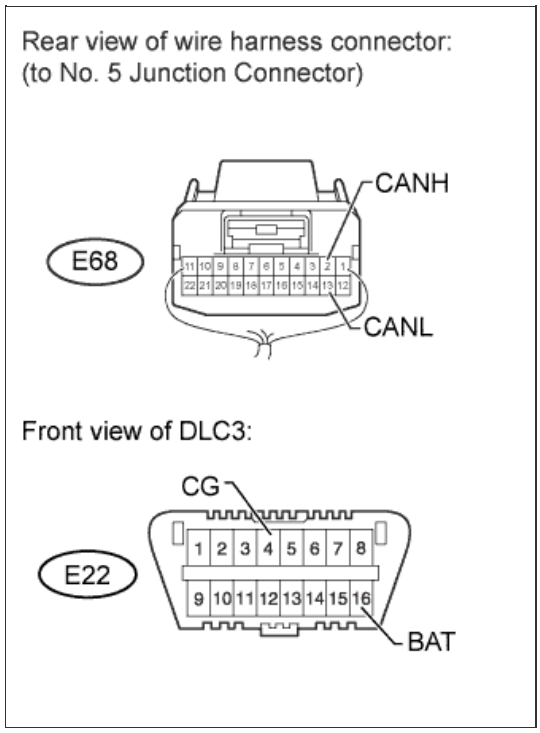
29.CHECK FOR SHORT IN CAN BUS WIRES (NO. 6 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

a. Disconnect the E68 No. 5 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E68-2 (CANH) - E68-13 (CANL)	Engine switch off	108 to 132 Ω
E68-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E68-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E68-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E68-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 6 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

OK

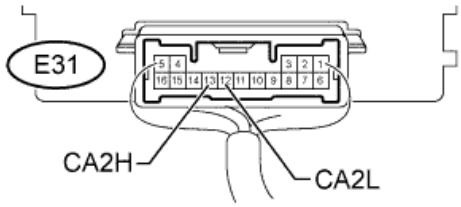
30.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

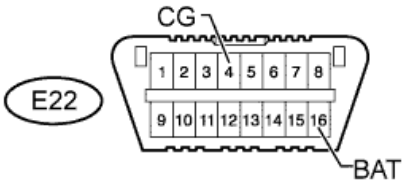
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Network Gateway ECU)



Front view of DLC3:



NG → Go to step 34

OK

31.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR - SEAT BELT CONTROL ECU)

NOTICE:

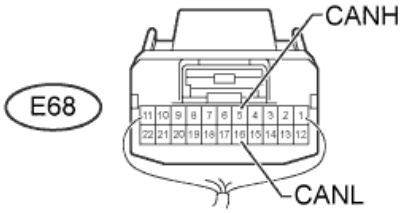
For vehicles without the pre-crash safety system, go to "Check for Short in CAN Bus Wires (No. 5 Junction Connector - Distance Control ECU)".

a. Measure the resistance according to the value(s) in the table below.

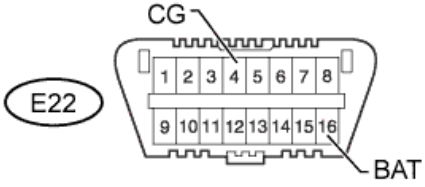
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E68-5 (CANH) - E68-16 (CANL)	Engine switch off	1 Ω or higher	OK
E68-5 (CANH) - E68-16 (CANL)	Engine switch off	Below 1 Ω	NG
E68-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E68-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 5 Junction Connector)



Front view of DLC3:



NG → Go to step 53

OK

32.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR - DISTANCE CONTROL ECU)

NOTICE:

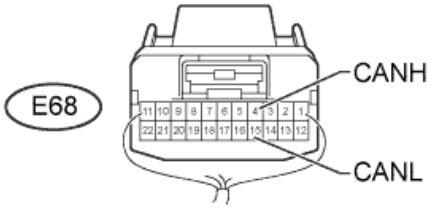
For vehicles without the dynamic radar cruise control system, go to "Check for Short in CAN Bus Wires (No. 5 Junction Connector - Yaw Rate Sensor)".

a. Measure the resistance according to the value(s) in the table below.

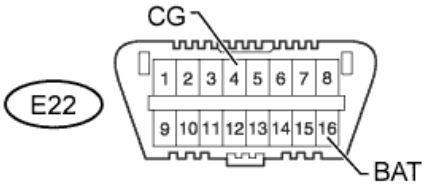
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E68-4 (CANH) - E68-15 (CANL)	Engine switch off	1 Ω or higher	OK
E68-4 (CANH) - E68-15 (CANL)	Engine switch off	Below 1 Ω	NG
E68-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E68-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 5 Junction Connector)



Front view of DLC3:



NG → Go to step 55

OK

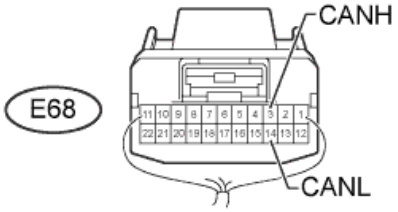
33.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR - YAW RATE SENSOR)

a. Measure the resistance according to the value(s) in the table below.

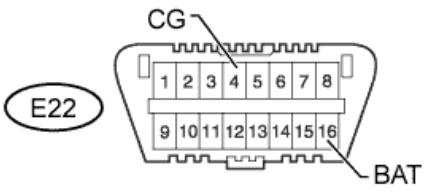
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E68-3 (CANH) - E68-14 (CANL)	Engine switch off	1 Ω or higher	OK
E68-3 (CANH) - E68-14 (CANL)	Engine switch off	Below 1 Ω	NG
E68-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E68-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 5 Junction Connector)



Front view of DLC3:



NG → Go to step 57

OK

REPAIR OR REPLACE NO. 5 JUNCTION CONNECTOR

34.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

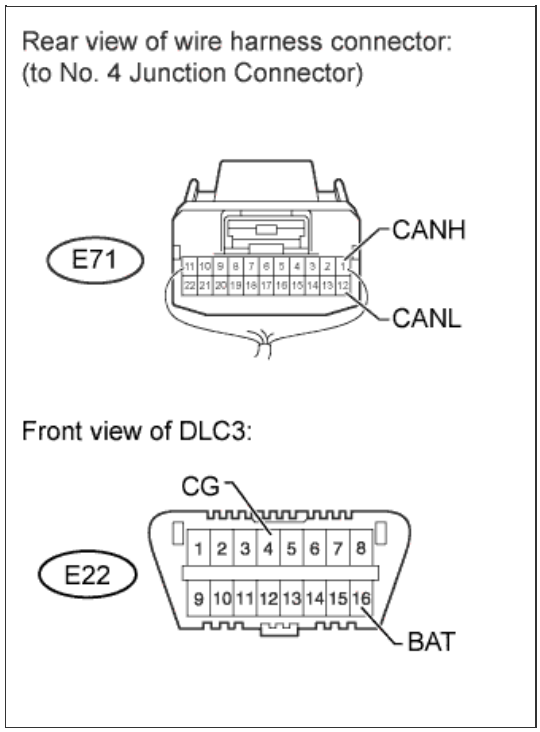
35.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR - NO. 4 JUNCTION CONNECTOR)

a. Disconnect the E71 No. 4 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E71-1 (CANH) - E71-12 (CANL)	Engine switch off	108 to 132 Ω
E71-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E71-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E71-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E71-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 5 JUNCTION CONNECTOR - NO. 4 JUNCTION CONNECTOR)

OK

36.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - 4WD CONTROL ECU)

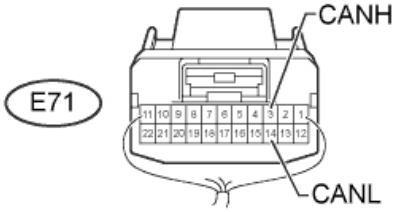
a. Measure the resistance according to the value(s) in the table below.

Result

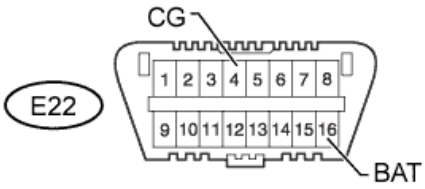
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E71-3 (CANH) - E71-14 (CANL)	Engine switch off	1 Ω or higher	OK
E71-3 (CANH) - E71-14 (CANL)	Engine switch off	Below 1 Ω	NG
E71-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK

E71-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E71-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E71-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 4 Junction Connector)



Front view of DLC3:



NG → Go to step 59

OK

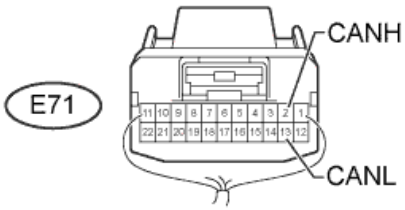
37.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

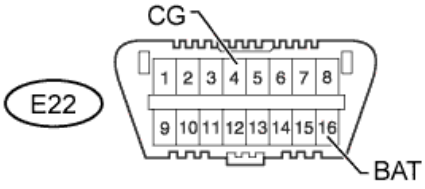
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E71-2 (CANH) - E71-13 (CANL)	Engine switch off	1 Ω or higher	OK
E71-2 (CANH) - E71-13 (CANL)	Engine switch off	Below 1 Ω	NG
E71-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E71-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E71-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E71-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 4 Junction Connector)



Front view of DLC3:



NG → Go to step 61

OK

REPAIR OR REPLACE NO. 4 JUNCTION CONNECTOR

38.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

39.CHECK FOR SHORT IN CAN BUS WIRES (STEERING CONTROL ECU)

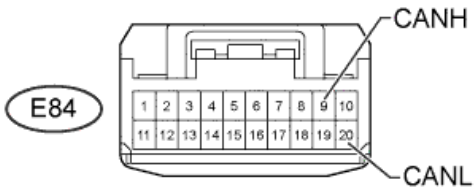
a. Disconnect the E84 steering control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

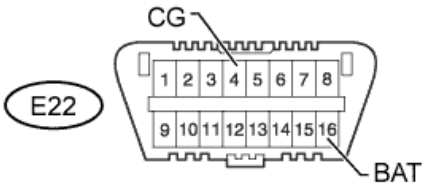
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E84-9 (CANH) - E84-20 (CANL)	Engine switch off	1 Ω or higher	OK
E84-9 (CANH) - E84-20 (CANL)	Engine switch off	Below 1 Ω	NG
E84-9 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E84-20 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E84-9 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E84-20 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E84-9 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E84-20 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E84-9 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E84-20 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Steering Control ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO STEERING CONTROL ECU (CANH, CANL)

OK

REPLACE STEERING CONTROL ECU (Click here)

40.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

41.CHECK FOR SHORT IN CAN BUS WIRES (STEERING ANGLE SENSOR)

a. Disconnect the E11 steering angle sensor connector.

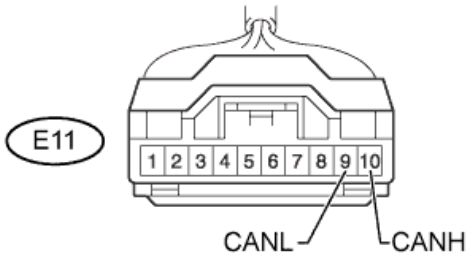
b. Measure the resistance according to the value(s) in the table below.

Result

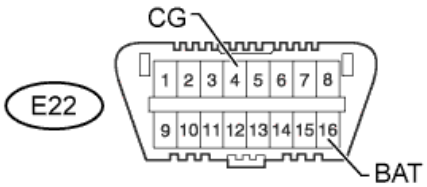
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E11-10 (CANH) - E11-9 (CANL)	Engine switch off	1 Ω or higher	OK
E11-10 (CANH) - E11-9 (CANL)	Engine switch off	Below 1 Ω	NG
E11-10 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E11-9 (CANL) - E22-4	Engine		

(CG)	switch off	1 Ω or higher	OK
E11-10 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E11-9 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E11-10 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E11-9 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E11-10 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E11-9 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Steering Angle Sensor)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO STEERING ANGLE SENSOR (CANH, CANL)

OK

REPLACE STEERING ANGLE SENSOR (Click here)

42.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

43.CHECK FOR SHORT IN CAN BUS WIRES (SKID CONTROL ECU)

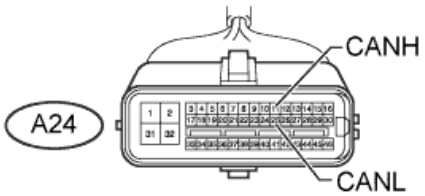
a. Disconnect the A24 master cylinder solenoid (skid control ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

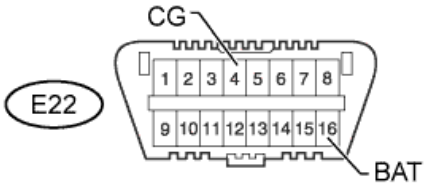
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	1 Ω or higher	OK
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	Below 1 Ω	NG
A24-11 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A24-25 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A24-11 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A24-25 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A24-11 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A24-25 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A24-11 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
A24-25 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Skid Control ECU)



Front view of DLC3:



NG

REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MASTER CYLINDER SOLENOID (SKID CONTROL ECU) (CANH, CANL)

OK

REPLACE MASTER CYLINDER SOLENOID (SKID CONTROL ECU) (Click here)

44.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

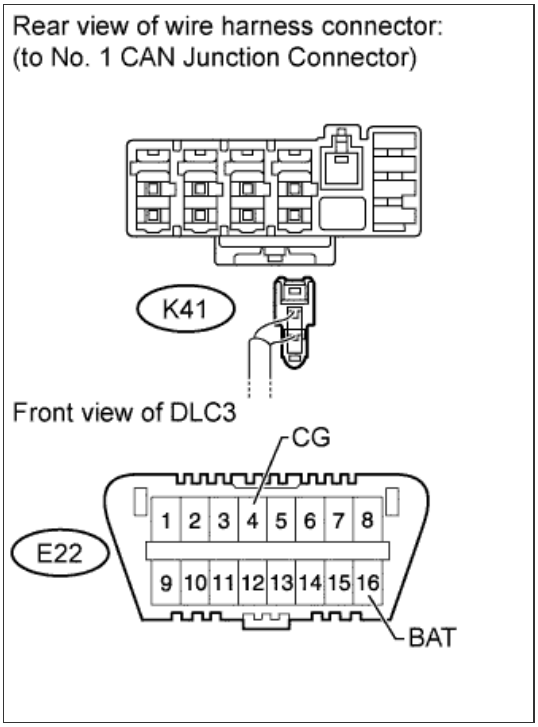
45.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 CAN JUNCTION CONNECTOR - SUSPENSION CONTROL ECU)

a. Disconnect the K41 No. 1 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
K41-1 (CANH) - K41-2 (CANL)	Engine switch off	1 Ω or higher	OK
K41-1 (CANH) - K41-2 (CANL)	Engine switch off	Below 1 Ω	NG
K41-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K41-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K41-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K41-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K41-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K41-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K41-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
K41-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG

Go to step 48

OK

46.CONNECT CONNECTOR

a. Reconnect the E74 No. 7 junction connector connector.

NEXT

47.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 CAN JUNCTION CONNECTOR)

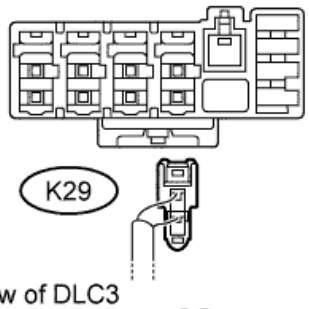
a. Measure the resistance according to the value(s) in the table below.

Result

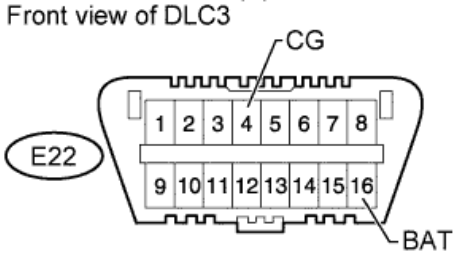
Tester Connection	Switch Condition	Measured Resistance	Proceed to
K29-1 (CANH) - K29-2	Engine		

(CANL)	switch off	1 Ω or higher	OK
K29-1 (CANH) - K29-2 (CANL)	Engine switch off	Below 1 Ω	NG
K29-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K29-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K29-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K29-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K29-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K29-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K29-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
K29-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 CAN Junction Connector)



Front view of DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NO. 1 CAN JUNCTION CONNECTOR (CANH, CANL)

OK

REPLACE NO. 1 CAN JUNCTION CONNECTOR

48.CHECK FOR SHORT IN CAN BUS WIRES (SUSPENSION CONTROL ECU)

a. Disconnect the K30 suspension control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

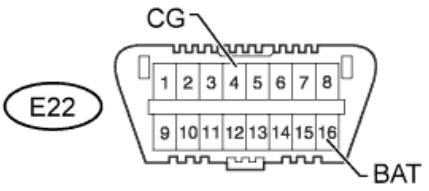
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
K30-7 (CANH) - K30-8 (CANL)	Engine switch off	1 Ω or higher	OK
K30-7 (CANH) - K30-8 (CANL)	Engine switch off	Below 1 Ω	NG
K30-7 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K30-8 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K30-7 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K30-8 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K30-7 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K30-8 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K30-7 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
K30-8 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to Suspension Control ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO SUSPENSION CONTROL ECU (CANH, CANL)

OK

REPLACE SUSPENSION CONTROL ECU (Click here)

49.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

50.CHECK FOR SHORT IN CAN BUS WIRES (CLEARANCE WARNING ECU)

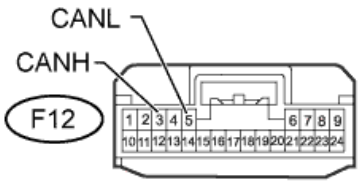
a. Disconnect the F12 clearance warning ECU connector.

b. Measure the resistance according to the value(s) in the table below.

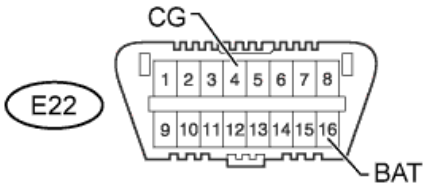
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F12-3 (CANH) - F12-5 (CANL)	Engine switch off	1 Ω or higher	OK
F12-3 (CANH) - F12-5 (CANL)	Engine switch off	Below 1 Ω	NG
F12-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F12-5 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F12-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F12-5 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F12-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F12-5 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F12-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F12-5 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Clearance Warning ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CLEARANCE WARNING ECU (CANH, CANL)

OK

REPLACE CLEARANCE WARNING ECU ASSEMBLY (Click here)

51.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

52.CHECK FOR SHORT IN CAN BUS WIRES (PARKING ASSIST ECU)

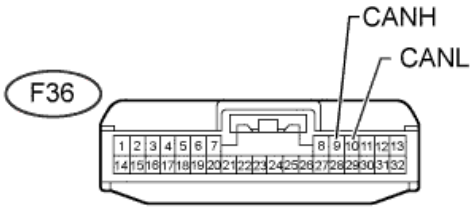
a. Disconnect the F36 parking assist ECU connector.

b. Measure the resistance according to the value(s) in the table below.

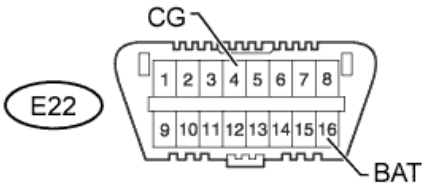
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F36-9 (CANH) - F36-10 (CANL)	Engine switch off	1 Ω or higher	OK
F36-9 (CANH) - F36-10 (CANL)	Engine switch off	Below 1 Ω	NG
F36-9 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F36-10 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F36-9 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F36-10 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F36-9 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F36-10 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F36-9 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F36-10 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Parking Assist ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO PARKING ASSIST ECU (CANH, CANL)

OK → REPLACE PARKING ASSIST ECU (Click here)

53.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

54.CHECK FOR SHORT IN CAN BUS WIRES (SEAT BELT CONTROL ECU)

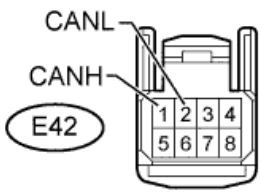
a. Disconnect the E42 seat belt control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

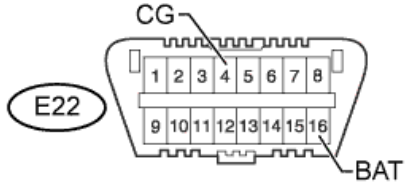
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E42-1 (CANH) - E42-2 (CANL)	Engine switch off	1 Ω or higher	OK
E42-1 (CANH) - E42-2 (CANL)	Engine switch off	Below 1 Ω	NG
E42-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E42-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E42-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E42-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E42-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E42-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E42-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Seat Belt Control ECU)



Front view of DLC3:



E42-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO SEAT BELT CONTROL ECU (CANH, CANL)

OK

REPLACE SEAT BELT CONTROL ECU (Click here)

55.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

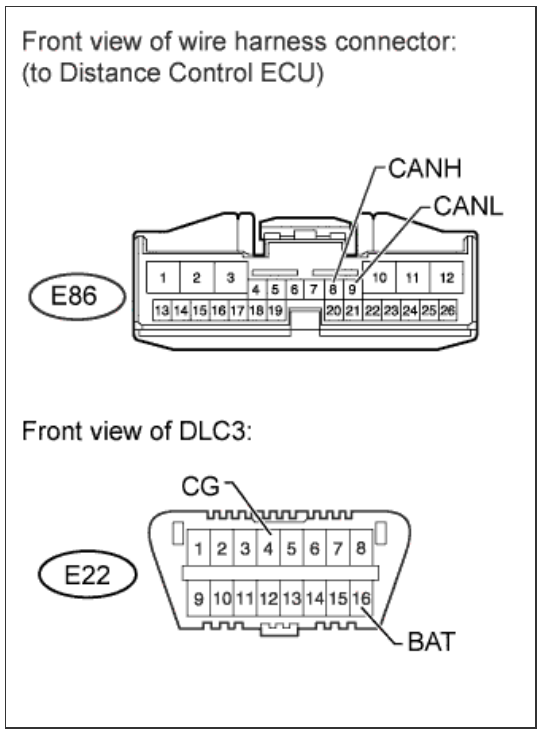
56.CHECK FOR SHORT IN CAN BUS WIRES (DISTANCE CONTROL ECU)

a. Disconnect the E86 distance control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E86-8 (CANH) - E86-9 (CANL)	Engine switch off	1 Ω or higher	OK
E86-8 (CANH) - E86-9 (CANL)	Engine switch off	Below 1 Ω	NG
E86-8 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E86-9 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E86-8 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E86-9 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E86-8 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E86-9 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E86-8 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E86-9 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISTANCE CONTROL ECU (CANH, CANL)

OK

REPLACE DISTANCE CONTROL ECU ASSEMBLY (Click here)

57.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

58.CHECK FOR SHORT IN CAN BUS WIRES (YAW RATE SENSOR)

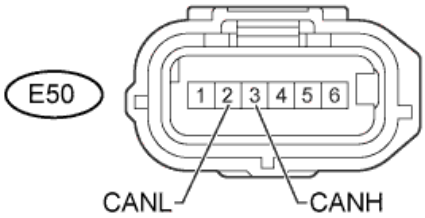
a. Disconnect the E50 yaw rate sensor connector.

b. Measure the resistance according to the value(s) in the table below.

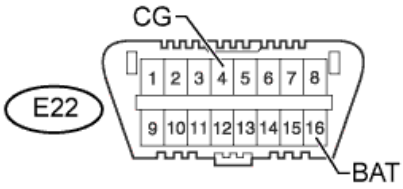
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	1 Ω or higher	OK
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	Below 1 Ω	NG
E50-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E50-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E50-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E50-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E50-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E50-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E50-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E50-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Yaw Rate Sensor)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO YAW RATE SENSOR (CANH, CANL)

OK

REPLACE YAW RATE SENSOR ASSEMBLY (Click here)

59.CONNECT CONNECTOR

a. Reconnect the E71 No. 4 junction connector connector.

NEXT

60.CHECK FOR SHORT IN CAN BUS WIRES (4WD CONTROL ECU)

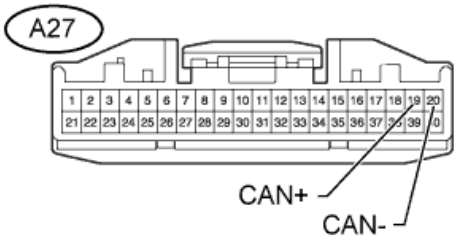
a. Disconnect the A27 4WD control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

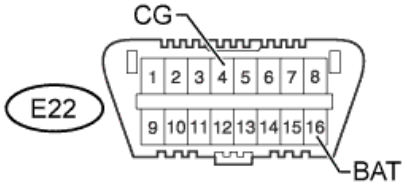
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
A27-19 (CAN+) - A27-20 (CAN-)	Engine switch off	1 Ω or higher	OK
A27-19 (CAN+) - A27-20 (CAN-)	Engine switch off	Below 1 Ω	NG
A27-19 (CAN+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A27-20 (CAN-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A27-19 (CAN+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A27-20 (CAN-) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A27-19 (CAN+) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A29-20 (CAN-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A27-19 (CAN+) - E22-	Engine		

Front view of wire harness connector:
(to 4WD Control ECU)



Front view of DLC3:



16 (BAT)	switch off	Below 1 Ω	NG
A27-20 (CAN-) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO 4WD CONTROL ECU (CAN+, CAN-)

OK

REPLACE 4WD CONTROL ECU (Click here)

61.CONNECT CONNECTOR

a. Reconnect the E71 No. 4 junction connector connector.

NEXT

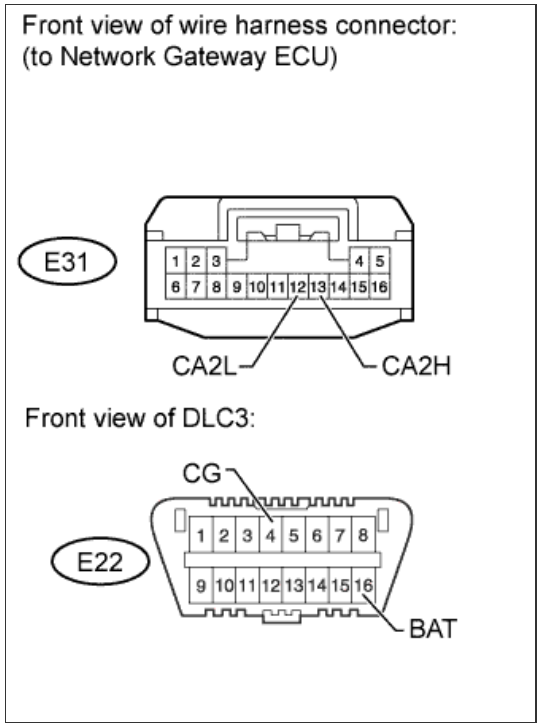
62.CHECK FOR SHORT IN CAN BUS WIRES (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	1 Ω or higher	OK
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	Below 1 Ω	NG
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CA2H, CA2L)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

63.CHECK HARNESS AND CONNECTOR (NETWORK GATEWAY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E31 network gateway ECU connector.

b. Disconnect the E31 network gateway ECU connector.

c. Measure the resistance according to the value(s) in the table below.

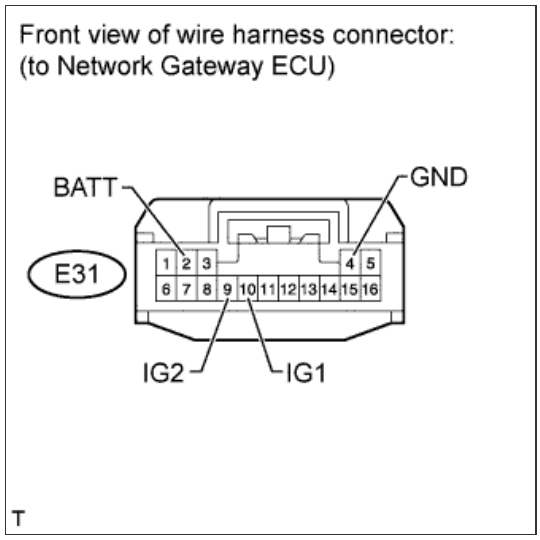
Standard Resistance:

Tester Connection	Condition	Specified Condition
E31-4 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E31-2 (BATT) - Body ground	Always	11 to 14 V
E31-9 (IG2) - Body ground	Engine switch on (IG)	11 to 14 V
E31-10 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE NETWORK GATEWAY ECU (Click here)

DTC U0123 Lost Communication with Yaw Rate Sensor Module

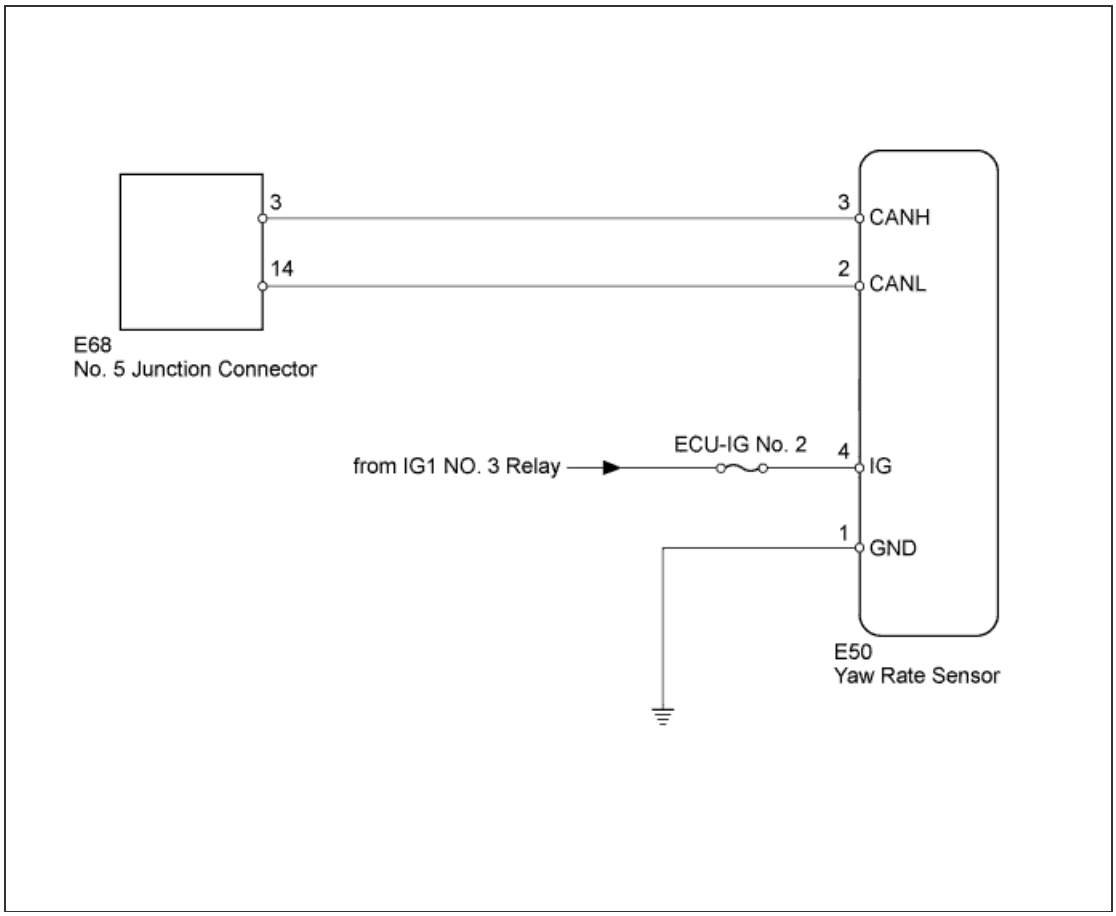
DTC U0124 Lost Communication with Lateral Acceleration Sensor Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0123	There is no communication from the yaw rate sensor.	• Power source circuit of yaw rate sensor assembly • Yaw rate sensor assembly • Yaw rate sensor branch wire or connector
U0124	There is no communication from the yaw rate sensor (lateral acceleration sensor).	• Power source circuit of yaw rate sensor assembly • Yaw rate sensor assembly • Yaw rate sensor branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

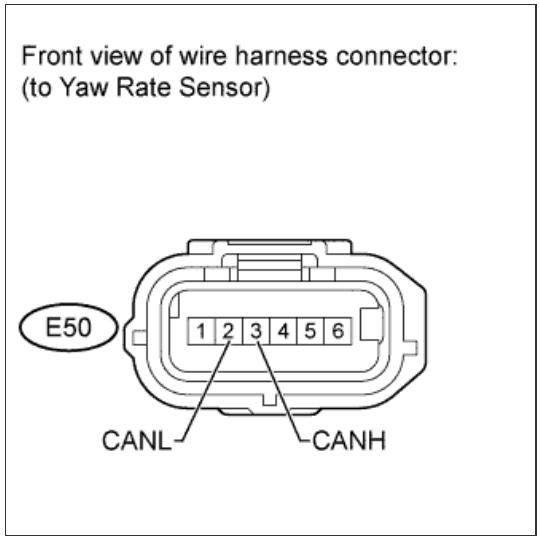
2.CHECK FOR OPEN IN CAN BUS WIRE (YAW RATE SENSOR BRANCH WIRE)

a. Disconnect the E50 yaw rate sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE YAW RATE SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (YAW RATE SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E50 yaw rate sensor connector.

c. Measure the resistance according to the value(s) in the table below.

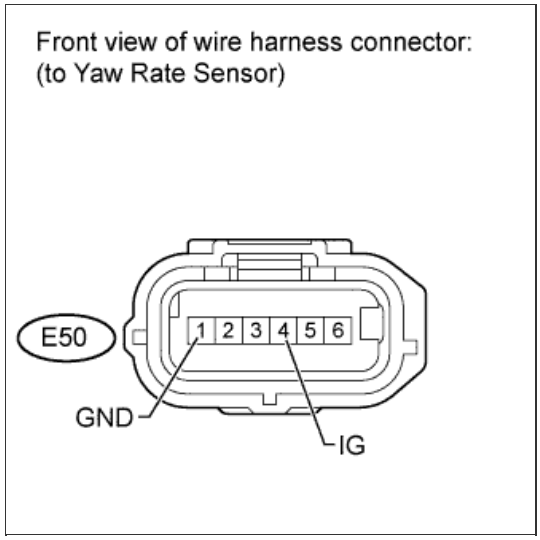
Standard Resistance:

Tester Connection	Condition	Specified Condition
E50-1 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E50-4 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE YAW RATE SENSOR ASSEMBLY (Click here)

DTC U1100 Lost Communication with Seat Belt Control ECU

for Preparation Click here

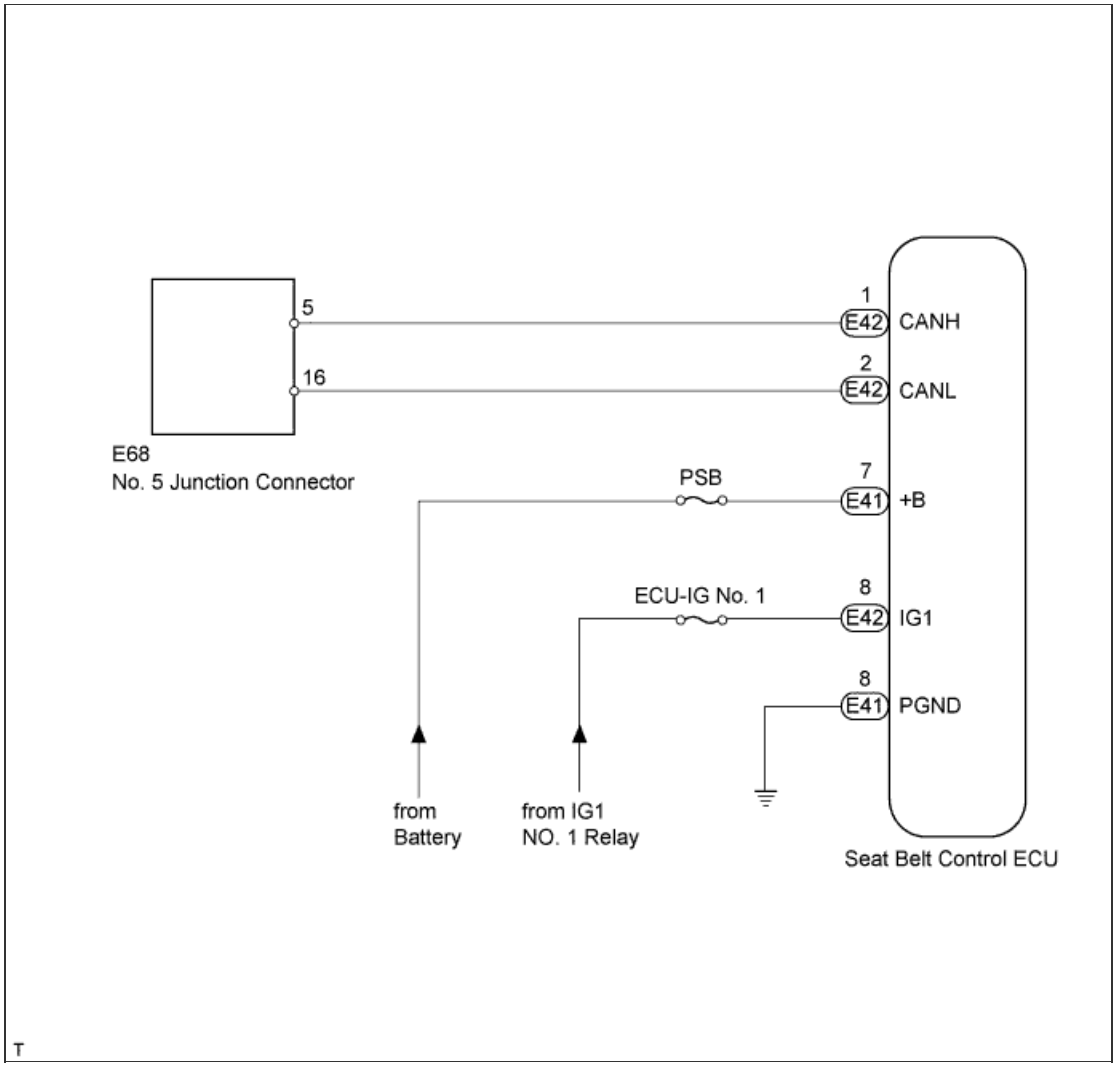
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1100	There is no communication from the seat belt control ECU.	• Power source circuit of seat belt control ECU • Seat belt control ECU • Seat belt control ECU branch wire or connector

HINT:

For vehicles with the pre-crash safety system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (SEAT BELT CONTROL ECU BRANCH WIRE)

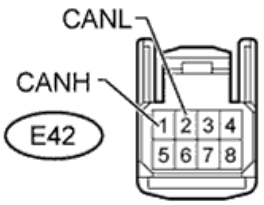
a. Disconnect the E42 seat belt control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E42-1 (CANH) - E42-2 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Seat Belt Control ECU)



NG → REPAIR OR REPLACE SEAT BELT CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SEAT BELT CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E41 and E42 seat belt control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

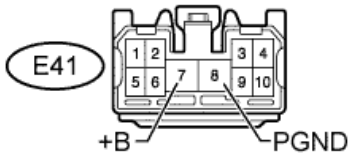
Tester Connection	Condition	Specified Condition
E41-8 (PGND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

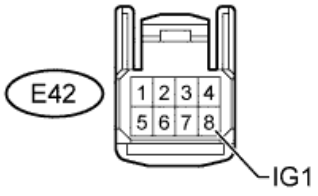
Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E41-7 (+B) - Body ground	Always	11 to 14 V
E42-8 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Seat Belt Control ECU)



Front view of wire harness connector:
(to Seat Belt Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE SEAT BELT CONTROL ECU (Click here)

DTC U0126 Lost Communication with Steering Angle Sensor Module

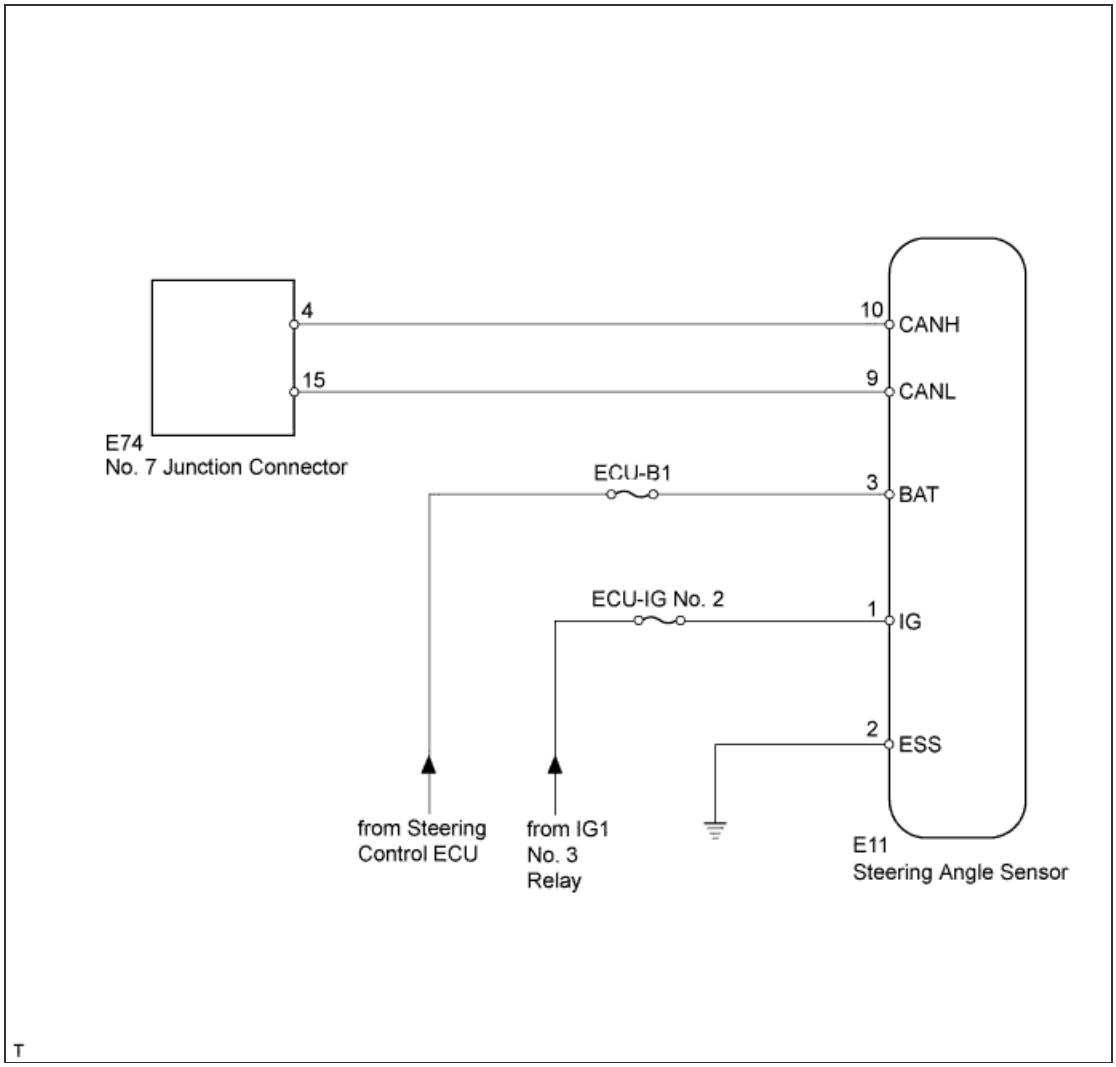
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0126	There is no communication from the steering angle sensor.	• Power source circuit of steering angle sensor • One side of CAN branch wire of other systems • Steering angle sensor • Steering angle sensor branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

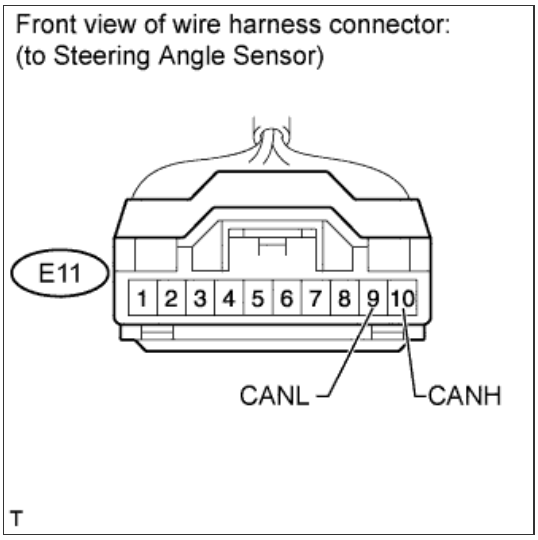
2.CHECK FOR OPEN IN CAN BUS WIRE (STEERING ANGLE SENSOR BRANCH WIRE)

a. Disconnect the E11 steering angle sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E11-10 (CANH) - E11-9 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE STEERING ANGLE SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (STEERING ANGLE SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E11 steering angle sensor connector.

c. Measure the resistance according to the value(s) in the table below.

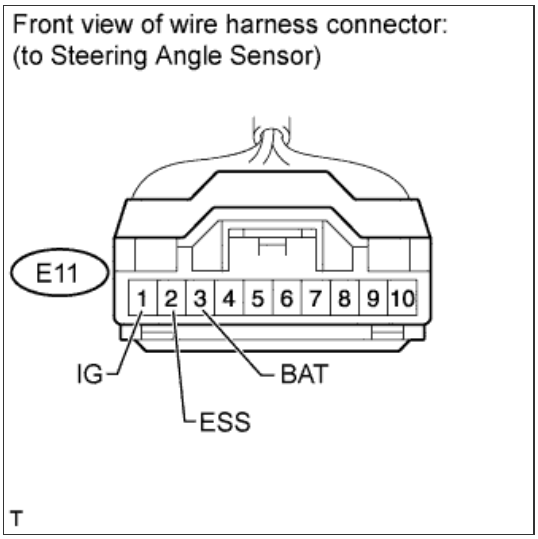
Standard Resistance:

Tester Connection	Condition	Specified Condition
E11-2 (ESS) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E11-3 (BAT) - Body ground	Always	11 to 14 V
E11-1 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE STEERING ANGLE SENSOR (Click here)

DTC U1101 Lost Communication with Distance Control ECU

for Preparation Click here

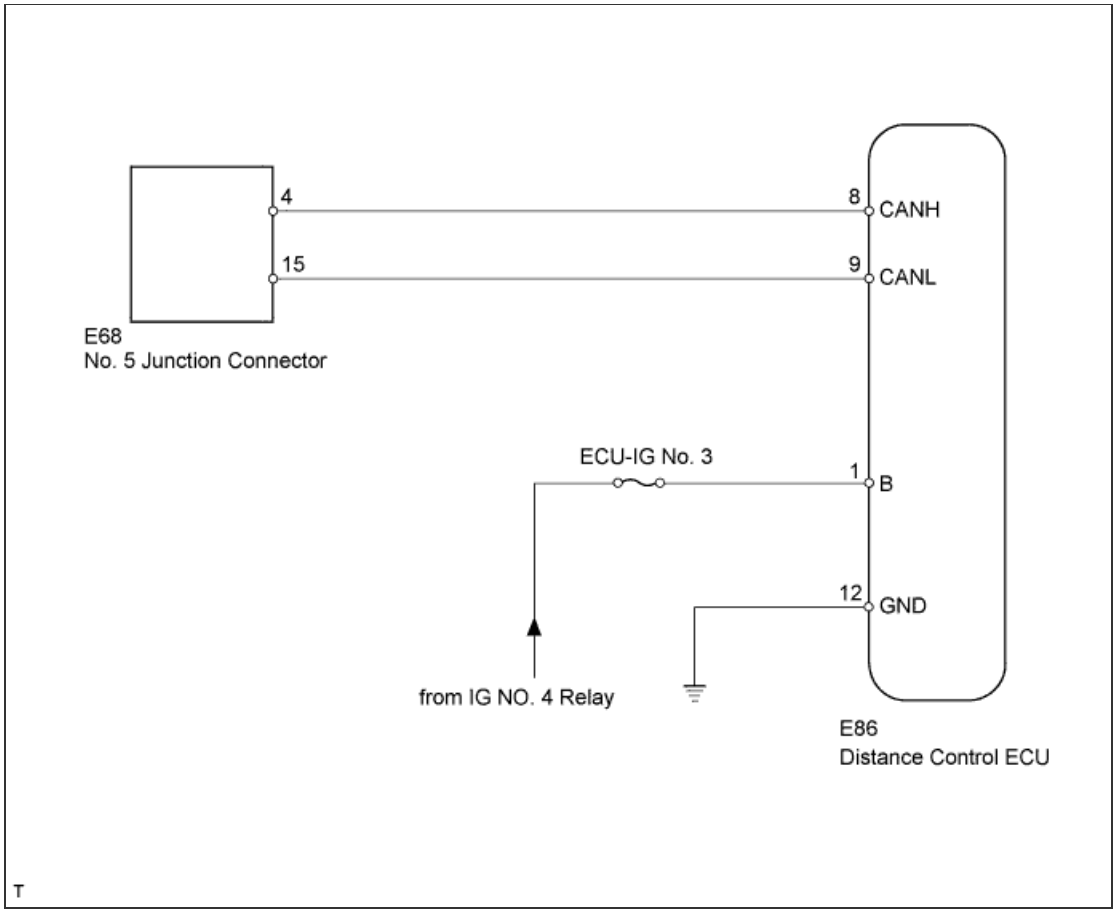
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1101	There is no communication from the distance control ECU.	• Power source circuit of distance control ECU assembly • Distance control ECU assembly • Distance control ECU assembly branch wire or connector

HINT:

For vehicles with the dynamic radar cruise control system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

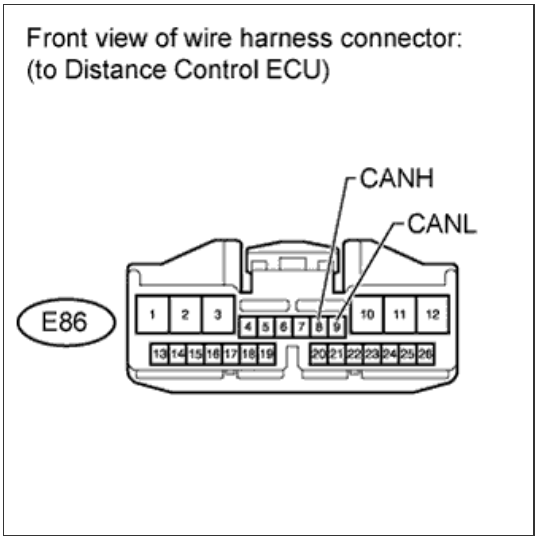
2.CHECK FOR OPEN IN CAN BUS WIRE (DISTANCE CONTROL ECU)

a. Disconnect the E86 distance control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E86-8 (CANH) - E86-9 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE DISTANCE CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (DISTANCE CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E86 distance control ECU connector.

c. Measure the resistance according to the value(s) in the table below.

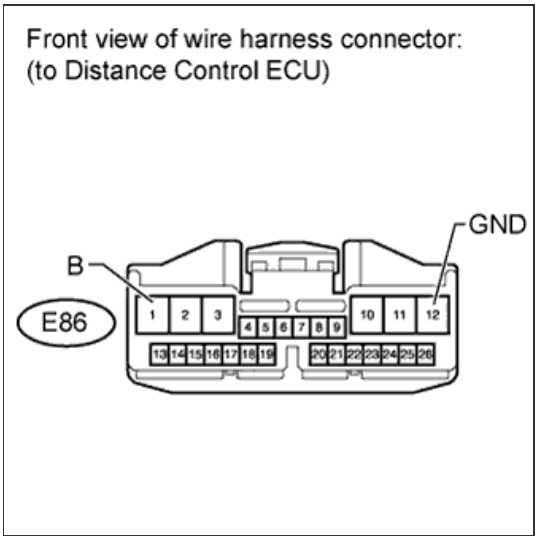
Standard Resistance:

Tester Connection	Condition	Specified Condition
E86-12 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
E86-1 (B) - Body ground	Always	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE DISTANCE CONTROL ECU ASSEMBLY (Click here)

DTC U0130 Lost Communication with Steering Effort Control Module

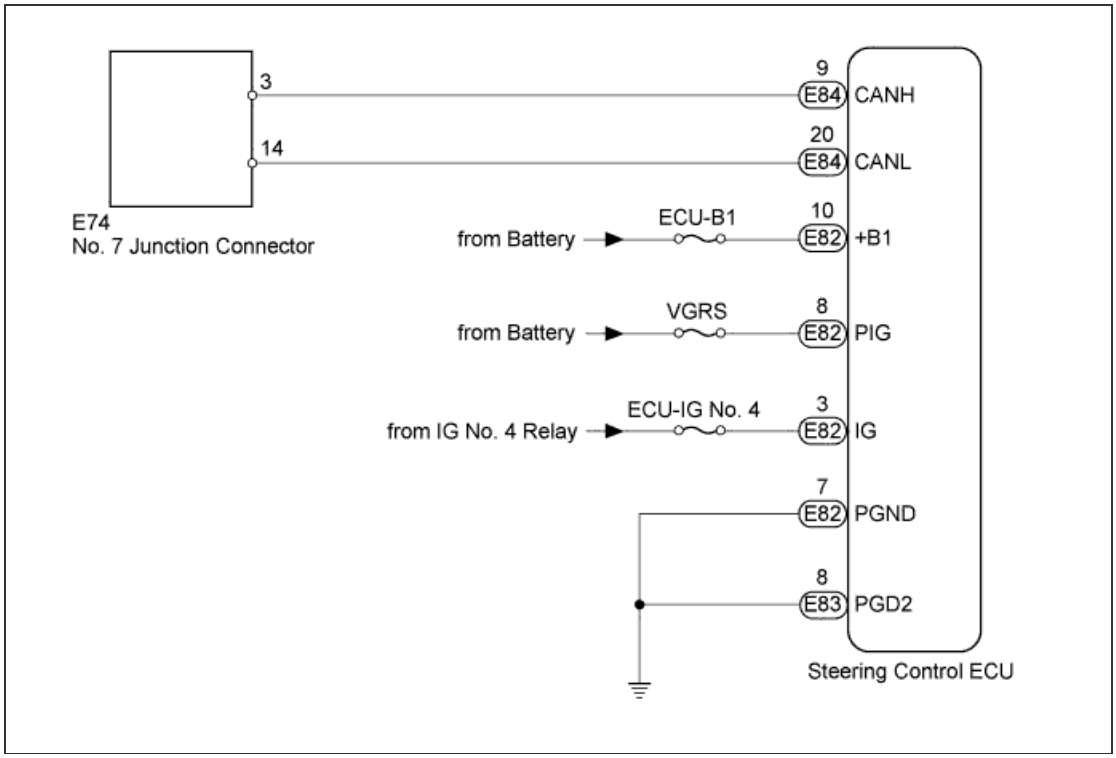
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0130	There is no communication from the steering control ECU.	• Power source circuit of steering control ECU • One side of CAN branch wire of other systems • Steering control ECU • Steering control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (STEERING CONTROL ECU BRANCH WIRE)

a. Disconnect the E84 steering control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E84-9 (CANH) - E84-20 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Steering Control ECU)



NG → REPAIR OR REPLACE STEERING CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (STEERING CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E82 and E83 steering control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

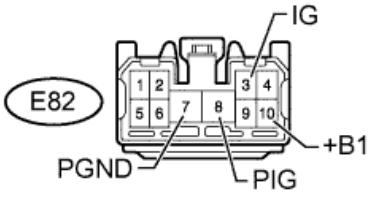
Tester Connection	Condition	Specified Condition
E82-7 (PGND) - Body ground	Always	Below 1 Ω
E83-8 (PGD2) - Body ground		

d. Measure the voltage according to the value(s) in the table below.

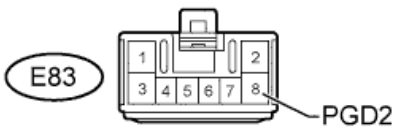
Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E82-10 (+B1) - Body ground	Always	11 to 14 V
E82-8 (PIG) - Body ground		
E82-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Steering Control ECU)



Front view of wire harness connector:
(to Steering Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE STEERING CONTROL ECU (Click here)

DTC U1110 Lost Communication with Clearance Sonar Module

for Preparation Click here

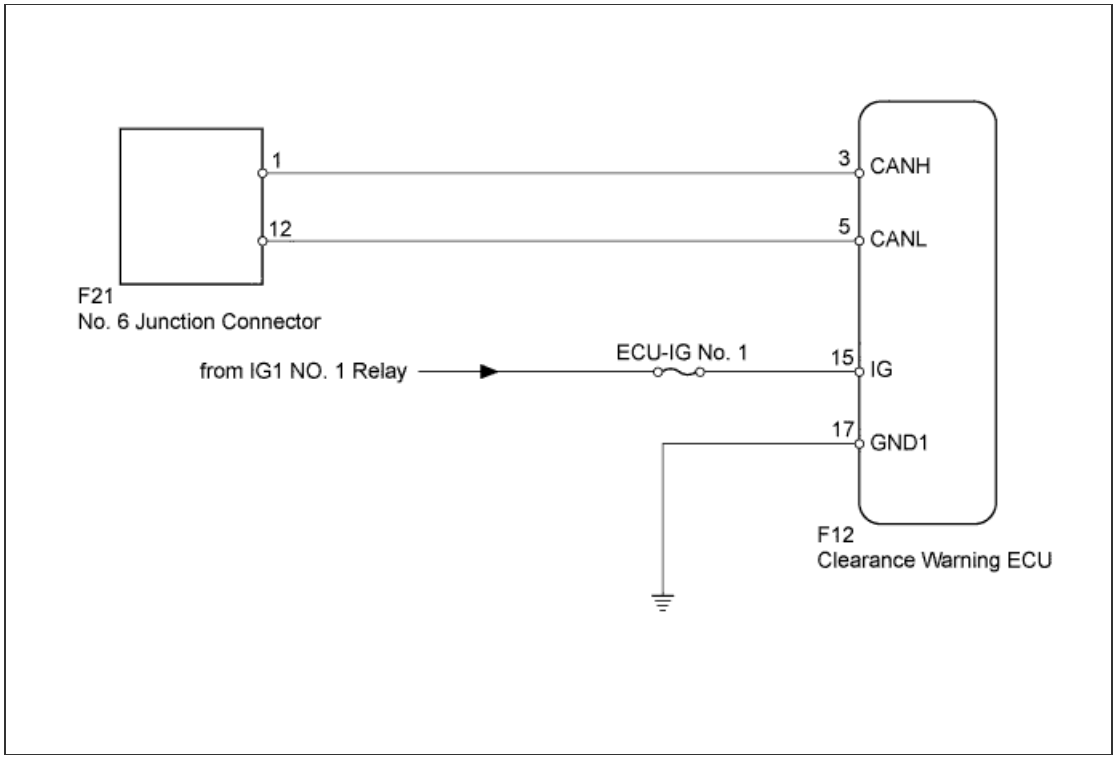
DESCRIPTION

DTC Code	DTC Detection Condition	Specified Condition
U1110	There is no communication from the clearance warning ECU.	• Power source circuit of clearance warning ECU • Clearance warning ECU • Clearance warning ECU branch wire or connector

HINT:

For vehicles with the LEXUS parking assist-sensor system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (CLEARANCE WARNING ECU BRANCH WIRE)

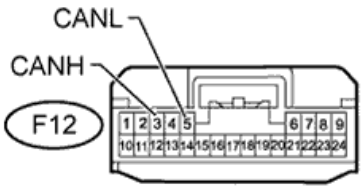
a. Disconnect the F12 clearance warning ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F12-3 (CANH) - F12-5 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Clearance Warning ECU)



NG → REPAIR OR REPLACE CLEARANCE WARNING ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (CLEARANCE WARNING ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F12 clearance warning ECU connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

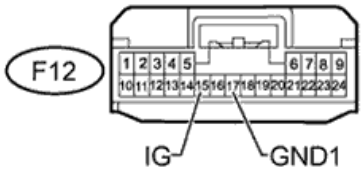
Tester Connection	Condition	Specified Condition
F12-17 (GND1) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F12-15 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Clearance Warning ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE CLEARANCE WARNING ECU ASSEMBLY (Click here)

DTC U0132 Lost Communication with Suspension Control ECU

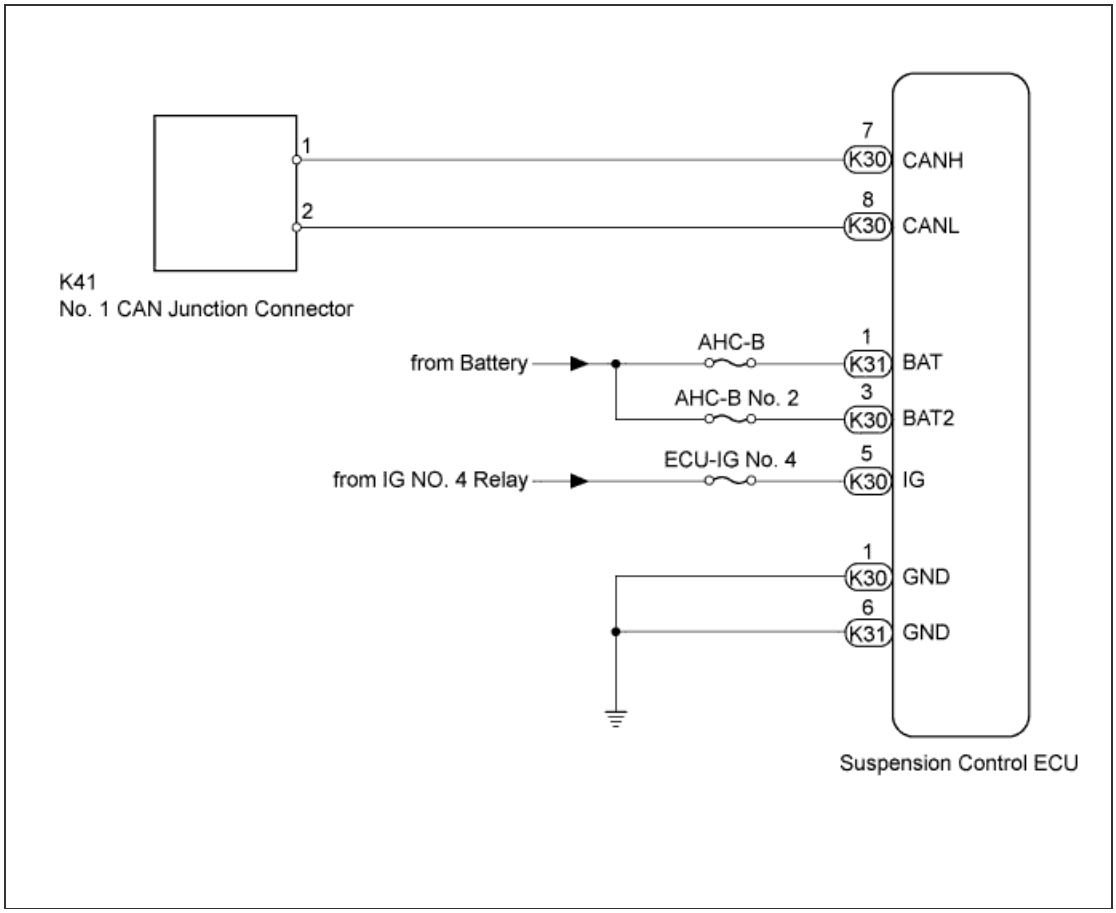
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0132	There is no communication with the suspension control ECU.	• Power source of suspension control ECU • One side of CAN branch wire of other systems • Suspension control ECU • Suspension control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (SUSPENSION CONTROL ECU)

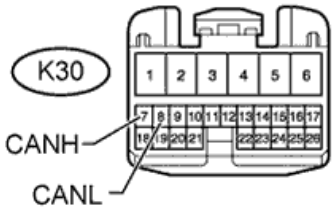
a. Disconnect the K30 suspension control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
K30-7 (CANH) - K30-8 (CANL)	Engine switch on (IG)	54 to 69 Ω

Front view of wire harness connector:
(to Suspension Control ECU)



NG → REPAIR OR REPLACE SUSPENSION CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SUSPENSION CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the K30 and K31 suspension control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

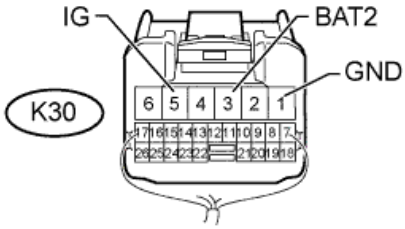
Tester Connection	Condition	Specified Condition
K30-1 (GND) - Body ground	Always	Below 1 Ω
K31-6 (GND) - Body ground		

d. Measure the voltage according to the value(s) in the table below.

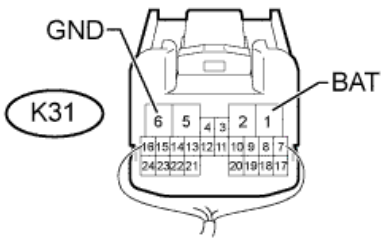
Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
K30-3 (BAT2) - Body ground	Always	11 to 14 V
K31-1 (BAT) - Body ground		
K30-5 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Rear view of wire harness connector:
(to Suspension Control ECU)



Rear view of wire harness connector:
(to Suspension Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE SUSPENSION CONTROL ECU (Click here)

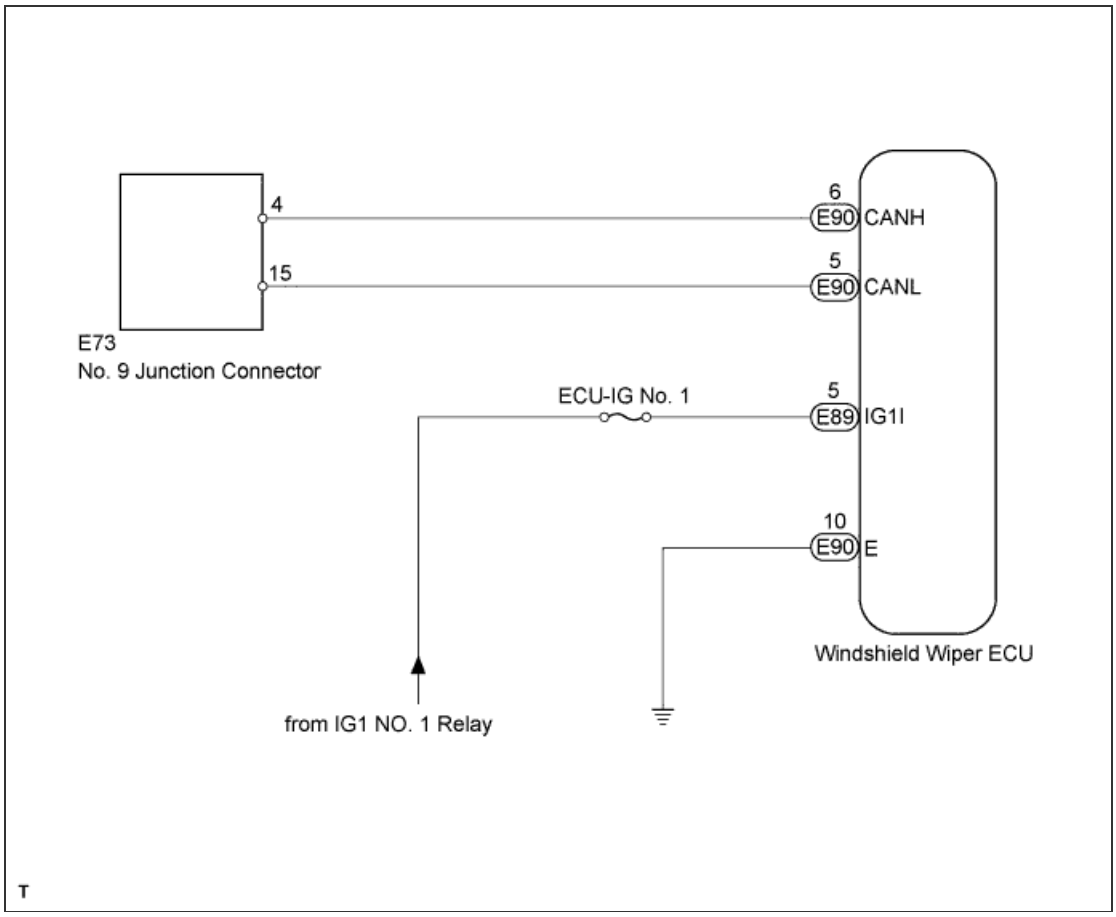
DTC U1111 Lost Communication with Body No. 5 Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1111	There is no communication from the windshield wiper ECU.	• Power source circuit of windshield wiper ECU • Windshield wiper ECU • Windshield wiper ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

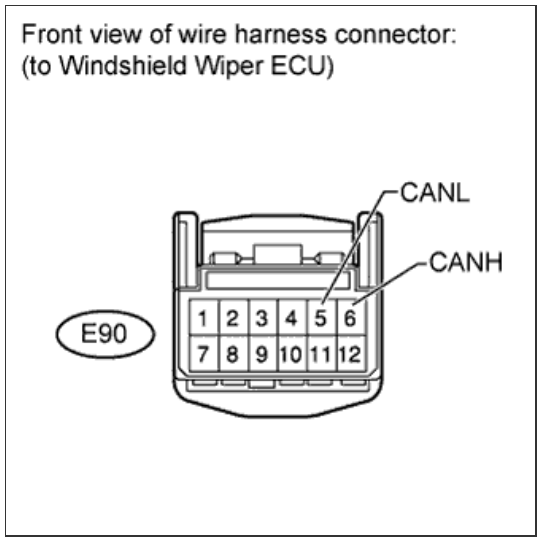
2.CHECK FOR OPEN IN CAN BUS WIRE (WINDSHIELD WIPER ECU BRANCH WIRE)

a. Disconnect the E90 windshield wiper ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE WINDSHIELD WIPER ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (WINDSHIELD WIPER ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E89 and E90 windshield wiper ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

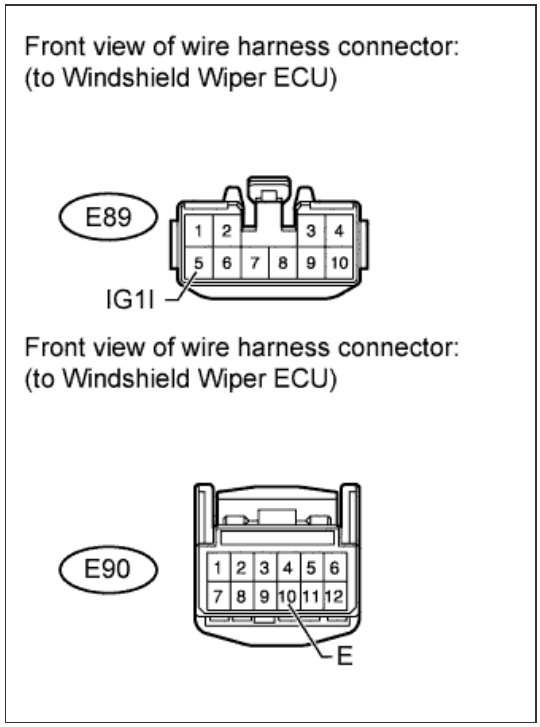
Standard Resistance:

Tester Connection	Condition	Specified Condition
E90-10 (E) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E89-5 (IG1I) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE WINDSHIELD WIPER ECU (Click here)

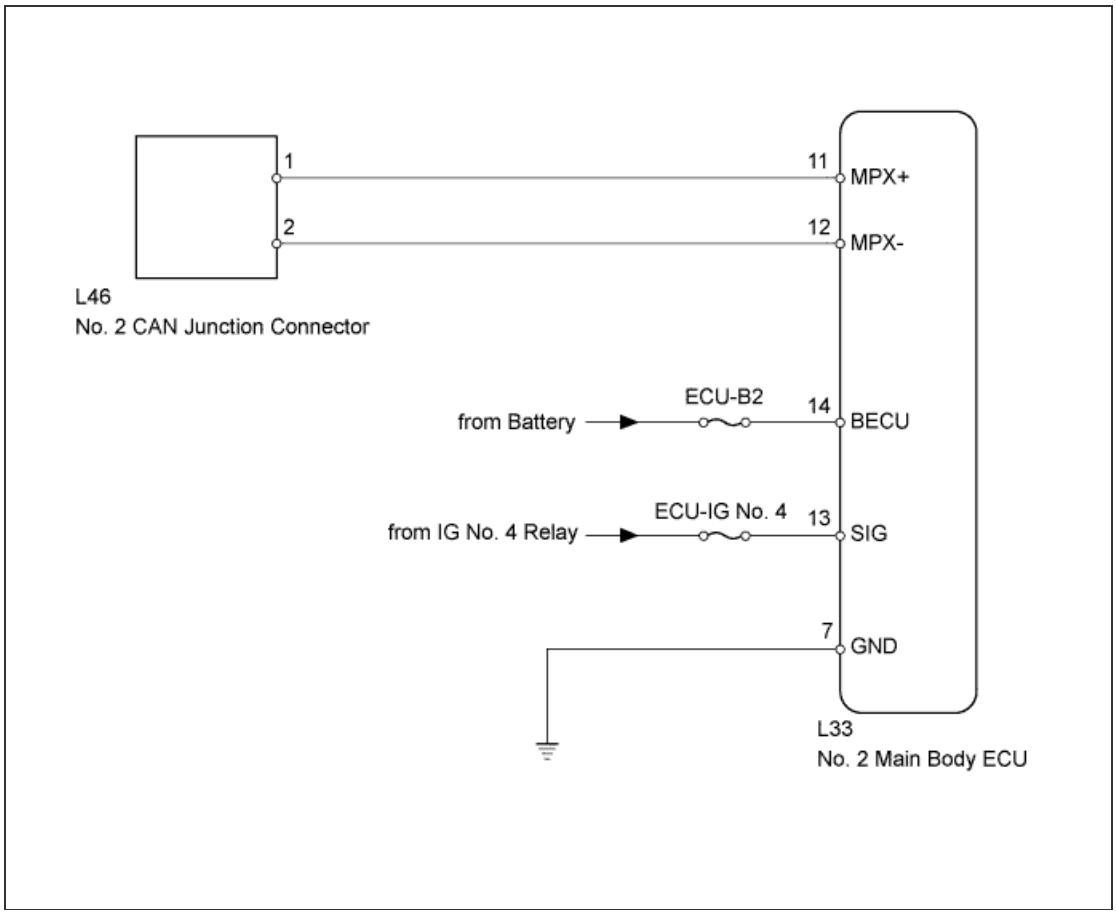
DTC U0141 Lost Communication with Body Control Module "A"

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0141	There is no communication from the No. 2 main body ECU.	• Power source circuit of No. 2 main body ECU • No. 2 main body ECU • No. 2 main body ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

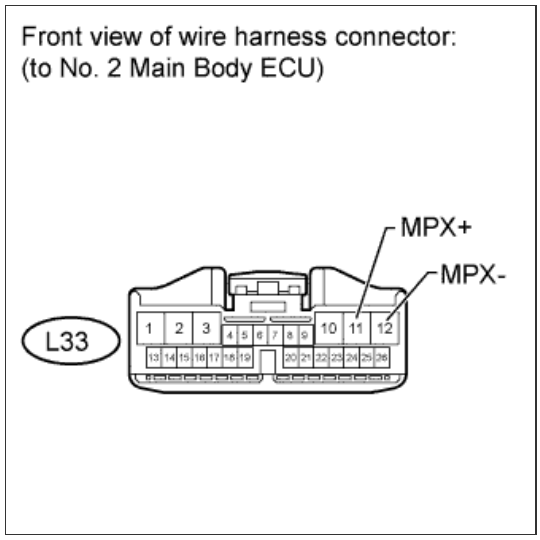
2.CHECK FOR OPEN IN CAN BUS WIRE (REAR JUNCTION BLOCK BRANCH WIRE)

a. Disconnect the L33 No. 2 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE NO. 2 MAIN BODY ECU BRANCH WIRE OR CONNECTOR (MPX+, MPX-)

OK

3.CHECK HARNESS AND CONNECTOR (NO. 2 MULTIPLEX NETWORK BODY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the L33 No. 2 main body ECU connector.

c. Measure the resistance according to the value(s) in the table below.

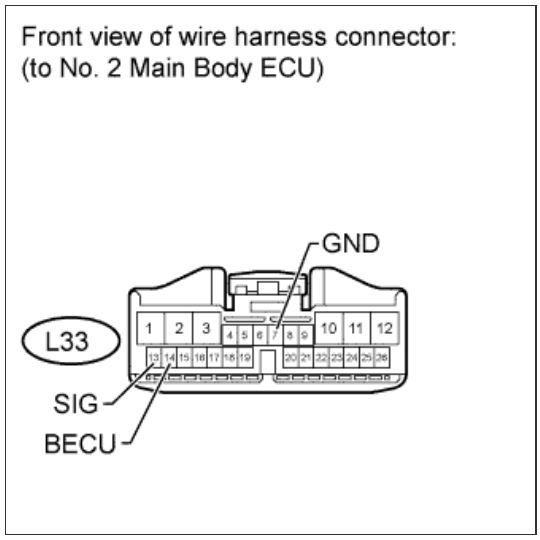
Standard Resistance:

Tester Connection	Condition	Specified Condition
L33-7 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
L33-14 (BECU) - Body ground	Always	11 to 14 V
L33-13 (SIG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE NO. 2 MAIN BODY ECU (Click here)

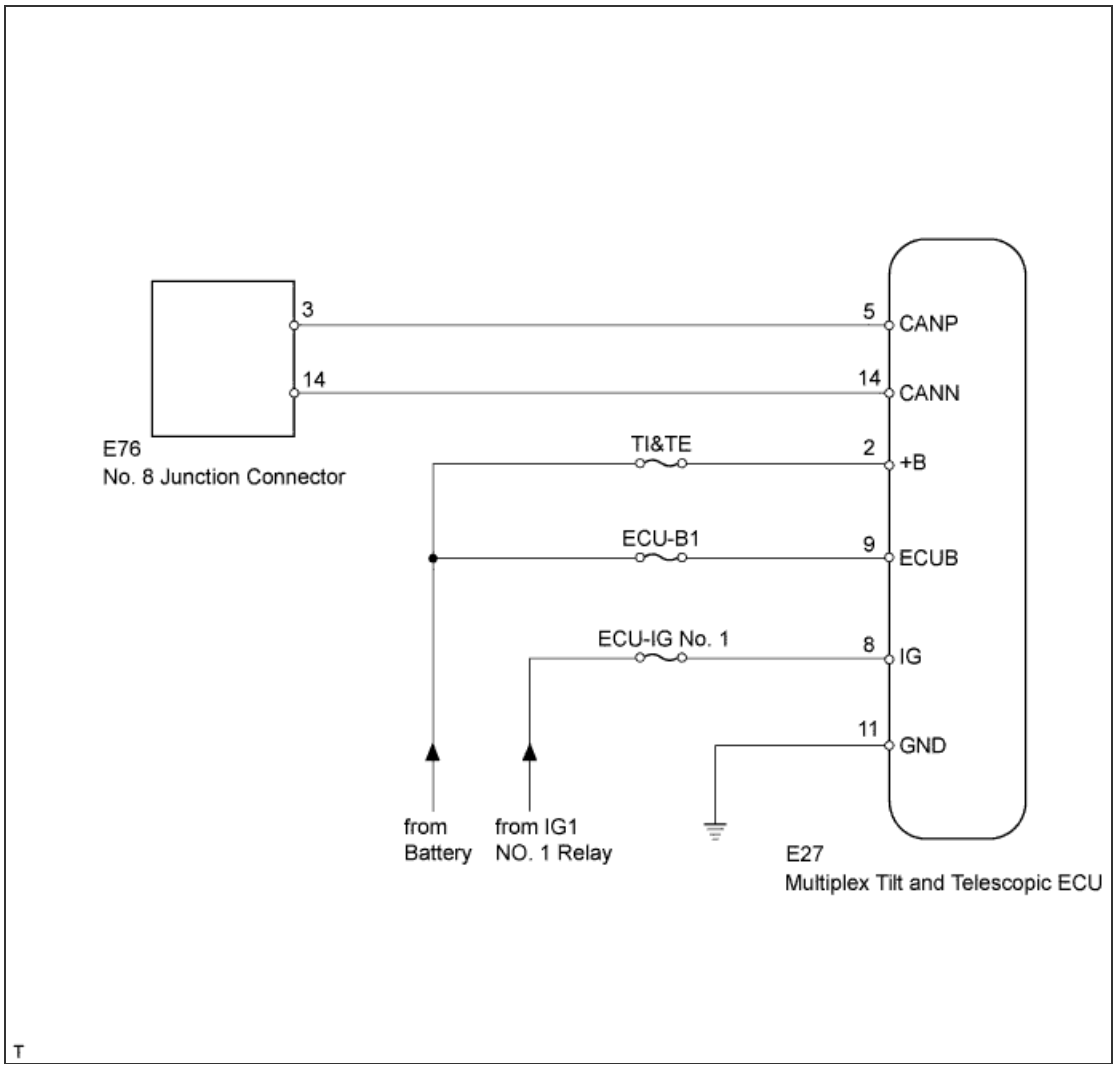
DTC U1115 Lost Communication with Tilt and Telescopic Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1115	There is no communication from the multiplex tilt and telescopic ECU.	• Power source circuit of multiplex tilt and telescopic ECU • Multiplex tilt and telescopic ECU • Multiplex tilt and telescopic ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (MULTIPLEX TILT AND TELESCOPIC ECU BRANCH WIRE)

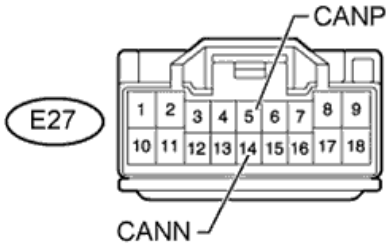
a. Disconnect the E27 multiplex tilt and telescopic ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Multiplex Tilt and Telescopic ECU)



NG → REPAIR OR REPLACE MULTIPLEX TILT AND TELESCOPIC ECU BRANCH WIRE OR CONNECTOR (CANP, CANN)

OK

3.CHECK HARNESS AND CONNECTOR (MULTIPLEX TILT AND TELESCOPIC ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E27 multiplex tilt and telescopic ECU connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

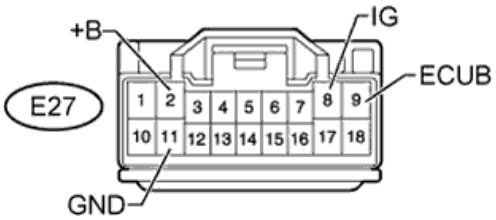
Tester Connection	Condition	Specified Condition
E27-11 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E27-2 (+B) - Body ground	Always	11 to 14 V
E27-9 (ECUB) - Body ground	Always	11 to 14 V
E27-8 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Multiplex Tilt and Telescopic ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE MULTIPLEX TILT AND TELESCOPIC ECU (Click here)

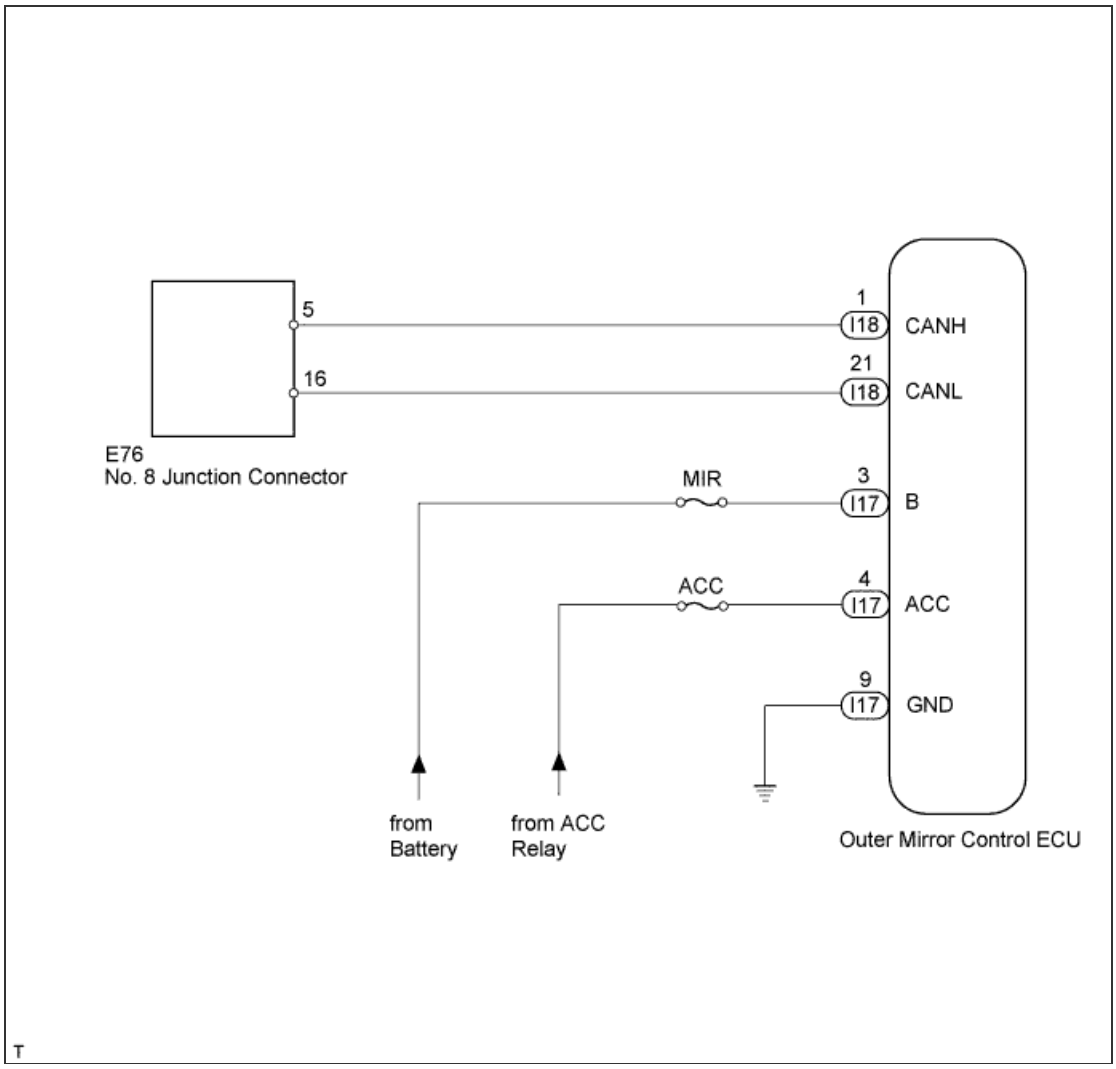
DTC U0199 Lost Communication with "Door Control Module A"

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0199	There is no communication from the outer mirror control ECU.	• Power source circuit of outer mirror control ECU assembly • Outer mirror control ECU assembly • Outer mirror control ECU branch wire or connector assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

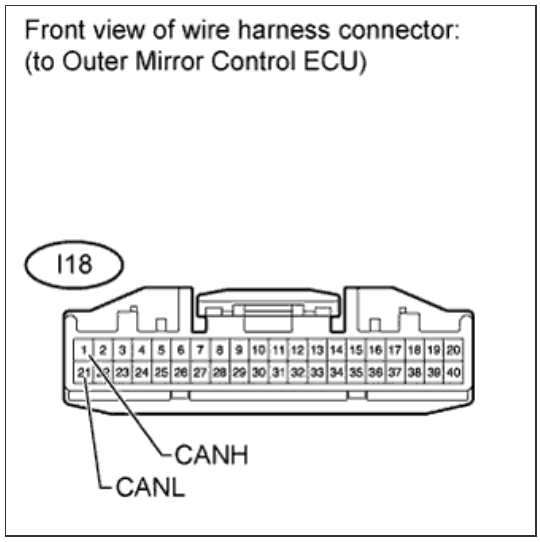
2.CHECK FOR OPEN IN CAN BUS WIRE (OUTER MIRROR CONTROL ECU BRANCH WIRE)

a. Disconnect the I18 outer mirror control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
I18-1 (CANH) - I18-21 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE OUTER MIRROR CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (OUTER MIRROR CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the I17 outer mirror control ECU connector.

c. Measure the resistance according to the value(s) in the table below.

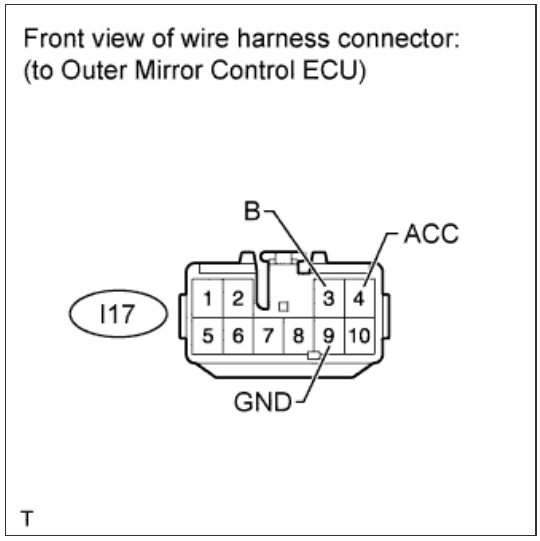
Standard Resistance:

Tester Connection	Condition	Specified Condition
I17-9 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
I17-3 (B) - Body ground	Always	11 to 14 V
I17-4 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY (Click here)

DTC U1126 Lost Communication with Parking Assist ECU

for Preparation Click here

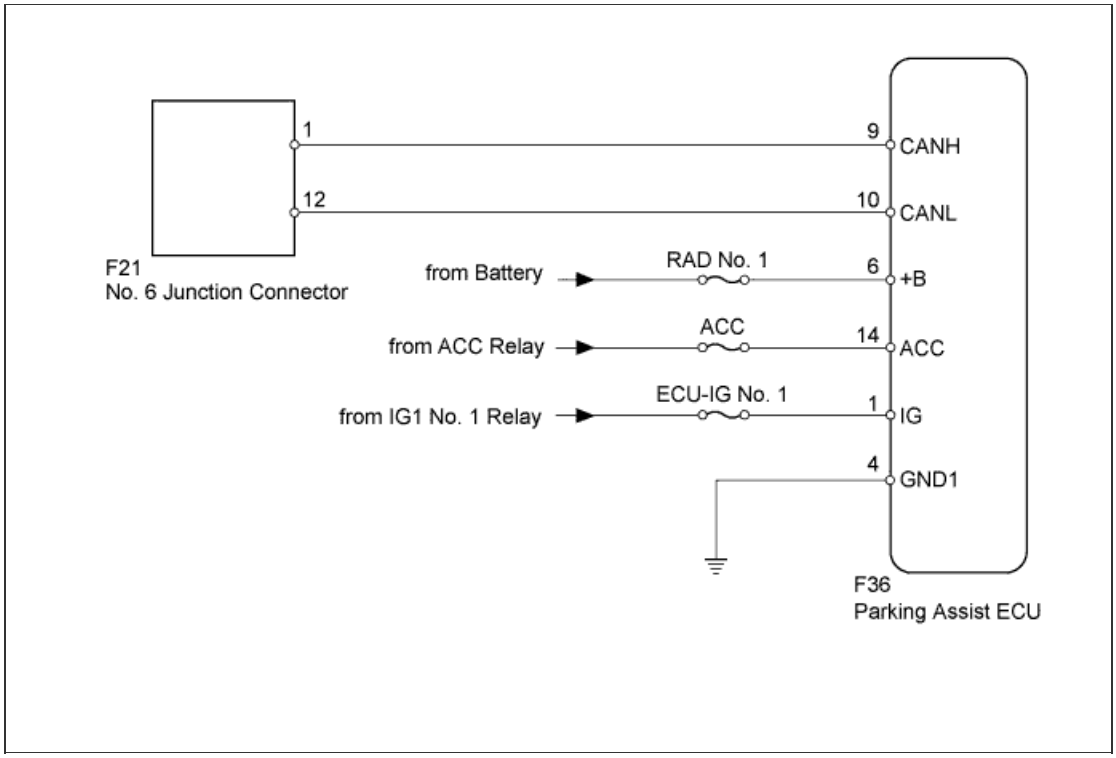
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1126	There is no communication from the parking assist ECU.	• Power source circuit of parking assist ECU • Parking assist ECU • Parking assist ECU branch wire or connector

HINT:

For vehicles with the parking assist monitor system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

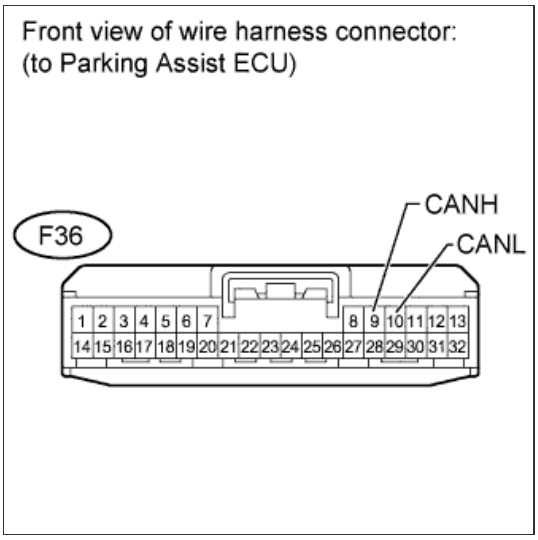
2.CHECK FOR OPEN IN CAN BUS WIRE (PARKING ASSIST ECU BRANCH WIRE)

a. Disconnect the F36 parking assist ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F36-9 (CANH) - F36-10 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE PARKING ASSIST ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F36 parking assist ECU connector.

c. Measure the resistance according to the value(s) in the table below.

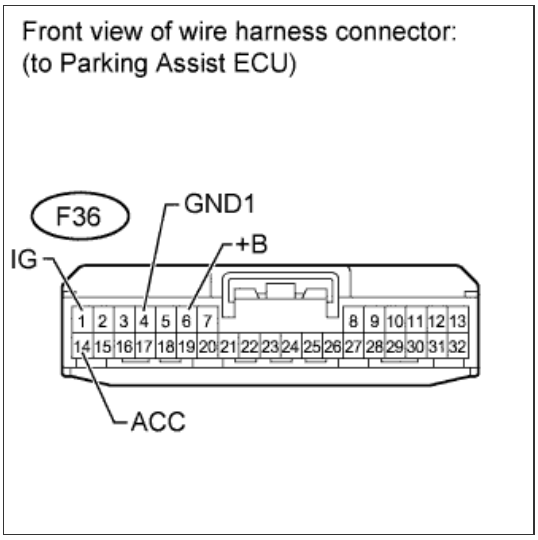
Standard Resistance:

Tester Connection	Condition	Specified Condition
F36-4 (GND1) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F36-6 (+B) - Body ground	Always	11 to 14 V
F36-14 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V
F36-1 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE PARKING ASSIST ECU (Click here)

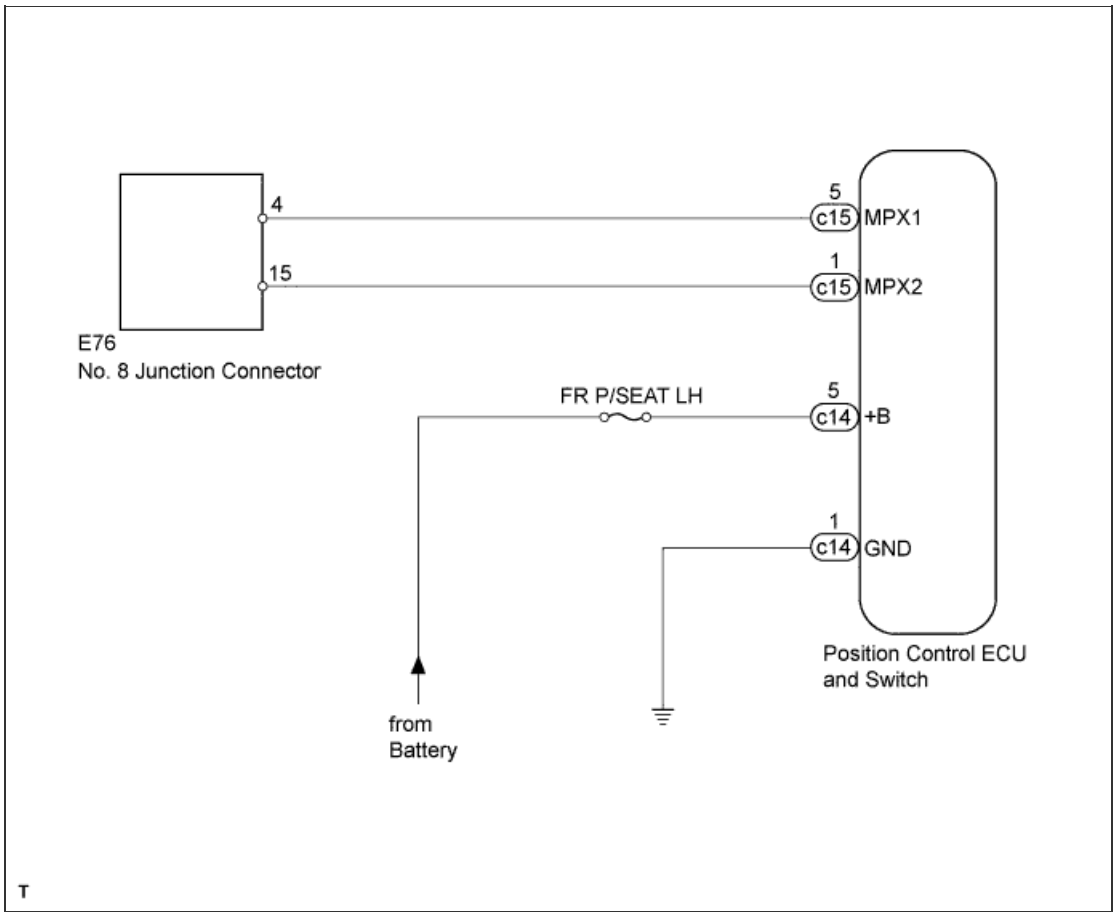
DTC U0208 Lost Communication with "Seat Control Module A"

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0208	There is no communication from the position control ECU and switch.	• Power source circuit of position control ECU and switch assembly • Position control ECU and switch assembly • Position control ECU and switch branch wire or connector assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (POSITION CONTROL ECU AND SWITCH BRANCH WIRE)

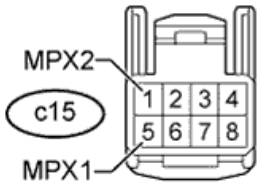
a. Disconnect the c15 position control ECU and switch connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
c15-5 (MPX1) - c15-1 (MPX2)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Position Control ECU and Switch)



NG → REPAIR OR REPLACE POSITION CONTROL ECU AND SWITCH BRANCH WIRE OR CONNECTOR (MPX1, MPX2)

OK

3.CHECK HARNESS AND CONNECTOR (POSITION CONTROL ECU AND SWITCH - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the c14 position control ECU and switch connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

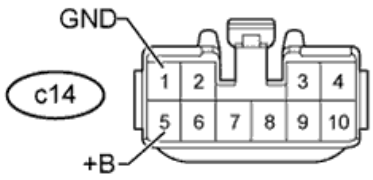
Tester Connection	Condition	Specified Condition
c14-1 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
c14-5 (+B) - Body ground	Always	11 to 14 V

Front view of wire harness connector:
(to Position Control ECU and Switch)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

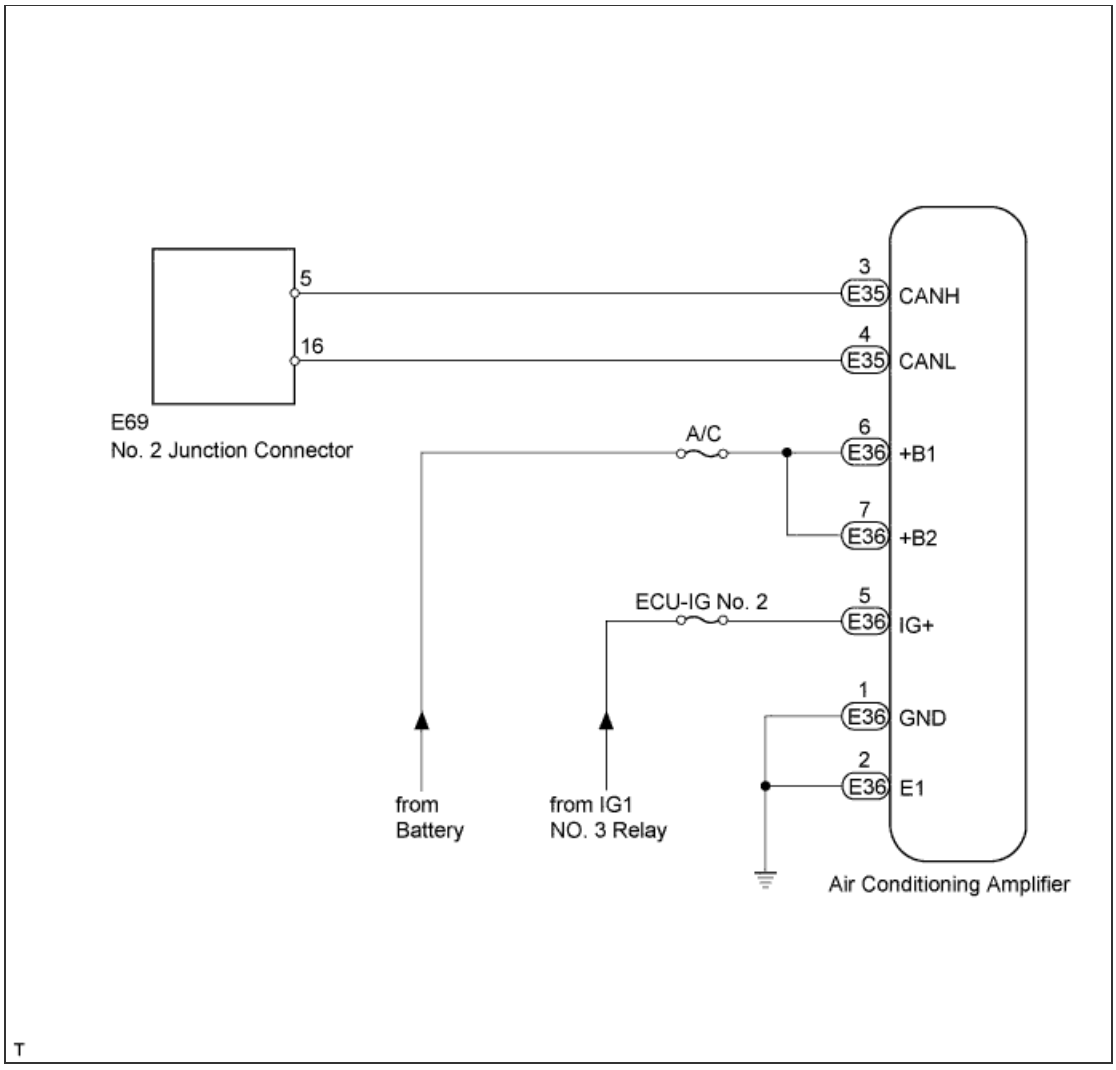
REPLACE POSITION CONTROL ECU AND SWITCH ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Air Conditioning Amplifier Communication Stop Mode	When either condition below is met: • "Air Conditioner" is not displayed on "Bus Check". • Applies to "Air Conditioning Amplifier Communication Stop Mode" in "DTC Combination Table".	• Power source or inside air conditioning amplifier assembly • Air conditioning amplifier branch wire or connector • Air conditioning amplifier assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

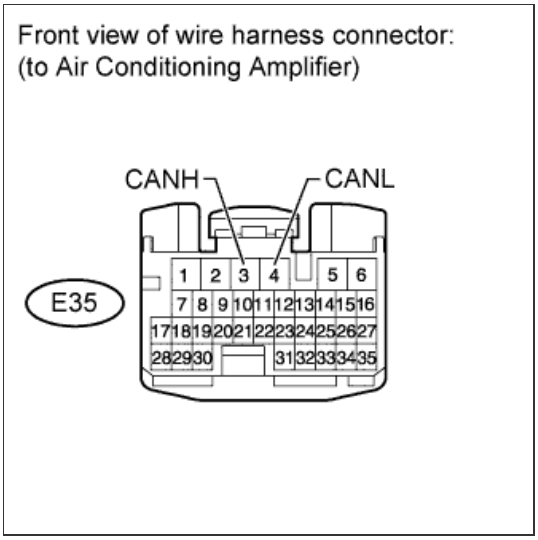
2.CHECK FOR OPEN IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER BRANCH WIRE)

a. Disconnect the E35 air conditioning amplifier connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE AIR CONDITIONING AMPLIFIER BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (AIR CONDITIONING AMPLIFIER - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E36 air conditioning amplifier connector.

c. Measure the resistance according to the value(s) in the table below.

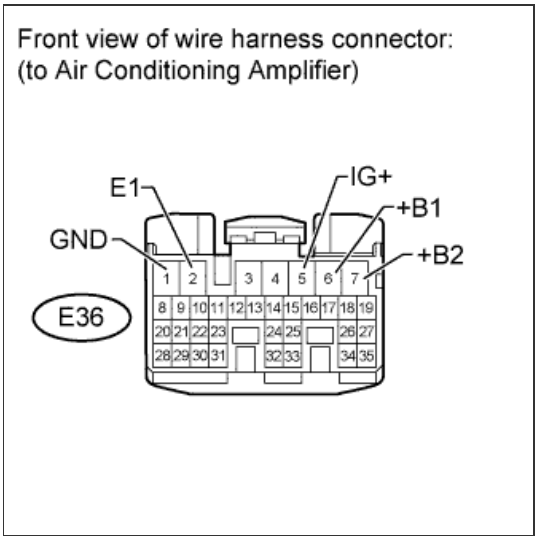
Standard Resistance:

Tester Connection	Condition	Specified Condition
E36-1 (GND) - Body ground	Always	Below 1 Ω
E36-2 (E1) - Body ground		

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E36-6 (+B1) - Body ground	Always	11 to 14 V
E36-7 (+B2) - Body ground		
E36-5 (IG+) - Body	Engine switch on	



ground	(IG)	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

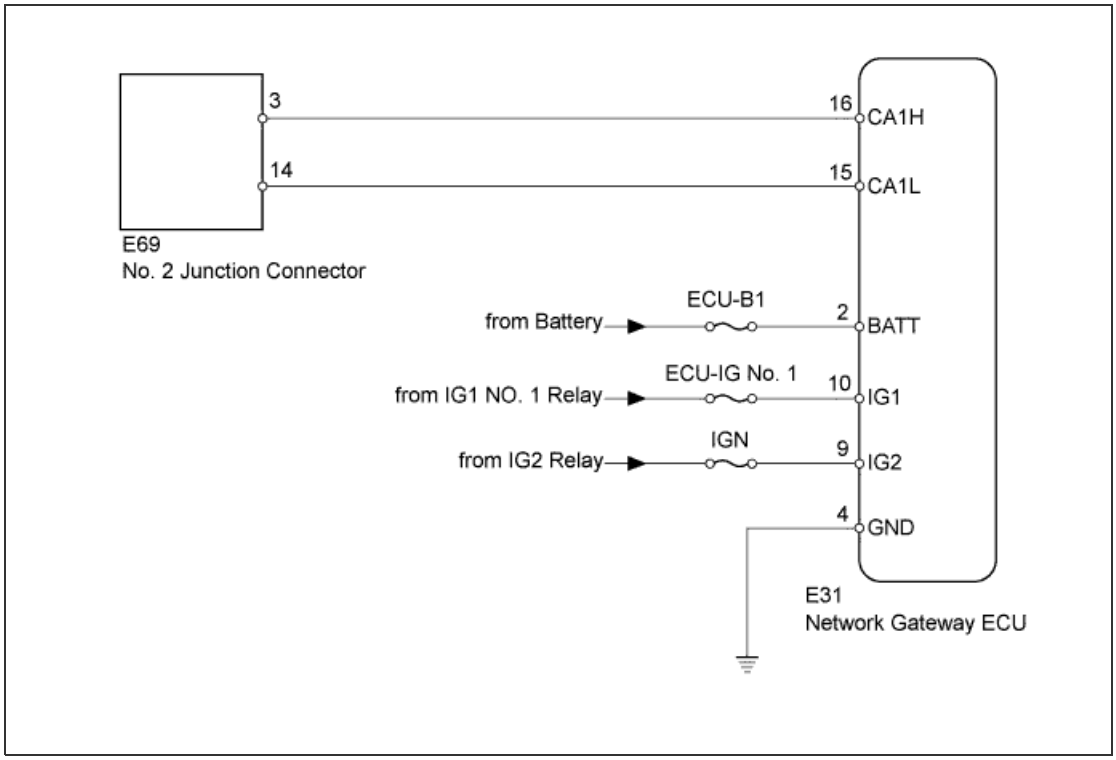
REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Gateway ECU Communication Stop Mode	When either condition below is met: • "CAN Gateway" is not displayed on "Bus Check". • Applies to "Gateway Communication Stop Mode" in "DTC Combination Table".	• Power source or inside network gateway ECU • Network gateway ECU main wire or connector • Network gateway ECU

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

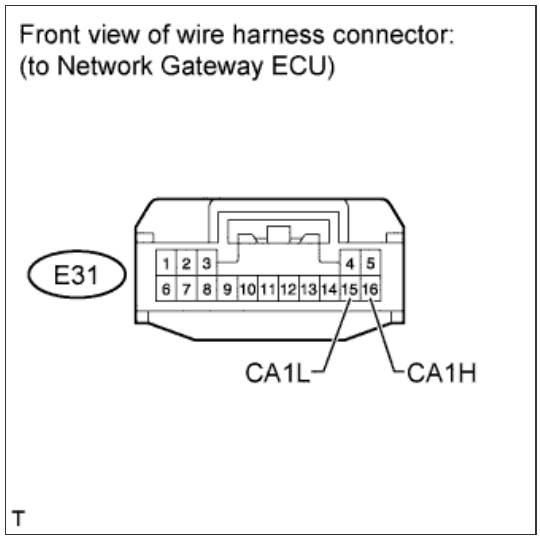
2.CHECK FOR OPEN IN CAN BUS WIRE (NETWORK GATEWAY ECU BRANCH WIRE)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE NETWORK GATEWAY ECU BRANCH WIRE OR CONNECTOR (CA1H, CA1L)

OK

3.CHECK HARNESS AND CONNECTOR (NETWORK GATEWAY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E31 network gateway ECU connector.

c. Measure the resistance according to the value(s) in the table below.

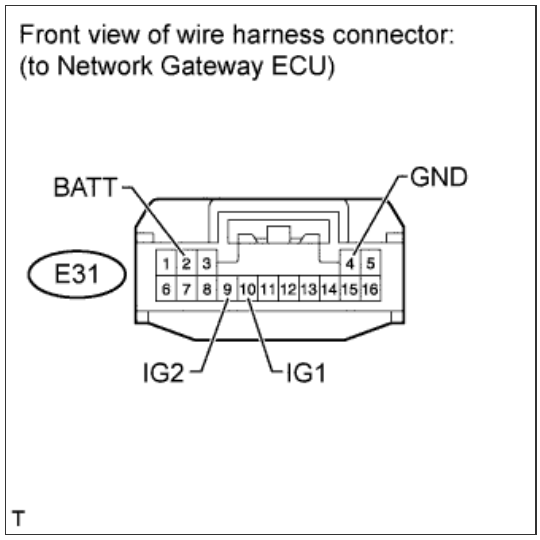
Standard Resistance:

Tester Connection	Condition	Specified Condition
E31-4 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E31-2 (BATT) - Body ground	Always	11 to 14 V
E31-10 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V
E31-9 (IG2) - Body ground		



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

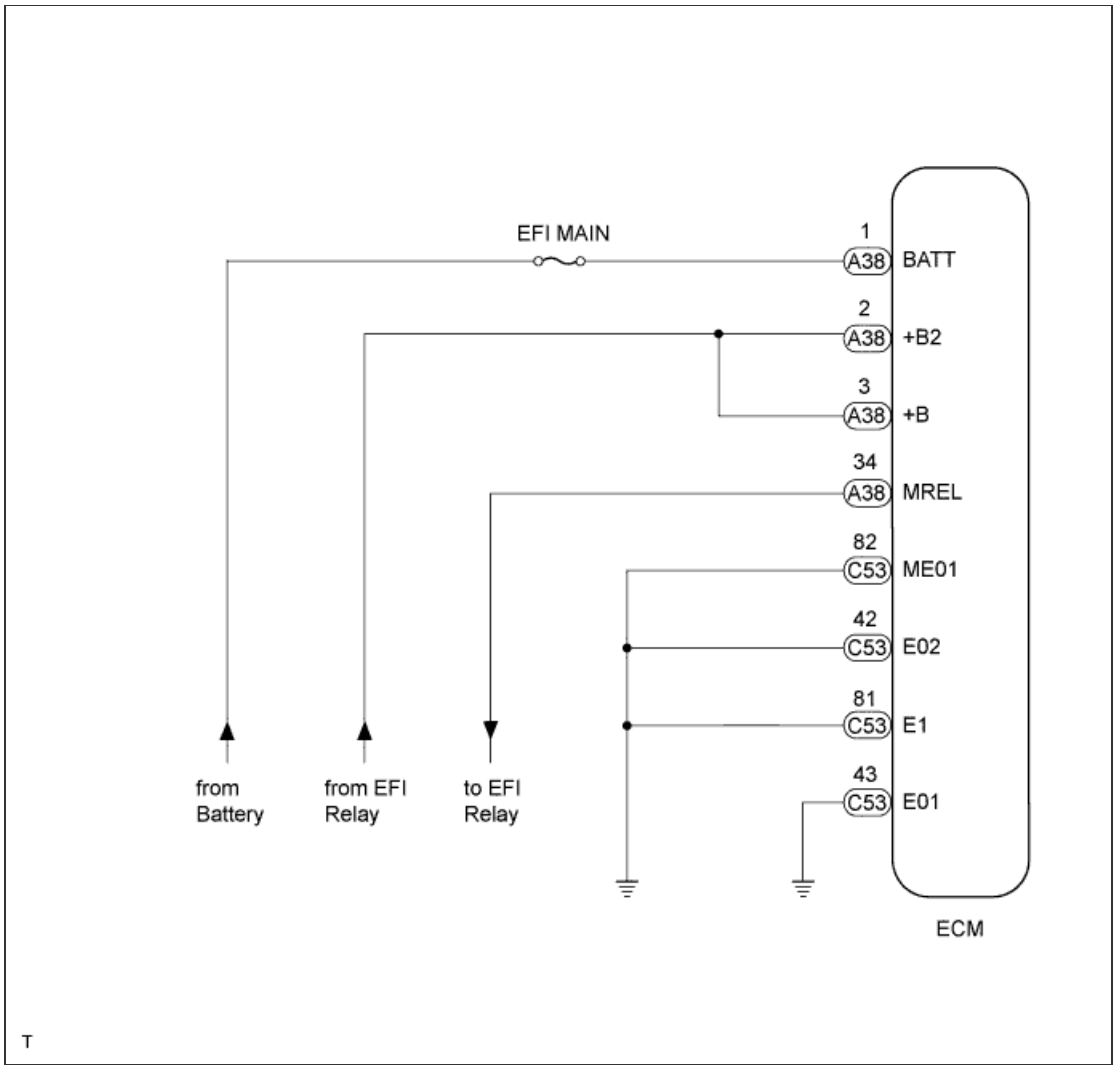
REPLACE NETWORK GATEWAY ECU (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
ECM Communication Stop Mode	When either condition below is met: • "Engine" is not displayed on "Bus Check". • Applies to "ECM Communication Stop Mode" in "DTC Combination Table".	• Power source or ECM • ECM main wire or connector • ECM

WIRING DIAGRAM

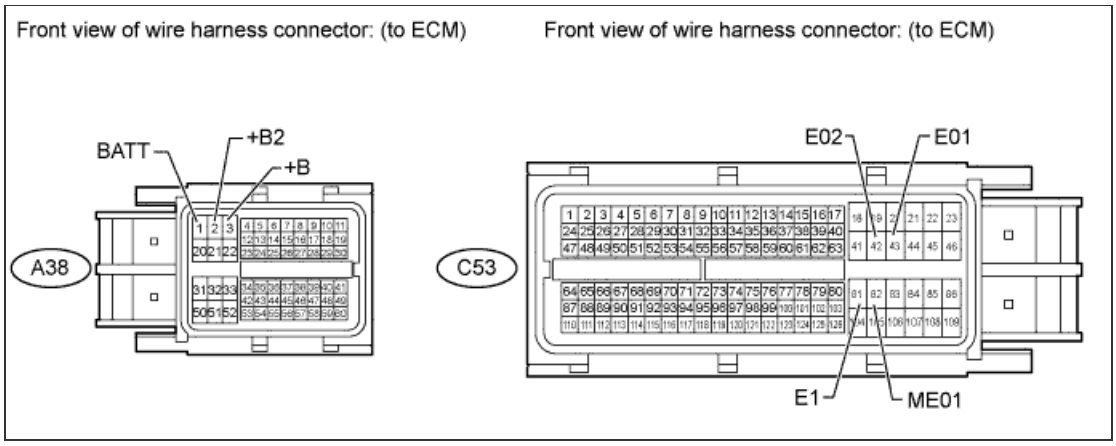


INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.CHECK HARNESS AND CONNECTOR (ECM - BATTERY AND BODY GROUND)



a. Disconnect the A38 and C53 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
C53-81 (E1) - Body ground	Always	Below 1 Ω
C53-42 (E02) - Body ground		
C53-43 (E01) - Body ground		
C53-82 (ME01) - Body ground		

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
A38-1 (BATT) - Body ground	Always	11 to 14 V
A38-2 (+B2) - Body ground	When battery positive (+) voltage is applied to terminal A38-34 (MREL)	
A38-3 (+B) - Body ground		

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

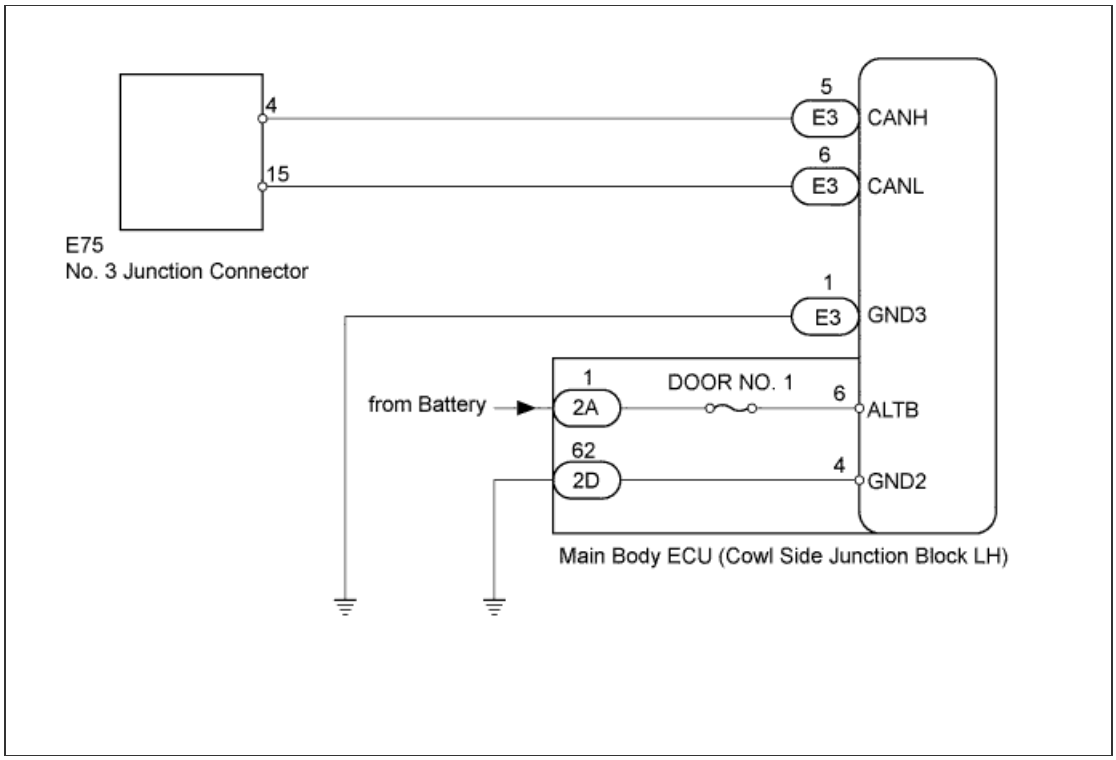
REPLACE ECM (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Main Body ECU Communication Stop Mode	When either condition below is met: • "Main Body" is not displayed on "Bus Check". • Applies to "Main Body ECU Communication Stop Mode" in "DTC Combination Table"	• Power source or inside main body ECU (cowl side junction block LH) • Main body ECU (cowl side junction block LH) branch wire or connector • Main body ECU (cowl side junction block LH)

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

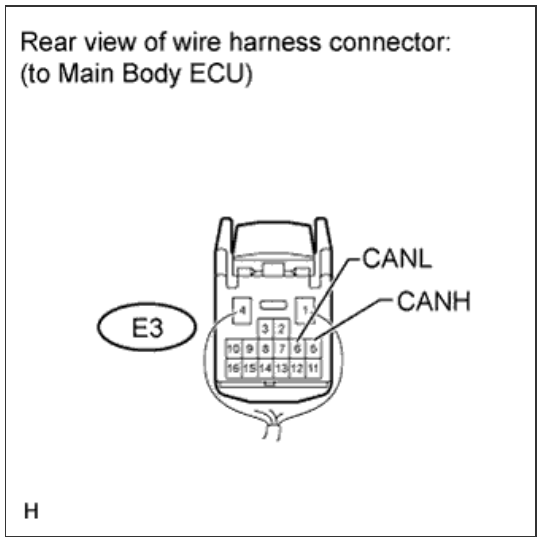
2.CHECK FOR OPEN IN CAN BUS WIRE (MAIN BODY ECU BRANCH WIRE)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE MAIN BODY ECU BRANCH WIRE OR CONNECTOR (COWL SIDE JUNCTION BLOCK) (CANH, CANL)

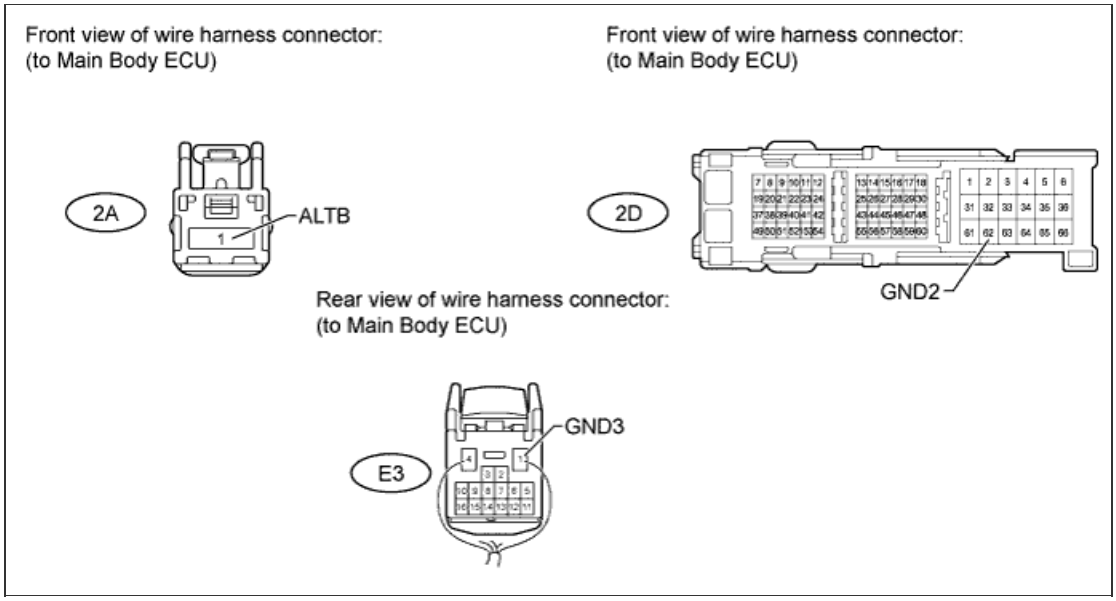
OK

3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).



b. Disconnect the 2A and 2D main body ECU (cowl side junction block LH) connectors.

c. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

d. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
2D-62 (GND2) - Body ground	Always	Below 1 Ω
E3-1 (GND3) - Body ground	Always	Below 1 Ω

e. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
2A-1 (ALTB) - Body ground	Always	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

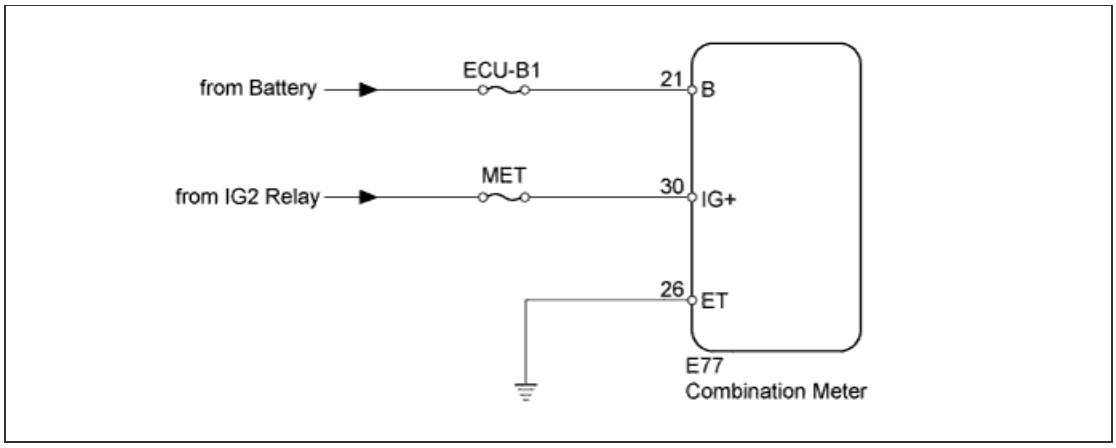
OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Combination Meter ECU Communication Stop Mode	When either condition below is met: • "Combination Meter" is not displayed on "Bus Check". • Applies to "Combination Meter ECU Communication Stop Mode" in "DTC Combination Table".	• Power source or inside combination meter assembly • Combination meter assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.CHECK HARNESS AND CONNECTOR (COMBINATION METER - BATTERY AND BODY GROUND)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

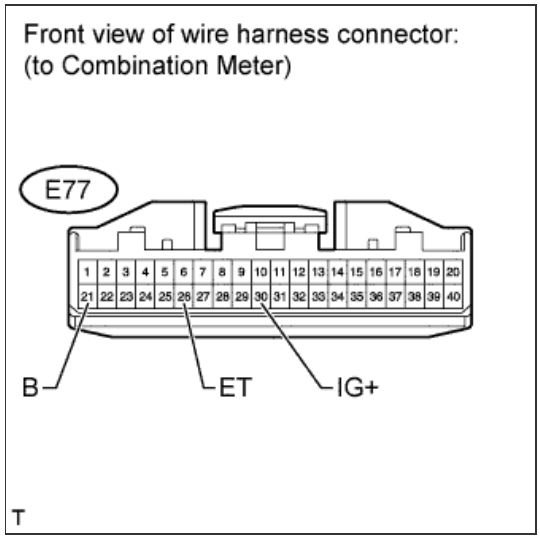
Standard Resistance:

Tester Connection	Condition	Specified Condition
E77-26 (ET) - Body ground	Always	Below 1 Ω

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E77-21 (B) - Body ground	Always	11 to 14 V
E77-30 (IG+) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

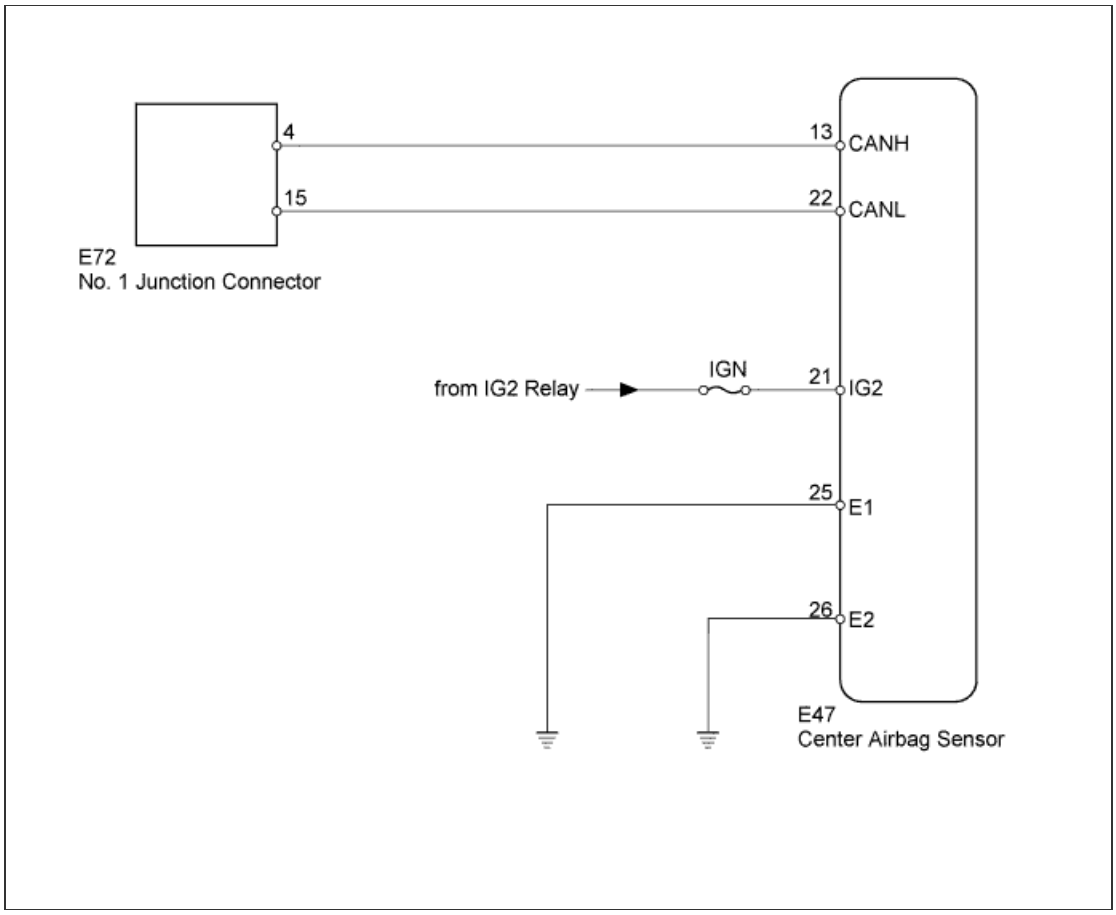
REPLACE COMBINATION METER ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Center Airbag Sensor Communication Stop Mode	When either condition below is met: • "SRS Airbag" is not displayed on "Bus Check". • Applies to "Center Airbag Sensor Communication Stop Mode" in "DTC Combination Table".	• Power source or center airbag sensor assembly • Center airbag sensor branch wire or connector • Center airbag sensor assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

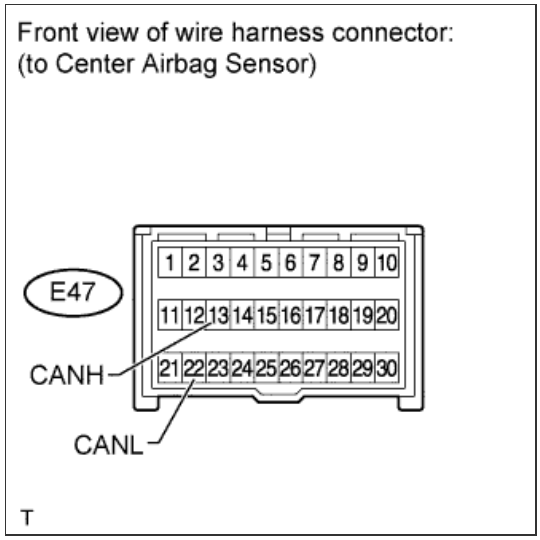
2.CHECK FOR OPEN IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CENTER AIRBAG SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (CENTER AIRBAG SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

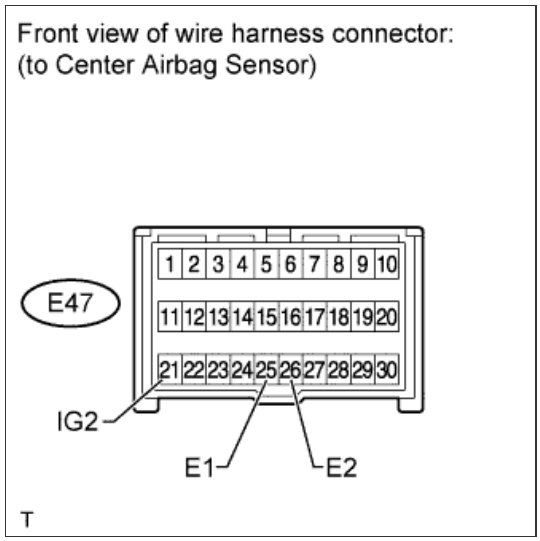
When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E47 center airbag sensor connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E47-25 (E1) - Body ground	Always	Below 1 Ω
E47-26 (E2) - Body ground		



d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E47-21 (IG2) - Body ground	Engine switch on (IG)	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

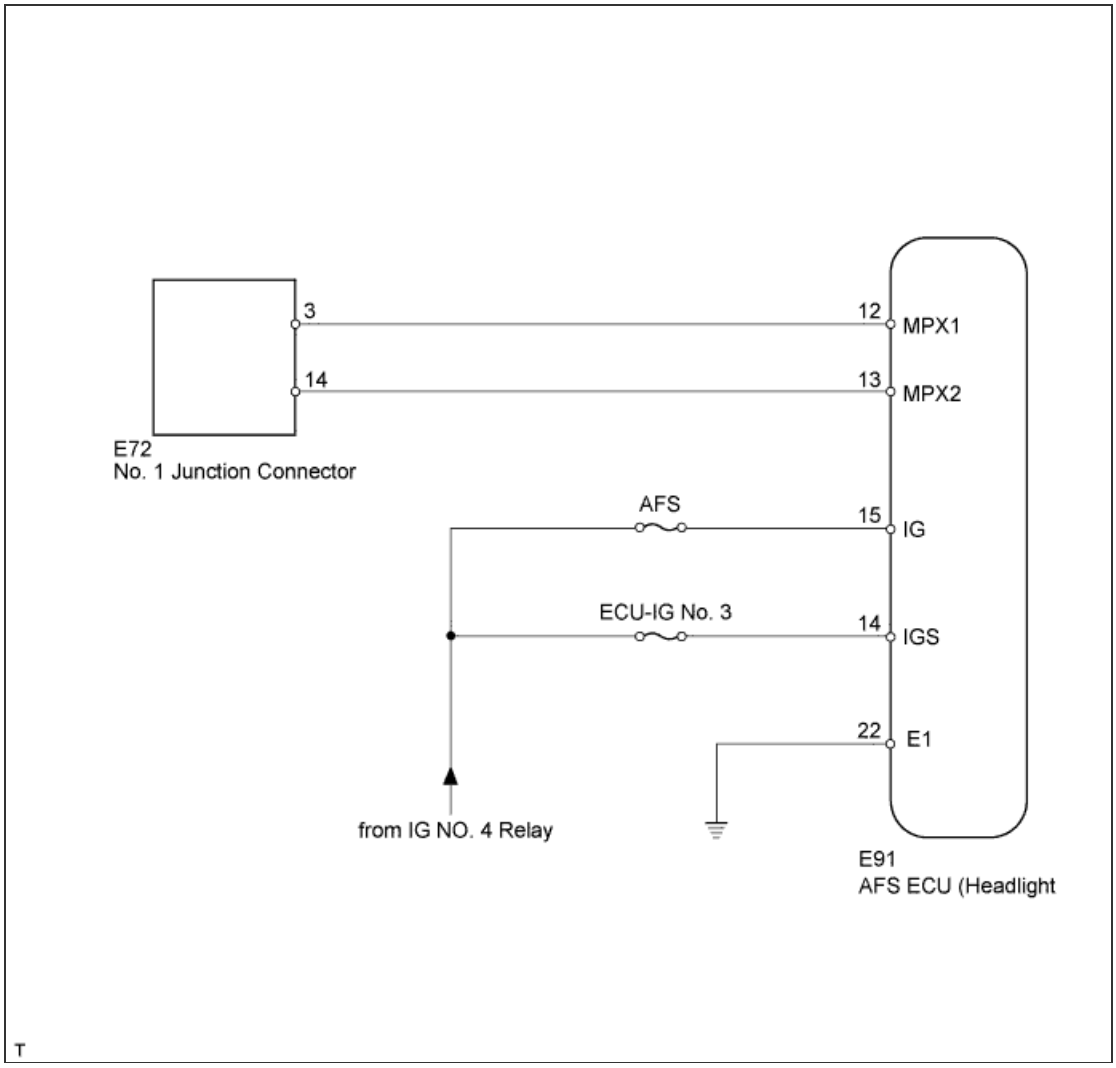
REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
AFS ECU Communication Stop Mode	When either condition below is met: • "AFS/HL AutoLeveling" is not displayed on "Bus Check". • Applies to "AFS ECU Communication Stop Mode" in "DTC Combination Table".	• Power source or inside AFS ECU (headlight swivel ECU assembly) • AFS ECU (headlight swivel ECU assembly) branch wire or connector • AFS ECU (headlight swivel ECU assembly)

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

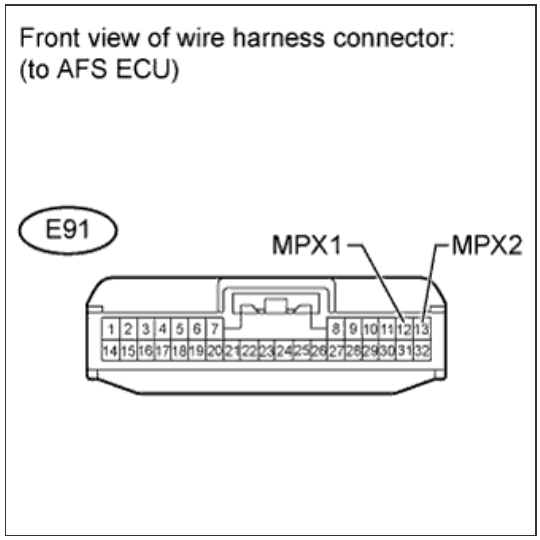
2.CHECK FOR OPEN IN CAN BUS WIRE (AFS ECU BRANCH WIRE)

a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	Engine switch off	54 to 69 Ω



NG → **REPAIR OR REPLACE AFS ECU BRANCH WIRE OR CONNECTOR (MPX1, MPX2)**

OK

3.CHECK HARNESS AND CONNECTOR (AFS ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

c. Measure the resistance according to the value(s) in the table below.

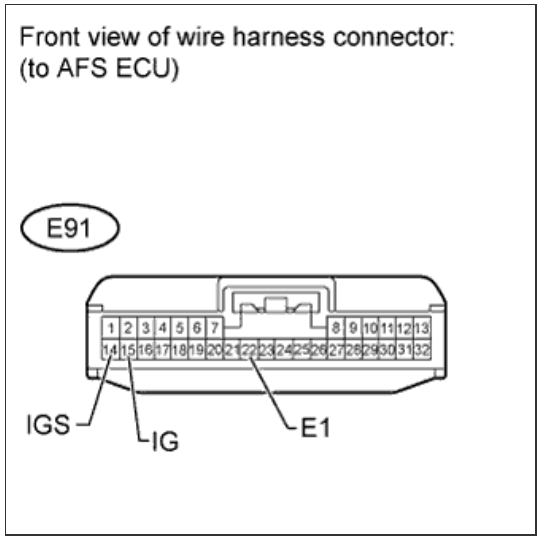
Standard Resistance:

Tester Connection	Condition	Specified Condition
E91-22 (E1) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E91-15 (IG) - Body ground	Engine switch on (IG)	11 to 14 V
E91-14 (IGS) - Body ground	Engine switch on (IG)	11 to 14 V



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

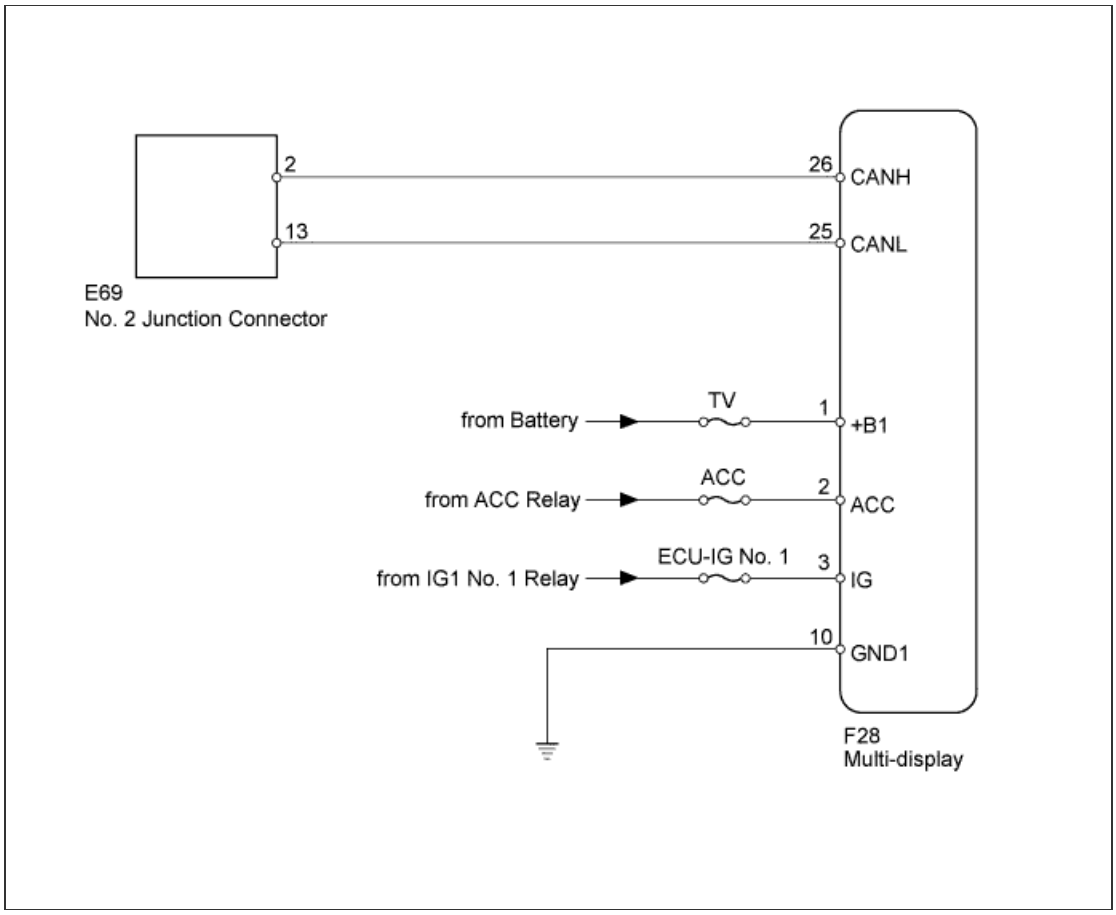
REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Display and Navigation Assembly Communication Stop Mode	When either condition below is met: • "AVN" is not displayed on "Bus Check". • Applies to "Display and Navigation Assembly Communication Stop Mode" in "DTC Combination Table".	• Power source or inside display and multi-display • Multi-display branch wire or connector • Multi-display

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

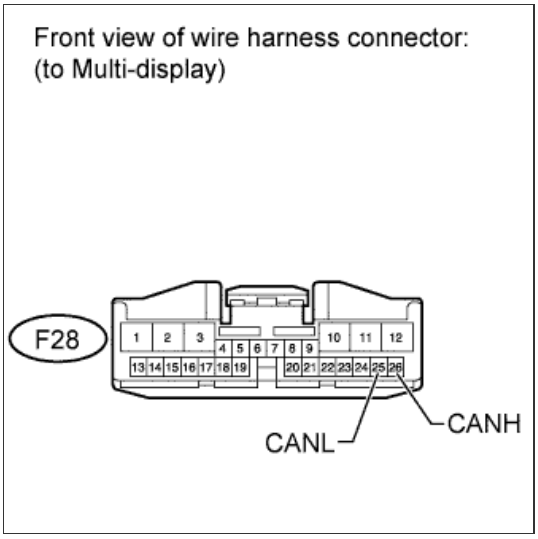
2.CHECK FOR OPEN IN CAN BUS WIRE (MULTI-DISPLAY BRANCH WIRE)

a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F28-26 (CANH) - F28-25 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE MULTI-DISPLAY BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (MULTI-DISPLAY - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

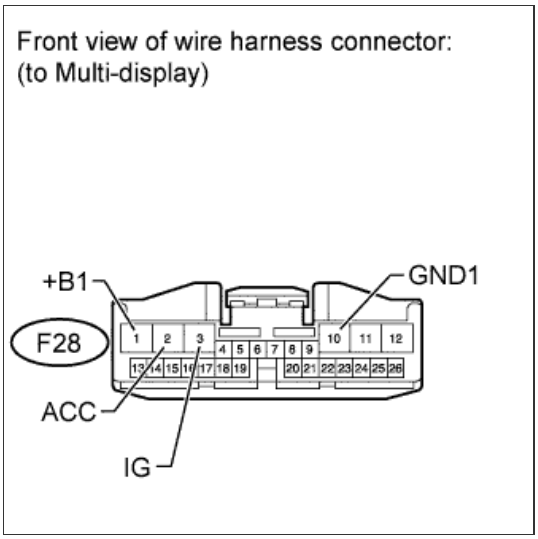
When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F28 multi-display connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
F28-10 (GND1) - Body ground	Always	Below 1 Ω



d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F28-1 (+B1) - Body ground	Always	11 to 14 V
F28-2 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V
F28-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B

NG	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE HARNESS OR CONNECTOR

A

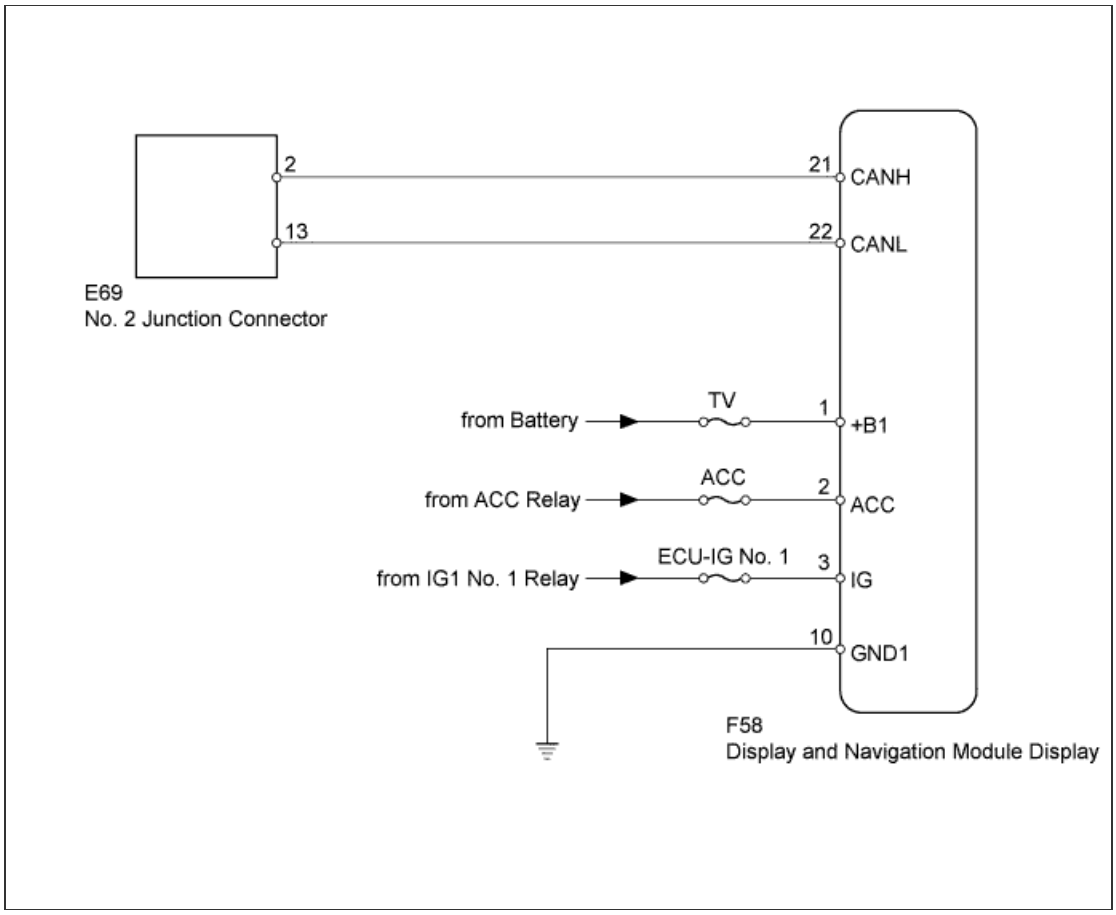
REPLACE MULTI-DISPLAY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Display and Navigation Assembly Communication Stop Mode	When either condition below is met: • "AVN1" is not displayed on "Bus Check". • Applies to "Display and Navigation Assembly Communication Stop Mode" in "DTC Combination Table".	• Power source or inside display and display and navigation module display • Display and navigation module display branch wire or connector • Display and navigation module display

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

NOTICE:

Inspect the fuses for circuits related to this system before performing the following inspection procedure.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY BRANCH WIRE)

a. Disconnect the F58 display and navigation module display connector.

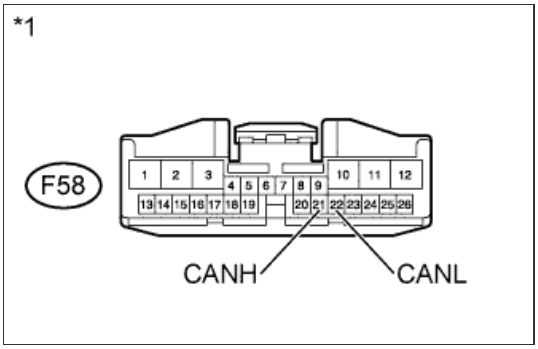
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F58-21 (CANH) - F58-22 (CANL)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to Display and Navigation Module Display)



NG → REPAIR OR REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (DISPLAY AND NAVIGATION DISPLAY - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F58 display and navigation module display connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
F58-10 (GND1) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

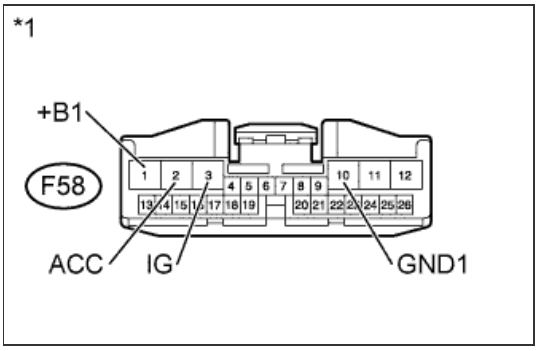
Tester Connection	Switch Condition	Specified Condition
F58-1 (+B1) - Body ground	Always	11 to 14 V
F58-2 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V
F58-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Text in Illustration

*1	Front view of wire harness connector (to Display and Navigation Module Display)

Result

Result	Proceed to



OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C

B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE HARNESS OR CONNECTOR

A → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

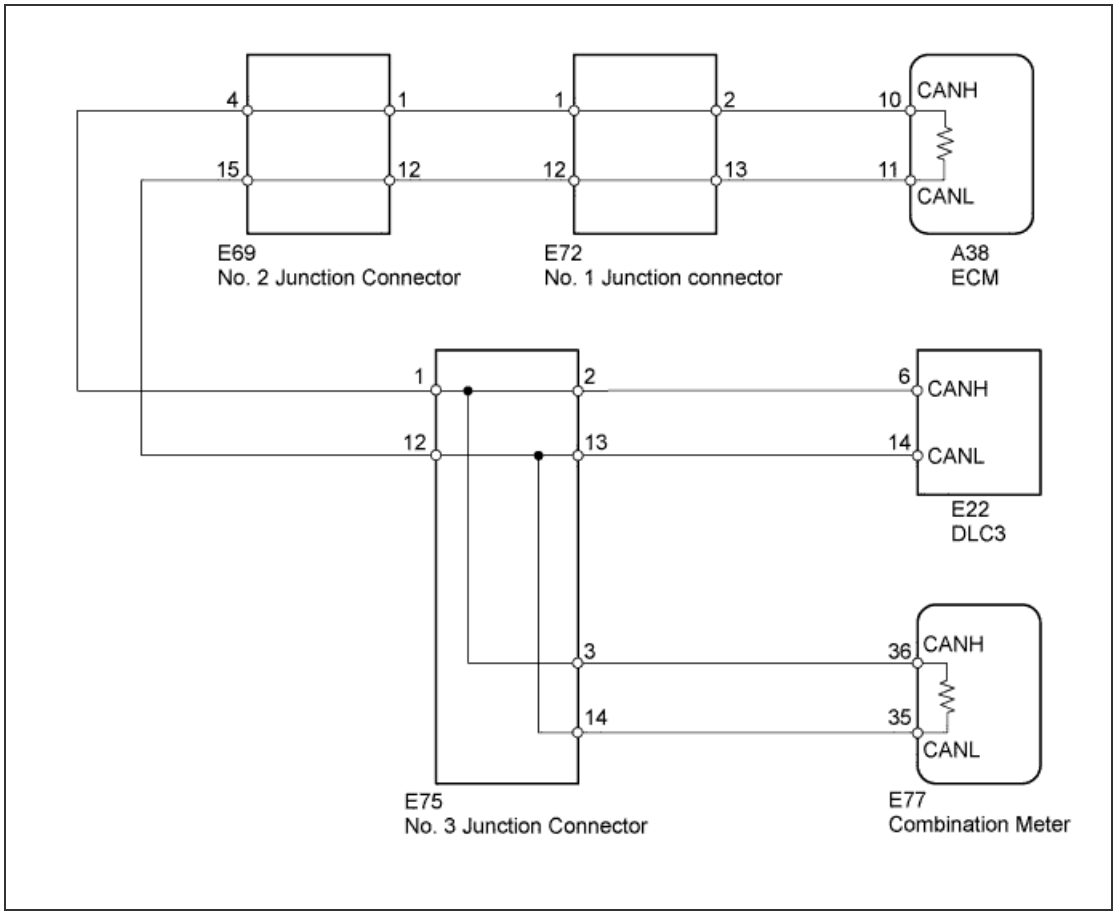
for Preparation Click here

DESCRIPTION

There may be an open circuit in the CAN main wire and/or DLC3 branch wire when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or higher.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of DLC3 is 69 Ω or higher.	• CAN main wire and connector • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector • ECM • Combination meter assembly • DLC3 branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

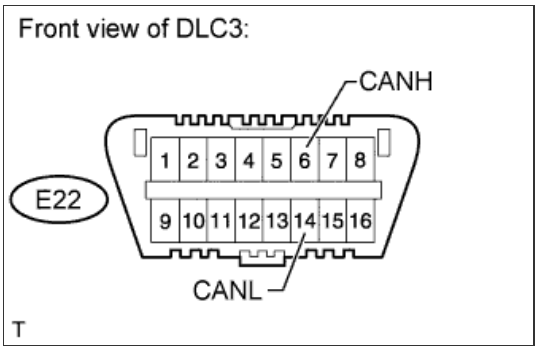
NEXT

2.CHECK DLC3

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω	OK
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	132 Ω or higher	NG



NOTICE:

When the measured value is 132 Ω or higher and a CAN communication system diagnostic trouble code is output, there may be a fault besides disconnection of the DLC3 branch wire. For that reason, troubleshooting should be performed again from "How to Proceed with Troubleshooting" (Click here) after repairing the trouble area.

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

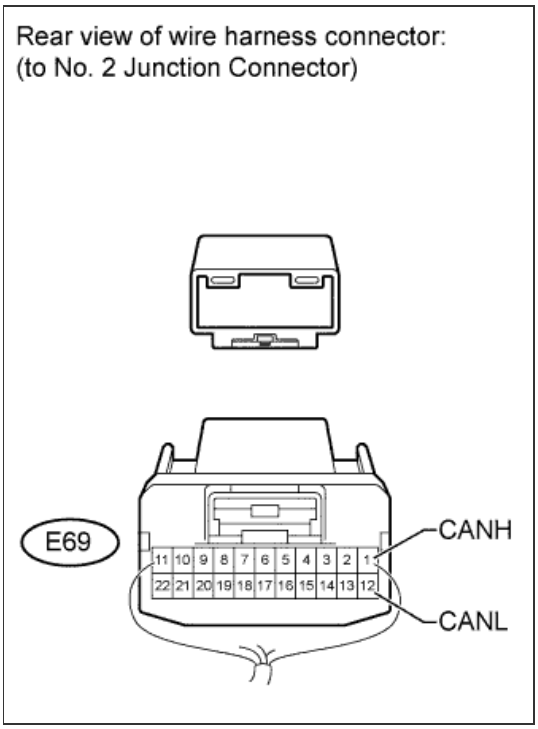
3.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - ECM)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-1 (CANH) - E69-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 5

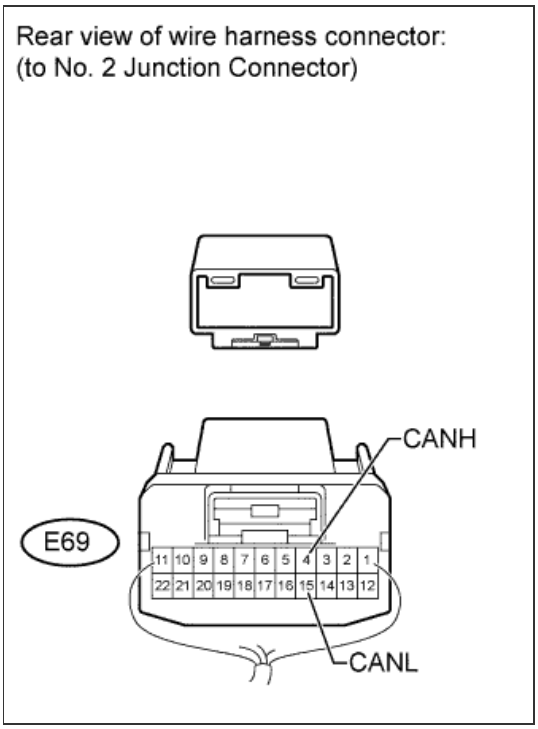
OK

4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-4 (CANH) - E69-15 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPLACE NO. 2 JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

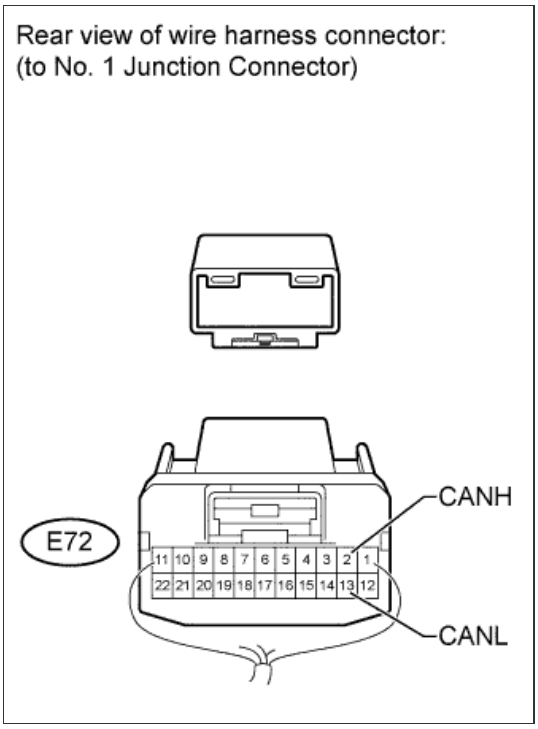
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

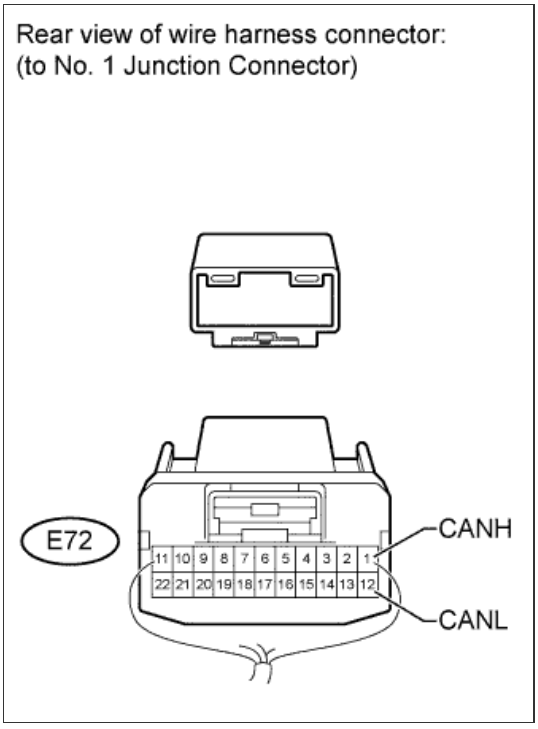
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-1 (CANH) - E72-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

REPLACE NO. 1 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (ECM - NO. 1 JUNCTION CONNECTOR)

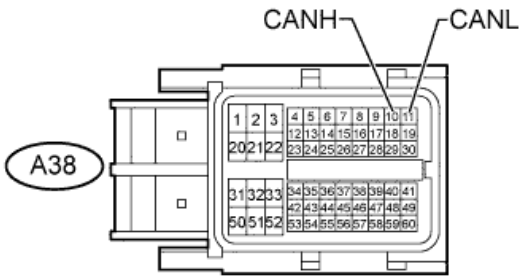
a. Disconnect the A38 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A38-10 (CANH) - A38-11 (CANL)	Engine switch off	108 to 132 Ω

Front view of wire harness connector:
(to ECM)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (ECM - NO. 1 JUNCTION CONNECTOR)

OK

REPLACE ECM (Click here)

10.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

11.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

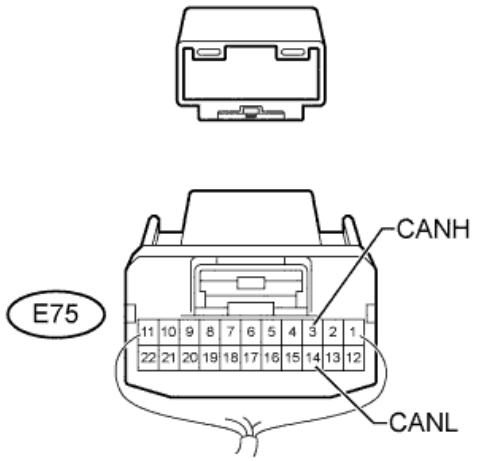
a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 3 Junction Connector)



NG → Go to step 13

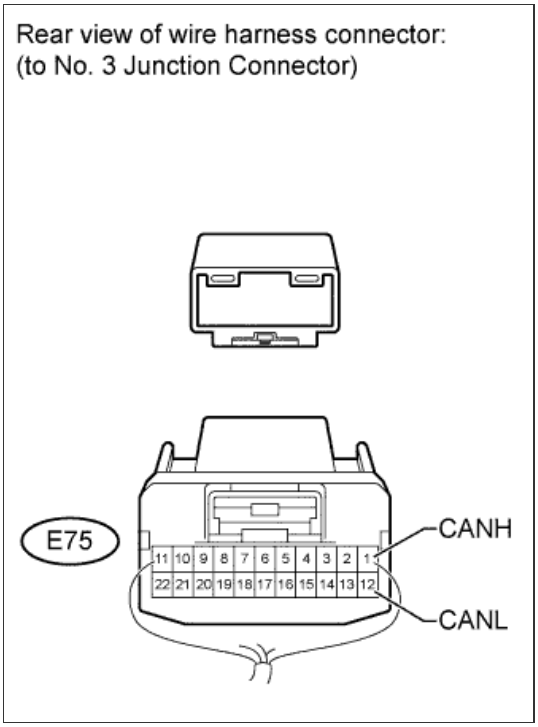
OK

12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE NO. 3 JUNCTION CONNECTOR

13.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

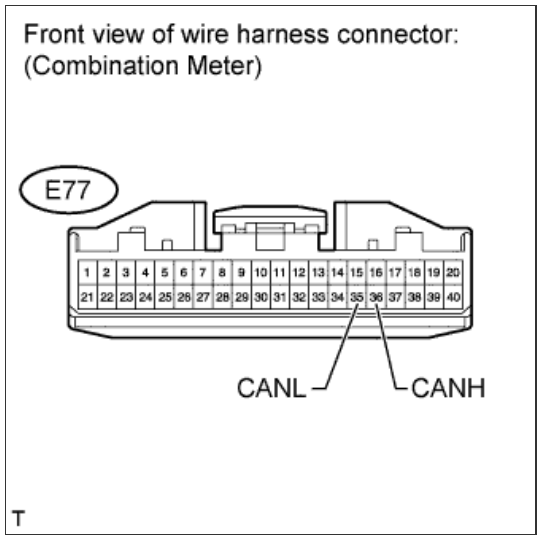
14.CHECK FOR OPEN IN CAN BUS MAIN WIRE (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

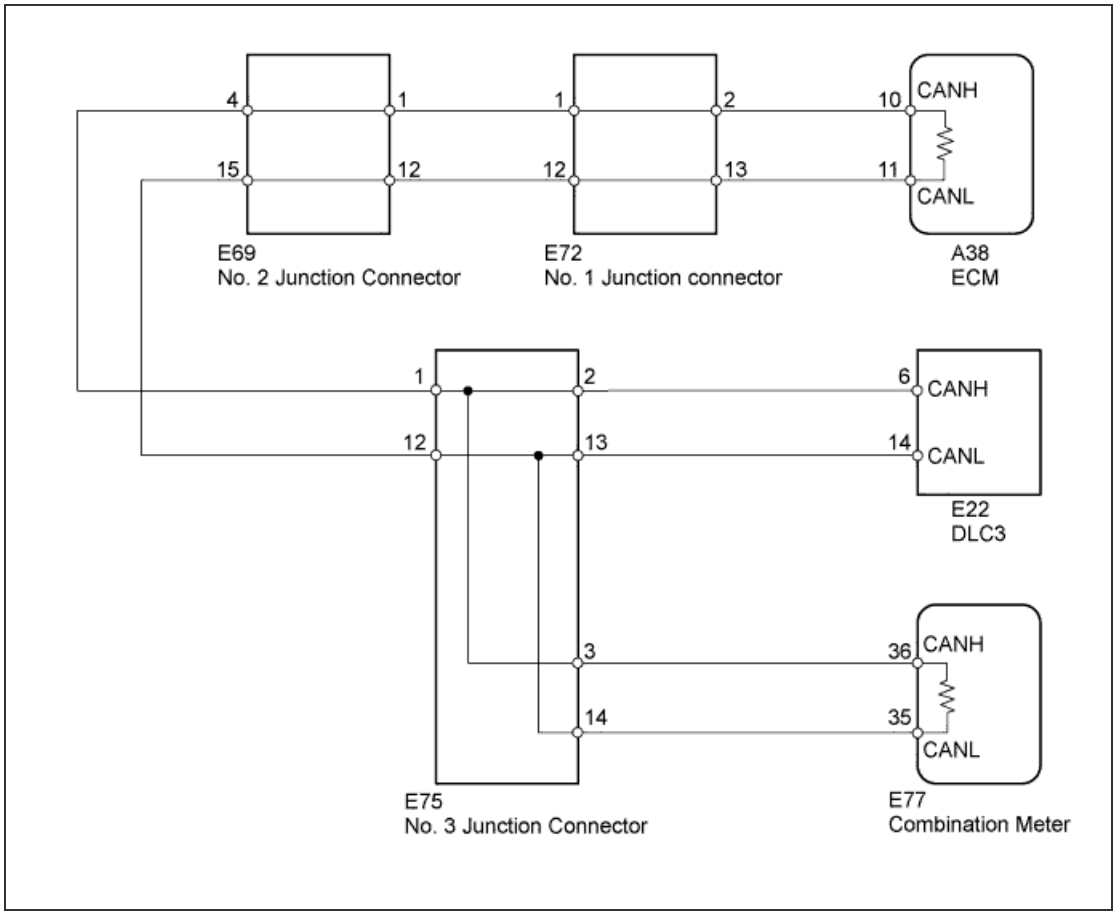
for Preparation Click here

DESCRIPTION

There may be an open circuit in the CAN main wire and/or DLC3 branch wire when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or higher.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of DLC3 is 69 Ω or higher.	• CAN main wire and connector • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector • ECM • Combination meter assembly • DLC3 branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

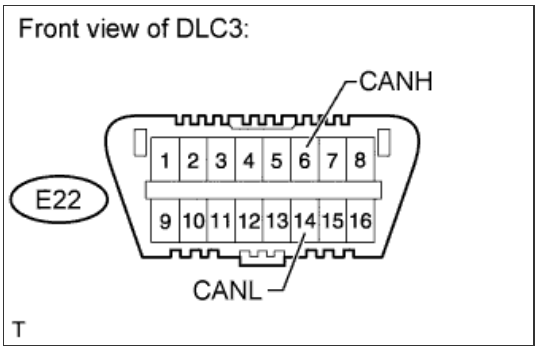
NEXT

2.CHECK DLC3

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω	OK
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	132 Ω or higher	NG



NOTICE:

When the measured value is 132 Ω or higher and a CAN communication system diagnostic trouble code is output, there may be a fault besides disconnection of the DLC3 branch wire. For that reason, troubleshooting should be performed again from "How to Proceed with Troubleshooting" (Click here) after repairing the trouble area.

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

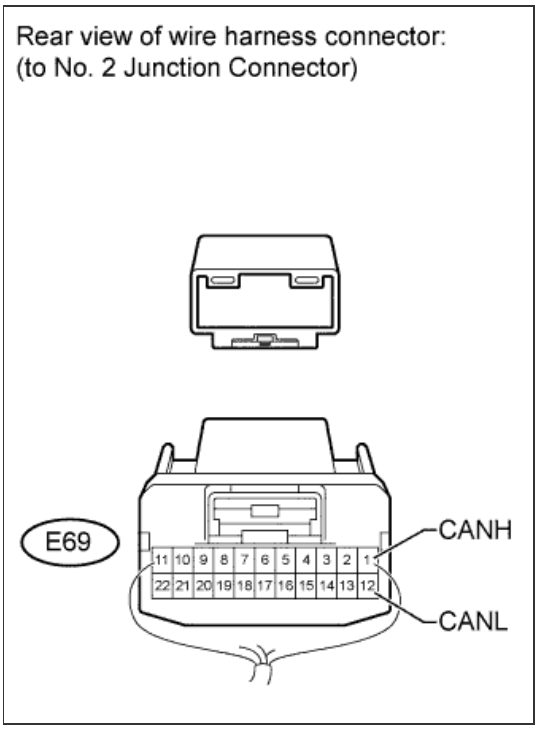
3.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - ECM)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-1 (CANH) - E69-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 5

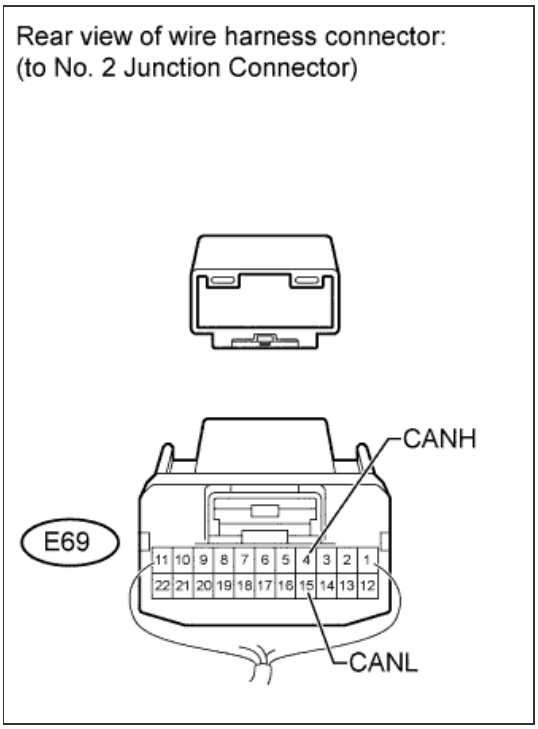
OK

4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-4 (CANH) - E69-15 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPLACE NO. 2 JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

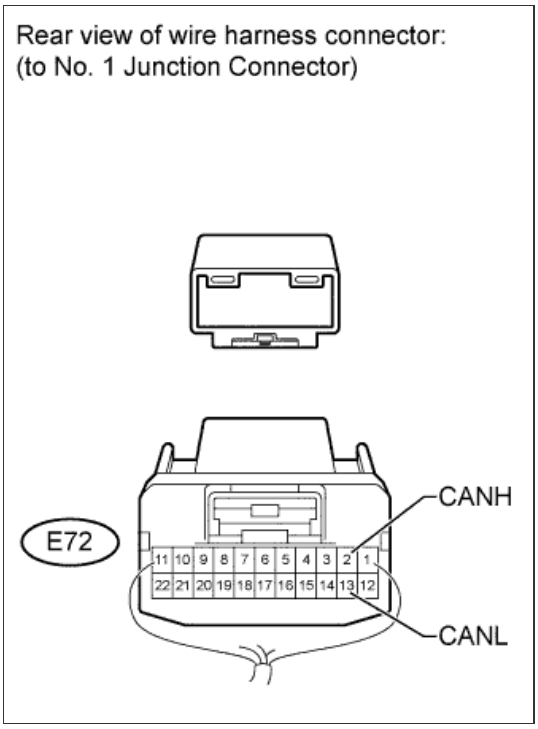
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

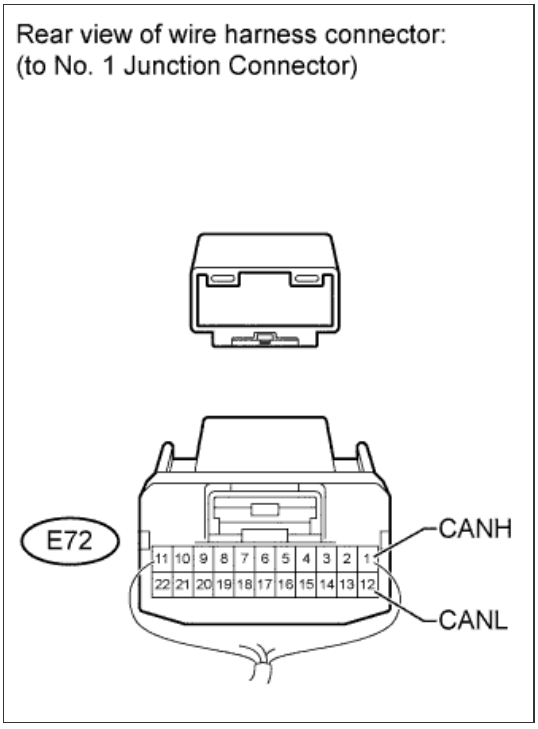
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-1 (CANH) - E72-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

REPLACE NO. 1 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (ECM - NO. 1 JUNCTION CONNECTOR)

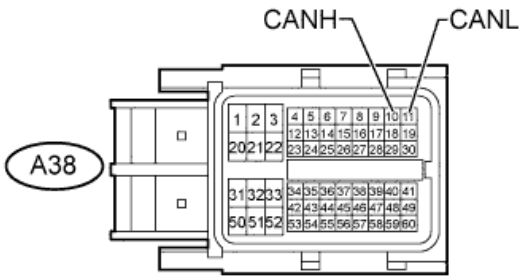
a. Disconnect the A38 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A38-10 (CANH) - A38-11 (CANL)	Engine switch off	108 to 132 Ω

Front view of wire harness connector:
(to ECM)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (ECM - NO. 1 JUNCTION CONNECTOR)

OK

REPLACE ECM (Click here)

10.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

11.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

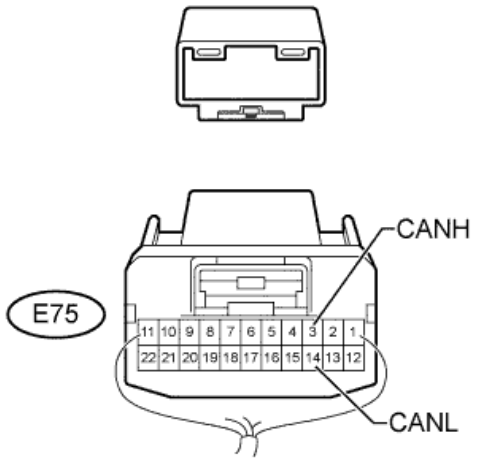
a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 3 Junction Connector)



NG → Go to step 13

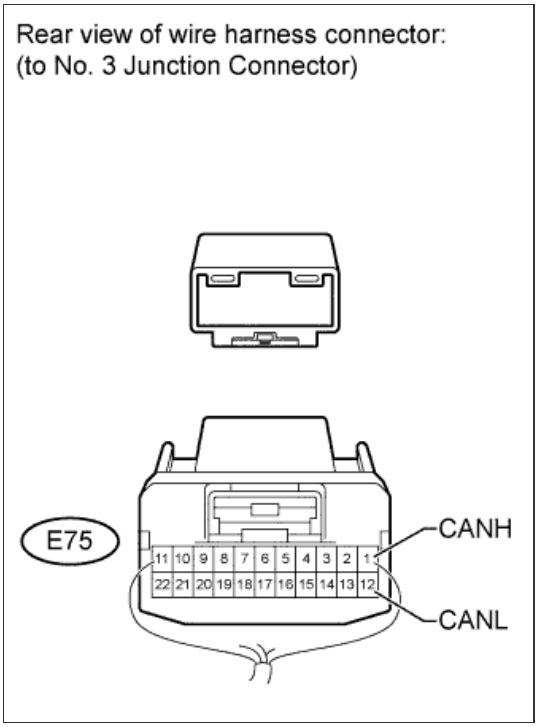
OK

12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE NO. 3 JUNCTION CONNECTOR

13.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

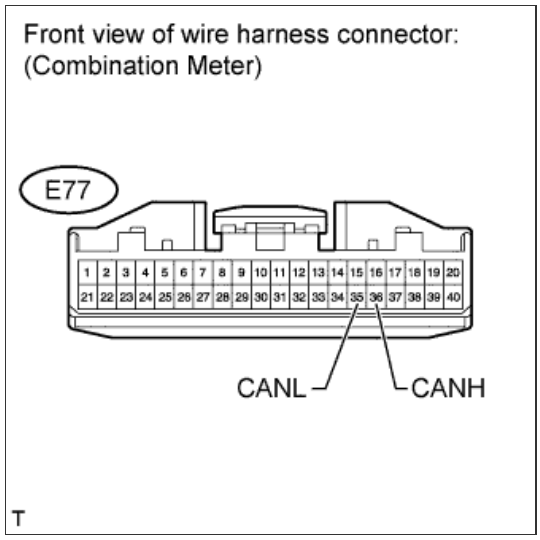
14.CHECK FOR OPEN IN CAN BUS MAIN WIRE (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

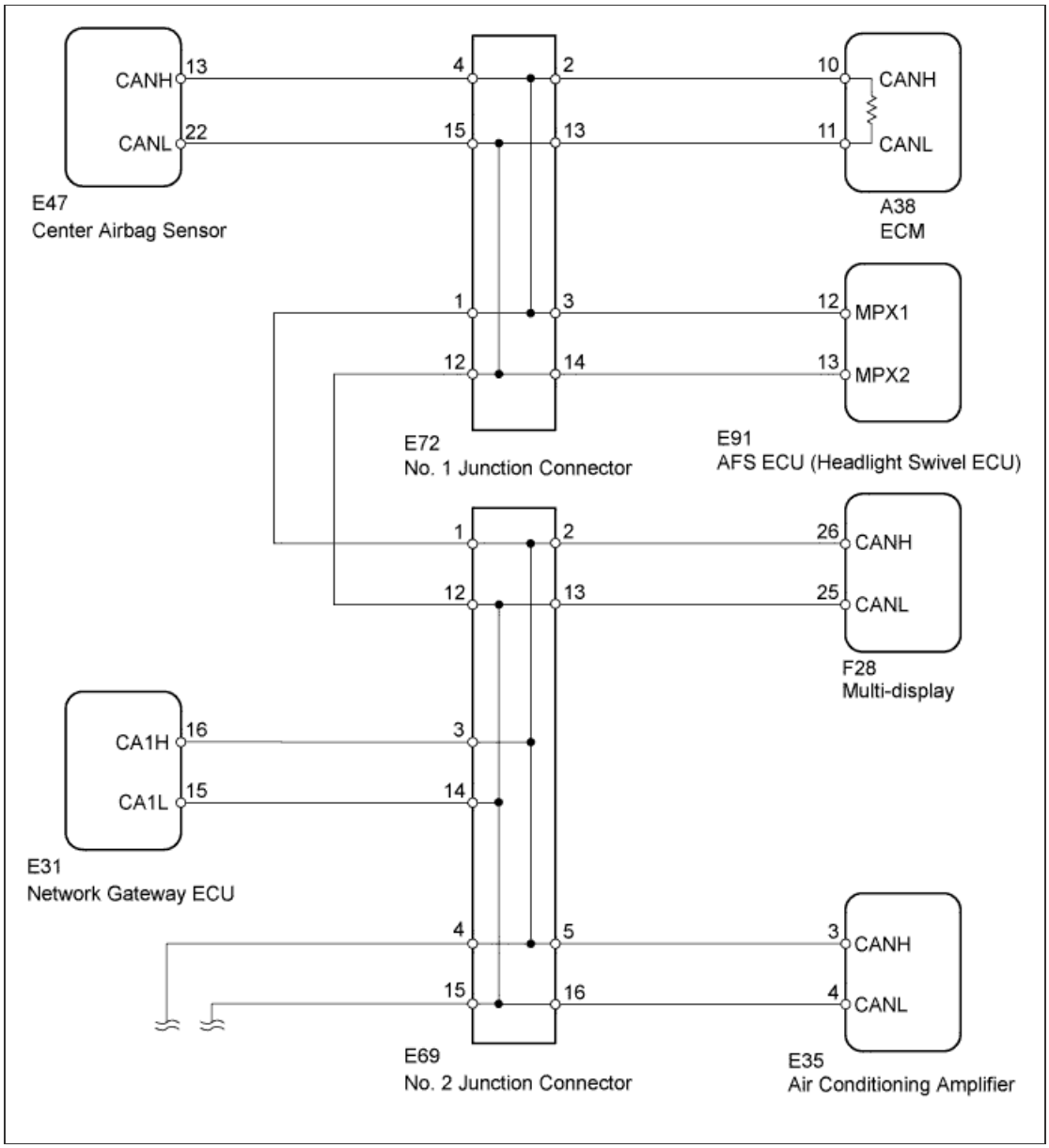
for Preparation Click here

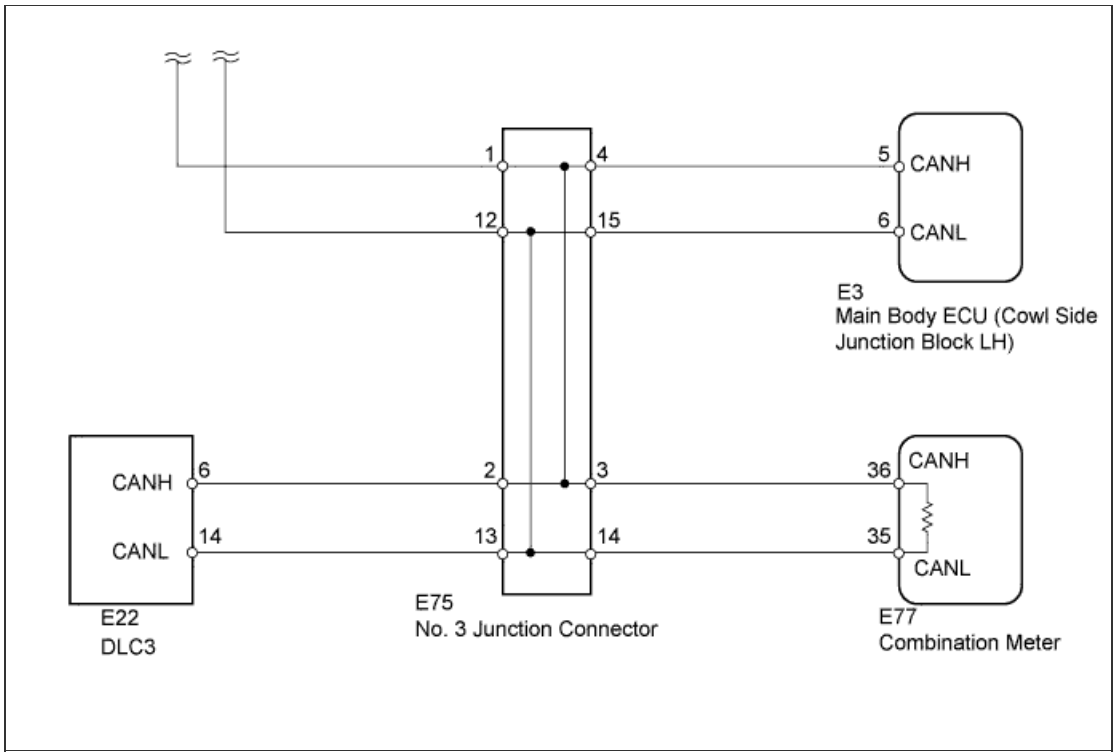
DESCRIPTION

There may be a short circuit between the CAN bus lines when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.	• Short between CAN bus lines • ECM • Center airbag sensor assembly • Multi-display • AFS ECU (headlight swivel ECU assembly) • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

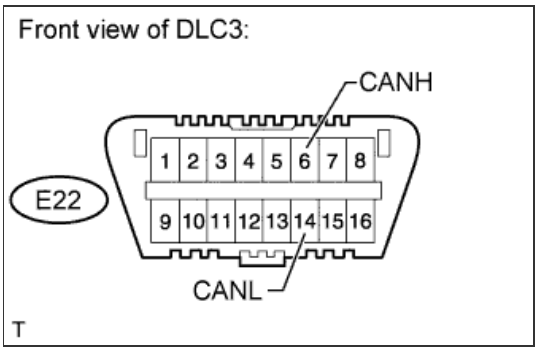
2.CHECK FOR SHORT IN CAN BUS WIRES (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

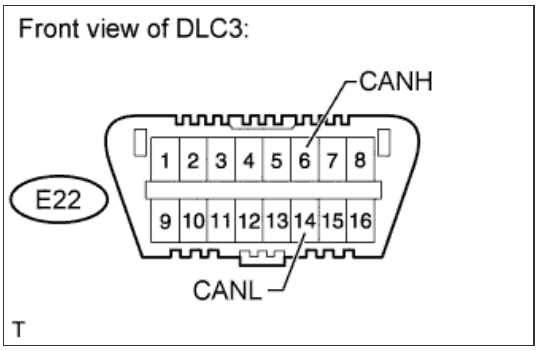
4.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 11

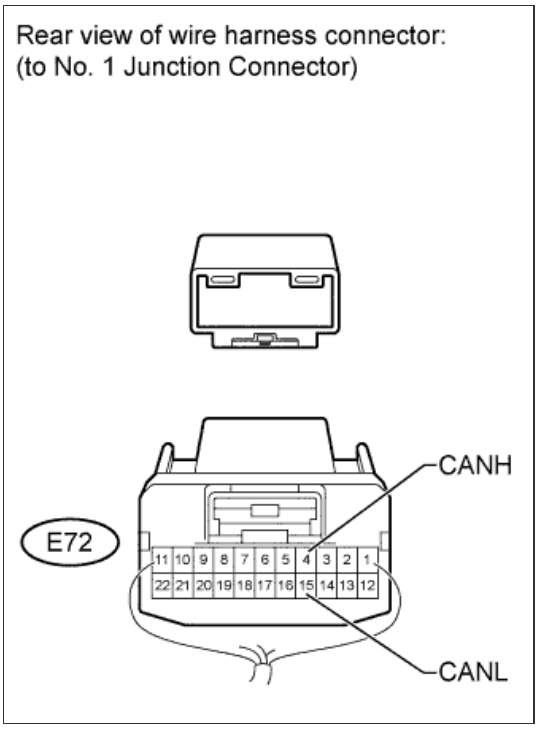
OK

5.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 8

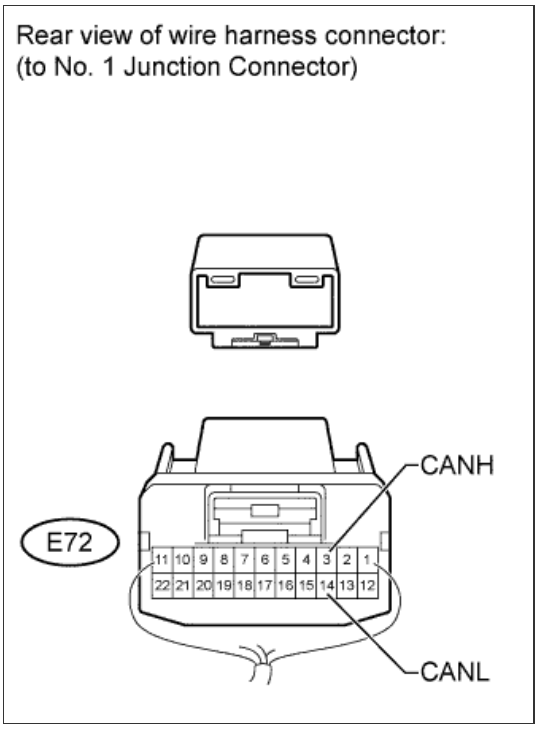
OK

6.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - AFS ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 9

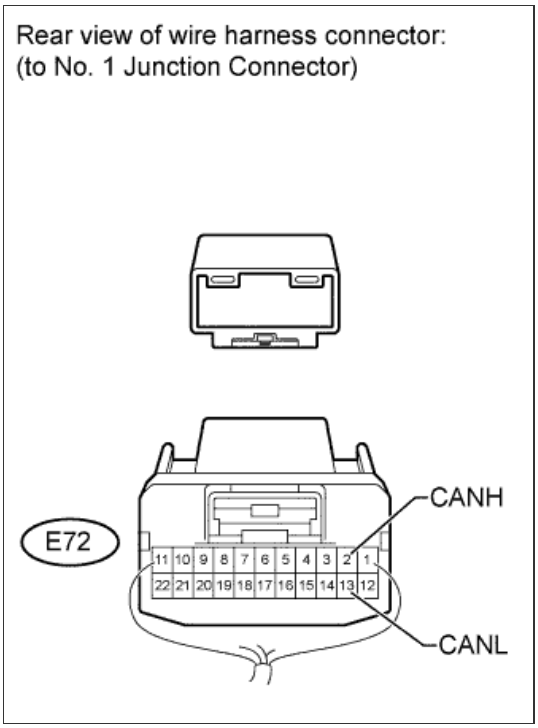
OK

7.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

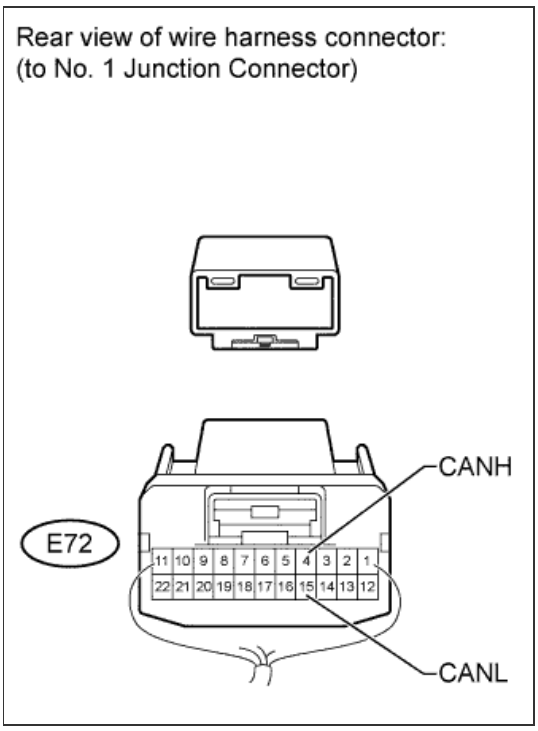
8.CHECK FOR SHORT IN CAN BUS WIRES (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

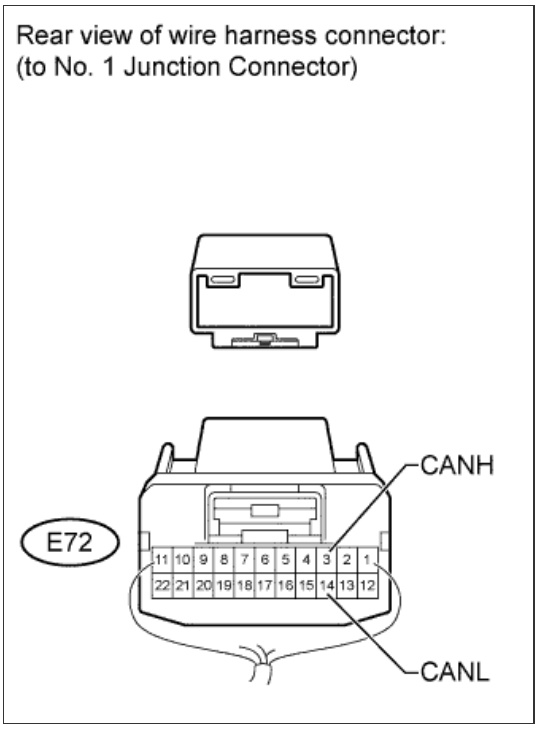
9.CHECK FOR SHORT IN CAN BUS WIRES (AFS ECU)

a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

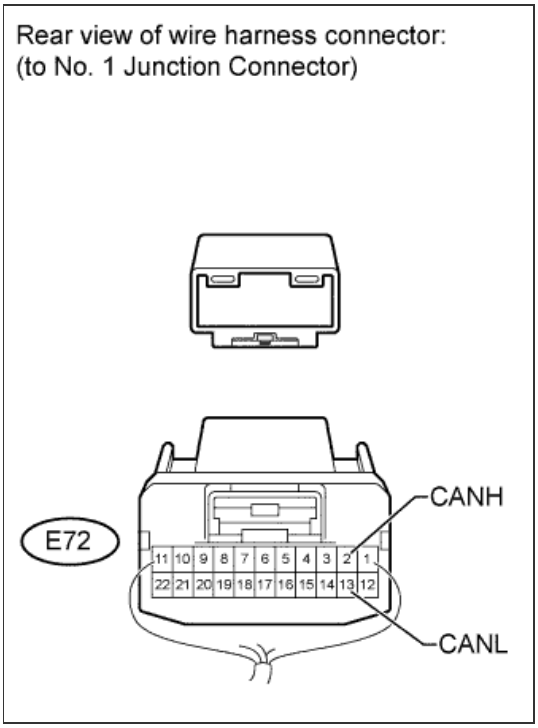
10.CHECK FOR SHORT IN CAN BUS WIRES (ECM)

a. Disconnect the A38 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

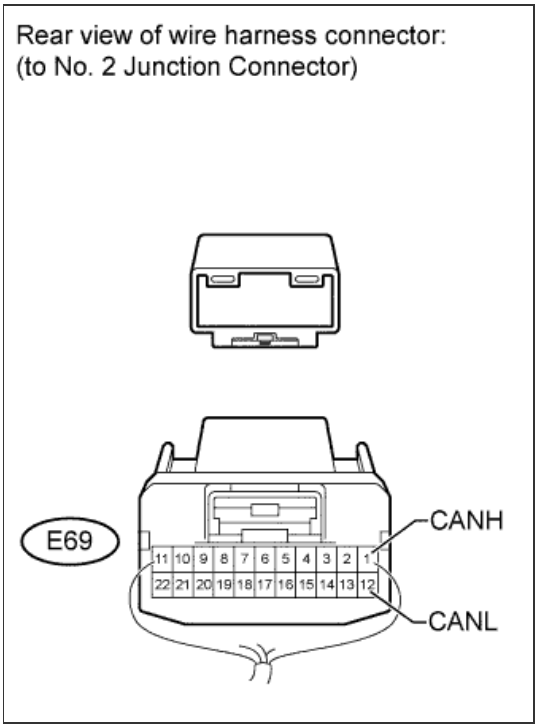
11.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-1 (CANH) - E69-12 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

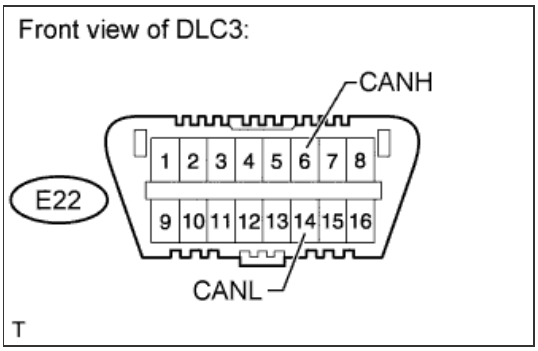
NEXT

13.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 20

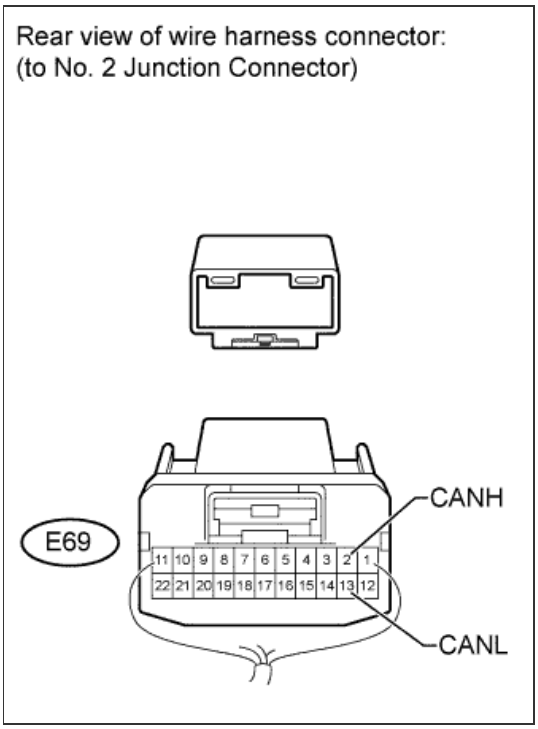
OK

14.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - MULTI-DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-2 (CANH) - E62-13 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 17

OK

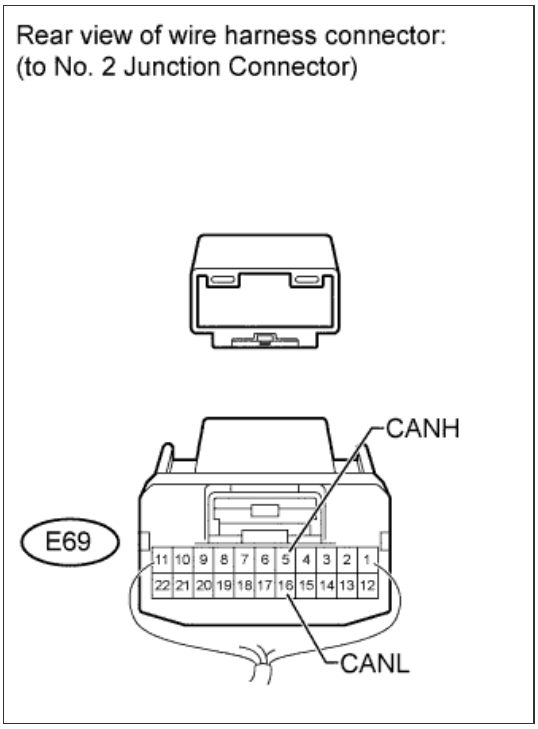
15.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch	Measured	Proceed

	Condition	Resistance	to
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 18

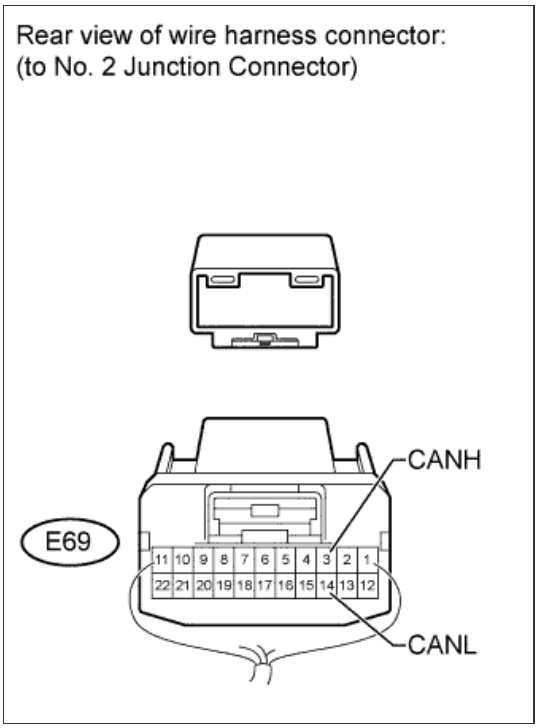
OK

16.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 19

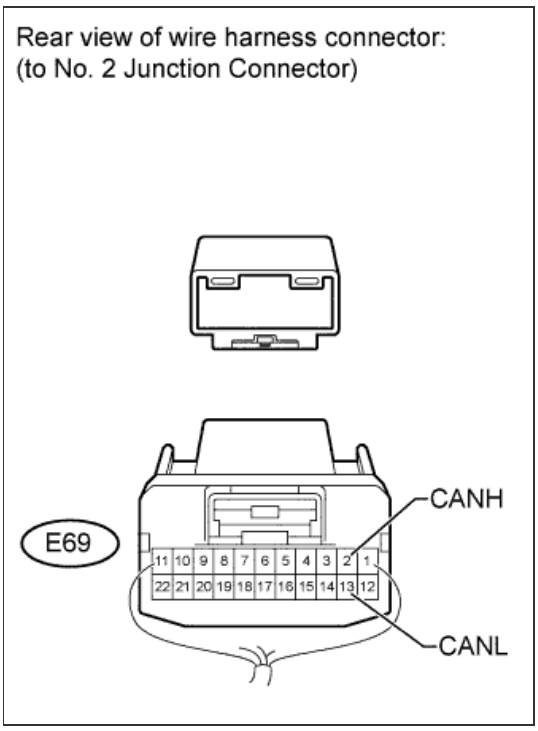
OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

17.CHECK FOR SHORT IN CAN BUS WIRES (MULTI-DISPLAY)

a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Result	Type	Proceed to
E69-2 (CANH) - E69-13 (CANL)	Engine switch off	1 Ω or higher	OK	w/ Navigation System	A
				w/o Navigation System	B
		Below 1 Ω	NG	-	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MULTI-DISPLAY (CANH, CANL)

A → REPLACE MULTI-DISPLAY (Click here)

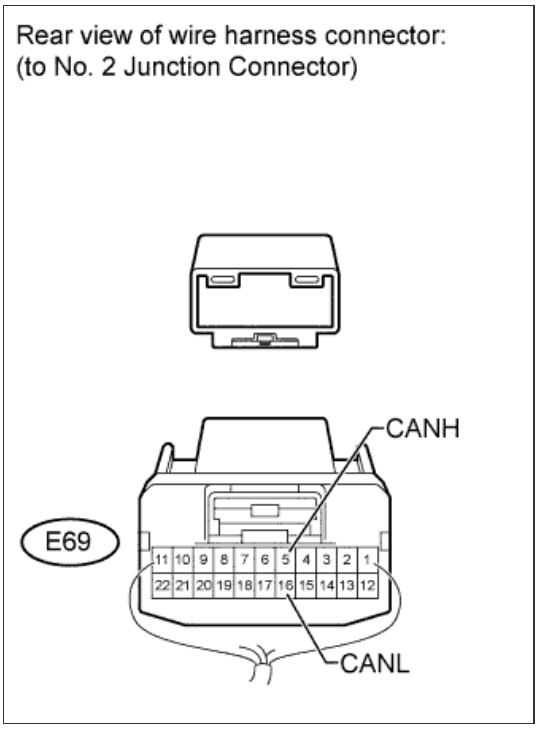
18.CHECK FOR SHORT IN CAN BUS WIRES (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Result
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

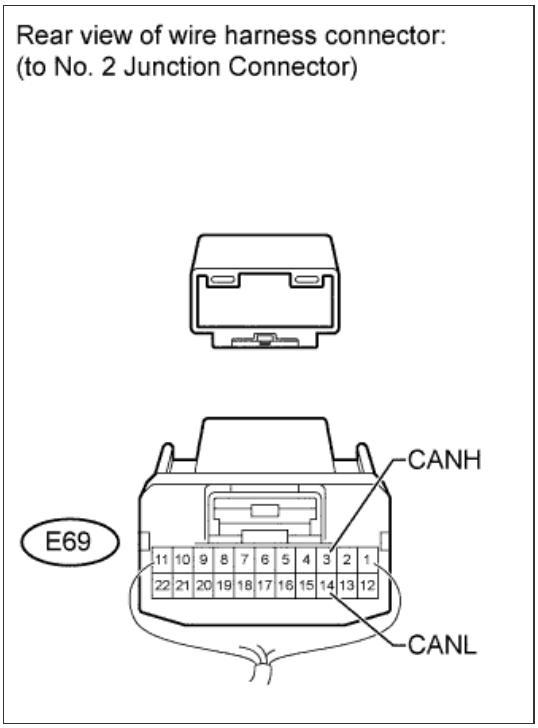
19.CHECK FOR SHORT IN CAN BUS WIRES (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

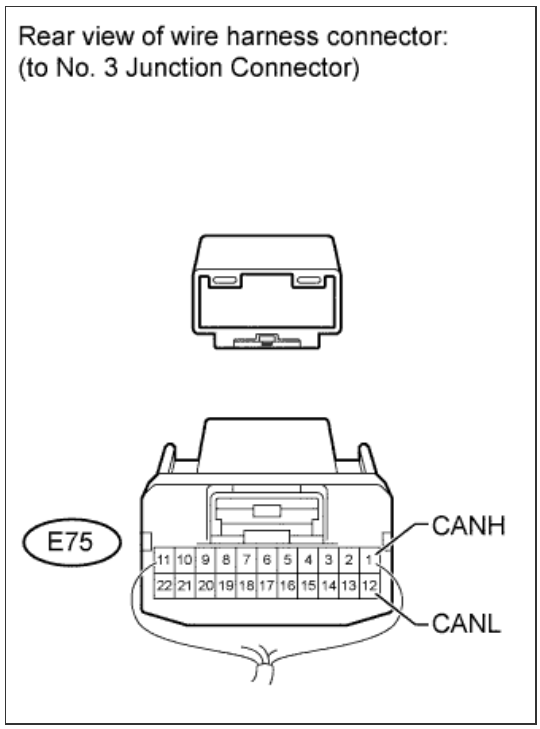
20.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

21.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

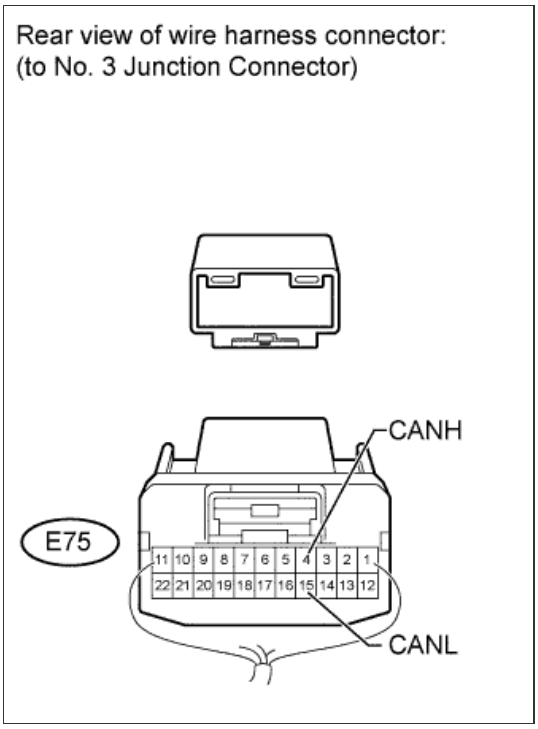
NEXT

22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 3 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-4 (CANH) - E75-15 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 24

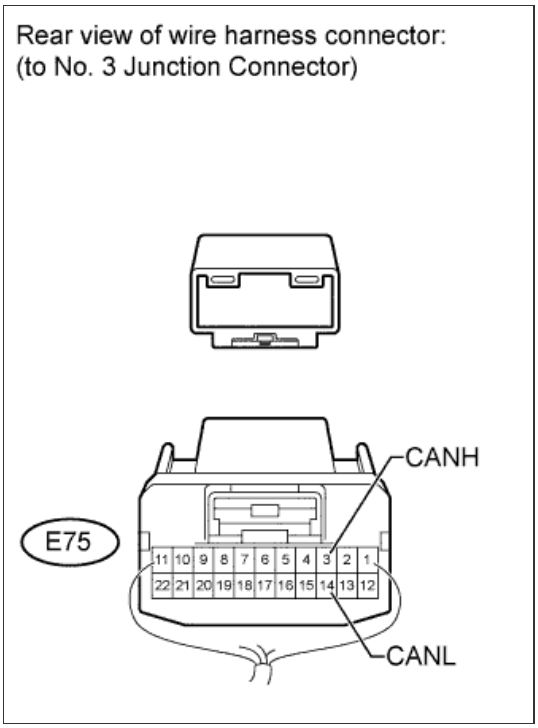
OK

23.CHECK FOR SHORT IN CAN BUS WIRES (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

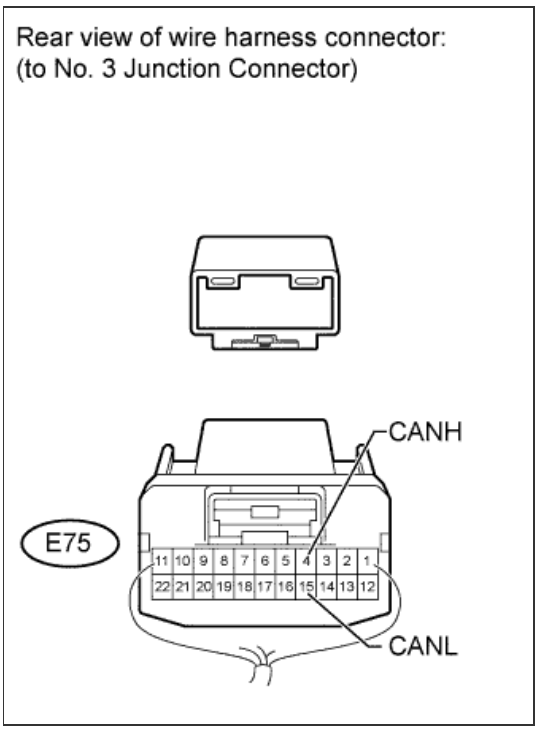
24.CHECK FOR SHORT IN CAN BUS WIRES (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-4 (CANH) - E75-15 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

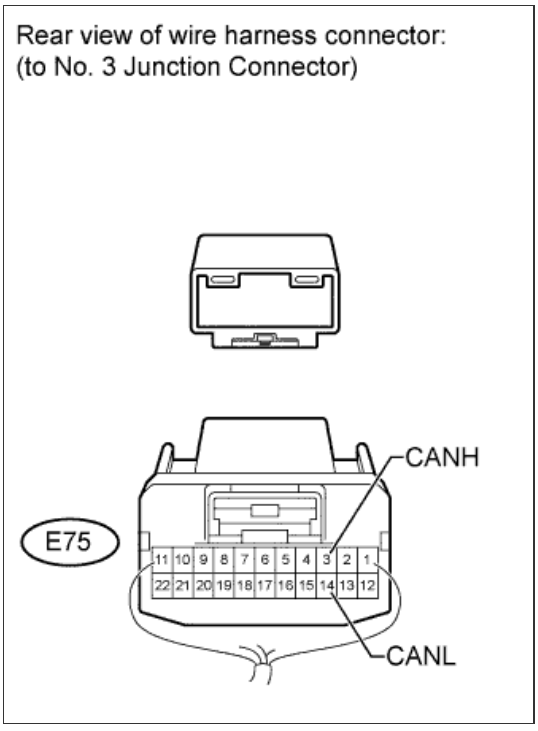
25.CHECK FOR SHORT IN CAN BUS WIRES (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK → REPLACE COMBINATION METER ASSEMBLY (Click here)

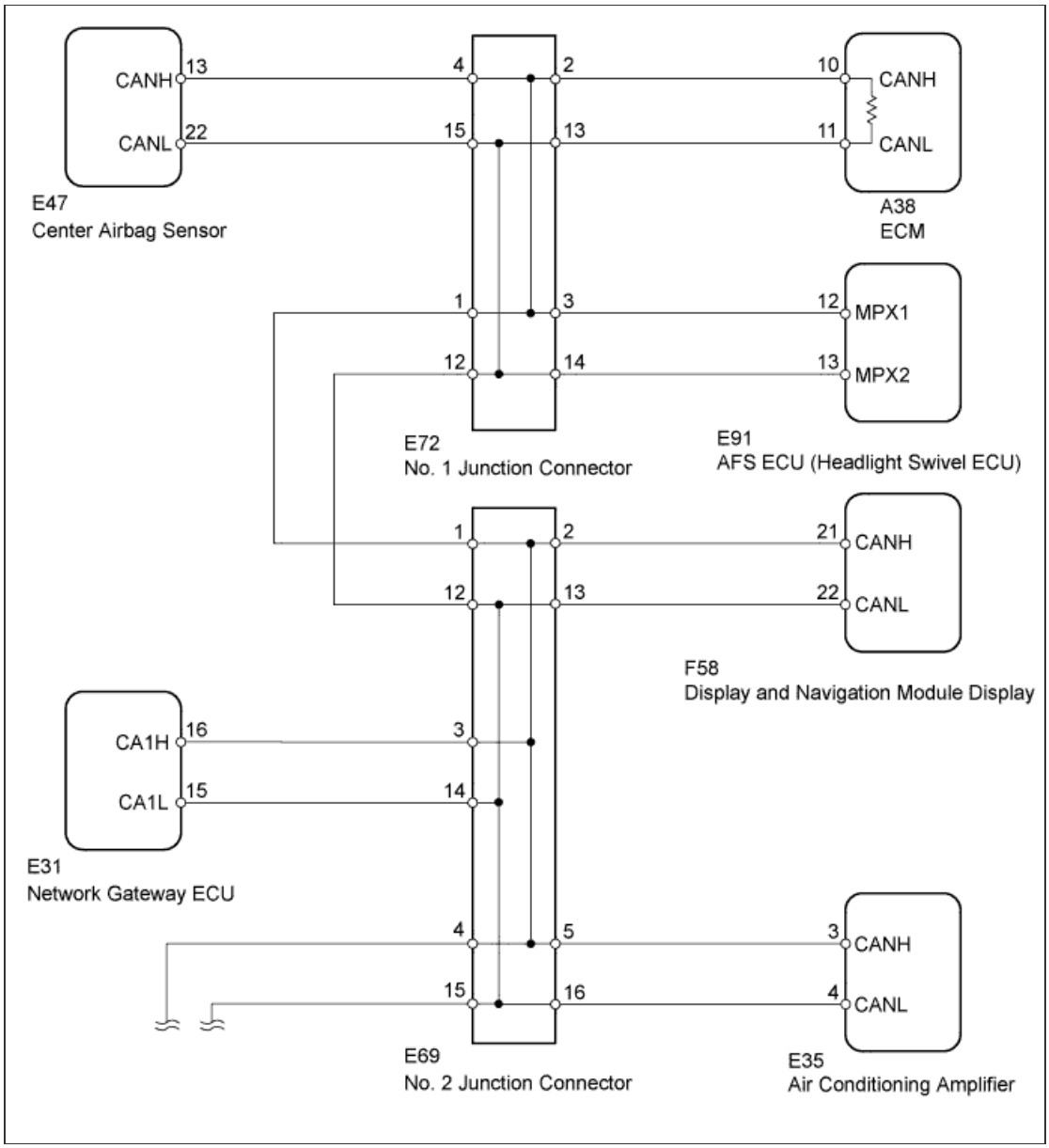
for Preparation Click here

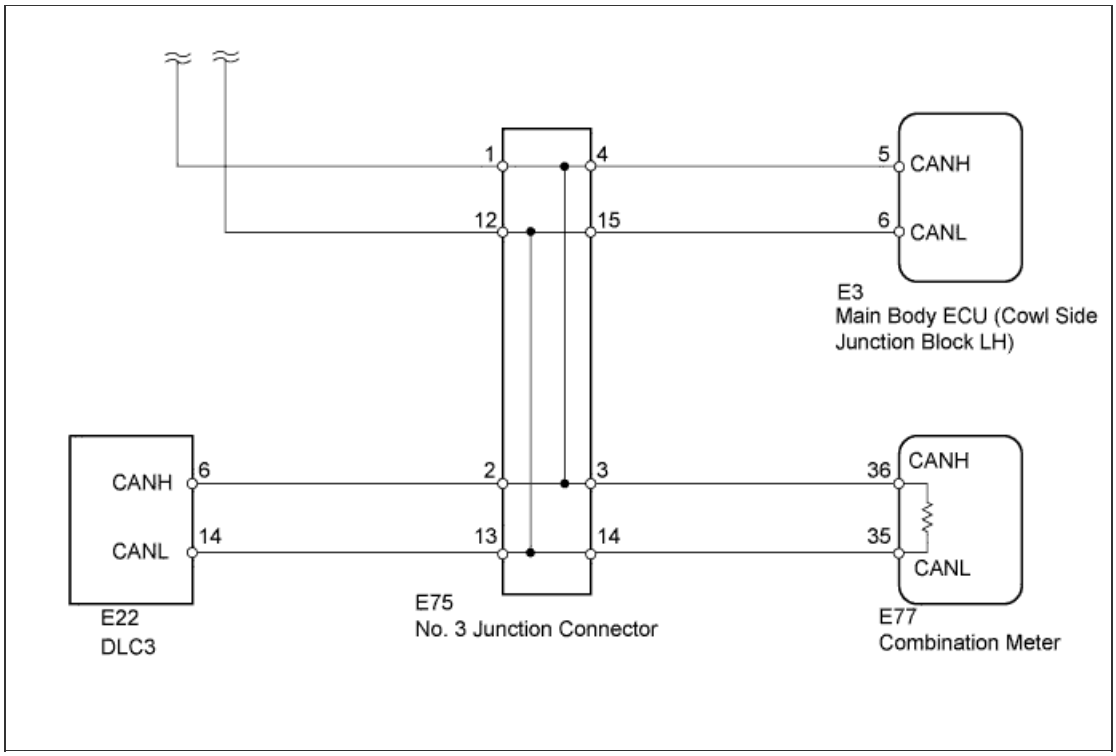
DESCRIPTION

There may be a short circuit between the CAN bus lines when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.	• Short between CAN bus lines • ECM • Center airbag sensor assembly • Display and navigation module display • AFS ECU (headlight swivel ECU assembly) • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR SHORT IN CAN BUS WIRES (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

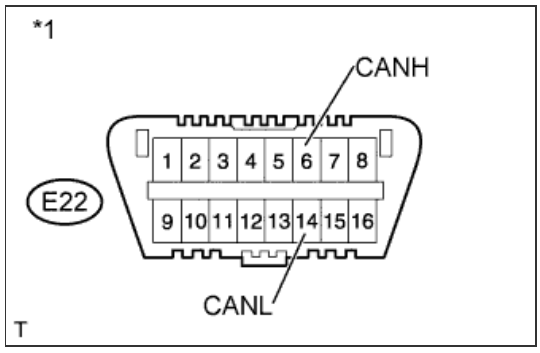
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	DLC3



NG → **REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)**

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

4.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

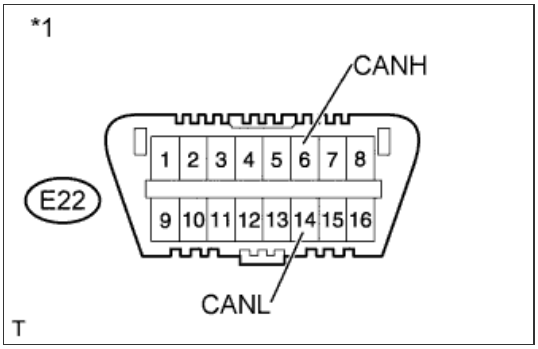
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	DLC3



NG → [Go to step 11]

OK

5.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

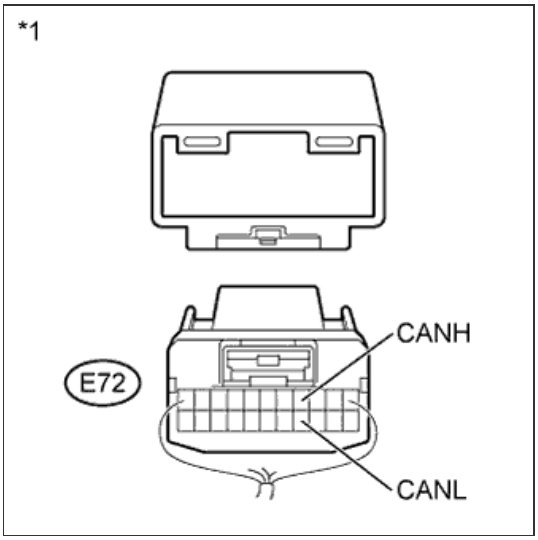
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → [Go to step 8]

OK

6.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - AFS ECU)

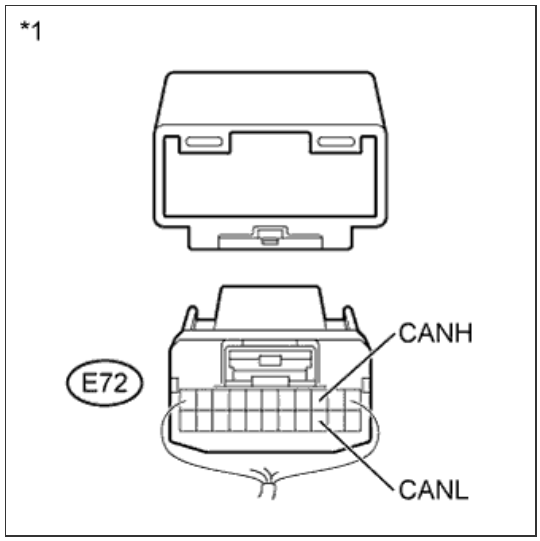
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → Go to step 9

OK

7.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - ECM)

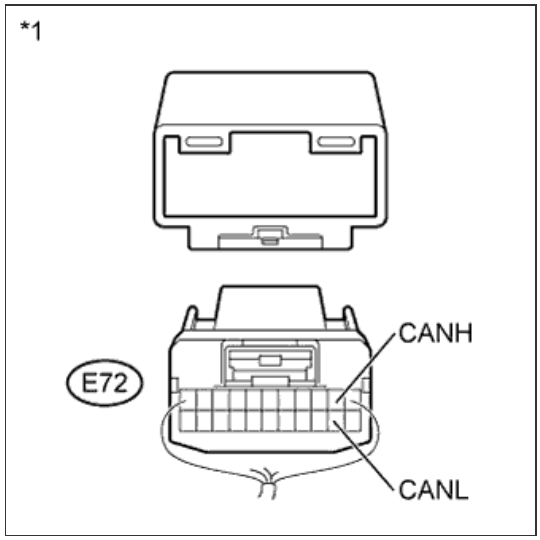
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT IN CAN BUS WIRES (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

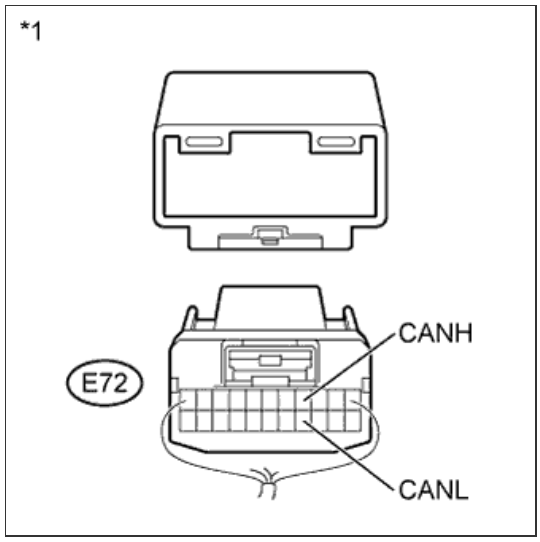
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector

	(to No. 1 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT IN CAN BUS WIRES (AFS ECU)

a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

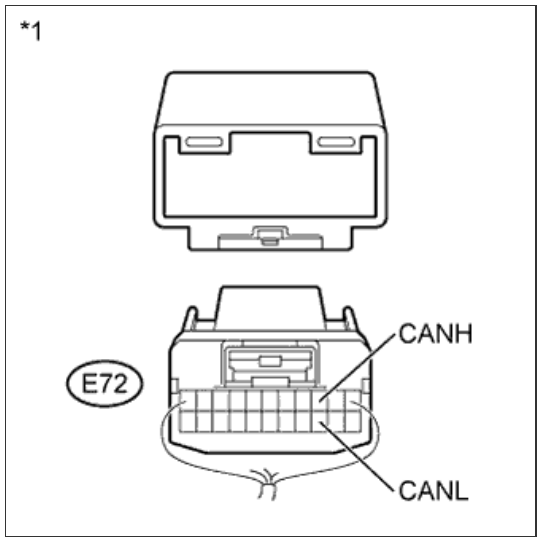
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

10.CHECK FOR SHORT IN CAN BUS WIRES (ECM)

a. Disconnect the A38 ECM connector.

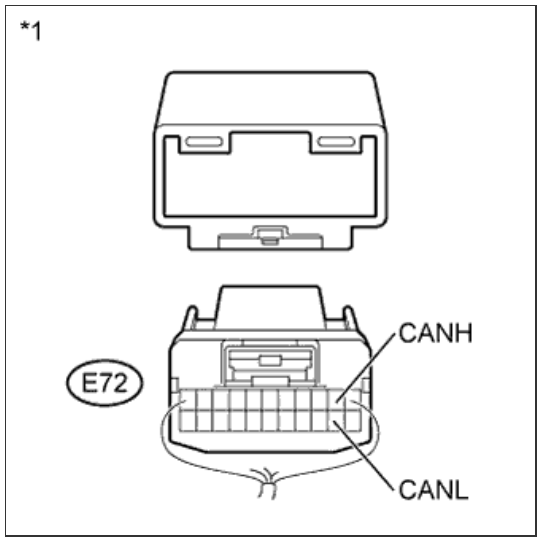
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

11.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

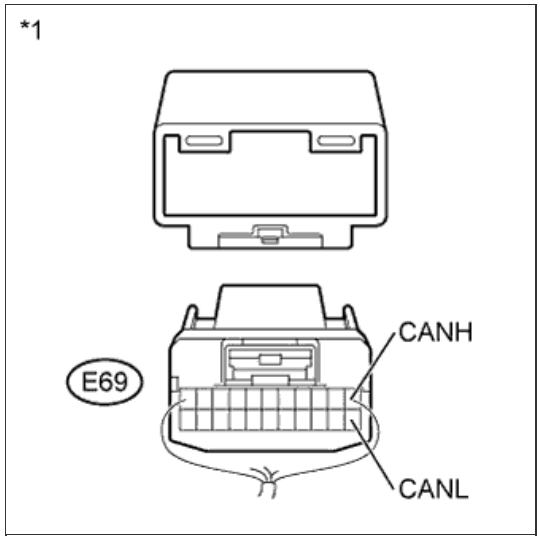
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-1 (CANH) - E69-12 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

13.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

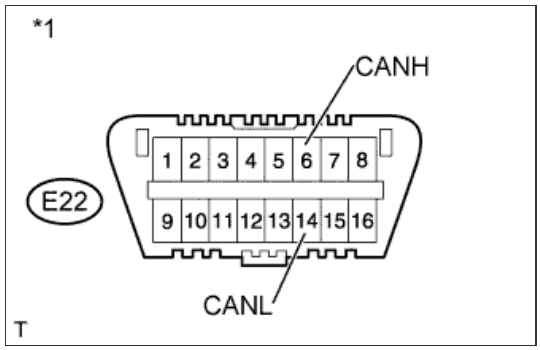
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition

E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	DLC3



NG → Go to step 20

OK →

14.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - DISPLAY AND NAVIGATION MODULE DISPLAY)

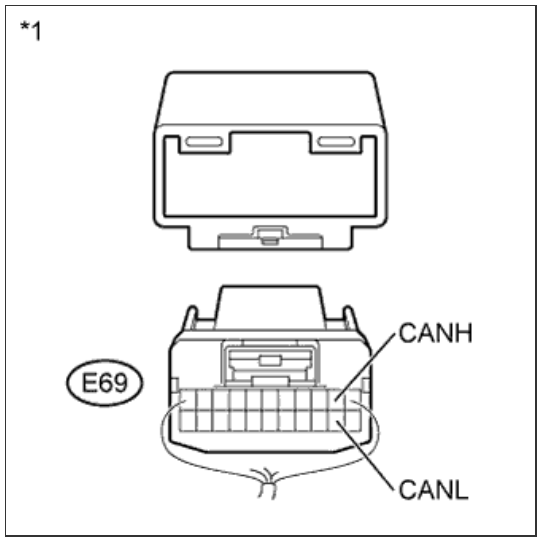
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E62-13 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → Go to step 17

OK →

15.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

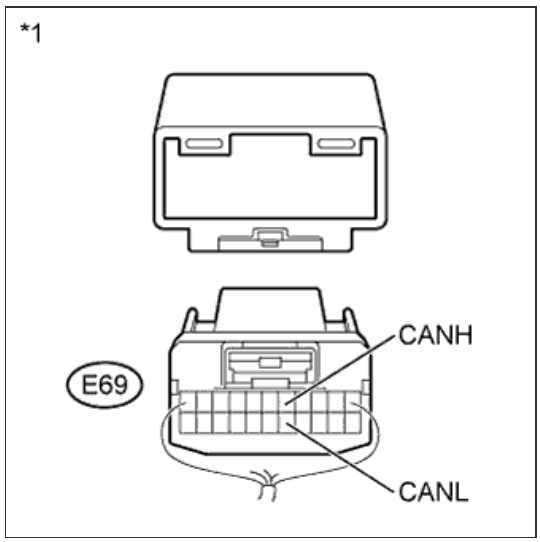
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → Go to step 18

OK

16.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

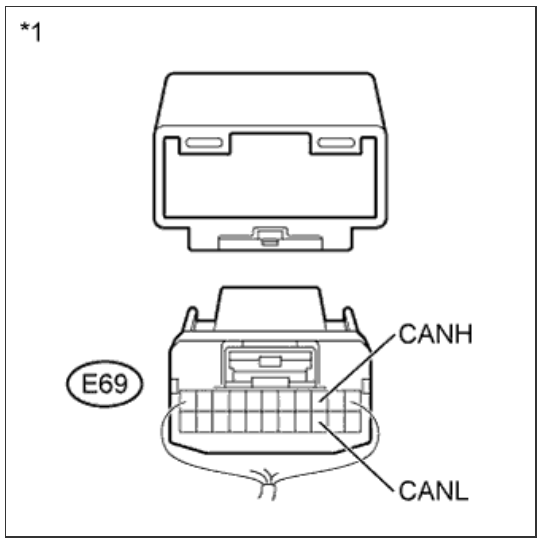
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → Go to step 19

OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

17.CHECK FOR SHORT IN CAN BUS WIRES (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation module display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

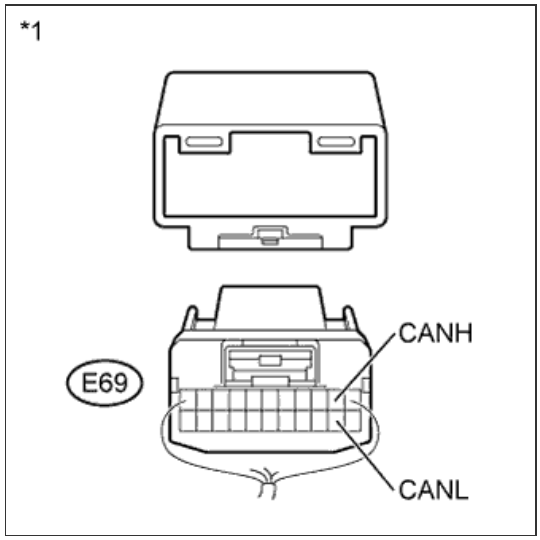
Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E69-13 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISPLAY AND NAVIGATION MODULE DISPLAY (CANH, CANL)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

18.CHECK FOR SHORT IN CAN BUS WIRES (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

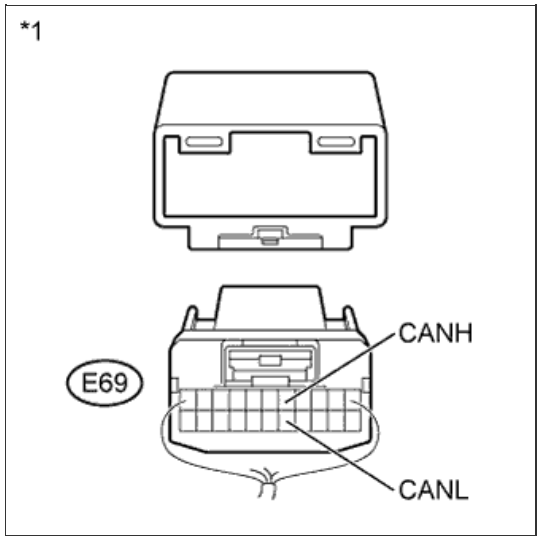
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

19.CHECK FOR SHORT IN CAN BUS WIRES (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

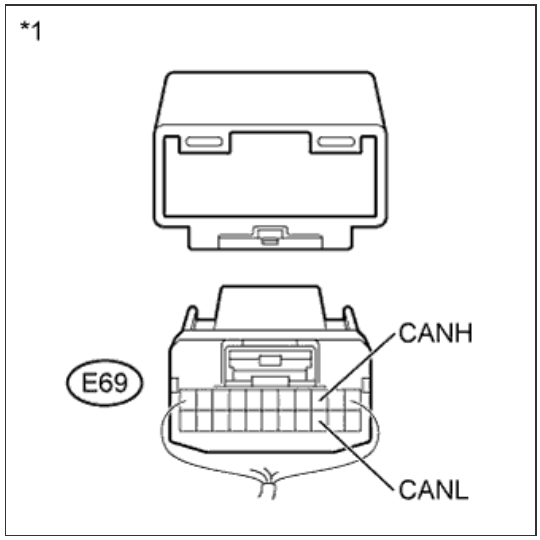
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

20.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

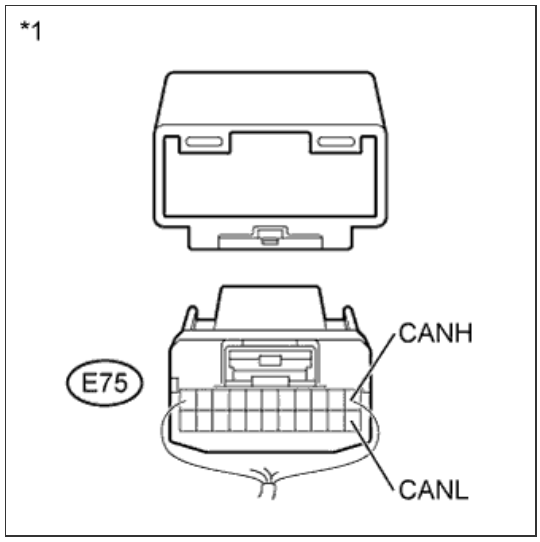
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

21.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 3 JUNCTION CONNECTOR - MAIN BODY ECU)

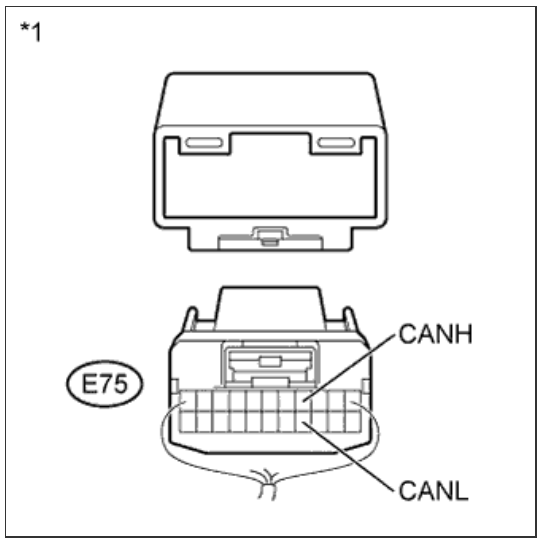
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-4 (CANH) - E75-15 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → Go to step 24

OK

23.CHECK FOR SHORT IN CAN BUS WIRES (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

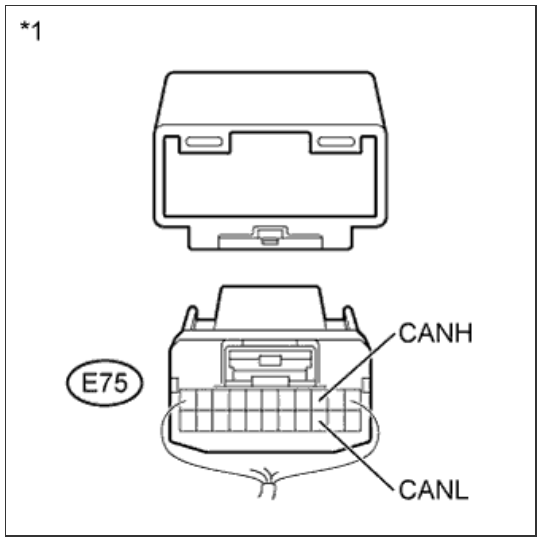
a. Measure the resistance according to the value(s) in the table below.
E75-4 (CANH) - E75-15 (CANL)

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

24.CHECK FOR SHORT IN CAN BUS WIRES (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

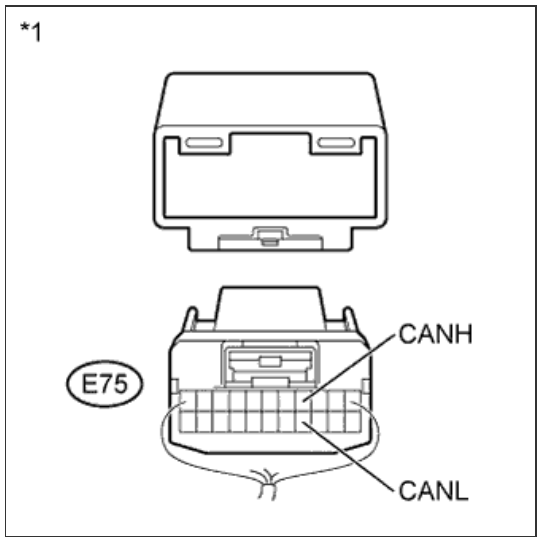
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-4 (CANH) - E75-15 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

25.CHECK FOR SHORT IN CAN BUS WIRES (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

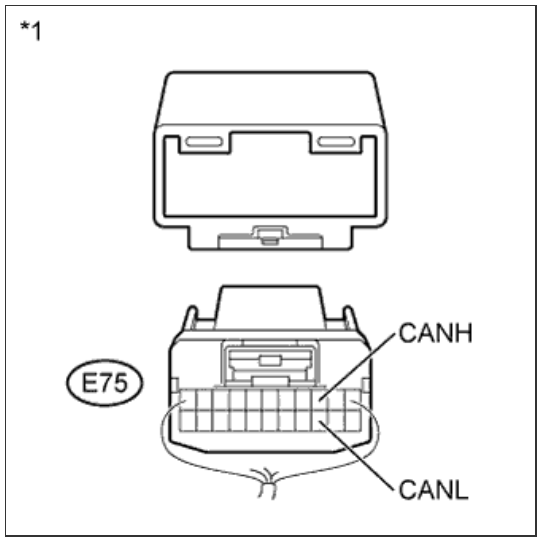
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

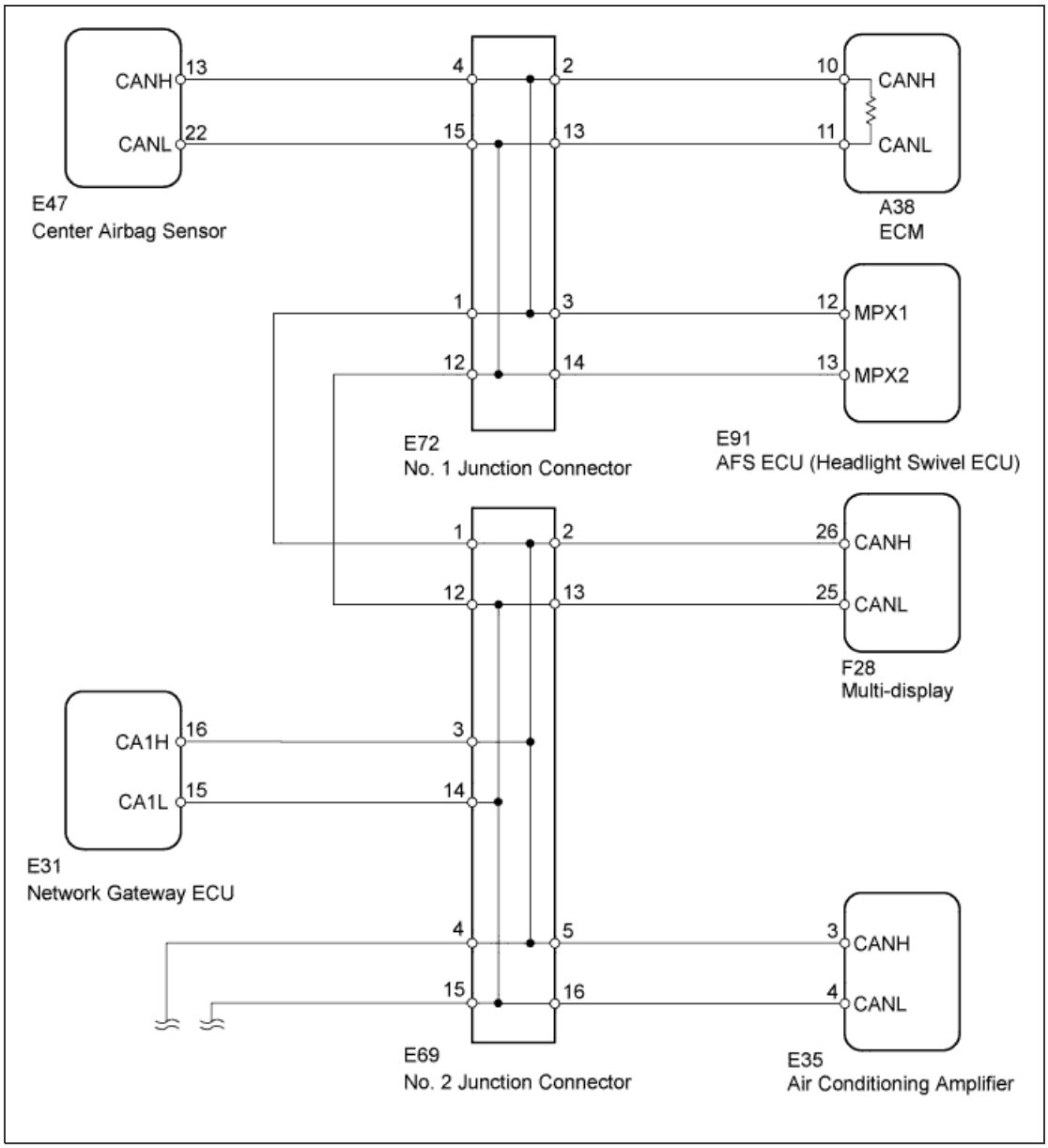
for Preparation Click here

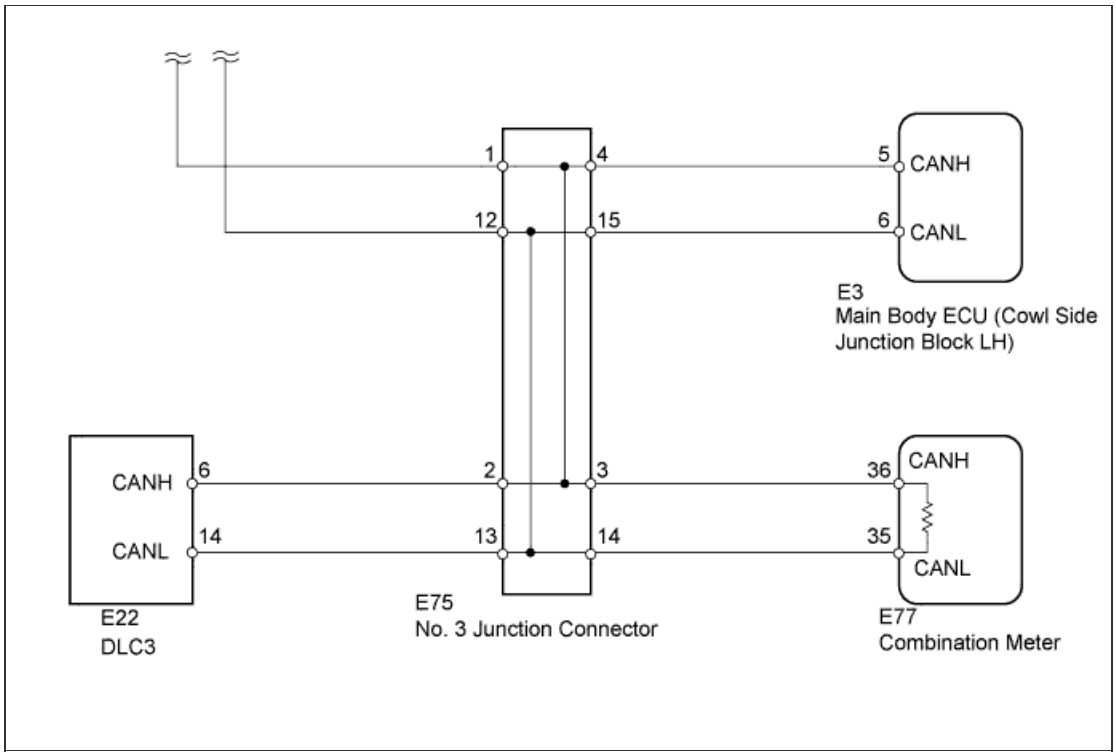
DESCRIPTION

There may be a short circuit between the CAN bus line and +B when there is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.	• Short to +B • ECM • Center airbag sensor assembly • AFS ECU (headlight swivel ECU assembly) • Multi-display • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

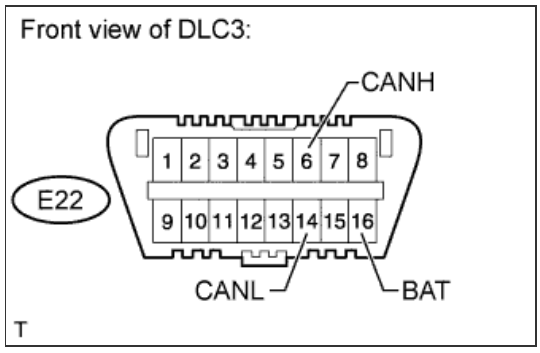
2.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO

DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

4.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

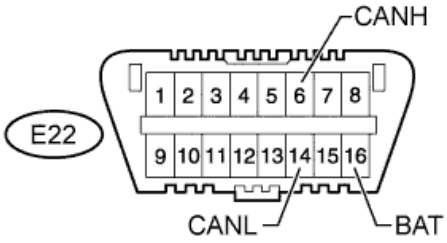
a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Result
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of DLC3:



T

NG → Go to step 11

OK

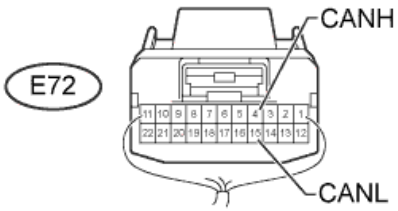
5.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

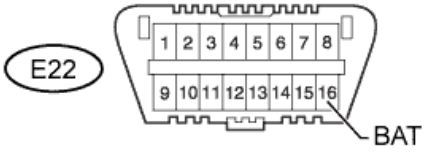
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → Go to step 8

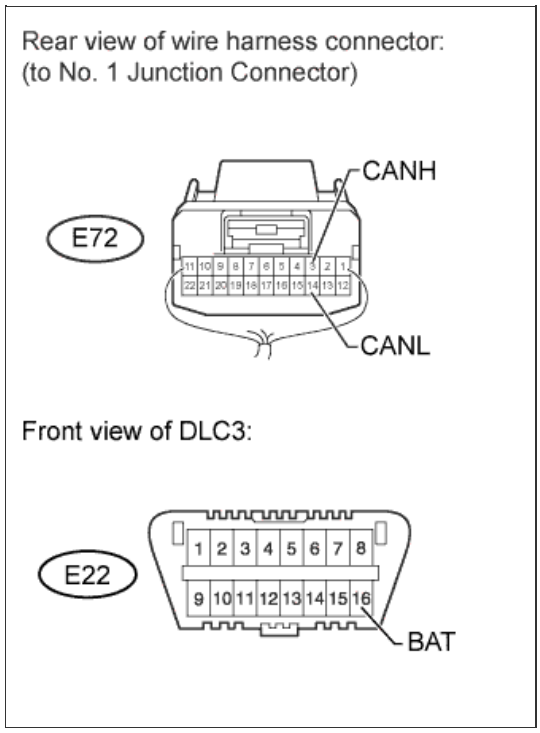
OK

6.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - AFS ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 9

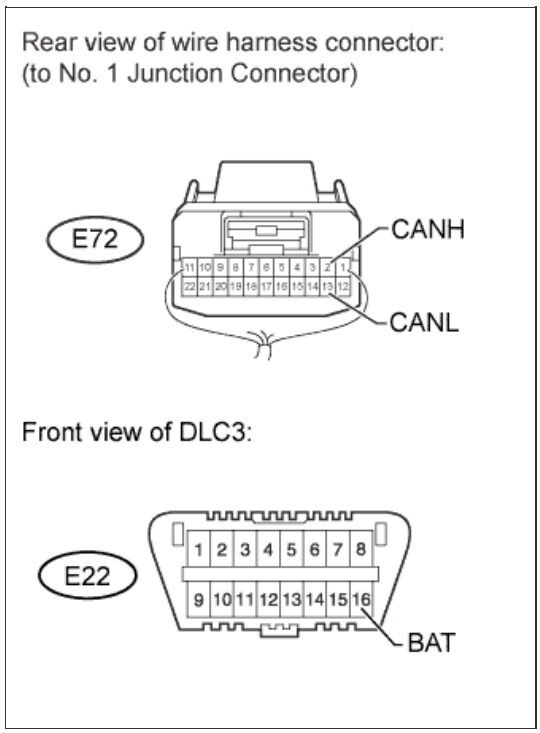
OK

7.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

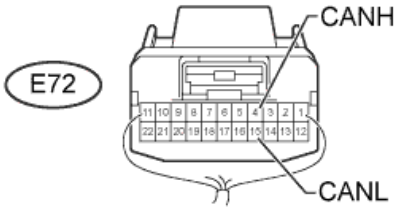
a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

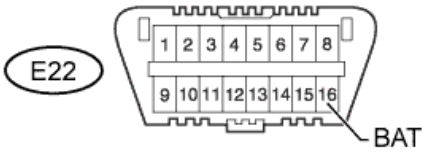
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AFS ECU)

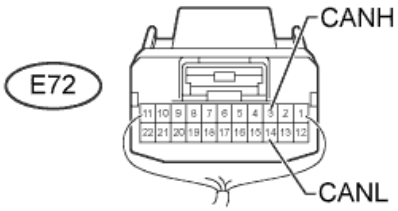
a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

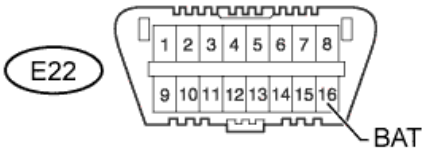
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (CANH, CANL)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

10.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (ECM)

a. Disconnect the A38 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

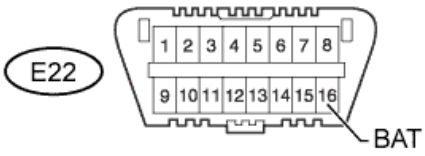
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

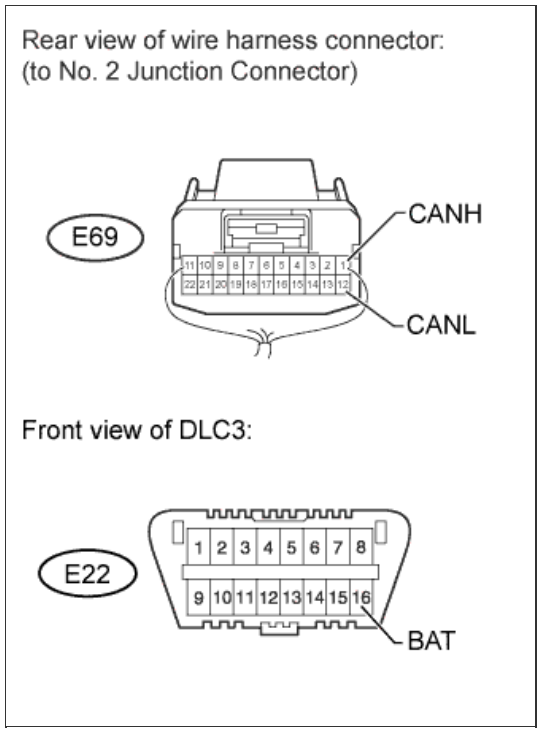
11.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-12 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

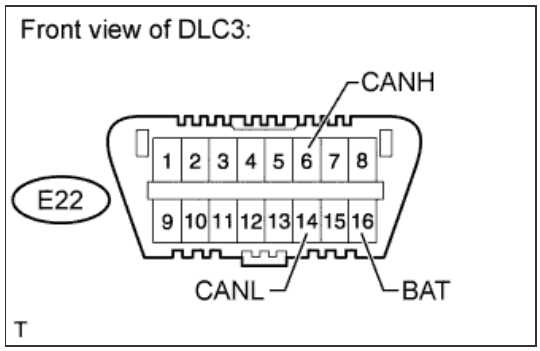
NEXT

13.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 20

OK

14.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - MULTI-DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

Result

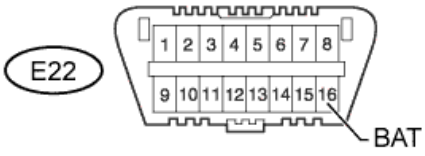
Tester Connection	Switch Condition	Measured Resistance	Proceed to

E69-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → Go to step 17

OK

15.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

a. Measure the resistance according to the value(s) in the table below.

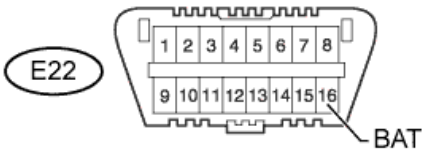
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → Go to step 18

OK

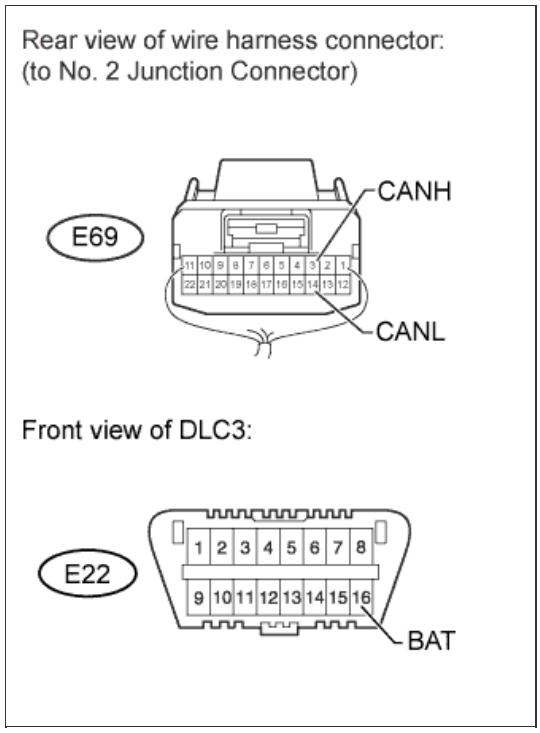
16.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 19

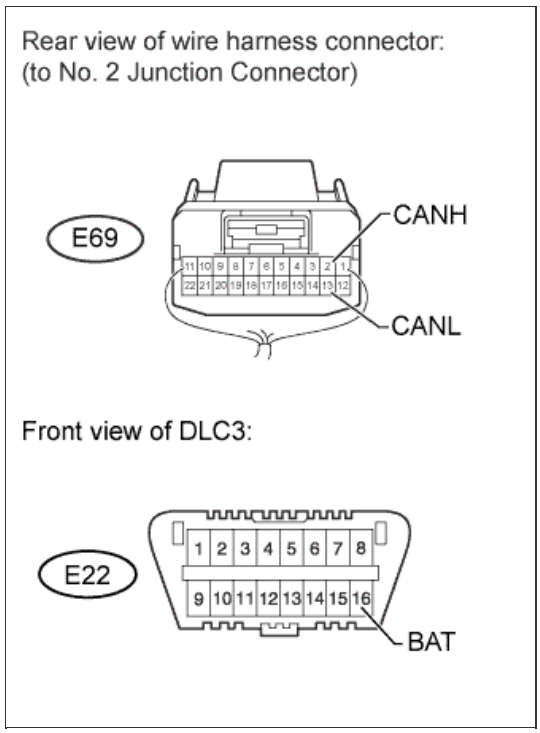
OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

17.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (MULTI-DISPLAY)

a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Result	Type	Proceed to
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK	w/ Navigation System	A
				w/o Navigation System	B
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK	w/ Navigation System	A
				w/o Navigation System	B
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG	-	C

E69-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG	-	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MULTI-DISPLAY (CANH, CANL)

A

REPLACE MULTI-DISPLAY (Click here)

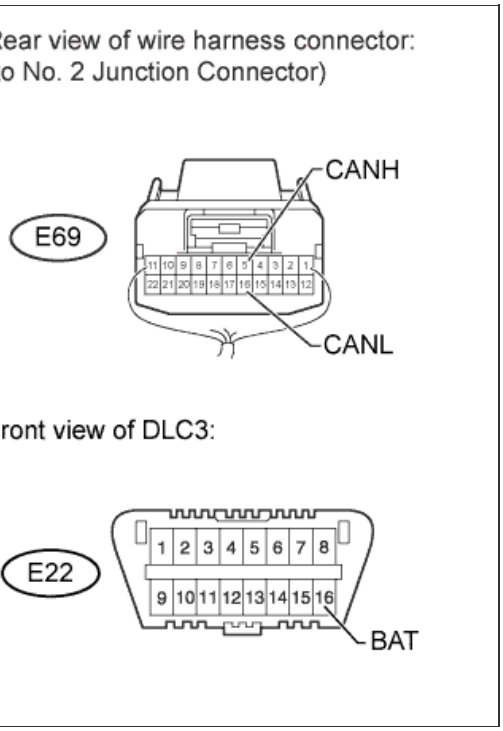
18.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

19.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NETWORK GATEWAY ECU)

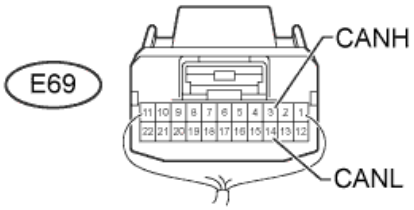
a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

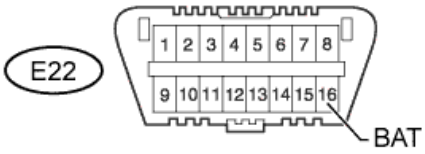
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

20.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

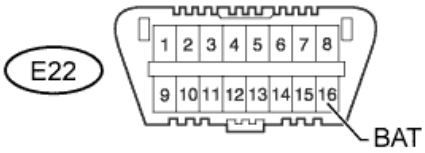
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-12 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

21.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

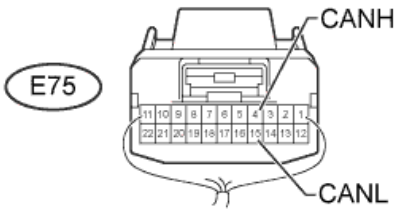
22.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

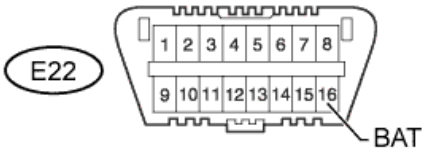
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → Go to step 24

OK

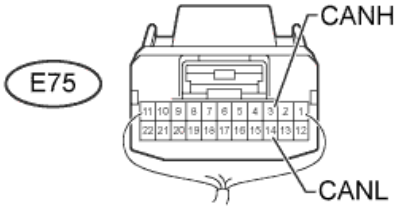
23.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

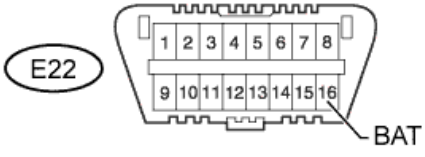
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

24.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (MAIN BODY ECU)

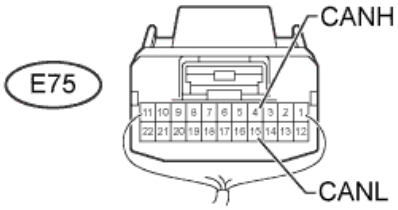
a. Disconnect the E3 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.

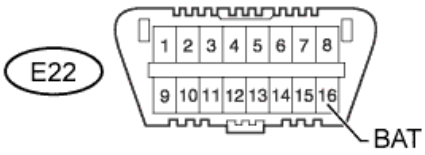
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

25.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (COMBINATION METER)

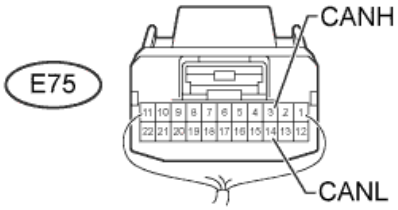
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

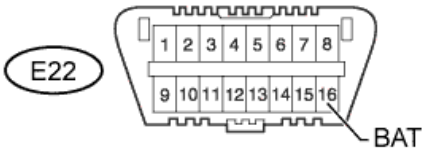
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

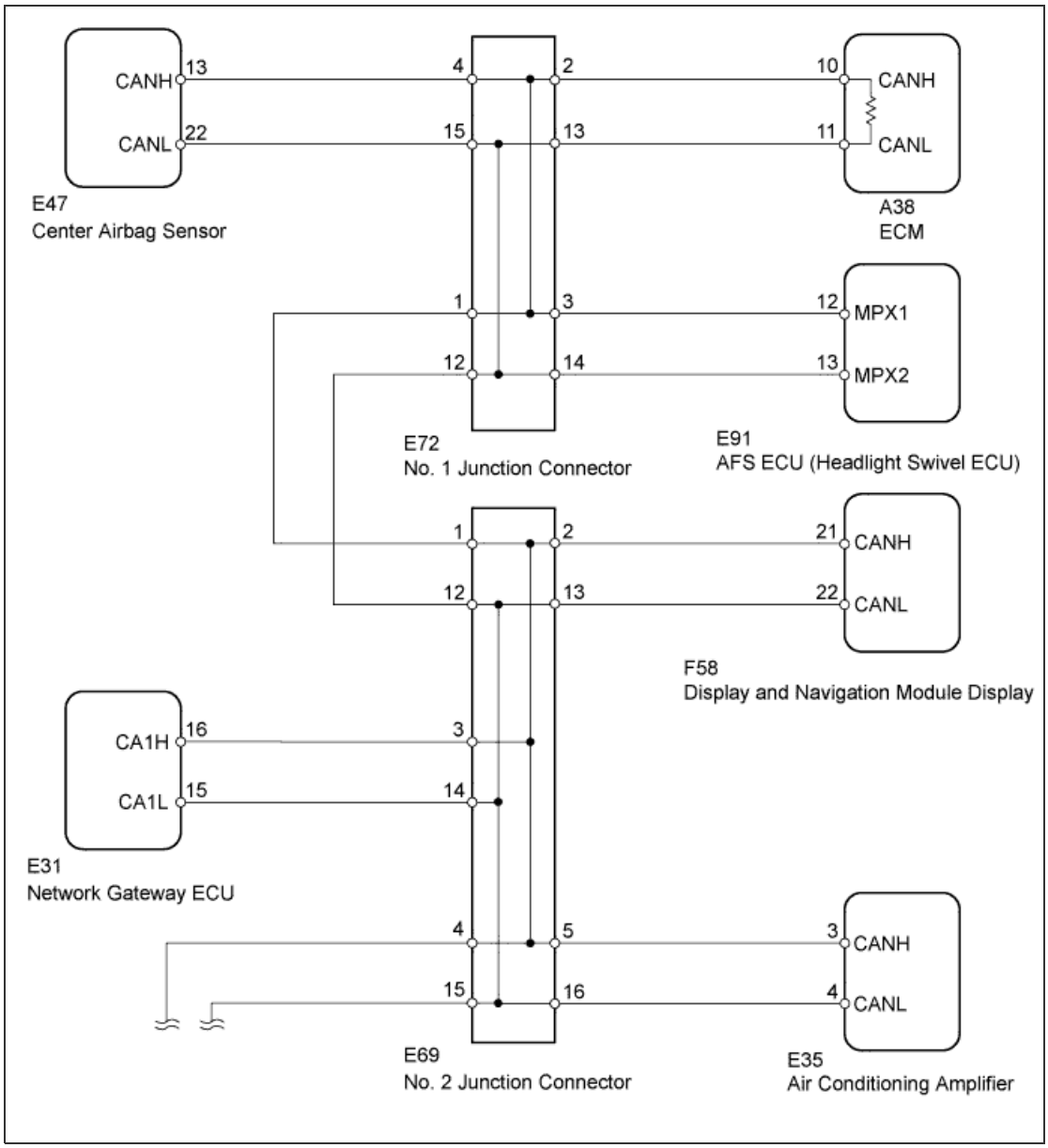
for Preparation Click here

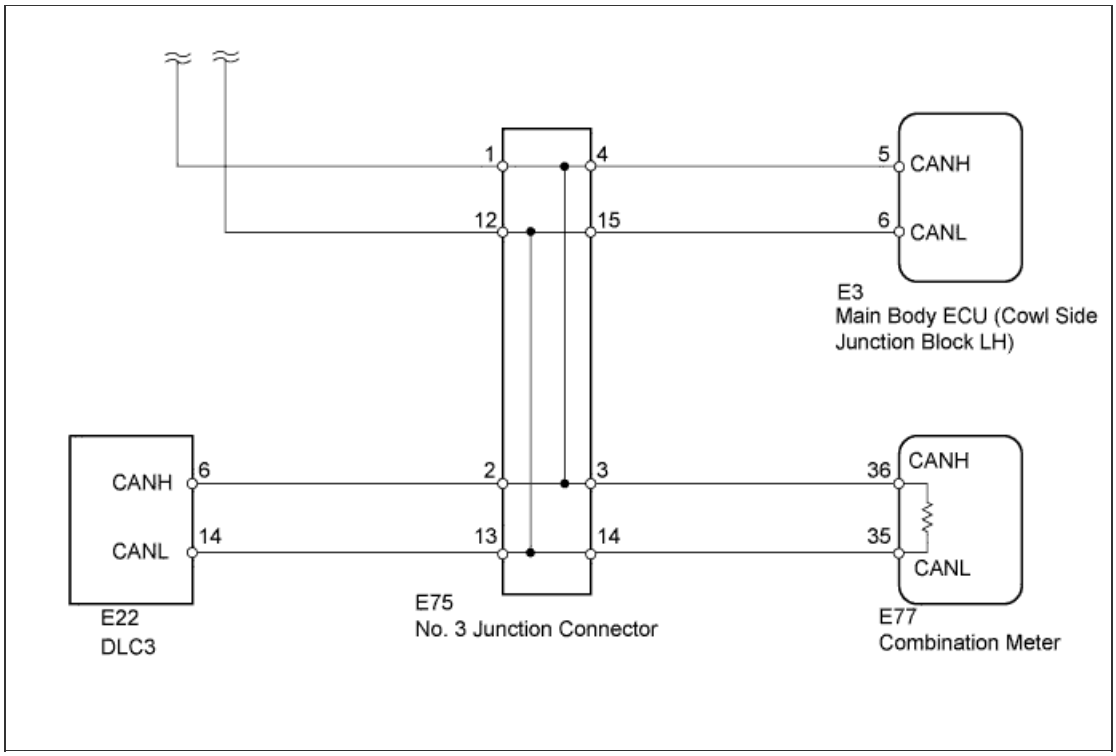
DESCRIPTION

There may be a short circuit between the CAN bus line and +B when there is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.	• Short to +B • ECM • Center airbag sensor assembly • AFS ECU (headlight swivel ECU assembly) • Display and navigation module display • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **w/ Navigation System:**
  After the engine switch is turned off, the HDD navigation system requires approximately 6 minutes to record various types of memory and settings. As a result, after turning the engine switch off, wait 6 minutes or more before disconnecting the cable from the negative (-) battery terminal.
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

NEXT

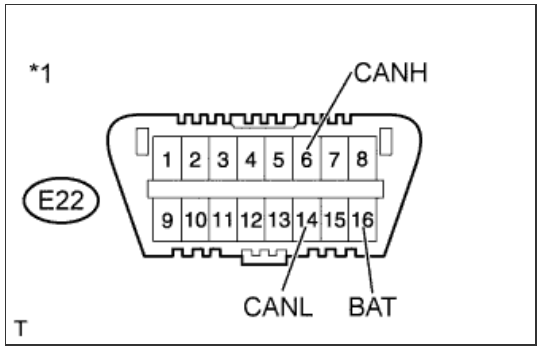
2.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



Text in Illustration

*1	DLC3

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

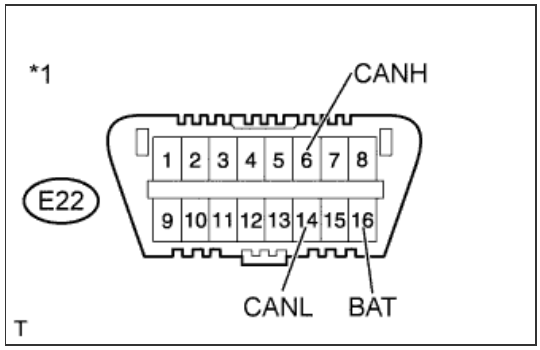
4.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



Text in Illustration

*1	DLC3

NG → Go to step 11

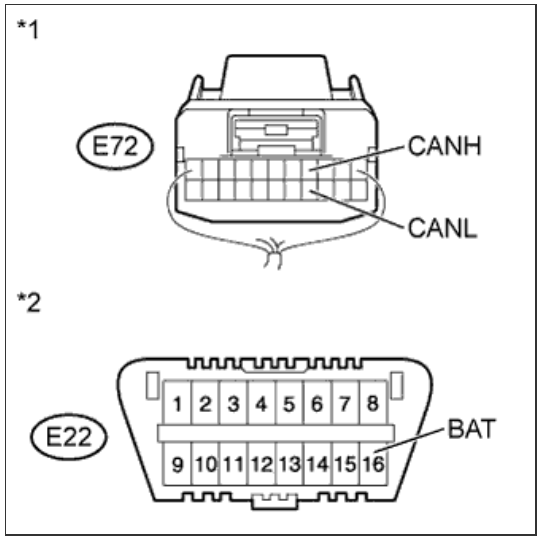
OK

5.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3

NG → Go to step 8

OK

6.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - AFS ECU)

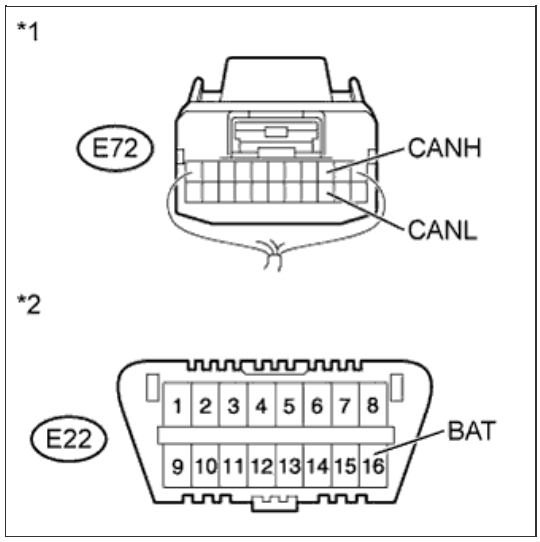
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 9

OK

7.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

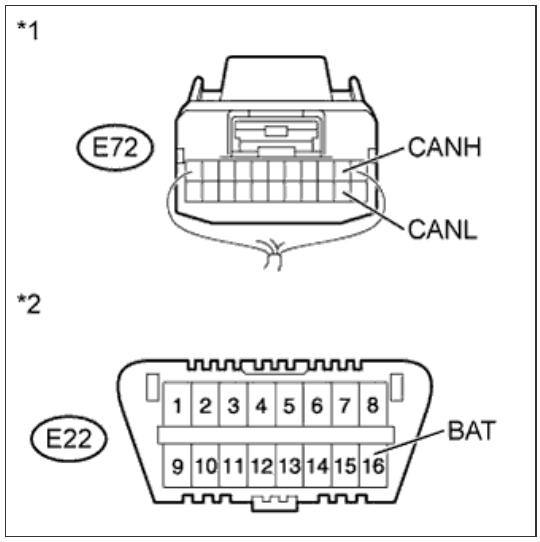
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

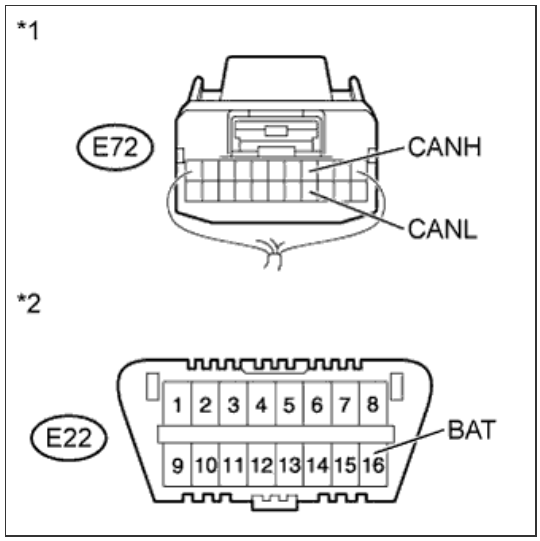
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition

E72-4 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

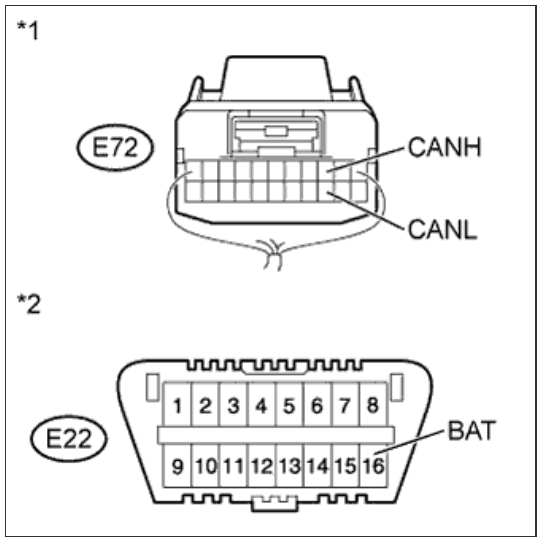
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (CANH, CANL)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

10.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (ECM)

a. Disconnect the A38 ECM connector.

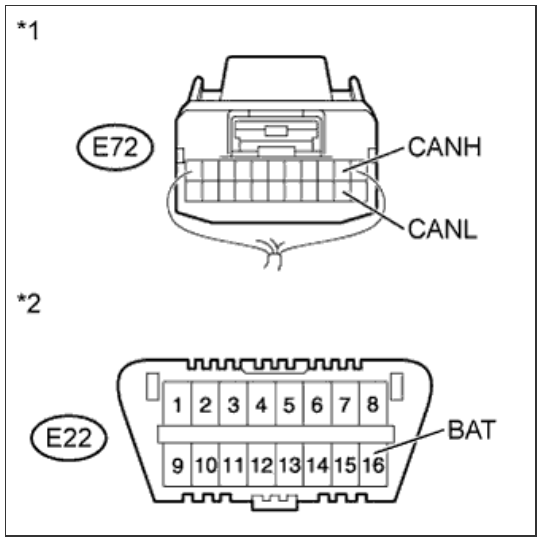
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

11.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

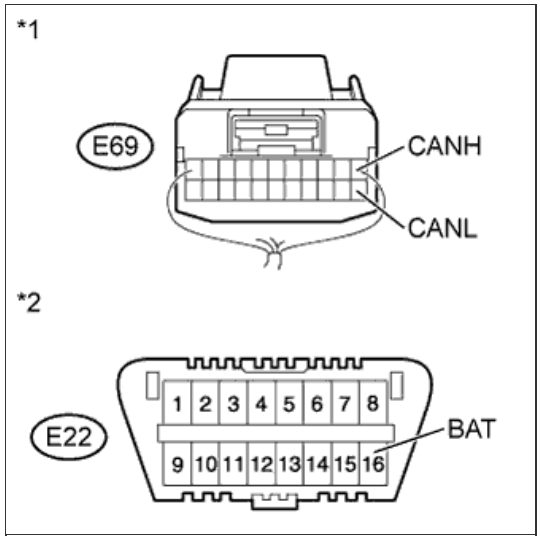
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

13.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

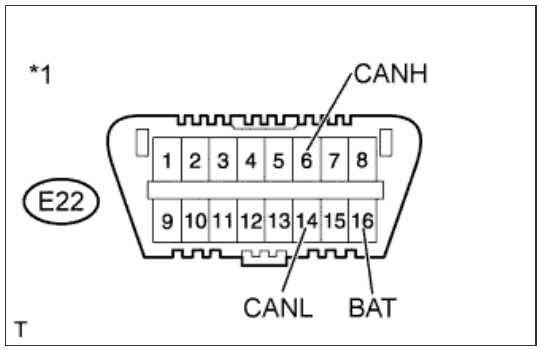
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	DLC3



NG → Go to step 20

OK

14.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - DISPLAY AND NAVIGATION MODULE DISPLAY)

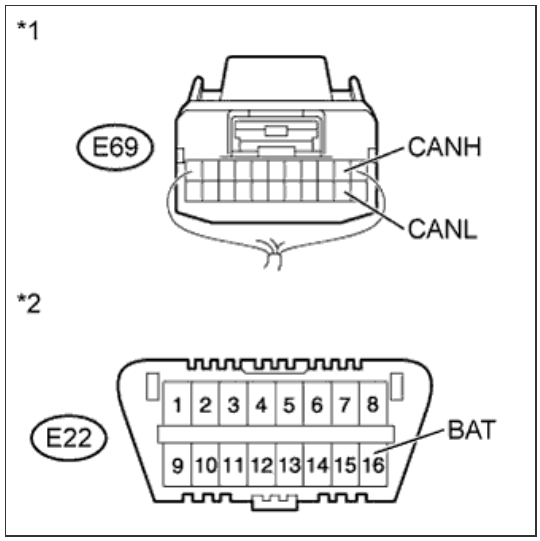
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 17

OK

15.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

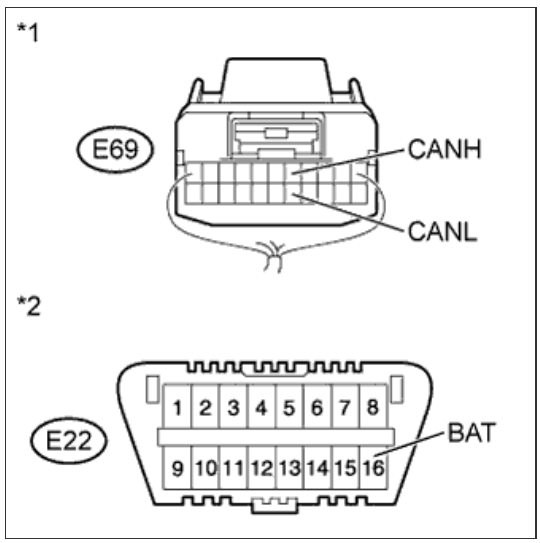
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 18

OK

16.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

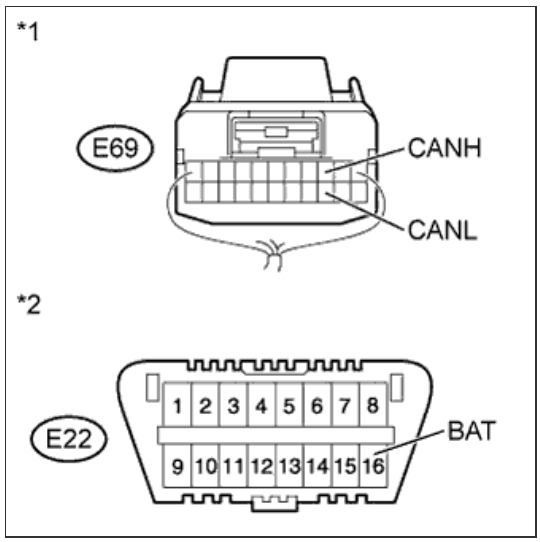
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 19

OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

17.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation module display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

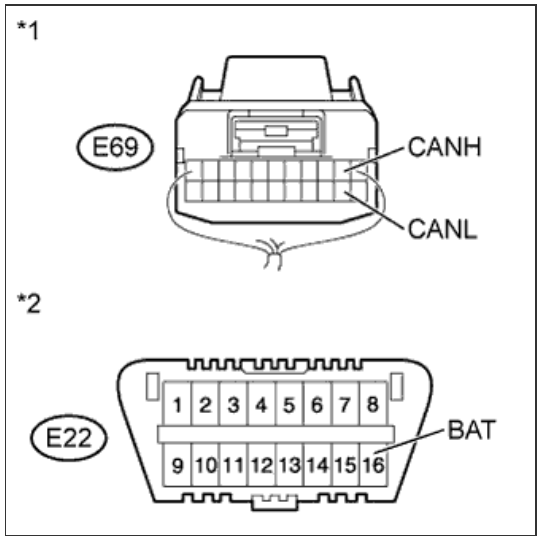
Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C

REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISPLAY AND NAVIGATION MODULE DISPLAY (CANH, CANL)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

18.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

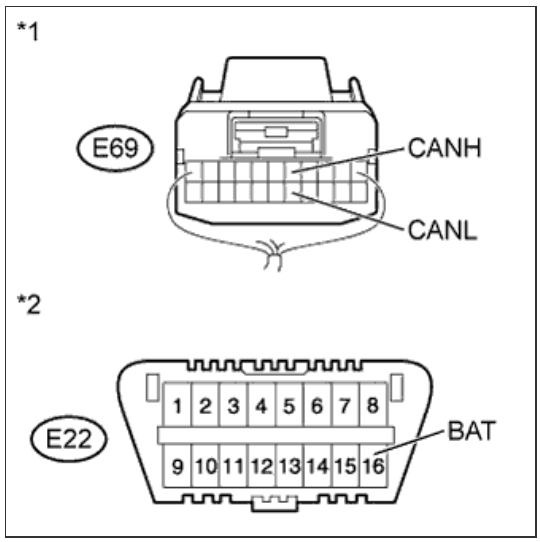
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG

REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

19.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

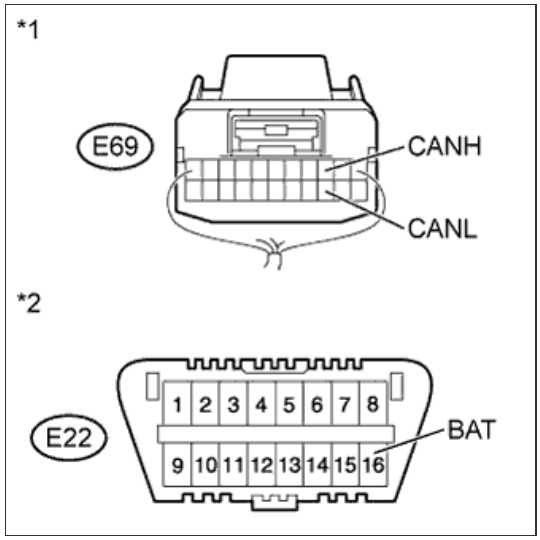
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG

REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

20.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

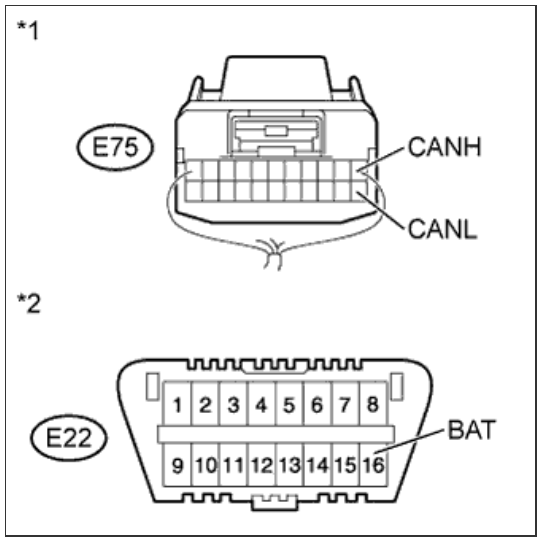
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E75-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

21.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

22.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - MAIN BODY ECU)

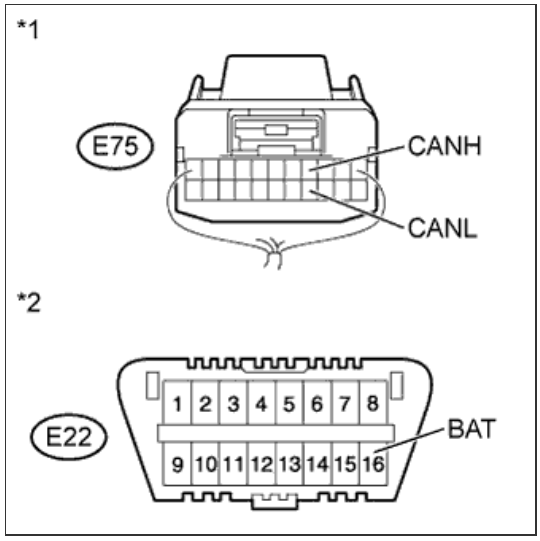
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-4 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E75-15 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → Go to step 24

OK

23.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

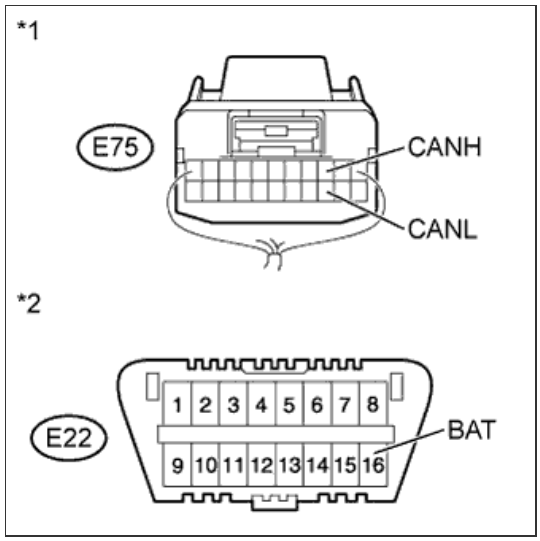
Standard Resistance:

Tester Connection	Switch Condition	Specified

		Condition
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

24.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU connector.

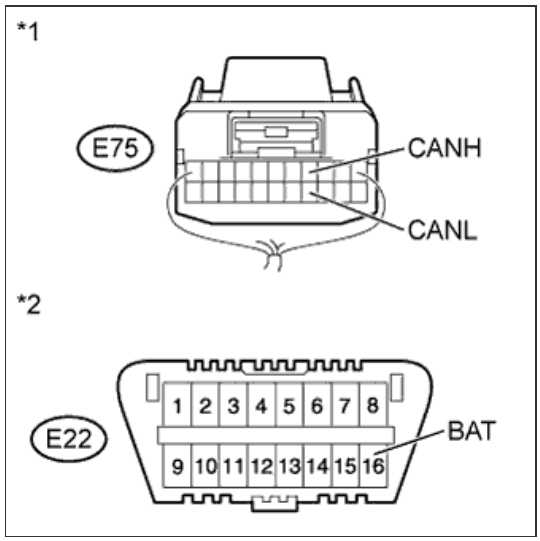
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-4 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E75-15 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

25.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

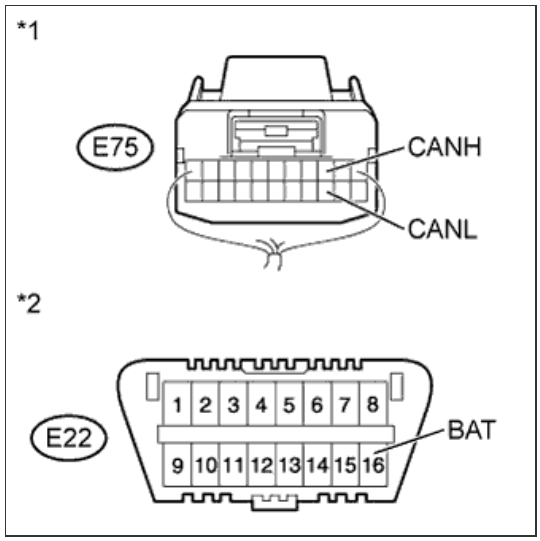
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

E75-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK →

REPLACE COMBINATION METER ASSEMBLY (Click here)

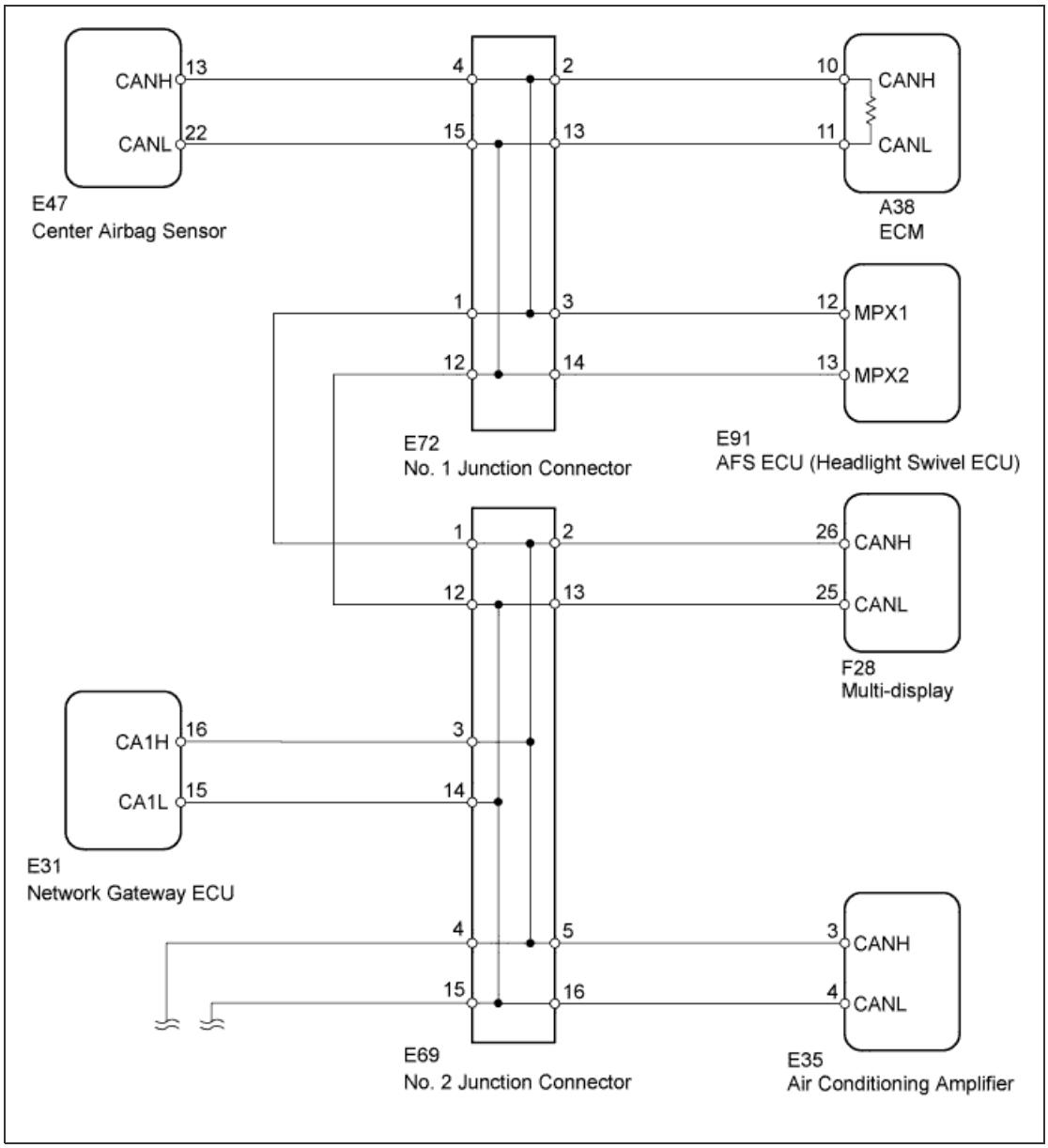
for Preparation Click here

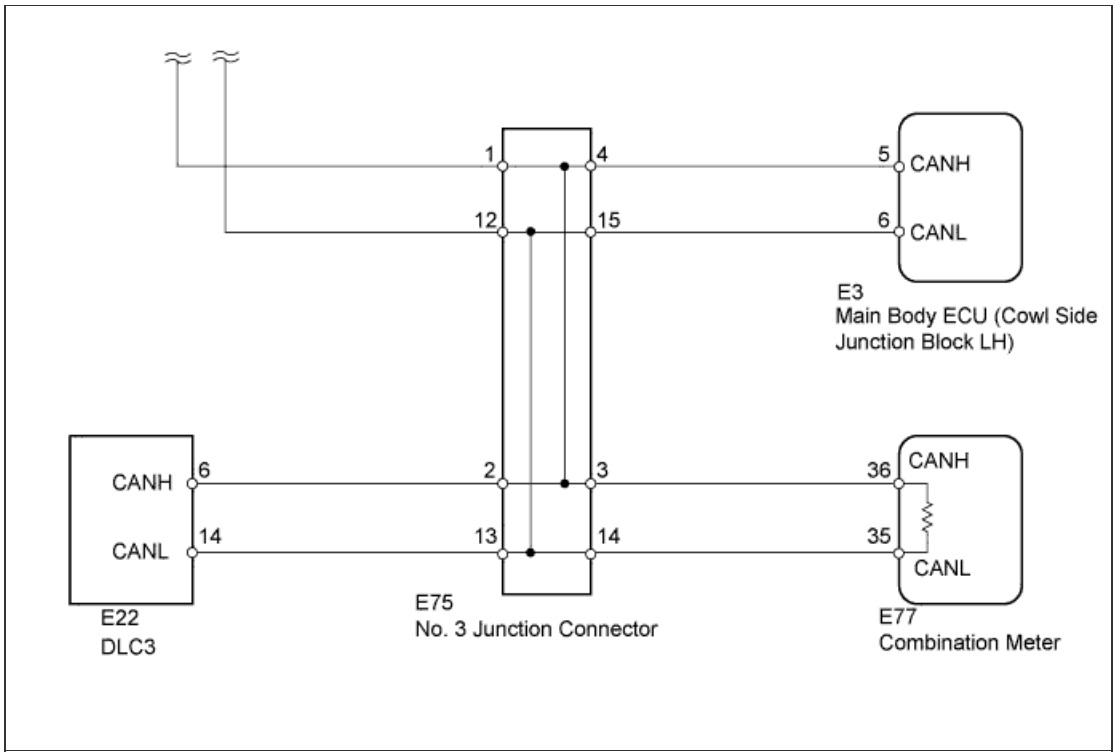
DESCRIPTION

There may be a short circuit between the CAN bus line and GND when there is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.	• Short to GND • ECM • Center airbag sensor assembly • AFS ECU (headlight swivel ECU assembly) • Multi-display • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

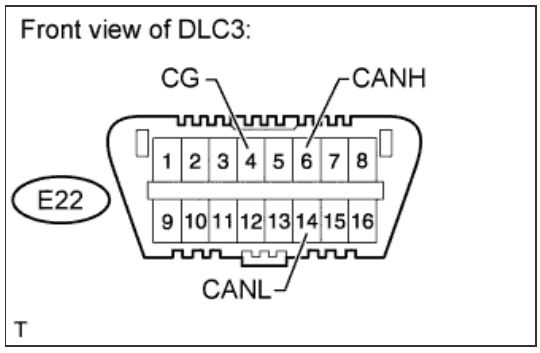
2.CHECK FOR SHORT TO GND IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO

DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

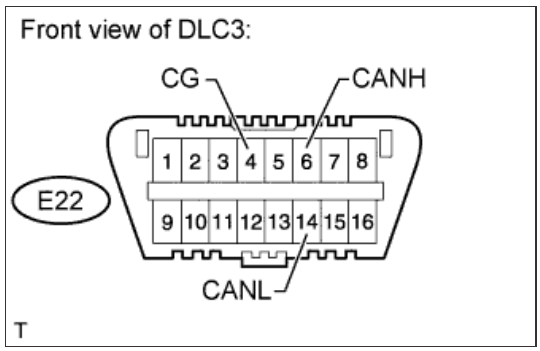
4.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Result
E22-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 11

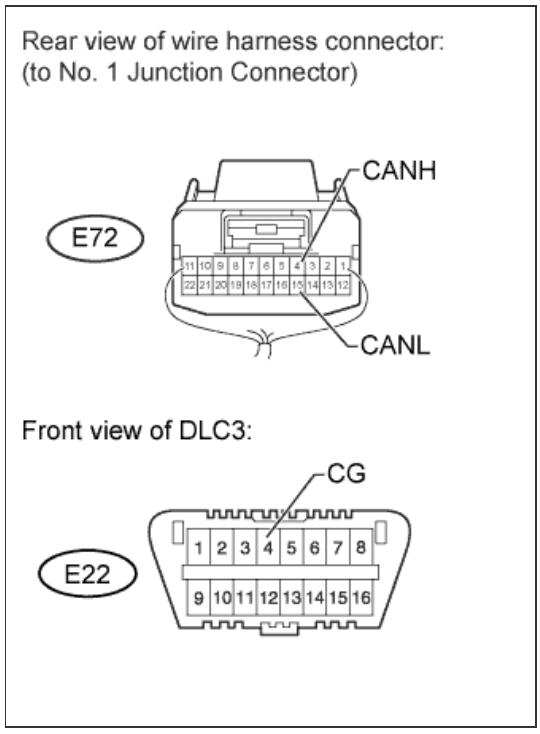
OK

5.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 8

OK

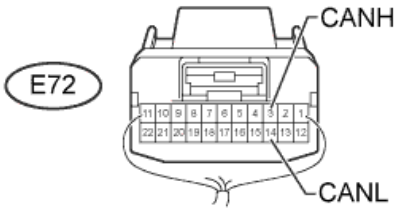
6.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION BLOCK - AFS ECU)

a. Measure the resistance according to the value(s) in the table below.

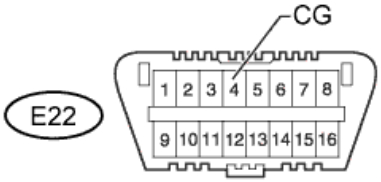
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → Go to step 9

OK

7.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.

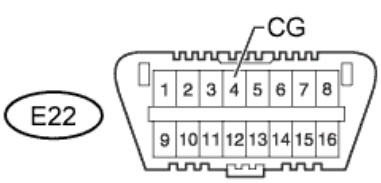
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT TO GND IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

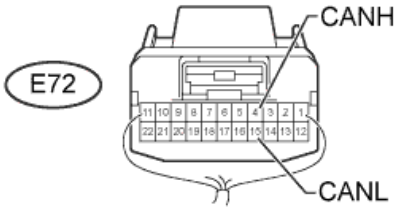
a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

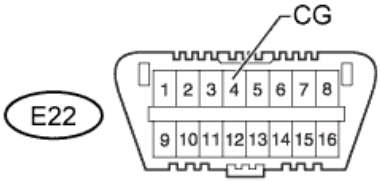
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AFS ECU)

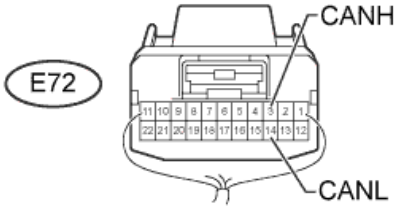
a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

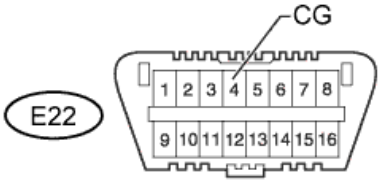
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

10.CHECK FOR SHORT TO GND IN CAN BUS WIRE (ECM)

a. Disconnect the A38 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

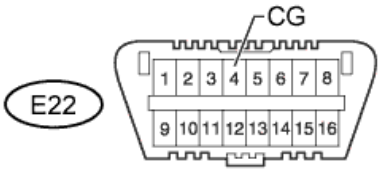
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

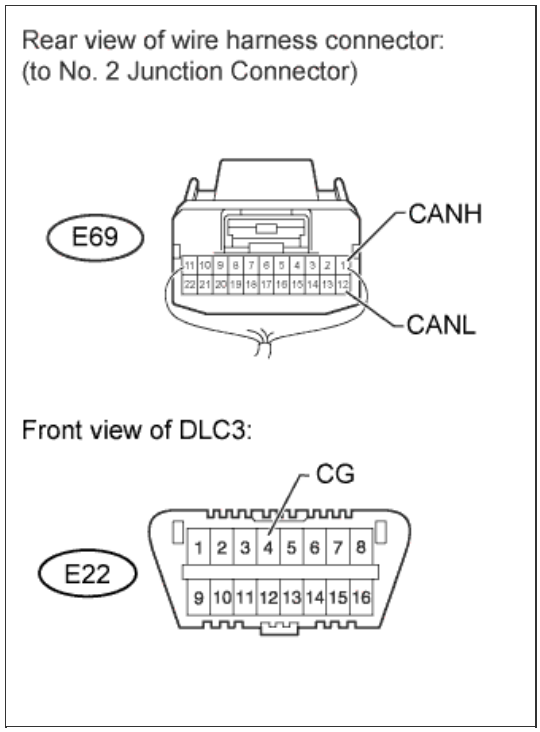
11.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

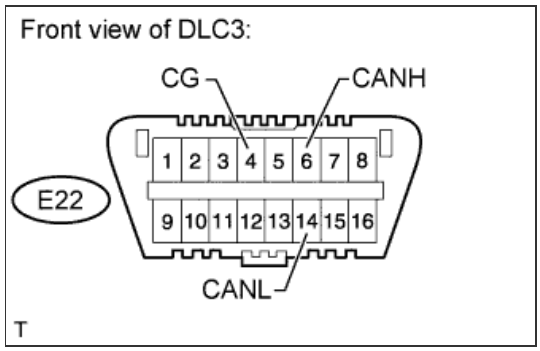
NEXT

13.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 20

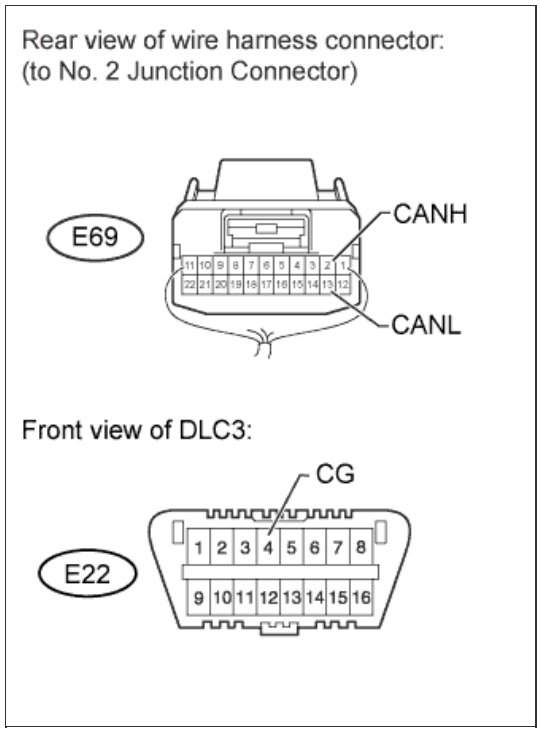
OK

14.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - MULTI-DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 17

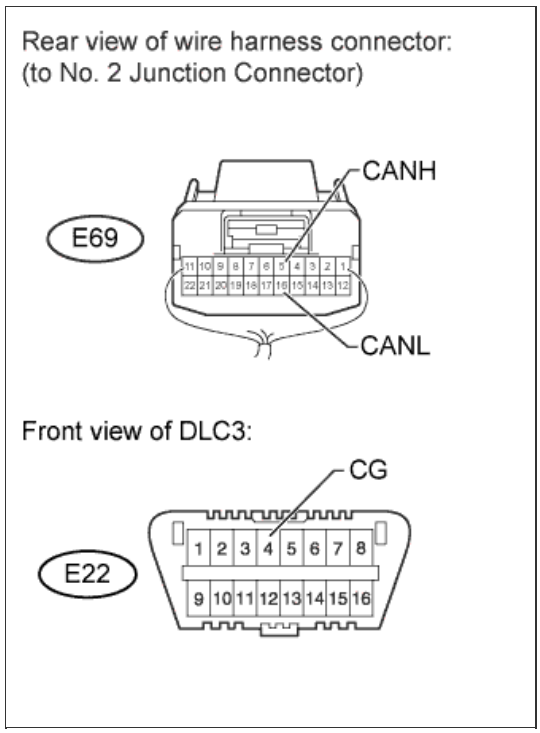
OK

15.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 18

OK

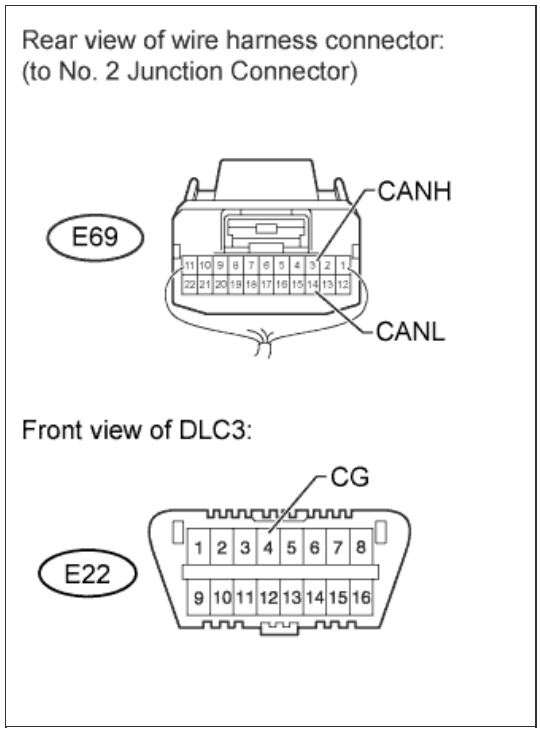
16.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 19

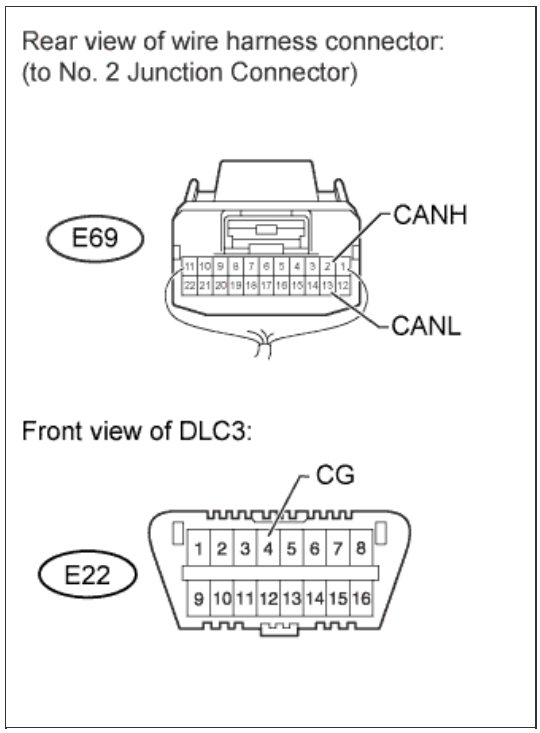
OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

17.CHECK FOR SHORT TO GND IN CAN BUS WIRE (MULTI-DISPLAY)

a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Result	Type	Proceed tp
E69-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK	w/ Navigation System	A
				w/o Navigation System	B
E69-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK	w/ Navigation System	A
				w/o Navigation System	B
E69-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG	-	C

E69-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG	-	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MULTI-DISPLAY (CANH, CANL)

A

REPLACE MULTI-DISPLAY (Click here)

18.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

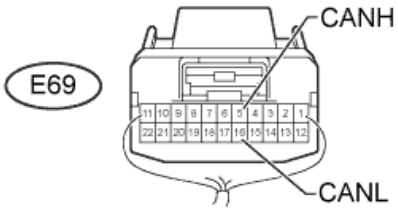
a. Disconnect the E35 air conditioning amplifier connector.

b. Measure the resistance according to the value(s) in the table below.

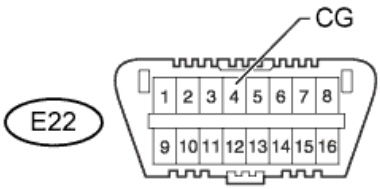
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

19.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NETWORK GATEWAY ECU)

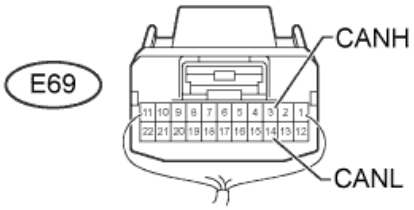
a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

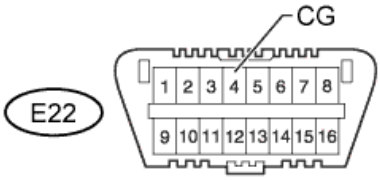
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

20.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

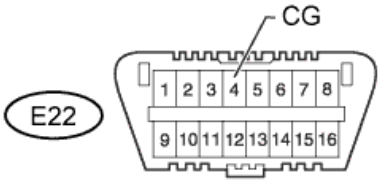
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

21.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

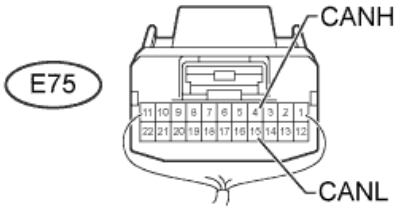
22.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - MAIN BODY)

a. Measure the resistance according to the value(s) in the table below.

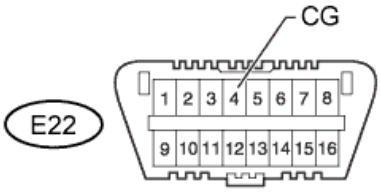
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → Go to step 24

OK

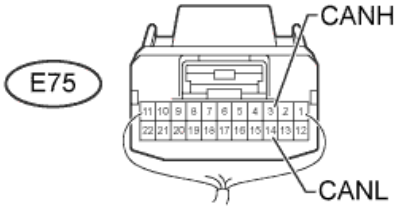
23.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

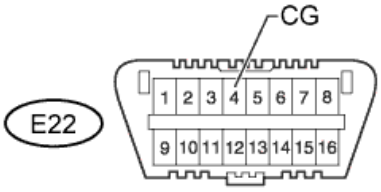
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

24.CHECK FOR SHORT TO GND IN CAN BUS WIRE (MAIN BODY ECU)

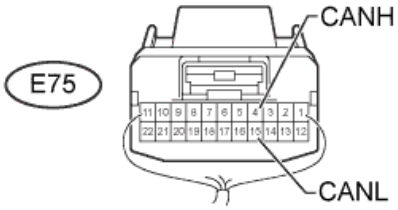
a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

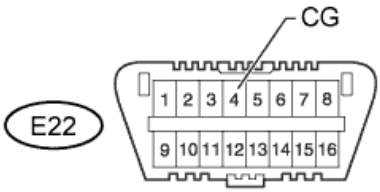
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

25.CHECK FOR SHORT TO GND IN CAN BUS WIRE (COMBINATION METER)

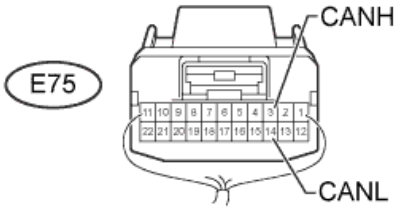
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

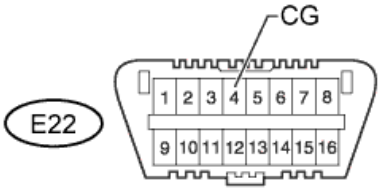
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK

REPLACE COMBINATION METER (Click here)

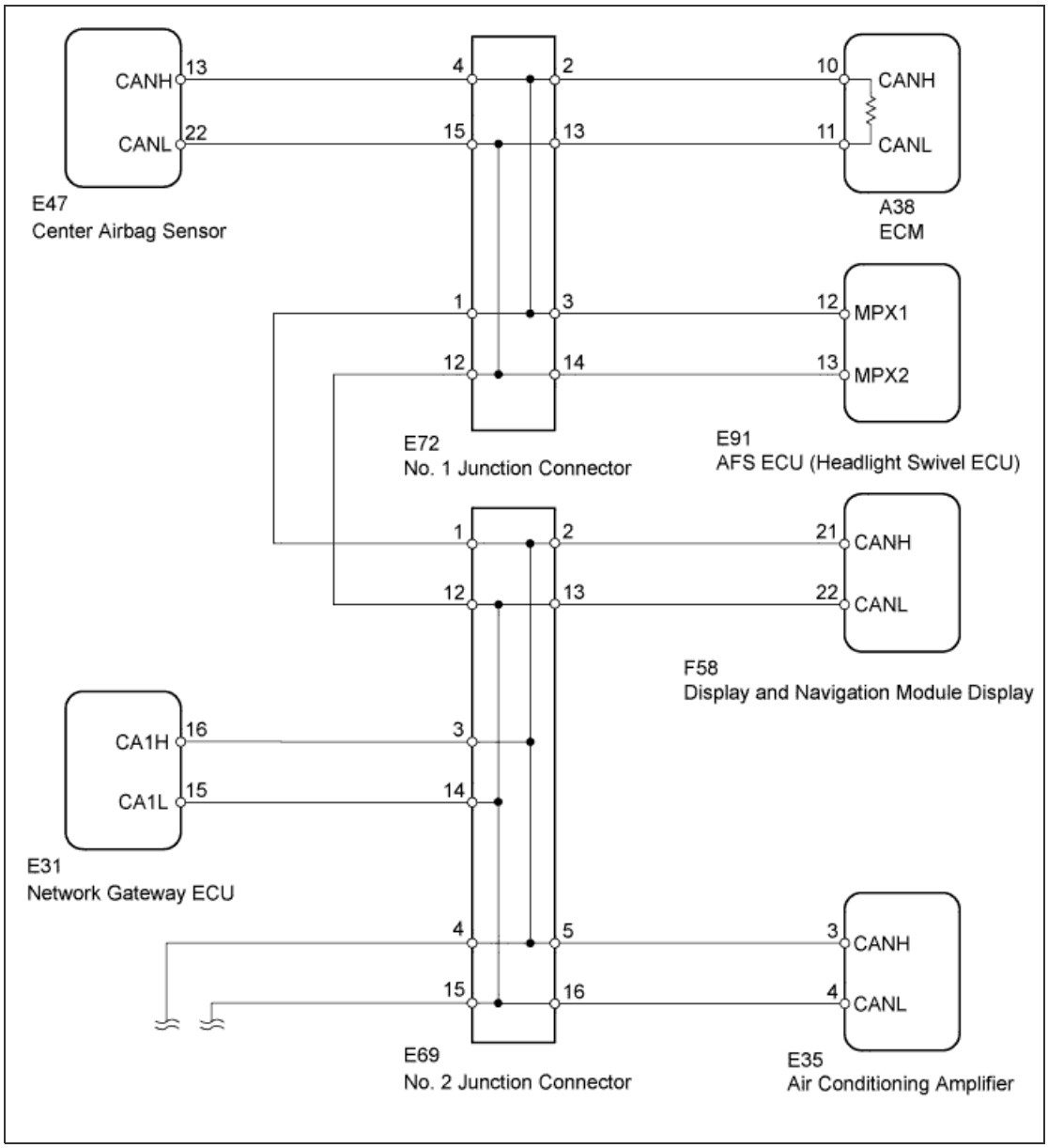
for Preparation Click here

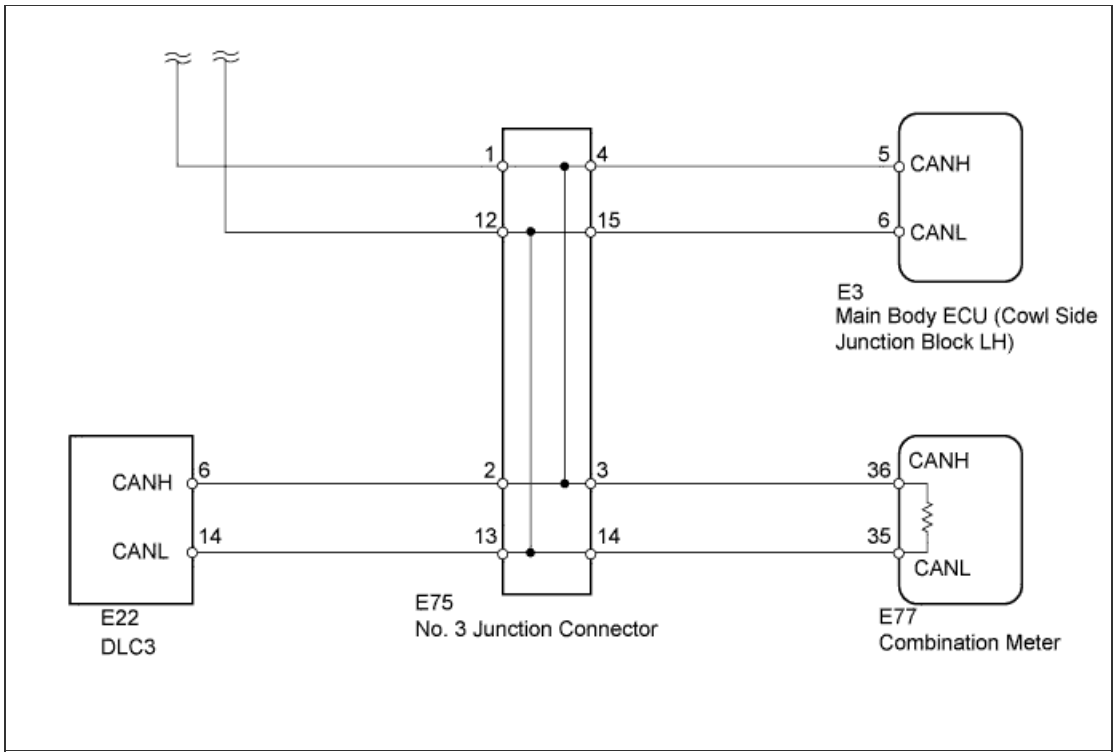
DESCRIPTION

There may be a short circuit between the CAN bus line and GND when there is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.	• Short to GND • ECM • Center airbag sensor assembly • AFS ECU (headlight swivel ECU assembly) • Display and navigation module display • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

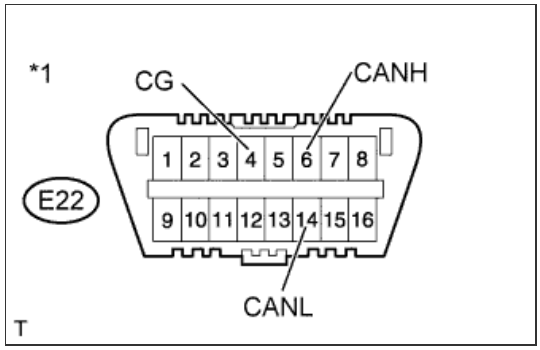
- **w/ Navigation System:**
  After the engine switch is turned off, the HDD navigation system requires approximately 6 minutes to record various types of memory and settings. As a result, after turning the engine switch off, wait 6 minutes or more before disconnecting the cable from the negative (-) battery terminal.
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

NEXT

2.CHECK FOR SHORT TO GND IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	DLC3

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

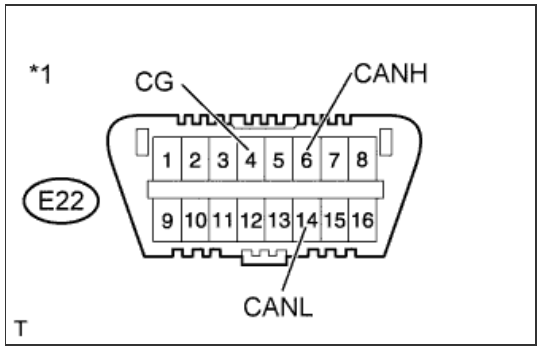
4.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher



Text in Illustration

*1	DLC3

NG → Go to step 11

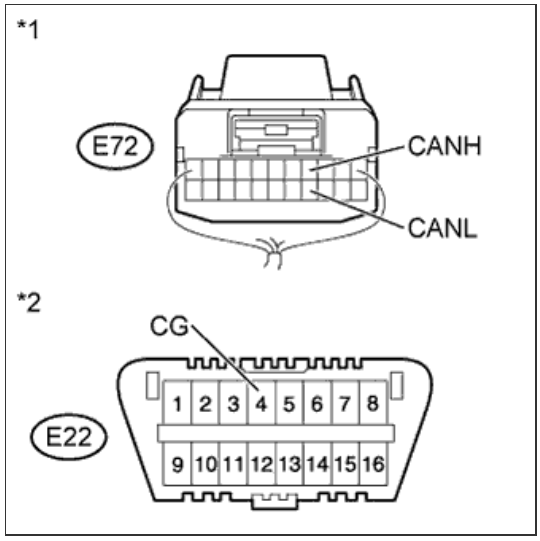
OK

5.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-15 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher



Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3

NG → Go to step 8

OK

6.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION BLOCK - AFS ECU)

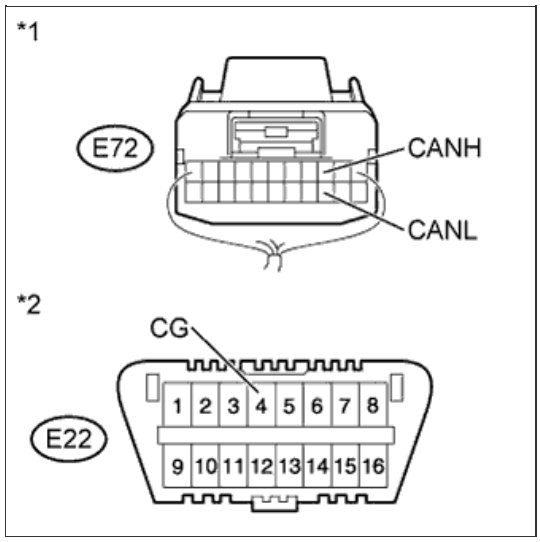
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 9

OK

7.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

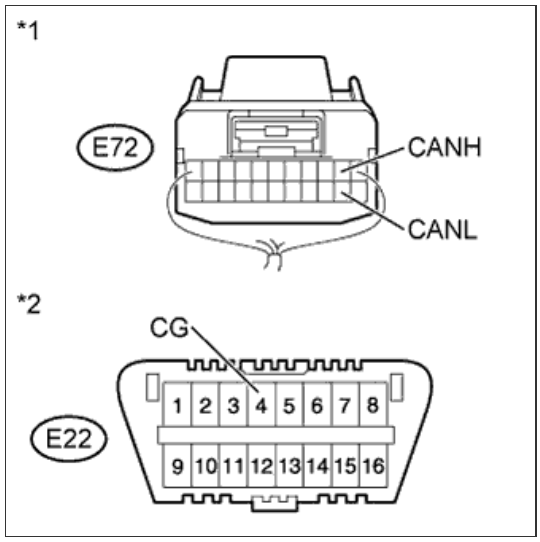
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT TO GND IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

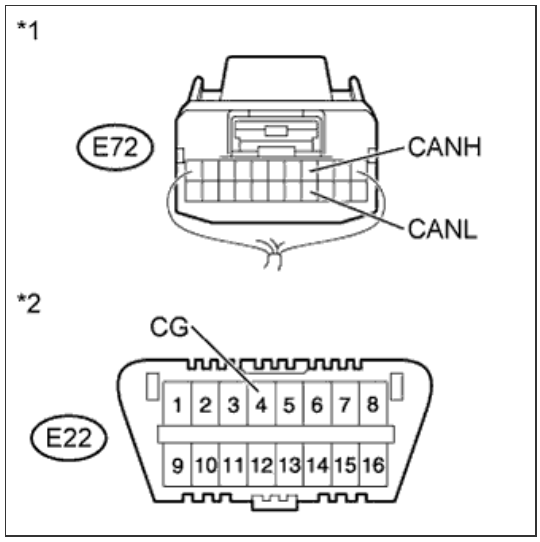
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition

E72-4 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-15 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU (headlight swivel ECU assembly) connector.

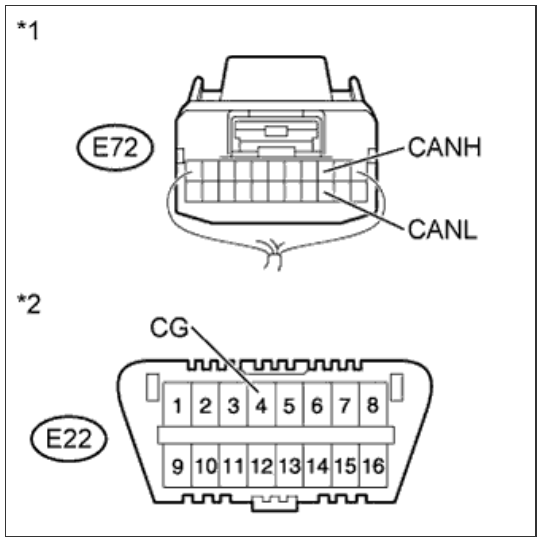
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

10.CHECK FOR SHORT TO GND IN CAN BUS WIRE (ECM)

a. Disconnect the A38 ECM connector.

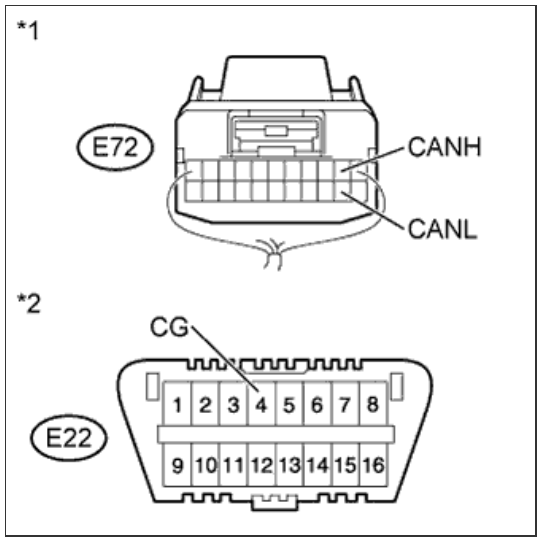
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

11.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

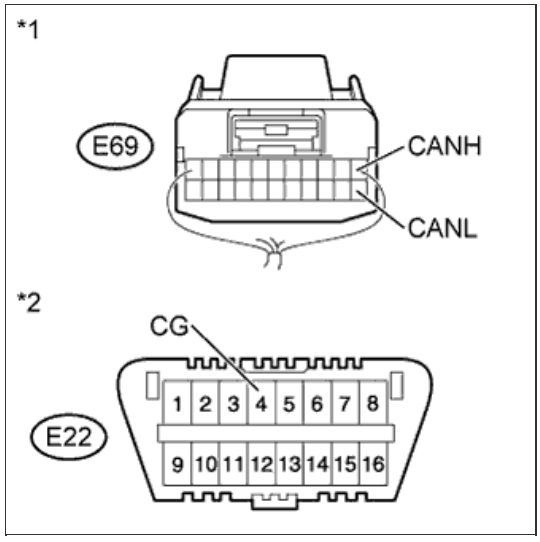
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

13.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

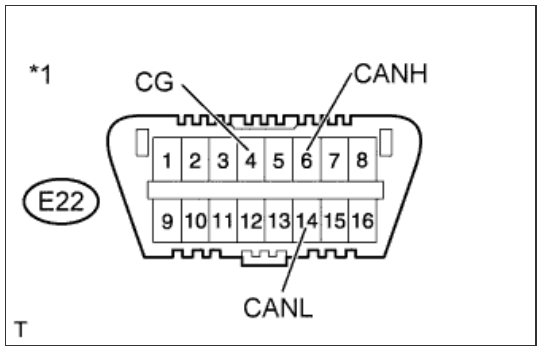
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	DLC3



NG → Go to step 20

OK

14.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - DISPLAY AND NAVIGATION MODULE DISPLAY)

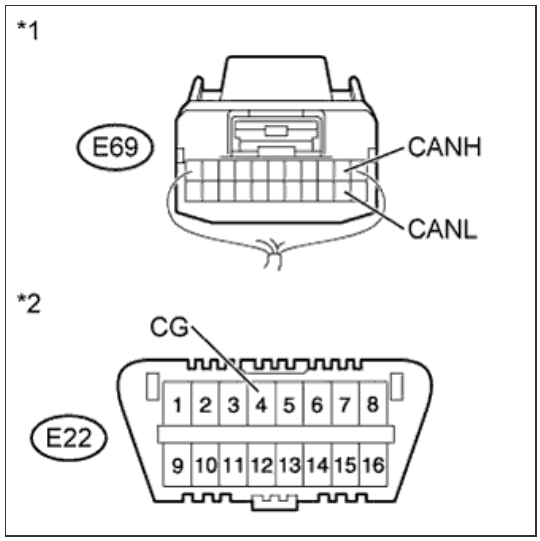
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 17

OK

15.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

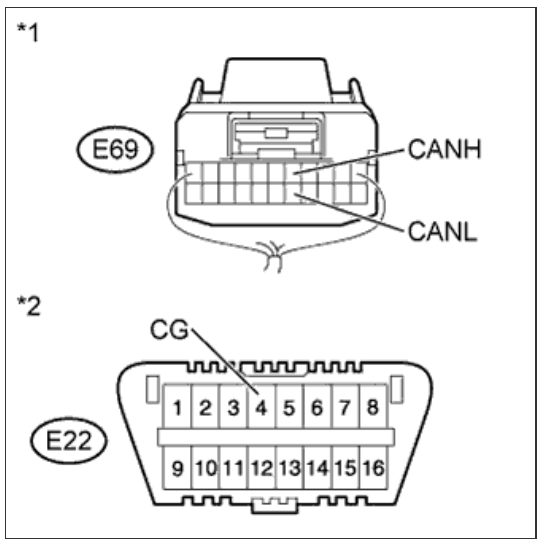
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-16 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 18

OK

16.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

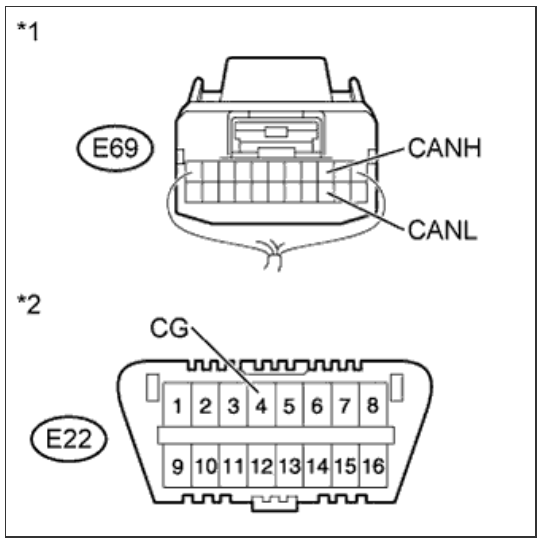
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 19

OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

17.CHECK FOR SHORT TO GND IN CAN BUS WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation module display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

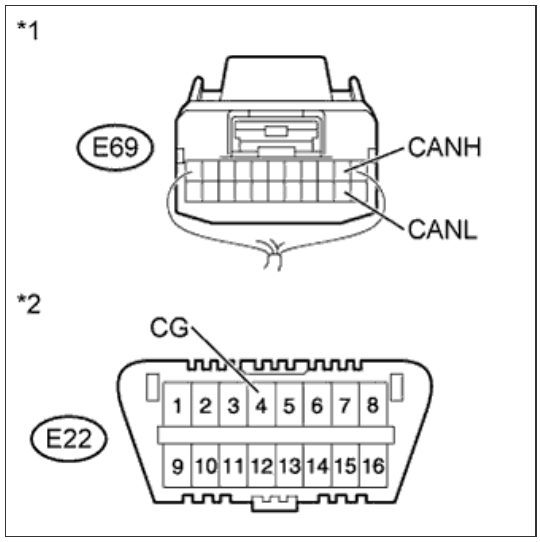
Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C

REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISPLAY AND NAVIGATION MODULE DISPLAY (CANH, CANL)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

18.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

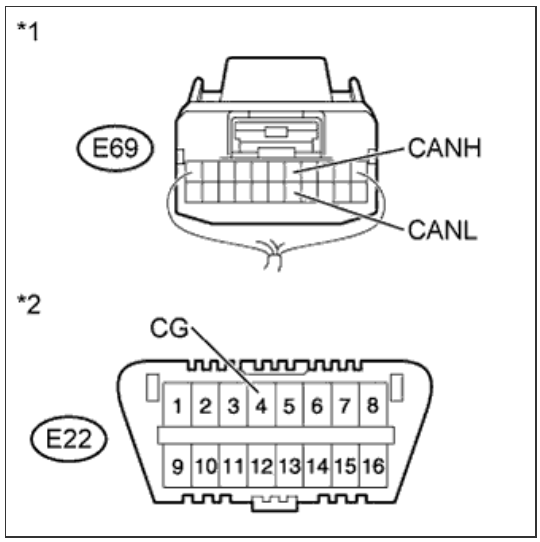
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-16 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG

REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

19.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

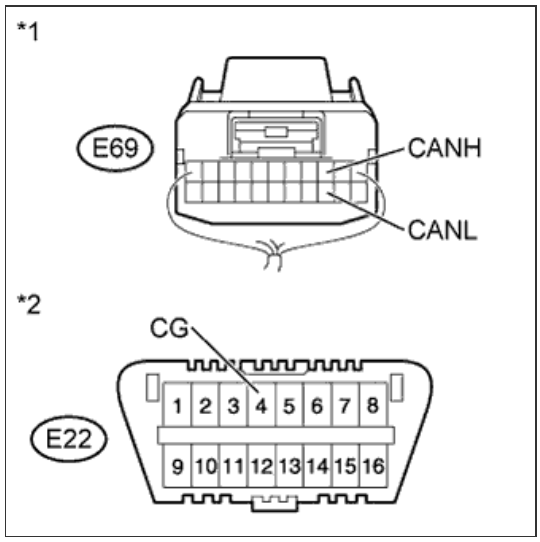
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG

REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

20.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

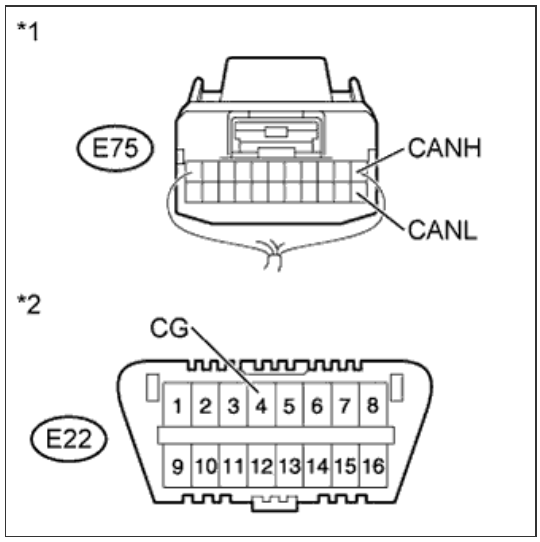
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E75-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

21.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

22.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - MAIN BODY)

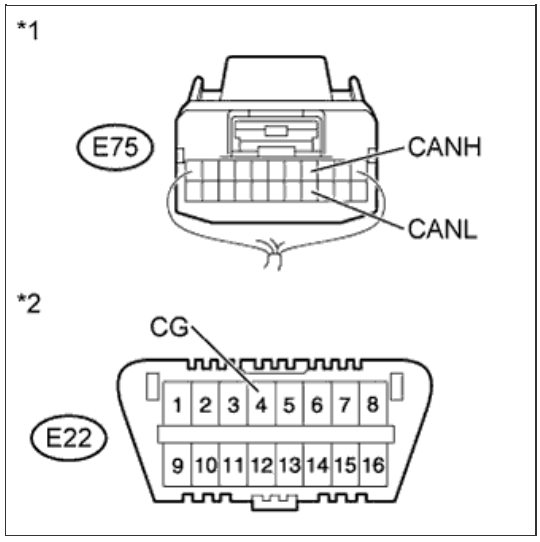
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-4 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E75-15 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → Go to step 24

OK

23.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

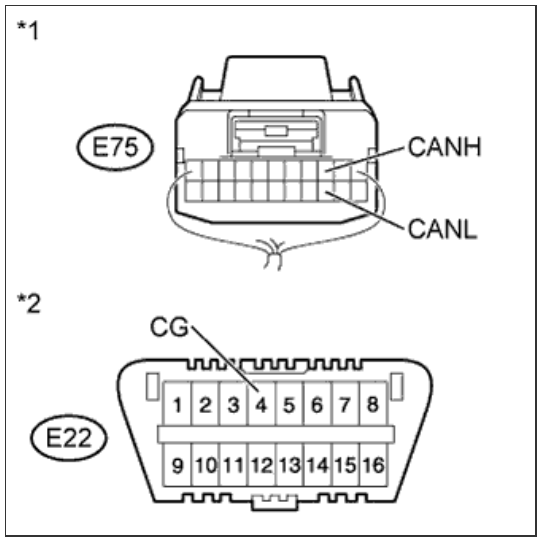
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E75-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

24.CHECK FOR SHORT TO GND IN CAN BUS WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

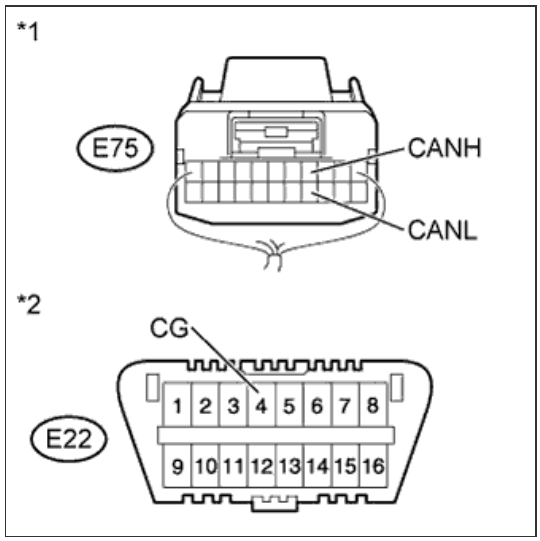
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-4 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E75-15 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

25.CHECK FOR SHORT TO GND IN CAN BUS WIRE (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

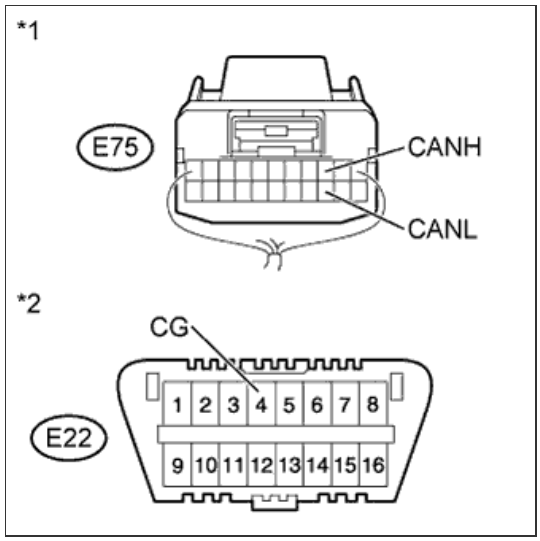
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher

E75-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK → REPLACE COMBINATION METER (Click here)

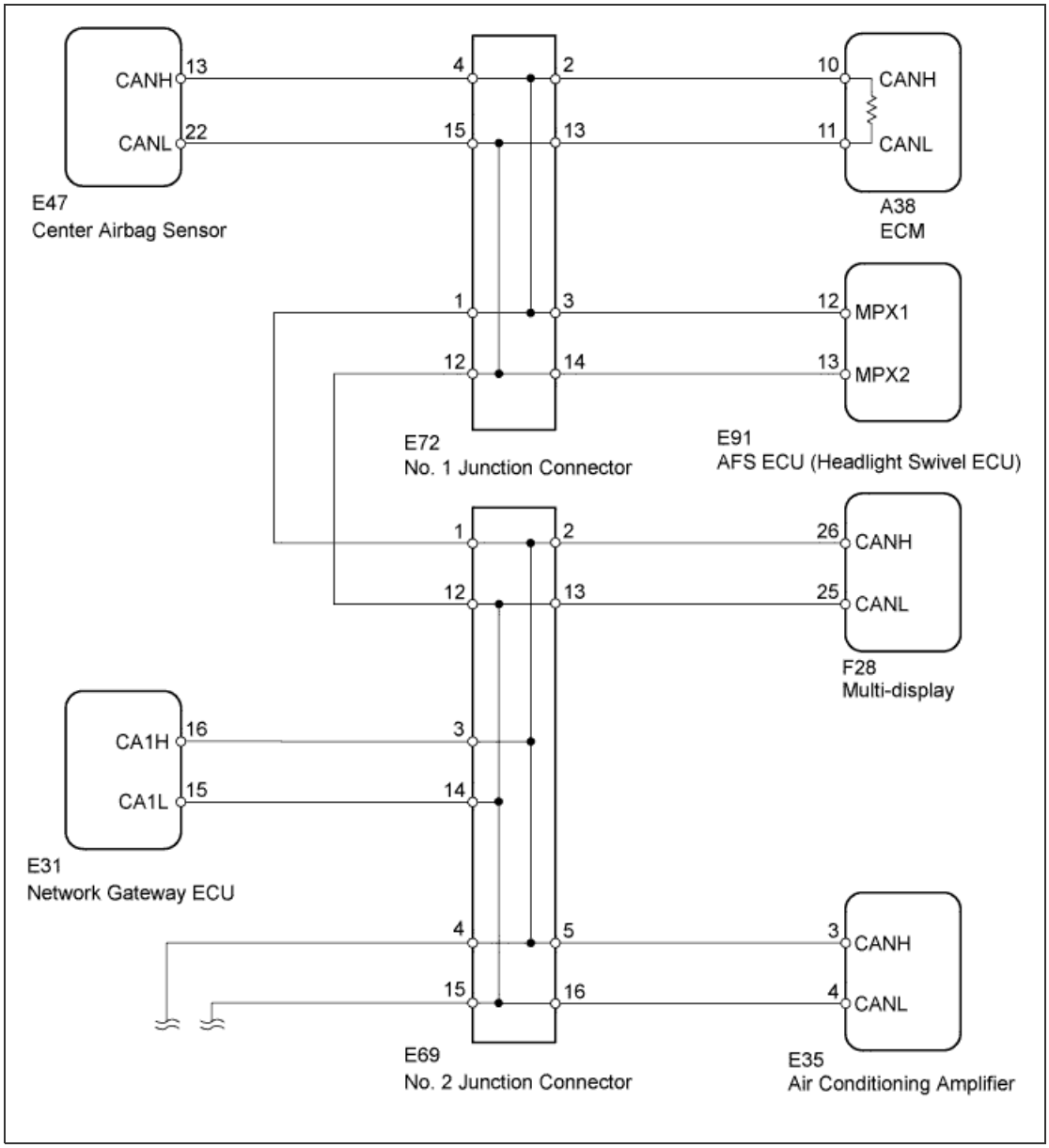
for Preparation Click here

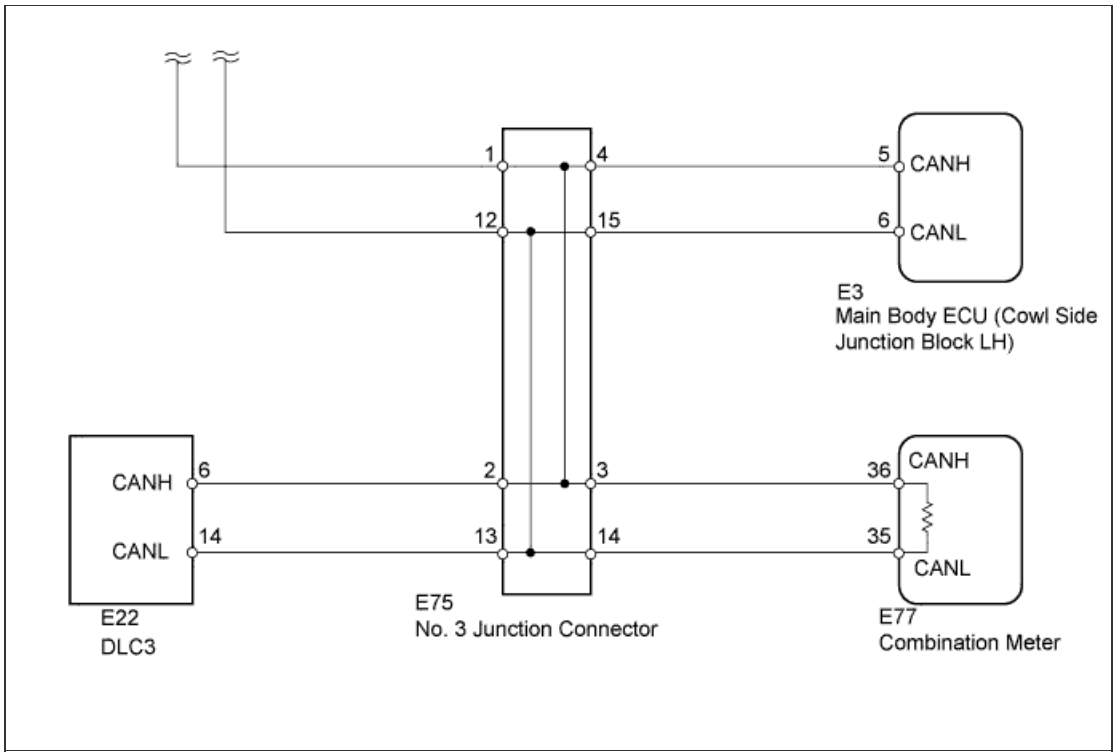
DESCRIPTION

If 2 or more ECUs and/or sensors do not appear on the intelligent tester "Bus Check" screen, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

Symptom	Trouble Area
2 or more ECUs and/or sensors do not appear on the intelligent tester "Bus Check" screen.	• One side of CAN branch wire is open • Multi-display • Center airbag sensor assembly • Air conditioning amplifier assembly • Main body ECU (cowl side junction block LH) • AFS ECU (headlight swivel ECU assembly) • Network gateway ECU

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

- **Perform the following inspection for the ECUs (sensors) which are not displayed on the intelligent tester. If a malfunction cannot be identified, perform the following inspections for the ECUs (sensors) connected to the CAN communication system.**
- **Do not remove the center airbag sensor and ECM, as they are the end parts of the circuit. If removed, CAN communication will not be possible.**
- **The open circuit confirmation of the center airbag sensor, ECM and main wire is performed in the Check CAN Bus Line procedure of How to Proceed with Troubleshooting. This inspection only has procedures for checking for an open circuit on one side of the CAN branch wire.**

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MULTI-DISPLAY)

a. Disconnect the F28 multi-display connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"AVN" not displayed on intelligent tester.	A
Several ECUs and sensors other than "AVN" not displayed on intelligent tester.	B

B → **Go to step 4**

A

3.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MULTI-DISPLAY BRANCH WIRE)

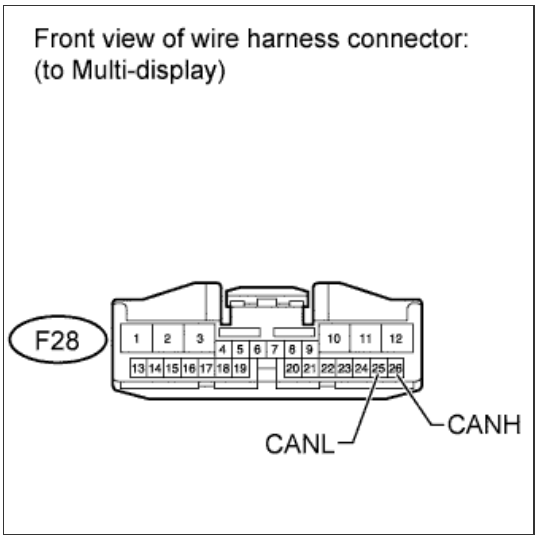
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F28-26 (CANH) - F28-25 (CANL)	Engine switch off	54 to 69 Ω

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (MULTI-DISPLAY)

A → REPLACE MULTI-DISPLAY (Click here)

4.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"SRS airbag" not displayed on intelligent tester.	A
Several ECUs and sensors other than "SRS airbag" not displayed on intelligent tester.	B

B → Go to step 6

A

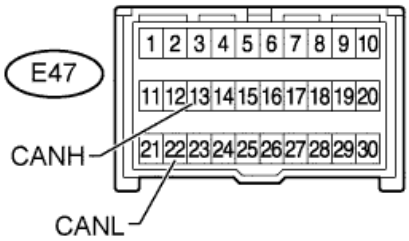
5.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Center Airbag Sensor)



T

NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (CENTER AIRBAG SENSOR)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

6.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Air Conditioner" not displayed on intelligent tester.	A
Several ECUs and sensors other than "Air Conditioner" not displayed on intelligent tester.	B

B → Go to step 8

A

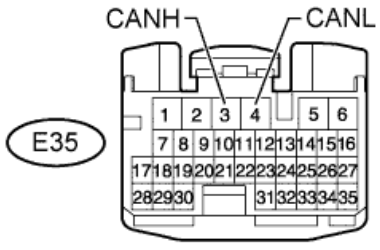
7.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Air Conditioning Amplifier)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (AIR CONDITIONING AMPLIFIER)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

8.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Main Body" not displayed on intelligent tester.	A
Several ECUs and sensors other than "Main Body" not displayed on intelligent tester.	B

B → Go to step 10

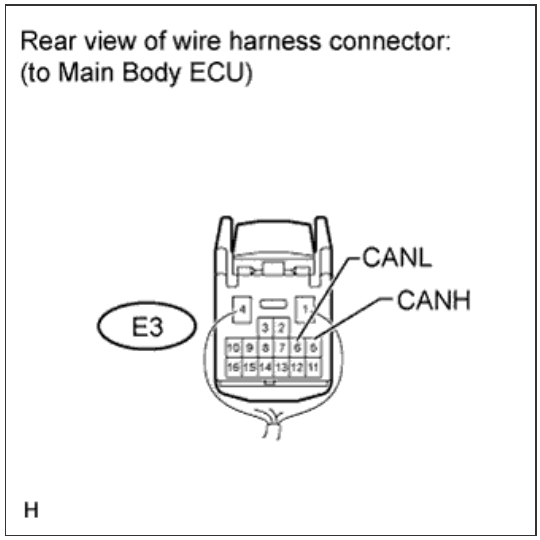
A

9.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (MAIN BODY ECU)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR OPEN IN ONE SIDE OF CAN BRANCH WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"AFS/HL AutoLeveling" not displayed on intelligent tester.	A
Several ECUs and sensors other than "AFS/HL AutoLeveling" not displayed on intelligent tester.	B

B → Go to step 12

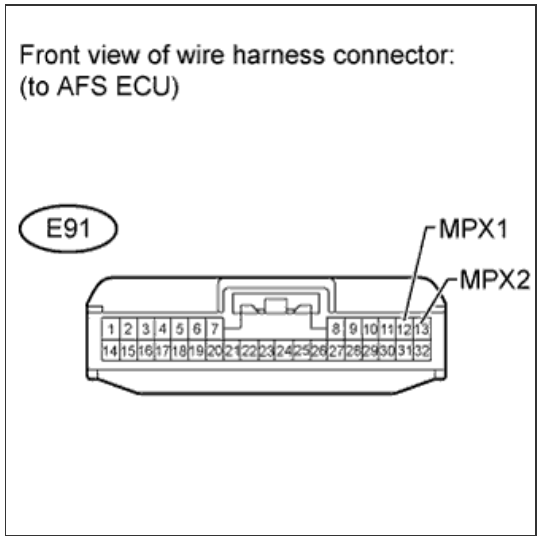
A

11.CHECK FOR OPEN IN ONE SIDE OF CAN BRANCH WIRE (AFS ECU BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (AFS ECU)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

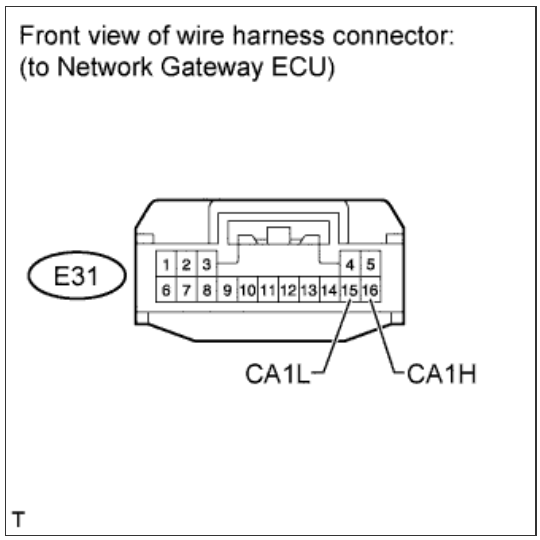
12.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (NETWORK GATEWAY ECU BRANCH WIRE)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (NETWORK GATEWAY ECU)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

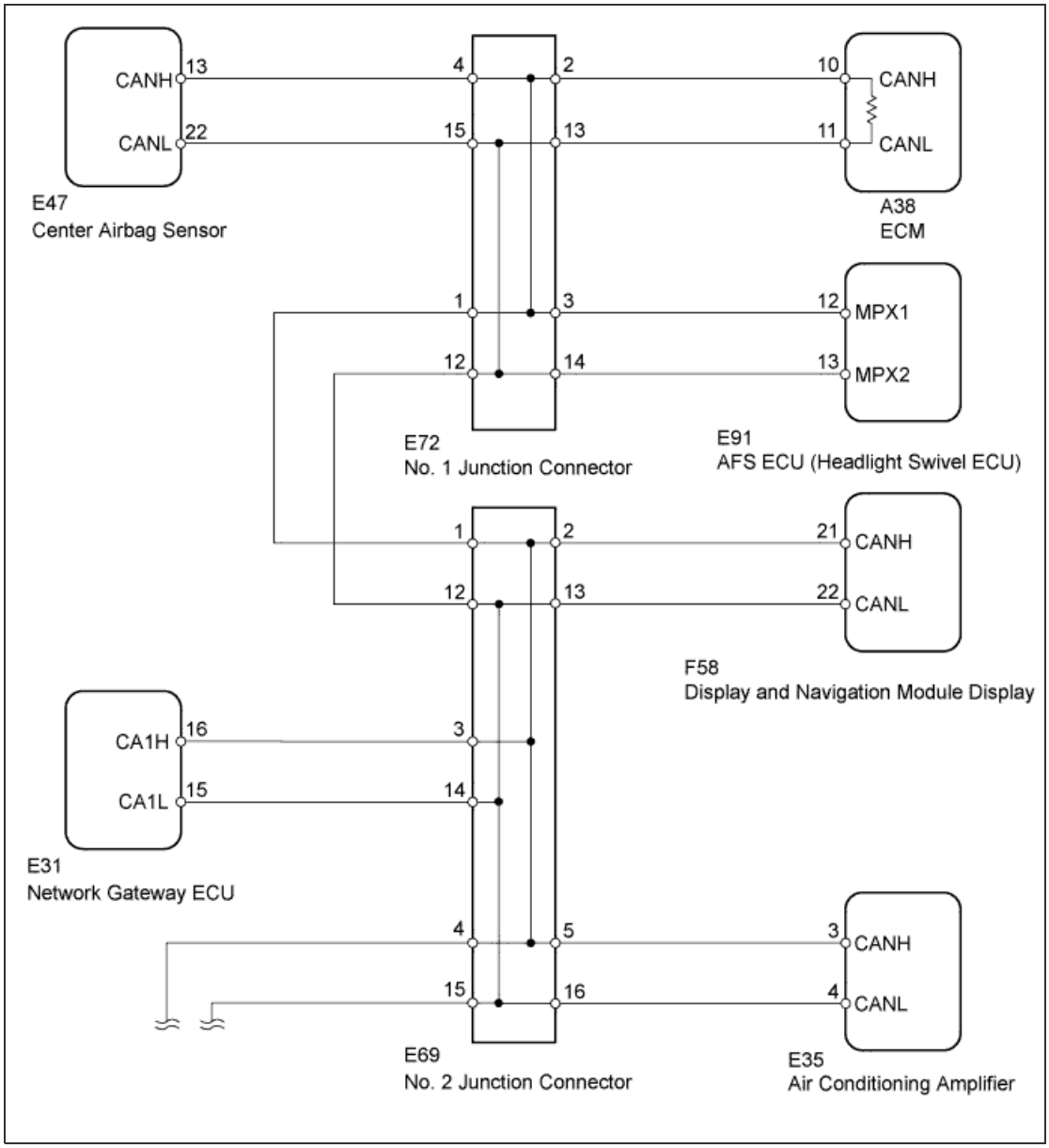
for Preparation Click here

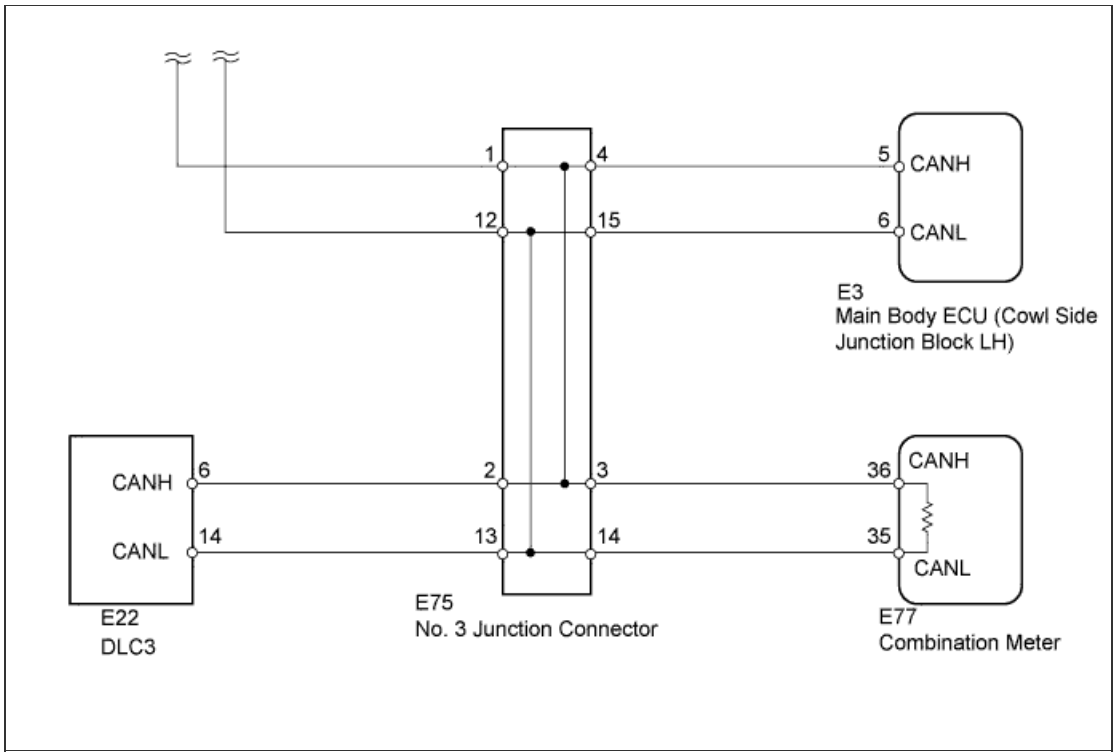
DESCRIPTION

If 2 or more ECUs and/or sensors do not appear on the intelligent tester "CAN Bus Check" screen, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

Symptom	Trouble Area
2 or more ECUs and/or sensors do not appear on the intelligent tester "CAN Bus Check" screen.	• One side of CAN branch wire is open • Display and navigation module display • Center airbag sensor assembly • Air conditioning amplifier assembly • Main body ECU (cowl side junction block LH) • AFS ECU (headlight swivel ECU assembly) • Network gateway ECU

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

- **Perform the following inspection for the ECUs (sensors) which are not displayed on the intelligent tester. If a malfunction cannot be identified, perform the following inspections for the ECUs (sensors) connected to the CAN communication system.**
- **Do not remove the center airbag sensor and ECM, as they are the end parts of the circuit. If removed, CAN communication will not be possible.**
- **The open circuit confirmation of the center airbag sensor, ECM and main wire is performed in the Check CAN Bus Line procedure of How to Proceed with Troubleshooting. This inspection only has procedures for checking for an open circuit on one side of the CAN branch wire.**

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **w/ Navigation System:**
  After the engine switch is turned off, the HDD navigation system requires approximately 6 minutes to record various types of memory and settings. As a result, after turning the engine switch off, wait 6 minutes or more before disconnecting the cable from the negative (-) battery terminal.
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

NEXT

2.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation module display connector.

b. Select "CAN Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"AVN1" not displayed on the intelligent tester.	A
Several ECUs and sensors other than "AVN1" not displayed on the intelligent tester.	B

B → Go to step 4

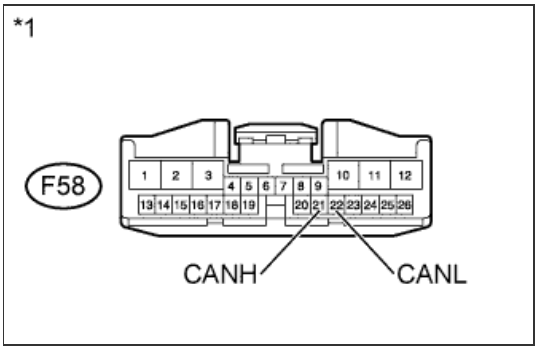
A

3.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F58-21 (CANH) - F58-22 (CANL)	Engine switch off	54 to 69 Ω



Text in Illustration

*1	Front view of wire harness connector (to Display and Navigation Module Display)

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C

B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (DISPLAY AND NAVIGATION MODULE DISPLAY OR MULTI-DISPLAY)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

4.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Select "CAN Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"SRS airbag" not displayed on the intelligent tester.	A
Several ECUs and sensors other than "SRS airbag" not displayed on the intelligent tester.	B

B → Go to step 6

A

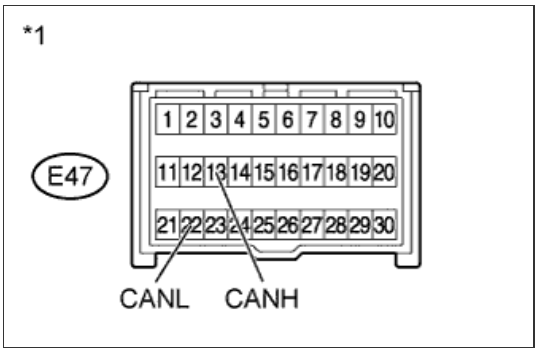
5.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified

		Condition
E47-13 (CANH) - E47-22 (CANL)	Engine switch off	54 to 69 Ω



Text in Illustration

*1	Front view of wire harness connector (to Center Airbag Sensor)

NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (CENTER AIRBAG SENSOR)

OK →

REPLACE CENTER AIRBAG SENSOR (Click here)

6.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

b. Select "CAN Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Air Conditioner" not displayed on the intelligent tester.	A
Several ECUs and sensors other than "Air Conditioner" not displayed on the intelligent tester.	B

B → Go to step 8

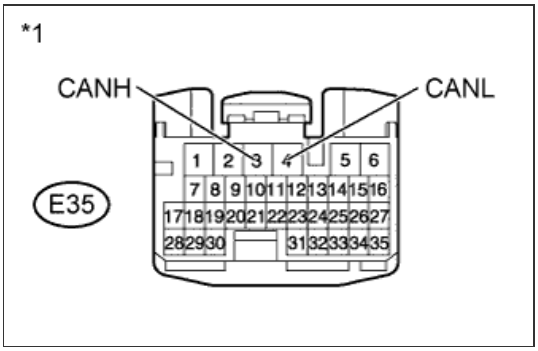
A →

7.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	Engine switch off	54 to 69 Ω



Text in Illustration

*1	Front view of wire harness connector (to Air Conditioning Amplifier)

NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (AIR CONDITIONING AMPLIFIER)

OK →

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

8.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Select "CAN Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Main Body" not displayed on the intelligent tester.	A
Several ECUs and sensors other than "Main Body" not displayed on the intelligent tester.	B

B → Go to step 10

A

9.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU BRANCH WIRE)

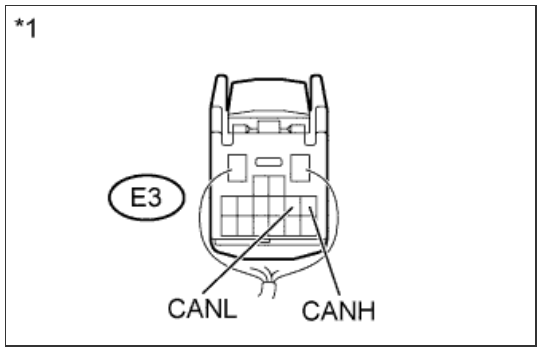
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Rear view of wire harness connector (to Main Body ECU)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (MAIN BODY ECU)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR OPEN IN ONE SIDE OF CAN BRANCH WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

b. Select "CAN Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"AFS/HL Auto Leveling" not displayed on the intelligent tester.	A
Several ECUs and sensors other than "AFS/HL Auto Leveling" not displayed on the intelligent tester.	B

B → Go to step 12

A

11.CHECK FOR OPEN IN ONE SIDE OF CAN BRANCH WIRE (AFS ECU BRANCH WIRE)

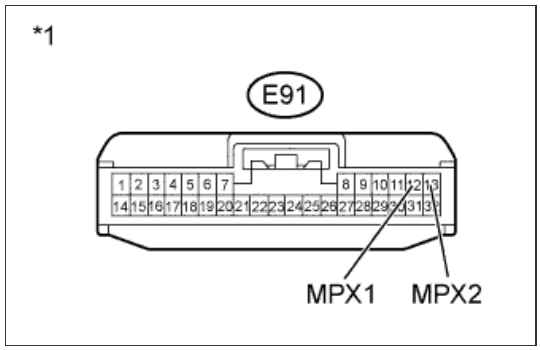
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to AFS ECU)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (AFS ECU)

OK

REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

12.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (NETWORK GATEWAY ECU BRANCH WIRE)

a. Disconnect the E31 network gateway ECU connector.

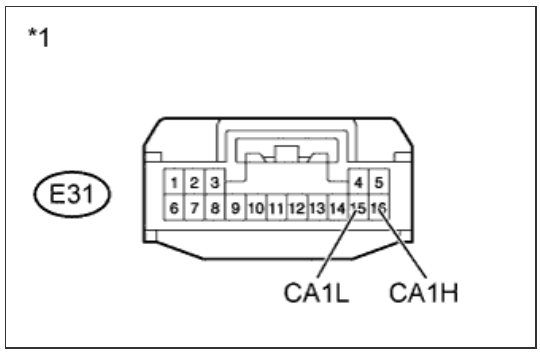
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to Network Gateway ECU)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (NETWORK GATEWAY ECU)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

for Preparation Click here

1.STEERING SYSTEM HANDLING PRECAUTIONS

a. Care must be taken when replacing parts. Incorrect replacement could affect the performance of the steering system and result in hazards when driving.

2.SRS AIRBAG SYSTEM HANDLING PRECAUTIONS

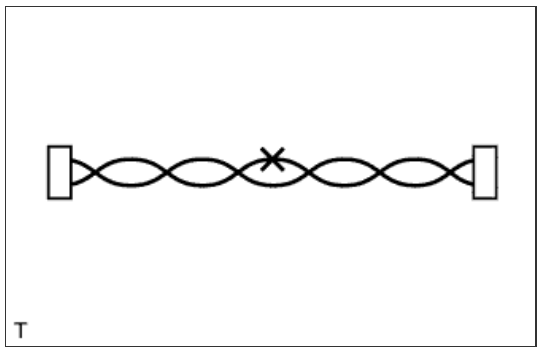
a. This vehicle is equipped with an SRS (Supplemental Restraint System), such as the driver airbag and front passenger airbag. Failure to carry out service operations in the correct sequence could cause unexpected SRS deployment during servicing and may lead to a serious accident. Before servicing (including installation/removal, inspection and replacement of parts), be sure to read the precautionary notice for the Supplemental Restraint System (Click here).

3.BUS LINE REPAIR

a. After repairing the bus line with solder, wrap the repaired part with vinyl tape (Click here).

NOTICE:

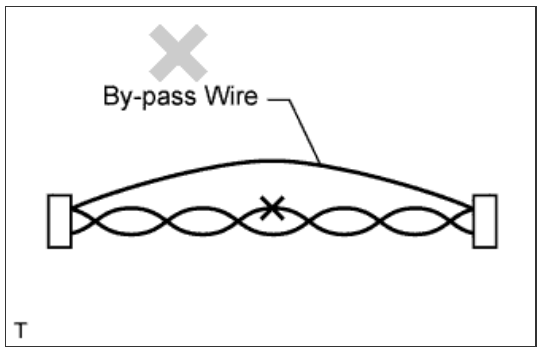
- **The CANL bus line and CANH bus line must be installed together.**
- **When installing the CAN bus lines, make sure to twist them.**
- **CAN bus lines are likely to be influenced by noise if the bus lines are not twisted together.**
- **The difference in length between the CANL bus line and CANH bus line should be less than 100 mm (3.94 in.).**
- **Leave approximately 80 mm (3.15 in.) loose in the twisted wires around the connectors.**



b. Do not use by-pass wiring between the connectors.

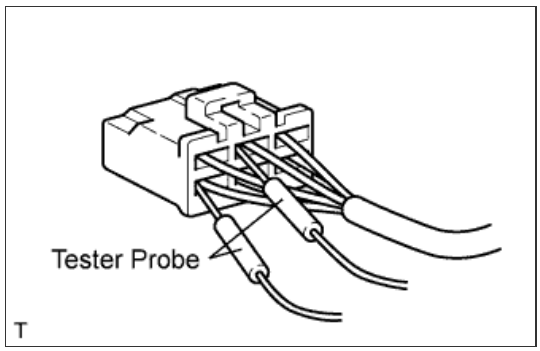
NOTICE:

The feature of the twisted wire harness will be lost if bypass wiring is used.

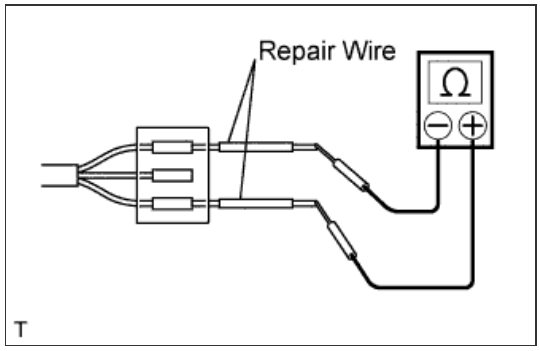


4.CONNECTOR HANDLING

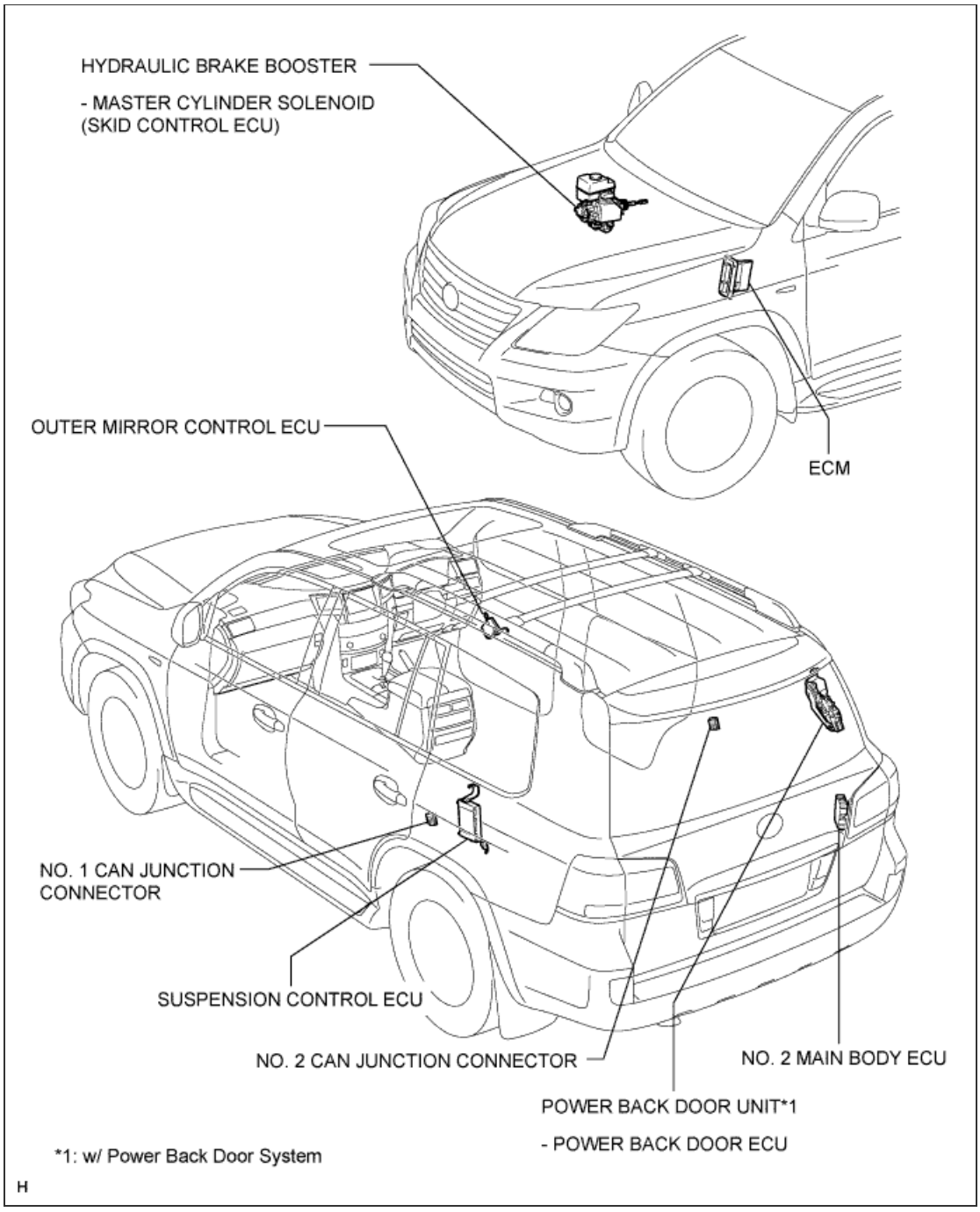
a. When inserting probes into a connector, insert them from the rear of the connector.

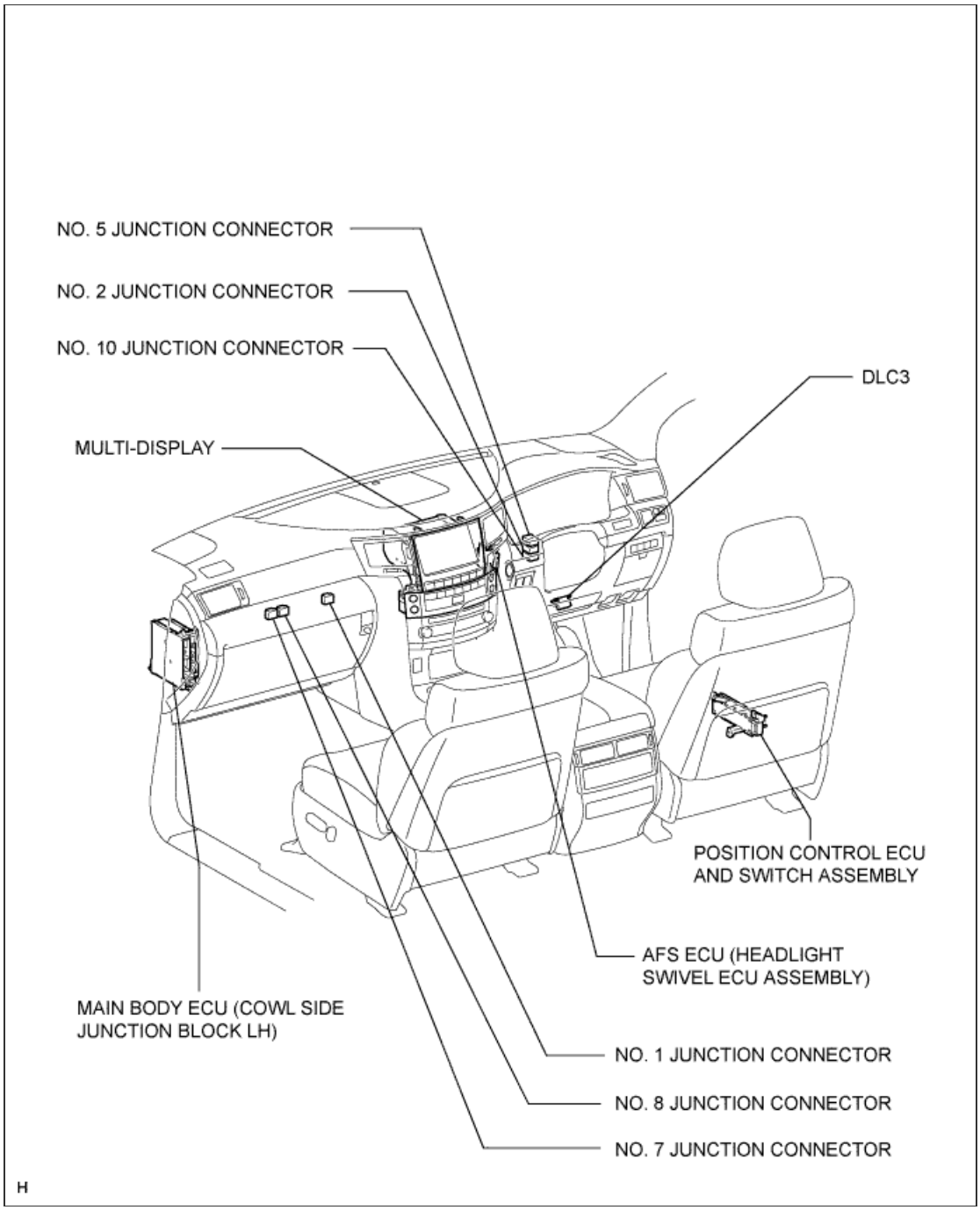


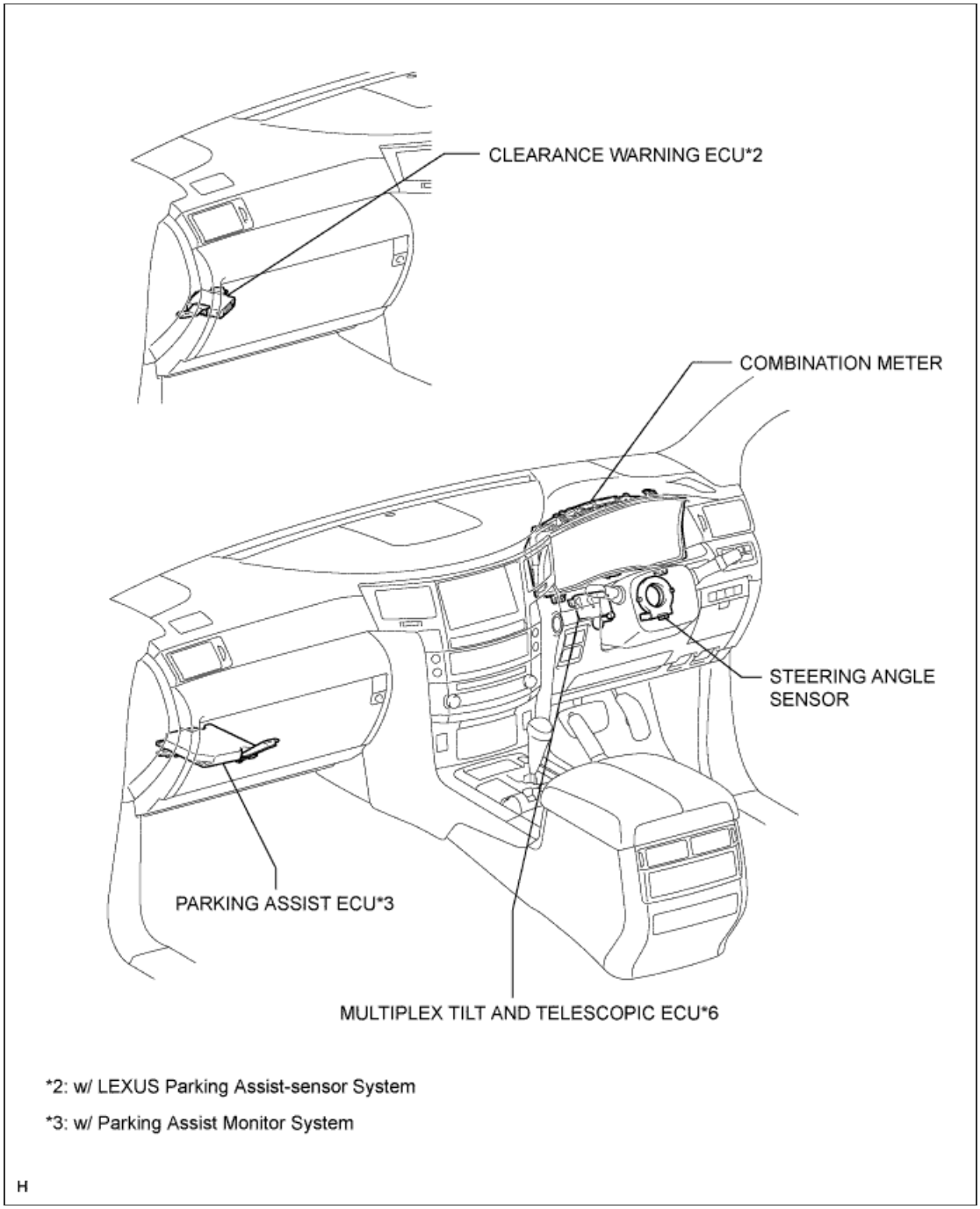
b. Use a repair wire to check the connector if it is impossible to check resistance from the rear of the connector.



for Preparation Click here



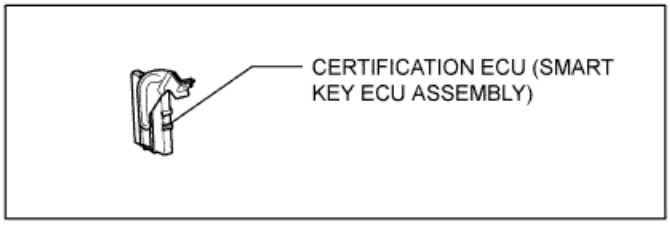

NO. 5 JUNCTION CONNECTOR
NO. 2 JUNCTION CONNECTOR
NO. 10 JUNCTION CONNECTOR
DLC3
MULTI-DISPLAY
POSITION CONTROL ECU
AND SWITCH ASSEMBLY
AFS ECU (HEADLIGHT
SWIVEL ECU ASSEMBLY)
MAIN BODY ECU (COWL SIDE
JUNCTION BLOCK LH)
NO. 1 JUNCTION CONNECTOR
NO. 8 JUNCTION CONNECTOR
NO. 7 JUNCTION CONNECTOR
H



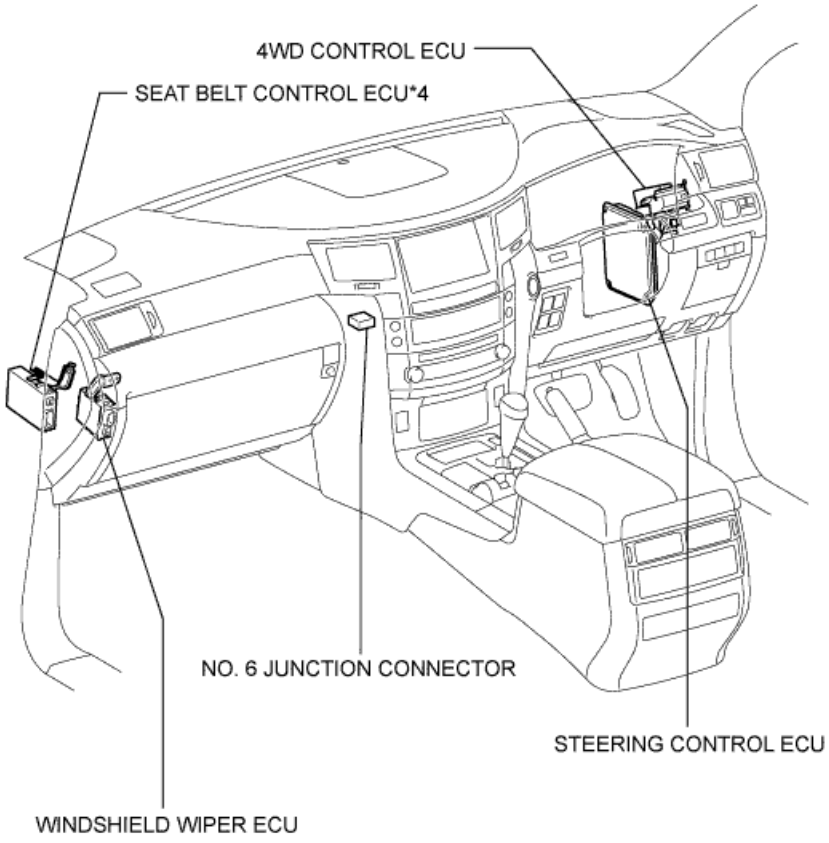
*2: w/ LEXUS Parking Assist-sensor System

*3: w/ Parking Assist Monitor System

H

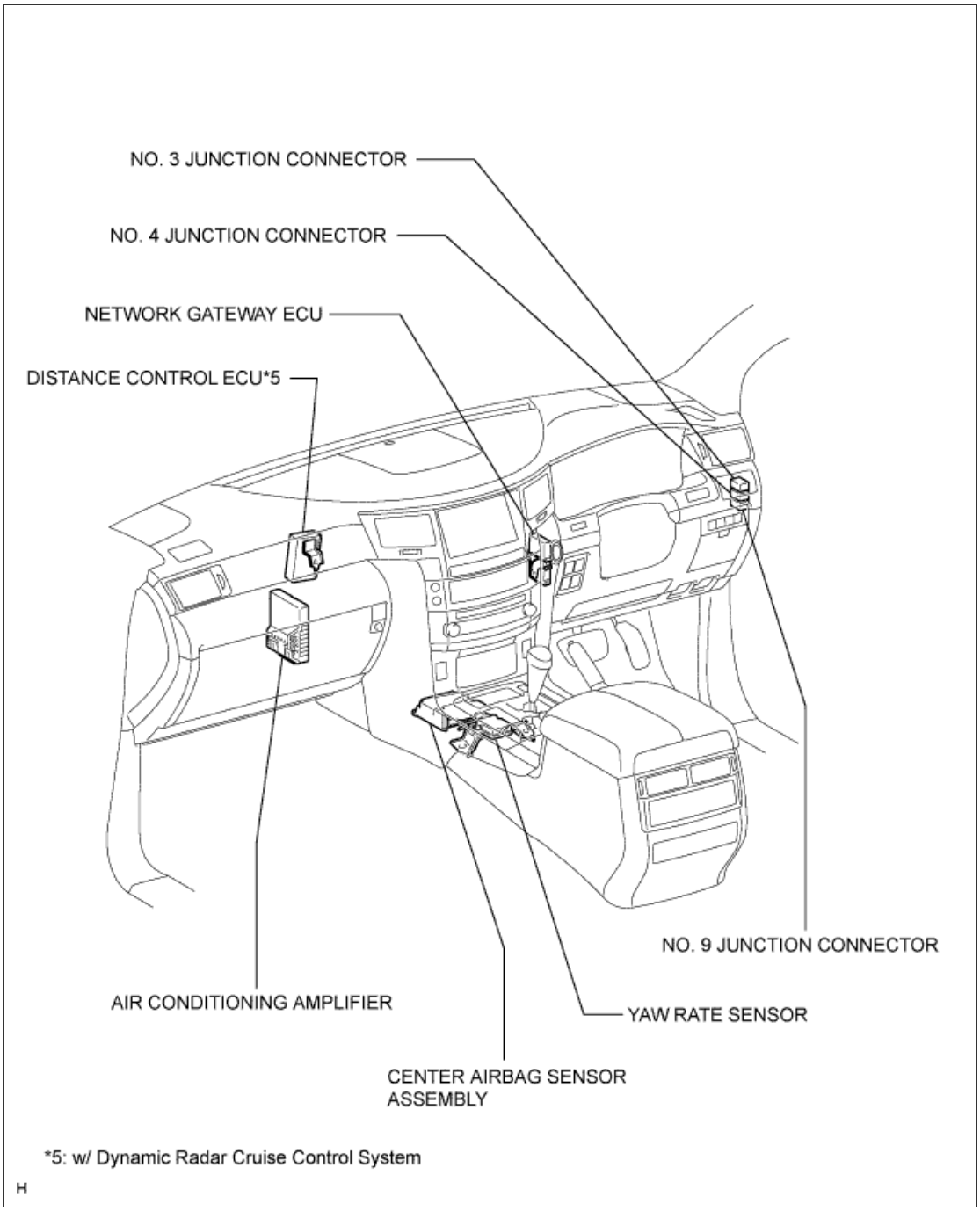


Refer to Service Bulletin for installation position.



*4: w/ Pre-Crash Safety System

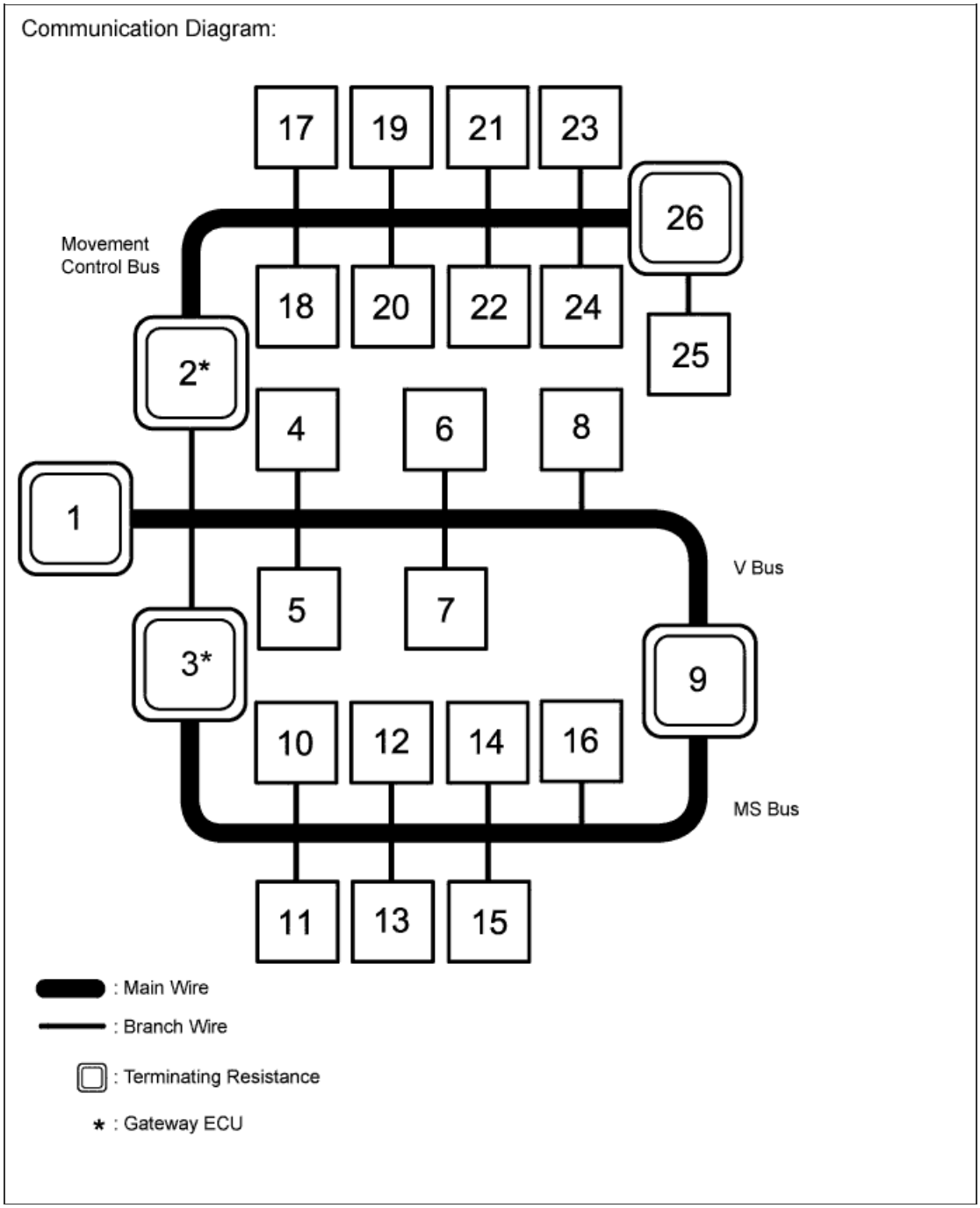
H



*5: w/ Dynamic Radar Cruise Control System

H

for Preparation Click here

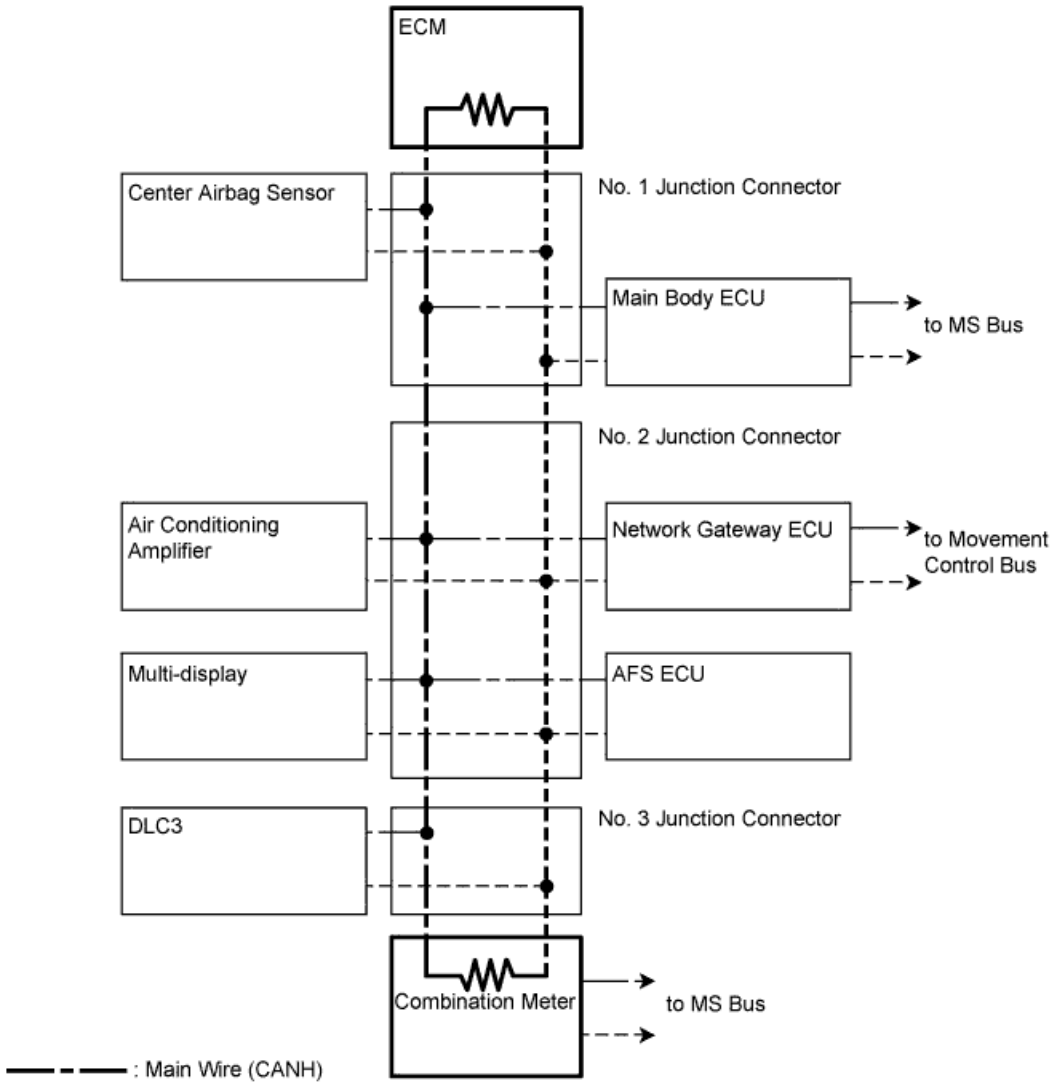


No.	ECU/Sensor Name
1	ECM
2	Network Gateway ECU
3	Main Body ECU (Cowl Side Junction Block LH)
4	DLC3
5	Air Conditioning Amplifier
6	Center Airbag Sensor
7	Multi-display
8	AFS ECU (Headlight Swivel ECU)
9	Combination Meter
10	Certification ECU (Smart Key ECU)
11	Multiplex Tilt and Telescopic ECU

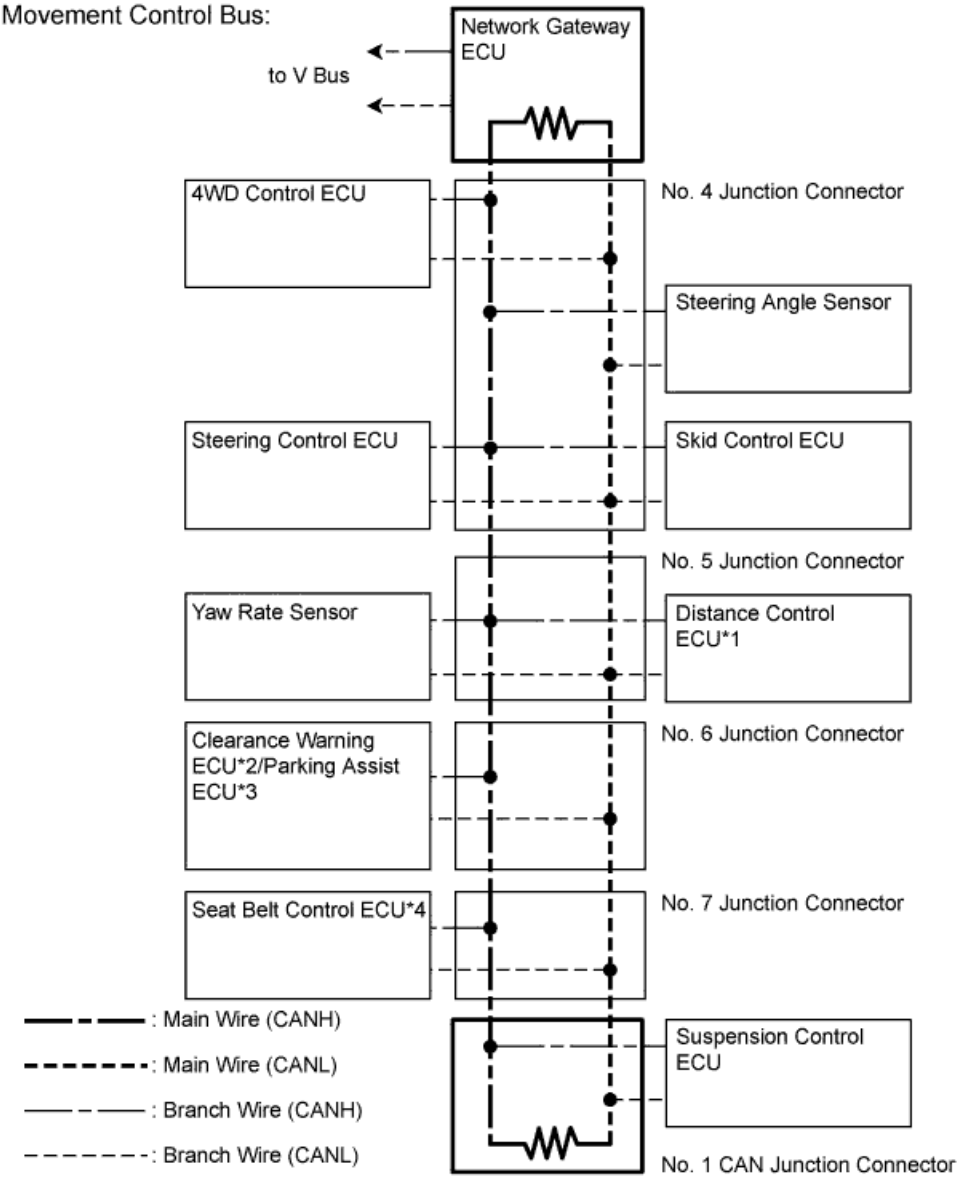
12	Outer Mirror Control ECU
13	Position Control ECU and Switch
14	No. 2 Main Body ECU
15	Power Back Door Unit (Power Back Door ECU)*1
16	Windshield Wiper ECU
17	Master Cylinder Solenoid (Skid Control ECU)
18	Yaw Rate Sensor
19	Steering Angle Sensor
20	4WD Control ECU
21	Parking Assist ECU*2 Clearance Warning ECU*3
22	Seat Belt Control ECU*4
23	Distance Control ECU*5
24	Steering Control ECU
25	Suspension Control ECU
26	No. 1 CAN Junction Connector

*1: w/ Power Back Door System
*2: w/ Parking Assist Monitor System
*3: w/ LEXUS Parking Assist-sensor System
*4: w/ Pre-Crash Safety System
*5: w/ Dynamic Radar Cruiser Control System

V Bus:


ECM
Center Airbag Sensor
No. 1 Junction Connector
Main Body ECU
to MS Bus
No. 2 Junction Connector
Air Conditioning Amplifier
Network Gateway ECU
to Movement Control Bus
Multi-display
AFS ECU
DLC3
No. 3 Junction Connector
Combination Meter
to MS Bus
: Main Wire (CANH)
: Main Wire (CANL)
: Branch Wire (CANH)
: Branch Wire (CANL)

Movement Control Bus:

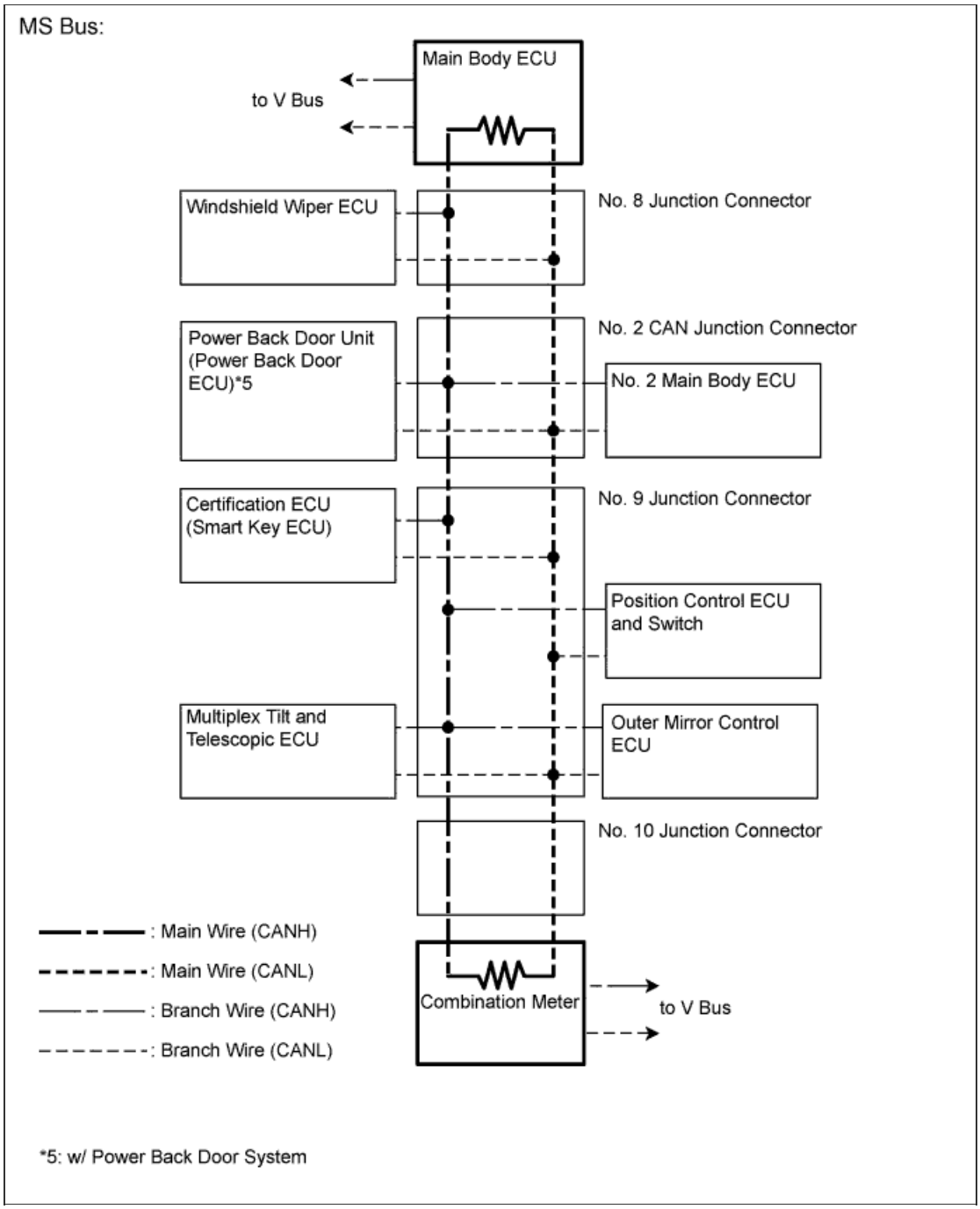


*1: w/ Dynamic Radar Cruise Control System

*2: w/ LEXUS Parking Assist-sensor System

*3: w/ Parking Assist Monitor System

*4: w/ Pre-Crash Safety System



HINT:

- **The master cylinder solenoid (skid control ECU) stores steering sensor and yaw rate sensor DTCs and performs DTC communication by receiving information from the steering sensor and yaw rate sensor.**
- **The ECM uses the CAN communication system to perform DTC communication instead of the conventional communication line (SIL).**

for Preparation Click here

BRIEF DESCRIPTION

a. The CAN (Controller Area Network) is a serial data communication system for real time application. It is a vehicle multiplex communication system which has a high communication speed (500 kbps, 250 kbps) and the ability to detect malfunctions.

b. By pairing the CANH and CANL bus lines, the CAN performs communication based on differential voltages.

c. Many ECUs (sensors) installed on the vehicle operate by sharing information and communicating with each other.

d. The CAN has 2 resistors of 120 Ω which are necessary to communicate with the main wire.

DEFINITION OF TERMS

a. Main wire

    i. The main wire is a wire harness between the 2 termination circuits on the bus (communication line). This is the main bus in the CAN communication system.

b. Branch wire

    i. The branch wire is a wire harness which diverges from the main wire to an ECU or sensor.

c. Termination circuits

    i. The termination circuit is a circuit which converts the communication current of the CAN communication into the bus voltage. It consists of a resistor and condenser. 2 termination circuits are necessary on a bus.

d. CAN junction connector

    i. The CAN junction connector is designed so that it can be used with CAN communication which has a termination circuit and CAN communication which does not have a termination circuit.

CIRCUIT DESCRIPTION

a. The V bus, movement control bus and MS bus each have termination circuits with resistance of 120 Ω x 2. High speed communication at 500 kbps and 250 kbps is possible.

ECU OR SENSOR WHICH COMMUNICATE VIA CAN COMMUNICATION SYSTEM

a. Master cylinder solenoid (skid control ECU)

b. Air conditioning amplifier

c. ECM

d. Main body ECU (cowl side junction block LH)

e. Combination meter

f. Center airbag sensor

g. Multi-display

h. Steering angle sensor

i. Yaw rate sensor

j. Seat belt control ECU*1

k. Clearance warning ECU*2

l. Parking assist ECU*3

m. Outer mirror control ECU

n. Multiplex tilt and telescopic ECU

o. Certification ECU (smart key ECU)

p. Position control ECU and switch

q. Network gateway ECU

r. 4WD control ECU

s. No. 2 main body ECU

t. Power back door unit (power back door ECU)*4

u. Distance control ECU*5

v. Steering control ECU

w. Suspension control ECU

x. AFS ECU (headlight swivel ECU)

y. Windshield wiper ECU

*1: w/ Pre-Crash Safety System
*2: w/ LEXUS Parking Assist-sensor System
*3: w/ Parking Assist Monitor System
*4: w/ Power Back Door System
*5: w/ Dynamic Radar Cruise Control System

DIAGNOSTIC CODES FOR CAN COMMUNICATION SYSTEM

a. DTCs for the CAN communication system are as follows: U0073, U0100, U0101, U0114/38, U0122, U0123, U0124, U0126, U0129, U0130, U0132, U0140, U0141, U0151, U0155, U0199, U0208, U0230, U0327, U1002 (CAN MS BUS), U1002 (CAN No. 2 BUS), U1100, U1101, U1110, U1111, U1115, U1117, B1499, B2427, B2621, B2624, C1AEF and C2179.

NOTES REGARDING TROUBLESHOOTING

a. Trouble in the CAN bus (communication line) can be checked through the DLC3 (except when there is a wire break in the branch wire of the DLC3).

b. DTCs regarding the CAN communication system can be checked using the intelligent tester.

c. The CAN communication system cannot detect trouble in the branch line of the DLC3 even though the DLC3 is also connected to the CAN communication system.

HOW TO DISTINGUISH CAN JUNCTION CONNECTOR CONNECTOR

a. In the CAN communication system, the shape of all connectors connected to the CAN junction connector is the same.
The connectors connected to the CAN junction connector can be distinguished by the colors of the bus line and the connecting side of the connector.

HINT:

See "Terminals of ECU" (Click here) for bus line color or the type of connecting surface.

for Preparation Click here

BRIEF DESCRIPTION

a. The CAN (Controller Area Network) is a serial data communication system for real time application. It is a vehicle multiplex communication system which has a high communication speed (500 kbps, 250 kbps) and the ability to detect malfunctions.

b. By pairing the CANH and CANL bus lines, the CAN performs communication based on differential voltages.

c. Many ECUs (sensors) installed on the vehicle operate by sharing information and communicating with each other.

d. The CAN has 2 resistors of 120 Ω which are necessary to communicate with the main wire.

DEFINITION OF TERMS

a. Main wire

    i. The main wire is a wire harness between the 2 termination circuits on the bus (communication line). This is the main bus in the CAN communication system.

b. Branch wire

    i. The branch wire is a wire harness which diverges from the main wire to an ECU or sensor.

c. Termination circuits

    i. The termination circuit is a circuit which converts the communication current of the CAN communication into the bus voltage. It consists of a resistor and condenser. 2 termination circuits are necessary on a bus.

d. CAN junction connector

    i. The CAN junction connector is designed so that it can be used with CAN communication which has a termination circuit and CAN communication which does not have a termination circuit.

CIRCUIT DESCRIPTION

a. The V bus, movement control bus and MS bus each have termination circuits with resistance of 120 Ω x 2. High speed communication at 500 kbps and 250 kbps is possible.

ECU OR SENSOR WHICH COMMUNICATE VIA CAN COMMUNICATION SYSTEM

a. Master cylinder solenoid (skid control ECU)

b. Air conditioning amplifier

c. ECM

d. Main body ECU (cowl side junction block LH)

e. Combination meter

f. Center airbag sensor

g. Display and navigation module display

h. Steering angle sensor

i. Yaw rate sensor

j. Seat belt control ECU*1

k. Clearance warning ECU*2

l. Parking assist ECU*3

m. Outer mirror control ECU

n. Multiplex tilt and telescopic ECU

o. Certification ECU (smart key ECU)

p. Position control ECU and switch

q. Network gateway ECU

r. 4WD control ECU

s. No. 2 main body ECU

t. Power back door unit (power back door ECU)*4

u. Distance control ECU*5

v. Steering control ECU

w. Suspension control ECU

x. AFS ECU (headlight swivel ECU)

y. Windshield wiper ECU

*1: w/ Pre-Crash Safety System
*2: w/ LEXUS Parking Assist-sensor System
*3: w/ Parking Assist Monitor System
*4: w/ Power Back Door System
*5: w/ Dynamic Radar Cruise Control System

DIAGNOSTIC CODES FOR CAN COMMUNICATION SYSTEM

a. DTCs for the CAN communication system are as follows: U0073, U0100, U0101, U0114/38, U0122, U0123, U0124, U0126, U0129, U0130, U0132, U0140, U0141, U0151, U0155, U0164, U0199, U0208, U0230, U0327, U1002 (CAN MS BUS), U1002 (CAN No. 2 BUS), U1100, U1101, U1110, U1111, U1115, U1117, B1499, B2427, B2621, B2624, C1AEF and C2179.

NOTES REGARDING TROUBLESHOOTING

a. Trouble in the CAN bus (communication line) can be checked through the DLC3 (except when there is a wire break in the branch wire of the DLC3).

b. DTCs regarding the CAN communication system can be checked using the intelligent tester.

c. The CAN communication system cannot detect trouble in the branch line of the DLC3 even though the DLC3 is also connected to the CAN communication system.

HOW TO DISTINGUISH CAN JUNCTION CONNECTOR CONNECTOR

a. In the CAN communication system, the shape of all connectors connected to the CAN junction connector is the same.
The connectors connected to the CAN junction connector can be distinguished by the colors of the bus line and the connecting side of the connector.

HINT:

See "Terminals of ECU" (Click here) for bus line color or the type of connecting surface.

for Preparation Click here

Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **DTCs for the CAN communication system are as follows: U0073, U0100, U0101, U0114/38, U0122, U0123, U0124, U0126, U0129, U0130, U0132, U0140, U0141, U0151, U0155, U0199, U0208, U0230, U0327, U1002 (CAN MS BUS), U1002 (CAN No. 2 BUS), U1100, U1101, U1110, U1111, U1115, U1117, B1499, B2427, B2621, B2624, C1AEF and C2179.**
- **Refer to the troubleshooting procedures of each system if DTCs regarding the CAN communication system are not output.**
- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

HINT:

- **Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.**
- ***: Use the intelligent tester.**

1.VEHICLE BROUGHT TO WORKSHOP

NEXT

2.INSPECT BATTERY VOLTAGE

Standard voltage:
11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

3.CHECK AND CLEAR DTC*

a. Using the intelligent tester, perform the all DTCs check.

NOTICE:

- **If there is a CAN communication trouble code that indicates that an ECU or sensor has a power malfunction or interior malfunction which is causing a communication stop, the problem may not be in the communication line.**
- **When CAN communication related connectors are disconnected with the engine switch on (IG) or on (ACC), the ECU related to the connector and ECUs of related systems will store a CAN communication DTC.**

NEXT

4.CHECK INSTALLED SYSTEMS (ECU AND SENSOR) THAT USE CAN COMMUNICATION

a. Based on the vehicle equipment and specifications, confirm the systems that use CAN communication (Click here).

NEXT

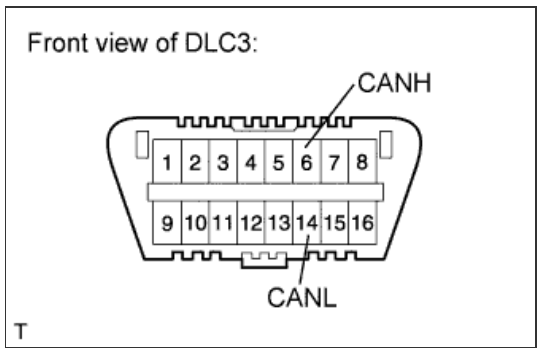
5.CHECK DLC3 BRANCH WIRE AND V BUS CIRCUIT MAIN WIRE (CANH - CANL)

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

b. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Proceed to
6 (CANH) - 14 (CANL)	Engine switch off	OK (54 to 69 Ω)	A
6 (CANH) - 14 (CANL)	Engine switch off	NG (70 Ω or higher)	B
6 (CANH) - 14 (CANL)	Engine switch off	NG (Below 54 Ω)	C



B. Go to CAN MAIN WIRE FOR DISCONNECTION (Click here)

C. Go to CHECK CAN BUS LINES FOR SHORT CIRCUIT (Click here)

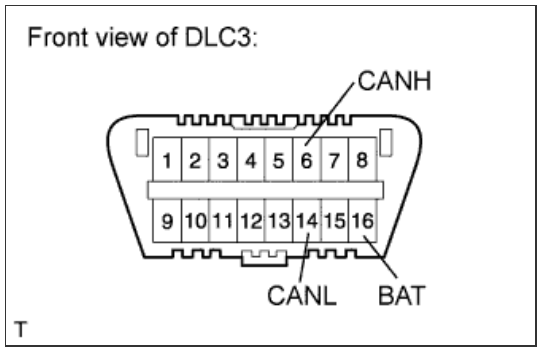
A

6.CHECK V BUS CIRCUIT +B (CANH, CANL - BAT)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 16 (BAT)	Engine switch off	6 kΩ or higher
14 (CANL) - 16 (BAT)	Engine switch off	6 kΩ or higher



NG. Go to CHECK CAN BUS LINE FOR SHORT TO +B (Click here)

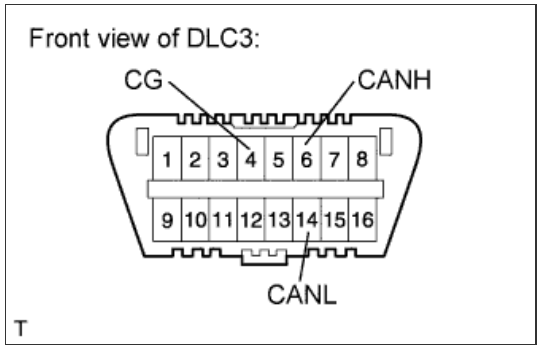
OK

7.CHECK V BUS CIRCUIT GND (CANH, CANL - CG)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 4 (CG)	Engine switch off	200 Ω or higher
14 (CANL) - 4 (CG)	Engine switch off	200 Ω or higher



NG. Go to CHECK CAN BUS LINE FOR SHORT TO GND (Click here)

OK

8.CHECK ECUS CONNECTED TO CAN BUS*

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Select "Bus Check" from "System Select".

c. Wait 1 minute and then check the display of the connected ECUs and sensors.

Result

Inspection Result	Proceed to
All ECUs and sensors connected to the CAN communication system are displayed on the screen.	A
Except for the main body ECU (cowl side junction block LH), no ECUs connected to the MS bus are displayed. The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (the MS bus main wire open or short malfunction).	B
No ECUs connected to the MS bus are displayed (the branch wire between the main body ECU (cowl side junction block LH) and V bus circuit is open).	C
Except for the network gateway ECU, no ECUs connected to the movement control bus are displayed. The network gateway ECU outputs the movement control bus trouble code (U1002) (the movement control bus main wire open or short malfunction).	D
No ECUs connected to the movement control bus are displayed (the branch wire between the network gateway ECU and movement control bus is open).	E
An ECU or sensor that should be connected to the CAN communication system is not displayed (the ECU or sensor branch wire is open).	F
An ECU or sensor that should be connected to the CAN communication system is not displayed or display is intermittent during check (the ECU or sensor branch wire is open on one side).	G

NOTICE:

The ECUs and sensors that are not present will not be displayed. Be careful not to mistake them for communication stop malfunctions.

HINT:

- **If the display of an ECU is intermittent during the check, one side of an ECU or sensor branch wire is open (The signal of the ECU is treated as noise, which affects the response and display of the intelligent tester).**
- **The main body ECU (cowl side junction block LH) checks for proper ECU communication for ECUs that are connected to the CAN MS bus circuit, and the results are displayed on the intelligent tester.**
- **The gateway ECU built into the main body ECU (cowl side junction block LH) may be malfunctioning if both of the following occurs: 1) all ECUs connected to the MS bus are not displayed on the intelligent tester; and 2) DTC U1002 is not output.**
- **If communication stops between an ECU and the main body ECU (cowl side junction block LH) or network gateway ECU for 10 seconds or more, the ECU disappears from the intelligent tester display.**
- **For communication stop mode of ECUs connected to the CAN MS bus circuit or movement control bus, refer to the DTC flowchart of the respective communication stop.**

B.	Go to DTC U1002 FLOWCHART (Click here)
C.	Go to MAIN BODY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)
D.	Go to DTC U1002 FLOWCHART (Click here)
E.	Go to NETWORK GATEWAY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)
F.	Go to PROBLEM SYMPTOMS TABLE (Click here)
G.	Go to OPEN IN ONE SIDE OF CAN BRANCH WIRE FLOWCHART (Click here)

A

9.CHECK COMMUNICATION MALFUNCTION DTC (PAST DTC CHECK)*

a. Select "Bus Check" from "System Select".

b. Write down all of the DTCs stored in each ECU.

HINT:

- **If there are communication malfunction DTCs stored but the intelligent tester "Bus Check - Communication Bus Check" screen displays all of the ECUs and sensors connected to the CAN system, the communication malfunction DTCs may be past malfunctions that are no longer present.**
- **For V bus main wire malfunctions, related ECUs are also detected. Therefore, determine the malfunctioning area based on all of the DTCs that are output.**
- **For MS bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the main body ECU (cowl side junction block LH).**
- **For movement control bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the network gateway ECU.**

Result

Inspection Result	Proceed to
An ECU connected to the V bus main wire has stored a communication trouble code (V bus main wire past malfunction).	A
The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (MS bus past malfunction).	B
The main body ECU (cowl side junction block LH) outputs a trouble code other than MS bus trouble code (U1002) (past malfunction of ECU branch wire connected to MS bus).	C
The network gateway ECU outputs the movement control bus trouble code (U1002) (movement control bus past malfunction).	D
The network gateway ECU outputs a trouble code other than movement control bus trouble code (U1002) (past malfunction of branch wire connected to movement control bus).	E

B.	**Go to DTC U1002 FLOWCHART (Click here)**
C.	**Go to PROBLEM SYMPTOMS TABLE (Click here)**
D.	**Go to DTC U1002 FLOWCHART (Click here)**
E.	**Go to PROBLEM SYMPTOMS TABLE (Click here)**

A

10.CHECK DTC COMBINATION TABLE (V BUS CIRCUIT BRANCH WIRE OPEN PAST MALFUNCTION)

a. Based on the combination of stored CAN communication system DTCs, determine which ECUs and sensors have a communication stop malfunction (Click here).

NEXT

11.PERFORM MALFUNCTION SIMULATION TEST (V BUS CIRCUIT MAIN WIRE PAST MALFUNCTION)*

a. Using the intelligent tester, clear all DTCs.

b. Perform a malfunction simulation test on all harnesses and connectors related to the V bus circuit main wire.

c. Check the DTCs that were stored as a result of the malfunction simulation test. Then determine the malfunctioning area.

NEXT

12.ADJUST, REPAIR AND REPLACE

NEXT

13.CONFIRMATION TEST


NEXT
END

for Preparation Click here

Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **DTCs for the CAN communication system are as follows: U0073, U0100, U0101, U0114/38, U0122, U0123, U0124, U0126, U0129, U0130, U0132, U0140, U0141, U0151, U0155, U0164, U0199, U0208, U0230, U0327, U1002 (CAN MS BUS), U1002 (CAN No. 2 BUS), U1100, U1101, U1110, U1111, U1115, U1117, B1499, B2427, B2621, B2624, C1AEF and C2179.**
- **Refer to the troubleshooting procedures of each system if DTCs regarding the CAN communication system are not output.**
- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

HINT:

- **Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.**
- ***: Use the intelligent tester.**

1.VEHICLE BROUGHT TO WORKSHOP

NEXT

2.INSPECT BATTERY VOLTAGE

Standard voltage:
11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

3.CHECK AND CLEAR DTC*

a. Using the intelligent tester, perform the all DTCs check.

NOTICE:

- **If there is a CAN communication trouble code that indicates that an ECU or sensor has a power malfunction or interior malfunction which is causing a communication stop, the problem may not be in the communication line.**
- **When CAN communication related connectors are disconnected with the engine switch on (IG) or on (ACC), the ECU related to the connector and ECUs of related systems will store a CAN communication DTC.**

NEXT

4.CHECK INSTALLED SYSTEMS (ECU AND SENSOR) THAT USE CAN COMMUNICATION

a. Based on the vehicle equipment and specifications, confirm the systems that use CAN communication (Click here).

NEXT

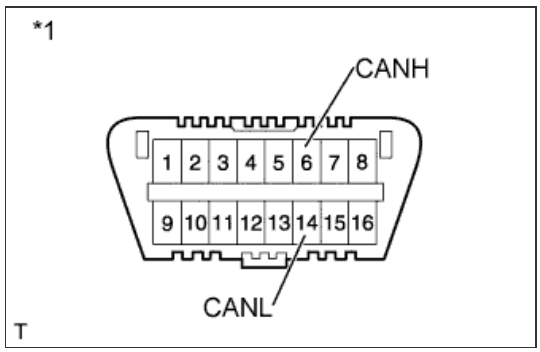
5.CHECK DLC3 BRANCH WIRE AND V BUS CIRCUIT MAIN WIRE (CANH - CANL)

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

b. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Proceed to
6 (CANH) - 14 (CANL)	Engine switch off	OK (54 to 69 Ω)	A
6 (CANH) - 14 (CANL)	Engine switch off	NG (70 Ω or higher)	B
6 (CANH) - 14 (CANL)	Engine switch off	NG (Below 54 Ω)	C



Text in Illustration

*1	DLC3

B. → Go to CAN MAIN WIRE FOR DISCONNECTION (Click here)

C. → Go to CHECK CAN BUS LINES FOR SHORT CIRCUIT (Click here)

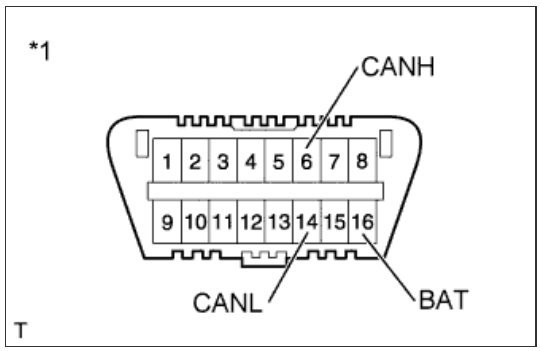
A

6.CHECK V BUS CIRCUIT +B (CANH, CANL - BAT)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 16 (BAT)	Engine switch off	6 kΩ or higher
14 (CANL) - 16 (BAT)	Engine switch off	6 kΩ or higher



Text in Illustration

*1	DLC3

NG. → Go to CHECK CAN BUS LINE FOR SHORT TO +B (Click here)

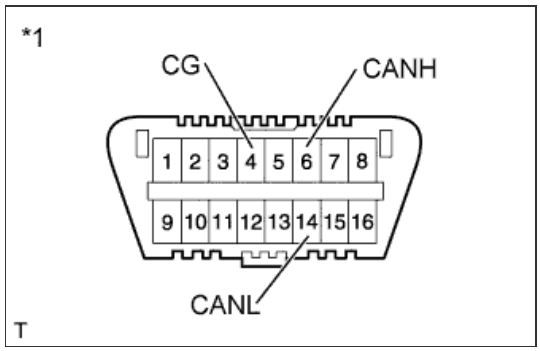
OK

7.CHECK V BUS CIRCUIT GND (CANH, CANL - CG)

a. Measure the resistance of the DLC3.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
6 (CANH) - 4 (CG)	Engine switch off	200 Ω or higher
14 (CANL) - 4 (CG)	Engine switch off	200 Ω or higher



Text in Illustration

*1	DLC3

NG. → Go to CHECK CAN BUS LINE FOR SHORT TO GND (Click here)

OK

8.CHECK ECUS CONNECTED TO CAN BUS*

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Select "Bus Check" from "System Select".

c. Wait 1 minute and then check the display of the connected ECUs and sensors.

Result

Inspection Result	Proceed to
All ECUs and sensors connected to the CAN communication system are displayed on the screen.	A
Except for the main body ECU (cowl side junction block LH), no ECUs connected to the MS bus are displayed. The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (the MS bus main wire open or short malfunction).	B
No ECUs connected to the MS bus are displayed (the branch wire between the main body ECU (cowl side junction block LH) and V bus circuit is open).	C
Except for the network gateway ECU, no ECUs connected to the movement control bus are displayed. The network gateway ECU outputs the movement control bus trouble code (U1002) (the movement control bus main wire open or short malfunction).	D
No ECUs connected to the movement control bus are displayed (the branch wire between the network gateway ECU and movement control bus is open).	E
An ECU or sensor that should be connected to the CAN communication system is not displayed (the ECU or sensor branch wire is open).	F
An ECU or sensor that should be connected to the CAN communication system is not displayed or display is intermittent during check (the ECU or sensor branch wire is open on one side).	G

NOTICE:

The ECUs and sensors that are not present will not be displayed. Be careful not to mistake them for communication stop malfunctions.

HINT:

- **If the display of an ECU is intermittent during the check, one side of an ECU or sensor branch wire is open (The signal of the ECU is treated as noise, which affects the response and display of the intelligent tester).**
- **The main body ECU (cowl side junction block LH) checks for proper ECU communication for ECUs that are connected to the CAN MS bus circuit, and the results are displayed on the intelligent tester.**
- **The gateway ECU built into the main body ECU (cowl side junction block LH) may be malfunctioning if both of the following occurs: 1) all ECUs connected to the MS bus are not displayed on the intelligent tester; and 2) DTC U1002 is not output.**
- **If communication stops between an ECU and the main body ECU (cowl side junction block LH) or network gateway ECU for 10 seconds or more, the ECU disappears from the intelligent tester display.**
- **For communication stop mode of ECUs connected to the CAN MS bus circuit or movement control bus, refer to the DTC flowchart of the respective communication stop.**

B. → Go to DTC U1002 FLOWCHART (Click here)

C. → Go to MAIN BODY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)

D. → Go to DTC U1002 FLOWCHART (Click here)

E. → Go to NETWORK GATEWAY ECU COMMUNICATION STOP MODE FLOWCHART (Click here)

F. → Go to PROBLEM SYMPTOMS TABLE (Click here)

G. → Go to OPEN IN ONE SIDE OF CAN BRANCH WIRE FLOWCHART (Click here)

A

9.CHECK COMMUNICATION MALFUNCTION DTC (PAST DTC CHECK)*

a. Select "Bus Check" from "System Select".

b. Write down all of the DTCs stored in each ECU.

HINT:

- **If there are communication malfunction DTCs stored but the intelligent tester "Bus Check - Communication Bus Check" screen displays all of the ECUs and sensors connected to the CAN system, the communication malfunction DTCs may be past malfunctions that are no longer present.**
- **For V bus main wire malfunctions, related ECUs are also detected. Therefore, determine the malfunctioning area based on all of the DTCs that are output.**
- **For MS bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the main body ECU (cowl side junction block LH).**
- **For movement control bus malfunctions, DTCs are stored based on the detection of communication stop malfunctions and network malfunctions of ECUs that are connected by the network gateway ECU.**

Result

Inspection Result	Proceed to
An ECU connected to the V bus main wire has stored a communication trouble code (V bus main wire past malfunction).	A
The main body ECU (cowl side junction block LH) outputs the MS bus trouble code (U1002) (MS bus past malfunction).	B
The main body ECU (cowl side junction block LH) outputs a trouble code other than MS bus trouble code (U1002) (past malfunction of ECU branch wire connected to MS bus).	C
The network gateway ECU outputs the movement control bus trouble code (U1002) (movement control bus past malfunction).	D
The network gateway ECU outputs a trouble code other than movement control bus trouble code (U1002) (past malfunction of branch wire connected to movement control bus).	E

B. Go to DTC U1002 FLOWCHART (Click here)

C. Go to PROBLEM SYMPTOMS TABLE (Click here)

D. Go to DTC U1002 FLOWCHART (Click here)

E. Go to PROBLEM SYMPTOMS TABLE (Click here)

A

10.CHECK DTC COMBINATION TABLE (V BUS CIRCUIT BRANCH WIRE OPEN PAST MALFUNCTION)

a. Based on the combination of stored CAN communication system DTCs, determine which ECUs and sensors have a communication stop malfunction (Click here).

NEXT

11.PERFORM MALFUNCTION SIMULATION TEST (V BUS CIRCUIT MAIN WIRE PAST MALFUNCTION)*

a. Using the intelligent tester, clear all DTCs.

b. Perform a malfunction simulation test on all harnesses and connectors related to the V bus circuit main wire.

c. Check the DTCs that were stored as a result of the malfunction simulation test. Then determine the malfunctioning area.

NEXT

12.ADJUST, REPAIR AND REPLACE

NEXT

13.CONFIRMATION TEST

NEXT

END

for Preparation Click here

HINT:

- **Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.**
- **Inspect the fuses and relays related to this system before inspecting the suspected areas below.**

Result List of Check CAN Bus Line

Symptom	Suspected Area	See page
The result of "How to Proceed with Troubleshooting" is "Open in CAN Main Wire".	Open in CAN Main Wire	Click here
The result of "How to Proceed with Troubleshooting" is "Short in CAN Bus Lines".	Short in CAN Bus Lines	Click here
The result of "How to Proceed with Troubleshooting" is "Short to +B in CAN Bus Line".	Short to B+ in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Short to GND in CAN Bus Line".	Short to GND in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Open in One Side of CAN Branch Line".	Open in One Side of CAN Branch Line	Click here

Communication Stop Mode Table

Symptom	Suspected Area	See page
"Air Conditioner" not displayed on the intelligent tester.	Air Conditioning Amplifier Communication Stop Mode	Click here
"CAN Gateway" not displayed on the intelligent tester.	Gateway ECU Communication Stop Mode	Click here
"Engine" not displayed on the intelligent tester.	ECM Communication Stop Mode	Click here
"Main Body" not displayed on the intelligent tester.	Main Body ECU (cowl side junction block LH) Communication Stop Mode	Click here
"Combination Meter" not displayed on the intelligent tester.	Combination Meter ECU Communication Stop Mode	Click here
"SRS Airbag" not displayed on the intelligent tester.	Airbag ECU Communication Stop Mode	Click here
"AFS/HL AutoLeveling" not displayed on the intelligent tester.	AFS ECU Communication Stop Mode	Click here
"AVN" not displayed on the intelligent tester.	Display and Navigation Assembly Communication Stop Mode	Click here

for Preparation Click here

HINT:

- **Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.**
- **Inspect the fuses and relays related to this system before inspecting the suspected areas below.**

Result List of Check CAN Bus Line

Symptom	Suspected Area	See page
The result of "How to Proceed with Troubleshooting" is "Open in CAN Main Wire".	Open in CAN Main Wire	Click here
The result of "How to Proceed with Troubleshooting" is "Short in CAN Bus Lines".	Short in CAN Bus Lines	Click here
The result of "How to Proceed with Troubleshooting" is "Short to +B in CAN Bus Line".	Short to B+ in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Short to GND in CAN Bus Line".	Short to GND in CAN Bus Line	Click here
The result of "How to Proceed with Troubleshooting" is "Open in One Side of CAN Branch Line".	Open in One Side of CAN Branch Line	Click here

Communication Stop Mode Table

Symptom	Suspected Area	See page
"Air Conditioner" not displayed on the intelligent tester.	Air Conditioning Amplifier Communication Stop Mode	Click here
"CAN Gateway" not displayed on the intelligent tester.	Gateway ECU Communication Stop Mode	Click here
"Engine" not displayed on the intelligent tester.	ECM Communication Stop Mode	Click here
"Main Body" not displayed on the intelligent tester.	Main Body ECU (cowl side junction block LH) Communication Stop Mode	Click here
"Combination Meter" not displayed on the intelligent tester.	Combination Meter ECU Communication Stop Mode	Click here
"SRS Airbag" not displayed on the intelligent tester.	Airbag ECU Communication Stop Mode	Click here
"AFS/HL AutoLeveling" not displayed on the intelligent tester.	AFS ECU Communication Stop Mode	Click here
"AVN" not displayed on the intelligent tester.	Display and Navigation Assembly Communication Stop Mode	Click here

for Preparation Click here

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

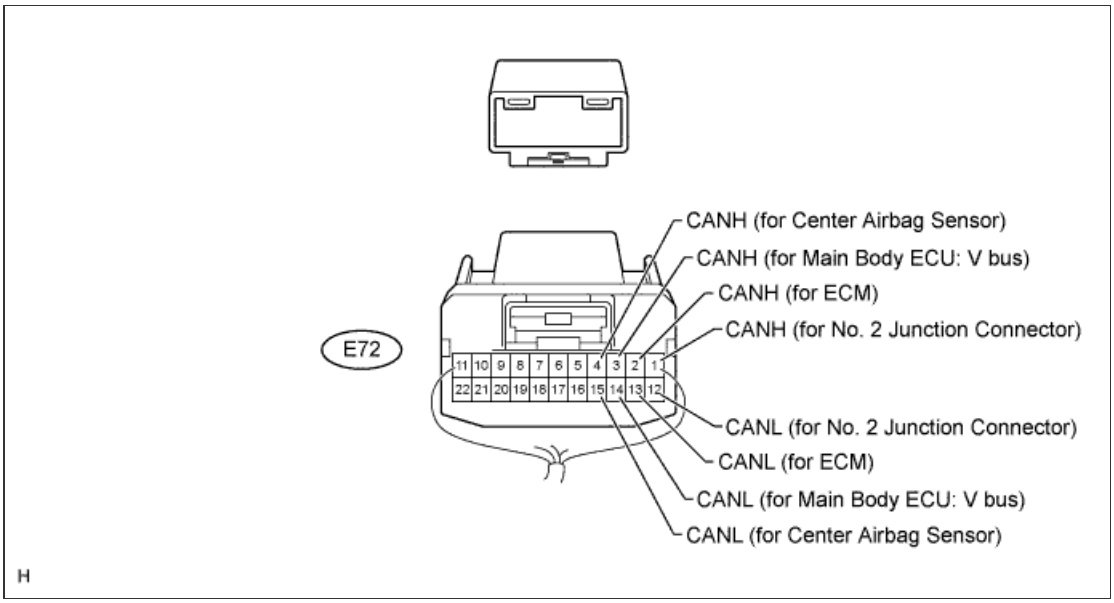
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

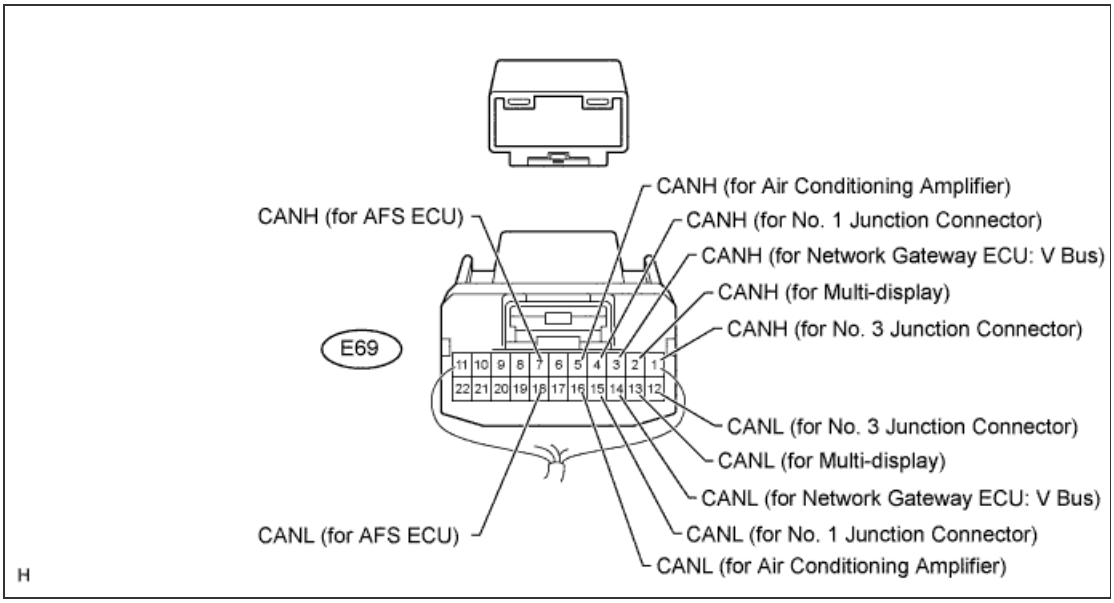
JUNCTION CONNECTOR

a. NO. 1 JUNCTION CONNECTOR



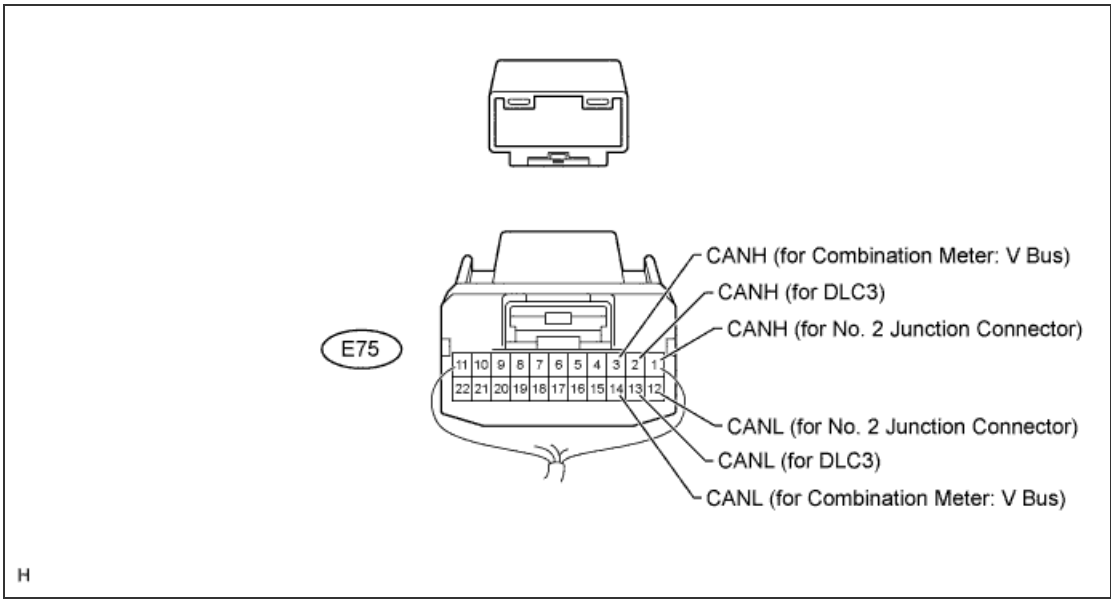
No. 1 Junction Connector	Wiring Color	Connect to
E72-1 (CANH)	Y	No. 2 junction connector
E72-12 (CANL)	B	
E72-2 (CANH)	P	ECM
E72-13 (CANL)	B	
E72-3 (CANH)	SB	Main body ECU (cowl side junction block LH) (V bus)
E72-14 (CANL)	B	
E72-4 (CANH)	GR	Center airbag sensor
E72-15 (CANL)	B	

b. NO. 2 JUNCTION CONNECTOR



No. 2 Junction Connector	Wiring Color	Connect to
E69-1 (CANH)	W	No. 3 junction connector
E69-12 (CANL)	B	
E69-2 (CANH)	P	Multi-display
E69-13 (CANL)	B	
E69-3 (CANH)	BR	Network gateway ECU (V bus)
E69-14 (CANL)	B	
E69-4 (CANH)	Y	No. 1 junction connector
E69-15 (CANL)	B	
E69-5 (CANH)	G	Air conditioning amplifier
E69-16 (CANL)	B	
E69-7 (CANH)	LG	AFS ECU (headlight swivel ECU)
E69-18 (CANL)	B	

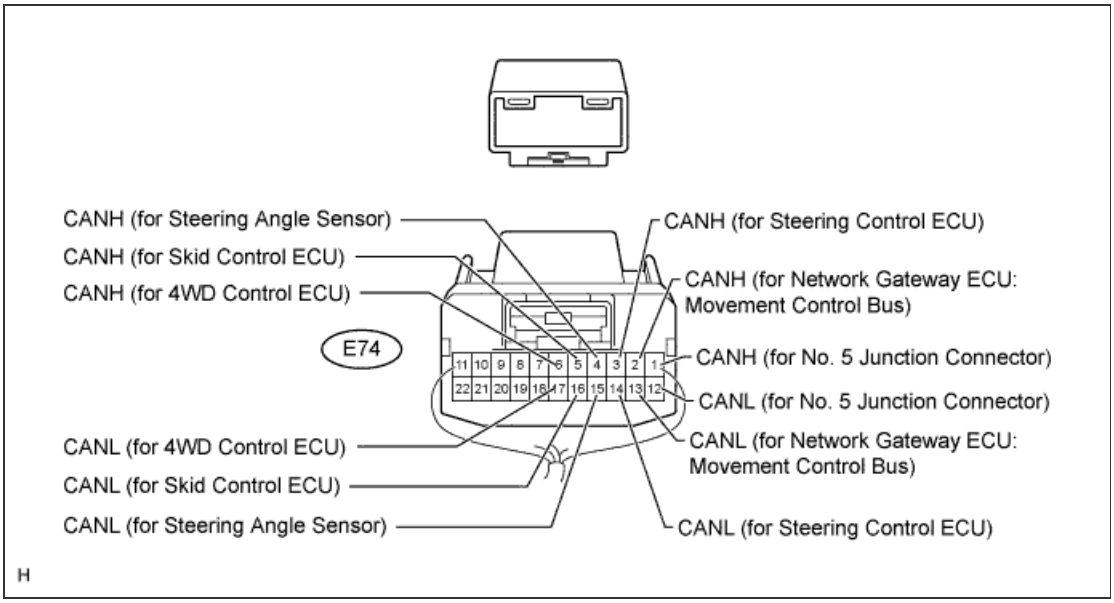
c. NO. 3 JUNCTION CONNECTOR



No. 3 Junction Connector	Wiring Color	Connect to
E75-1 (CANH)	W	No. 2 junction connector
E75-12 (CANL)	B	

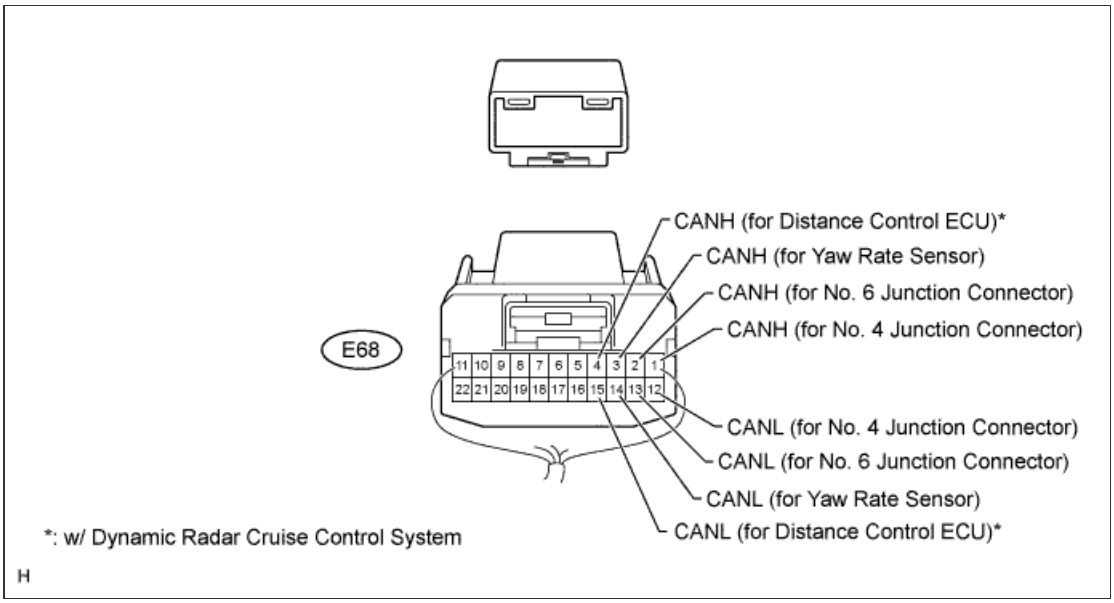
E75-2 (CANH)	G	DLC3
E75-13 (CANL)	B	
E75-3 (CANH)	V	Combination meter (V bus)
E75-14 (CANL)	B	

d. NO. 4 JUNCTION CONNECTOR



No. 4 Junction Connector	Wiring Color	Connect to
E74-1 (CANH)	W	No. 5 junction connector
E74-12 (CANL)	L	
E74-2 (CANH)	SB	Network gateway ECU (movement control bus)
E74-13 (CANL)	L	
E74-3 (CANH)	LG	Steering control ECU
E74-14 (CANL)	L	
E74-4 (CANH)	GR	Steering angle sensor
E74-15 (CANL)	L	
E74-5 (CANH)	V	Skid control ECU
E74-16 (CANL)	L	
E74-6 (CANH)	P	4WD control ECU
E74-17 (CANL)	L	

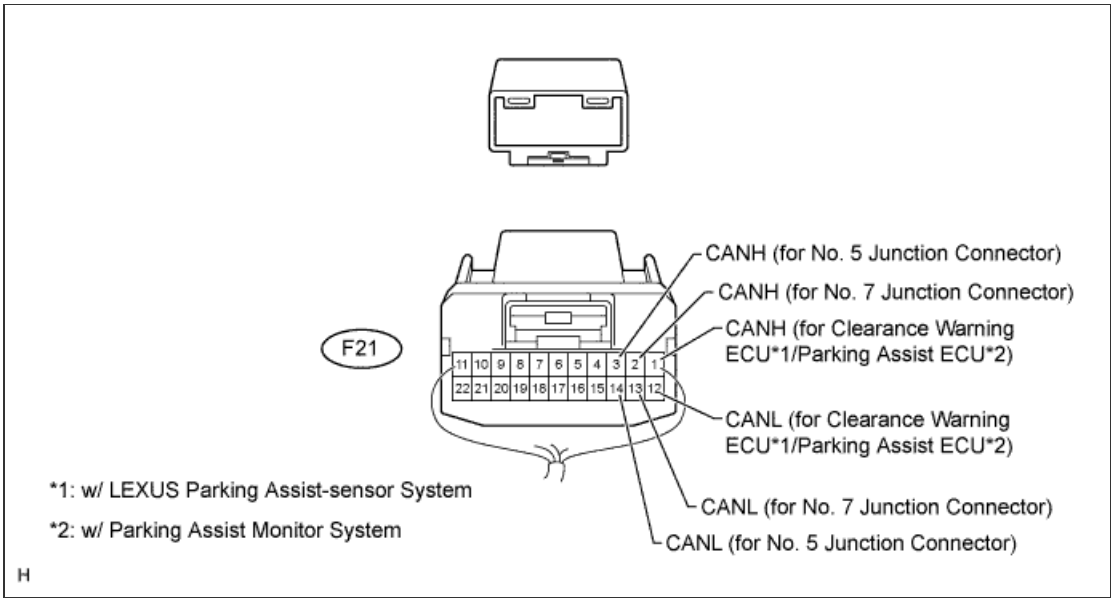
e. NO. 5 JUNCTION CONNECTOR



No. 5 Junction Connector	Wiring Color	Connect to
E68-1 (CANH)	W	No. 4 junction connector
E68-12 (CANL)	L	
E68-2 (CANH)	Y	No. 6 junction connector
E68-13 (CANL)	L	
E68-3 (CANH)	BR	Yaw rate sensor
E68-14 (CANL)	L	
E68-4 (CANH)*	SB	Distance control ECU
E68-15 (CANL)*	L	

*: w/ Dynamic Radar Cruise Control System

f. NO. 6 JUNCTION CONNECTOR

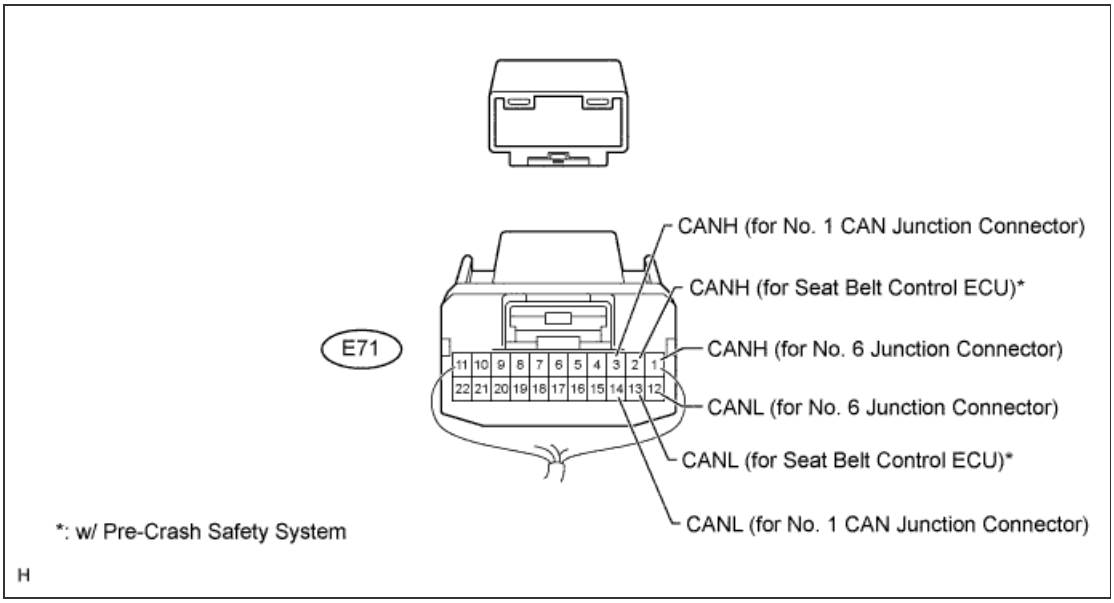


No. 6 Junction Connector	Wiring Color	Connect to
F21-1 (CANH)*1	V	Clearance warning ECU
F21-12 (CANL)*1	L	
F21-1 (CANH)*2	V	Parking assist ECU
F21-12 (CANL)*2	L	
F21-2 (CANH)	W	No. 7 junction connector
F21-13 (CANL)	L	

F21-3 (CANH)	Y	No. 5 junction connector
F21-14 (CANL)	L	

*1: w/ LEXUS Parking Assist-sensor System
*2: w/ Parking Assist Monitor System

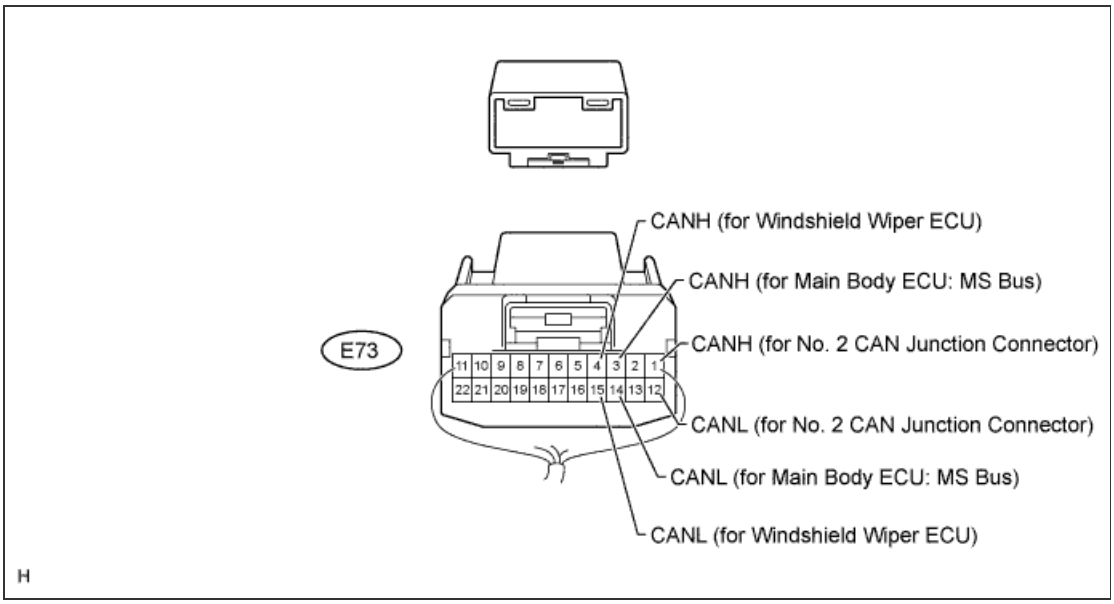
g. NO. 7 JUNCTION CONNECTOR



No. 7 Junction Connector	Wiring Color	Connect to
E71-1 (CANH)	W	No. 6 junction connector
E71-12 (CANL)	L	
E71-2 (CANH)	G	Seat belt control ECU*
E71-13 (CANL)	L	
E71-3 (CANH)	W	No. 1 CAN junction connector
E71-14 (CANL)	L	

*: w/ Pre-Crash Safety System

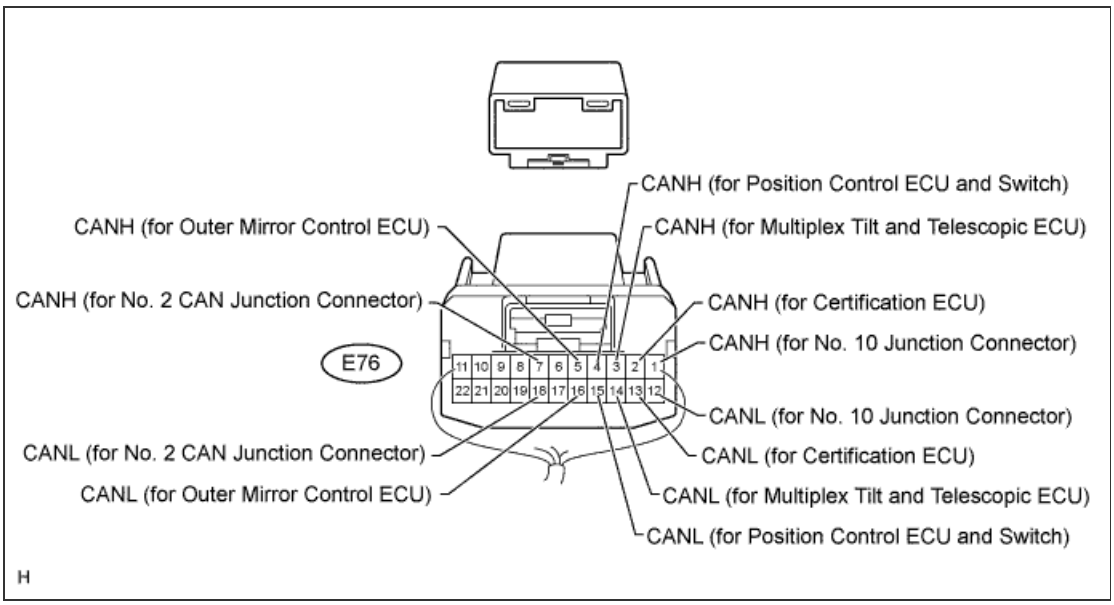
h. NO. 8 JUNCTION CONNECTOR



No. 8 Junction Connector	Wiring Color	Connect to

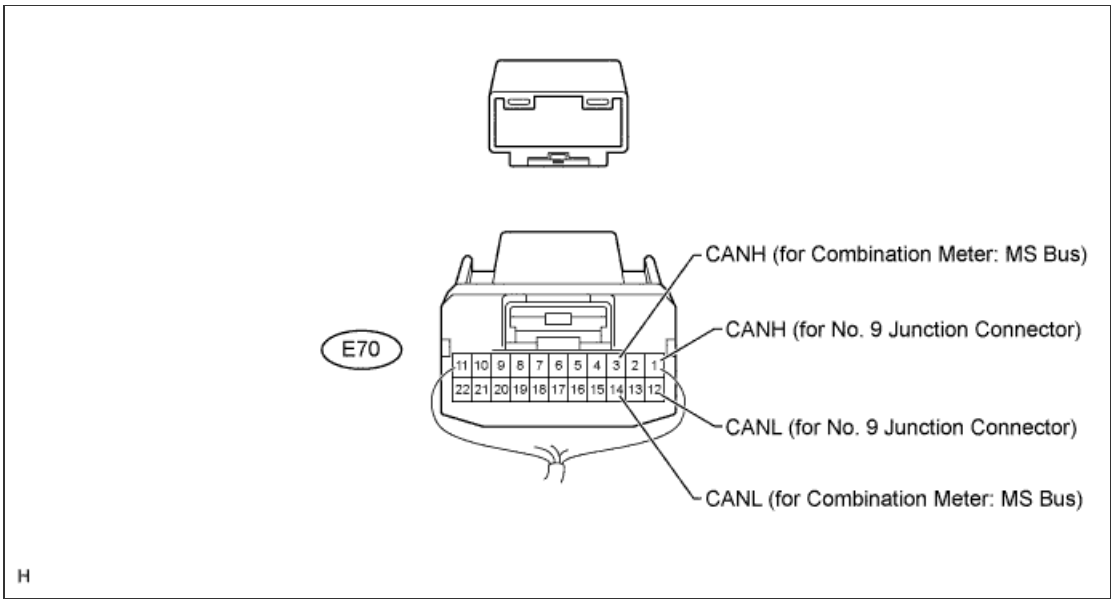
E73-1 (CANH)	W	No. 2 CAN junction connector
E73-12 (CANL)	R	
E73-3 (CANH)	GR	Main body ECU (MS bus)
E73-14 (CANL)	R	
E73-4 (CANH)	LG	Windshield wiper ECU
E73-15 (CANL)	R	

i. NO. 9 JUNCTION CONNECTOR



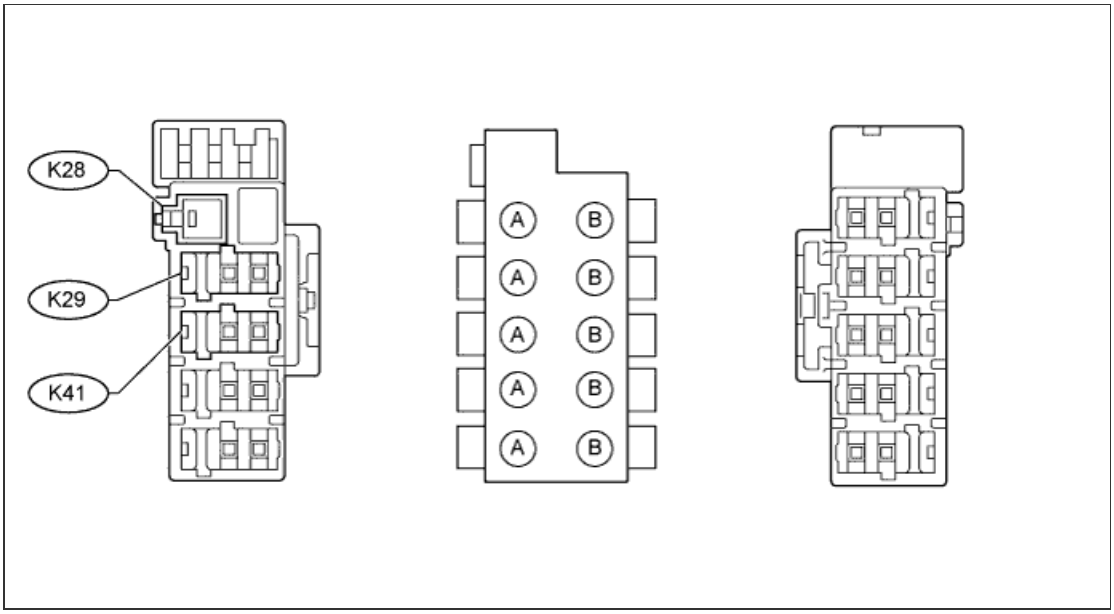
No. 9 Junction Connector	Wiring Color	Connect to
E76-1 (CANH)	W	No. 10 junction connector
E76-12 (CANL)	R	
E76-2 (CANH)	LG	Certification ECU (smart key ECU)
E76-13 (CANL)	R	
E76-3 (CANH)	P	Multiplex tilt and telescopic ECU
E76-14 (CANL)	R	
E76-4 (CANH)	V	Position control ECU and switch
E76-15 (CANL)	R	
E76-5 (CANH)	BR	Outer mirror control ECU
E76-16 (CANL)	R	
E76-7 (CANH)	Y	No. 2 CAN junction connector
E76-18 (CANL)	R	

j. NO. 10 JUNCTION CONNECTOR



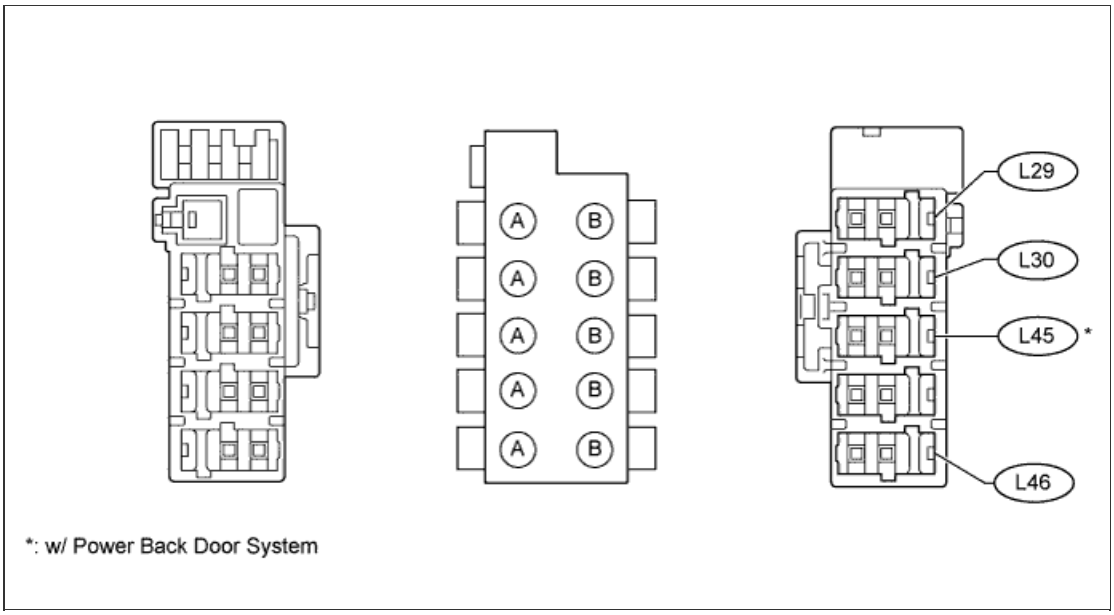
No. 10 Junction Connector	Wiring Color	Connect to
E70-1 (CANH)	W	No. 9 Junction Connector
E70-12 (CANL)	R	
E70-3 (CANH)	LG	Combination Meter (MS bus)
E70-14 (CANL)	R	

k. NO. 1 CAN JUNCTION CONNECTOR



Junction Connector A Side	Wiring Color (CANH Side)	Wiring Color (CANL Side)
Body ground (K28)	-	W-B
No. 7 junction connector (K29)	W	L
Suspension control ECU (K41)	V	L

l. NO. 2 CAN JUNCTION CONNECTOR

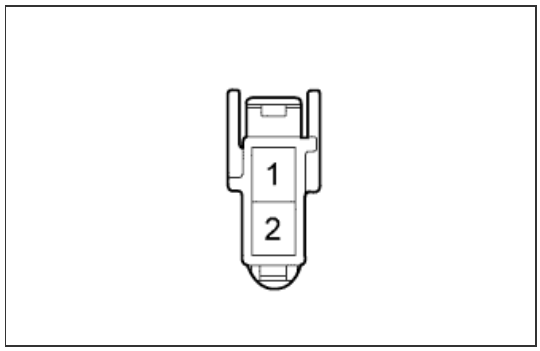


Junction Connector B side	Wiring Color (CANH Side)	Wiring Color (CANL Side)
No. 8 junction connector (L29)	W	R
No. 9 junction connector (L30)	Y	R
Power back door ECU (L45)*	V	R
No. 2 main body ECU (L46)	LG	R

*: w/ Power Back Door System

TERMINALS OF CONNECTORS FOR JUNCTION CONNECTOR (CAN JUNCTION CONNECTOR)

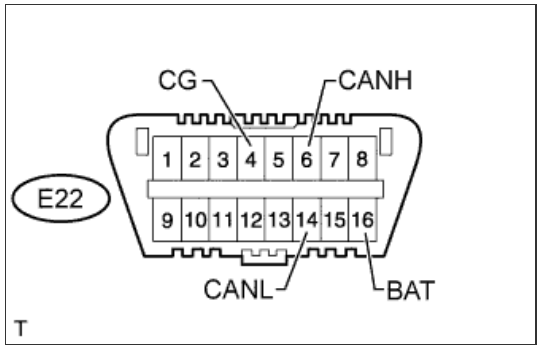
Terminal No.	Symbol
1	CANH
2	CANL



CHECK DLC3

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

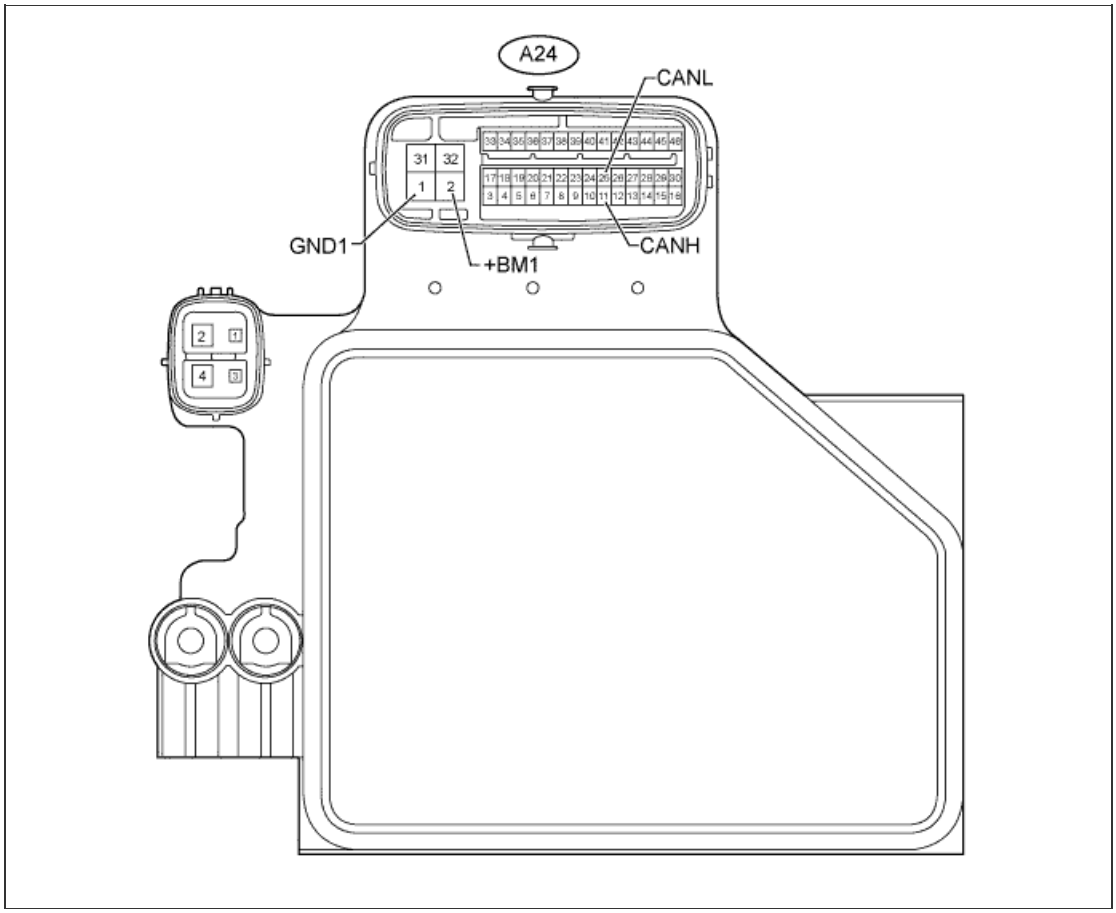
b. Measure the resistance according to the value(s) in the table below.



Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	G - B	Engine switch off	54 to 69 Ω
E22-6 (CANH) - E22-4 (CG)	G - W-B	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	B - W-B	Engine switch off	200 Ω or higher
E22-6 (CANH) - E22-16 (BAT)	G - O	Engine switch off	6 kΩ or higher

E22-14 (CANL) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

CHECK MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

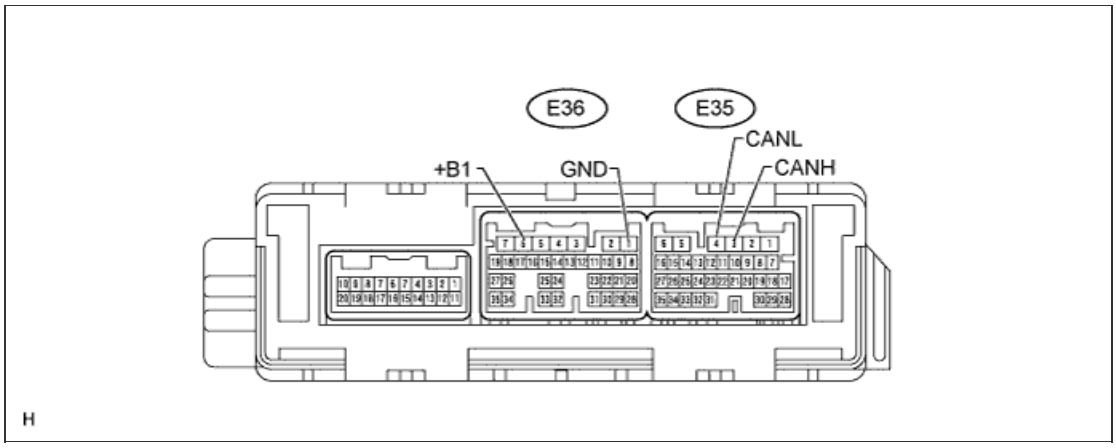


a. Disconnect the A24 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	V - L	Engine switch off	54 to 69 Ω
A24-11 (CANH) - A24-1 (GND1)	V - W-B	Engine switch off	200 Ω or higher
A24-25 (CANL) - A24-1 (GND1)	L - W-B	Engine switch off	200 Ω or higher
A24-11 (CANH) - A24-2 (+BM1)	V - B	Engine switch off	6 kΩ or higher
A24-25 (CANL) - A24-2 (+BM1)	L - B	Engine switch off	6 kΩ or higher

CHECK AIR CONDITIONING AMPLIFIER

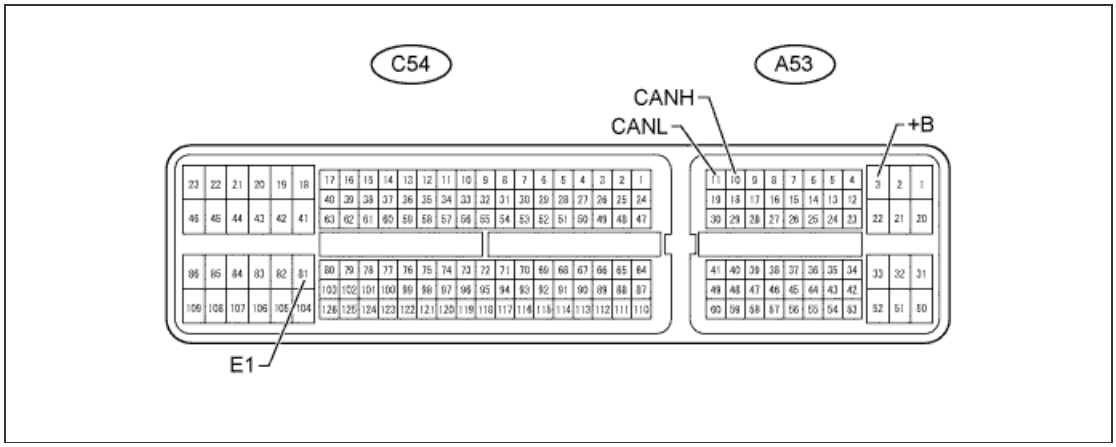


a. Disconnect the E35 and E36 amplifier connectors.

b. Measure the voltage and resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	G - B	Engine switch off	54 to 69 Ω
E35-3 (CANH) - E36-1 (GND)	G - W-B	Engine switch off	200 Ω or higher
E35-4 (CANL) - E36-1 (GND)	B - W-B	Engine switch off	200 Ω or higher
E35-3 (CANH) - E36-6 (+B1)	G - R	Engine switch off	6 kΩ or higher
E35-4 (CANL) - E36-6 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK ECM

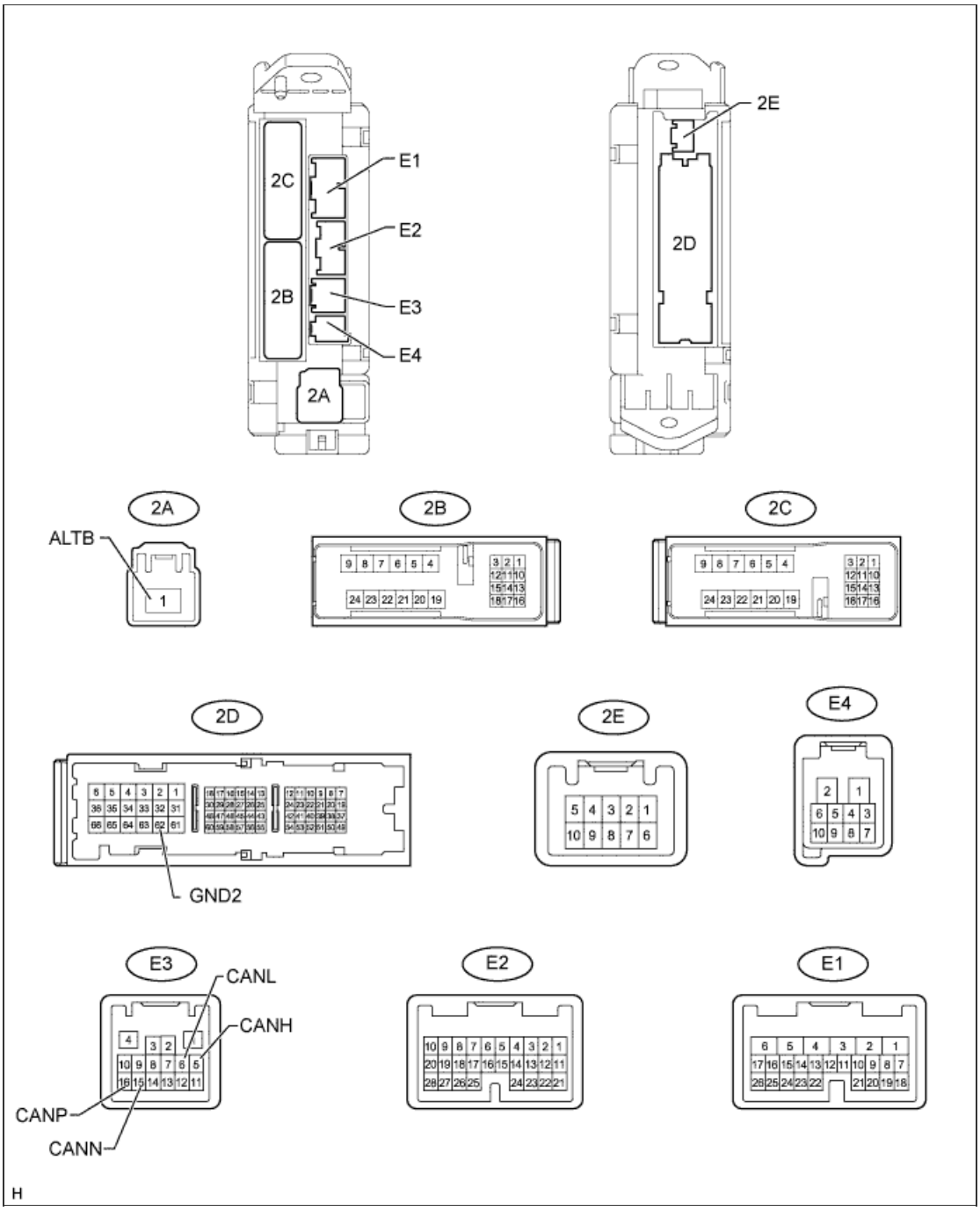


a. Disconnect the A53 and C54 ECM connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A53-10 (CANH) - A53-11 (CANL)	P - B	Engine switch off	108 to 132 Ω
A53-10 (CANH) - C54-81 (E1)	P - W-B	Engine switch off	200 Ω or higher
A53-11 (CANL) - C54-81 (E1)	B - W-B	Engine switch off	200 Ω or higher
A53-10 (CANH) - A53-3 (+B)	P - B	Engine switch off	6 kΩ or higher
A53-11 (CANL) - A53-3 (+B)	B - B	Engine switch off	6 kΩ or higher

CHECK MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)



a. Disconnect the E3 ECU connector.

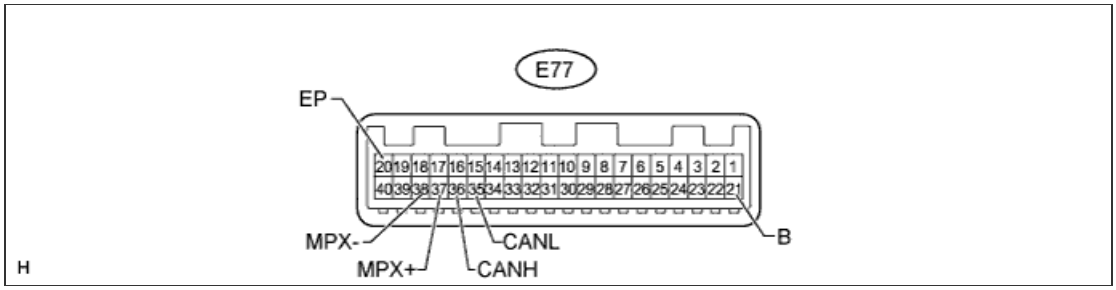
b. Disconnect the 2A and 2D junction connectors.

c. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)*1	SB - B	Engine switch off	54 to 69 Ω
E3-5 (CANH) - 2D-62 (GND2)*1	SB - W-B	Engine switch off	200 Ω or higher
E3-6 (CANL) - 2D-62 (GND2)*1	B - W-B	Engine switch off	200 Ω or higher
E3-5 (CANH) - 2A-1 (ALTB)*1	SB - B	Engine switch off	6 kΩ or higher
E3-6 (CANL) - 2A-1 (ALTB)*1	B - B	Engine switch off	6 kΩ or higher
E3-16 (CANP) - E3-15 (CANN)*2	GR - R	Engine switch off	108 to 132 Ω
E3-16 (CANP) - 2D-62 (GND2)*2	GR - W-B	Engine switch off	200 Ω or higher
E3-15 (CANN) - 2D-62 (GND2)*2	R - W-B	Engine switch off	200 Ω or higher
E3-16 (CANP) - 2A-1 (ALTB)*2	GR - B	Engine switch off	6 kΩ or higher
E3-15 (CANN) - 2A-1 (ALTB)*2	R - B	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK COMBINATION METER



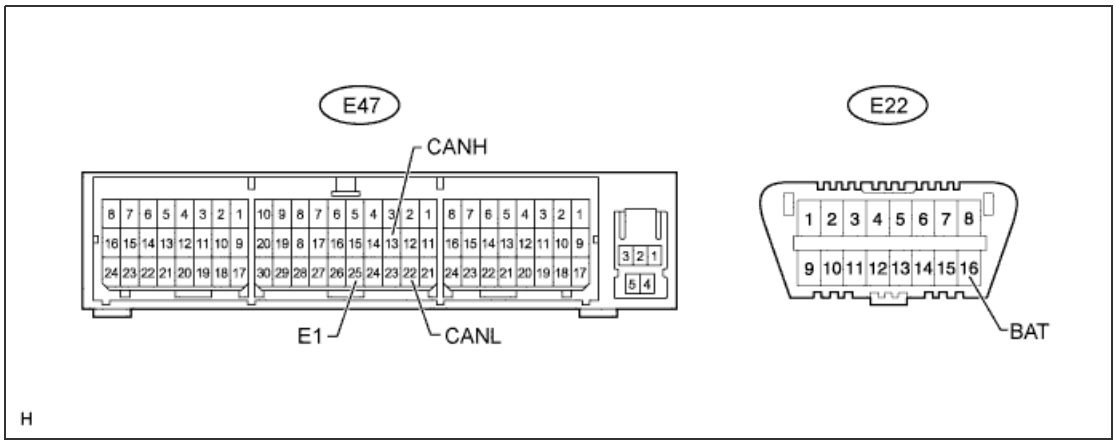
a. Disconnect the E77 meter connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)*1	V - B	Engine switch off	108 to 132 Ω
E77-36 (CANH) - E77-20 (EP)*1	V - W-B	Engine switch off	200 Ω or higher
E77-35 (CANL) - E77-20 (EP)*1	B - W-B	Engine switch off	200 Ω or higher
E77-36 (CANH) - E77-21 (B)*1	V - R	Engine switch off	6 kΩ or higher
E77-35 (CANL) - E77-21 (B)*1	B - R	Engine switch off	6 kΩ or higher
E77-37 (MPX+) - E77-38 (MPX-)*2	LG - R	Engine switch off	108 to 132 Ω
E77-37 (MPX+) - E77-20 (EP)*2	LG - W-B	Engine switch off	200 Ω or higher
E77-38 (MPX-) - E77-20 (EP)*2	R - W-B	Engine switch off	200 Ω or higher
E77-37 (MPX+) - E77-21 (B)*2	LG - R	Engine switch off	6 kΩ or higher
E77-38 (MPX-) - E77-21 (B)*2	R - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK CENTER AIRBAG SENSOR



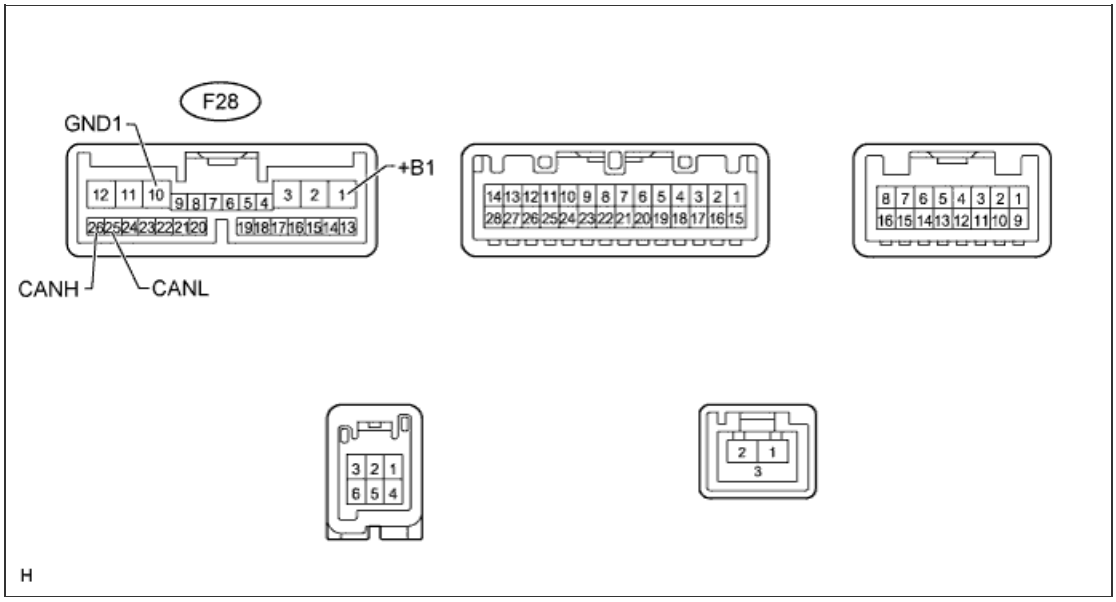
a. Disconnect the E47 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	GR - B	Engine switch off	54 to 69 Ω
E47-13 (CANH) - E47-25 (E1)	GR - W-B	Engine switch off	200 Ω or higher

E47-22 (CANL) - E47-25 (E1)	B - W-B	Engine switch off	200 Ω or higher
E47-13 (CANH) - E22-16 (BAT)	GR - O	Engine switch off	6 kΩ or higher
E47-22 (CANL) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

CHECK MULTI-DISPLAY

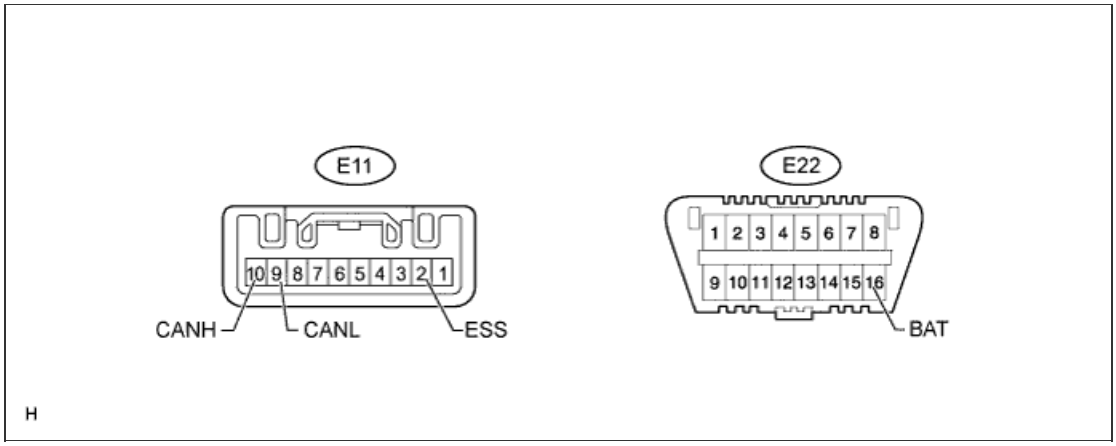


a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F28-26 (CANH) - F28-25 (CANL)	P - B	Engine switch off	54 to 69 Ω
F28-26 (CANH) - F28-10 (GND1)	P - W-B	Engine switch off	200 Ω or higher
F28-25 (CANL) - F28-10 (GND1)	B - W-B	Engine switch off	200 Ω or higher
F28-26 (CANH) - F28-1 (+B1)	P - R	Engine switch off	6 kΩ or higher
F28-25 (CANL) - F28-1 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK STEERING ANGLE SENSOR



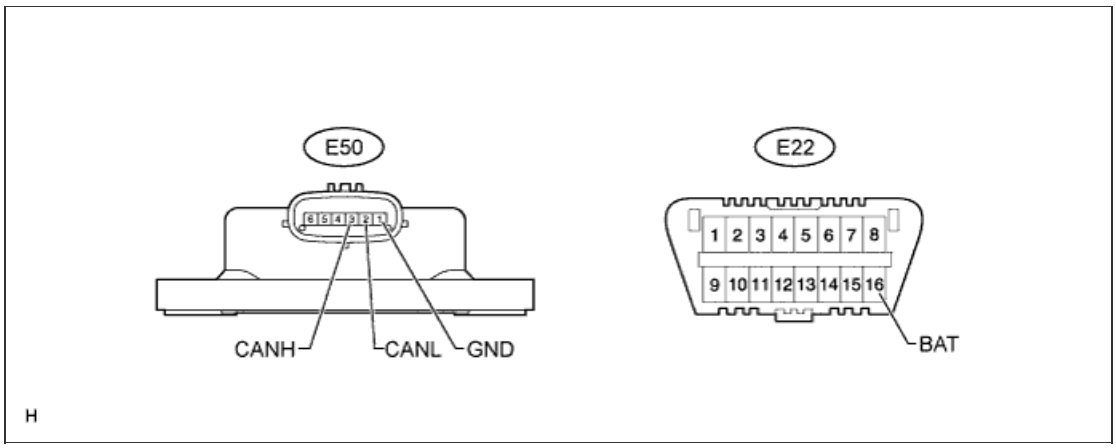
a. Disconnect the E11 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E11-10 (CANH) - E11-9 (CANL)	GR - L	Engine switch off	54 to 69 Ω

E11-10 (CANH) - E11-2 (ESS)	GR - W-B	Engine switch off	200 Ω or higher
E11-9 (CANL) - E11-2 (ESS)	L - W-B	Engine switch off	200 Ω or higher
E11-10 (CANH) - E22-16 (BAT)	GR - O	Engine switch off	6 kΩ or higher
E11-9 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK YAW RATE SENSOR



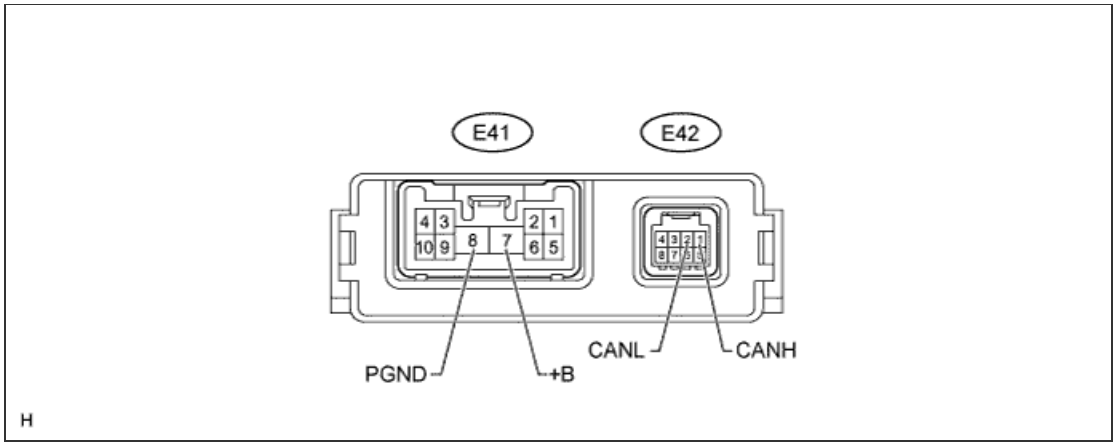
a. Disconnect the E50 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	BR - L	Engine switch off	54 to 69 Ω
E50-3 (CANH) - E50-1 (GND)	BR - W-B	Engine switch off	200 Ω or higher
E50-2 (CANL) - E50-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
E50-3 (CANH) - E22-16 (BAT)	BR - O	Engine switch off	6 kΩ or higher
E50-2 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK SEAT BELT CONTROL ECU

For vehicles with the pre-crash safety system only.

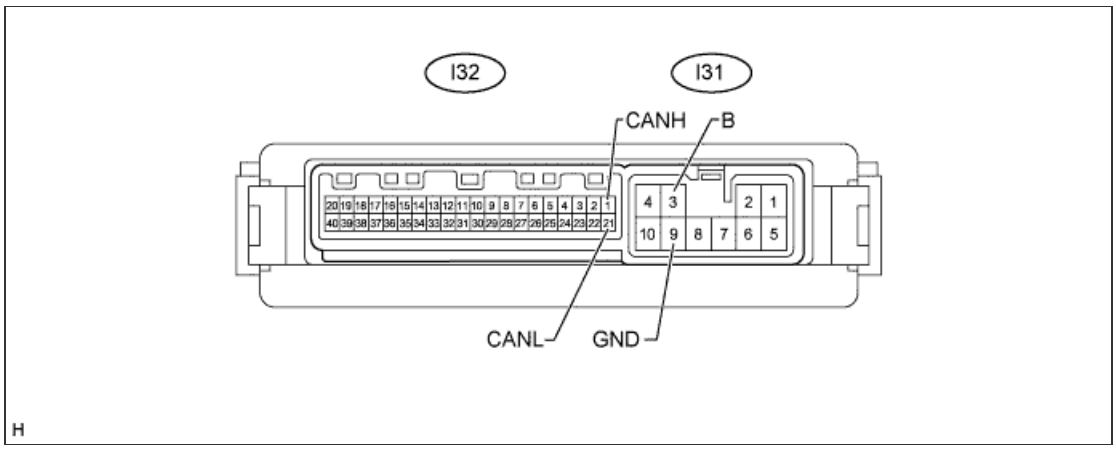


a. Disconnect the E41 and E42 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E42-1 (CANH) - E42-2 (CANL)	G - L	Engine switch off	54 to 69 Ω
E42-1 (CANH) - E41-8 (PGND)	G - W-B	Engine switch off	200 Ω or higher
E42-2 (CANL) - E41-8 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E42-1 (CANH) - E41-7 (+B)	G - R	Engine switch off	6 kΩ or higher
E42-2 (CANL) - E41-7 (+B)	L - R	Engine switch off	6 kΩ or higher

CHECK OUTER MIRROR CONTROL ECU

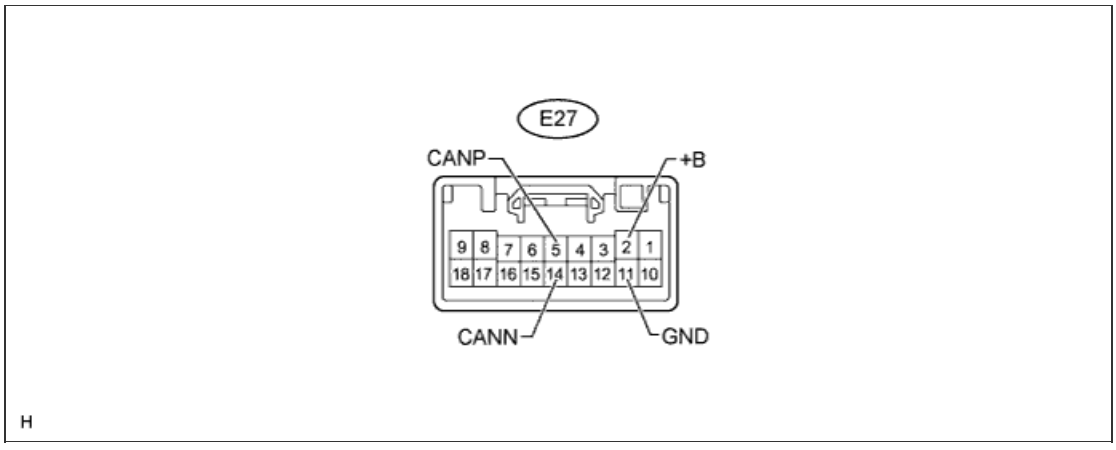


a. Disconnect the I31 and I32 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
I32-1 (CANH) - I32-21 (CANL)	BR - R	Engine switch off	54 to 69 Ω
I32-1 (CANH) - I31-9 (GND)	BR - W-B	Engine switch off	200 Ω or higher
I32-21 (CANL) - I31-9 (GND)	R - W-B	Engine switch off	200 Ω or higher
I32-1 (CANH) - I31-3 (B)	BR - R	Engine switch off	6 kΩ or higher
I32-21 (CANL) - I31-3 (B)	R - R	Engine switch off	6 kΩ or higher

CHECK MULTIPLEX TILT AND TELESCOPIC ECU

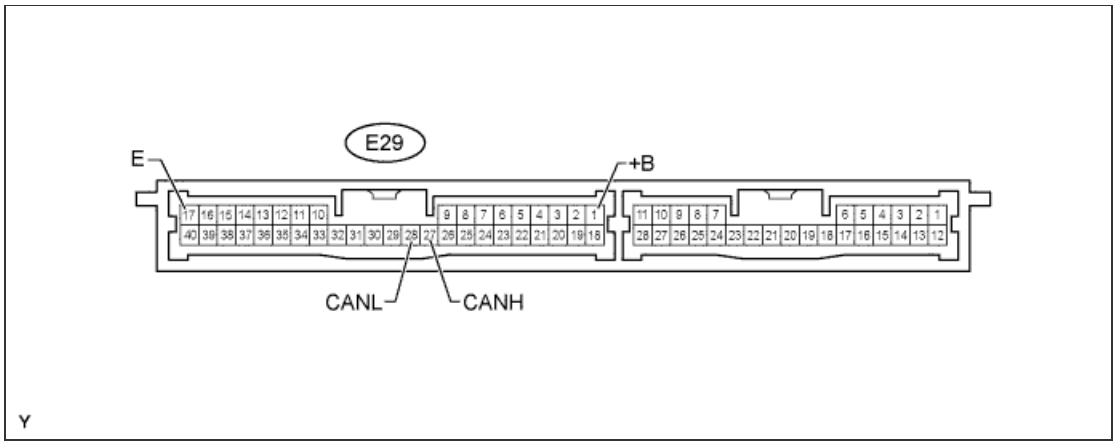


a. Disconnect the E27 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E27-5 (CANP) - E27-14 (CANN)	P - R	Engine switch off	54 to 69 Ω
E27-5 (CANP) - E27-11 (GND)	P - W-B	Engine switch off	200 Ω or higher
E27-14 (CANN) - E27-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
E27-5 (CANP) - E27-2 (+B)	P - L	Engine switch off	6 kΩ or higher
E27-14 (CANN) - E27-2 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK CERTIFICATION ECU (SMART KEY ECU)

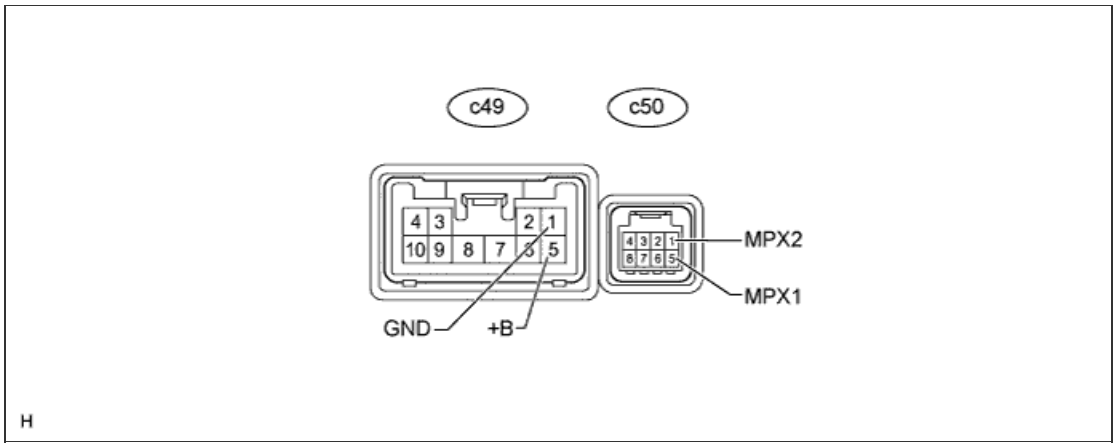


a. Disconnect the E29 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E29-27 (CANH) - E29-28 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E29-27 (CANH) - E29-17 (E)	LG - W-B	Engine switch off	200 Ω or higher
E29-28 (CANL) - E29-17 (E)	R - W-B	Engine switch off	200 Ω or higher
E29-27 (CANH) - E29-1 (+B)	LG - B	Engine switch off	6 kΩ or higher
E29-28 (CANL) - E29-1 (+B)	R - B	Engine switch off	6 kΩ or higher

CHECK POSITION CONTROL ECU AND SWITCH

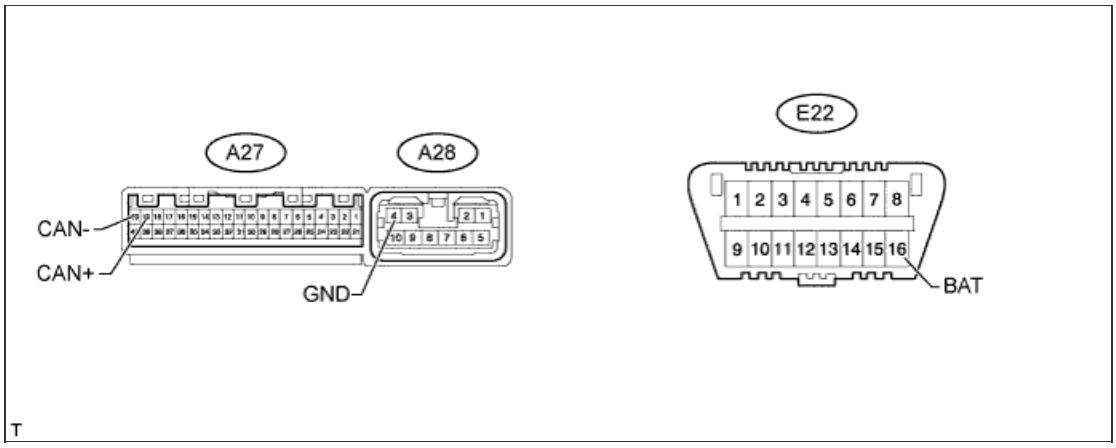


a. Disconnect the c49 and c50 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
c50-5 (MPX1) - c50-1 (MPX2)	V - R	Engine switch off	54 to 69 Ω
c50-5 (MPX1) - c49-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
c50-1 (MPX2) - c49-1 (GND)	R - W-B	Engine switch off	200 Ω or higher
c50-5 (MPX1) - c49-5 (+B)	V - L	Engine switch off	6 kΩ or higher
c50-1 (MPX2) - c49-5 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK 4WD CONTROL ECU

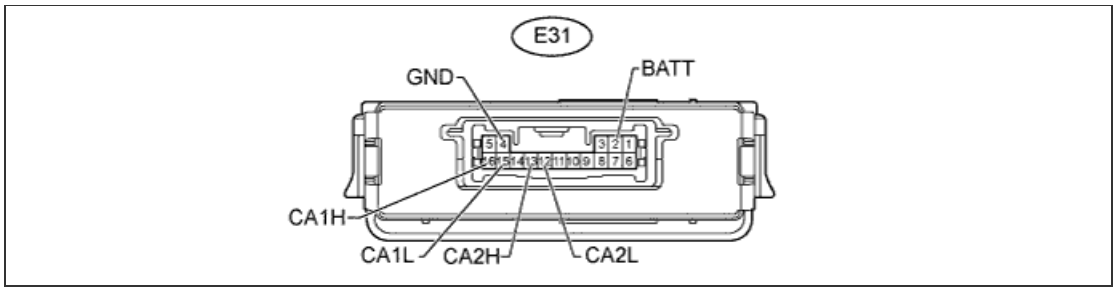


a. Disconnect the A27 and A28 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A27-19 (CAN+) - A27-20 (CAN-)	P - L	Engine switch off	54 to 69 Ω
A27-19 (CAN+) - A28-4 (GND)	P - W	Engine switch off	200 Ω or higher
A27-20 (CAN-) - A28-4 (GND)	L - W	Engine switch off	200 Ω or higher
A27-19 (CAN+) - E22-16 (BAT)	P - O	Engine switch off	6 kΩ or higher
A27-20 (CAN-) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK NETWORK GATEWAY ECU



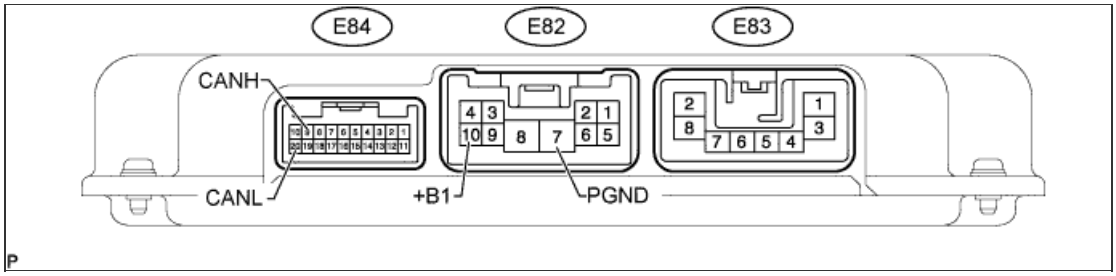
a. Disconnect the E31 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)*1	BR - B	Engine switch off	54 to 69 Ω
E31-16 (CA1H) - E31-4 (GND)*1	BR - W-B	Engine switch off	200 Ω or higher
E31-15 (CA1L) - E31-4 (GND)*1	B - W-B	Engine switch off	200 Ω or higher
E31-16 (CA1H) - E31-2 (BATT)*1	BR - R	Engine switch off	6 kΩ or higher
E31-15 (CA1L) - E31-2 (BATT)*1	B - R	Engine switch off	6 kΩ or higher
E31-13 (CA2H) - E31-12 (CA2L)*2	SB - L	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E31-4 (GND)*2	SB - W-B	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E31-4 (GND)*2	L - W-B	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E31-2 (BATT)*2	SB - R	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E31-2 (BATT)*2	L - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For movement control bus

CHECK STEERING CONTROL ECU

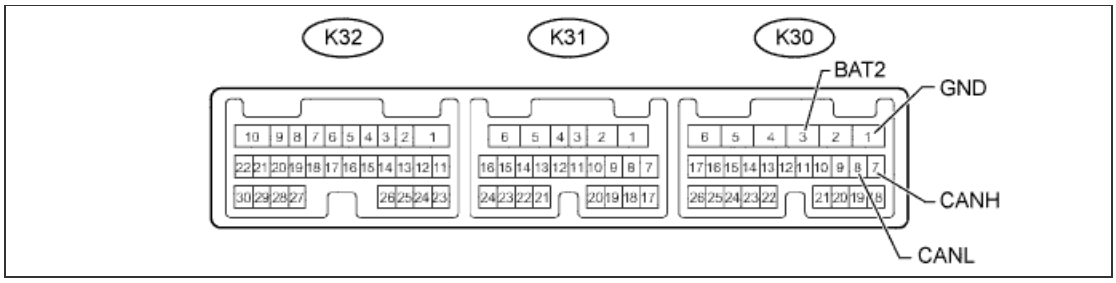


a. Disconnect the E82 and E84 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E84-9 (CANH) - E84-20 (CANL)	LG - L	Engine switch off	54 to 69 Ω
E84-9 (CANH) - E82-7 (PGND)	LG - W-B	Engine switch off	200 Ω or higher
E84-20 (CANL) - E82-7 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-10 (+B1)	LG - R	Engine switch off	6 kΩ or higher
E84-20 (CANL) - E82-10 (+B1)	L - R	Engine switch off	6 kΩ or higher

CHECK SUSPENSION CONTROL ECU

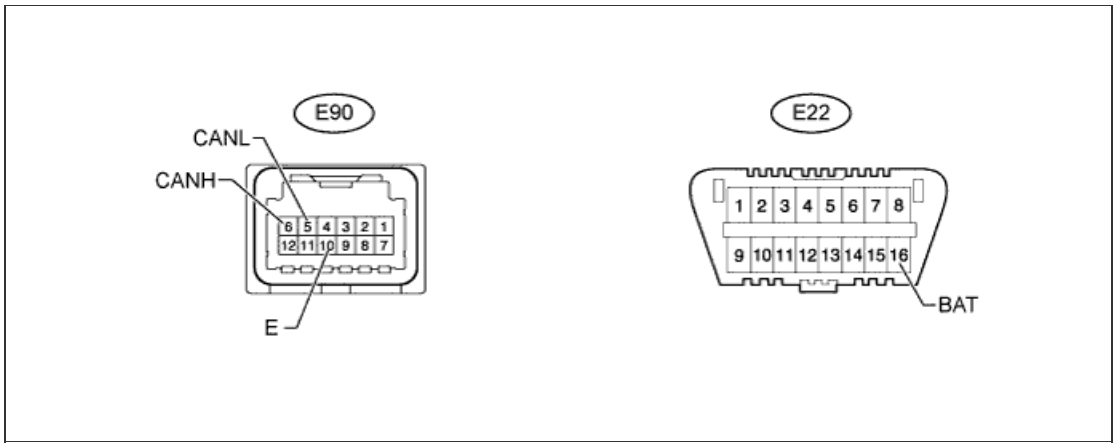


a. Disconnect the K30 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
K30-7 (CANH) - K30-8 (CANL)	V - L	Engine switch off	54 to 69 Ω
K30-7 (CANH) - K30-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
K30-8 (CANL) - K30-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
K30-7 (CANH) - K30-3 (BAT2)	V - R	Engine switch off	6 kΩ or higher
K30-8 (CANL) - K30-3 (BAT2)	L - R	Engine switch off	6 kΩ or higher

CHECK WINDSHIELD WIPER ECU



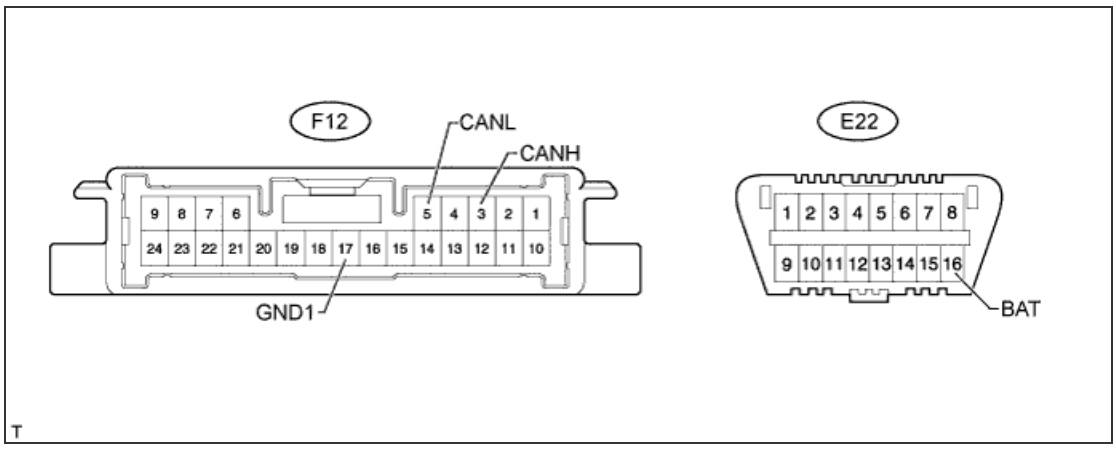
a. Disconnect the E90 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E90-6 (CANH) - E90-5 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E90-6 (CANH) - E90-10 (E)	LG - W-B	Engine switch off	200 Ω or higher
E90-5 (CANL) - E90-10 (E)	R - W-B	Engine switch off	200 Ω or higher
E90-6 (CANH) - E22-16 (BAT)	LG - O	Engine switch off	6 kΩ or higher
E90-5 (CANL) - E22-16 (BAT)	R - O	Engine switch off	6 kΩ or higher

CHECK CLEARANCE WARNING ECU

For vehicles with the LEXUS parking assist-sensor system only.



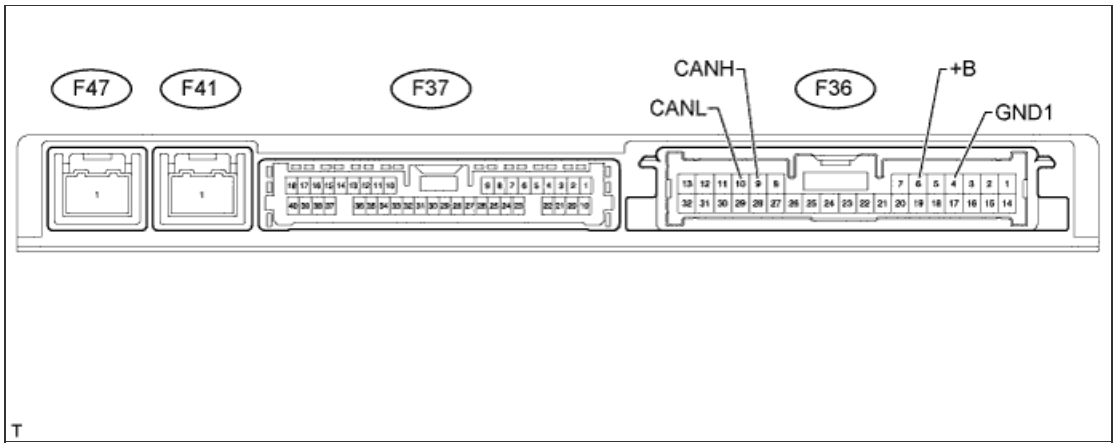
a. Disconnect F12 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F12-3 (CANH) - F12-5 (CANL)	V - L	Engine switch off	54 to 69 Ω
F12-3 (CANH) - F12-17 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F12-5 (CANL) - F12-17 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F12-3 (CANH) - E22-16 (BAT)	V - O	Engine switch off	6 kΩ or higher
F12-5 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

CHECK PARKING ASSIST ECU

For vehicles with the parking assist monitor system only.



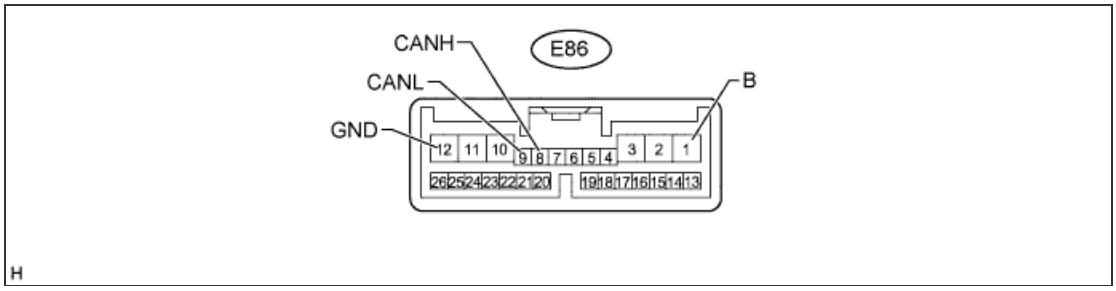
a. Disconnect the F36 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F36-9 (CANH) - F36-10 (CANL)	V - L	Engine switch off	54 to 69 Ω
F36-9 (CANH) - F36-4 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F36-10 (CANL) - F36-4 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F36-9 (CANH) - F36-6 (+B)	V - L	Engine switch off	6 kΩ or higher
F36-10 (CANL) - F36-6 (+B)	L - L	Engine switch off	6 kΩ or higher

CHECK DISTANCE CONTROL ECU

For vehicles with the dynamic radar cruise control system only.



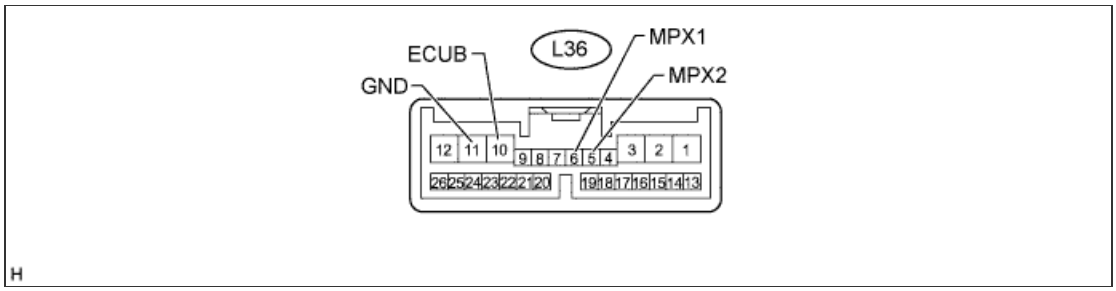
a. Disconnect the E86 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E86-8 (CANH) - E86-9 (CANL)	SB - L	Engine switch off	54 to 69 Ω
E86-8 (CANH) - E86-12 (GND)	SB - BR	Engine switch off	200 Ω or higher
E86-9 (CANL) - E86-12 (GND)	L - BR	Engine switch off	200 Ω or higher
E86-8 (CANH) - E86-1 (B)	SB - R	Engine switch off	6 kΩ or higher
E86-9 (CANL) - E86-1 (B)	L - R	Engine switch off	6 kΩ or higher

CHECK POWER BACK DOOR UNIT (POWER BACK DOOR ECU)

For vehicles with the power back door system only.

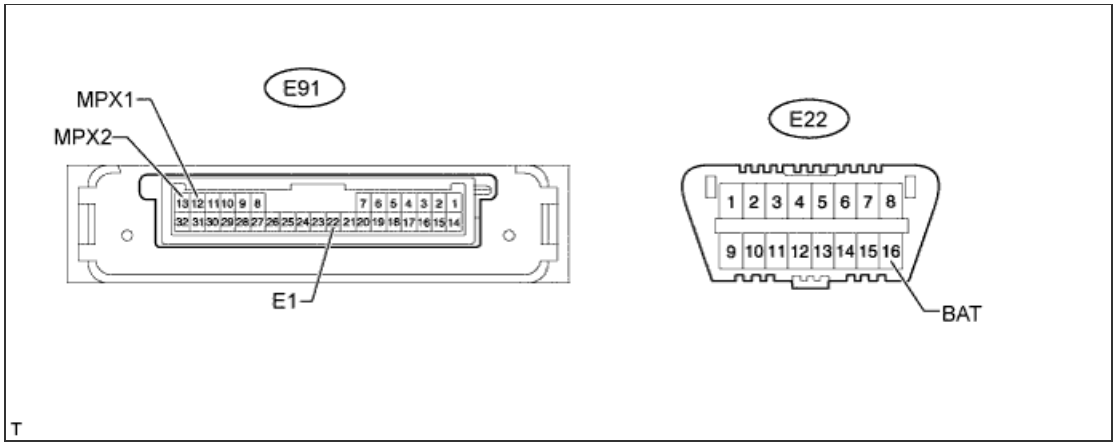


a. Disconnect the L36 unit connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L36-6 (MPX1) - L36-5 (MPX2)	V - R	Engine switch off	54 to 69 Ω
L36-6 (MPX1) - L36-11 (GND)	V - W-B	Engine switch off	200 Ω or higher
L36-5 (MPX2) - L36-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
L36-6 (MPX1) - L36-10 (ECUB)	V - R	Engine switch off	6 kΩ or higher
L36-5 (MPX2) - L36-10 (ECUB)	R - R	Engine switch off	6 kΩ or higher

CHECK AFS ECU (HEADLIGHT SWIVEL ECU)

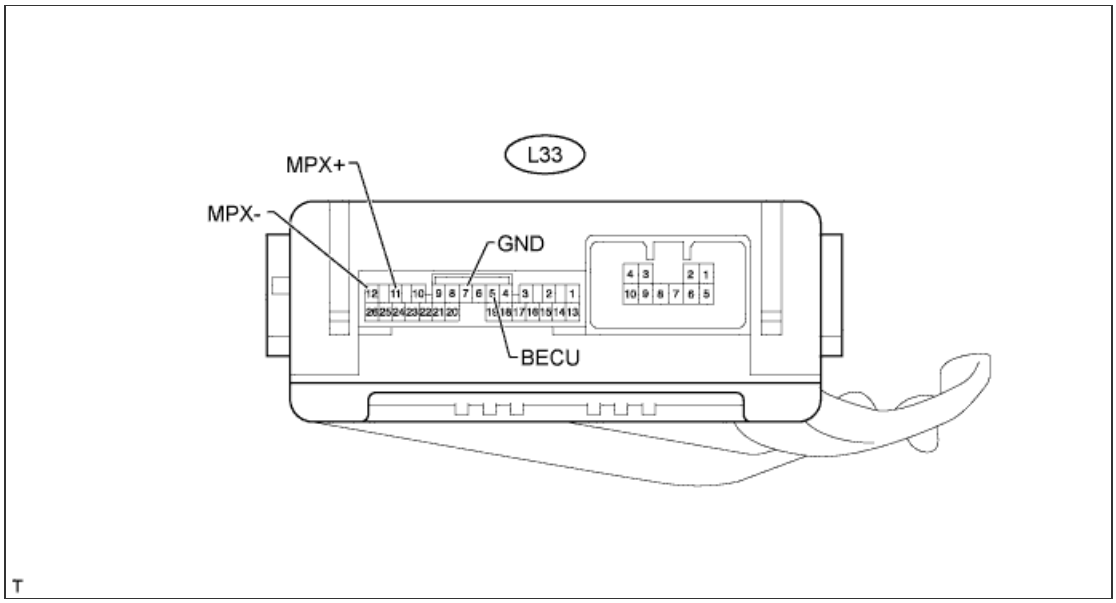


a. Disconnect the E91 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	LG - B	Engine switch off	54 to 69 Ω
E91-12 (MPX1) - E91-22 (E1)	LG - W-B	Engine switch off	200 Ω or higher
E91-13 (MPX2) - E91-22 (E1)	B - W-B	Engine switch off	200 Ω or higher
E91-12 (MPX1) - E22-16 (BAT)	LG - O	Engine switch off	6 kΩ or higher
E91-13 (MPX2) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

CHECK NO. 2 MAIN BODY ECU



a. Disconnect the L33 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L33-11 (MPX+) - L33-12 (MPX-)	LG - R	Engine switch off	54 to 69 Ω
L33-11 (MPX+) - L33-7 (GND)	LG - W-B	Engine switch off	200 Ω or higher
L33-12 (MPX-) - L33-7 (GND)	R - W-B	Engine switch off	200 Ω or higher
L33-11 (MPX+) - L33-5 (BECU)	LG - R	Engine switch off	6 kΩ or higher
L33-12 (MPX-) - L33-5 (BECU)	R - R	Engine switch off	6 kΩ or higher

for Preparation Click here

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

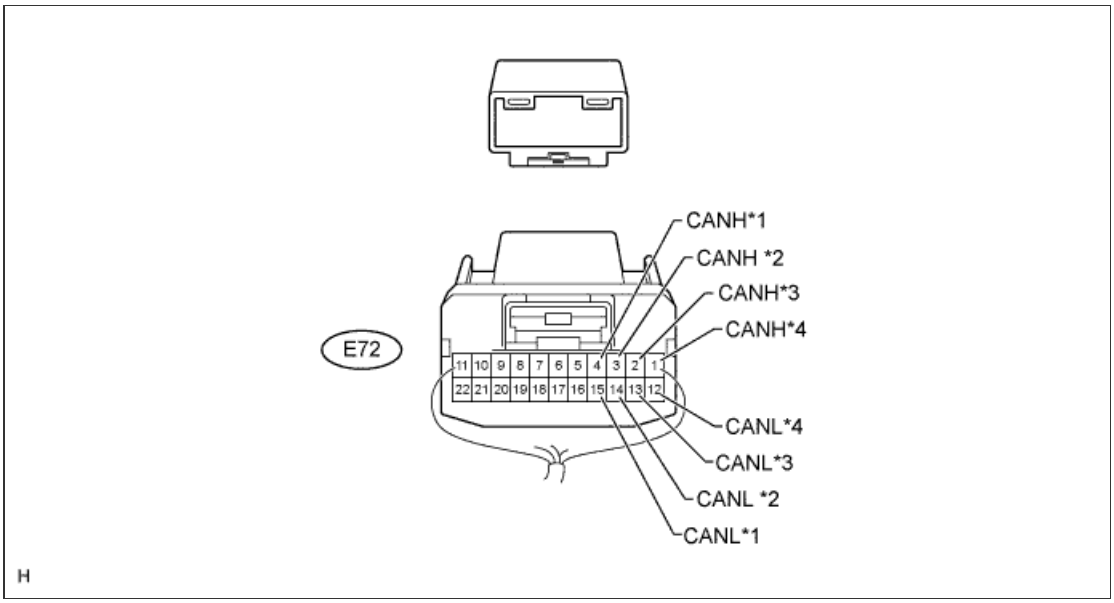
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- **Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.**
- **When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).**

JUNCTION CONNECTOR

a. NO. 1 JUNCTION CONNECTOR

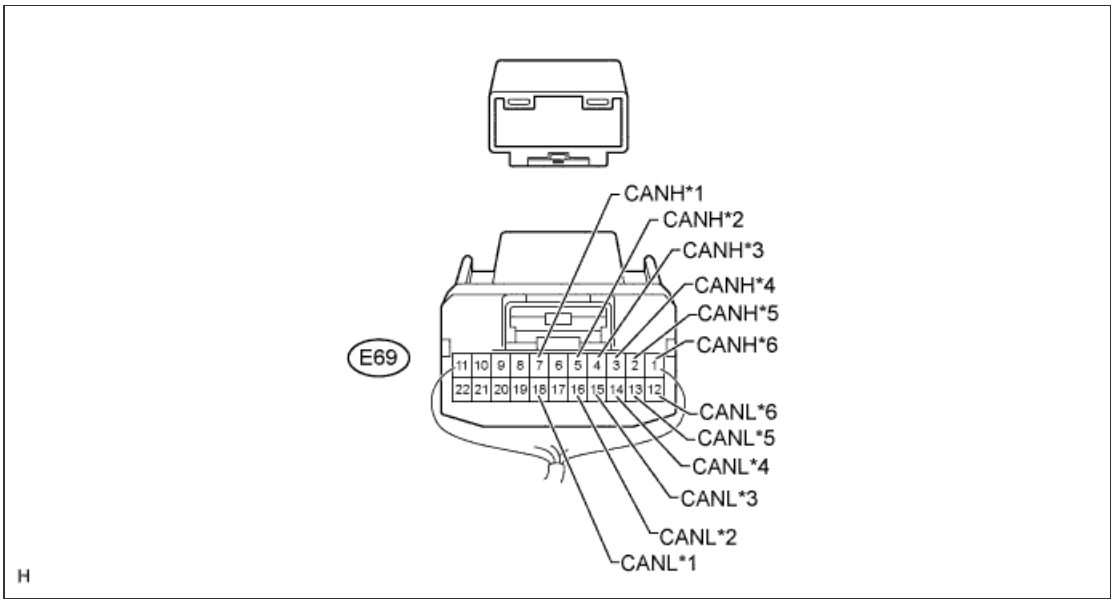


Text in Illustration

*1	to Center Airbag Sensor	*2	to Main Body ECU: V bus
*3	to ECM	*4	to No. 2 Junction Connector

No. 1 Junction Connector	Wiring Color	Connect to
E72-1 (CANH)	Y	No. 2 junction connector
E72-12 (CANL)	B	
E72-2 (CANH)	P	ECM
E72-13 (CANL)	B	
E72-3 (CANH)	SB	Main body ECU (cowl side junction block LH) (V bus)
E72-14 (CANL)	B	
E72-4 (CANH)	GR	Center airbag sensor
E72-15 (CANL)	B	

b. NO. 2 JUNCTION CONNECTOR

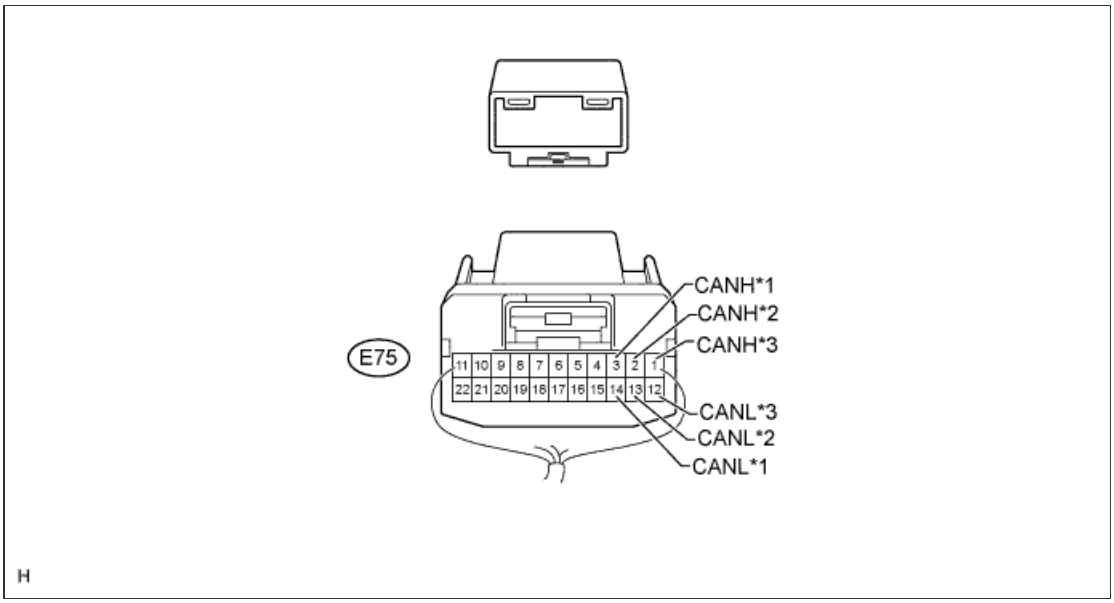


Text in Illustration

*1	to AFS ECU	*2	to Air Conditioning Amplifier
*3	to No. 1 Junction Connector	*4	to Network Gateway ECU: V bus
*5	to Display and Navigation Module Display	*6	to No. 3 Junction Connector

No. 2 Junction Connector	Wiring Color	Connect to
E69-1 (CANH)	W	No. 3 junction connector
E69-12 (CANL)	B	
E69-2 (CANH)	P	Display and navigation module display
E69-13 (CANL)	B	
E69-3 (CANH)	BR	Network gateway ECU (V bus)
E69-14 (CANL)	B	
E69-4 (CANH)	Y	No. 1 junction connector
E69-15 (CANL)	B	
E69-5 (CANH)	G	Air conditioning amplifier
E69-16 (CANL)	B	
E69-7 (CANH)	LG	AFS ECU (headlight swivel ECU)
E69-18 (CANL)	B	

c. NO. 3 JUNCTION CONNECTOR

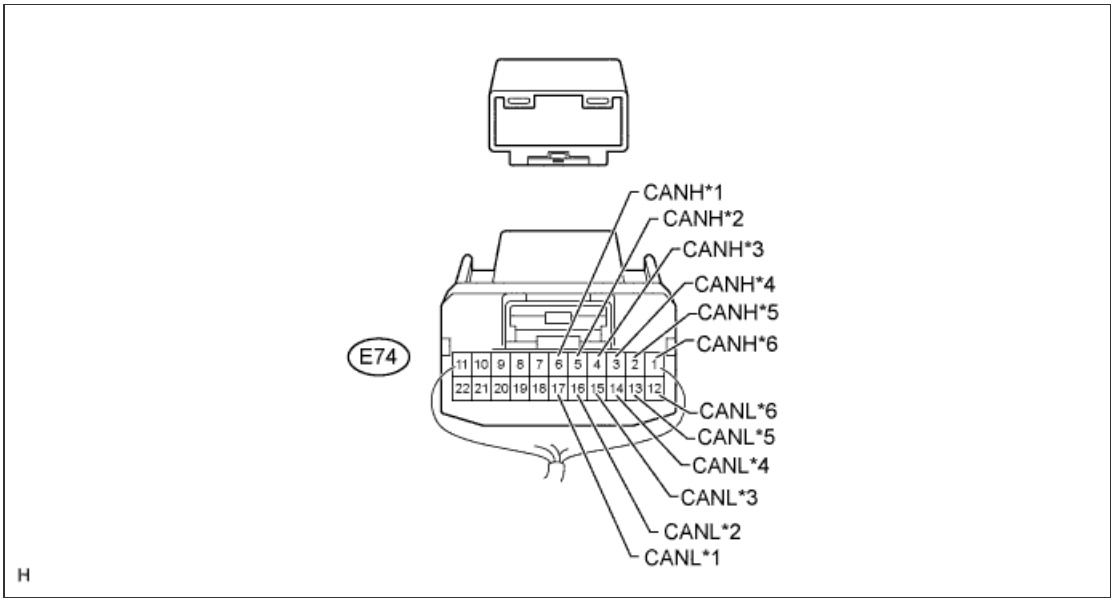


Text in Illustration

*1	to Combination Meter: V bus	*2	to DLC3
*3	to No. 2 Junction Connector	-	-

No. 3 Junction Connector	Wiring Color	Connect to
E75-1 (CANH)	W	No. 2 junction connector
E75-12 (CANL)	B	
E75-2 (CANH)	G	DLC3
E75-13 (CANL)	B	
E75-3 (CANH)	V	Combination meter (V bus)
E75-14 (CANL)	B	

d. NO. 4 JUNCTION CONNECTOR



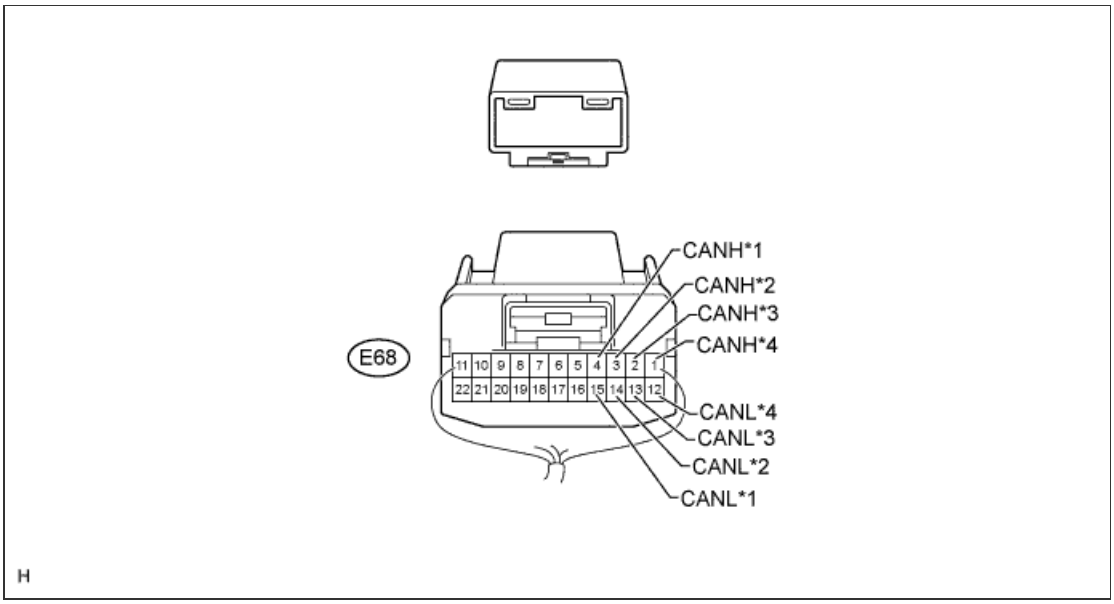
Text in Illustration

*1	to 4WD Control ECU	*2	to Skid Control ECU
*3	to Steering Angle Sensor	*4	to Steering Control ECU
*5	to Network Gateway ECU: Movement Control Bus	*6	to No. 5 Junction Connector

No. 4 Junction Connector	Wiring Color	Connect to

E74-1 (CANH) E74-12 (CANL)	W L	No. 5 junction connector
E74-2 (CANH)	SB	Network gateway ECU (movement control bus)
E74-13 (CANL)	L	
E74-3 (CANH)	LG	Steering control ECU
E74-14 (CANL)	L	
E74-4 (CANH)	GR	Steering angle sensor
E74-15 (CANL)	L	
E74-5 (CANH)	V	Skid control ECU
E74-16 (CANL)	L	
E74-6 (CANH)	P	4WD control ECU
E74-17 (CANL)	L	

e. NO. 5 JUNCTION CONNECTOR



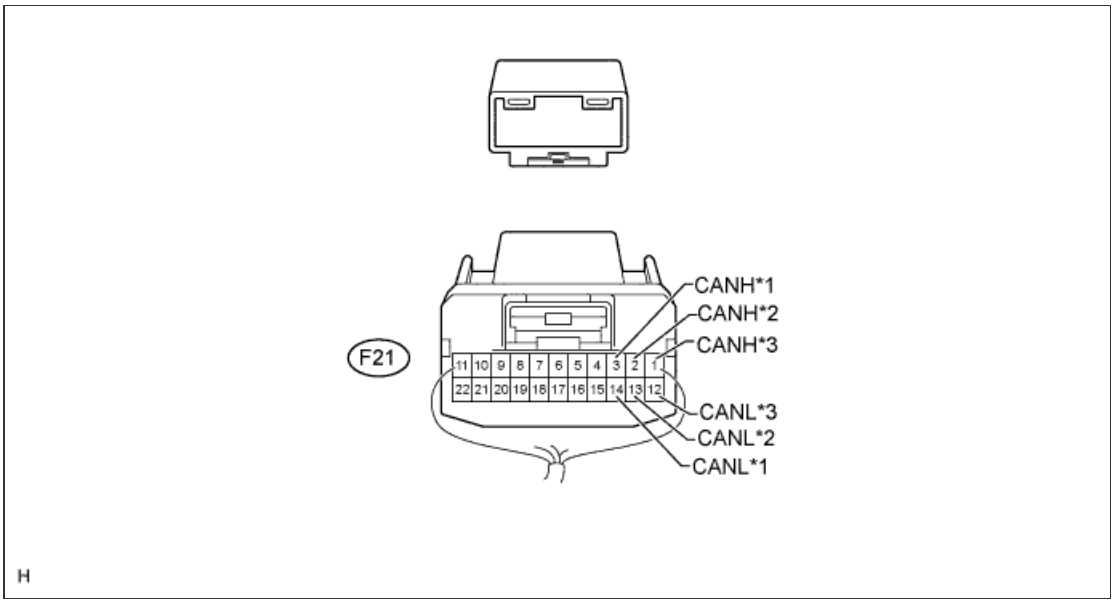
Text in Illustration

*1	to Distance Control ECU (w/ Dynamic Radar Cruise Control System)	*2	to Yaw Rate Sensor
*3	to No. 6 Junction Connector	*4	to No. 4 Junction Connector

No. 5 Junction Connector	Wiring Color	Connect to
E68-1 (CANH)	W	No. 4 junction connector
E68-12 (CANL)	L	
E68-2 (CANH)	Y	No. 6 junction connector
E68-13 (CANL)	L	
E68-3 (CANH)	BR	Yaw rate sensor
E68-14 (CANL)	L	
E68-4 (CANH)*	SB	Distance control ECU
E68-15 (CANL)*	L	

*: w/ Dynamic Radar Cruise Control System

f. NO. 6 JUNCTION CONNECTOR



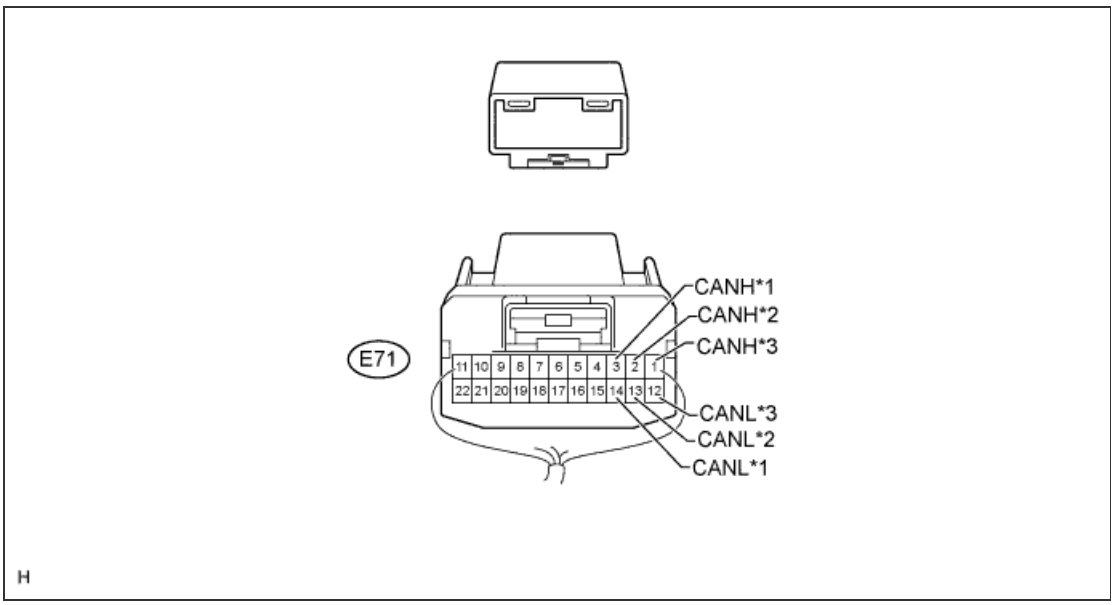
Text in Illustration

*1	to No. 5 Junction Connector	*2	to No. 7 Junction Connector
*3	• to Clearance Warning ECU (w/ LEXUS Parking Assist-sensor System) • to Parking Assist ECU (w/ Parking Assist Monitor System)	-	-

No. 6 Junction Connector	Wiring Color	Connect to
F21-1 (CANH)*1	V	Clearance warning ECU
F21-12 (CANL)*1	L	
F21-1 (CANH)*2	V	Parking assist ECU
F21-12 (CANL)*2	L	
F21-2 (CANH)	W	No. 7 junction connector
F21-13 (CANL)	L	
F21-3 (CANH)	Y	No. 5 junction connector
F21-14 (CANL)	L	

*1: w/ LEXUS Parking Assist-sensor System
*2: w/ Parking Assist Monitor System

g. NO. 7 JUNCTION CONNECTOR



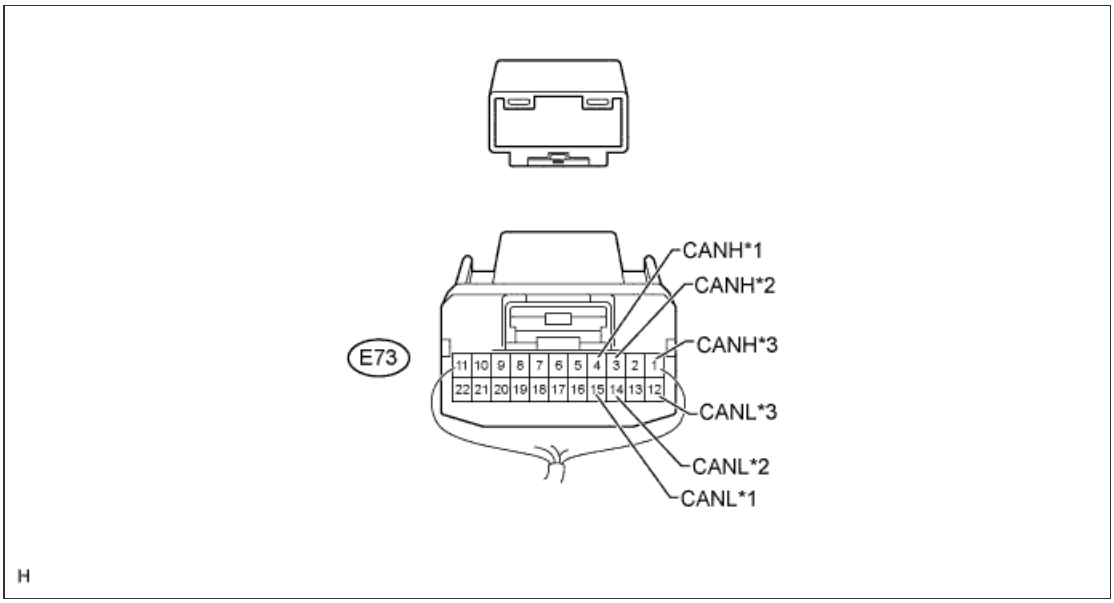
Text in Illustration

*1	to No. 1 CAN Junction Connector	*2	to Seat Belt Control ECU (w/ Pre-crash Safety System)
*3	to No. 6 Junction Connector	-	-

No. 7 Junction Connector	Wiring Color	Connect to
E71-1 (CANH)	W	No. 6 junction connector
E71-12 (CANL)	L	
E71-2 (CANH)	G	Seat belt control ECU*
E71-13 (CANL)	L	
E71-3 (CANH)	W	No. 1 CAN junction connector
E71-14 (CANL)	L	

*: w/ Pre-Crash Safety System

h. NO. 8 JUNCTION CONNECTOR

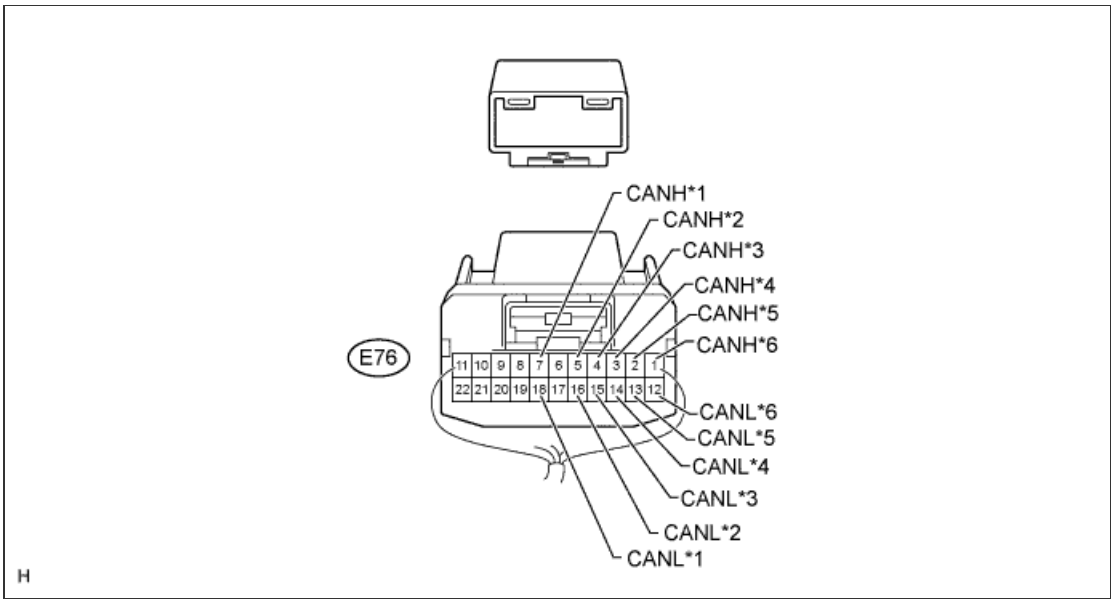


Text in Illustration

*1	to Windshield Wiper ECU	*2	to Main Body ECU: MS Bus
*3	to No. 2 CAN Junction Connector	-	-

No. 8 Junction Connector	Wiring Color	Connect to
E73-1 (CANH)	W	No. 2 CAN junction connector
E73-12 (CANL)	R	
E73-3 (CANH)	GR	Main body ECU (MS bus)
E73-14 (CANL)	R	
E73-4 (CANH)	LG	Windshield wiper ECU
E73-15 (CANL)	R	

i. NO. 9 JUNCTION CONNECTOR

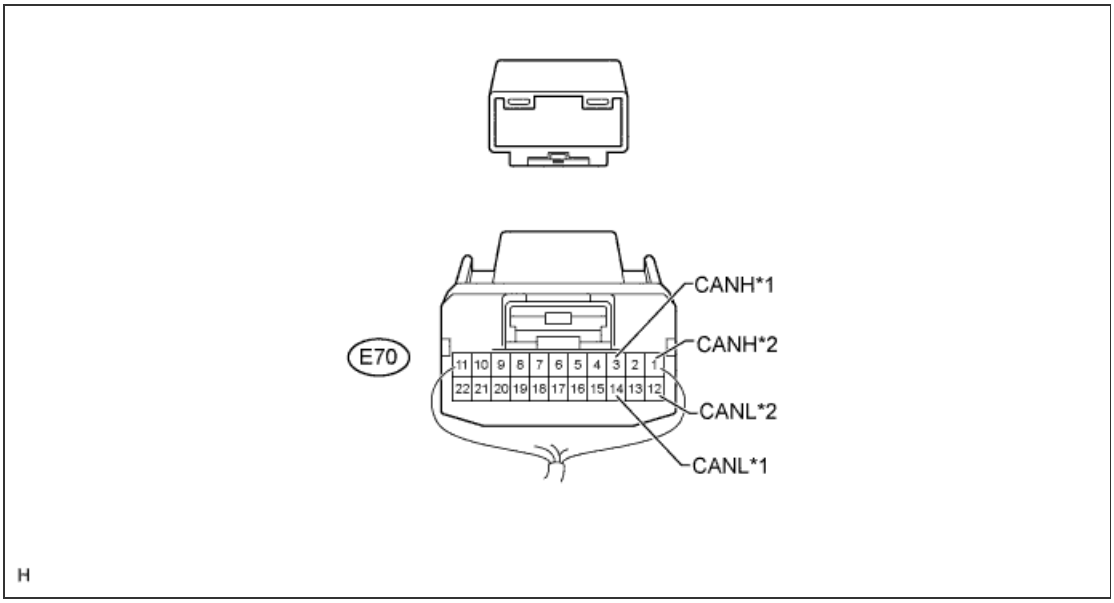


Text in Illustration

*1	to No. 2 CAN Junction Connector	*2	to Outer Mirror Control ECU
*3	to Position Control ECU and Switch	*4	to Multiplex Tilt and Telescopic ECU
*5	to Certification ECU	*6	to No. 10 Junction Connector

No. 9 Junction Connector	Wiring Color	Connect to
E76-1 (CANH)	W	No. 10 junction connector
E76-12 (CANL)	R	
E76-2 (CANH)	LG	Certification ECU (smart key ECU)
E76-13 (CANL)	R	
E76-3 (CANH)	P	Multiplex tilt and telescopic ECU
E76-14 (CANL)	R	
E76-4 (CANH)	V	Position control ECU and switch
E76-15 (CANL)	R	
E76-5 (CANH)	BR	Outer mirror control ECU
E76-16 (CANL)	R	
E76-7 (CANH)	Y	No. 2 CAN junction connector
E76-18 (CANL)	R	

j. NO. 10 JUNCTION CONNECTOR

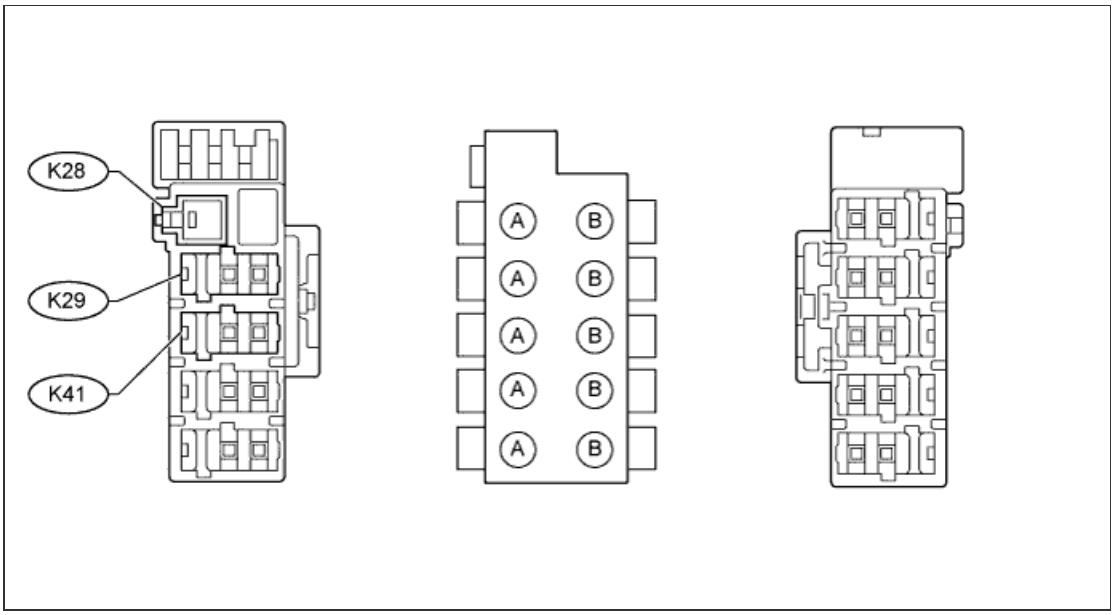


Text in Illustration

*1	to Combination Meter: MS Bus	*2	to No. 9 CAN Junction Connector

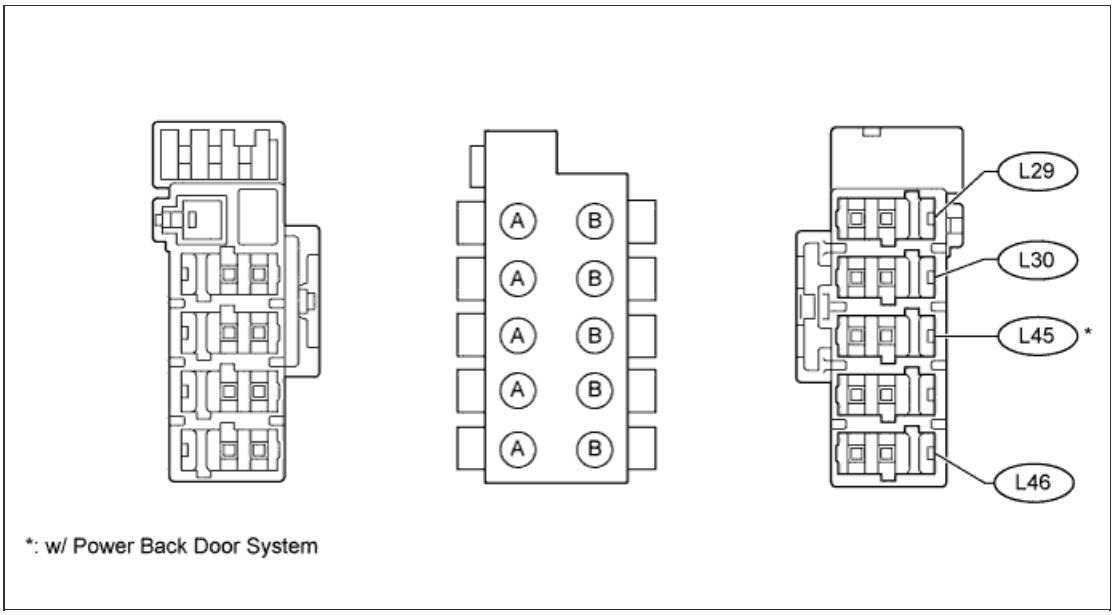
No. 10 Junction Connector	Wiring Color	Connect to
E70-1 (CANH)	W	No. 9 Junction Connector
E70-12 (CANL)	R	
E70-3 (CANH)	LG	Combination Meter (MS bus)
E70-14 (CANL)	R	

k. NO. 1 CAN JUNCTION CONNECTOR



Junction Connector A Side	Wiring Color (CANH Side)	Wiring Color (CANL Side)
Body ground (K28)	-	W-B
No. 7 junction connector (K29)	W	L
Suspension control ECU (K41)	V	L

l. NO. 2 CAN JUNCTION CONNECTOR

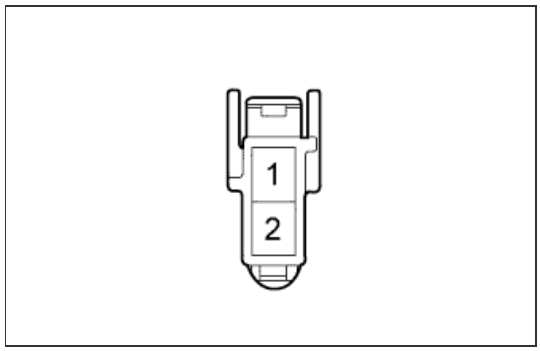


Junction Connector B side	Wiring Color (CANH Side)	Wiring Color (CANL Side)
No. 8 junction connector (L29)	W	R
No. 9 junction connector (L30)	Y	R
Power back door ECU (L45)*	V	R
No. 2 main body ECU (L46)	LG	R

*: w/ Power Back Door System

TERMINALS OF CONNECTORS FOR JUNCTION CONNECTOR (CAN JUNCTION CONNECTOR)

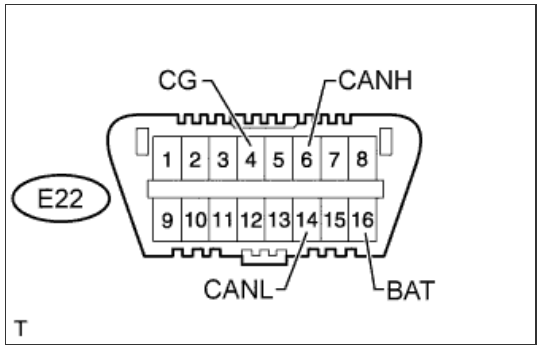
Terminal No.	Symbol
1	CANH
2	CANL



CHECK DLC3

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

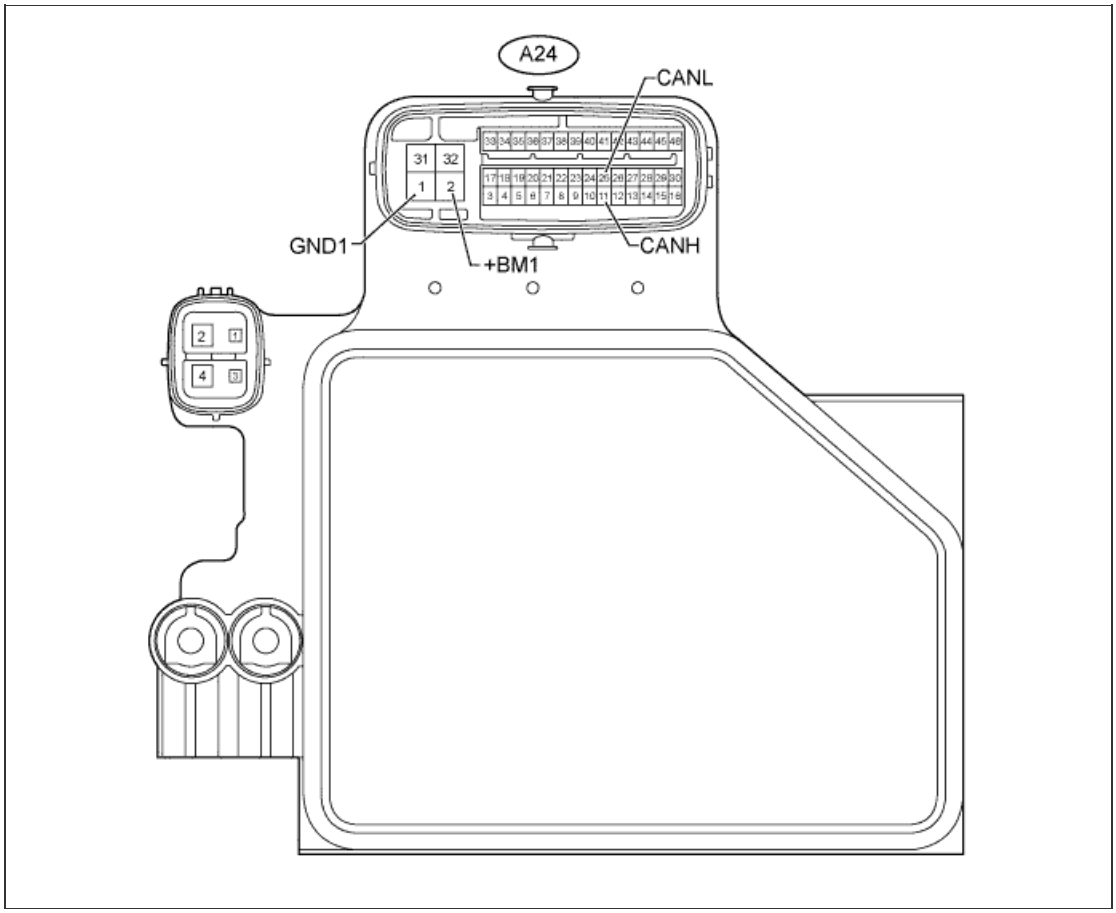
b. Measure the resistance according to the value(s) in the table below.



Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	G - B	Engine switch off	54 to 69 Ω
E22-6 (CANH) - E22-4 (CG)	G - W-B	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	B - W-B	Engine switch off	200 Ω or higher
E22-6 (CANH) - E22-16 (BAT)	G - BE	Engine switch off	6 kΩ or higher

E22-14 (CANL) - E22-16 (BAT)	B - BE	Engine switch off	6 kΩ or higher

CHECK MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

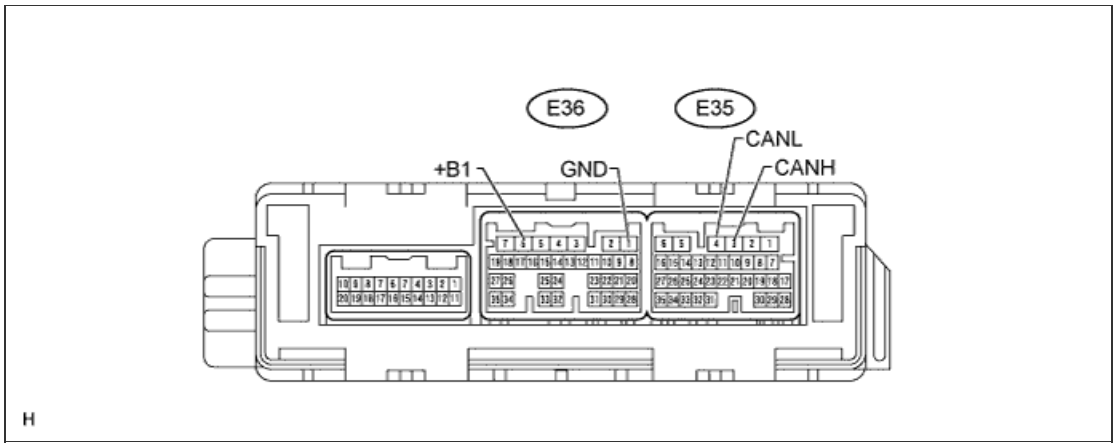


a. Disconnect the A24 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	V - L	Engine switch off	54 to 69 Ω
A24-11 (CANH) - A24-1 (GND1)	V - W-B	Engine switch off	200 Ω or higher
A24-25 (CANL) - A24-1 (GND1)	L - W-B	Engine switch off	200 Ω or higher
A24-11 (CANH) - A24-2 (+BM1)	V - B	Engine switch off	6 kΩ or higher
A24-25 (CANL) - A24-2 (+BM1)	L - B	Engine switch off	6 kΩ or higher

CHECK AIR CONDITIONING AMPLIFIER

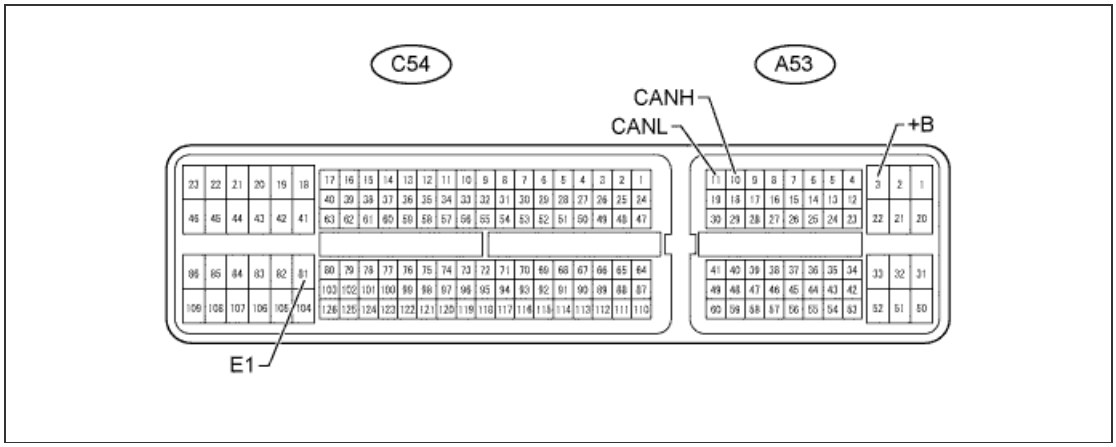


a. Disconnect the E35 and E36 amplifier connectors.

b. Measure the voltage and resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	G - B	Engine switch off	54 to 69 Ω
E35-3 (CANH) - E36-1 (GND)	G - W-B	Engine switch off	200 Ω or higher
E35-4 (CANL) - E36-1 (GND)	B - W-B	Engine switch off	200 Ω or higher
E35-3 (CANH) - E36-6 (+B1)	G - R	Engine switch off	6 kΩ or higher
E35-4 (CANL) - E36-6 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK ECM

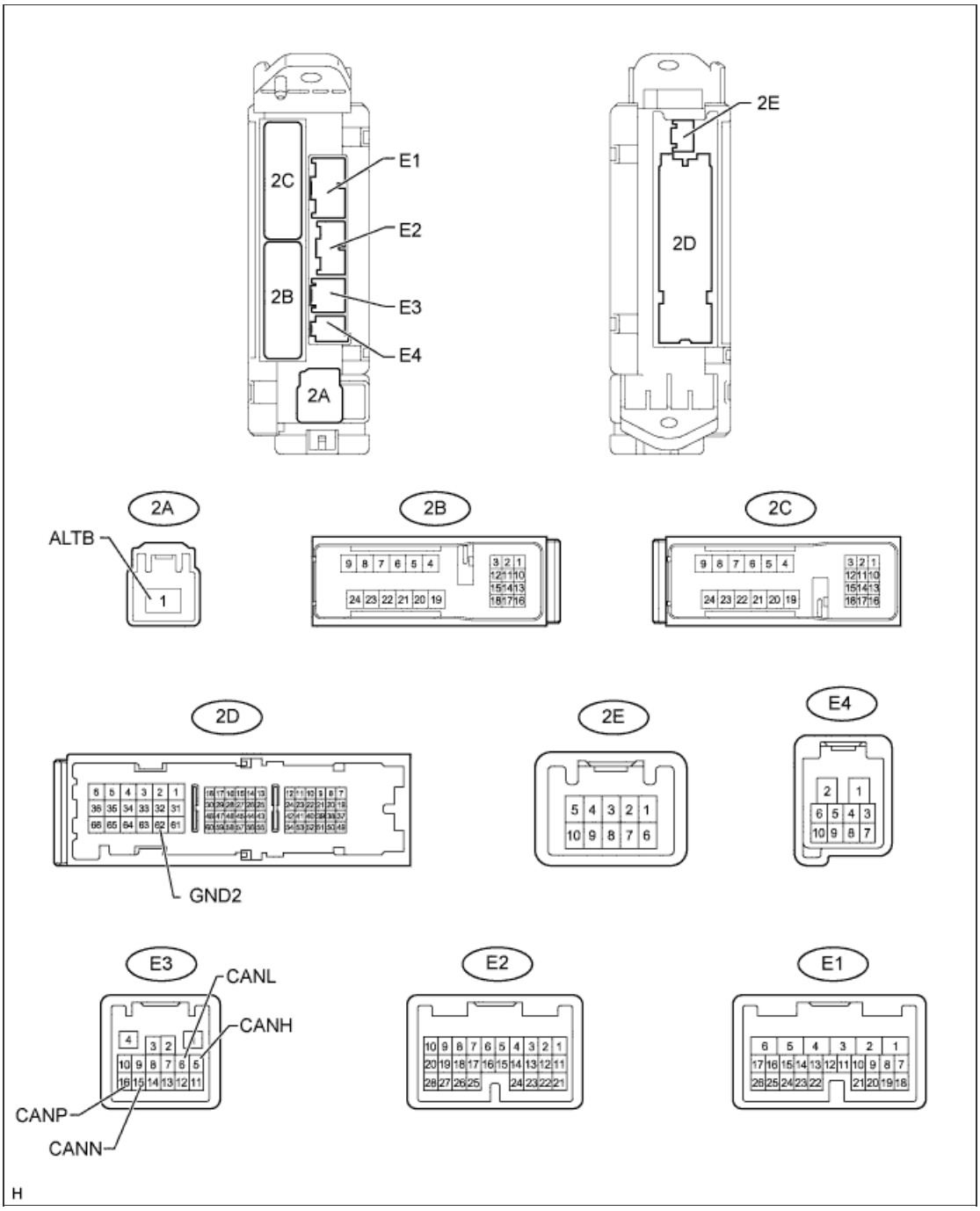


a. Disconnect the A53 and C54 ECM connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A53-10 (CANH) - A53-11 (CANL)	P - B	Engine switch off	108 to 132 Ω
A53-10 (CANH) - C54-81 (E1)	P - W-B	Engine switch off	200 Ω or higher
A53-11 (CANL) - C54-81 (E1)	B - W-B	Engine switch off	200 Ω or higher
A53-10 (CANH) - A53-3 (+B)	P - B	Engine switch off	6 kΩ or higher
A53-11 (CANL) - A53-3 (+B)	B - B	Engine switch off	6 kΩ or higher

CHECK MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)



a. Disconnect the E3 ECU connector.

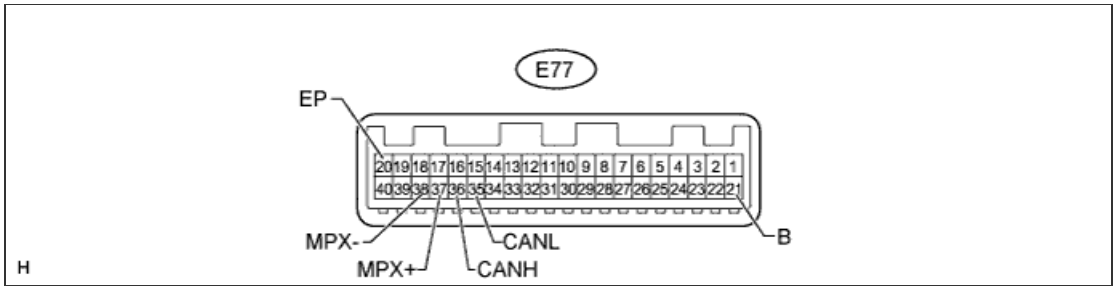
b. Disconnect the 2A and 2D junction connectors.

c. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)*1	SB - B	Engine switch off	54 to 69 Ω
E3-5 (CANH) - 2D-62 (GND2)*1	SB - W-B	Engine switch off	200 Ω or higher
E3-6 (CANL) - 2D-62 (GND2)*1	B - W-B	Engine switch off	200 Ω or higher
E3-5 (CANH) - 2A-1 (ALTB)*1	SB - B	Engine switch off	6 kΩ or higher
E3-6 (CANL) - 2A-1 (ALTB)*1	B - B	Engine switch off	6 kΩ or higher
E3-16 (CANP) - E3-15 (CANN)*2	GR - R	Engine switch off	108 to 132 Ω
E3-16 (CANP) - 2D-62 (GND2)*2	GR - W-B	Engine switch off	200 Ω or higher
E3-15 (CANN) - 2D-62 (GND2)*2	R - W-B	Engine switch off	200 Ω or higher
E3-16 (CANP) - 2A-1 (ALTB)*2	GR - B	Engine switch off	6 kΩ or higher
E3-15 (CANN) - 2A-1 (ALTB)*2	R - B	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK COMBINATION METER



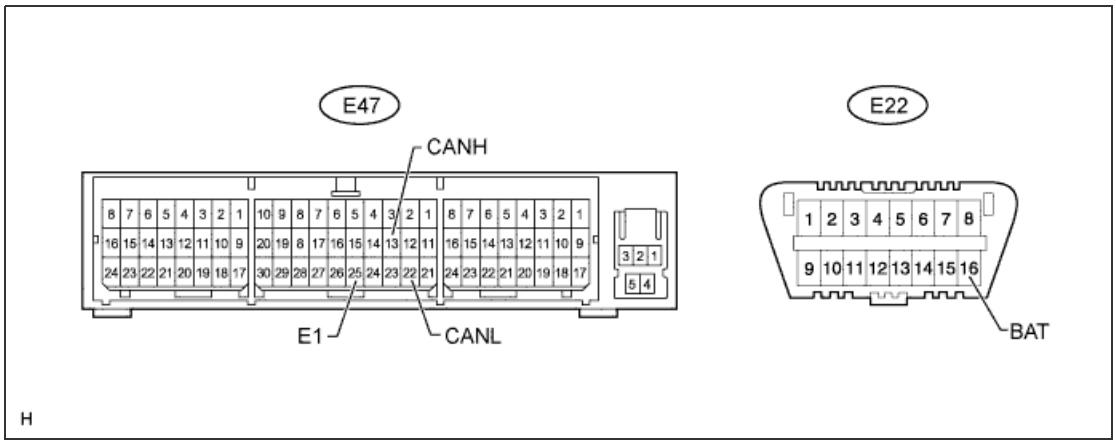
a. Disconnect the E77 meter connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)*1	V - B	Engine switch off	108 to 132 Ω
E77-36 (CANH) - E77-20 (EP)*1	V - W-B	Engine switch off	200 Ω or higher
E77-35 (CANL) - E77-20 (EP)*1	B - W-B	Engine switch off	200 Ω or higher
E77-36 (CANH) - E77-21 (B)*1	V - R	Engine switch off	6 kΩ or higher
E77-35 (CANL) - E77-21 (B)*1	B - R	Engine switch off	6 kΩ or higher
E77-37 (MPX+) - E77-38 (MPX-)*2	LG - R	Engine switch off	108 to 132 Ω
E77-37 (MPX+) - E77-20 (EP)*2	LG - W-B	Engine switch off	200 Ω or higher
E77-38 (MPX-) - E77-20 (EP)*2	R - W-B	Engine switch off	200 Ω or higher
E77-37 (MPX+) - E77-21 (B)*2	LG - R	Engine switch off	6 kΩ or higher
E77-38 (MPX-) - E77-21 (B)*2	R - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For MS bus

CHECK CENTER AIRBAG SENSOR



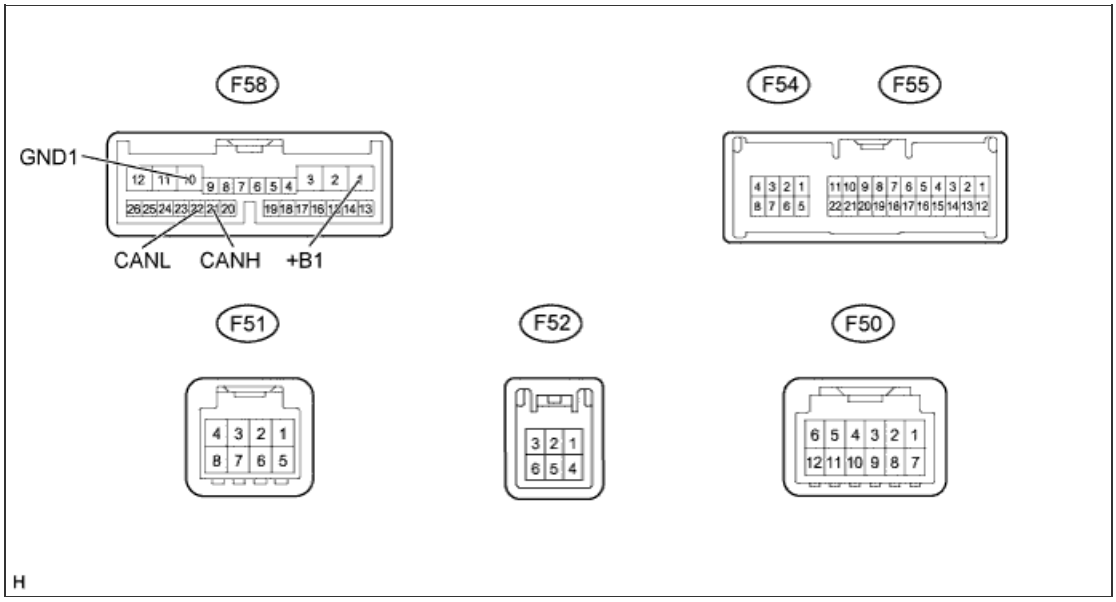
a. Disconnect the E47 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	GR - B	Engine switch off	54 to 69 Ω
E47-13 (CANH) - E47-25 (E1)	GR - W-B	Engine switch off	200 Ω or higher

E47-22 (CANL) - E47-25 (E1)	B - W-B	Engine switch off	200 Ω or higher
E47-13 (CANH) - E22-16 (BAT)	GR - BE	Engine switch off	6 kΩ or higher
E47-22 (CANL) - E22-16 (BAT)	B - BE	Engine switch off	6 kΩ or higher

CHECK DISPLAY AND NAVIGATION DISPLAY

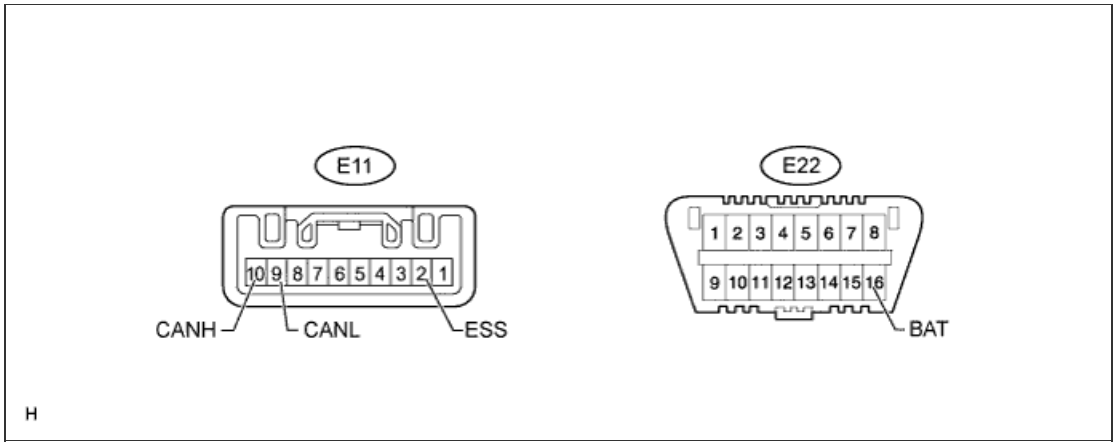


a. Disconnect the F58 display connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F58-21 (CANH) - F58-22 (CANL)	P - B	Engine switch off	54 to 69 Ω
F58-21 (CANH) - F58-10 (GND1)	P - W-B	Engine switch off	200 Ω or higher
F58-22 (CANL) - F58-10 (GND1)	B - W-B	Engine switch off	200 Ω or higher
F58-21 (CANH) - F58-1 (+B1)	P - R	Engine switch off	6 kΩ or higher
F58-22 (CANL) - F58-1 (+B1)	B - R	Engine switch off	6 kΩ or higher

CHECK STEERING ANGLE SENSOR



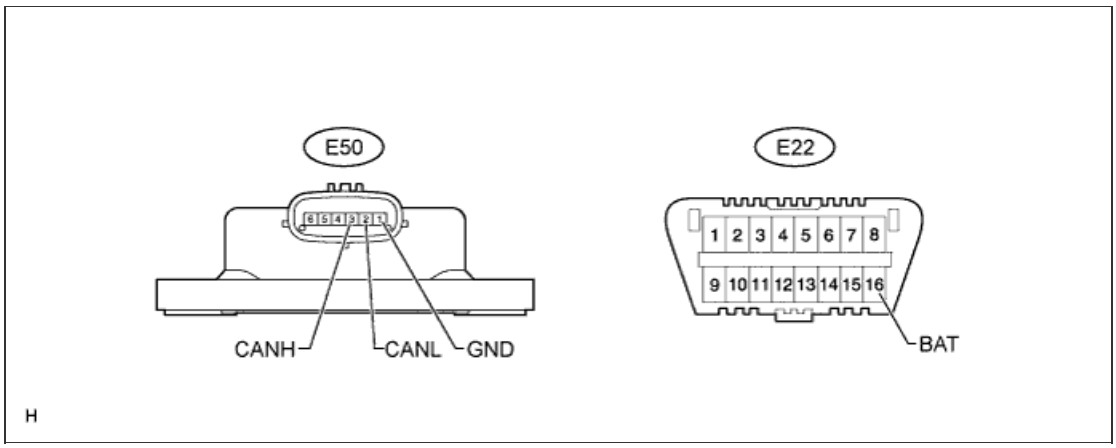
a. Disconnect the E11 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E11-10 (CANH) - E11-9 (CANL)	GR - L	Engine switch off	54 to 69 Ω

E11-10 (CANH) - E11-2 (ESS)	GR - W-B	Engine switch off	200 Ω or higher
E11-9 (CANL) - E11-2 (ESS)	L - W-B	Engine switch off	200 Ω or higher
E11-10 (CANH) - E22-16 (BAT)	GR - BE	Engine switch off	6 kΩ or higher
E11-9 (CANL) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK YAW RATE SENSOR



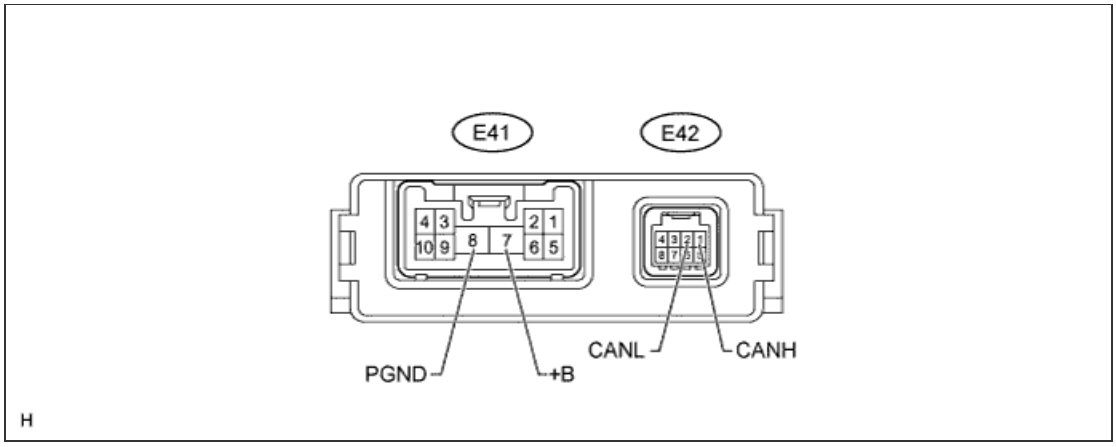
a. Disconnect the E50 sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	BR - L	Engine switch off	54 to 69 Ω
E50-3 (CANH) - E50-1 (GND)	BR - W-B	Engine switch off	200 Ω or higher
E50-2 (CANL) - E50-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
E50-3 (CANH) - E22-16 (BAT)	BR - BE	Engine switch off	6 kΩ or higher
E50-2 (CANL) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK SEAT BELT CONTROL ECU

For vehicles with the pre-crash safety system only.

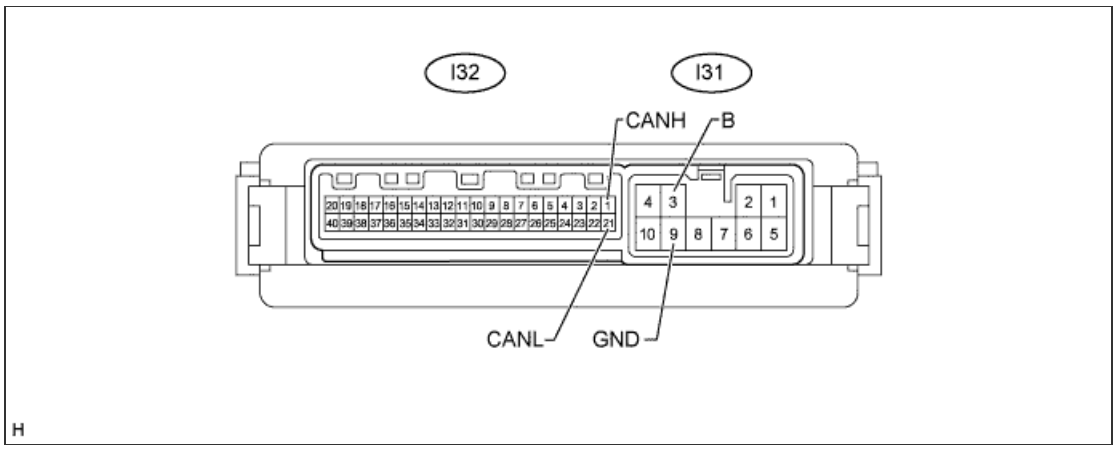


a. Disconnect the E41 and E42 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E42-1 (CANH) - E42-2 (CANL)	G - L	Engine switch off	54 to 69 Ω
E42-1 (CANH) - E41-8 (PGND)	G - W-B	Engine switch off	200 Ω or higher
E42-2 (CANL) - E41-8 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E42-1 (CANH) - E41-7 (+B)	G - R	Engine switch off	6 kΩ or higher
E42-2 (CANL) - E41-7 (+B)	L - R	Engine switch off	6 kΩ or higher

CHECK OUTER MIRROR CONTROL ECU

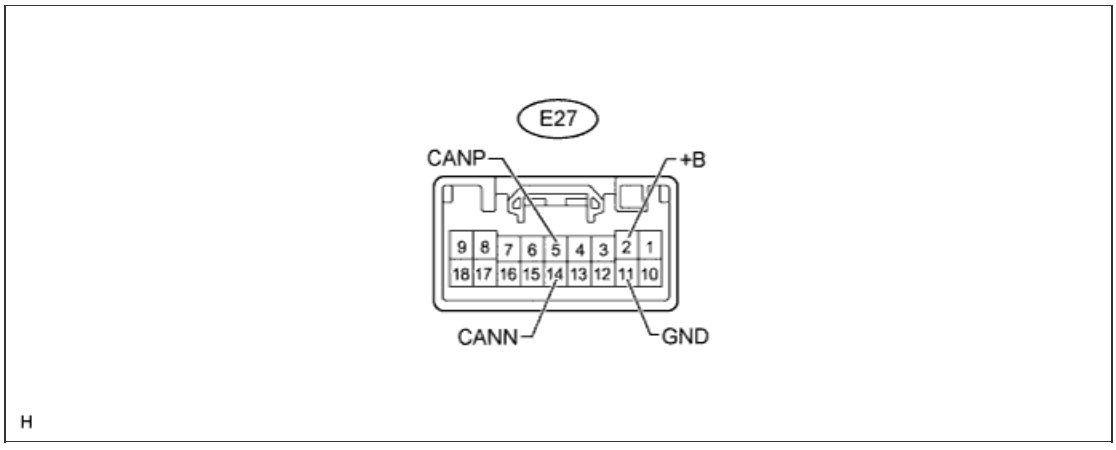


a. Disconnect the I31 and I32 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
I32-1 (CANH) - I32-21 (CANL)	BR - R	Engine switch off	54 to 69 Ω
I32-1 (CANH) - I31-9 (GND)	BR - W-B	Engine switch off	200 Ω or higher
I32-21 (CANL) - I31-9 (GND)	R - W-B	Engine switch off	200 Ω or higher
I32-1 (CANH) - I31-3 (B)	BR - R	Engine switch off	6 kΩ or higher
I32-21 (CANL) - I31-3 (B)	R - R	Engine switch off	6 kΩ or higher

CHECK MULTIPLEX TILT AND TELESCOPIC ECU

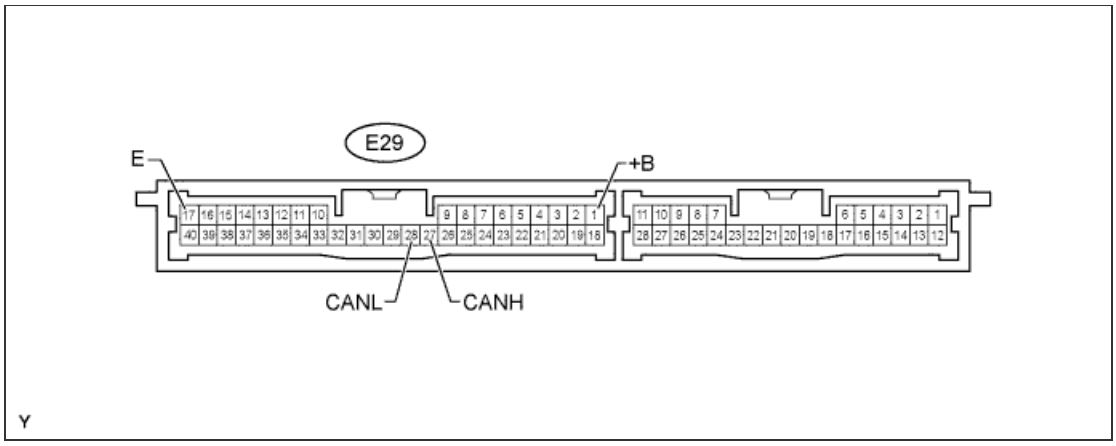


a. Disconnect the E27 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E27-5 (CANP) - E27-14 (CANN)	P - R	Engine switch off	54 to 69 Ω
E27-5 (CANP) - E27-11 (GND)	P - W-B	Engine switch off	200 Ω or higher
E27-14 (CANN) - E27-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
E27-5 (CANP) - E27-2 (+B)	P - L	Engine switch off	6 kΩ or higher
E27-14 (CANN) - E27-2 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK CERTIFICATION ECU (SMART KEY ECU)

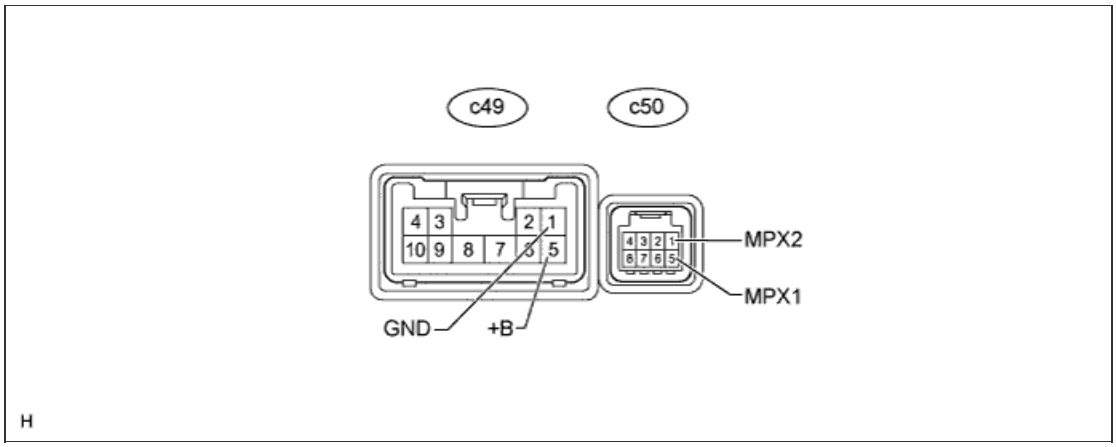


a. Disconnect the E29 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E29-27 (CANH) - E29-28 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E29-27 (CANH) - E29-17 (E)	LG - W-B	Engine switch off	200 Ω or higher
E29-28 (CANL) - E29-17 (E)	R - W-B	Engine switch off	200 Ω or higher
E29-27 (CANH) - E29-1 (+B)	LG - B	Engine switch off	6 kΩ or higher
E29-28 (CANL) - E29-1 (+B)	R - B	Engine switch off	6 kΩ or higher

CHECK POSITION CONTROL ECU AND SWITCH

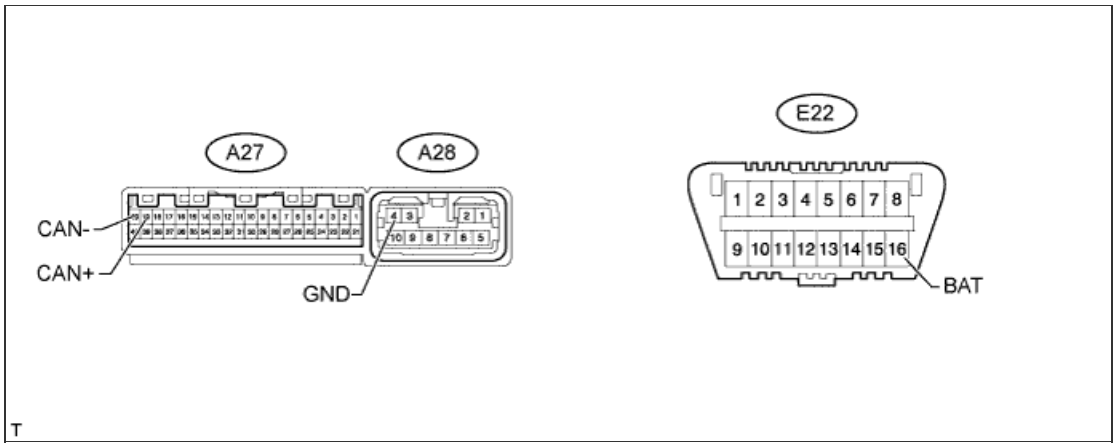


a. Disconnect the c49 and c50 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
c50-5 (MPX1) - c50-1 (MPX2)	V - R	Engine switch off	54 to 69 Ω
c50-5 (MPX1) - c49-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
c50-1 (MPX2) - c49-1 (GND)	R - W-B	Engine switch off	200 Ω or higher
c50-5 (MPX1) - c49-5 (+B)	V - L	Engine switch off	6 kΩ or higher
c50-1 (MPX2) - c49-5 (+B)	R - L	Engine switch off	6 kΩ or higher

CHECK 4WD CONTROL ECU

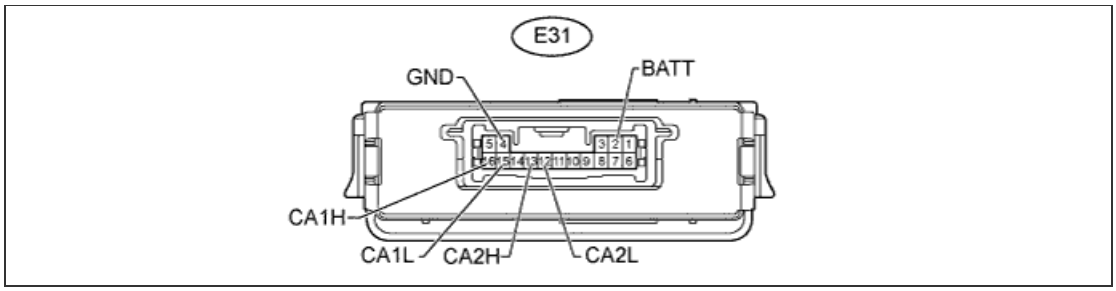


a. Disconnect the A27 and A28 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
A27-19 (CAN+) - A27-20 (CAN-)	P - L	Engine switch off	54 to 69 Ω
A27-19 (CAN+) - A28-4 (GND)	P - W	Engine switch off	200 Ω or higher
A27-20 (CAN-) - A28-4 (GND)	L - W	Engine switch off	200 Ω or higher
A27-19 (CAN+) - E22-16 (BAT)	P - BE	Engine switch off	6 kΩ or higher
A27-20 (CAN-) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK NETWORK GATEWAY ECU



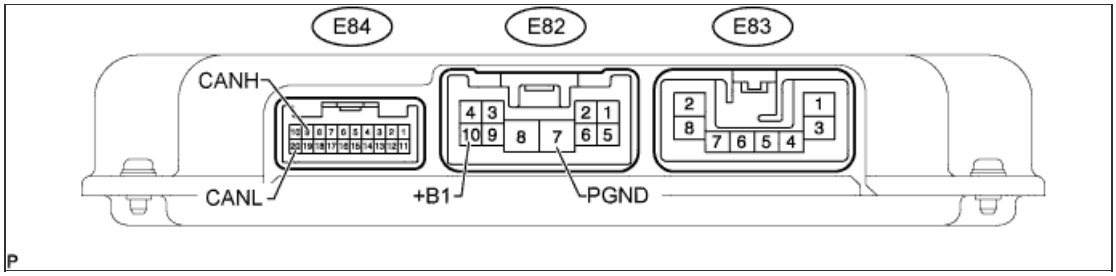
a. Disconnect the E31 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)*1	BR - B	Engine switch off	54 to 69 Ω
E31-16 (CA1H) - E31-4 (GND)*1	BR - W-B	Engine switch off	200 Ω or higher
E31-15 (CA1L) - E31-4 (GND)*1	B - W-B	Engine switch off	200 Ω or higher
E31-16 (CA1H) - E31-2 (BATT)*1	BR - R	Engine switch off	6 kΩ or higher
E31-15 (CA1L) - E31-2 (BATT)*1	B - R	Engine switch off	6 kΩ or higher
E31-13 (CA2H) - E31-12 (CA2L)*2	SB - L	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E31-4 (GND)*2	SB - W-B	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E31-4 (GND)*2	L - W-B	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E31-2 (BATT)*2	SB - R	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E31-2 (BATT)*2	L - R	Engine switch off	6 kΩ or higher

*1: For V bus
*2: For movement control bus

CHECK STEERING CONTROL ECU

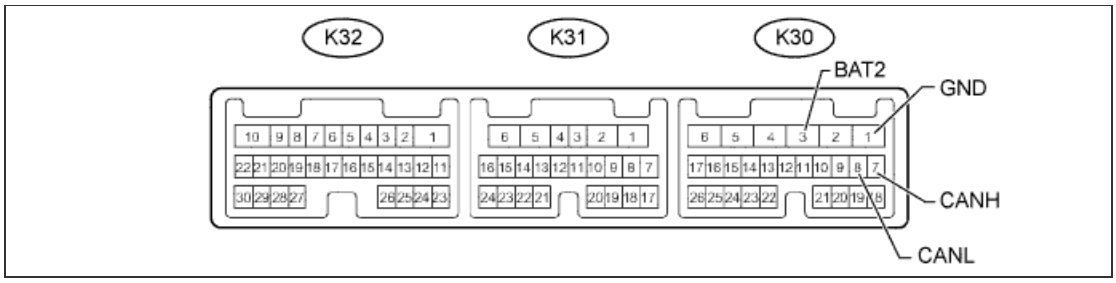


a. Disconnect the E82 and E84 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E84-9 (CANH) - E84-20 (CANL)	LG - L	Engine switch off	54 to 69 Ω
E84-9 (CANH) - E82-7 (PGND)	LG - W-B	Engine switch off	200 Ω or higher
E84-20 (CANL) - E82-7 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-10 (+B1)	LG - R	Engine switch off	6 kΩ or higher
E84-20 (CANL) - E82-10 (+B1)	L - R	Engine switch off	6 kΩ or higher

CHECK SUSPENSION CONTROL ECU

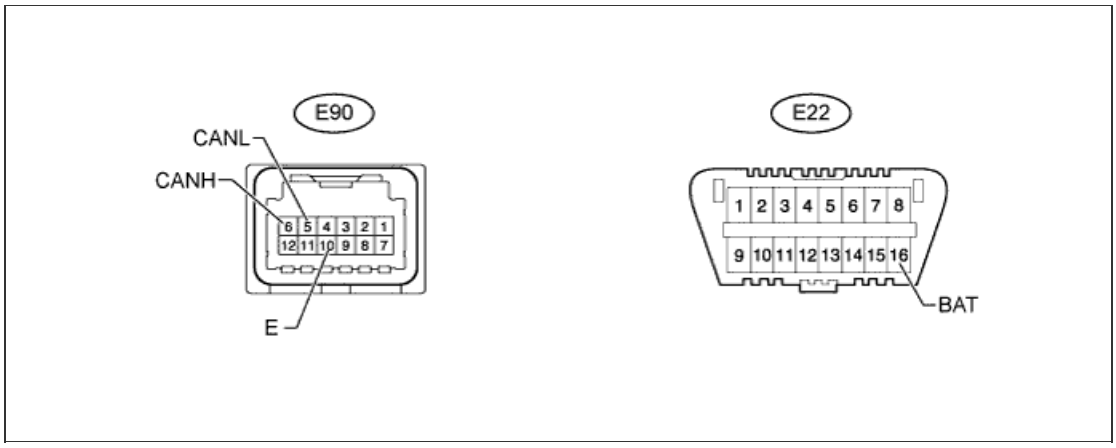


a. Disconnect the K30 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
K30-7 (CANH) - K30-8 (CANL)	V - L	Engine switch off	54 to 69 Ω
K30-7 (CANH) - K30-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
K30-8 (CANL) - K30-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
K30-7 (CANH) - K30-3 (BAT2)	V - R	Engine switch off	6 kΩ or higher
K30-8 (CANL) - K30-3 (BAT2)	L - R	Engine switch off	6 kΩ or higher

CHECK WINDSHIELD WIPER ECU



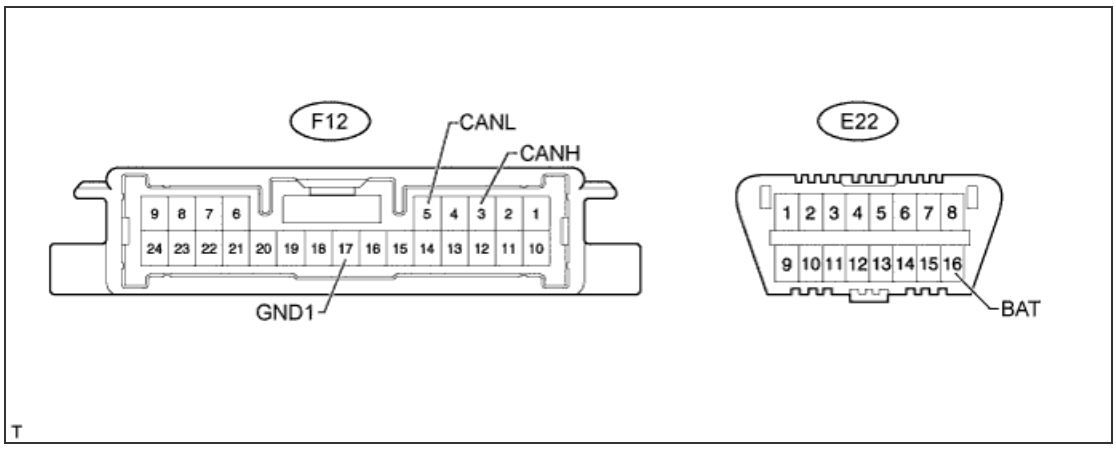
a. Disconnect the E90 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E90-6 (CANH) - E90-5 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E90-6 (CANH) - E90-10 (E)	LG - W-B	Engine switch off	200 Ω or higher
E90-5 (CANL) - E90-10 (E)	R - W-B	Engine switch off	200 Ω or higher
E90-6 (CANH) - E22-16 (BAT)	LG - BE	Engine switch off	6 kΩ or higher
E90-5 (CANL) - E22-16 (BAT)	R - BE	Engine switch off	6 kΩ or higher

CHECK CLEARANCE WARNING ECU

For vehicles with the LEXUS parking assist-sensor system only.



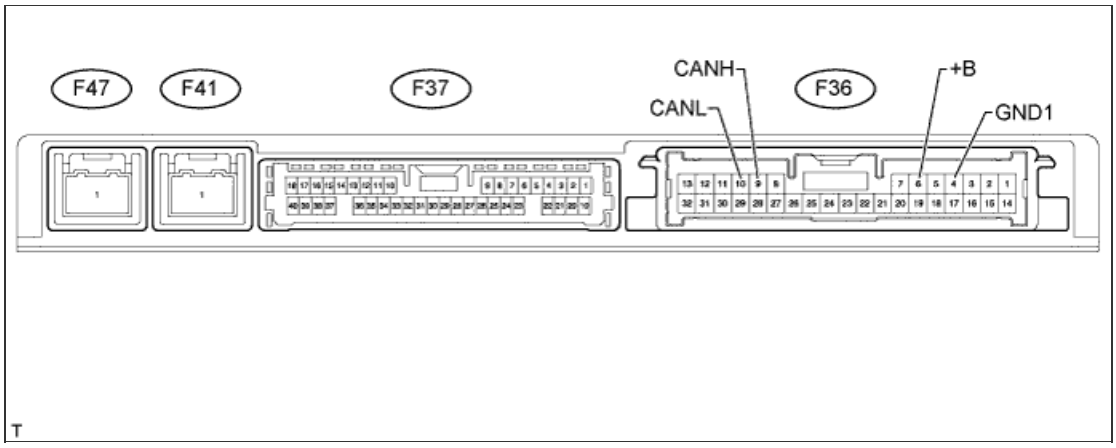
a. Disconnect F12 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F12-3 (CANH) - F12-5 (CANL)	V - L	Engine switch off	54 to 69 Ω
F12-3 (CANH) - F12-17 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F12-5 (CANL) - F12-17 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F12-3 (CANH) - E22-16 (BAT)	V - BE	Engine switch off	6 kΩ or higher
F12-5 (CANL) - E22-16 (BAT)	L - BE	Engine switch off	6 kΩ or higher

CHECK PARKING ASSIST ECU

For vehicles with the parking assist monitor system only.



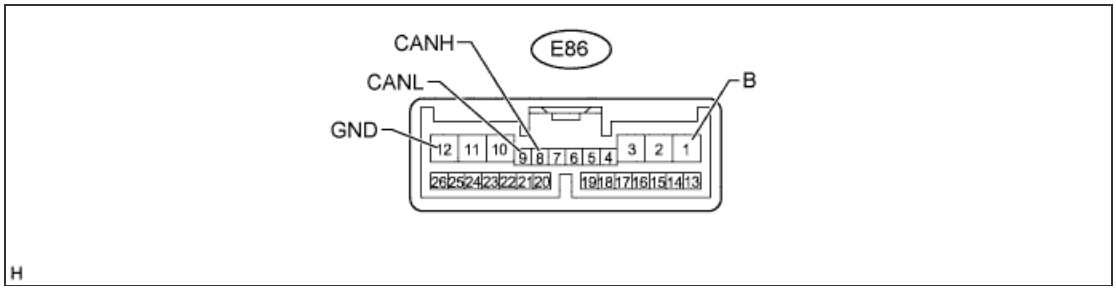
a. Disconnect the F36 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
F36-9 (CANH) - F36-10 (CANL)	V - L	Engine switch off	54 to 69 Ω
F36-9 (CANH) - F36-4 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F36-10 (CANL) - F36-4 (GND1)	L - W-B	Engine switch off	200 Ω or higher
F36-9 (CANH) - F36-6 (+B)	V - L	Engine switch off	6 kΩ or higher
F36-10 (CANL) - F36-6 (+B)	L - L	Engine switch off	6 kΩ or higher

CHECK DISTANCE CONTROL ECU

For vehicles with the dynamic radar cruise control system only.



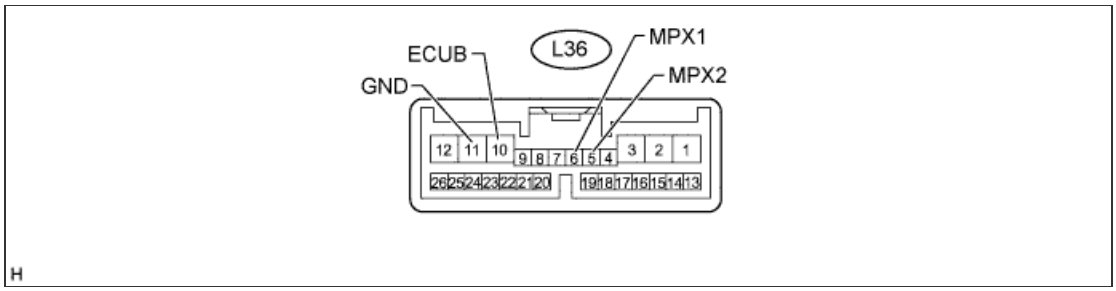
a. Disconnect the E86 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E86-8 (CANH) - E86-9 (CANL)	SB - L	Engine switch off	54 to 69 Ω
E86-8 (CANH) - E86-12 (GND)	SB - BR	Engine switch off	200 Ω or higher
E86-9 (CANL) - E86-12 (GND)	L - BR	Engine switch off	200 Ω or higher
E86-8 (CANH) - E86-1 (B)	SB - R	Engine switch off	6 kΩ or higher
E86-9 (CANL) - E86-1 (B)	L - R	Engine switch off	6 kΩ or higher

CHECK POWER BACK DOOR UNIT (POWER BACK DOOR ECU)

For vehicles with the power back door system only.

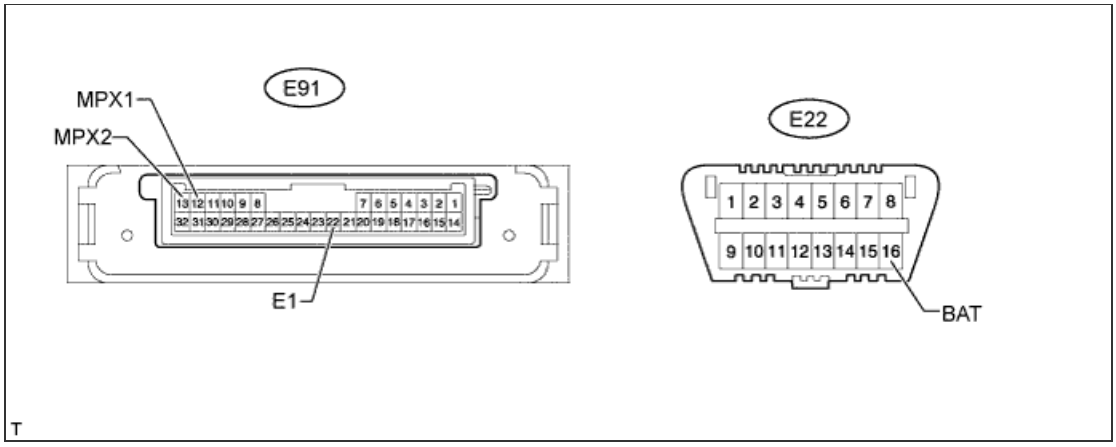


a. Disconnect the L36 unit connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L36-6 (MPX1) - L36-5 (MPX2)	V - R	Engine switch off	54 to 69 Ω
L36-6 (MPX1) - L36-11 (GND)	V - W-B	Engine switch off	200 Ω or higher
L36-5 (MPX2) - L36-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
L36-6 (MPX1) - L36-10 (ECUB)	V - R	Engine switch off	6 kΩ or higher
L36-5 (MPX2) - L36-10 (ECUB)	R - R	Engine switch off	6 kΩ or higher

CHECK AFS ECU (HEADLIGHT SWIVEL ECU)

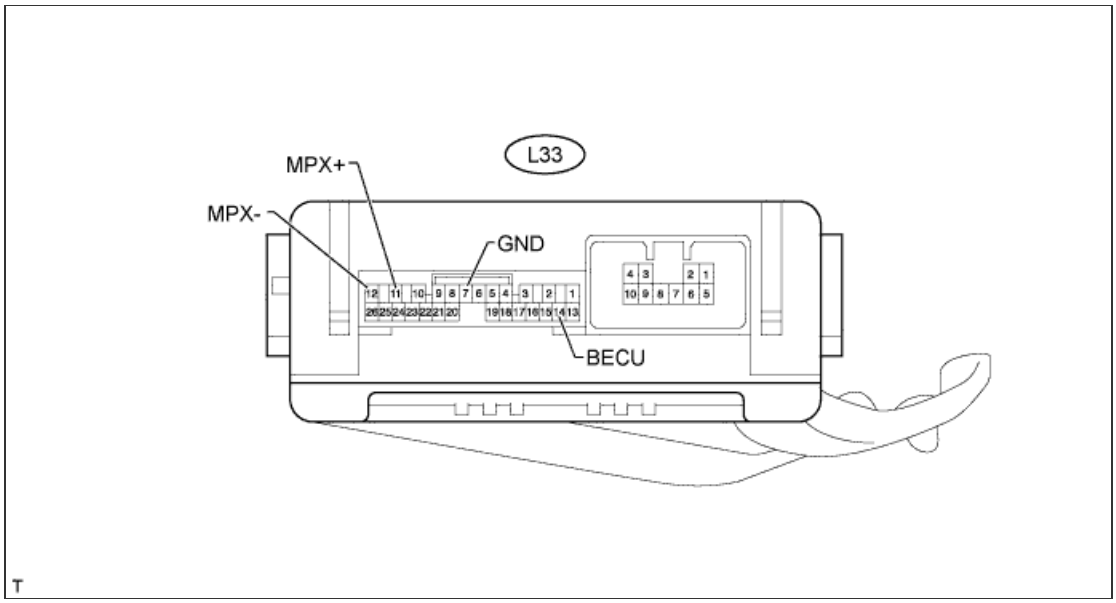


a. Disconnect the E91 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	LG - B	Engine switch off	54 to 69 Ω
E91-12 (MPX1) - E91-22 (E1)	LG - W-B	Engine switch off	200 Ω or higher
E91-13 (MPX2) - E91-22 (E1)	B - W-B	Engine switch off	200 Ω or higher
E91-12 (MPX1) - E22-16 (BAT)	LG - BE	Engine switch off	6 kΩ or higher
E91-13 (MPX2) - E22-16 (BAT)	B - BE	Engine switch off	6 kΩ or higher

CHECK NO. 2 MAIN BODY ECU



a. Disconnect the L33 ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Switch Condition	Specified Condition
L33-11 (MPX+) - L33-12 (MPX-)	LG - R	Engine switch off	54 to 69 Ω
L33-11 (MPX+) - L33-7 (GND)	LG - W-B	Engine switch off	200 Ω or higher
L33-12 (MPX-) - L33-7 (GND)	R - W-B	Engine switch off	200 Ω or higher
L33-11 (MPX+) - L33-14 (BECU)	LG - R	Engine switch off	6 kΩ or higher
L33-12 (MPX-) - L33-14 (BECU)	R - R	Engine switch off	6 kΩ or higher

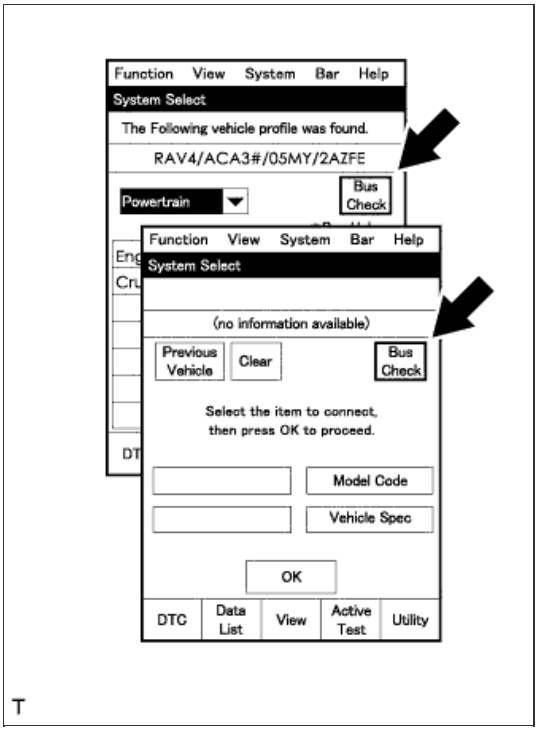
for Preparation Click here

BUS CHECK (COMMUNICATION MALFUNCTION ECU)

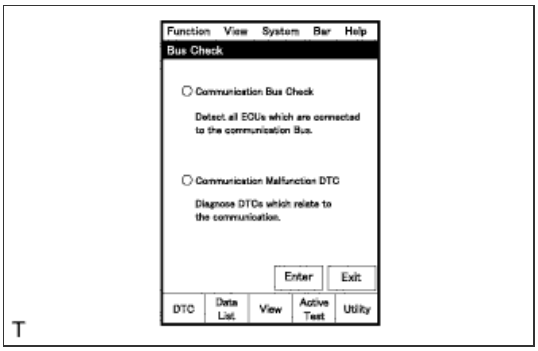
HINT:

Only CAN communication system DTCs for each ECU can be displayed on the intelligent tester.

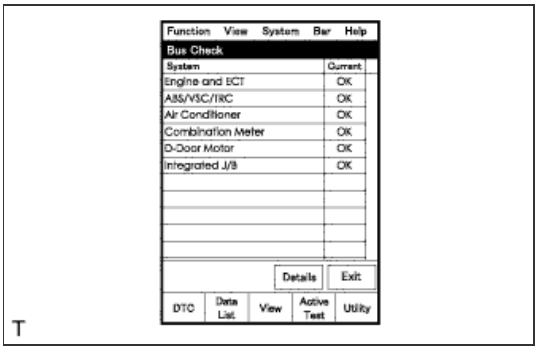
a. Select "Bus Check" from the "System Select" screen on the intelligent tester.



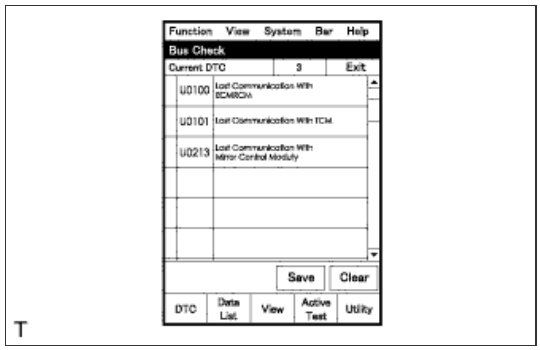
b. Select "Communication Malfunction DTC" from the "Bus Check" screen, and then select "Enter".



c. Select the system of the DTC to be checked and select "Details".



d. CAN communication system DTCs are displayed.

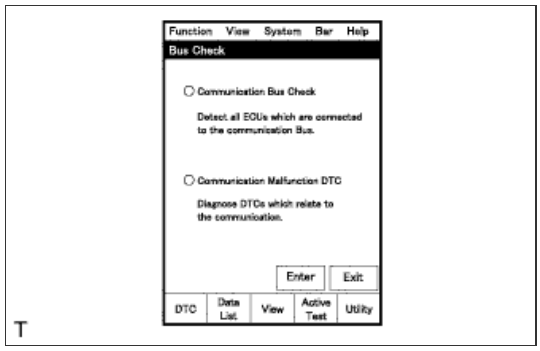


BUS CHECK (COMMUNICATION BUS CHECK)

HINT:

The ECUs and sensors that are properly connected to the CAN communication system can be displayed using the intelligent tester.

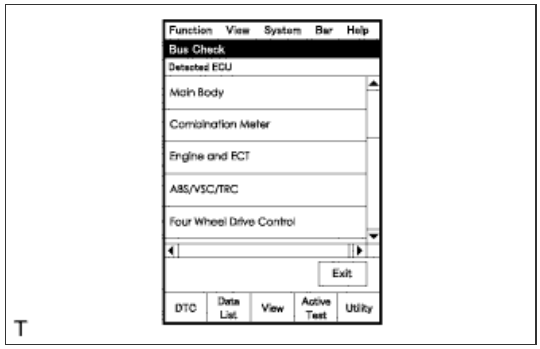
a. Select "Communication Bus Check" from the "Bus Check" screen.



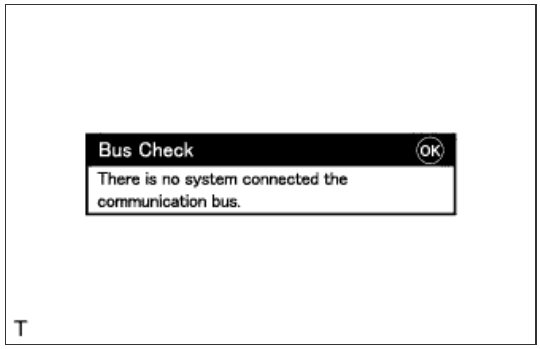
b. The screen displays the ECUs and sensors that are properly connected to the CAN communication system.

HINT:

If any properly connected ECUs or sensors are not displayed, there is a communication stop in the system (Click here).



c. "There is no system connected to the communication bus" is displayed if there are no ECUs or sensors connected to the CAN bus.



CHECK INSTALLED SYSTEMS (ECUS AND SENSORS) THAT USE CAN COMMUNICATION

a. Systems (ECUs and sensors) that use CAN communication vary depending on the optional settings of the vehicle. Check which systems (ECUs and sensors) are installed on the vehicle.

ECU/Sensor Name	Intelligent Tester Display	Installed on
Master cylinder solenoid (skid control ECU)	ABS/VSC/TRAC	All vehicles
Air conditioning amplifier	Air Conditioner	All vehicles

ECM	Engine	All vehicles
Main body ECU (cowl side junction block LH)	Main Body	All vehicles
Combination meter	Combination Meter	All vehicles
Center airbag sensor	SRS Airbag	All vehicles
Multi-display	AVN	All vehicles
Steering control ECU	VGRS	All vehicles
Steering angle sensor	Steering Angle Sensor	All vehicles
Yaw rate sensor	Yaw Rate / Deceleration Sensor	All vehicles
Seat belt control ECU	Pre-crash Seat Belt	Vehicles with pre-crash safety system
Clearance warning ECU	Clearance Sonar	Vehicles with LEXUS parking assist-sensor system
Parking assist ECU	Parking Assist Monitor	Vehicles with parking assist monitor system
Outer mirror control ECU	Driver Door/Mirror	All vehicles
Multiplex tilt and telescopic ECU	Tilt&Telescopic	All vehicles
Certification ECU (smart key ECU)	Entry & Start / Wireless Tuner	All vehicles
Position control ECU and switch	Driver Seat	All vehicles
Network gateway ECU	CAN Gateway	All vehicles
4WD control ECU	Four Wheel Drive Control	All vehicles
No. 2 main body ECU	Body No.4	All vehicles
Windshield wiper ECU	Rain Sensor	All vehicles
Distance control ECU	Cruise Control (ACC)	Vehicles with dynamic radar cruise control system
AFS ECU (headlight swivel ECU)	AFS/HL AutoLeveling	All vehicles
Steering control ECU	VGRS	All vehicles
Power back door unit (power back door ECU)	Power Back Door	Vehicles with power back door system

DTC TABLE BY ECU

HINT:

- **In the CAN communication system, CAN communication system DTCs stored by the ECU can be output by using the intelligent tester.**
- **If CAN communication system DTCs are output, the trouble cannot be determined solely from the DTCs. Perform troubleshooting according to "How to Proceed with Troubleshooting".**

a. MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0073	Control Module Communication Bus OFF
U0100	Lost Communication with ECM/PCM "A"
U0114/38	Lost Communication with 4WD Control ECU
U0123	Lost Communication with Yaw Rate Sensor Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module

b. ECM/ECT

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0101	Lost Communication with TCM
U0122	Lost Communication with Vehicle Dynamics Control Module

U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U1101	Lost Communication with Distance Control ECU

c. MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0141	Lost Communication with Body Control Module "A"
U0199	Lost Communication with "Door Control Module A"
U0208	Lost Communication with "Seat Control Module A"
U0230	Lost Communication with Rear Gate Module
U0327	Software Incompatibility with Vehicle Security Control Module
U1002 (CAN MS BUS)	Lost Communication with Gateway Module (Main Body ECU)
U1111	Lost Communication with Front Controller Module
U1115	Lost Communication with Tilt and Telescopic Module

d. COMBINATION METER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0129	Lost Communication with Brake System Control Module

e. SEAT BELT CONTROL ECU
For vehicles with the pre-crash safety system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0151	Lost Communication with Airbag ECU
U1101	Lost Communication with Distance Control ECU

f. MULTIPLEX TILT AND TELESCOPIC ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2621	Communication Interruption
B2624*	Vehicle Speed Malfunction

HINT:

*: Refer to the Power Tilt and Power Telescopic Steering Column System (Click here).

g. MULTI-DISPLAY

HINT:

The multi-display is connected to the CAN communication system but CAN communication DTCs are not stored.

h. OUTER MIRROR CONTROL ECU

HINT:

The outer mirror control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

i. CENTER AIRBAG SENSOR

HINT:

The center airbag sensor is connected to the CAN communication system but CAN communication DTCs are not stored.

j. CERTIFICATION ECU (SMART KEY ECU)

HINT:

The certification ECU (smart key ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

k. AIR CONDITIONING AMPLIFIER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B1499	Multiplex Communication Circuit

l. POSITION CONTROL ECU AND SWITCH

HINT:

The position control ECU and switch is connected to the CAN communication system but CAN communication DTCs are not stored.

m. NETWORK GATEWAY ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0132	Lost Communication with Ride Level Control Module
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module (Network Gateway ECU)
U1100	Lost Communication with Seat Belt Control Module
U1101	Lost Communication with Distance Control ECU
U1110	Lost Communication with Clearance Sonar Module
U1126	Lost Communication with Parking Assist ECU

n. CLEARANCE WARNING ECU
For vehicles with the LEXUS parking assist-sensor system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
C1AEF	Shift Position Information
U0155	Lost Communication with Instrument Panel Cluster Control Module

o. PARKING ASSIST ECU
For vehicles with the parking assist monitor system only.

HINT:

The parking assist ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

p. 4WD CONTROL ECU

HINT:

The 4WD control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

q. NO. 2 MAIN BODY ECU

HINT:

The No. 2 main body ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

r. WINDSHIELD WIPER ECU

HINT:

The windshield wiper ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

s. POWER BACK DOOR UNIT (POWER BACK DOOR ECU)
For vehicles with the power back door system only.

HINT:

The power back door unit (power back door ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

t. SUSPENSION CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0101	Lost Communication with TCM
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0140	Lost Communication with Main Body ECU

u. DISTANCE CONTROL ECU
For vehicles with the dynamic radar cruise control system only.

HINT:

The distance control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

v. AFS ECU (HEADLIGHT SWIVEL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2427	CAN Communication Malfunction

w. STEERING CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0126	Lost Communication with Steering Angle Sensor Module

DTC COMBINATION TABLE

*4: The ECM receives diagnosis data from the distance control ECU and stores a DTC.
*5: The seat belt control ECU receives diagnosis data from the distance control ECU and stores a DTC.

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Main Body ECU Communication Stop Mode	Combination Meter Communication Stop Mode	Center Airbag Sensor Communication Stop Mode	Air Conditioning Amplifier Communication Stop Mode

Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with 4WD Control ECU	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
			• Main Body				

Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	○*1	○	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	○	○	X	○*1
Steering Control ECU	U0126	Shift Position Information	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	○	X	X
			• ECM				

AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X	X
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
		Lost Communication					

	U1111	with Body No. 5 Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Multi-display Communication Stop Mode	AFS ECU Communication Stop Mode	ECM Communication Stop Mode	Network Gateway ECU Communication Stop Mode
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-

Master Cylinder Solenoid (Skid Control ECU)	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2	○*1, *2
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2, *4	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	○	○
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	○	○
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	○	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
		Vehicle Speed					

	B2624	Malfunction	Combination Meter	X	X	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*3	○*1, *3
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	○*3	○*1, *3
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	X	X	X	X
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	○*1
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	○	○*1
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	○*1
			• ECM • Master Cylinder Solenoid (Skid Control				

AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	X	○*1	○	○*1
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*5	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	○*1
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	X
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
		Lost Communication					

	U0199	with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				Network Gateway ECU Communication Stop Mode	Clearance Warning ECU Communication Stop Mode	Parking Assist ECU Communication Stop Mode	Skid Control ECU Communication Stop Mode
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	○*1
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*2	X	X	○*1

Master Cylinder Solenoid (Skid Control ECU)	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	○*1
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	○*1
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	○*1
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	○	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	○	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	○	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
	U0100	Lost Communication with ECM/PCM	ECM	○*3	X	X	X

		"A"					
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
Suspension Control ECU	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	X
	U0101	Lost Communication with TCM	ECT	○*3	X	X	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Control ECU	X	X	X	X
Steering Control ECU	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	○	○*1	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	○	○*1	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering	○	X	X	○

			Control ECU • Main Body ECU (Cowl Side Junction Block LH)				
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	X
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	○	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
		Lost					

Network Gateway ECU	U1100	Communication with Seat Belt Control Module	Seat Belt Control ECU	○	X	X	X
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	○	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	○	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	○	X	○	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○	○	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	○	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				4WD Control ECU Communication Stop Mode	Steering Angle Sensor Communication Stop Mode	Yaw Rate Sensor Communication Stop Mode	Distance Control ECU Communication Stop Mode
Master Cylinder	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	○	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor	Steering Angle Sensor	X	○	X	X

Solenoid (Skid Control ECU)		Module					
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	○	○	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	○*1, *4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○*1, *4
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○*4	○*1, *4
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*4	X	○*1, *4
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1, *4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	○
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	○
	1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
		Lost Communication with Vehicle	Master Cylinder Solenoid (Skid Control				

Suspension Control ECU	U0122	Dynamics Control Module	ECU)	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○*3	X	X	X
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl	X	○	X	X

			Side Junction Block LH)				
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	X	X
		Lost					

Network Gateway ECU	U0132	Communication with Ride Level Control Module	Suspension Control ECU	X	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode		
				Movement Control Bus		
				Steering Control ECU Communication Stop Mode	Suspension Control ECU Communication Stop Mode	Seat Belt Control ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X

	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	○	X	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-
Suspension	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*1	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	○*1	X

Control ECU	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	○*1	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	○*1	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	○*1	X
	U0101	Lost Communication with TCM	ECT	X	○*1	X
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*1	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	○*1

	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○*1
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	○
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	X	○	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X

	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Outer Mirror Control ECU Communication Stop Mode	Windshield Wiper ECU Communication Stop Mode	Multiplex Tilt and Telescopic ECU Communication Stop Mode	Position Control ECU and Switch Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
		Lost Communication					

ECM	U0123	with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	○*1	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	○*1	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication	ECT	-	-	-	-

		with TCM					
Air Conditioning Amplifier	B1499	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-

Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	X	X	X	X
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	X	X
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	X	X	X
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	X	X	X	X
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	○	X
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	○	X	X
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	○	X	X	X
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle	Master Cylinder Solenoid (Skid Control	-	-	-	-

		Dynamics Control Module	ECU)				
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Power Back Door ECU Communication Stop Mode	No. 2 Main Body ECU Communication Stop Mode	Certification ECU Communication Stop Mode	Main Body ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
		Lost Communication					

	U0126	with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
ECM	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	X	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	X	○
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	-	-	-	-
Air Conditioning		Multiplex	• Main Body ECU (Cowl Side				

Amplifier	B1499	Communication Circuit	Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1002 (CAN MS BUS)	Lost Communication with Gateway	MS Bus Network Malfunction	X	X	X	○

		Module					
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	○	○
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	○	X	○
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	○	X	X	○
Main Body ECU (Cowl Side Junction Block LH)	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	X	○
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	X	X	○
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	X	X	X	○
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
Network Gateway ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
		Lost					

	U1126	Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

HINT:

○: Stored.

x: When one side of branch wire is open, storage may occur.

*1: Only stored when communication recovery has occurred. During communication stop, cannot be stored.

*2: Stored when vehicle speed is 15 km/h (9 mph) or more.

*3: Stored when vehicle speed is 30 km/h (18 mph) or more.

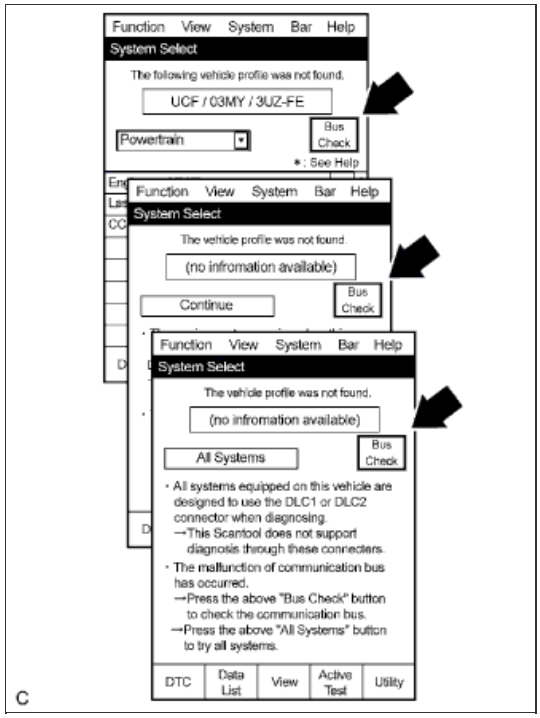
for Preparation Click here

BUS CHECK (COMMUNICATION MALFUNCTION ECU)

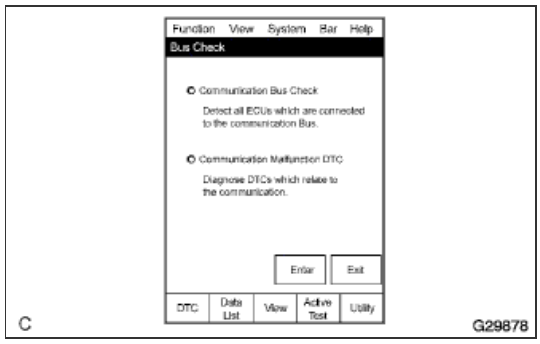
HINT:

Only CAN communication system DTCs for each ECU can be displayed on the intelligent tester.

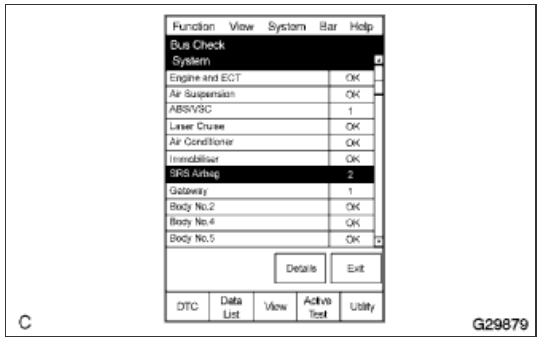
a. Select "Bus Check" from the "System Select" screen on the intelligent tester.



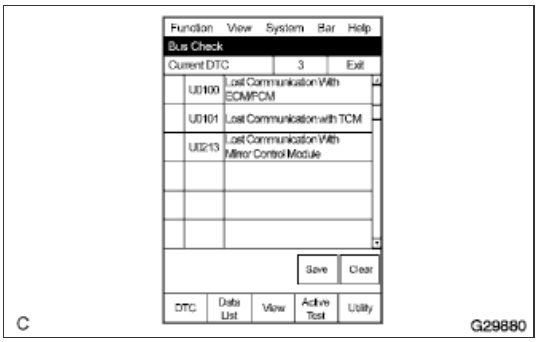
b. Select "Communication Malfunction DTC" from the "Bus Check" screen, and then select "Enter".



c. Select the system of the DTC to be checked and select "Details".



d. CAN communication system DTCs are displayed.

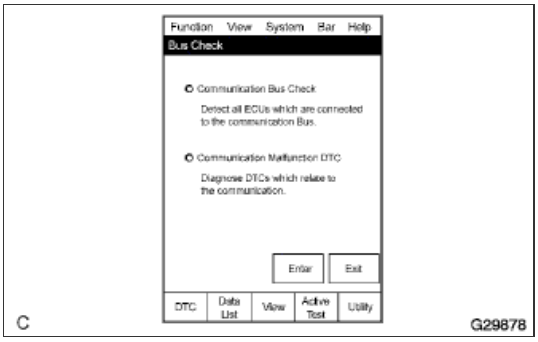


BUS CHECK (COMMUNICATION BUS CHECK)

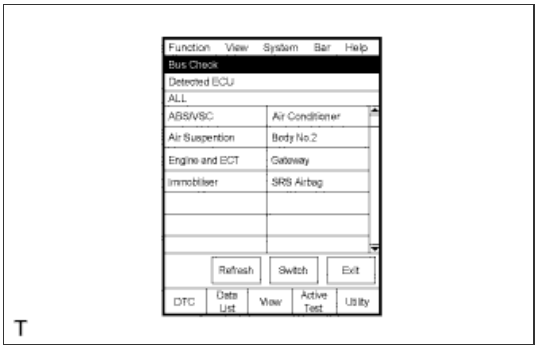
HINT:

The ECUs and sensors that are properly connected to the CAN communication system can be displayed using the intelligent tester.

a. Select "Communication Bus Check" from the "Bus Check" screen.

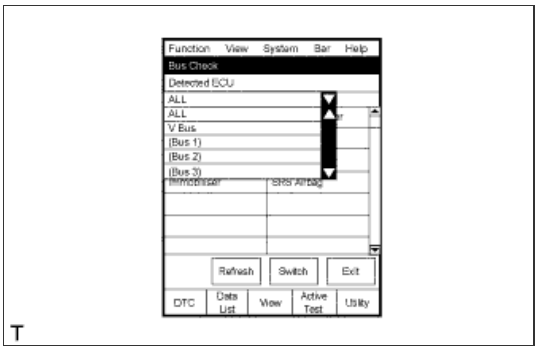


b. The screen displays the ECUs and sensors that are properly connected to the CAN communication system.



HINT:

- **If any properly connected ECUs or sensors are not displayed, there is a communication stop in the system (Click here).**



- **The default item displayed in the combo box is "ALL". When checking the ECUs (sensors) connected to each bus, pull down the combo box and select the bus to be checked from the drop down list. The drop down list displays "ALL", "V Bus", and the names of the remaining buses.**

Combo Box	Display Content
ALL	All ECUs (sensors) connected to the CAN bus
V Bus	ECUs (sensors) connected to the V bus
Bus Name	ECUs (sensors) connected to the selected bus

- **The connection status (shown below) is indicated by the background color displayed behind the system name.**

ECU (Sensor) on V Bus

Background Color	Connection Status
White	Detected normally
Yellow	Could not be detected in the past, but is currently detected
Red	Detected in the past, but cannot be detected now

Not displayed	Has never been detected

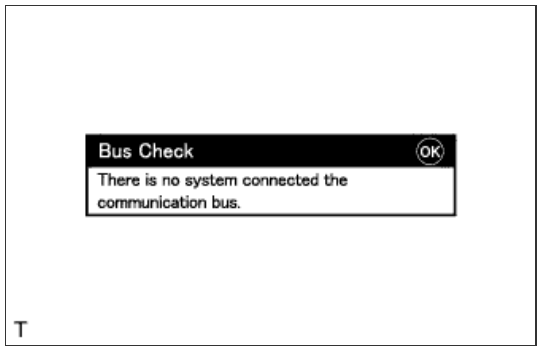
ECU (Sensor) with no Data Monitor History

Background Color	Connection Status
White	Detected normally
Yellow	Could not be detected in the past, but is currently detected
Red	Detected in the past, but cannot be detected now
Not displayed	Has never been detected

ECU (Sensor) with no Data Monitor History

Background Color	Connection Status
White	Detected normally
Yellow	Could not be detected in the past, but is currently detected
Red	Detected in the past, but cannot be detected now
Red	Has never been detected bus has connection history
Not displayed	Has never been detected and has no connection history

c. "There is no system connected to the communication bus" is displayed if there are no ECUs or sensors connected to the CAN bus.



CHECK INSTALLED SYSTEMS (ECUS AND SENSORS) THAT USE CAN COMMUNICATION

a. Systems (ECUs and sensors) that use CAN communication vary depending on the optional settings of the vehicle. Check which systems (ECUs and sensors) are installed on the vehicle.

ECU/Sensor Name	Intelligent Tester Display	Installed on
Master cylinder solenoid (skid control ECU)	ABS/VSC/TRAC	All vehicles
Air conditioning amplifier	Air Conditioner	All vehicles
ECM	Engine	All vehicles
Main body ECU (cowl side junction block LH)	Main Body	All vehicles
Combination meter	Combination Meter	All vehicles
Center airbag sensor	SRS Airbag	All vehicles
Display and navigation module display	AVN1	All vehicles
Steering control ECU	VGRS	All vehicles
Steering angle sensor	Steering Angle Sensor	All vehicles
Yaw rate sensor	Yaw Rate / Deceleration Sensor	All vehicles
Seat belt control ECU	Pre-crash Seat Belt	Vehicles with pre-crash safety system
Clearance warning ECU	Clearance Sonar	Vehicles with LEXUS parking assist-sensor system
Parking assist ECU	Parking Assist Monitor	Vehicles with parking assist monitor

		system
Outer mirror control ECU	Driver Door/Mirror	All vehicles
Multiplex tilt and telescopic ECU	Tilt&Telescopic	All vehicles
Certification ECU (smart key ECU)	Entry & Start / Wireless Tuner	All vehicles
Position control ECU and switch	Driver Seat	All vehicles
Network gateway ECU	CAN Gateway	All vehicles
4WD control ECU	Four Wheel Drive Control	All vehicles
No. 2 main body ECU	Body No.4	All vehicles
Windshield wiper ECU	Rain Sensor	All vehicles
Distance control ECU	Cruise Control (ACC)	Vehicles with dynamic radar cruise control system
AFS ECU (headlight swivel ECU)	AFS/HL AutoLeveling	All vehicles
Steering control ECU	VGRS	All vehicles
Power back door unit (power back door ECU)	Power Back Door	Vehicles with power back door system

DTC TABLE BY ECU

HINT:

- **In the CAN communication system, CAN communication system DTCs stored by the ECU can be output by using the intelligent tester.**
- **If CAN communication system DTCs are output, the trouble cannot be determined solely from the DTCs. Perform troubleshooting according to "How to Proceed with Troubleshooting".**

a. MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0073	Control Module Communication Bus OFF
U0100	Lost Communication with ECM/PCM "A"
U0114/38	Lost Communication with 4WD Control ECU
U0123	Lost Communication with Yaw Rate Sensor Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module

b. ECM/ECT

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U1101	Lost Communication with Distance Control ECU

c. MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0141	Lost Communication with Body Control Module "A"
U0199	Lost Communication with "Door Control Module A"
U0208	Lost Communication with "Seat Control Module A"
U0230	Lost Communication with Rear Gate Module

U0327	Software Incompatibility with Vehicle Security Control Module
U1002 (CAN MS BUS)	Lost Communication with Gateway Module (Main Body ECU)
U1111	Lost Communication with Front Controller Module
U1115	Lost Communication with Tilt and Telescopic Module

d. COMBINATION METER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0129	Lost Communication with Brake System Control Module

e. SEAT BELT CONTROL ECU
For vehicles with the pre-crash safety system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0151	Lost Communication with Airbag ECU
U1101	Lost Communication with Distance Control ECU

f. MULTIPLEX TILT AND TELESCOPIC ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2621	Communication Interruption
B2624*	Vehicle Speed Malfunction

HINT:

*: Refer to the Power Tilt and Power Telescopic Steering Column System (Click here).

g. DISPLAY AND NAVIGATION MODULE DISPLAY

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0073	Control Module Communication Bus OFF
U0100	Lost Communication with ECM/PCM "A"
U0126	Lost Communication with Steering Angle Sensor Module
U0129	Lost Communication with Brake System Control Module
U0155	Lost Communication with Combination Meter
U0164	Lost Communication with A/C ECU
U1110	Lost Communication with Clearance Sonar Module

h. OUTER MIRROR CONTROL ECU

HINT:

The outer mirror control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

i. CENTER AIRBAG SENSOR

HINT:

The center airbag sensor is connected to the CAN communication system but CAN communication DTCs are not stored.

j. CERTIFICATION ECU (SMART KEY ECU)

HINT:

The certification ECU (smart key ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

k. AIR CONDITIONING AMPLIFIER

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B1499	Multiplex Communication Circuit

l. POSITION CONTROL ECU AND SWITCH

HINT:

The position control ECU and switch is connected to the CAN communication system but CAN communication DTCs are not stored.

m. NETWORK GATEWAY ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0123	Lost Communication with Yaw Rate Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0132	Lost Communication with Ride Level Control Module
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module (Network Gateway ECU)
U1100	Lost Communication with Seat Belt Control Module
U1101	Lost Communication with Distance Control ECU
U1110	Lost Communication with Clearance Sonar Module
U1126	Lost Communication with Parking Assist ECU

n. CLEARANCE WARNING ECU
For vehicles with the LEXUS parking assist-sensor system only.

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
C1AEF	Shift Position Information
U0155	Lost Communication with Instrument Panel Cluster Control Module

o. PARKING ASSIST ECU
For vehicles with the parking assist monitor system only.

HINT:

The parking assist ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

p. 4WD CONTROL ECU

HINT:

The 4WD control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

q. NO. 2 MAIN BODY ECU

HINT:

The No. 2 main body ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

r. WINDSHIELD WIPER ECU

HINT:

The windshield wiper ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

s. POWER BACK DOOR UNIT (POWER BACK DOOR ECU)
For vehicles with the power back door system only.

HINT:

The power back door unit (power back door ECU) is connected to the CAN communication system but CAN communication DTCs are not stored.

t. SUSPENSION CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0101	Lost Communication with TCM
U0114/38	Lost Communication with 4WD Control ECU
U0122	Lost Communication with Vehicle Dynamics Control Module
U0124	Lost Communication with Lateral Acceleration Sensor Module
U0126	Lost Communication with Steering Angle Sensor Module
U0130	Lost Communication with Steering Effort Control Module
U0140	Lost Communication with Main Body ECU

u. DISTANCE CONTROL ECU
For vehicles with the dynamic radar cruise control system only.

HINT:

The distance control ECU is connected to the CAN communication system but CAN communication DTCs are not stored.

v. AFS ECU (HEADLIGHT SWIVEL ECU)

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
B2427	CAN Communication Malfunction

w. STEERING CONTROL ECU

HINT:

DTC communication uses the CAN communication system.

DTC Code	Detection Item
U0100	Lost Communication with ECM/PCM "A"
U0122	Lost Communication with Vehicle Dynamics Control Module
U0126	Lost Communication with Steering Angle Sensor Module

DTC COMBINATION TABLE

*4: The ECM receives diagnosis data from the distance control ECU and stores a DTC.
*5: The seat belt control ECU receives diagnosis data from the distance control ECU and stores a DTC.
*6: Only stored while malfunction continues.

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Main Body ECU Communication Stop Mode	Combination Meter Communication Stop Mode	Center Airbag Sensor Communication Stop Mode	Air Conditioning Amplifier Communication Stop Mode
	U0123	Lost Communication with Yaw Rate Sensor Module		-	-	-	-

Master Cylinder Solenoid (Skid Control ECU)	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with 4WD Control ECU	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
		Vehicle Speed					

	B2624	Malfunction	Combination Meter	○*1	○	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	○	○	X	○*1
Steering Control ECU	U0126	Shift Position Information	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	○	X	X
AFS ECU (Headlight	B2427	CAN Communication	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle	○	X	X	X

Swivel ECU)		Malfunction	Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)				
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○	X
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	X
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	X	X	X	○
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	X	○	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X	X
	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
		Software					

Main Body ECU (Cowl Side Junction Block LH)	U0327	Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Body No. 5 Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-

	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				V Bus			
				Display and Navigation Assembly Communication Stop Mode	AFS ECU Communication Stop Mode	ECM Communication Stop Mode	Network Gateway ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2	○*1, *2
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*2, *4	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
		Lost Communication	Master Cylinder				

	U0122	with Vehicle Dynamics Control Module	Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	○	○
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	○	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	X	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*3	○*1, *3
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	X	X	○*3	○*1, *3
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-

Steering Control ECU	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	○*1
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	○	○*1
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	○*1
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	X	○*1	○	○*1
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*5	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	○*1
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	○*1	X	X	X
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	○*1	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○*1	X	X	○*1
	U0155	Lost Communication with Combination Meter	Combination Meter	○*1	X	X	X
		Lost Communication					

	U0126	with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*1	X	○	X
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X	○*1
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○	X
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control	Steering Control ECU	-	-	-	-

Network Gateway ECU		Module					
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				Network Gateway ECU Communication Stop Mode	Clearance Warning ECU Communication Stop Mode	Parking Assist ECU Communication Stop Mode	Skid Control ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	○*1
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X	○*1
	U0100	Lost Communication with ECM/PCM "A"	ECM	○*2	X	X	○*1
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	○*1
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	○*1
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	○*1
			• Yaw Rate				

	U0073	Control Module Communication Bus OFF	Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	○*1
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*4
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	○	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	○	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	○*3	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
		Lost Communication with Lateral					

	U0124	Acceleration Sensor Module	Yaw Rate Sensor	X	X	X	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X	X
	U0101	Lost Communication with TCM	ECT	○*3	X	X	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Control ECU	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	○	○*1	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	○	○*1	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X	○
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○
	U1101	Lost Communication with Distance	Distance Control ECU	X	X	X	X

		Control ECU					
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	○	X	X	X
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○*1	○	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X	○
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
		Lost					

	U1115	Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	○	X	X	X
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	○	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	○	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○	X	X	○
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	○	X	○	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	○	○	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	○	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				Movement Control Bus			
				4WD Control ECU Communication Stop Mode	Steering Angle Sensor Communication Stop Mode	Yaw Rate Sensor Communication Stop Mode	Distance Control ECU Communication Stop Mode
	U0123	Lost Communication with Yaw Rate		X	X	○	X

Master Cylinder Solenoid (Skid Control ECU)		Sensor Module	Yaw Rate Sensor				
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	○	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	○*1, *4
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○*1, *4
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○*4	○*1, *4
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*4	X	○*1, *4
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	○*1, *4
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	○
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	○
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-	-

	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-	-
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○*3	X	X	X
	U0101	Lost Communication with TCM	ECT	X	X	X	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X	X
			• ECM • Master Cylinder Solenoid (Skid				

AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	X	○	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	X	X
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
		Lost					

Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Communication with Gateway Module	MS Bus Network Malfunction	-	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	X	X
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	X	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	X	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X	○
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	○	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	○	X	X	X
	U0122	Lost Communication with Vehicle Dynamics	Master Cylinder Solenoid (Skid Control ECU)	X	X	X	X

		Control Module					
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X	X
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	X
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X	X

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode		
				Movement Control Bus		
				Steering Control ECU Communication Stop Mode	Suspension Control ECU Communication Stop Mode	Seat Belt Control ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module		X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	X	X	X
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control	Master Cylinder Solenoid (Skid Control ECU)	X	X	X

		Module				
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	-	-	-
	B2624	Vehicle Speed Malfunction	Combination Meter	-	-	-
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	○*1	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	○*1	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	○*1	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	○*1	X
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	X	○*1	X
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	X	○*1	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	○*1	X
	U0101	Lost Communication with TCM	ECT	X	○*1	X
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	○*1	X	X
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	○*1	X	X
	U0100	Lost Communication	ECM	○*1	X	X

		with ECM/PCM "A"				
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	X	X	X
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	X	X	X
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	○	X	X
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	X	X	○*1
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	○*1
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	○*1
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	X	X	○*1
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
		Lost				

Combination Meter	U0129	Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	X	X	X
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	-	-	-
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	-	-	-
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	-	-	-
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	-	-	-
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	-	-	-
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	-	-	-
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	-	-	-
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	-	-	-
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	X	X	○
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	X	○	X
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	○	X	X
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	X	X	X
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	X	X	X
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	X	X	X
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	X	X	X
	U0122	Lost Communication with Vehicle Dynamics Control	Master Cylinder Solenoid (Skid Control ECU)	X	X	X

	Module					
U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	X	X	X	
U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	X	X	X	
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	X	X	X	

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Outer Mirror Control ECU Communication Stop Mode	Windshield Wiper ECU Communication Stop Mode	Multiplex Tilt and Telescopic ECU Communication Stop Mode	Position Control ECU and Switch Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
		Lost Communication					

ECM	U0126	with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	○*1	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	○*1	X
Suspension Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	-	-	-	-
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-

Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
Seat Belt Control ECU	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Display and	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
		Lost Communication					

Navigation Module Display	U0155	with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block LH)	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	X	X	X	X
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	X	X
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	X	X	X
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	X	X	X	X
	U0208	Lost Communication with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	○	X
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	○	X	X
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	○	X	X	X
	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level	Suspension Control ECU	-	-	-	-

		Control Module					
Network Gateway ECU	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

Output from	Output DTC	Detection Item	Target ECU	Detected Communication Stop Mode			
				MS Bus			
				Power Back Door ECU Communication Stop Mode	No. 2 Main Body ECU Communication Stop Mode	Certification ECU Communication Stop Mode	Main Body ECU Communication Stop Mode
Master Cylinder Solenoid (Skid Control ECU)	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module		-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-

	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
ECM	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0235	Lost Communication with Cruise Control Front Distance Range Sensor	Distance Control ECU	-	-	-	-
	U1102	Lost Communication with Radar Sensor	Distance Control ECU	-	-	-	-
Multiplex Tilt and Telescopic ECU	B2621	Communication Interruption	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	X	X	X	○
	B2624	Vehicle Speed Malfunction	Combination Meter	X	X	X	○
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
		Lost Communication					

Suspension Control ECU	U0130	with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U0124	Lost Communication with Lateral Acceleration Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0140	Lost Communication with Main Body ECU	Main Body ECU (Cowl Side Junction Block)	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0101	Lost Communication with TCM	ECT	-	-	-	-
Air Conditioning Amplifier	B1499*6	Multiplex Communication Circuit	• Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	-	-	-	-
Steering Control ECU	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Clearance Warning ECU	C1AEF	Shift Position Information	ECM	-	-	-	-
	U0155	Lost Communication with Instrument Panel Cluster Control Module	Combination Meter	-	-	-	-
AFS ECU (Headlight Swivel ECU)	B2427	CAN Communication Malfunction	• ECM • Master Cylinder Solenoid (Skid Control ECU) • Steering Angle Sensor • Steering Control ECU • Main Body ECU (Cowl Side Junction Block LH)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
		Lost Communication	Master Cylinder				

Seat Belt Control ECU	U0122	with Vehicle Dynamics Control Module	Solenoid (Skid Control ECU)	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0151	Lost Communication with Airbag ECU	Center Airbag Sensor	-	-	-	-
Display and Navigation Module Display	U0073	Control Module Communication Bus OFF	• Yaw Rate Sensor • Steering Control ECU • Steering Angle Sensor	-	-	-	-
	U0164	Lost Communication with A/C ECU	Air Conditioning Amplifier	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U0155	Lost Communication with Combination Meter	Combination Meter	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
Combination Meter	U0129	Lost Communication with Brake System Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U0100	Lost Communication with ECM/PCM "A"	ECM	-	-	-	-
Main Body ECU (Cowl Side Junction Block	U1002 (CAN MS BUS)	Lost Communication with Gateway Module	MS Bus Network Malfunction	X	X	X	○
	U0327	Software Incompatibility with Vehicle Security Control Module	Certification ECU (Smart Key ECU)	X	X	○	○
	U0141	Lost Communication with Body Control Module "A"	No. 2 Main Body ECU	X	○	X	○
	U0230	Lost Communication with Rear Gate Module	Power Back Door Unit (Power Back Door ECU)	○	X	X	○
		Lost Communication					

LH)	U0208	with "Seat Control Module A"	Position Control ECU and Switch	X	X	X	○
	U1115	Lost Communication with Tilt and Telescopic Module	Multiplex Tilt and Telescopic ECU	X	X	X	○
	U1111	Lost Communication with Front Controller Module	Windshield Wiper ECU	X	X	X	○
	U0199	Lost Communication with "Door Control Module A"	Outer Mirror Control ECU	X	X	X	○
Network Gateway ECU	U1100	Lost Communication with Seat Belt Control Module	Seat Belt Control ECU	-	-	-	-
	U0132	Lost Communication with Ride Level Control Module	Suspension Control ECU	-	-	-	-
	U0130	Lost Communication with Steering Effort Control Module	Steering Control ECU	-	-	-	-
	U1101	Lost Communication with Distance Control ECU	Distance Control ECU	-	-	-	-
	U0123	Lost Communication with Yaw Rate Sensor Module	Yaw Rate Sensor	-	-	-	-
	U0126	Lost Communication with Steering Angle Sensor Module	Steering Angle Sensor	-	-	-	-
	U0114/38	Lost Communication with 4WD Control ECU	4WD Control ECU	-	-	-	-
	U0122	Lost Communication with Vehicle Dynamics Control Module	Master Cylinder Solenoid (Skid Control ECU)	-	-	-	-
	U1126	Lost Communication with Parking Assist ECU	Parking Assist ECU	-	-	-	-
	U1110	Lost Communication with Clearance Sonar Module	Clearance Warning ECU	-	-	-	-
	U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module	Movement Control Bus Network Malfunction	-	-	-	-

HINT:

○: Stored.

x: When one side of branch wire is open, storage may occur.

*1: Only stored when communication recovery has occurred. During communication stop, cannot be stored.

*2: Stored when vehicle speed is 15 km/h (9 mph) or more.

*3: Stored when vehicle speed is 30 km/h (18 mph) or more.

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FAIL-SAFE FUNCTION

a. When communication fails in any of the main wires (communication lines) due to a short circuit or other causes, the fail-safe function, which is specified for each system, operates to prevent the system from malfunctioning.

b. The table below shows the effects on each system when communication is impossible. For further details, refer to each system.

System	Function	Control Description	1. Control Master 2. System Related 3. Control Actuator	Related ECU	Fail-safe Function System Behavior	Indicator and Buzzer Behavior or User Notification
Airbag (ABG)	TC DTC/output service	When TC is on, DTCs (warning light turn on/turn off request signals) are output.	1. Center Airbag Sensor 2. - 3. Combination Meter	• Center Airbag Sensor • Combination Meter	-	-
	Event recorder (EDR)	Records the vehicle information during a collision (the vehicle speed, accelerator pedal opening angle, shift position, etc.).	1. Center Airbag Sensor 2. Combination Meter, ECM 3. -	• Center Airbag Sensor • Combination Meter • ECM	-	-
	SRS warning light control	Turns the SRS warning light on/off.	1. Combination Meter 2. Center Airbag Sensor 3. -	• Center Airbag Sensor • Combination Meter	The SRS warning light turns on.	-
	Information output function (Refer to related system for control description details)	The collision detection signal stops the fuel pump during a collision.	1. ECM 2. Center Airbag Sensor 3. -	• ECM • Center Airbag Sensor	-	-
		The driver/passenger seat buckle switch stops PSB control when the seat belt is not fastened.	1. Seat Belt Control ECU, Combination Meter 2. Center Airbag Sensor 3. -	• Seat Belt Control ECU • Combination Meter	-	-
		The passenger seat occupant detection signal turns on the seat belt warning light when the seat belt is not fastened.	1. Combination Meter 2. Center Airbag Sensor 3. -	Combination Meter	-	-
	Warning light control	BRL, ABS, VSC-OFF, SLIP and CRAWL light control (turn on/off, blink, DTC output).	1. Master Cylinder Solenoid (Skid Control ECU) 2. - 3. Combination Meter	Combination Meter	-	-
	ABS control	ABS control according to the G sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. Yaw Rate Sensor 3. Master Cylinder Solenoid (Skid Control ECU)	Yaw Rate Sensor	The ABS does not operate.	ABS warning light turns on.
			1. Master Cylinder Solenoid (Skid			

Brake (VSC)	TRC control	Brake control and engine torque control during acceleration slip.	(Skid Control ECU) 2. ECM, 4WD Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	• ECM • 4WD Control ECU	TRC does not operate.	VSC warning light turns on.
	VSC control	VSC control according to the yaw rate and steering angle sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM, 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Steering Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	• ECM • Steering Angle Sensor • Yaw Rate Sensor • Steering Control ECU • 4WD Control ECU	VSC does not operate.	ABS and VSC warning lights turn on.
Brake (ABS)	ACC control	The brake control according to the request from the distance control ECU via the ECM.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM 3. Master Cylinder Solenoid (Skid Control ECU)	ECM	ACC does not operate.	VSC warning light turns on.
Dynamic Radar Cruise Control (ACC)	ACC	Acceleration/deceleration control when following the vehicle in front.	1. - 2. ECM 3. ECM	ECM	ACC control is canceled.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. Master Cylinder Solenoid (Skid Control ECU)	Master Cylinder Solenoid (Skid Control ECU)	-	-
			1. Distance Control ECU 2. - 3. -	-	-	-
			1. - 2. Steering Control ECU 3. -	Steering Control ECU	-	-
			1. - 2. Combination	Combination Meter	-	-

			3. Meter 3. -	[illegible]		
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	-	-
Dynamic Radar Cruise Control (ACC)	PSC	Seat belt and brake control immediately before a collision.	1. - 2. ECM 3. -	ECM	Radar linked PCS control stops.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	PCS control stops.	
			1. Distance Control ECU 2. - 3. -	-	-	-
			1. - 2. Steering Control ECU 3. -	Steering Control ECU	-	-
			1. - 2. - 3. Seat Belt Control ECU	Seat Belt Control ECU	-	-
Tilt and Telescopic (TAT)	Microcomputer preset steering	Automatically begins the steering auto away/auto return when the engine switch is turned on (IG) or off.	1. Multiplex Tilt and Telescopic ECU 2. Position Control ECU and Switch, Main Body ECU (Cowl Side Junction Block LH) (V Bus), Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Combination Meter 3. Multiplex Tilt and Telescopic ECU	Main Body ECU (Cowl Side Junction Block LH)	The power tilt and power telescopic steering column system does not operate.	-
				Position Control ECU and Switch	Memory restore control does not operate.	-
				Combination Meter	Auto return/auto away control does not operate.	-
	Switching control between High and Low	Switching between High and Low is prohibited during the following conditions: 1) When there is a vehicle speed violation, engine speed violation, or large difference in wheel speeds, 2) when the shift lever is not in N, or 3) when the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	Switching between High and Low is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if switching between High and Low can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or 4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
			[illegible]	[illegible]	[illegible]	[illegible]

Mechanical 4WD (FWM)	Neutral switching control	Switching to neutral is prohibited during the following conditions: 1) When there is a vehicle speed violation or engine speed violation, or 2) when the shift lever is not in N or the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	Switching to neutral is prohibited.	4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Center differential lock switching control (between Free and Lock)	Center differential lock switching is prohibited when there is a vehicle speed violation or large difference in wheel speeds.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Center differential lock switching is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if center differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
Mechanical 4WD (FWM)	Rear differential lock switching control (between Rr Free and Rr Lock)	Rear differential lock switching is prohibited when there is a vehicle speed violation.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Rear differential lock switching is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if rear differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	L4F switching control	Switching to L4F is prohibited and the operation is performed with L4L when VSC is malfunctioning.	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	L4F switching is prohibited and the operation is performed with L4L.	No user notification.
	Specialized control when temperature is low	Changes the ACT conductive current value according to the temperature (low temperature use or normal temperature use).	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. Air Conditioning Amplifier, ECM 3. -	• Air Conditioning Amplifier • ECM	Changes the temperature used for the calculation of ACT temperature adjustment control.	No user notification.
Mechanical 4WD (FWM)	Specialized control during wheel speed failure	When there is a wheel speed failure, switching is permitted only when specified conditions are met (the wheel speed malfunction is 1 wheel or more and 3 wheels or less, the brake is applied, the engine speed is low, and all normal wheel speeds are low).	1. 4WD Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	If the wheel speed malfunction is 1 wheel or more and 3 wheels or less, only when the wheel speed failure specified conditions are met, switching is permitted. When 4 wheels are malfunctioning, switching is prohibited	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).

					(the wheel speed failure specialized control does not operate).	
Mechanical 4WD (FWM)	Indicator and buzzer signal output	Signal output of the indicator and buzzer condition that indicates the actuator position and switching status.	1. 4WD Control ECU 2. - 3. -	-	-	-
	High-Low actuator failure signal output	When the High-Low actuator limit switch is malfunctioning, a signal is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
	C/C cancel signal output	Outputs a cruise control cancel signal when center differential switching is not completed even though 5 sec. or more have elapsed from the start of switching.	1. 4WD Control ECU 2. - 3. -	-	-	-
	L4 status signal condition output	A signal is output when switching between the L4F and L4L position is completed.	1. 4WD Control ECU 2. - 3. -	-	-	-
	C/D lock condition signal output	CDL switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
	R/D lock condition signal output	R switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
	T/F N condition signal output	NP switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-	-
Gasoline Engine	Engine control system	Adjusts the fuel injection volume according to each sensor value and controls the engine.	1. ECM 2. - 3. -	-	-	-
	ECT control system	Changes the ECT shift position based on the vehicle speed and torque.	1. ECM 2. - 3. -	-	-	-
	Cruise control system	Maintains a constant vehicle speed and drives the vehicle.	1. ECM 2. - 3. -	-	-	-
Power	Power back door operation conditions	Prohibits the power back door operation according to the vehicle state (the engine switch, shift position, vehicle speed, and lock position).	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) Main Body ECU (Cowl Side Junction Block LH) (V Bus), Combination Meter, ECM 3. -	• ECM • Main Body ECU (Cowl Side Junction Block LH) • Combination Meter	The power back door system does not operate (when the start signal is received, the buzzer sounds a warning that the conditions are not met).	-
	Power back door operation requests	Receives the power back door close/open operation trigger from the operation switch or wireless switch and begins the power back door operation.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-	-
			1. - 2. Main body ECU (Cowl Side Junction Block LH)	• Main Body ECU (Cowl Side Junction Block LH)	The power back door system does not	-

Back Door (BKD)			(MS Bus), Certification ECU (Smart Key ECU) 3. -	Block LH) • Certification ECU (Smart Key ECU)	operate.	
	Power back door operation status output	Sends the hazard illumination request when the power back door operation begins and back door unlock request.	1. Power Back Door Unit (Power Back Door ECU) 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	Main Body ECU (Cowl Side Junction Block LH)	When the back door operation begins, the hazard warning lights may not illuminate.	-
			1. - 2. - 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Main Body ECU (Cowl Side Junction Block LH)	-	-
	DTC transmission/reception	Performs the power back door customization, malfunction detection, Active Test, etc.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	DTC function does not operate.	-
Active Height Control Suspension (4-WHEEL AHC)	Damping force control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the damping force of the shock absorbers.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-	-
			1. - 2. ECM 3. -	ECM	Damping force control is prohibited.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)		-
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		-
			1. - 2. Steering Control ECU 3. -	Steering Control ECU		-
Active Height Control Suspension (4-WHEEL AHC)	Spring switching control is prohibited	Based on the information from the master cylinder solenoid (skid control ECU), steering control ECU, yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the front spring constant value (ON/OFF).	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Spring switching control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1			

			1. - 2. Steering Control ECU 3. -	Steering Control ECU		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-	-
			1. Suspension Control ECU 2. ECM 3. Suspension Control ECU	ECM	Vehicle height control is prohibited.	-
			1. - 2. ECM 3. -	ECT	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Vehicle height control is prohibited.	-
			1. - 2. 4WD Control ECU 3. -	4WD Control ECU	-	-
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Vehicle height control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. - 2. Steering Control ECU 3. -	Steering Control ECU		
			1. - 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
Air Conditioner (ACN)	Air conditioning system	• Air conditioning vent temperature control according to the engine coolant temperature information. • Air conditioning vent switching control according to the engine coolant temperature information. • Air conditioning vent airflow amount control according to the engine coolant temperature information. • Compensation of the engine	1. Air Conditioning Amplifier 2. ECM 3. -	None	Coolant information: Control is performed by using the default value (80°C (176°F). Engine type: The condition is maintained (when unconfirmed, control is performed by using the default (507F)).	-

		of the engine coolant temperature information according to the engine type. • Compressor lock judgment value switching according to the engine type.				
Air Conditioner (ACN)	Air conditioning system	Compressor lock judgment by NE.	1. Air Conditioning Amplifier 2. ECM 3. -	None	NE: Control is performed by using the default value (0 km/h (0 mph)).	-
		The electric load control condition is limited according to the load control level.	1. Air Conditioning Amplifier 2. ECM 3. -	None	Load control: No load control (normal control).	-
		• Activation control according to the viscous heater activation permission information. • Activation control according to the PTC heater activation permission information.	1. Air Conditioning Amplifier 2. ECM 3. -	None	Permission information: Control is performed according to the operation prohibition state.	-
		• Air conditioning system operation status control and panel switch IND output control according to panel switch operation information. • Exhaust gas automatic air presence judgment and circulation control switching according to exhaust gas automatic air presence information.	1. Air Conditioning Amplifier 2. Multi-Display 3. -	Multi-display	None (Air conditioning system operation condition switching is not possible).	-
Air		Dimmer information output to the LIN panel according to the display dimmer information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	None	Condition is maintained (after the reset, the dimmer condition is fixed).	-
		PTC control switching based on the headlight illumination information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	None	PTC control (the headlight flickering countermeasure) is not performed.	-
			1. Air Conditioning			

Conditioner (ACN)	Air conditioning system	A/C control pattern switching based on the country specific information.	1. Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	None	Condition is maintained (when unconfirmed, control is performed according to the default value).	-
		Air conditioning system operation condition switching and the outside temperature display output adjustment according to the vehicle speed information.	1. Air Conditioning Amplifier 2. Combination Meter 3. -	None	• Decrease in reliability and consistency of the exterior temperature value of the outside temperature display. • Decrease in the optimum level of A/C vent airflow amount adjustment.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. Steering Angle Sensor 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• Initialization condition: Data output response request (STS=0). • When the trigger frame VSC 1S01 is not received from the master cylinder solenoid (skid control ECU), the data output response of the output response request changes from STS=0 to STS=1.	-
				Master Cylinder Solenoid (Skid Control ECU)	Communication is stopped after transmission is sent 4 times at 12 msec. intervals as the data output response non-request STS=0. When the above conditions are met, the sensor internal zero point memory invalid SAZS=1 and SFRZ=previous value + 1 during the next transmission.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. - 2. - 3. -	• Master Cylinder Solenoid (Skid Control ECU) • Steering Control ECU • ECM	Communication is stopped after transmission is sent 4 times at 12 millisecond intervals as the data output response non-request STS=0. When the above conditions are met, the sensor internal zero point memory invalid SAZA=1 and SFRZ=previous value + 1 during the next transmission.	Depends on the partner ECU specification.
			1. Position Control ECU and Switch 2. - 3. Position Control ECU	• Master Cylinder Solenoid (Skid Control ECU) • Steering	-	-

			and Switch	Control ECU • ECM		
			1. - 2. ECM 3. -	ECT	The memory restore function does not operate.	-
			1. - 2. ECM 3. -	ECM	The memory restore function does not operate.	-
		Memory restore function	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The memory restore function does not operate.	-
Seat (DST)	Seat system		1. - 2. Position Control ECU and Switch 3. -	Position Control ECU and Switch	The memory restore function does not operate.	-
		Memory call function	1. Position Control ECU and Switch 2. - 3. Position Control ECU and Switch	-	-	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	The memory call does not operate.	-
		Tilt and telescopic operation permission function	1. Position Control ECU and Switch 2. - 3. -	-	-	-
			1. - 2. Multiplex Tilt and Telescopic ECU 3. Multiplex Tilt and Telescopic ECU	Multiplex Tilt and Telescopic ECU	The tilt and telescopic operation does not operate.	-
	Mirror surface manual control	Function that adjusts the mirror surface with the manual switch.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The mirror surface manual adjustment function does not operate (stops if there is a disruption during the operation).	-
	Mirror surface memory control	Function that records the mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch, Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	• Main Body ECU (Cowl Side Junction Block LH) • Position Control ECU and Switch	The mirror surface recording function does not operate	-
	Mirror surface recovery control	Function that moves the mirror surface to the recorded mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch 3. -	Position Control ECU and Switch	The mirror surface recovery function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
			1. Outer Mirror Control ECU 2. Main Body			

Mirror (DRD)	Mirror surface reverse control	Function that tilts the mirror surface downward when the vehicle is moving in reverse.	ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), ECM 3. -	• Main Body ECU (Cowl Side Junction Block LH) • ECT	The reverse shift-linked function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Electric retract/return control	Function that retracts/returns the mirror housing.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), ECM 3. -	• Main Body ECU (Cowl Side Junction Block LH) • ECT	The mirror housing retract/return function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Foot light illumination control	Function that turns on/off the foot light illumination that is on the bottom of the mirror housing.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The foot light illumination turns off (if illuminated, turns off).	-
Wiper (FRN)	Front wiper control	System that operates the wiper HI and LO operation, vehicle speed sensing intermittent wiper function, vehicle speed switching function, washer linked function, and auto wiper.	1. Windshield Wiper ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	With the engine switch on (IG) and the wipers operating with the LO switch on, the intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)		-
			1. - 2. Combination Meter 3. -	Combination Meter	• With the engine switch on (IG) and the wipers operating with the LO switch on, the intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating. • With the engine switch on (IG), the	-

					• washer fluid delay timing becomes fixed. • With the engine switch on (IG), the intervals do not change according to the vehicle speed while the intermittent wiper function is operating.	
Wiper (FRN)	LIN communication control	System that assists the outer wiper function by communication with the windshield wiper ECU.	1. Windshield Wiper ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	With the engine switch on (IG), the disruption value data is routed to the rain sensor. Otherwise, the rain sensor operation depends on the specifications.	-
			1. - 2. Combination Meter 3. -	Combination Meter		-
Navigation (EMV)	Auto dimmer function and forced day screen function	Forced day screen switching, and auto dimmer function control.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. - 3. -	Main Body ECU (Cowl Side Junction Block LH)	The auto dimmer function and forced day screen function do not operate.	-
	Air conditioning function	Displays the air conditioning control screen by using the information from the air conditioning amplifier, and has a control function that notifies the air conditioning ECU of screen switch operating information.	1. - 2. Multi-display 3. -	-	-	-
			1. Air Conditioning Amplifier 2. - 3. -	Air Conditioning Amplifier (air conditioning functions)	• With the engine switch on (IG), the screen is displayed without air conditioning if ACN1S06 is not received for 10 sec. • Panel switch control, screen switch control, and voice control do not operate.	Warning function: The screen displays without the air conditioning. Warning function: Nothing. Behavior: The air conditioning control screen/panel indicator light and set temperature indicator turn on and do not change. Displayed using the EMV.
Navigation (EMV)	Country specification switching function	Function that changes the country specification based on the country specification information received from the vehicle.	1. - 2. Multi-display 3. -	-	-	-
			1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. - 3. -	Main Body ECU (Cowl Side Junction Block LH)	-	-
			1. - 2. Multi-display	-	-	-

			3. -			
	Clearance sonar screen display and clearance sonar cooperative display	System that displays the clearance sonar detection information.	1. Clearance Warning ECU 2. - 3. -	Clearance Warning ECU	The clearance sonar screen display is off (it is determined that the clearance sonar ECU is not present).	Warning function: Nothing. Behavior: Information menu screen "CLEAN SONAR" TSW is not displayed. Displayed using the EMV.
Navigation (EMV)	Clearance sonar screen display and clearance sonar cooperative display	System that displays the clearance sonar detection information.	1. ECM 2. - 3. -	ECT	Shift: Maintains previous value concerning R information, however there is no particular problem (Shift: Maintained in R). It is not possible to make the warning screen not display by shifting to N → R → N consecutively. However, it is possible to switch to the warning screen and cooperative screen (camera) if the normal shift operation is performed. Therefore, there is no problem (Shift: Maintained in a position other than R (default)). It is not possible to make the camera screen not display by shifting to P → N → R when starting. However, it is possible to switch to the warning screen and cooperative screen (camera) if the normal shift operation is performed. Therefore, there is no problem.	-
Navigation (EMV)	Clearance sonar settings	System that sets the operation of the clearance sonar.	1. - 2. Multi-display 3. -	-	-	-
			1. Clearance Warning ECU 2. - 3. -	Clearance Warning ECU	The clearance sonar screen display is off (it is determined that the clearance sonar ECU is not present).	Warning function: Nothing. Behavior: The information menu screen "CLEAN SONAR" TSW is not displayed. Displayed using the EMV.
No. 2 Body ECU (RRJ)	Rear wiper control	System that performs the rear wiper LO speed operation, washer linked function, intermittent wiper function, vehicle speed switching control, and reverse linked control.	1. No. 2 Main Body ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	With the engine switch on (IG), the rear wiper does not stop due to the rear upper door opening during the rear wiper operation.	-
			1. - 2. Combination Meter 3. -	Combination Meter	With the engine switch on (IG), the intermittent wiper function does not operate while the wipers are stopped due to the vehicle speed switching control not operating during the rear wiper operation.	-
			1. - 2. ECM 3. -	ECM	With the engine switch on (IG), the rear wiper does not activate due to the reverse operation control not operating when the front wiper is operating.	-
			1. - 2. Windshield Wiper ECU 3. -	Windshield Wiper ECU		-
			1. No. 2 Main Body ECU 2. - 3. -	-	-	-

	Lower door closer control	System that independently controls the internal closer motors (RH, LH) of the rear lower door at the same time.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Does not activate release, and does not release the lower door latch.	-
			1. - 2. Combination Meter 3. -	Combination Meter	With the engine switch on (IG), does not activate release, and does not release the lower door latch.	-
No. 2 Body ECU (RRJ)	Illumination control	System that fades the inside handle illumination, and step illumination in and out.	1. No. 2 Main Body ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Does not turn on the inside handle illumination or step illumination.	-
	LIN communication control	System that routes the CAN data to the overhead module using LIN communication.	1. No. 2 Main Body ECU 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Routes the disrupted value data to the overhead module.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)		-
Variable Gear Ratio Steering (VGR)	VGRS system	System that changes the steering gear ratio based on the vehicle speed information and steering angle.	1. Steering Control ECU 2. - 3. Steering Control ECU	-	-	-
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor	VGRS system does not operate.	Master warning light illuminates and display is shown on multi-information display (meter display).
			1. - 2. ECM 3. -	ECM		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)		
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. Clearance Warning ECU 2. - 3. -	-	-	-
			1. - 2. Air Conditioning Amplifier 3. -	Air Conditioning Amplifier	The sonar system functions normally. Maintains distance by maintaining the outside temperature at 25°C (77°F).	-
			1. - 2. Windshield Wiper ECU 3. -	Windshield Wiper ECU	The sonar system functions normally. Operates the obstacle judgments with the wiper off (except in rain).	-
			1. - 2. ECM	ECM	If data received from the ECM is lost, the system is inoperable as control is performed with the	-

			3. -		is performed with the shift position data set to P.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The clearance sonar main switch indicator is maintained with the brightness as the previous value.	-
					The sonar system functions normally. Control is maintained with the country specification information as the previous value (with or without a warning sound).	-
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. - 2. Combination Meter 3. -	Combination Meter	If data received from the meter ECU is lost, the system is inoperable as the clearance sonar is controlled at 20 km/h (12.5 mph) or more.	-
			1. - 2. Multi-display 3. -	Multi-display	The sonar system functions normally. The clearance sonar customize information is maintained.	-
					The sonar system functions normally. Information on the camera presence is maintained.	-
					The sonar system functions normally. Notification on the screen that the clearance sonar is off is disabled.	-
AFS	Leveling	System that adjusts the beam axis direction of the headlights vertically according to the pitch angle requested by the wheel speed sensor and vehicle height sensor.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	• Leveling control continues. • Swivel control centers the headlights.	AFS OFF indicator light blinks.
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• Leveling control continues with the vehicle speed set to 0 km/h (0 mph). • Swivel control centers the headlights.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Steering Control ECU 3. -	Steering Control ECU	-	-
			1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	• Leveling control continues. • Swivel control	

AFS	Swivel	System that measures the turning diameter based on the wheel speed and steering angle, and then moves the headlights left and right according to the turning diameter.	3.		centers the headlights.	AFS OFF indicator blinks.
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• Leveling control continues with the vehicle speed set to 0. • Swivel control centers the headlights.	
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -	• Steering Angle Sensor • Steering Control ECU	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Steering Angle Sensor 3. -	Steering Angle Sensor	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	• Level control continues. • Swivel control centers the headlights.	
	AFS indicator	Monitors for AFS system malfunctions and blinks the indicator of the meter when a malfunction is detected.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. AFS ECU (Headlight Swivel ECU)	-	-	-
			1. - 2. Combination Meter 3. -	Combination Meter	-	-
Rear View Monitor (DS2)	Rear view monitor system	System that displays the expected course lines in the back camera image of the display that links to the steering angle to assist in parking (garage parking, parallel parking, etc.).	1. Parking Assist ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECT	The rear view monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -	• Steering Angle Sensor • Steering Control ECU		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
	Wide view front and side monitor system	System that displays the front and side camera image on the display (the side monitor is linked with the steering angle to display the expected course lines).	1. Parking Assist ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECT	The wide view front and side monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -	• Steering Angle Sensor • Steering Control ECU		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
		When the VSC system suddenly brakes and/or the vehicle is unable to be	1. Seat Belt Control ECU 2. - 3. Seat Belt Control ECU	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control	Master Cylinder Solenoid (Skid Control	Detects that communication with the	-

		controlled (while spinning or drifting), the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened (receives the buckle switch information from the center airbag sensor) by tightening the seat belts to increase the occupant restraint.	(Skid Control ECU) 3. -	ECU)	seat belt control ECU is lost. Control is stopped.	
	PCS (brake linked)		1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Detects that communication with the seat belt control ECU is lost. Control is stopped (brake linked).	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
Pre-crash Seat Belt (PSB)	PCS (millimeter wave radar sensor linked)	When ACC determines that a collision is unavoidable based on the information from the millimeter wave radar sensor, the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened by tightening the seat belts to increase the occupant restraint.	1. Seat Belt Control ECU 2. - 3. -	-	-	-
			1. - 2. Distance Control ECU 3. -	Distance Control ECU	Detects that communication with the seat belt control ECU is lost. Control is stopped (millimeter wave radar sensor linked).	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
	Meter display request	Receives the seat belt control ECU malfunction information or ACC malfunction information, and requests the display of the indicator to the meter ("PCS" indicator turn off/turn on request). **HINT:** As long as there is a signal in the ACC frame, the blinking request outputs an illumination request to the combination meter. When communication with the ACC frame is lost, it is determined that a malfunction exists and an illumination request is output along with the malfunction. The priority order is determined by the combination meter. The illumination is the first priority.	1. Seat Belt Control ECU 2. - 3. -	-	-	Exclusive indicator "PCS" turns on.
			1. - 2. Combination Meter, Master Cylinder Solenoid (Skid Control ECU) 3. -	• Combination Meter • Master Cylinder Solenoid (Skid Control ECU) • Distance Control ECU		
			1. - 2. Combination Meter, Distance Control ECU 3. -	• Combination Meter • Distance Control ECU		
	2 digit DTC output	When terminal TC of the DLC3 is connected to terminal GND, a 2 digit DTC (BCD) is displayed by the blinking of "PCS".	1. Seat Belt Control ECU 2. - 3. -	-	-	-
			1. - 2. ECM 3. -	ECM	-	-
	Speedometer	Indicates the vehicle speed according to the vehicle speed signal.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	The speedometer indicates 0 km/h (0 mph).	-
			1. Combination Meter			

	Tachometer	Indicates the engine speed according to the engine speed signal.	Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The tachometer indicates 0 rpm.	-
Meter (MET)	ODO/TRIP meter	Calculates and displays the driven distance according to the vehicle speed pulse signal calculated value.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	• The ODO/TRIP meter stops calculating and the last displayed value continues to be displayed. • Optitron meter: In multi-display. • Regular analog meter: Independent LCD.	-
	Engine coolant temperature gauge	Indicates the coolant temperature according to the engine coolant temperature signal.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The coolant temperature gauge displays less than the C mark.	-
Meter (MET)	Fuel gauge	Indicates the remaining fuel according to the fuel sender (direct line) input (uses the CAN communication (the vehicle speed signal) to determine if the vehicle is being driven or not).	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	Control is performed with the speed input as 0 km/h (0 mph).	-
	Oil pressure gauge	Indicates the engine oil pressure according to the oil pressure sender (direct line) input (uses the CAN communication to determine if the engine is on or off by the engine speed signal).	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The oil pressure gauge displays less than the L mark.	-
	Shift lever indicator	The shift information is displayed according to the shift position signal.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM 3. -	ECM	The shift lever indicator and shift position in the multi-information display turns off.	-
Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body	• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	Conditions for the seat belt buzzer not sounding: When VSC1S03 is lost: Does not sound. When BDB1S01 is lost: Does not sound. When ECT1S90 is lost: Control is performed with B_R=0b.	-
				• Master Cylinder Solenoid	Conditions for the seat belt buzzer sounding: When VSC1S03 is lost: Control is performed	

(MET)		according to the various signals that are input.	ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	(Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost: Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
				• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	The door ajar driving warning buzzer does not sound.	-
Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various signals that are input.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The light reminder buzzer does not sound.	-
				Main Body ECU (Cowl Side Junction Block LH)	The sliding roof buzzer condition is maintained (until bus sleep).	-
			1. - 2. ECM 3. -	ECM	The A/T reverse buzzer does not sound.	-
				ECM	• The sports shift reject buzzer condition is maintained. • The radar cruise low speed buzzer does not sound. • The radar cruise warning buzzer does not sound.	-
			1. - 2. 4WD Control ECU 3. -	4WD Control ECU	The last state of the 4WD buzzer is maintained.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	The door control transmitter buzzer (single push, continuous push, and intermittent push) does not sound. The immobiliser verification completion notification buzzer does not sound.	-
			1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Master Cylinder (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	The ABS indicator turns on.	The ABS indicator turns on.
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side	• Master Cylinder Solenoid (Skid Control	Brake warning light When VSC1S95 is lost: Illuminates.	

Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	ECU) • Main Body ECU (Cowl Side Junction Block LH)	When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	SLIP indicator light condition is maintained. VSC OFF indicator light condition is maintained. The downhill assist control indicator light condition is maintained. The CRAWL indicator light condition is maintained.	-
				Master Cylinder Solenoid (Skid Control ECU)	Control is performed with the speed condition as 0 km/h (0 mph) for the following display: FUEL FILTER clog indicator. The odometer calculation is stopped for the following display conditions: T-BELT indicator.	-
			1. - 2. AFS ECU 3. -	AFS ECU	Maintains the AFS OFF indicator condition.	-
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	When there is determined to be a disruption, the following indicators operate as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • DOOR indicator light • Driver side seat belt indicator light	-
				Main Body ECU (Cowl Side Junction Block LH)	When there is determined to be a disruption, the following indicators operate as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • FRONT FOG indicator light • REAR FOG indicator light • TAIL indicator • HEAD indicator • BEAM indicator	-
			1. - 2. Parking Assist ECU 3. -	Parking Assist ECU	CLEARANCE SONAR indicator light turns off.	-
			1. - 2. ECM	ECM	The A/T P warning light condition is maintained. The ECT PWR indicator light condition is maintained. The 2nd START indicator light condition	-

			2. ECM 3. -	ECM	Indicator light condition is maintained. The CHARGE warning light condition is maintained. The CRUISE main indicator light condition is maintained.	
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. ECM, 4WD Control ECU 3. -	• ECM • 4WD Control ECU	The A/T P warning light conditions are maintained.	-
			1. - 2. 4WD Control ECU 3. -	4WD Control ECU	The center differential lock indicator light turns off. The 4LO indicator light turns off.	-
			1. - 2. Seat Belt Control ECU 3. -	Seat Belt Control ECU	The PCS indicator light condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	Suspension Control ECU	The ACCESS MODE indicator light • When the engine switch is on (IG): The condition is maintained. • When the engine switch is off: Turns off.	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	The SRS warning light turns on.	The SRS warning indicator turns on.
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, radar cruise, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	• ECM • Master Cylinder Solenoid (Skid Control ECU)	Displays a blank screen and drive monitor operation and calculation of the following values stops: instant fuel economy, average fuel economy after refueling, distance to empty, average vehicle speed after engine start, driving distance after engine start.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Parking brake drag warning display conditions: When VSC1S03 is lost: Control is performed with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost: Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid	• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	The CRAWL system display is maintained. The VSC display is maintained.	-

			1. - 2. Control ECU 3. -			
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)	Control is performed with the speed condition as 0 km/h (0 mph) for the following displays: Door open while driving display, FUEL FILTER clog display. ODO calculation stops for the following display conditions: Oil maintenance display, T-BELT display.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	• Master Cylinder Solenoid (Skid Control ECU) • Main Body ECU (Cowl Side Junction Block LH)	Conditions for the door open display and door open while driving display: VSC1S03: Control is performed with the vehicle speed as 0 km/h (0 mph). BSB1S01: Display state is maintained. BDB1S08: No display.	-
			1. - 2. Air Conditioning Amplifier 3. -	Air Conditioning Amplifier	The outside temperature display is "E".	The outside temperature display is "E" (in the meter).
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The shift lever display turns off.	-
				Main Body ECU (Cowl Side Junction Block LH)	The door control transmitter display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off.	-
				Main Body ECU (Cowl Side Junction Block LH)	The sliding roof open display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off.	-
			1. - 2. Parking Assist ECU 3. -	Parking Assist ECU	The clearance warning sonar display condition is maintained.	-
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. ECM 3. -	ECM	The A/T shift position display turns off.	-
				ECM	The A/T OIL TEMP display state is maintained.	-
			1. - 2. Seat Belt Control ECU 3. -	Seat Belt Control ECU	The PCS display condition is maintained.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	The door control transmitter display condition is maintained. The security display condition is maintained. The door control transmitter unlock mode display condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	Suspension Control ECU	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.

			1. - 2. Steering Control ECU 3. -	Steering Control ECU	"Check VGRS System" is displayed.	"Check VGRS System" is displayed.
	Illumination function	Controls dimming and meter illumination on/off according to the CAN signals.	1. Combination Meter 2. - 3. Combination Meter	Combination Meter	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Daytime brightness.	-
			1. - 2. ECM 3. -	ECM	-	-
Meter (MET)	Passenger seat belt warning indicator	Blinks the passenger seat belt warning indicator according to the CAN signals.	1. Combination Meter 2. - 3. Combination Meter	-	-	-
			1. - 2. Center Airbag Sensor 3. -	Center Airbag Sensor	The passenger seat belt warning indicator condition is maintained.	-
			1. - 2. - 3. Multi-display	Multi-display	-	-
Body (BDB)	Power supply switching control	The system that switches the power supply between +B, ACC, and IG.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. -	ECM	The forced engine switch off function does not operate.	-
				Combination Meter	When the power supply switching conditions are met, power supply switching control is permitted. When the power supply condition IG2 start/stop switch turns from off to on, the power supply condition is changed to IG1, and the IG relay output stops.	-
Body (BDB)	Security	The system that operates the warning when a theft is detected.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Certification ECU (Smart Key ECU)	The security control does not operate (The headlight/taillight warning output, horn warning output, and hazard warning light output do not operate). The forced door lock function lock output does not operate. The dome light warning control does not operate. The lighting system answer back control does not operate. (The taillight warning output and hazard warning light output do not operate).	-
				Certification ECU (Smart Key ECU)	When the security warning is operating, warning output stops during hazard warning light output.	-
				Certification ECU (Smart Key ECU)	When the security warning is operating, the dome light turns off during dome light illumination.	-
		The system that operates the lock/unlock, engine switch, back door opener, warning, etc. by pressing	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)		Entry and start/wireless control does not	

	Entry and start/wireless	the switch when the door control transmitter is within the vehicle detection area. The system that operates the vehicle lock/unlock, panic, back door opener, etc. by remote control.	2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Certification ECU (Smart Key ECU)	operate. The door lock/unlock control and entry and start back door opener control do not operate.	-
Body (BDB)	Vehicle speed linked auto lock	The system that locks the doors when the vehicle speed is 20 km/h (12 mph) or more.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	ECM	When the vehicle speed linked auto lock signal is lost, operation is permitted.	-
				Combination Meter	The vehicle speed linked auto lock does not operate.	-
	Shift linked auto lock/unlock	The system that unlocks all the doors when the shift lever is moved to P, and locks all doors when the shift lever is moved from P to another position while the engine is running.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	ECM	The shift linked auto lock/unlock function does not operate.	-
				Combination Meter	When the shift linked auto lock/unlock signal is lost, operation is permitted.	-
	DRL	The system that illuminates lights when driving the vehicle to improve the visibility of pedestrians and other vehicles in the daytime.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	ECM	DRL control does not operate. **HINT:** If operated once, the operation continues until the engine switch is turned off, even if the signal is lost.	-
	Boarding	System that controls the front (rear) dome light, door mirror foot light, center console spot light, and interior foot light.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Certification ECU (Smart Key ECU), Combination Meter, ECM, Parking Assist ECU 3. Outer Mirror Control ECU, No. 2 Main Body ECU, Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus)	Certification ECU (Smart Key ECU)	Front (rear) dome light, door mirror foot light, center console spot light, and interior foot light control does not operate.	-
				Combination Meter	While the interior foot light is illuminated, the center console does not turn off.	-
				ECM	When the interior foot light is illuminated, the dimmer operates. When the engine switch is on (IG), the door mirror foot light does not operate by the manual unlock.	-
				Parking Assist ECU	When the side monitor is operating, the door mirror foot light can illuminate.	-
			1. Power Back Door Unit			

	Back door	System that operates the hazard warning lights as an answer back when the power back door begins to operate.	1. Power Back Door Unit (Power Back Door ECU) 2. Power Back Door Unit (Power Back Door ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	Power Back Door Unit (Power Back Door ECU)	The hazard warning light answer back does not operate when the back door begins to operate.	-
	Back door opener	The system that releases the door latch (turns opener motor on) by turning on the switch built into the outside door handle.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	Combination Meter	Prohibits the back door opener control.	-
Body (BDB)	One motion power back door opener	System that unlocks and opens the back door in one motion when the wireless back door opening operation is performed.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Power Back Door Unit (Power Back Door ECU) 3. Power Back Door Unit (Power Back Door ECU)	Power Back Door Unit (Power Back Door ECU)	Back door opener control does not operate.	-
	Display automatic dimmer control	System that controls the brightness of the interior display/indicators, etc. only during twilight and nighttime by determining the time of day and using the light sensor signal.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Windshield Wiper ECU, No. 2 Main Body ECU, ECU, Combination Meter, Multi-display, Air Conditioning Amplifier, Clearance Warning ECU	Combination Meter	Operates the display automatic dimmer control when the tail cancel switch is on. When the value of the light sensor illumination intensity signal is less than the display dimmer value, the brightness of the vehicle interior display/indicator is dimmed.	-
	Power window	The system that operates power window control based on the request from wireless/entry and start control.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. -	Certification ECU (Smart Key ECU)	Power window control does not operate. Power window control stops during wireless/entry power window control operation.	-
			1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-	-
			1. - 2. Main Body ECU (Cowl		• The entry lock/unlock does not operate. • The entry back door does not operate. • The entry	

Verification (IDT)	Entry function	Entry and start/lock/back door/warning, etc.	Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	and start warning message does not operate. • The key lock-in prevention function does not operate. • The entry illumination does not operate.	-
				Main Body ECU (Cowl Side Junction Block LH)	Package default setting.	-
			1. - 2. Combination Meter 3. -	Combination Meter	The vehicle speed is determined to be 0 km/h (0 mph).	-
				Combination Meter	-	-
	Wireless buzzer function	The wireless buzzer sounding control.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	Does not sound even though there is a wireless buzzer request.	-
				Main Body ECU (Cowl Side Junction Block LH)	Package default settings.	-
			1. - 2. Suspension Control ECU 3. -	Suspension Control ECU	Does not sound even though there is an access mode warning buzzer request.	-
Verification (IDT)	Immobiliser function	The immobiliser control by the warning and remote engine start.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-
			1. - 2. ECM 3. -	ECM	The engine switch is forcibly turned off.	-
	Wireless function	Wireless electric wave information transmission.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	-	-
	Security function	Security alarm control.	1. Certification ECU (Smart Key ECU) 2. - 3. Certification ECU (Smart Key ECU)	-	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Main Body ECU (Cowl Side Junction Block LH)	The alarm is not unset. The alarm is not set.	-
			1. - 2. ECM 3. -	ECM	The alarm is not unset by the engine start.	-
			1. Network			

Movement Control Bus (CGW)	Movement control bus monitor function	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Seat Belt Control ECU 3. -	Seat Belt Control ECU	The reception interval counter (RAM and CAN controller initialization).	-
			1. Network Gateway ECU (Movement Control Bus) 2. Distance Control ECU 3. -	Distance Control ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Clearance Warning ECU 3. -	Clearance Warning ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Parking Assist ECU 3. -	Parking Assist ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Steering Angle Sensor 3. -	Steering Angle Sensor		
			1. Network Gateway ECU (Movement Control Bus) 2. Suspension Control ECU 3. -	Suspension Control ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Master Cylinder Solenoid (Skid Control ECU)		
			1. Network Gateway ECU (Movement Control Bus) 2. Yaw Rate Sensor 3. -	Yaw Rate Sensor		
			1. Network Gateway ECU (Movement Control Bus) 2. Steering Control ECU 3. -	Steering Control ECU		
			1. Network Gateway ECU (Movement Control Bus) 2. 4WD Control ECU	4WD Control ECU		

			3. -			
Movement Control Bus (CGW)	Movement control bus monitor function	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Parking Assist ECU, Master Cylinder Solenoid (Skid Control ECU), 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Distance Control ECU, Steering Control ECU, Seat Belt Control ECU, Suspension Control ECU 3. -	• Parking Assist ECU • Clearance Warning ECU • Master Cylinder Solenoid (Skid Control ECU) • 4WD Control ECU • Steering Angle Sensor • Yaw Rate Sensor • Distance Control ECU • Steering Control ECU • Seat Belt Control ECU • Suspension Control ECU	The reception interval counter (RAM and CAN controller initialization).	-

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FAIL-SAFE FUNCTION

a. When communication fails in any of the main wires (communication lines) due to a short circuit or other causes, the fail-safe function, which is specified for each system, operates to prevent the system from malfunctioning.

b. The table below shows the effects on each system when communication is impossible. For further details, refer to each system.

System	Function	Control Description	1. Control Master 2. System Related 3. Control Actuator	Fail-safe Function System Behavior	Indicator and Buzzer Behavior or User Notification
Airbag (ABG)	TC DTC/output service	When TC is on, DTCs (warning light turn on/turn off request signals) are output.	1. Center Airbag Sensor 2. - 3. Combination Meter	-	-
	Event recorder (EDR)	Records the vehicle information during a collision (the vehicle speed, accelerator pedal opening angle, shift position, etc.).	1. Center Airbag Sensor 2. Combination Meter, ECM 3. -	-	-
	SRS warning light control	Turns the SRS warning light on/off.	1. Combination Meter 2. Center Airbag Sensor 3. -	The SRS warning light turns on.	-
	Information output function (Refer to related system for control description details)	The collision detection signal stops the fuel pump during a collision.	1. ECM 2. Center Airbag Sensor 3. -	-	-
		The driver/passenger seat buckle switch stops PSB control when the seat belt is not fastened.	1. Seat Belt Control ECU 2. Center Airbag Sensor 3. -	-	-
		The passenger seat occupant detection signal turns on the seat belt warning light when the seat belt is not fastened.	1. Combination Meter 2. Center Airbag Sensor 3. -	-	-
	Warning light control	BRL, ABS, VSC-OFF, SLIP and CRAWL light control (turn on/off, blink, DTC output).	1. Master Cylinder Solenoid (Skid Control ECU) 2. - 3. Combination Meter	-	-
	ABS control	ABS control according to the G sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. Yaw Rate Sensor 3. Master	The ABS does not operate.	ABS warning light turns on.

			Cylinder Solenoid (Skid Control ECU)		
Brake (VSC)	TRC control	Brake control and engine torque control during acceleration slip.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM, 4WD Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	TRC does not operate.	VSC warning light turns on.
	VSC control	VSC control according to the yaw rate and steering angle sensor signal.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM, 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Steering Control ECU 3. Master Cylinder Solenoid (Skid Control ECU)	VSC does not operate.	ABS and VSC warning lights turn on.
Brake (ABS)	ACC control	The brake control according to the request from the distance control ECU via the ECM.	1. Master Cylinder Solenoid (Skid Control ECU) 2. ECM 3. Master Cylinder Solenoid (Skid Control ECU)	ACC does not operate.	VSC warning light turns on.
			1. - 2. ECM 3. ECM	ACC control is canceled.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
			1. - 2. Master Cylinder Solenoid		

Dynamic Radar Cruise Control (ACC)	ACC	Acceleration/deceleration control when following the vehicle in front.	(Skid Control ECU) 3. Master Cylinder Solenoid (Skid Control ECU)	-	-
			1. Distance Control ECU 2. - 3. -	-	-
			1. - 2. Steering Control ECU 3. -	-	-
			1. - 2. Combination Meter 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	-	-
Dynamic Radar Cruise Control (ACC)	PCS	Seat belt and brake control immediately before a collision.	1. - 2. ECM 3. -	Radar linked PCS control stops.	• "Check Cruise Control System" is displayed on the multi-information display. • The master warning light turns on and the warning buzzer sounds.
			1. - 2. Steering Angle Sensor 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. Master Cylinder Solenoid (Skid Control ECU)	PCS control stops.	
			1. Distance Control ECU 2. - 3. -	-	-
			1. - 2. Steering Control ECU 3. -	-	-
			1. - 2. - 3. Seat Belt Control ECU	-	-
			1. Multiplex Tilt and Telescopic ECU 2. Position Control ECU	The power tilt and power telescopic steering column system does not operate.	-
				Memory restore control does not operate.	-

Tilt and Telescopic (TAT)	Microcomputer preset steering	Automatically begins the steering auto away/auto return when the engine switch is turned on (IG) or off.	and Switch, Main Body ECU (Cowl Side Junction Block LH) (V Bus), Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Combination Meter 3. Multiplex Tilt and Telescopic ECU	Auto return/auto away control does not operate.	-
Mechanical 4WD (FWM)	Switching control between High and Low	Switching between High and Low is prohibited during the following conditions: 1) When there is a vehicle speed violation, engine speed violation, or large difference in wheel speeds, 2) when the shift lever is not in N, or 3) when the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	Switching between High and Low is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if switching between High and Low can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or 4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Neutral switching control	Switching to neutral is prohibited during the following conditions: 1) When there is a vehicle speed violation or engine speed violation, or 2) when the shift lever is not in N or the clutch is not on.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	Switching to neutral is prohibited.	4LO indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Center differential lock switching control (between Free and Lock)	Center differential lock switching is prohibited when there is a vehicle speed violation or large difference in wheel speeds.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Center differential lock switching is prohibited. **HINT:** When there is a wheel speed malfunction, function No. 7 is controlled to determine if center differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	Rear differential lock	Rear differential lock	1. 4WD Control ECU 2. - 3. -	-	-
			1. -	Rear differential lock switching is prohibited. **HINT:**	

Mechanical 4WD (FWM)	switching control (between Rr Free and Rr Lock)	switching is prohibited when there is a vehicle speed violation.	2. Master Cylinder Solenoid (Skid Control ECU) 3. -	When there is a wheel speed malfunction, function No. 7 is controlled to determine if rear differential lock switching can be performed.	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
	L4F switching control	Switching to L4F is prohibited and the operation is performed with L4L when VSC is malfunctioning.	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	L4F switching is prohibited and the operation is performed with L4L.	No user notification.
	Specialized control when temperature is low	Changes the ACT conductive current value according to the temperature (low temperature use or normal temperature use).	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. Air Conditioning Amplifier, ECM 3. -	Changes the temperature used for the calculation of ACT temperature adjustment control.	No user notification.
Mechanical 4WD (FWM)	Specialized control during wheel speed failure	When there is a wheel speed failure, switching is permitted only when specified conditions are met (the wheel speed malfunction is 1 wheel or more and 3 wheels or less, the brake is applied, the engine speed is low, and all normal wheel speeds are low).	1. 4WD Control ECU 2. - 3. -	-	-
			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	If the wheel speed malfunction is 1 wheel or more and 3 wheels or less, only when the wheel speed failure specified conditions are met, switching is permitted. When 4 wheels are malfunctioning, switching is prohibited (the wheel speed failure specialized control does not operate).	Center differential lock indicator light blinks (at 0.2 sec. intervals) or center differential lock and 4LO indicator lights blink (at 0.2 sec. intervals).
Mechanical 4WD (FWM)	Indicator and buzzer signal output	Signal output of the indicator and buzzer condition that indicates the actuator position and switching status.	1. 4WD Control ECU 2. - 3. -	-	-
	High-Low actuator failure signal output	When the High-Low actuator limit switch is malfunctioning, a signal is output.	1. 4WD Control ECU 2. - 3. -	-	-
	C/C cancel signal output	Outputs a cruise control cancel signal when center differential switching is not completed even though 5 sec. or more have elapsed from the start of switching.	1. 4WD Control ECU 2. - 3. -	-	-
	L4 status signal condition output	A signal is output when switching between the L4F and L4L position is completed.	1. 4WD Control ECU 2. - 3. -	-	-
	C/D lock condition signal output	CDL switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-

	R/D lock condition signal output	R switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-
	T/F N condition signal output	NP switch condition is output.	1. 4WD Control ECU 2. - 3. -	-	-
Gasoline Engine	Engine control system	Adjusts the fuel injection volume according to each sensor value and controls the engine.	1. ECM 2. - 3. -	-	-
	ECT control system	Changes the ECT shift position based on the vehicle speed and torque.	1. ECM 2. - 3. -	-	-
	Cruise control system	Maintains a constant vehicle speed and drives the vehicle.	1. ECM 2. - 3. -	-	-
Power Back Door (BKD)	Power back door operation conditions	Prohibits the power back door operation according to the vehicle state (the engine switch, shift position, vehicle speed, and lock position).	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) Main Body ECU (Cowl Side Junction Block LH) (V Bus), Combination Meter, ECM 3. -	The power back door system does not operate (when the start signal is received, the buzzer sounds a warning that the conditions are not met).	-
	Power back door operation requests	Receives the power back door close/open operation trigger from the operation switch or wireless switch and begins the power back door operation.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-
			1. - 2. Main body ECU (Cowl Side Junction Block LH) (MS Bus), Certification ECU (Smart Key ECU) 3. -	The power back door system does not operate.	-
	Power back door	Sends the hazard illumination request when	1. Power Back Door Unit (Power Back Door ECU) 2. Main Body ECU (Cowl Side Junction Block LH) 3. Power Back	When the back door operation begins, the hazard warning lights may not illuminate.	-

	operation status output	the power back door operation begins and back door unlock request.	Door Unit (Power Back Door ECU)		
			1. - 2. - 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	-	-
	DTC transmission/reception	Performs the power back door customization, malfunction detection, Active Test, etc.	1. Power Back Door Unit (Power Back Door ECU) 2. - 3. Power Back Door Unit (Power Back Door ECU)	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	DTC function does not operate.	-
Active Height Control Suspension (4-WHEEL AHC)	Damping force control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the damping force of the shock absorbers.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-
			1. - 2. ECM 3. -	Damping force control is prohibited.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -		-
			1. - 2. Steering Angle Sensor 3. -		-
			1. - 2. Steering Control ECU 3. -		-
Active Height Control Suspension (4-WHEEL AHC)	Spring switching control is prohibited	Based on the information from the master cylinder solenoid (skid control ECU), steering control ECU, yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and changes the front spring constant value (ON/OFF).	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Spring switching control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -		
			1. -		

			2. Steering Control ECU 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. Suspension Control ECU 2. - 3. Suspension Control ECU	-	-
			1. Suspension Control ECU 2. ECM 3. Suspension Control ECU	Vehicle height control is prohibited.	-
			1. - 2. ECM 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V bus) 3. -	Vehicle height control is prohibited.	-
			1. - 2. 4WD Control ECU 3. -	-	-
Active Height Control Suspension (4-WHEEL AHC)	Vehicle height control	Based on the information from the ECM, master cylinder solenoid (skid control ECU), steering control ECU, 4WD, main body ECU (cowl side junction block LH), yaw rate sensor and steering angle sensor, detects the driving conditions, road surface conditions, etc. and restricts vehicle height changes.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Vehicle height control is prohibited.	"Check 4-WHEEL AHC System" illuminates.
			1. - 2. Steering Angle Sensor 3. -		
			1. - 2. Steering Control ECU 3. -		
			1. - 2. Yaw Rate Sensor 3. -		
		• Air conditioning vent temperature control according to the engine coolant temperature information. • Air conditioning vent switching control according to the engine coolant temperature information.		Coolant information: Control is performed by	

Air Conditioner (ACN)	Air conditioning system	• Air conditioning vent airflow amount control according to the engine coolant temperature information. • Compensation of the engine coolant temperature information according to the engine type. • Compressor lock judgment value switching according to the engine type.	1. Air Conditioning Amplifier 2. ECM 3. -	using the default value (80°C (176°F). Engine type: The condition is maintained (when unconfirmed, control is performed by using the default (507F)).	-
Air Conditioner (ACN)	Air conditioning system	Compressor lock judgment by NE.	1. Air Conditioning Amplifier 2. ECM 3. -	NE: Control is performed by using the default value (0 km/h (0 mph)).	-
		The electric load control condition is limited according to the load control level.	1. Air Conditioning Amplifier 2. ECM 3. -	Load control: No load control (normal control).	-
		• Activation control according to the viscous heater activation permission information. • Activation control according to the PTC heater activation permission information.	1. Air Conditioning Amplifier 2. ECM 3. -	Permission information: Control is performed according to the operation prohibition state.	-
		• Air conditioning system operation status control and panel switch IND output control according to panel switch operation information. • Exhaust gas automatic air presence judgment and circulation control switching according to exhaust gas automatic air presence information.	1. Air Conditioning Amplifier 2. Display and Navigation Module Display 3. -	None (Air conditioning system operation condition switching is not possible).	-

Air Conditioner (ACN)	Air conditioning system	Dimmer information output to the LIN panel according to the display dimmer information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Condition is maintained (after the reset, the dimmer condition is fixed).	-
		PTC control switching based on the headlight illumination information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	PTC control (the headlight flickering countermeasure) is not performed.	-
		A/C control pattern switching based on the country specific information.	1. Air Conditioning Amplifier 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Condition is maintained (when unconfirmed, control is performed according to the default value).	-
		Air conditioning system operation condition switching and the outside temperature display output adjustment according to the vehicle speed information.	1. Air Conditioning Amplifier 2. Combination Meter 3. -	• Decrease in reliability and consistency of the exterior temperature value of the outside temperature display. • Decrease in the optimum level of A/C vent airflow amount adjustment.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. Steering Angle Sensor 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	• Initialization condition: Data output response request (STS=0). • When the trigger frame VSC 1S01 is not received from the master cylinder solenoid (skid control ECU), the data output response of the output response request changes from STS=0 to STS=1.	-
				Communication is stopped after	

				transmission is sent 4 times at 12 msec. intervals as the data output response non-request STS=0. When the above conditions are met, the sensor internal zero point memory invalid SAZS=1 and SFRZ=previous value + 1 during the next transmission.	-
Steering Sensor (STR)	Steering angle detection function	The steering angle change information is output to the CAN according to the steering wheel operation.	1. Steering Angle Senso 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	-	Depends on the partner ECU specification.
Seat (DST)	Seat system	Memory restore function	1. Position Control ECU and Switch 2. - 3. Position Control ECU and Switch	-	-
			1. - 2. ECM 3. -	The memory restore function does not operate.	-
			1. - 2. ECM 3. -	The memory restore function does not operate.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	The memory restore function does not operate.	-
			1. - 2. Outer Mirror Control ECU 3. -	The memory restore function does not operate.	-
		Memory call function	1. Position Control ECU and Switch 2. - 3. Position Control ECU and Switch	-	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	The memory call does not operate.	-
		Tilt and telescopic operation permission function	1. Position Control ECU and Switch 2. - 3. -	-	-
			1. - 2. Multiplex Tilt and Telescopic ECU 3. Multiplex Tilt and Telescopic ECU	The tilt and telescopic operation does not operate.	-
			1. Outer Mirror		

Mirror (DRD)	Mirror surface manual control	Function that adjusts the mirror surface with the manual switch.	Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	The mirror surface manual adjustment function does not operate (stops if there is a disruption during the operation).	-
	Mirror surface memory control	Function that records the mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch, Main Body ECU (Cowl Side Junction Block LH) 3. -	The mirror surface recording function does not operate	-
	Mirror surface recovery control	Function that moves the mirror surface to the recorded mirror surface position.	1. Outer Mirror Control ECU 2. Position Control ECU and Switch 3. -	The mirror surface recovery function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Mirror surface reverse control	Function that tilts the mirror surface downward when the vehicle is moving in reverse.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	The reverse shift-linked function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Electric retract/return control	Function that retracts/returns the mirror housing.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	The mirror housing retract/return function does not operate (if disrupted during the operation, the function does not operate from the next trigger condition).	-
	Foot light illumination control	Function that turns on/off the foot light illumination that is on the bottom of the mirror housing.	1. Outer Mirror Control ECU 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	The foot light illumination turns off (if illuminated, turns off).	-
			1. Windshield Wiper ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	With the engine switch on (IG) and the wipers operating with the LO switch on, the intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -		-
				• With the engine switch on (IG) and the wipers operating with the LO switch on, the	

Wiper (FRN)	Front wiper control	System that operates the wiper HI and LO operation, vehicle speed sensing intermittent wiper function, vehicle speed switching function, washer linked function, and auto wiper.	1. - 2. Combination Meter 3. -	intermittent wiper function does not operate while the vehicle is stopped due to the vehicle speed switching control not operating. • With the engine switch on (IG), the washer fluid delay timing becomes fixed. • With the engine switch on (IG), the intervals do not change according to the vehicle speed while the intermittent wiper function is operating.	-
Wiper (FRN)	LIN communication control	System that assists the outer wiper function by communication with the windshield wiper ECU.	1. Windshield Wiper ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	With the engine switch on (IG), the disruption value data is routed to the rain sensor. Otherwise, the rain sensor operation depends on the specifications.	-
			1. - 2. Combination Meter 3. -		-
Navigation (EMVN)	Air Conditioner Control	Controls all Air Conditioner functions	1. Display and Navigation Module Display 2. Air Conditioning Amplifier 3. -	Clears display screens that do not respond to SW	Displayed on-screen
	Clearance Sonar Settings / Communication	Displays Sonar Status, and issues audible warnings	1. Display and Navigation Module Display 2. ECM, Parking Assist ECU 3. -	Clears display screens that do not respond to SW	Icon disappears
	Destination ID	Determines the vehicle destination, and decides the display language, time zones, etc	1. Display and Navigation Module Display 2. Main Body ECU (Cowl Side Junction	Destination data saved prior to system stoppage is used	Cannot detect

			Block LH) 3. -		
No. 2 Body ECU (RRJ)	Rear wiper control	System that performs the rear wiper LO speed operation, washer linked function, intermittent wiper function, vehicle speed switching control, and reverse linked control.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	With the engine switch on (IG), the rear wiper does not stop due to the rear upper door opening during the rear wiper operation.	-
			1. - 2. Combination Meter 3. -	With the engine switch on (IG), the intermittent wiper function does not operate while the wipers are stopped due to the vehicle speed switching control not operating during the rear wiper operation.	-
			1. - 2. ECM 3. -	With the engine switch on (IG), the rear wiper does not activate due to the reverse operation control not operating when the front wiper is operating.	-
			1. - 2. Windshield Wiper ECU 3. -		-
	Lower door closer control	System that independently controls the internal closer motors (RH, LH) of the rear lower door at the same time.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	Does not activate release, and does not release the lower door latch.	-
			1. - 2. Combination Meter 3. -	With the engine switch on (IG), does not activate release, and does not release the lower door latch.	-
No. 2 Body ECU (RRJ)	Illumination control	System that fades the inside handle illumination, and step illumination in and out.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Does not turn on the inside handle illumination or step illumination.	-
	LIN communication control	System that routes the CAN data to the overhead module using LIN communication.	1. No. 2 Main Body ECU 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Routes the disrupted value data to the overhead module.	-
			1. - 2. Certification ECU (Smart		-

			Key ECU) 3. -		
Variable Gear Ratio Steering (VGR)	VGRS system	System that changes the steering gear ratio based on the vehicle speed information and steering angle.	1. Steering Control ECU 2. - 3. Steering Control ECU	-	-
			1. - 2. Steering Angle Sensor 3. -	VGRS system does not operate.	Master warning light illuminates and display is shown on multi-information display (meter display).
			1. - 2. ECM 3. -		
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -		
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. Clearance Warning ECU 2. - 3. -	-	-
			1. - 2. Air Conditioning Amplifier 3. -	The sonar system functions normally. Maintains distance by maintaining the outside temperature at 25°C (77°F).	-
			1. - 2. Windshield Wiper ECU 3. -	The sonar system functions normally. Operates the obstacle judgments with the wiper off (except in rain).	-
			1. - 2. ECM 3. -	If data received from the ECM is lost, the system is inoperable as control is performed with the shift position data set to P.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) 3. -	The clearance sonar main switch indicator is maintained with the brightness as the previous value.	-
				The sonar system functions normally. Control is maintained with the country specification information as the previous value (with or without a warning sound).	-
Clearance Sonar (CSR)	LEXUS parking assist-sensor system	System that activates the ultrasonic sensor, measures the distance from obstacles, and notifies the user by using the display and buzzer.	1. - 2. Combination Meter 3. -	If data received from the meter ECU is lost, the system is inoperable as the clearance sonar is controlled at 20 km/h (12.5 mph) or more.	-
			1. - 2. Display and Navigation	The sonar system functions normally. The clearance sonar customize information is maintained.	-
				The sonar system functions normally. Information on the	-

			Module Display 3. -	camera presence is maintained.	
				The sonar system functions normally. Notification on the screen that the clearance sonar is off is disabled.	-
AFS	Leveling	System that adjusts the beam axis direction of the headlights vertically according to the pitch angle requested by the wheel speed sensor and vehicle height sensor.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-
			1. - 2. ECM 3. -	• Leveling control continues. • Swivel control centers the headlights.	AFS OFF indicator light blinks.
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	• Leveling control continues with the vehicle speed set to 0 km/h (0 mph). • Swivel control centers the headlights.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Steering Control ECU 3. -	-	-
AFS	Swivel	System that measures the turning diameter based on the wheel speed and steering angle, and then moves the headlights left and right according to the turning diameter.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. -	-	-
			1. - 2. ECM 3. -	• Leveling control continues. • Swivel control centers the headlights.	AFS OFF indicator blinks.
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	• Leveling control continues with the vehicle speed set to 0. • Swivel control centers the headlights.	
			1. - 2. Steering Angle Sensor, Steering Control ECU	• Leveling control continues. • Swivel control centers the	

			3. -	headlights.	
			1. - 2. Steering Angle Sensor 3. -	• Leveling control continues. • Swivel control centers the headlights.	
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	• Level control continues. • Swivel control centers the headlights.	
	AFS indicator	Monitors for AFS system malfunctions and blinks the indicator of the meter when a malfunction is detected.	1. AFS ECU (Headlight Swivel ECU) 2. - 3. AFS ECU (Headlight Swivel ECU)	-	-
			1. - 2. Combination Meter 3. -	-	-
Rear View Monitor (DS2)	Rear view monitor system	System that displays the expected course lines in the back camera image of the display that links to the steering angle to assist in parking (garage parking, parallel parking, etc.).	1. Parking Assist ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	The rear view monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
	Wide view front and side monitor system	System that displays the front and side camera image on the display (the side monitor is linked with the steering angle to display the expected course lines).	1. Parking Assist ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	The wide view front and side monitor system does not operate.	Nothing (informed to user by not displaying image).
			1. - 2. Steering Angle Sensor, Steering Control ECU 3. -		Does not display the expected course lines on the display. Displays "Guidance unavailable" on the navigation screen.
	PCS (brake linked)	When the VSC system suddenly brakes and/or the vehicle is unable to be controlled (while spinning or drifting), the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened (receives the buckle switch information from the center airbag sensor) by tightening the seat belts to increase the	1. Seat Belt Control ECU 2. - 3. Seat Belt Control ECU	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
			1. - 2. Distance Control ECU 3. -	-	-

Pre-crash Seat Belt (PSB)		occupant restraint.	1. - 2. Center Airbag Sensor 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
	PCS (millimeter wave radar sensor linked)	When ACC determines that a collision is unavoidable based on the information from the millimeter wave radar sensor, the seat belt control ECU operates the pre-collision seat belts (PSB) that are fastened by tightening the seat belts to increase the occupant restraint.	1. Seat Belt Control ECU 2. - 3. -	-	-
			1. - 2. Distance Control ECU 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped (millimeter wave radar sensor linked).	-
			1. - 2. Center Airbag Sensor 3. -	Detects that communication with the seat belt control ECU is lost. Control is stopped.	-
Pre-crash Seat Belt (PSB)	Meter display request	Receives the seat belt control ECU malfunction information or ACC malfunction information, and requests the display of the indicator to the meter ("PCS" indicator turn off/turn on request). **HINT:** As long as there is a signal in the ACC frame, the blinking request outputs an illumination request to the combination meter. When communication with the ACC frame is lost, it is determined that a malfunction exists and an illumination request is output along with the malfunction. The priority order is determined by the combination meter. The illumination is the first priority.	1. Seat Belt Control ECU 2. - 3. -	-	Exclusive indicator "PCS" turns on.
			1. - 2. Combination Meter, Master Cylinder Solenoid (Skid Control ECU) 3. -		
			1. - 2. Combination Meter, Distance Control ECU 3. -		
	2 digit DTC output	When terminal TC of the DLC3 is connected to terminal GND, a 2 digit DTC (BCD) is displayed by the blinking of "PCS".	1. Seat Belt Control ECU 2. - 3. -	-	-
			1. - 2. ECM 3. -	-	-
	Speedometer	Indicates the vehicle speed according to the vehicle speed signal.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	The speedometer indicates 0 km/h (0 mph).	-
			1. Combination		

Meter (MET)	Tachometer	Indicates the engine speed according to the engine speed signal.	1. Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The tachometer indicates 0 rpm.	-
	ODO/TRIP meter	Calculates and displays the driven distance according to the vehicle speed pulse signal calculated value.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	• The ODO/TRIP meter stops calculating and the last displayed value continues to be displayed. • Optitron meter: In multi-display. • Regular analog meter: Independent LCD.	-
	Engine coolant temperature gauge	Indicates the coolant temperature according to the engine coolant temperature signal.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The coolant temperature gauge displays less than the C mark.	-
Meter (MET)	Fuel gauge	Indicates the remaining fuel according to the fuel sender (direct line) input (uses the CAN communication (the vehicle speed signal) to determine if the vehicle is being driven or not).	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Control is performed with the speed input as 0 km/h (0 mph).	-
	Oil pressure gauge	Indicates the engine oil pressure according to the oil pressure sender (direct line) input (uses the CAN communication to determine if the engine is on or off by the engine speed signal).	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The oil pressure gauge displays less than the L mark.	-
	Shift lever indicator	The shift information is displayed according to the shift position signal.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. ECM 3. -	The shift lever indicator and shift position in the multi-information display turns off.	-
			1. Combination Meter 2. - 3. Combination	-	-

			Meter		
Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various signals that are input.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	Conditions for the seat belt buzzer not sounding: When VSC1S03 is lost: Does not sound. When BDB1S01 is lost: Does not sound. When ECT1S90 is lost: Control is performed with B_R=0b.	-
				Conditions for the seat belt buzzer sounding: When VSC1S03 is lost: Control is performed with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost: Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
				The door ajar driving warning buzzer does not sound.	-
Meter (MET)	Buzzer	Controls the buzzer to sound and not sound according to the various signals that are input.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	The light reminder buzzer does not sound.	-
				The sliding roof buzzer condition is maintained (until bus sleep).	-
			1. - 2. ECM 3. -	The A/T reverse buzzer does not sound.	-
				• The sports shift reject buzzer condition is maintained. • The radar cruise low speed buzzer does not sound. • The radar cruise warning buzzer does not sound.	-
			1. - 2. 4WD Control ECU 3. -	The last state of the 4WD buzzer is maintained.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	The door control transmitter buzzer (single push, continuous push, and intermittent push) does not sound. The immobiliser verification completion notification buzzer does not sound.	-
			1. Combination Meter 2. - 3. Combination	-	-

			Meter		
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. Master Cylinder (Skid Control ECU) 3. -	The ABS indicator turns on.	The ABS indicator turns on.
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	Brake warning light When VSC1S95 is lost: Illuminates. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	SLIP indicator light condition is maintained. VSC OFF indicator light condition is maintained. The downhill assist control indicator light condition is maintained. The CRAWL indicator light condition is maintained.	-
				Control is performed with the speed condition as 0 km/h (0 mph) for the following display: FUEL FILTER clog indicator. The odometer calculation is stopped for the following display conditions: T-BELT indicator.	-
			1. - 2. AFS ECU 3. -	Maintains the AFS OFF indicator condition.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body	When there is determined to be a disruption, the following indicators operate as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • DOOR indicator light • Driver side seat belt indicator light	-
				When there is determined to be a disruption, the following indicators operate as	

Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	ECU (Cowl Side Junction Block LH) (V Bus) 3. -	follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off. • FRONT FOG indicator light • REAR FOG indicator light • TAIL indicator • HEAD indicator • BEAM indicator	-
			1. - 2. Parking Assist ECU 3. -	CLEARANCE SONAR indicator light turns off.	-
			1. - 2. ECM 3. -	The A/T P warning light condition is maintained. The ECT PWR indicator light condition is maintained. The 2nd START indicator light condition is maintained. The CHARGE warning light condition is maintained. The CRUISE main indicator light condition is maintained.	-
Meter (MET)	Telltale	Turns on/blinks/turns off indicators based on the various signals.	1. - 2. ECM, 4WD Control ECU 3. -	The A/T P warning light conditions are maintained.	-
			1. - 2. 4WD Control ECU 3. -	The center differential lock indicator light turns off. The 4LO indicator light turns off.	-
			1. - 2. Seat Belt Control ECU 3. -	The PCS indicator light condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	The ACCESS MODE indicator light • When the engine switch is on (IG): The condition is maintained. • When the engine switch is off: Turns off.	-
			1. - 2. Center Airbag Sensor 3. -	The SRS warning light turns on.	The SRS warning indicator turns on.
			1. Combination Meter 2. - 3. Combination Meter	-	-
				Displays a blank screen	

			1. - 2. ECM, Master Cylinder Solenoid (Skid Control ECU) 3. -	and drive monitor operation and calculation of the following values stops: instant fuel economy, average fuel economy after refueling, distance to empty, average vehicle speed after engine start, driving distance after engine start.	-
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, radar cruise, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Parking brake drag warning display conditions: When VSC1S03 is lost: Control is performed with the vehicle speed as 0 km/h (0 mph). When VSC1S95 is lost: Control is performed with B_CPKB=0b. When BDB1S01 is lost: Control is performed with PKB_BDB=0b.	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control ECU) 3. -	The TRC system display is maintained. The VSC display is maintained.	-
			1. - 2. Master Cylinder Solenoid (Skid Control ECU) 3. -	Control is performed with the speed condition as 0 km/h (0 mph) for the following displays: Door open while driving display, FUEL FILTER clog display. ODO calculation stops for the following display conditions: Oil maintenance display, T-BELT display.	-
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus), Master Cylinder Solenoid (Skid Control	Conditions for the door open display and door open while driving display: VSC1S03: Control is performed with the vehicle speed as 0 km/h (0 mph). BSB1S01: Display state is maintained. BDB1S08: No display.	-

			ECU) 3. -		
			1. - 2. Air Conditioning Amplifier 3. -	The outside temperature display is "E".	The outside temperature display is "E" (in the meter).
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	The shift lever display turns off.	-
				The door control transmitter display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off.	-
				The sliding roof open display condition is as follows: While the engine switch is on (IG): Condition is maintained. When the engine switch is off: Turns off.	-
			1. - 2. Parking Assist ECU 3. -	The clearance warning sonar display condition is maintained.	-
Meter (MET)	Multi-display	Displays information about the drive monitor, warning, clearance sonar, door, A/T shift position, odometer, etc. based on the various signals.	1. - 2. ECM 3. -	The A/T shift position display turns off.	-
				The A/T OIL TEMP display state is maintained.	-
			1. - 2. Seat Belt Control ECU 3. -	The PCS display condition is maintained.	-
			1. - 2. Certification ECU (Smart Key ECU) 3. -	The door control transmitter display condition is maintained. The security display condition is maintained. The door control transmitter unlock mode display condition is maintained.	-
			1. - 2. Suspension Control ECU 3. -	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.	4-WHEEL AHC vehicle height display turns off. "Check 4-WHEEL AHC System" is displayed.
			1. - 2. Steering Control ECU 3. -	"Check VGRS System" is displayed.	"Check VGRS System" is displayed.
	Illumination function	Controls dimming and meter illumination on/off according to the CAN signals.	1. Combination Meter 2. - 3. Combination Meter	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	Daytime brightness.	-
			1. - 2. ECM 3. -	-	-
			1. Combination		

			Meter 2. - 3. Combination Meter	-	-
Meter (MET)	Passenger seat belt warning indicator	Blinks the passenger seat belt warning indicator according to the CAN signals.	1. - 2. Center Airbag Sensor 3. -	The passenger seat belt warning indicator condition is maintained.	-
			1. - 2. - 3. Display and Navigation Module Display	-	-
Body (BDB)	Power supply switching control	The system that switches the power supply between +B, ACC, and IG.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. -	The forced engine switch off function does not operate.	-
				When the power supply switching conditions are met, power supply switching control is permitted. When the power supply condition IG2 start/stop switch turns from off to on, the power supply condition is changed to IG1, and the IG relay output stops.	-
Body (BDB)	Security	The system that operates the warning when a theft is detected.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	The security control does not operate (The headlight/taillight warning output, horn warning output, and hazard warning light output do not operate). The forced door lock function lock output does not operate. The dome light warning control does not operate. The lighting system answer back control does not operate. (The taillight warning output and hazard warning light output do not operate).	-
				When the security warning is operating, warning output stops during hazard warning light output.	-
				When the security warning is operating, the dome light turns off during dome light illumination.	-
	Entry and start/wireless	The system that operates the lock/unlock, engine switch, back door opener, warning, etc. by pressing the switch when the door control transmitter is within the vehicle detection area. The system that operates the vehicle lock/unlock, panic, back door opener, etc. by remote control.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. Main Body ECU (Cowl Side Junction Block LH)	Entry and start/wireless control does not operate. The door lock/unlock control and entry and start back door opener control do not operate.	-

			(MS Bus)		
Body (BDB)	Vehicle speed linked auto lock	The system that locks the doors when the vehicle speed is 20 km/h (12 mph) or more.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	When the vehicle speed linked auto lock signal is lost, operation is permitted.	-
				The vehicle speed linked auto lock does not operate.	-
	Shift linked auto lock/unlock	The system that unlocks all the doors when the shift lever is moved to P, and locks all doors when the shift lever is moved from P to another position while the engine is running.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter, ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	The shift linked auto lock/unlock function does not operate.	-
				When the shift linked auto lock/unlock signal is lost, operation is permitted.	-
	DRL	The system that illuminates lights when driving the vehicle to improve the visibility of pedestrians and other vehicles in the daytime.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. ECM 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	DRL control does not operate. **HINT:** If operated once, the operation continues until the engine switch is turned off, even if the signal is lost.	-
	Boarding	System that controls the front (rear) dome light, door mirror foot light, center console spot light, and interior foot light.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Certification ECU (Smart Key ECU), Combination Meter, ECM, Parking Assist ECU 3. Outer Mirror Control ECU, No. 2 Main Body ECU, Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction	Front (rear) dome light, door mirror foot light, center console spot light, and interior foot light control does not operate.	-
				While the interior foot light is illuminated, the center console does not turn off.	-
				When the interior foot light is illuminated, the dimmer operates. When the engine switch is on (IG), the door mirror foot light does not operate by the manual unlock.	-
				When the side monitor is operating, the door mirror foot light can illuminate.	-

			Block LH) (V Bus)		
Body (BDB)	Back door	System that operates the hazard warning lights as an answer back when the power back door begins to operate.	1. Power Back Door Unit (Power Back Door ECU) 2. Power Back Door Unit (Power Back Door ECU) 3. Main Body ECU (Cowl Side Junction Block LH) (MS Bus)	The hazard warning light answer back does not operate when the back door begins to operate.	-
	Back door opener	The system that releases the door latch (turns opener motor on) by turning on the switch built into the outside door handle.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Main Body ECU (Cowl Side Junction Block LH) (V Bus)	Prohibits the back door opener control.	-
	One motion power back door opener	System that unlocks and opens the back door in one motion when the wireless back door opening operation is performed.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Power Back Door Unit (Power Back Door ECU) 3. Power Back Door Unit (Power Back Door ECU)	Back door opener control does not operate.	-
	Display automatic dimmer control	System that controls the brightness of the interior display/indicators, etc. only during twilight and nighttime by determining the time of day and using the light sensor signal.	1. Main Body ECU (Cowl Side Junction Block LH) (V Bus) 2. Combination Meter 3. Windshield Wiper ECU, No. 2 Main Body ECU, Combination Meter, Air Conditioning Amplifier	Operates the display automatic dimmer control when the tail cancel switch is on. When the value of the light sensor illumination intensity signal is less than the display dimmer value, the brightness of the vehicle interior display/indicator is dimmed.	-
	Power window	The system that operates power window control based on the request from wireless/entry and start control.	1. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 2. Certification ECU (Smart Key ECU) 3. -	Power window control does not operate. Power window control stops during wireless/entry power window control operation.	-
			1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-

Verification (IDT)	Entry function	Entry and start/lock/back door/warning, etc.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus), Main Body ECU (Cowl Side Junction Block LH) (V Bus) 3. -	• The entry lock/unlock does not operate. • The entry back door does not operate. • The entry and start warning message does not operate. • The key lock-in prevention function does not operate. • The entry illumination does not operate.	-
				Package default setting.	-
			1. - 2. Combination Meter 3. -	The vehicle speed is determined to be 0 km/h (0 mph).	-
				-	-
	Wireless buzzer function	The wireless buzzer sounding control.	1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	Does not sound even though there is a wireless buzzer request.	-
				Package default settings.	-
			1. - 2. Suspension Control ECU 3. -	Does not sound even though there is an access mode warning buzzer request.	-
Verification (IDT)	Immobiliser function	The immobiliser control by the warning and remote engine start.	1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-
			1. - 2. ECM 3. -	The engine switch is forcibly turned off.	-
	Wireless function	Wireless electric wave information transmission.	1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-
			1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	-	-
			1. Certification ECU (Smart Key ECU) 2. - 3. -	-	-

	Security function	Security alarm control.	1. - 2. Main Body ECU (Cowl Side Junction Block LH) (MS Bus) 3. -	The alarm is not unset. The alarm is not set.	-
			1. - 2. ECM 3. -	The alarm is not unset by the engine start.	-
Movement Control Bus (CGW)	Movement control bus monitor function	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Seat Belt Control ECU 3. -	The reception interval counter (RAM and CAN controller initialization).	-
			1. Network Gateway ECU (Movement Control Bus) 2. Distance Control ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Clearance Warning ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Parking Assist ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Steering Angle Sensor 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Suspension Control ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Master Cylinder Solenoid (Skid Control ECU) 3. -		

			1. Network Gateway ECU (Movement Control Bus) 2. Yaw Rate Sensor 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. Steering Control ECU 3. -		
			1. Network Gateway ECU (Movement Control Bus) 2. 4WD Control ECU 3. -		
Movement Control Bus (CGW)	Movement control bus monitor function	Monitoring of communication stop.	1. Network Gateway ECU (Movement Control Bus) 2. Clearance Warning ECU, Parking Assist ECU, Master Cylinder Solenoid (Skid Control ECU), 4WD Control ECU, Steering Angle Sensor, Yaw Rate Sensor, Distance Control ECU, Steering Control ECU, Seat Belt Control ECU, Suspension Control ECU 3. -	The reception interval counter (RAM and CAN controller initialization).	-

for Preparation Click here

HINT:

If a trouble code is displayed during the DTC check, inspect the trouble areas listed for that code. For details of the code, refer to the "See page" below.

DTC Code	Detection Item	Trouble Area	See page
U0114/38	Lost Communication with 4WD Control ECU	- Power source circuit of 4WD control ECU - 4WD control ECU - 4WD control ECU branch wire or connector	Click here
U0122	Lost Communication with Vehicle Dynamics Control Module	- Power source circuit of skid control ECU - One side of CAN branch wire of other systems - Skid control ECU - Skid control ECU branch wire or connector	Click here
U0123	Lost Communication with Yaw Rate Sensor Module	- Power source circuit of yaw rate sensor - Yaw rate sensor - Yaw rate sensor branch wire or connector	Click here
U0124	Lost Communication with Lateral Acceleration Sensor Module	- Power source circuit of yaw rate sensor - Yaw rate sensor - Yaw rate sensor branch wire or connector	Click here
U0126	Lost Communication with Steering Angle Sensor Module	- Power source circuit of steering angle sensor - One side of CAN branch wire of other systems - Steering angle sensor - Steering angle sensor branch wire or connector	Click here
U0129	Lost Communication with Brake System Control Module	- Power source circuit of skid control ECU - One side of CAN branch wire of other systems - Skid control ECU - Skid control ECU branch wire or connector	Click here
U0130	Lost Communication with Steering Effort Control Module	- Power source circuit of steering control ECU - Steering control ECU - Steering control ECU branch wire or connector	Click here
U0132	Lost Communication with Ride Level Control Module	- Power source circuit of suspension control ECU - One side of CAN branch wire of other systems - Suspension control ECU - Suspension control ECU branch wire or connector	Click here
U0141	Lost Communication with Body Control Module "A"	- Power source circuit of No. 2 main body ECU - No. 2 main body ECU - No. 2 main body ECU branch wire or connector	Click here
U0199	Lost Communication with "Door Control Module A"	- Power source circuit of outer mirror control ECU - Outer mirror control ECU - Outer mirror control ECU branch wire or connector	Click here
U0208	Lost Communication with "Seat Control Module A"	- Power source circuit of position control ECU and switch - Position control ECU and switch - Position control ECU and switch branch wire or connector	Click here
U0230	Lost Communication with Rear Gate Module	- Power source circuit of power back door unit assembly (power back door ECU) - Power back door unit assembly (power back door ECU) - Power back door unit assembly (power back door ECU) branch wire or connector	Click here
U0327	Software Incompatibility with Vehicle Security Control Module	- Power source circuit of certification ECU (smart key ECU assembly) - Certification ECU (smart key ECU assembly) - Certification ECU (smart key ECU assembly) branch wire or connector	Click here
		- MS bus circuit - Main body ECU main wire or connector - Windshield wiper ECU branch wire or connector - Position control ECU and switch branch wire or connector - Certification ECU (smart key ECU assembly) branch wire or connector - Multiplex tilt and telescopic ECU branch wire or connector - Outer mirror control ECU branch wire or connector	

U1002 (CAN MS BUS)	Lost Communication with Gateway Module (Main body ECU)	- Combination meter main wire or connector - No. 2 main body ECU power back door ECU - Main body ECU - Windshield wiper ECU - Position control ECU and switch - Certification ECU (smart key ECU assembly) - Multiplex tilt and telescopic ECU - Outer mirror control ECU - Combination meter - No. 2 main body ECU power back door ECU - No. 8 junction connector - No. 9 junction connector - No. 10 junction connector - No. 2 CAN junction connector	Click here
U1002 (CAN No. 2 BUS)	Lost Communication with Gateway Module (Network Gateway ECU)	- Movement control bus circuit - 4WD control ECU branch wire or connector - Yaw rate sensor branch wire or connector - Seat belt control ECU branch wire or connector - Clearance warning ECU branch wire or connector - Parking assist ECU branch wire or connector - Skid control ECU branch wire or connector - Steering angle sensor branch wire or connector - Network gateway ECU main wire or connector - Suspension control ECU branch wire or connector - Steering control ECU branch wire or connector - Distance Control ECU - 4WD control ECU - Yaw rate sensor - Seat belt control ECU - Clearance warning ECU - Parking assist ECU - Skid control ECU - Steering angle sensor - Suspension control ECU - Steering control ECU - Network gateway ECU - Distance Control ECU - No. 4 junction connector - No. 5 junction connector - No. 6 junction connector - No. 7 junction connector - No. 1 CAN junction connector	Click here
U1100	Lost Communication with Seat Belt Control ECU	- Power source circuit of seat belt control ECU - Seat belt control ECU - Seat belt control ECU branch wire or connector	Click here
U1101	Lost Communication with Distance Control ECU	- Power source circuit of distance control ECU assembly - Distance control ECU assembly - Distance control ECU assembly branch wire or connector	Click here
U1110	Lost Communication with Clearance Sonar Module	- Power source circuit of clearance warning ECU - Clearance warning ECU - Clearance warning ECU branch wire or connector	Click here
U1111	Lost Communication with Body No. 5 Module	- Power source circuit of windshield wiper ECU - Windshield wiper ECU - Windshield wiper ECU main wire or connector	Click here
U1115	Lost Communication with Tilt and Telescopic Module	- Power source circuit of multiplex tilt and telescopic ECU - Multiplex tilt and telescopic ECU - Multiplex tilt and telescopic ECU branch wire or connector	Click here
U1126	Lost Communication with Parking Assist ECU	- Power source circuit of parking assist ECU - Parking assist ECU - Parking assist ECU branch wire or connector	Click here

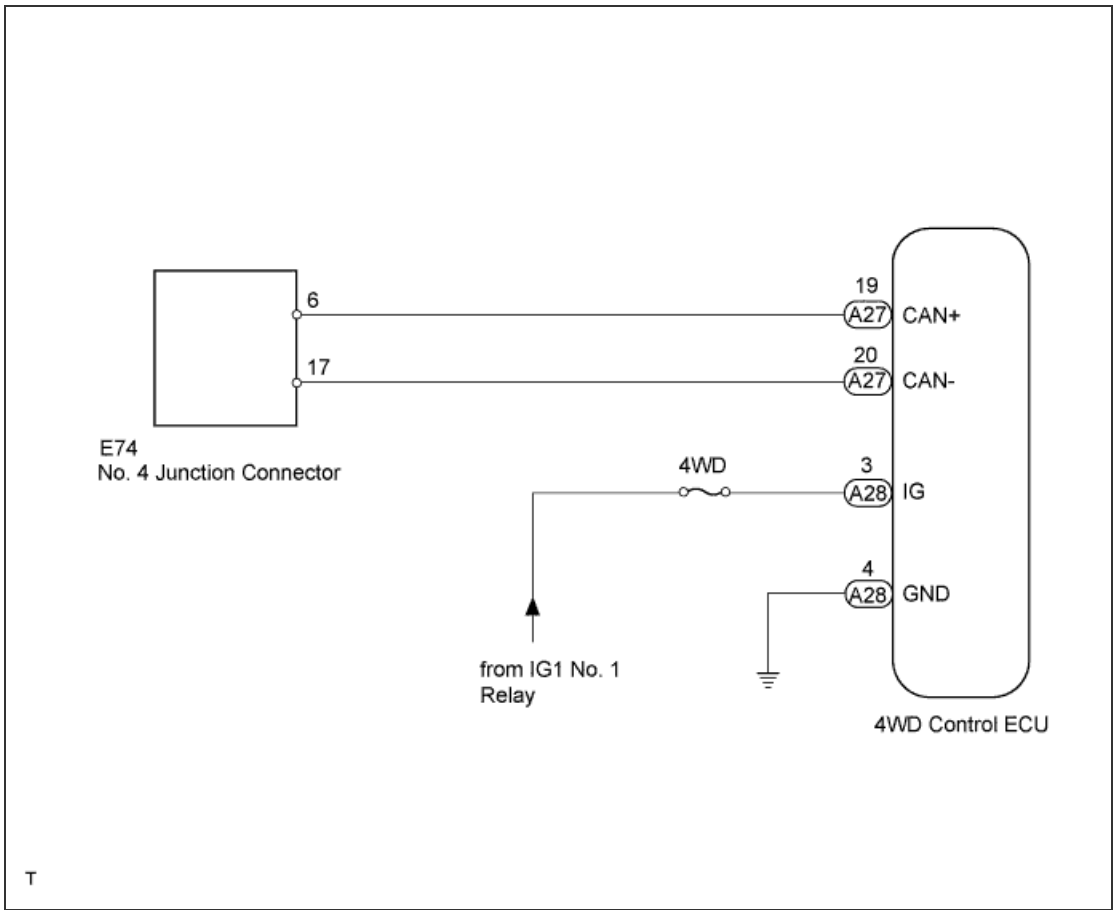
DTC U0114/38 Lost Communication with 4WD Control ECU

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0114/38	There is no communication from the 4WD control ECU.	• Power source circuit of 4WD control ECU • 4WD control ECU • 4WD control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

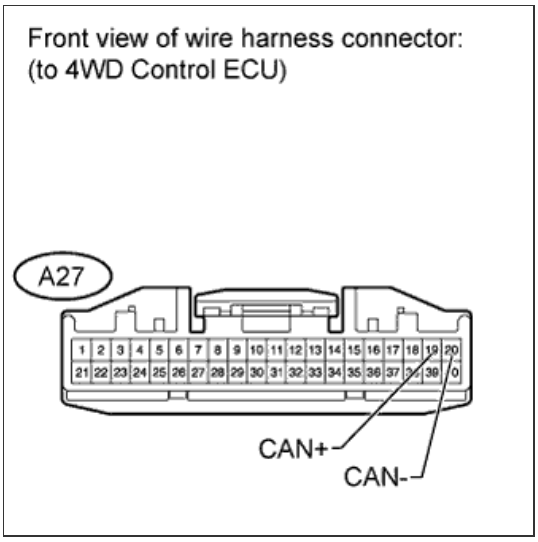
2.CHECK FOR OPEN IN CAN BUS WIRE (4WD CONTROL ECU BRANCH WIRE)

a. Disconnect the A27 4WD control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A27-19 (CAN+) - A27-20 (CAN-)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE 4WD CONTROL ECU BRANCH WIRE OR CONNECTOR (CAN+, CAN-)

OK

3.CHECK HARNESS AND CONNECTOR (4WD CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the A28 4WD control ECU connector.

c. Measure the resistance according to the value(s) in the table below.

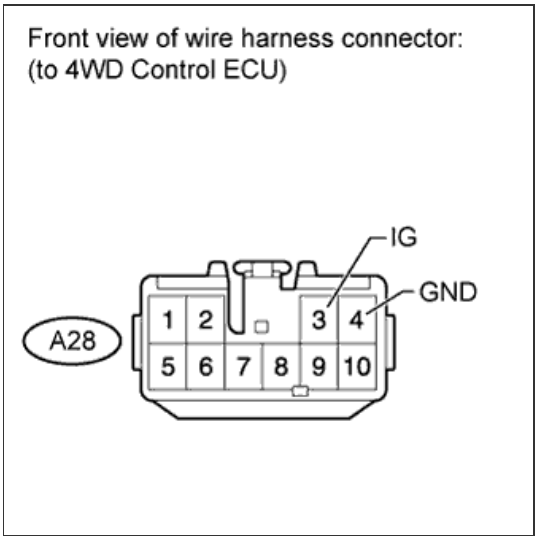
Standard Resistance:

Tester Connection	Condition	Specified Condition
A28-4 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
A28-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE 4WD CONTROL ECU (Click here)

DTC U0230 Lost Communication with Rear Gate Module

for Preparation Click here

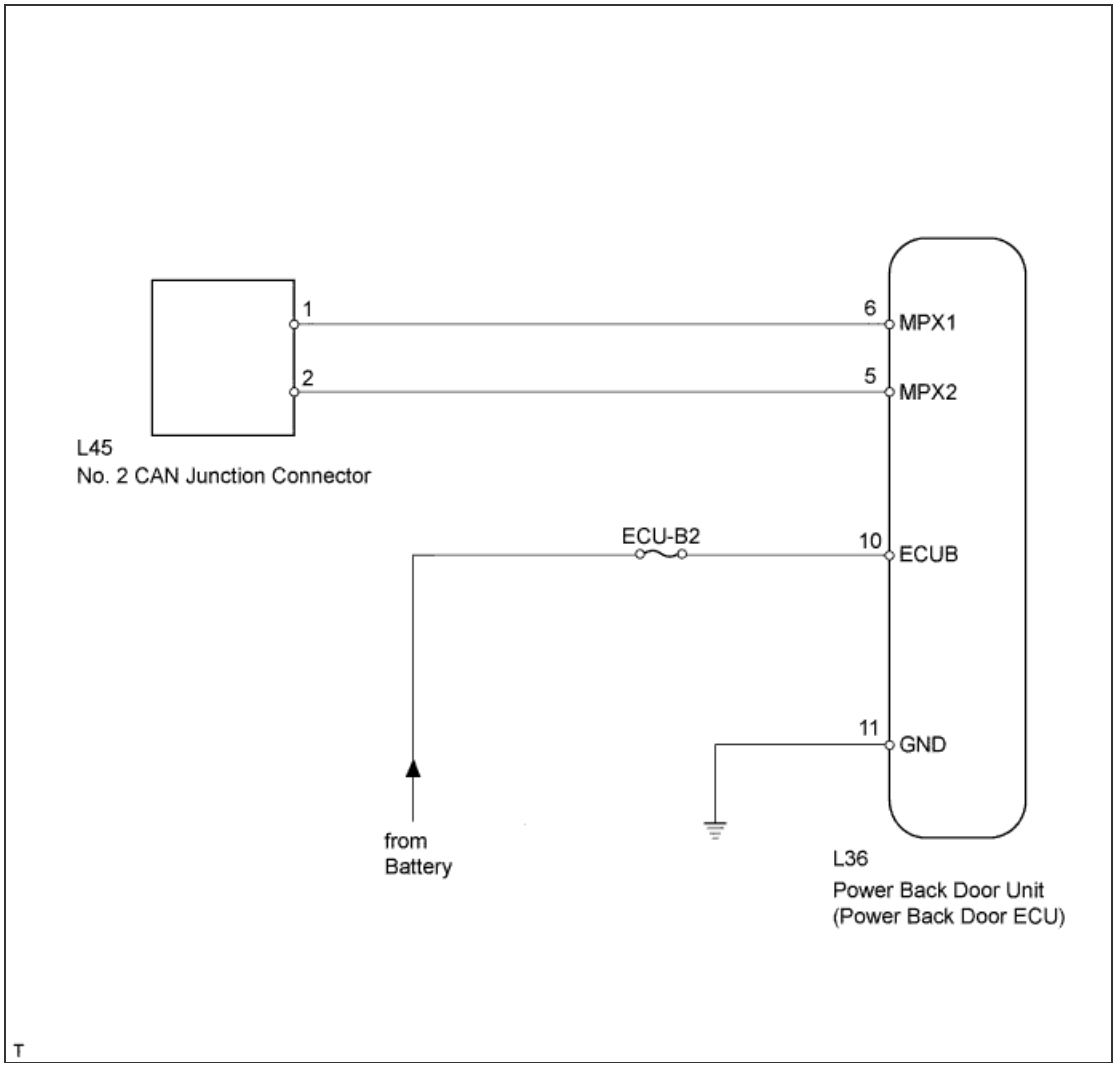
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0230	There is no communication from the power back door unit assembly (power back door ECU).	• Power source circuit of power back door unit assembly (power back door ECU) • Power back door unit assembly (power back door ECU) • Power back door unit assembly (power back door ECU) branch wire or connector

HINT:

For vehicles with the power back door system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

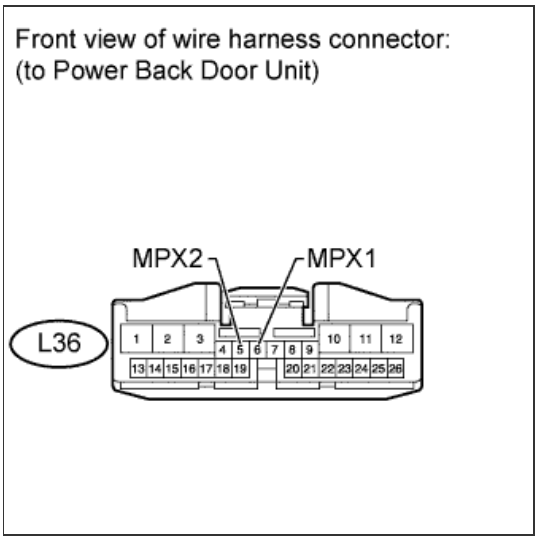
2.CHECK FOR OPEN IN CAN BUS WIRE (POWER BACK DOOR UNIT BRANCH WIRE)

a. Disconnect the L36 power back door unit (power back door ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE POWER BACK DOOR UNIT (POWER BACK DOOR ECU) BRANCH WIRE OR CONNECTOR (MPX1, MPX2)

OK

3.CHECK HARNESS AND CONNECTOR (POWER BACK DOOR UNIT - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the L36 power back door unit (power back door ECU) connector.

c. Measure the resistance according to the value(s) in the table below.

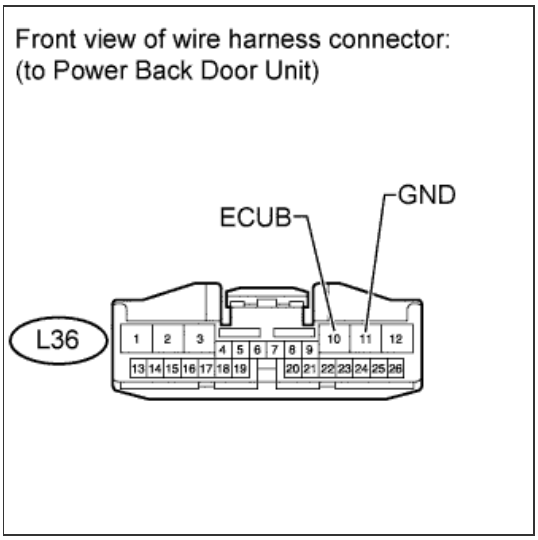
Standard Resistance:

Tester Connection	Condition	Specified Condition
L36-11 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
L36-10 (ECUB) - Body ground	Always	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE POWER BACK DOOR UNIT ASSEMBLY (POWER BACK DOOR ECU) (Click here)

DTC U0122 Lost Communication with Vehicle Dynamics Control Module

DTC U0129 Lost Communication with Brake System Control Module

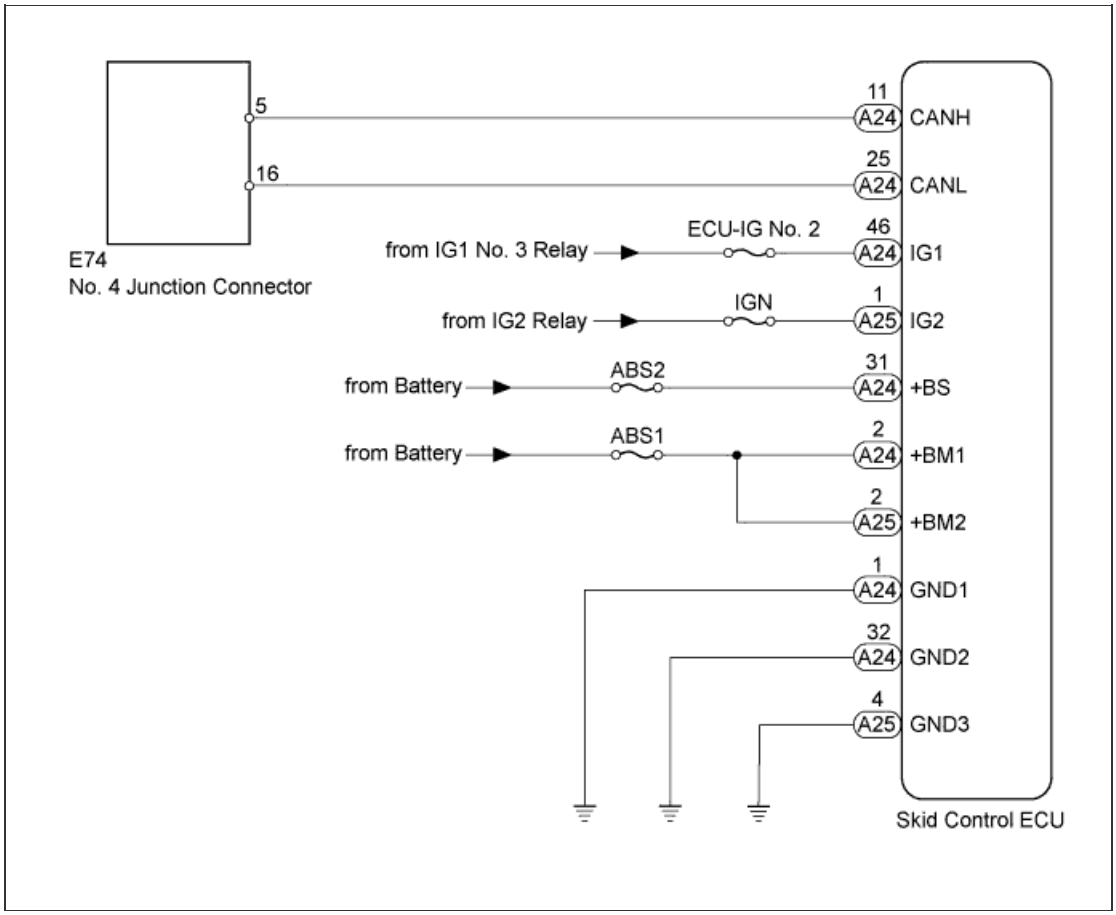
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0122	There is no communication from the skid control ECU.	• Power source circuit of skid control ECU • One side of CAN branch wire of other systems • Skid control ECU • Skid control ECU branch wire or connector
U0129	There is no communication from the skid control ECU.	• Power source circuit of skid control ECU • One side of CAN branch wire of other systems • Skid control ECU • Skid control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

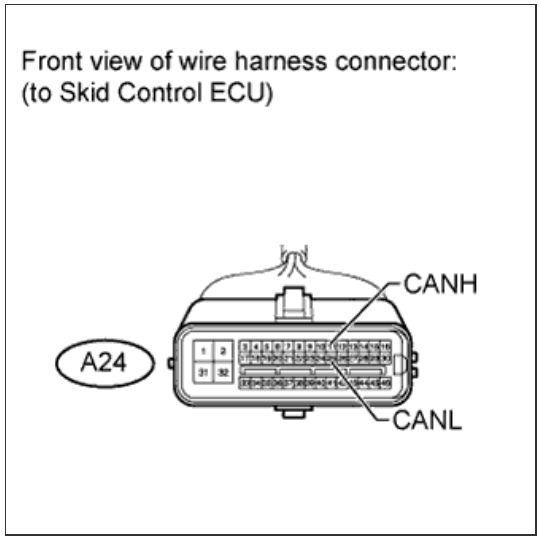
2.CHECK FOR OPEN IN CAN BUS WIRE (SKID CONTROL ECU BRANCH WIRE)

a. Disconnect the A24 skid control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE SKID CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SKID CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the A24 and A25 skid control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
A24-1 (GND1) - Body ground	Always	Below 1 Ω
A24-32 (GND2) - Body ground		
A25-4 (GND3) - Body ground		

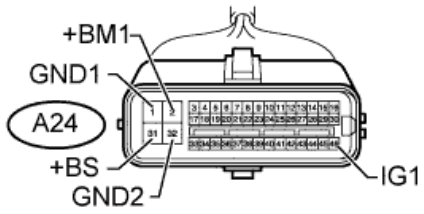
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

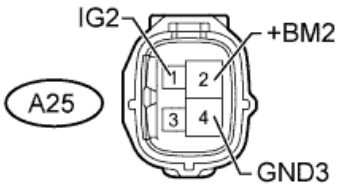
Tester Connection	Switch Condition	Specified Condition
A24-2 (+BM1) - Body ground		
A24-31 (+BS) -		

Body ground	Always	11 to 14 V
A25-2 (+BM2) - Body ground		
A24-46 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V
A25-1 (IG2) - Body ground		

Front view of wire harness connector:
(to Skid Control ECU)



Front view of wire harness connector:
(to Skid Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE MASTER CYLINDER SOLENOID (SKID CONTROL ECU) (Click here)

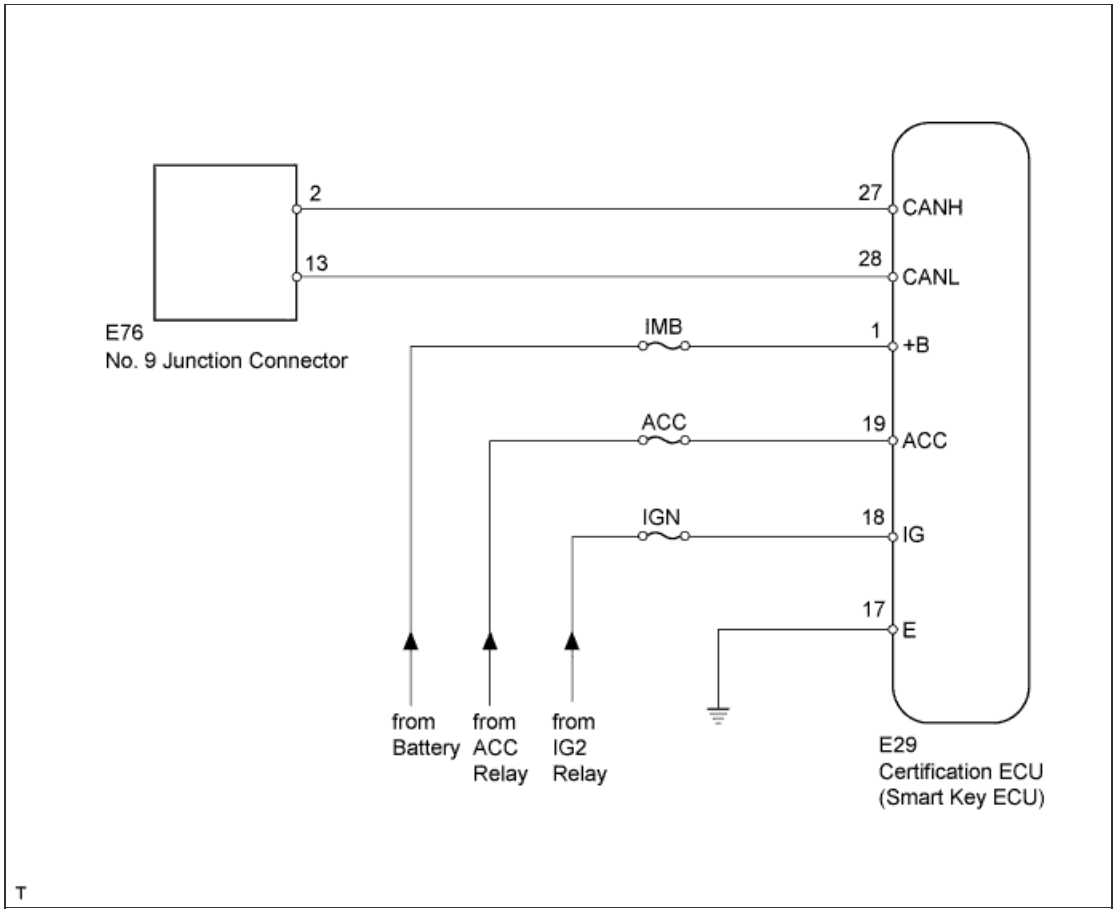
DTC U0327 Software Incompatibility with Vehicle Security Control Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0327	There is no communication from the certification ECU (smart key ECU).	• Power source circuit of certification ECU (smart key ECU assembly) • Certification ECU (smart key ECU assembly) • Certification ECU (smart key ECU assembly) branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

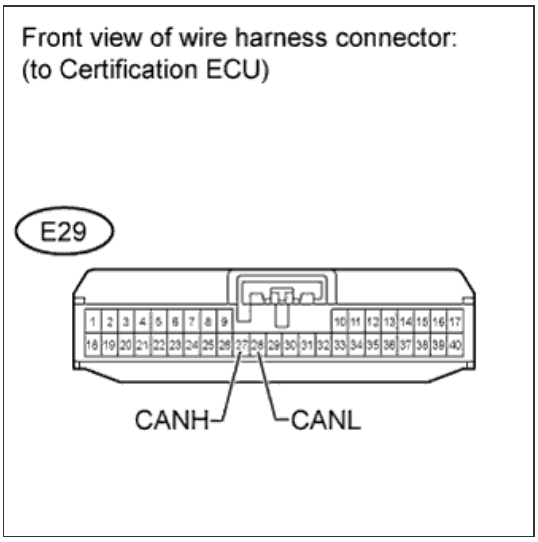
2.CHECK FOR OPEN IN CAN BUS WIRE (CERTIFICATION ECU BRANCH WIRE)

a. Disconnect the E29 certification ECU (smart key ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E29 certification ECU (smart key ECU) connector.

c. Measure the resistance according to the value(s) in the table below.

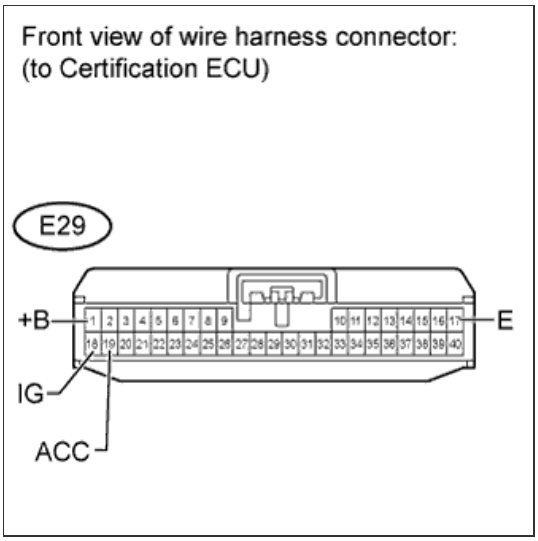
Standard Resistance:

Tester Connection	Condition	Specified Condition
E29-17 (E) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E29-1 (+B) - Body ground	Always	11 to 14 V
E29-18 (IG) - Body ground	Engine switch on (IG)	11 to 14 V
E29-19 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

DTC U0122 Lost Communication with Vehicle Dynamics Control Module

DTC U0129 Lost Communication with Brake System Control Module

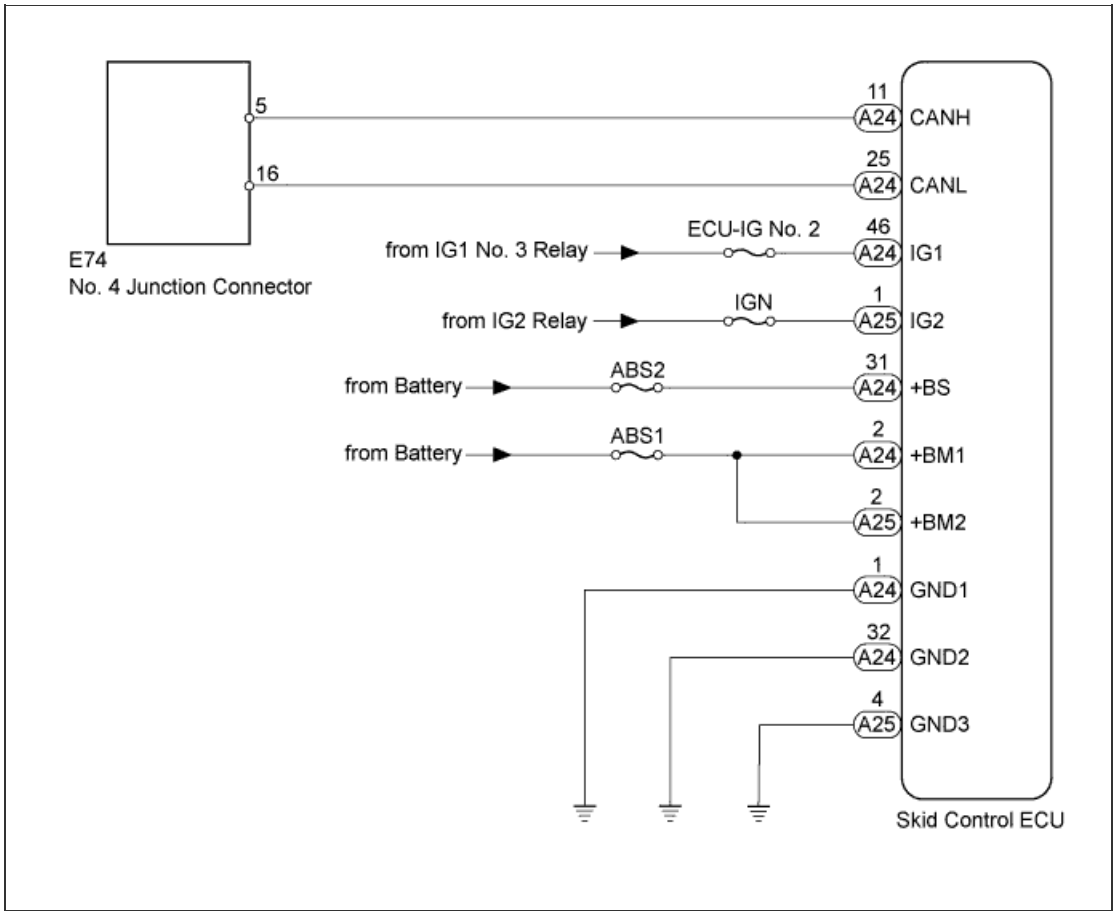
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0122	There is no communication from the skid control ECU.	• Power source circuit of skid control ECU • One side of CAN branch wire of other systems • Skid control ECU • Skid control ECU branch wire or connector
U0129	There is no communication from the skid control ECU.	• Power source circuit of skid control ECU • One side of CAN branch wire of other systems • Skid control ECU • Skid control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

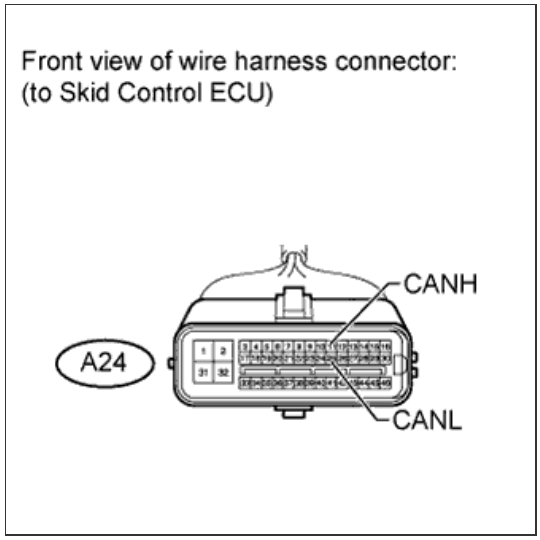
2.CHECK FOR OPEN IN CAN BUS WIRE (SKID CONTROL ECU BRANCH WIRE)

a. Disconnect the A24 skid control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE SKID CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SKID CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the A24 and A25 skid control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
A24-1 (GND1) - Body ground	Always	Below 1 Ω
A24-32 (GND2) - Body ground		
A25-4 (GND3) - Body ground		

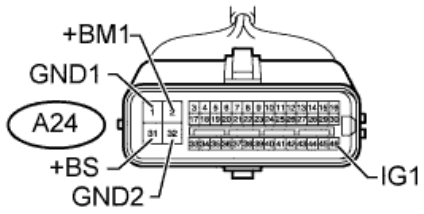
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

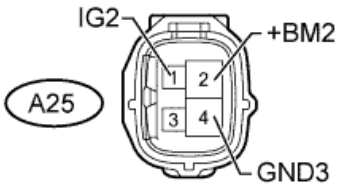
Tester Connection	Switch Condition	Specified Condition
A24-2 (+BM1) - Body ground		
A24-31 (+BS) -		

Body ground	Always	11 to 14 V
A25-2 (+BM2) - Body ground		
A24-46 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V
A25-1 (IG2) - Body ground		

Front view of wire harness connector:
(to Skid Control ECU)



Front view of wire harness connector:
(to Skid Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE MASTER CYLINDER SOLENOID (SKID CONTROL ECU) (Click here)

DTC U1002 (CAN MS BUS) Lost Communication with Gateway Module (Main body ECU)

for Preparation Click here

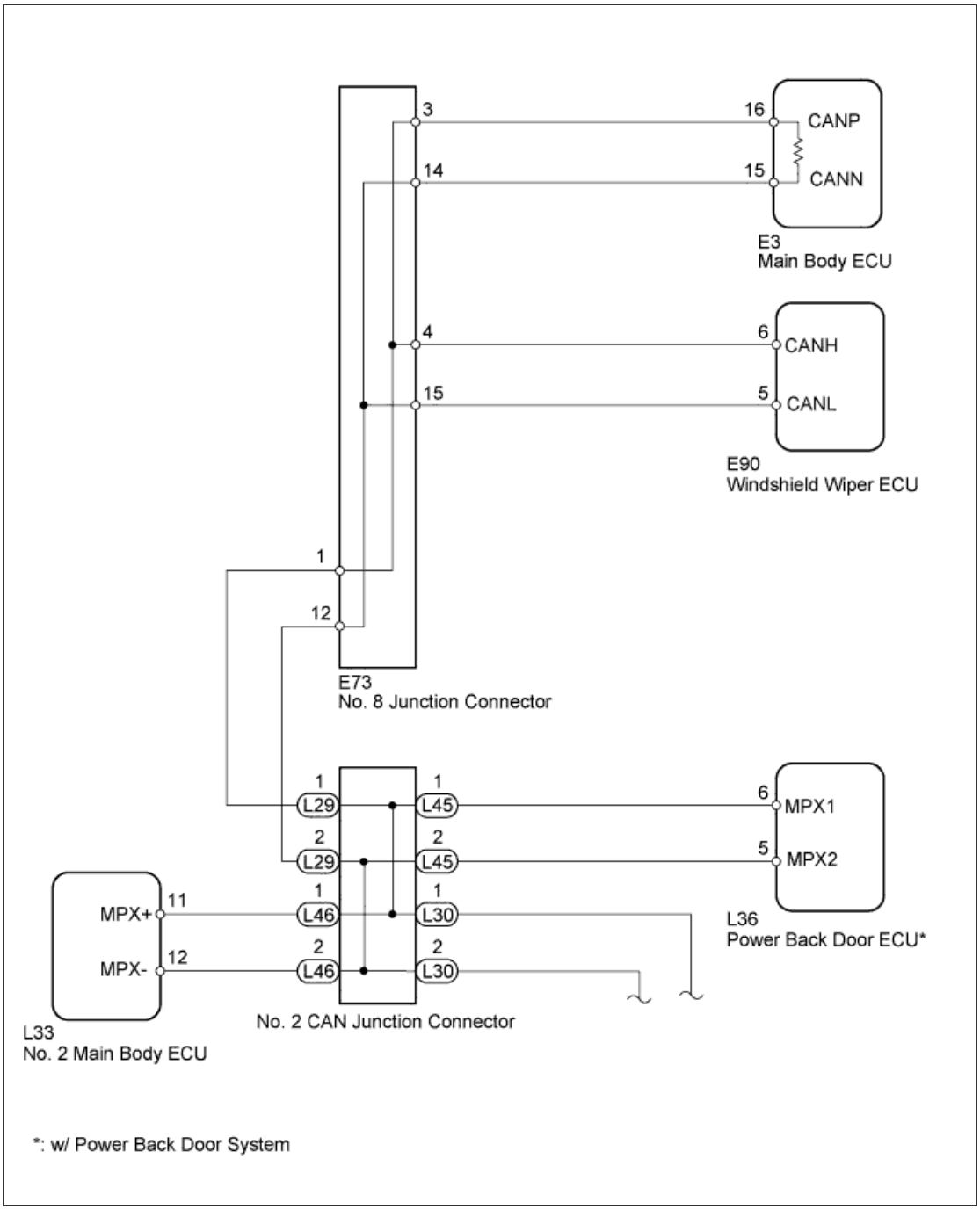
DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (one side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

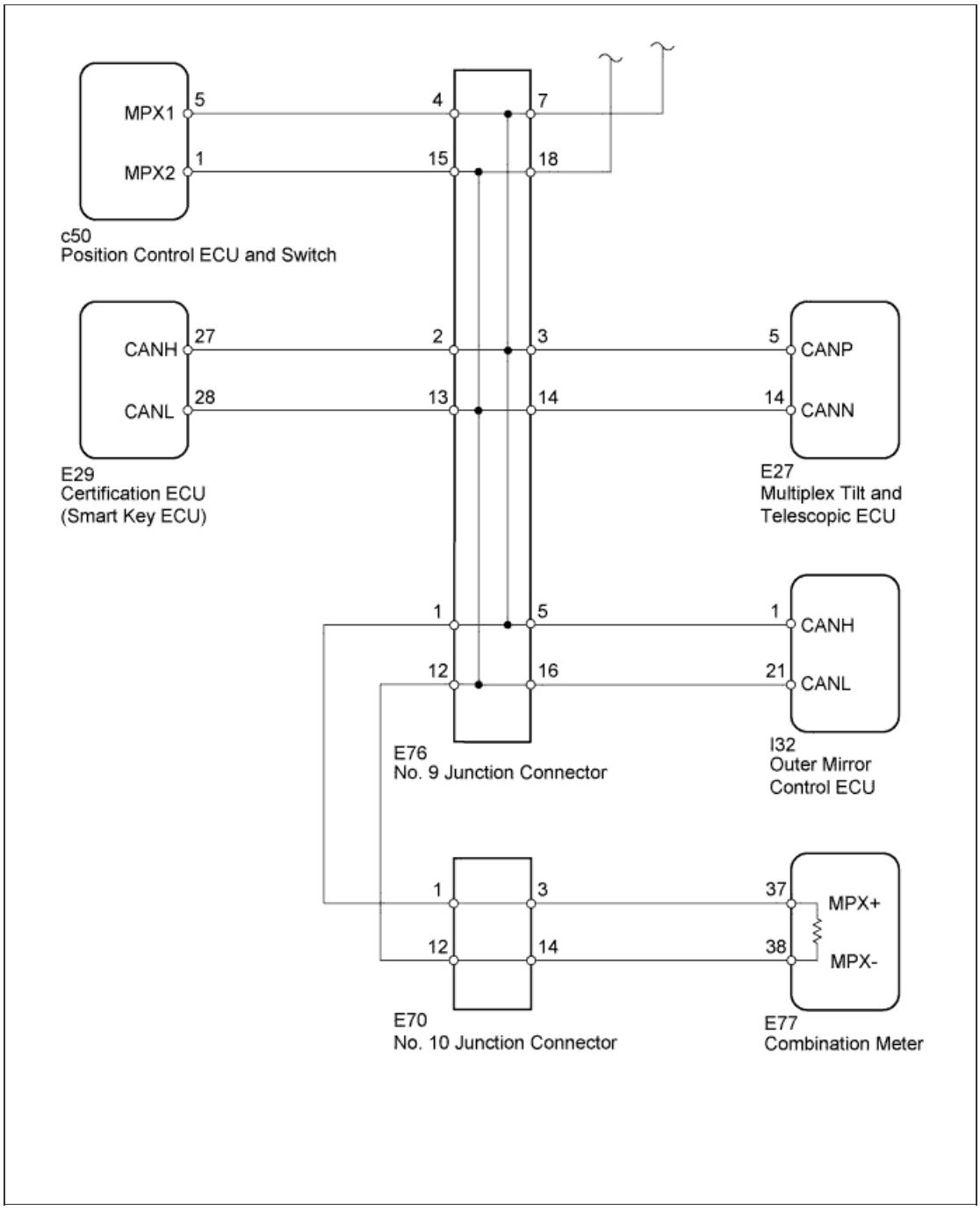
DTC Code	Symptom	Trouble Area
U1002 (CAN MS BUS)	Lost communication with the gateway module (main body ECU).	• MS bus circuit • Main body ECU main wire or connector • Windshield wiper ECU branch wire or connector • Position control ECU and switch branch wire or connector • Certification ECU (smart key ECU assembly) branch wire or connector • Multiplex tilt and telescopic ECU branch wire or connector • Outer mirror control ECU branch wire or connector • Combination meter main wire or connector • No. 2 main body ECU branch wire or connector • Power back door ECU branch wire or connector* • Main body ECU • Windshield wiper ECU • Position control ECU and switch • Certification ECU (smart key ECU assembly) • Multiplex tilt and telescopic ECU • Outer mirror control ECU • Combination meter • No. 2 main body ECU • Power back door ECU* • No. 8 junction connector • No. 9 junction connector • No. 10 junction connector • No. 2 CAN junction connector

*: w/ Power Back Door System

WIRING DIAGRAM



*: w/ Power Back Door System



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

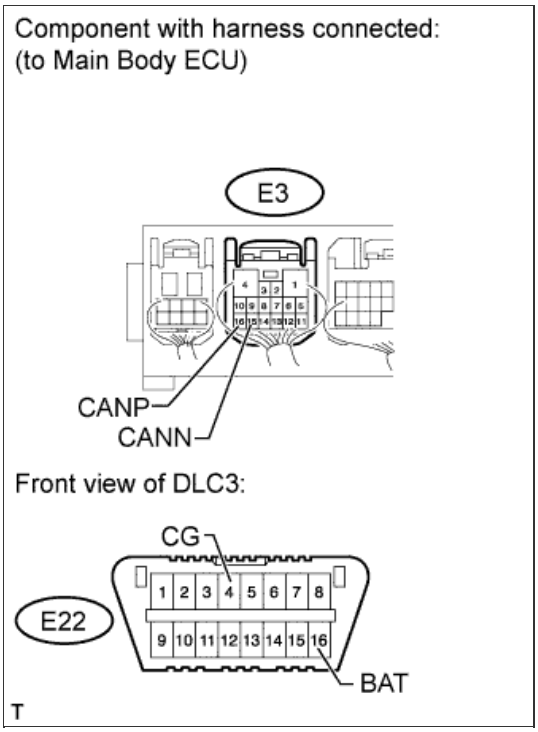
NEXT

2.CHECK CAN BUS WIRE (MAIN WIRE FOR DISCONNECTION, BUS LINE FOR SHORT CIRCUIT)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Resistance Malfunction
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	54 to 69 Ω	Below 53 Ω: Short in line
	Engine switch off		70 Ω or higher: Open in CAN main bus line
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short



Result

Result	Proceed to
NG - Open in CAN main bus line	A
NG - Short in line - +B short - Ground short	B
OK	C

B → Go to step 18

C → Go to step 54

A

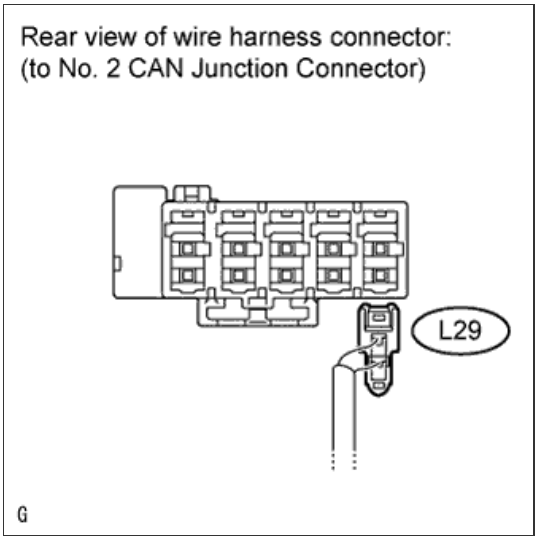
3.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - MAIN BODY ECU)

a. Disconnect the L29 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L29-1 (CANH) - L29-2 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 5

OK

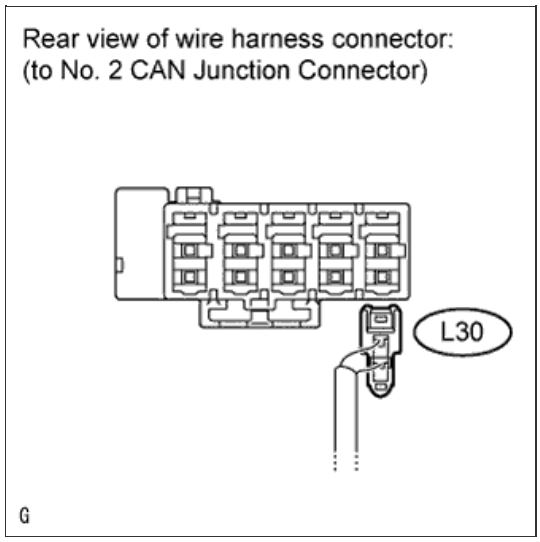
4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - COMBINATION METER)

a. Disconnect the L30 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L30-1 (CANH) - L30-2 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPLACE NO. 2 CAN JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the L29 No. 2 CAN junction connector connector.

NEXT

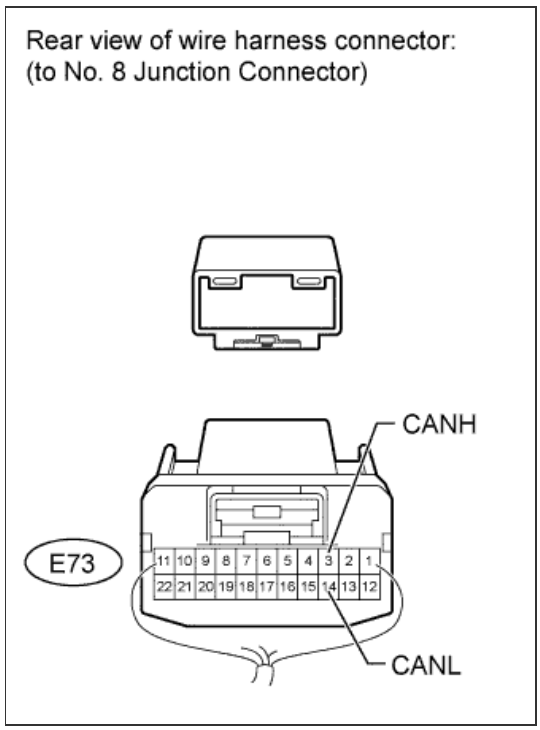
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 8 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Disconnect the E73 No. 8 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E73-3 (CANH) - E73-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

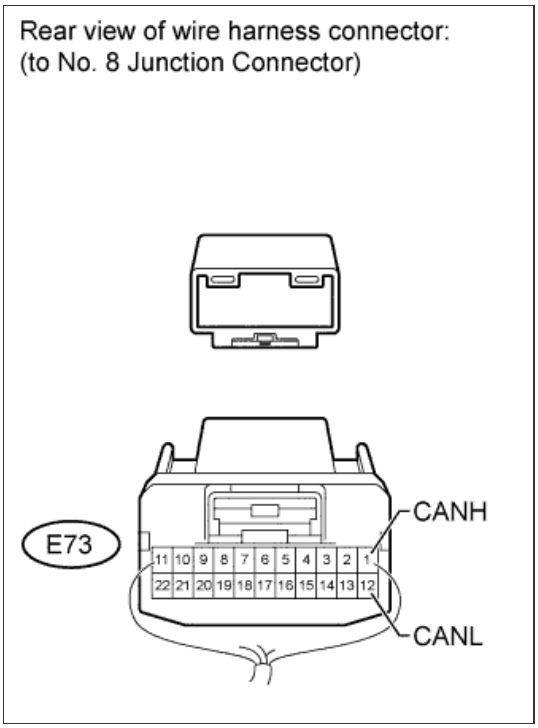
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E73-1 (CANH) - E73-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)

OK

REPAIR OR REPLACE NO. 8 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the E73 No. 8 junction connector connector.

NEXT

9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (MAIN BODY ECU - NO. 8 JUNCTION CONNECTOR)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to Main Body ECU)



H

NG

REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (MAIN BODY ECU - NO. 8 JUNCTION CONNECTOR)

OK

REPLACE MAIN BODY ECU

10.CONNECT CONNECTOR

a. Reconnect the L29 and L30 No. 2 CAN junction connector connectors.

NEXT

11.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)

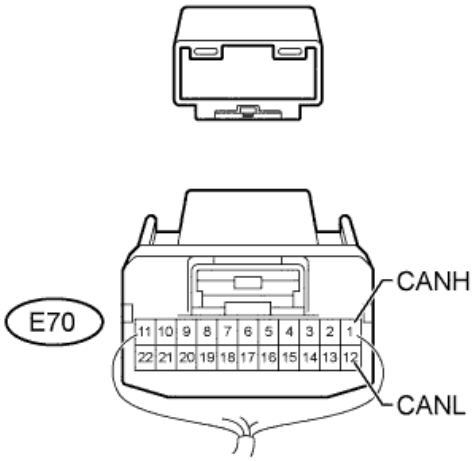
a. Disconnect the E70 No. 10 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E70-1 (CANH) - E70-12 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 10 Junction Connector)



NG

Go to step 15

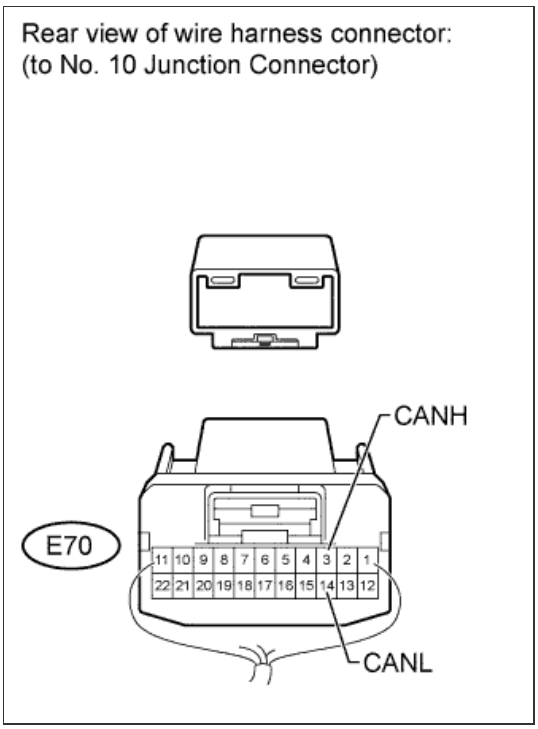
OK

12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 10 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 13

OK →

REPAIR OR REPLACE NO. 10 CAN JUNCTION CONNECTOR

13.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT →

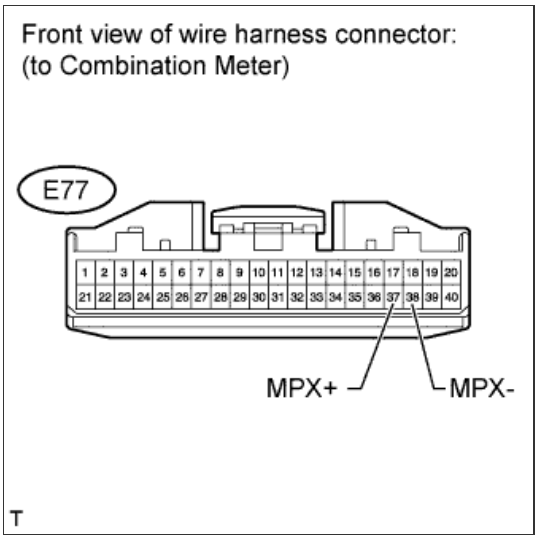
14.CHECK FOR OPEN IN CAN BUS MAIN WIRE (COMBINATION METER - NO. 10 JUNCTION CONNECTOR)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (COMBINATION METER - NO. 10 JUNCTION BLOCK)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

15.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT

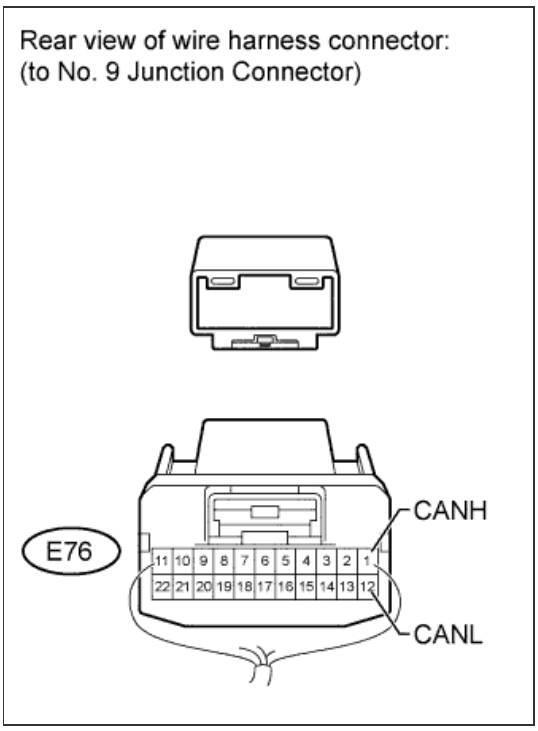
16.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)

a. Disconnect the E76 No. 9 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E76-1 (CANH) - E76-12 (CANL)	Engine switch off	108 to 132 Ω



NG

REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)

OK

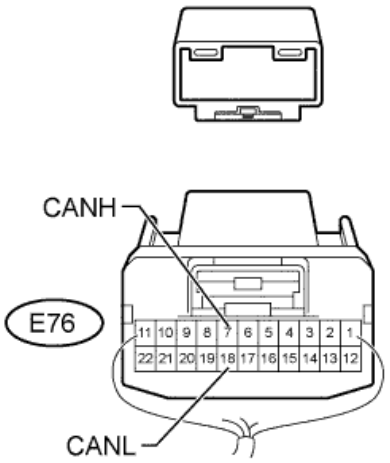
17.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E76-7 (CANH) - E76-18 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 9 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

OK

REPAIR OR REPLACE NO. 9 JUNCTION CONNECTOR

18.CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR SIDE)

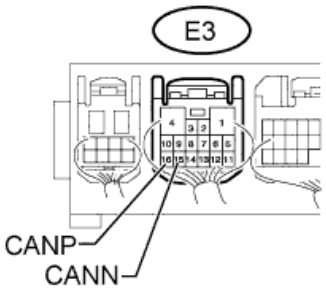
a. Disconnect the E70 No. 10 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

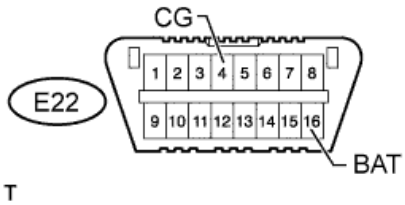
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Main Body ECU)



Front view of DLC3:



T

NG → Go to step 20

OK

19.CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

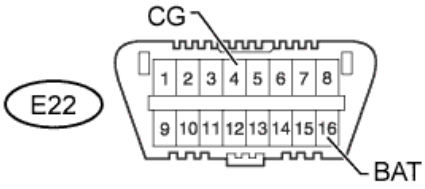
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E70-3 (CANH) - E70-14 (CANN)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	Below 1 Ω	NG
E70-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E70-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E70-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E70-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E70-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E70-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 10 Junction Connector)



Front view of DLC3:



NG → Go to step 36

OK

REPAIR OR REPLACE NO. 10 JUNCTION CONNECTOR

20.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT

21.CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

a. Disconnect the E76 No. 9 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

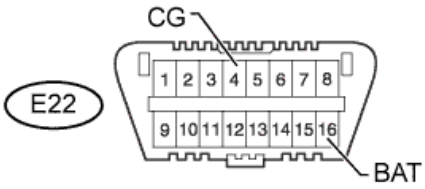
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E76-1 (CANH) - E76-12 (CANL)	Engine switch off	108 to 132 Ω
E76-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E76-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E76-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E76-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Rear view of wire harness connector:
(to No. 9 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 10 JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

OK

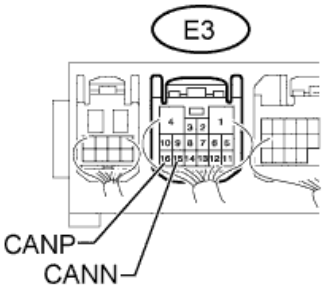
22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

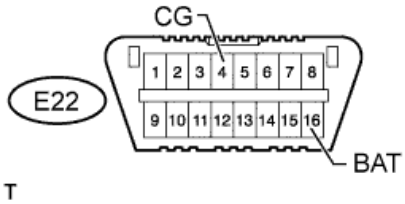
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Main Body ECU)



Front view of DLC3:



T

NG → Go to step 27

OK

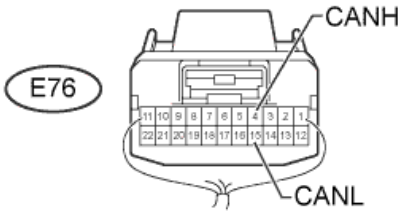
23.CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR - POSITION CONTROL AND SWITCH)

a. Measure the resistance according to the value(s) in the table below.

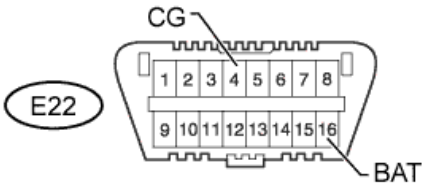
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-4 (CANH) - E76-15 (CANL)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E76-15 (CANL)	Engine switch off	Below 1 Ω	NG
E76-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 9 Junction Connector)



Front view of DLC3:



NG → Go to step 38

OK

24.CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR - MULTIPLEX TILT AND TELESCOPIC ECU)

a. Measure the resistance according to the value(s) in the table below.

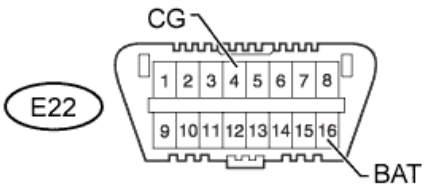
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-3 (CANH) - E76-14 (CANL)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E76-14 (CANL)	Engine switch off	Below 1 Ω	NG
E76-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 9 Junction Connector)



Front view of DLC3:



NG → Go to step 40

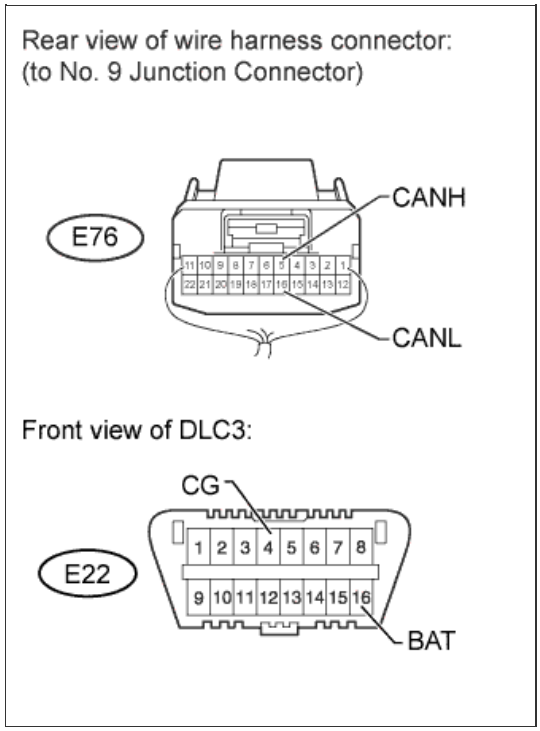
OK

25.CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR - OUTER MIRROR CONTROL ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-5 (CANH) - E76-16 (CANL)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E76-16 (CANL)	Engine switch off	Below 1 Ω	NG
E76-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 42

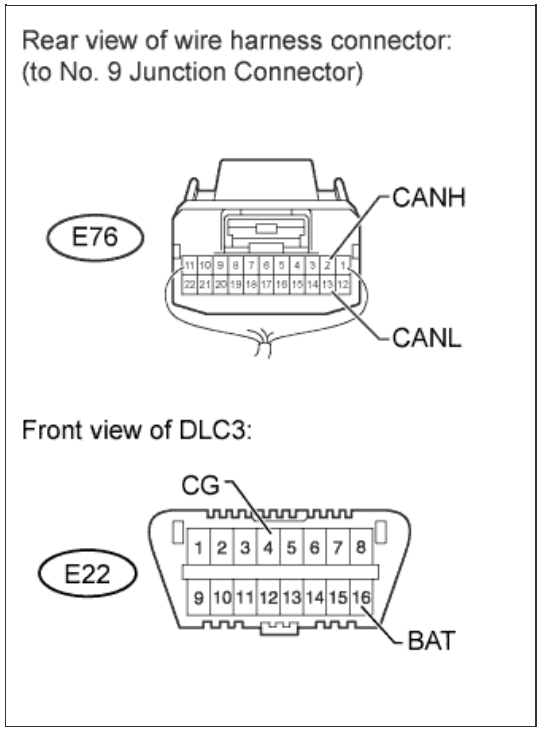
OK

26.CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR - CERTIFICATION ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E76-2 (CANH) - E76-13 (CANL)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E76-13 (CANL)	Engine switch off	Below 1 Ω	NG
E76-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 44

OK

REPAIR OR REPLACE NO. 9 JUNCTION CONNECTOR

27.CONNECT CONNECTOR

a. Reconnect the E76 No. 9 junction connector connector.

NEXT

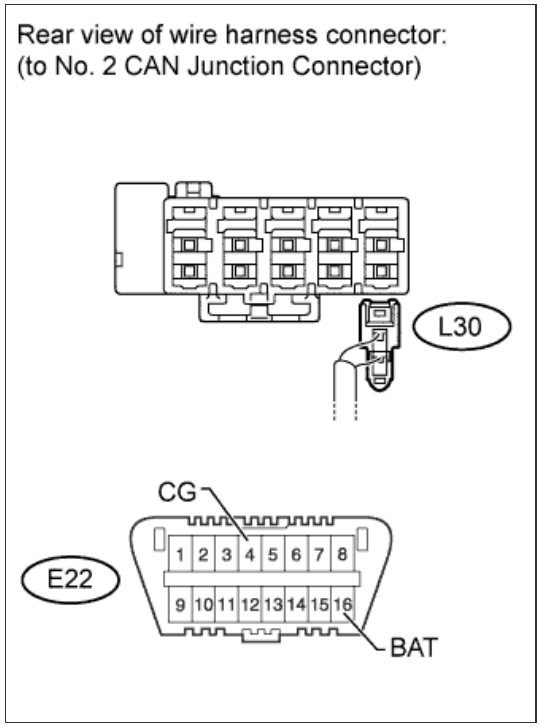
28.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

a. Disconnect the L30 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L30-1 (CANH) - L30-2 (CANL)	Engine switch off	108 to 132 Ω
L30-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
L30-2 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
L30-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
L30-2 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)

OK

29.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR SIDE)

a. Disconnect the L29 No. 2 CAN junction connector connector.

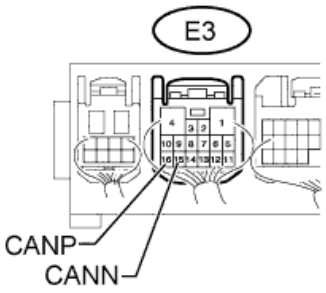
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

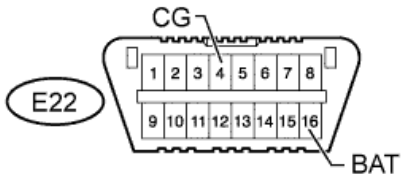
Tester Connection	Switch Condition	Specified Condition
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher

E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Main Body ECU)



Front view of DLC3:



T

NG → Go to step 32

OK

30.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - POWER BACK DOOR UNIT)

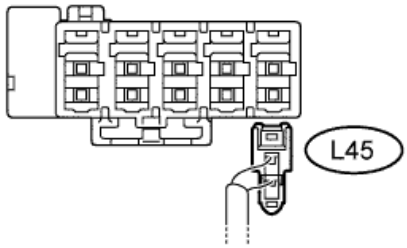
NOTICE:

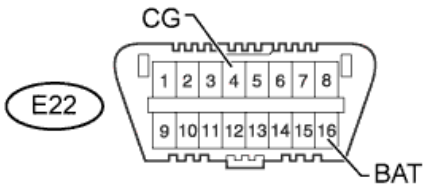
For vehicles without the power back door system, go to "Check for Short in CAN Bus Wires (No. 2 CAN Junction Connector - No. 2 Main Body ECU)".

a. Disconnect the L45 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Rear view of wire harness connector:
(to No. 2 CAN Junction Connector)





Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
L45-1 (CANH) - L45-2 (CANL)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - L45-2 (CANL)	Engine switch off	Below 1 Ω	NG
L45-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L45-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L45-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L45-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L45-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L45-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

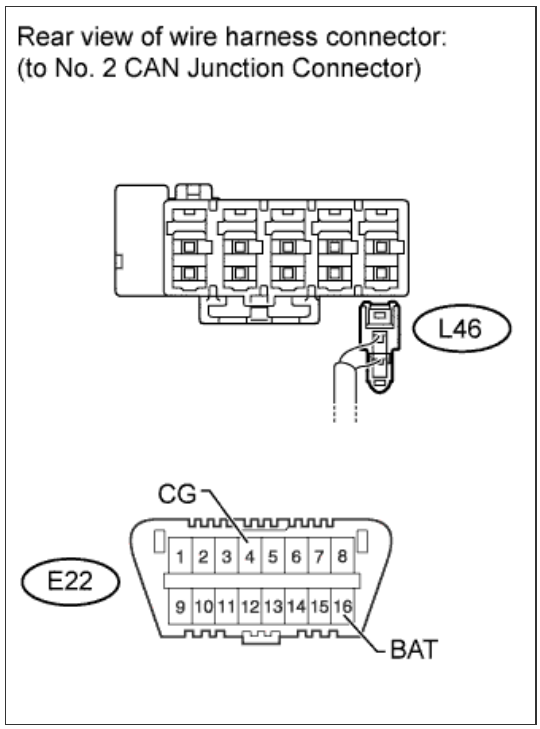
NG → Go to step 46

OK

31.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 2 MAIN BODY ECU)

a. Disconnect the L46 No. 2 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
L46-1 (CANH) - L46-2 (CANL)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - L46-2 (CANL)	Engine switch off	Below 1 Ω	NG
L46-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L46-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L46-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L46-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L46-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L46-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → Go to step 48

OK

REPLACE NO. 2 CAN JUNCTION CONNECTOR

32.CONNECT CONNECTOR

a. Reconnect the L29, L45, L46 and L30 No. 2 CAN junction connector connectors.

NEXT

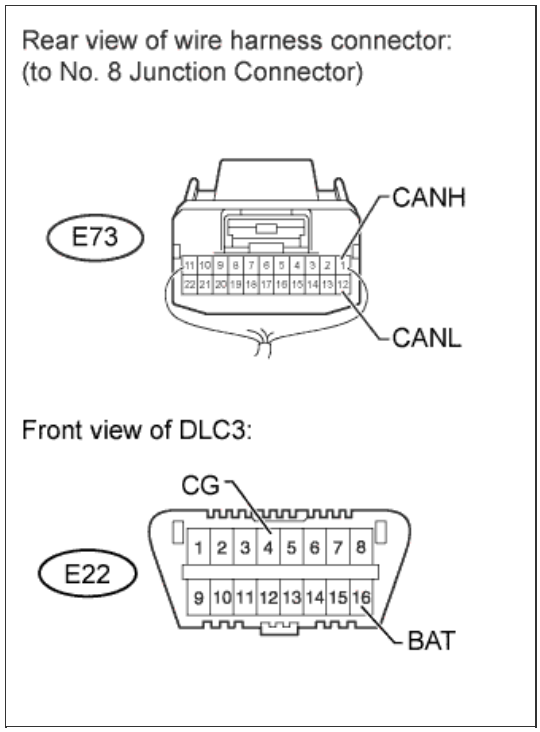
33.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)

a. Disconnect the E73 No. 8 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E73-1 (CANH) - E73-12 (CANL)	Engine switch off	108 to 132 Ω
E73-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E73-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E73-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E73-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)

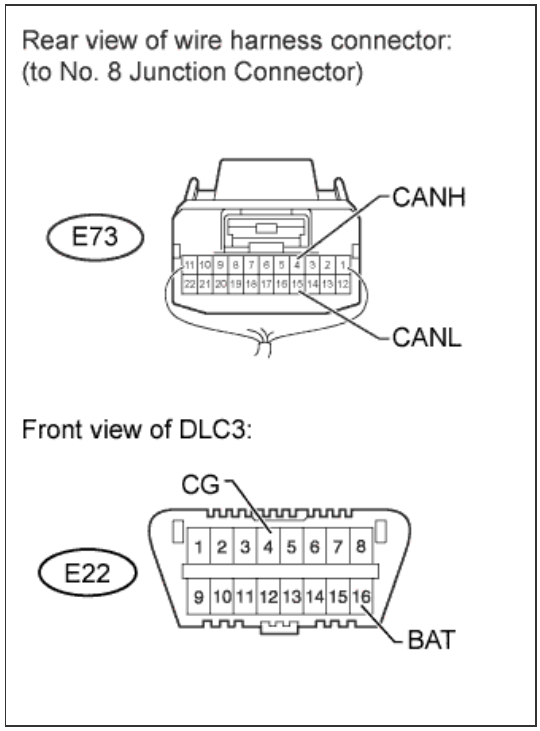
OK

34.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - WINDSHIELD WIPER ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E73-4 (CANH) - E73-15 (CANL)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E73-15 (CANL)	Engine switch off	Below 1 Ω	NG
E73-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E73-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 50

OK

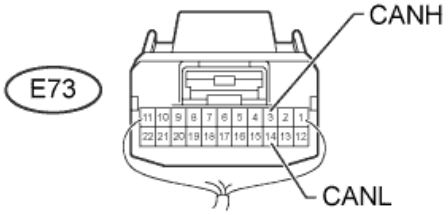
35.CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

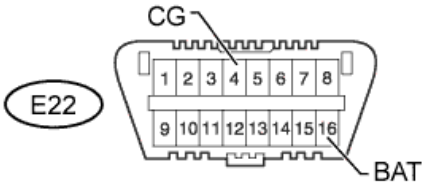
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E73-3 (CANH) - E73-14 (CANL)	Engine switch off	1 Ω or higher	OK
E73-3 (CANH) - E73-14 (CANL)	Engine switch off	Below 1 Ω	NG
E73-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E73-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 8 Junction Connector)



Front view of DLC3:



NG → Go to step 52

OK

REPAIR OR REPLACE NO. 8 JUNCTION CONNECTOR

36.CONNECT CONNECTOR

a. Reconnect the E70 No. 10 junction connector connector.

NEXT

37.CHECK FOR SHORT IN CAN BUS WIRES (COMBINATION METER)

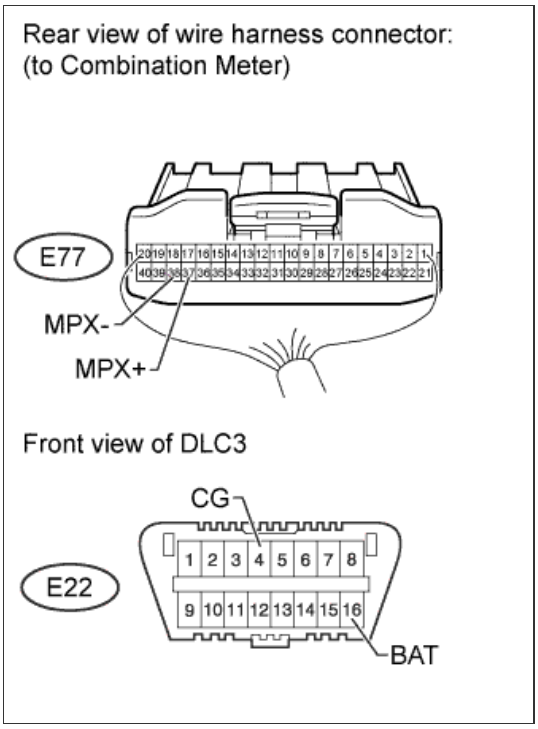
a. Disconnect the E77 meter ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	Below 1 Ω	NG
E77-37 (MPX+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E77-38 (MPX-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E77-38 (MPX-) - E22-4	Engine	Below 1 Ω	NG

(CG)	switch off		
E77-37 (MPX+) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E77-38 (MPX-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E77-38 (MPX-) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (NO. 10 JUNCTION CONNECTOR - COMBINATION METER)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

38.CONNECT CONNECTOR

a. Reconnect the E76 No. 9 junction connector connector.

NEXT

39.CHECK FOR SHORT IN CAN BUS WIRES (POSITION CONTROL ECU AND SWITCH)

a. Disconnect the c50 position control ECU and switch connector.

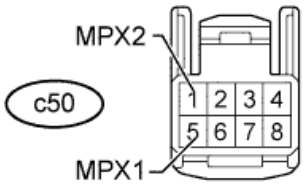
b. Measure the resistance according to the value(s) in the table below.

Result

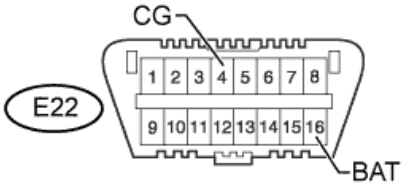
Tester Connection	Switch Condition	Measured Resistance	Proceed to
c50-5 (MPX1) - c50-1 (MPX2)	Engine switch off	1 Ω or higher	OK
c50-5 (MPX1) - c50-1 (MPX2)	Engine switch off	Below 1 Ω	NG
c50-5 (MPX1) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
c50-1 (MPX2) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
c50-5 (MPX1) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
c50-1 (MPX2) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
c50-5 (MPX1) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
c50-1 (MPX2) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
c50-5 (MPX1) - E22-	Engine		

16 (BAT)	switch off	Below 1 Ω	NG
c50-1 (MPX2) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Position Control ECU and Switch)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO POSITION CONTROL ECU AND SWITCH (MPX1, MPX2)

OK → REPLACE POSITION CONTROL ECU AND SWITCH ASSEMBLY (Click here)

40.CONNECT CONNECTOR

a. Reconnect the E76 No. 9 junction connector connector.

NEXT

41.CHECK FOR SHORT IN CAN BUS WIRES (MULTIPLEX TILT AND TELESCOPIC ECU)

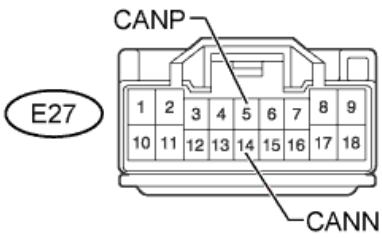
a. Disconnect the E27 power tilt and telescopic ECU connector.

b. Measure the resistance according to the value(s) in the table below.

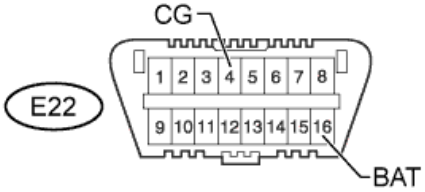
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	Below 1 Ω	NG
E27-5 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E27-14 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E27-14 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E27-5 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E27-14 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Multiplex Tilt and Telescopic ECU)



Front view of DLC3:



E27-14 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO POWER TILT AND TELESCOPIC ECU (CANP, CANN)

OK

REPLACE MULTIPLEX TILT AND TELESCOPIC ECU (Click here)

42.CONNECT CONNECTOR

a. Reconnect the E76 No. 9 junction connector connector.

NEXT

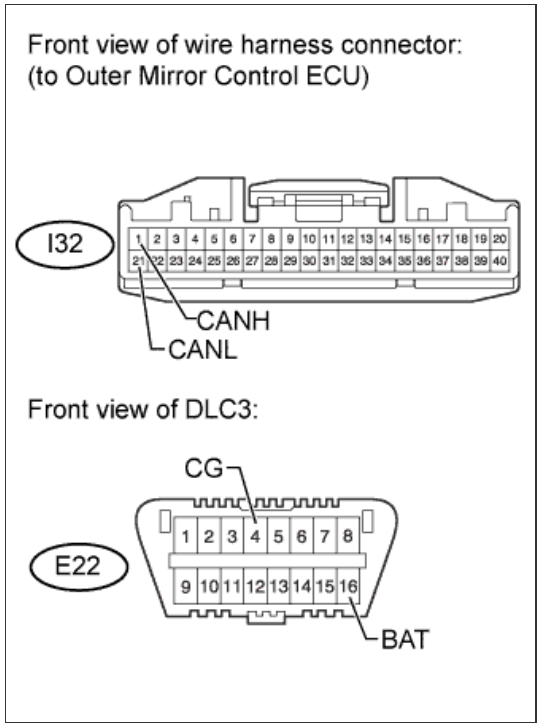
43.CHECK FOR SHORT IN CAN BUS WIRES (OUTER MIRROR CONTROL ECU)

a. Disconnect the I32 outer mirror control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
I32-1 (CANH) - I32-21 (CANL)	Engine switch off	1 Ω or higher	OK
I32-1 (CANH) - I32-21 (CANL)	Engine switch off	Below 1 Ω	NG
I32-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
I32-21 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
I32-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
I32-21 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
I32-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
I32-21 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
I32-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
I32-21 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO OUTER MIRROR CONTROL ECU (CANH, CANL)

OK

REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY (Click here)

44.CONNECT CONNECTOR

a. Reconnect the E76 No. 9 junction connector connector.

NEXT

45.CHECK FOR SHORT IN CAN BUS WIRES (CERTIFICATION ECU)

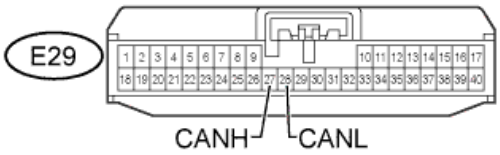
a. Disconnect the E29 certification ECU (smart key ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

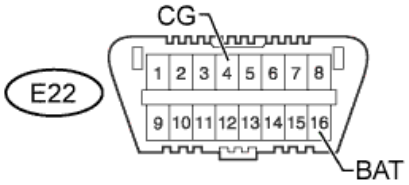
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	Below 1 Ω	NG
E29-27 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E29-28 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E29-28 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E29-27 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E29-28 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E29-28 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Certification ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) (CANH, CANL)

OK → REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

46.CONNECT CONNECTOR

a. Reconnect the E76 No. 9 junction connector connector.

NEXT

47.CHECK FOR SHORT IN CAN BUS WIRES (POWER BACK DOOR UNIT)

a. Disconnect the L36 power back door unit (power back door ECU) connector.

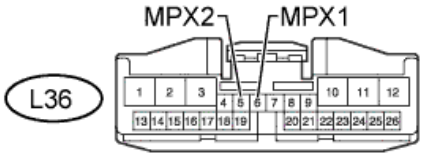
b. Measure the resistance according to the value(s) in the table below.

Result

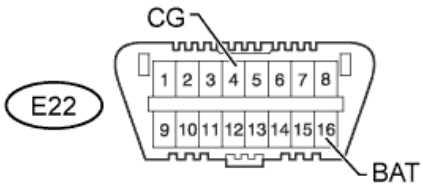
Tester Connection	Switch Condition	Measured Resistance	Proceed to
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	Below 1 Ω	NG
L36-6 (MPX1) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L36-5 (MPX2) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

L36-5 (MPX2) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L36-6 (MPX1) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L36-5 (MPX2) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L36-5 (MPX2) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Power Back Door Unit)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO POWER BACK DOOR UNIT (POWER BACK DOOR ECU) (MPX1, MPX2)

OK → REPLACE POWER BACK DOOR UNIT ASSEMBLY (POWER BACK DOOR ECU) (Click here)

48.CONNECT CONNECTOR

a. Reconnect the E76 No. 9 junction connector connector.

NEXT

49.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 MAIN BODY ECU)

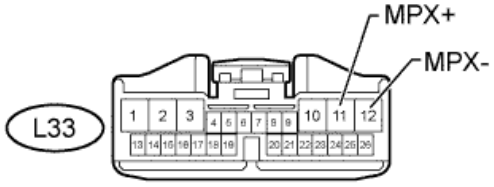
a. Disconnect the L33 No. 2 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.

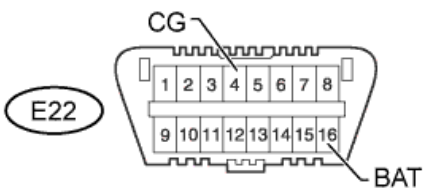
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	Below 1 Ω	NG
L33-11 (MPX+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L33-12 (MPX-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L33-12 (MPX-) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L33-11 (MPX+) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L33-12 (MPX-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L33-12 (MPX-) - E22-	Engine	Below 1 Ω	NG

Front view of wire harness connector:
(to No. 2 Main Body ECU)



Front view of DLC3:



16 (BAT)	switch off		

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NO. 2 MAIN BODY ECU (MPX+, MPX-)

OK

REPLACE NO. 2 MAIN BODY ECU (Click here)

50.CONNECT CONNECTOR

a. Reconnect the E73 No. 8 junction connector connector.

NEXT

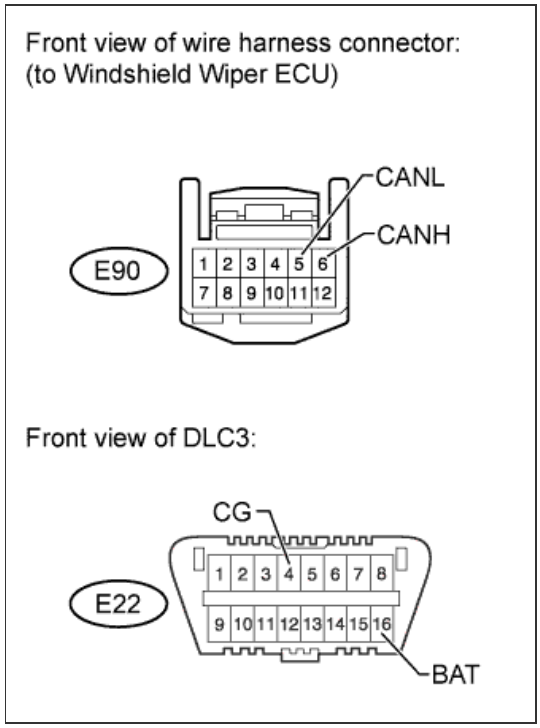
51.CHECK FOR SHORT IN CAN BUS WIRES (WINDSHIELD WIPER ECU)

a. Disconnect the E90 windshield wiper ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	Below 1 Ω	NG
E90-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E90-5 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E90-5 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E90-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E90-5 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E90-5 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO WINDSHIELD WIPER ECU (CANH, CANL)

OK

REPLACE WINDSHIELD WIPER ECU (Click here)

52.CONNECT CONNECTOR

a. Reconnect the E73 No. 8 junction connector connector.

NEXT

53.CHECK FOR SHORT IN CAN BUS WIRES (MAIN BODY ECU)

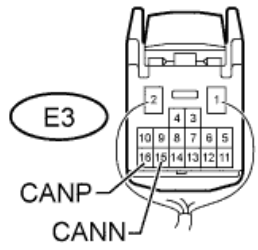
a. Disconnect the E3 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.

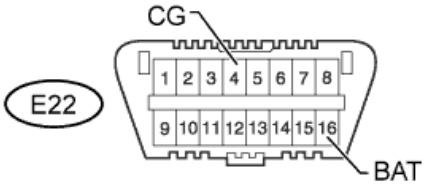
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	Below 1 Ω	NG
E3-16 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E3-15 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E3-15 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to Main Body ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO MAIN BODY ECU (NO. 8 JUNCTION CONNECTOR - MAIN BODY ECU)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

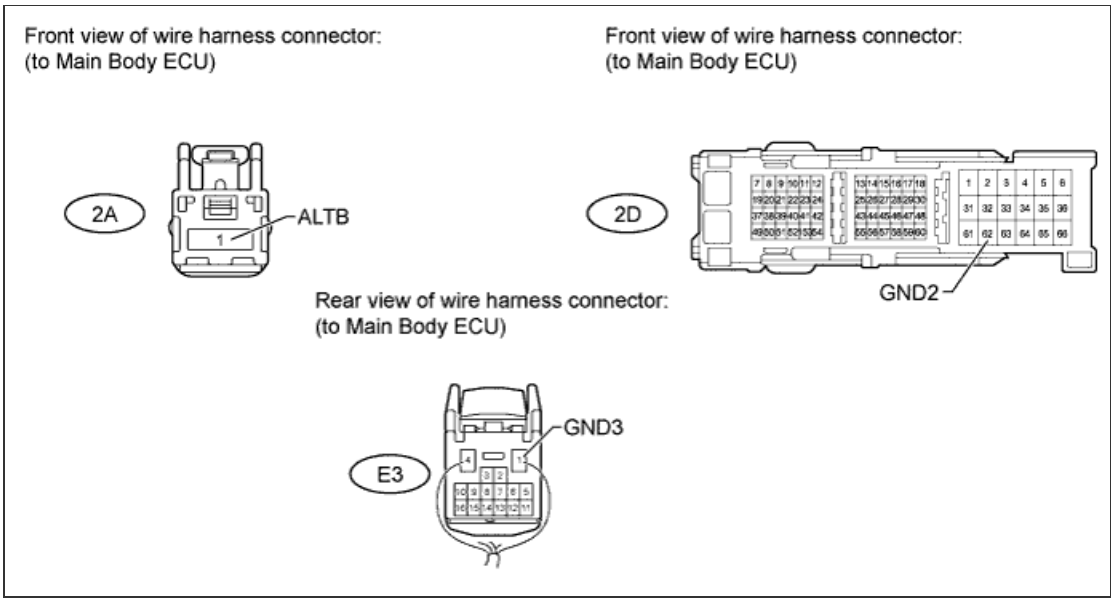
54.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the 2A, 2D and E3 main body ECU (cowl side junction block LH) connectors.



c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
2D-62 (GND2) - Body ground	Always	Below 1 Ω
E3-1 (GND3) - Body ground		

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
2A-1 (ALTB) - Body ground	Always	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

DTC U0123 Lost Communication with Yaw Rate Sensor Module

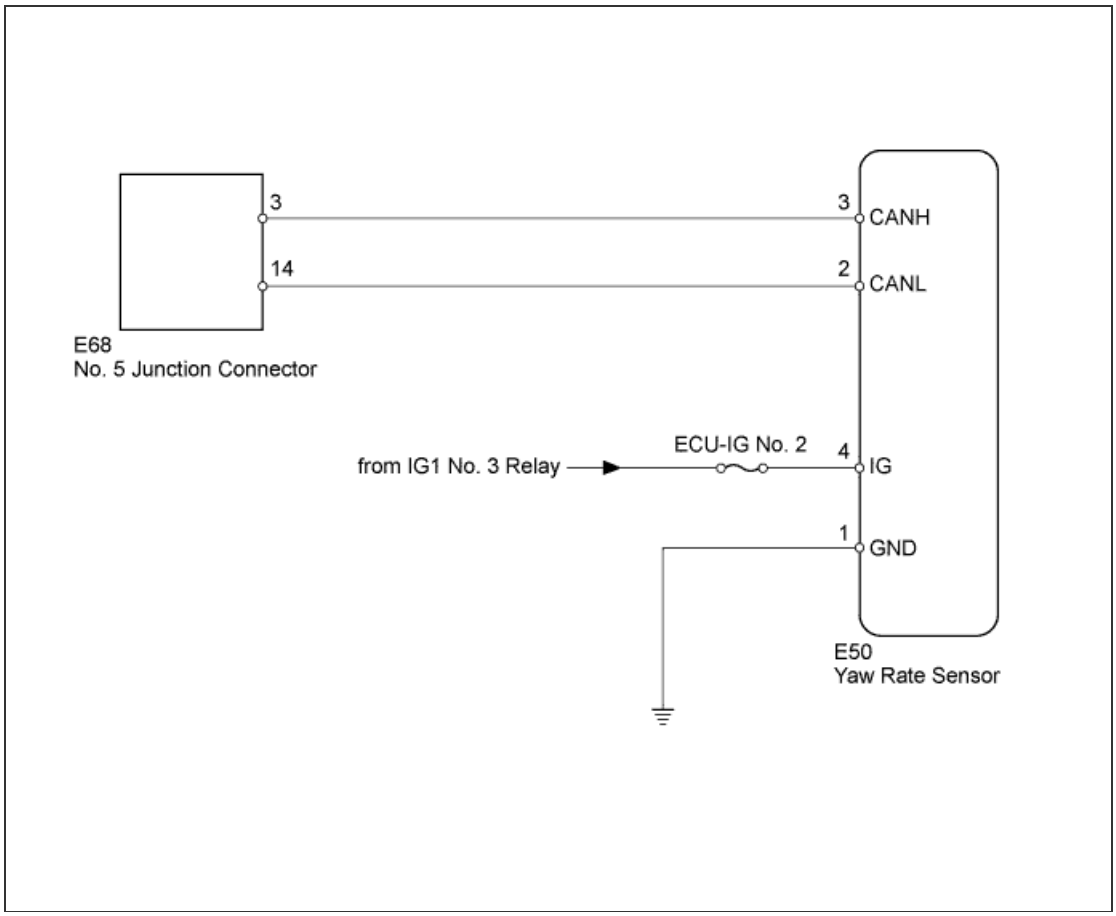
DTC U0124 Lost Communication with Lateral Acceleration Sensor Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0123	There is no communication from the yaw rate sensor.	• Power source circuit of yaw rate sensor • Yaw rate sensor • Yaw rate sensor branch wire or connector
U0124	There is no communication from the yaw rate sensor (lateral acceleration sensor).	• Power source circuit of yaw rate sensor • Yaw rate sensor • Yaw rate sensor branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

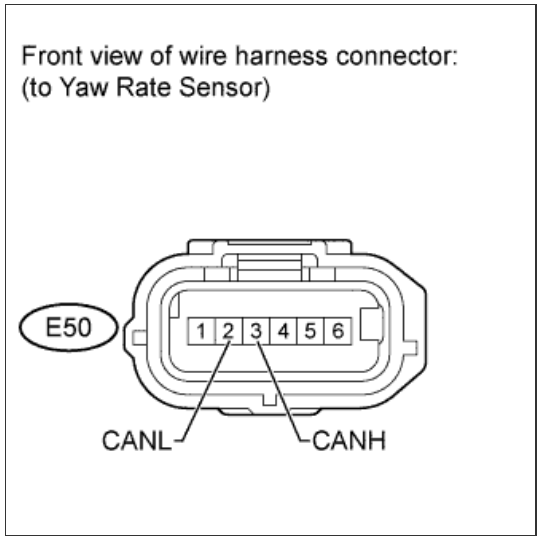
2.CHECK FOR OPEN IN CAN BUS WIRE (YAW RATE SENSOR BRANCH WIRE)

a. Disconnect the E50 yaw rate sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE YAW RATE SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (YAW RATE SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E50 yaw rate sensor connector.

c. Measure the resistance according to the value(s) in the table below.

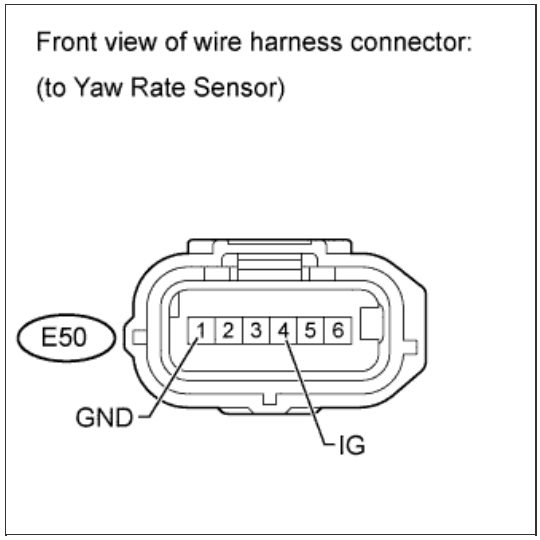
Standard Resistance:

Tester Connection	Condition	Specified Condition
E50-1 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E50-4 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE YAW RATE SENSOR ASSEMBLY (Click here)

DTC U1002 (CAN No. 2 BUS) Lost Communication with Gateway Module (Network Gateway ECU)

for Preparation Click here

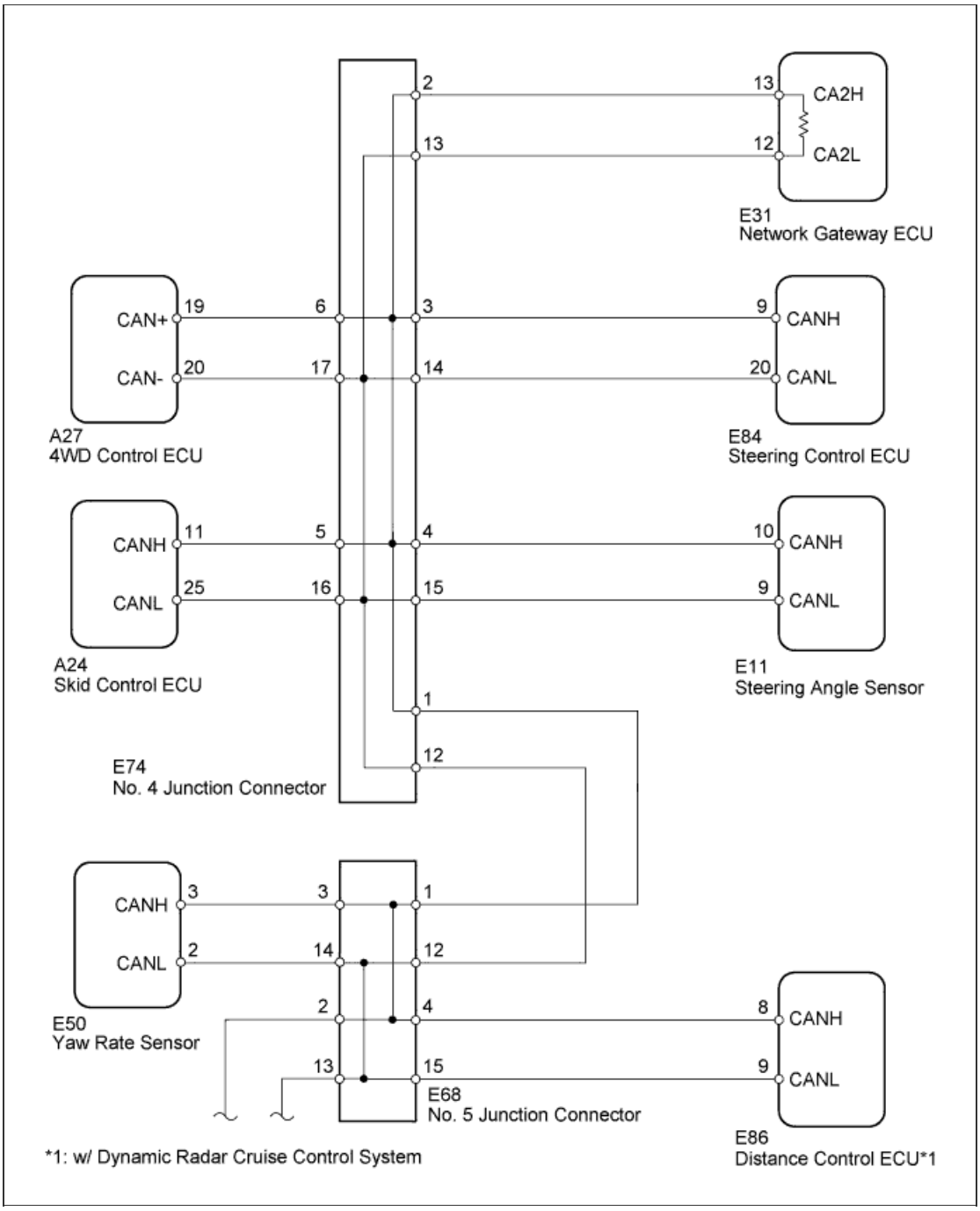
DESCRIPTION

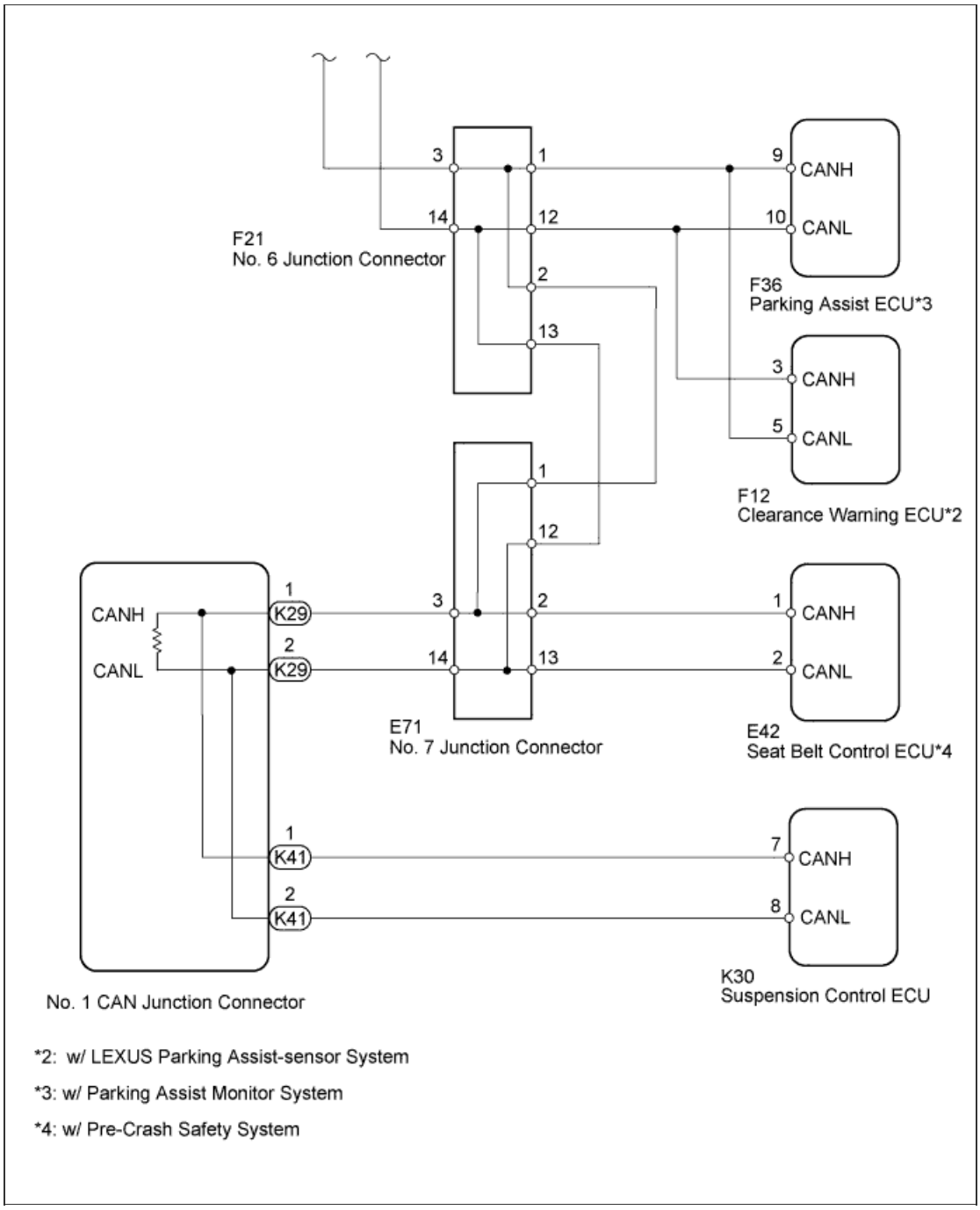
If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (one side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	Symptoms	Trouble Area
U1002 (CAN No. 2 BUS)	Lost communication with the gateway module (network gateway ECU).	• Movement control bus circuit • 4WD control ECU branch wire or connector • Yaw rate sensor branch wire or connector • Seat belt control ECU branch wire or connector*1 • Clearance warning ECU branch wire or connector*2 • Parking assist ECU branch wire or connector*3 • Skid control ECU branch wire or connector • Steering angle sensor branch wire or connector • Network gateway ECU main wire or connector • Suspension control ECU branch wire or connector • Steering control ECU branch wire or connector • Distance Control ECU branch wire or connector*4 • 4WD control ECU • Yaw rate sensor • Seat belt control ECU*1 • Clearance warning ECU*2 • Parking assist ECU*3 • Skid control ECU • Steering angle sensor • Suspension control ECU • Steering control ECU • Network gateway ECU • Distance Control ECU*4 • No. 4 junction connector • No. 5 junction connector • No. 6 junction connector • No. 7 junction connector • No. 1 CAN junction connector

*1: w/ Pre-Crash Safety System
*2: w/ LEXUS Parking Assist-sensor System
*3: w/ Parking Assist Monitor System
*4: w/ Dynamic Radar Cruise Control System

WIRING DIAGRAM


2
13
13
CA2H
12
CA2L
E31
Network Gateway ECU
CAN+
19
6
3
9
CANH
CAN-
20
17
14
20
CANL
A27
4WD Control ECU
E84
Steering Control ECU
CANH
11
5
4
10
CANH
CANL
25
16
15
9
CANL
A24
Skid Control ECU
E11
Steering Angle Sensor
1
12
E74
No. 4 Junction Connector
CANH
3
3
1
CANL
2
14
12
2
4
8
CANH
13
15
9
CANL
E50
Yaw Rate Sensor
E68
No. 5 Junction Connector
E86
Distance Control ECU*1
*1: w/ Dynamic Radar Cruise Control System



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK CAN BUS WIRE (MAIN WIRE FOR DISCONNECTION, BUS LINE FOR SHORT CIRCUIT)

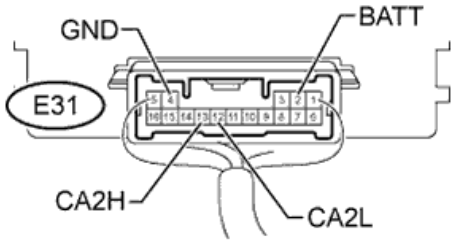
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition	Resistance Malfunction

E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	54 to 69 Ω	Below 53 Ω: Short in line
	Engine switch off		70 Ω or higher: Open in CAN main bus line
E31-13 (CA2H) - E31-2 (BAAT)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E31-12 (CA2L) - E31-2 (BAAT)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E31-13 (CA2H) - E31-4 (GND)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short
E31-12 (CA2L) - E31-4 (GND)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short

Component with harness connected:
(Network Gateway ECU)



H

Result

Result	Proceed to
NG - Open in CAN main bus line	A
NG - Short in line - +B short - Ground short	B
OK	C

B → Go to step 18

C → Go to step 63

A

3.CHECK FOR OPEN IN MAIN BUS WIRE (NO. 7 CAN JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

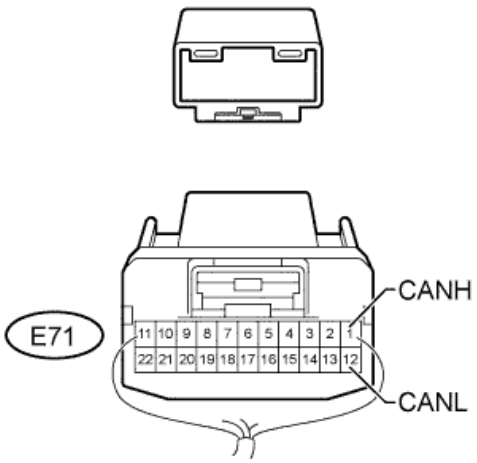
a. Disconnect the E71 No. 7 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E71-1 (CANH) - E71-12 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 7 Junction Connector)



NG → Go to step 5

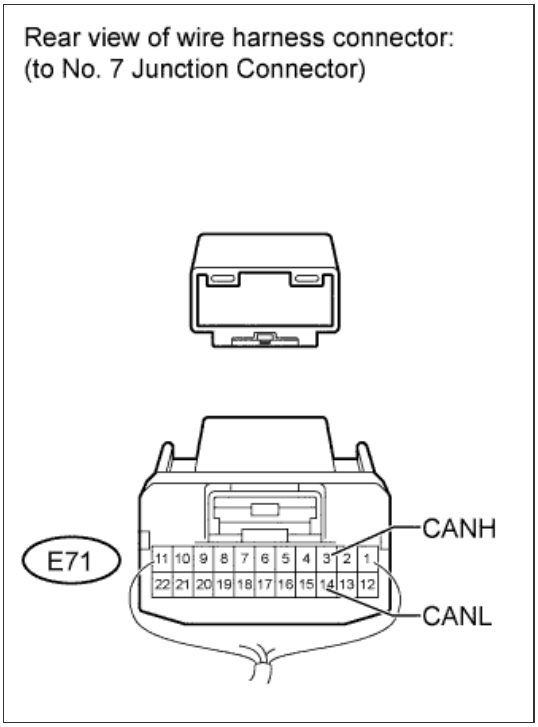
OK

4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 7 JUNCTION CONNECTOR - NO. 1 CAN JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E71-3 (CANH) - E71-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 14

OK

REPAIR OR REPLACE NO. 7 JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the E71 No. 7 junction connector connector.

NEXT

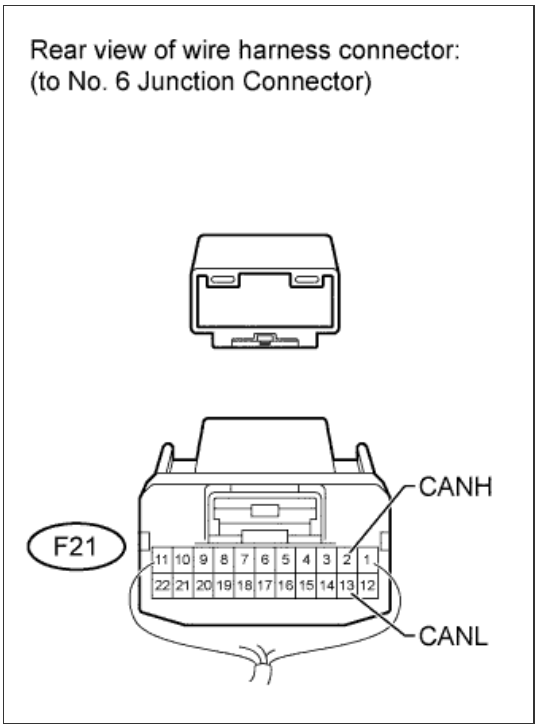
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 6 JUNCTION CONNECTOR - NO. 7 JUNCTION BLOCK)

a. Disconnect the F21 No. 6 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F21-2 (CANH) - F21-13 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 6 JUNCTION CONNECTOR - NO. 7 JUNCTION CONNECTOR)

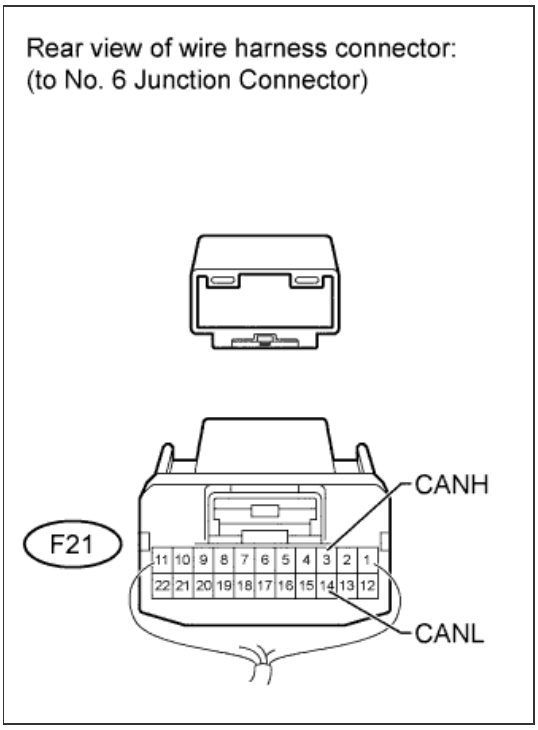
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 6 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F21-3 (CANH) - F21-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

OK

REPAIR OR REPLACE NO. 6 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

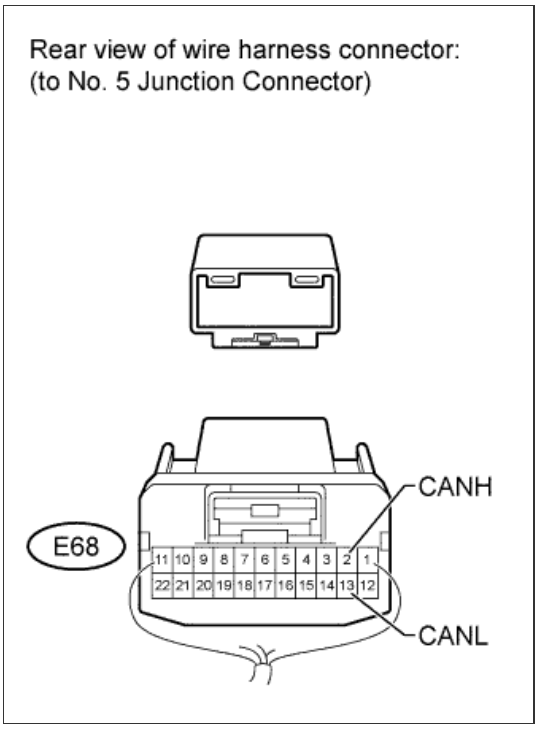
9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 5 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

a. Disconnect the E68 No. 5 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E68-2 (CANH) - E68-13 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 5 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

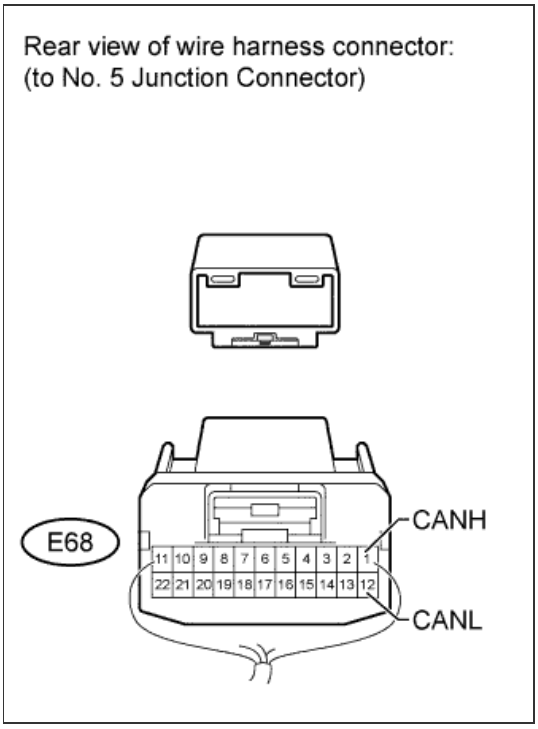
OK

10.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 5 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E68-1 (CANH) - E68-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 11

OK

REPAIR OR REPLACE NO. 5 JUNCTION CONNECTOR

11.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

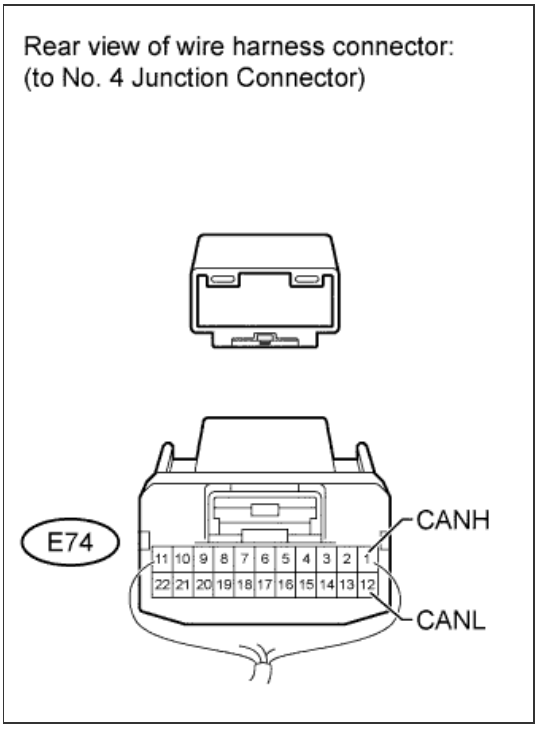
12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 4 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

a. Disconnect the E74 No. 4 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E74-1 (CANH) - E74-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 4 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

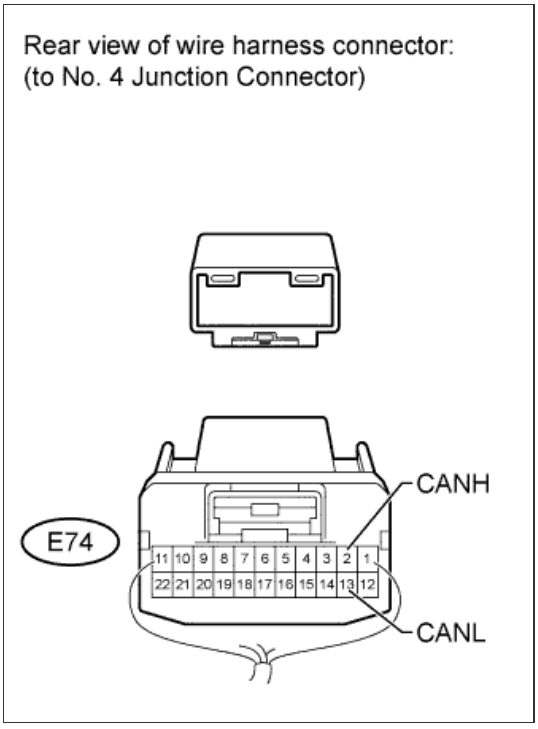
OK

13.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 4 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E74-2 (CANH) - E74-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 16

OK

REPAIR OR REPLACE NO. 4 CAN JUNCTION CONNECTOR

14.CONNECT CONNECTOR

a. Reconnect the E71 No. 7 junction connector connector.

NEXT

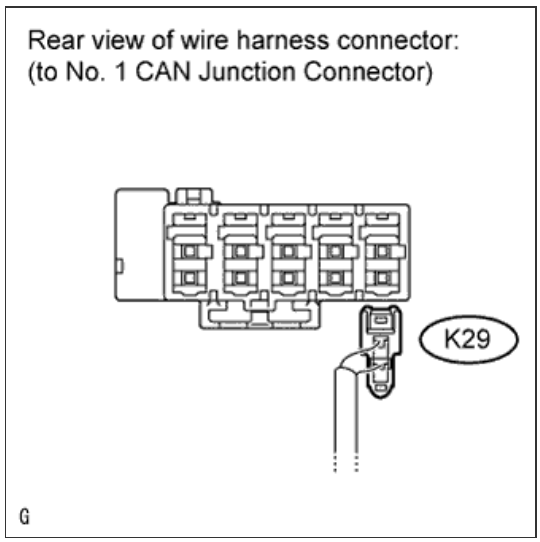
15.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 CAN JUNCTION CONNECTOR - NO. 7 JUNCTION CONNECTOR)

a. Disconnect the K29 No. 1 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
K29-1 (CANH) - K29-2 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 CAN JUNCTION CONNECTOR - NO. 7 JUNCTION CONNECTOR)

OK

REPAIR OR REPLACE NO. 1 CAN JUNCTION CONNECTOR

16.CONNECT CONNECTOR

a. Reconnect the E74 No. 4 junction connector connector.

NEXT

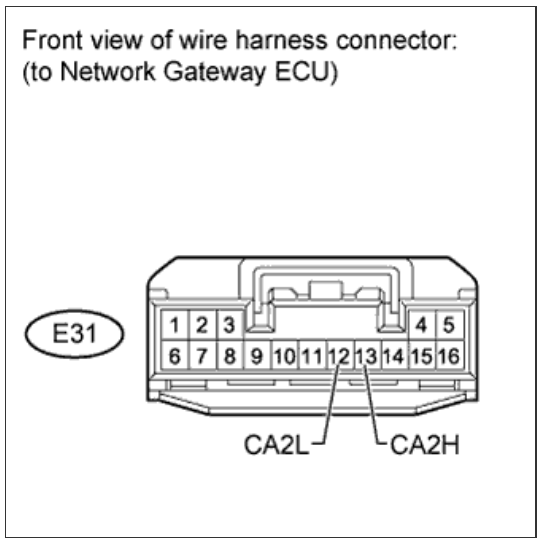
17.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NETWORK GATEWAY ECU - NO. 1 CAN JUNCTION CONNECTOR)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO NETWORK GATEWAY ECU (NETWORK GATEWAY ECU - NO. 1 CAN JUNCTION CONNECTOR)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

18.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR SIDE)

a. Disconnect the E71 No. 7 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

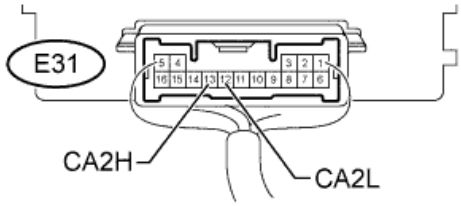
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

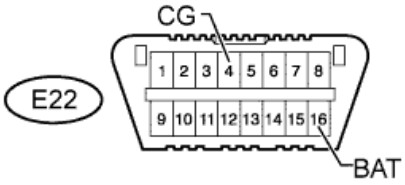
Result

Result	Proceed to
OK (w/ Pre-Crash Safety System)	A
OK (w/o Pre-Crash Safety System)	B
NG	C

Component with harness connected:
(Network Gateway ECU)



Front view of DLC3:



B → Go to step 20

C → Go to step 21

A

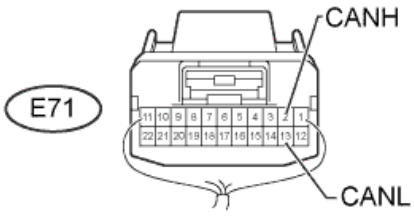
19.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - SEAT BELT CONTROL ECU)

a. Measure the resistance according to the value(s) in the table below.

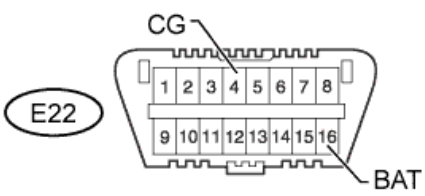
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E71-2 (CANH) - E71-13 (CANL)	Engine switch off	1 Ω or higher	OK
E71-2 (CANH) - E71-13 (CANL)	Engine switch off	Below 1 Ω	NG
E71-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E71-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E71-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E71-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 7 Junction Connector)



Front view of DLC3:



NG → Go to step 38

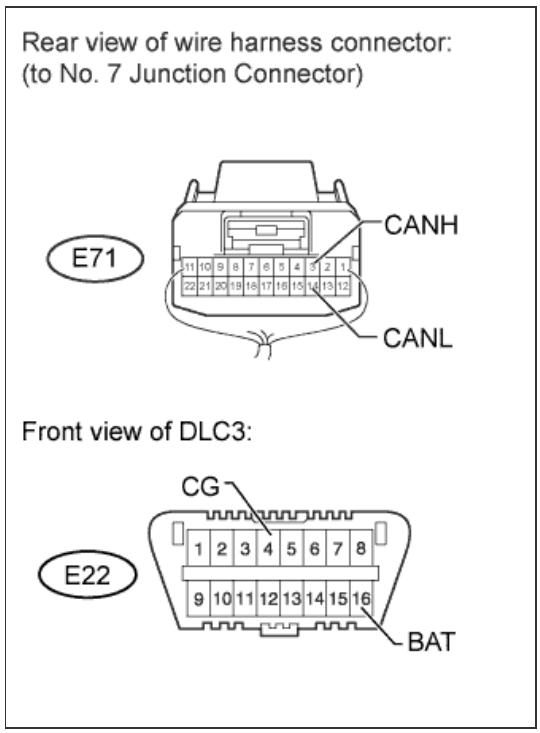
OK

20.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - NO. 1 CAN JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E71-3 (CANH) - E71-14 (CANL)	Engine switch off	1 Ω or higher	OK
E71-3 (CANH) - E71-14 (CANL)	Engine switch off	Below 1 Ω	NG
E71-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E71-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E71-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E71-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E71-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E71-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 40

OK

21.CONNECT CONNECTOR

a. Reconnect the E71 No. 7 junction connector connector.

NEXT

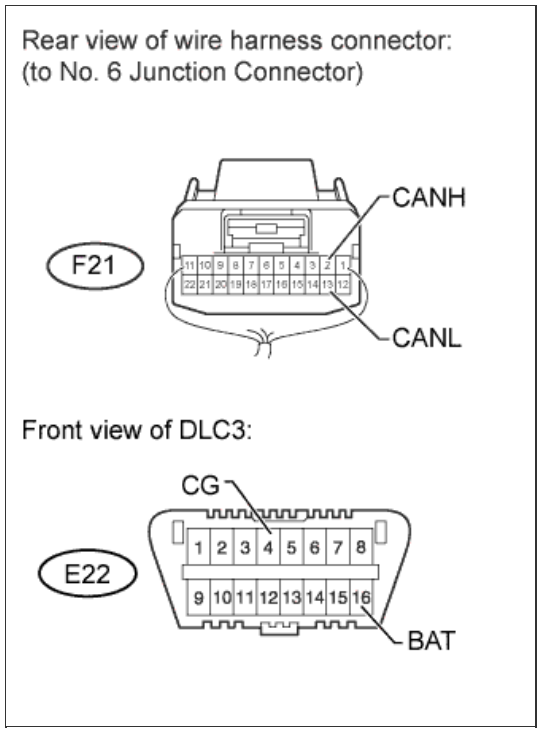
22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 7 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

a. Disconnect the F21 No. 6 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F21-2 (CANH) - F21-13 (CANL)	Engine switch off	108 to 132 Ω
F21-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
F21-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
F21-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
F21-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

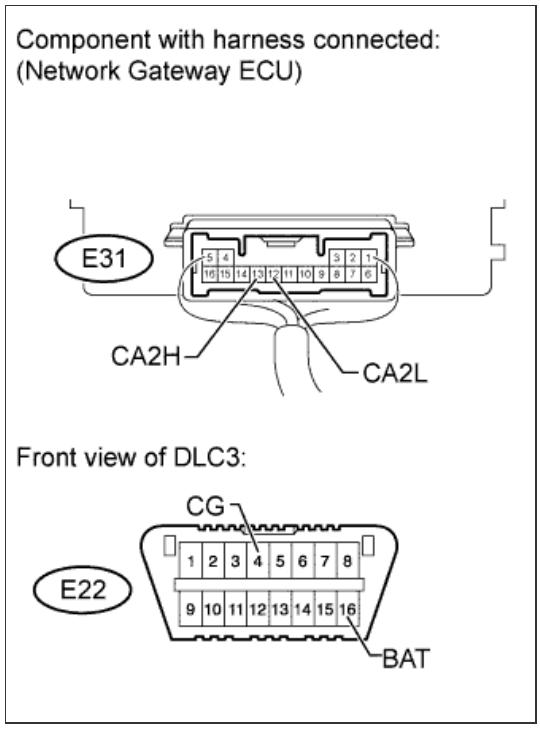


NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 7 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

OK

23.CHECK FOR SHORT IN CAN BUS WIRES (NO. 6 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Result

Tester Connection	Switch Condition
OK (w/ LEXUS Parking Assist-sensor System)	A
OK (w/ Parking Assist Monitor System)	B
NG	C

B → Go to step 25

C → Go to step 26

A

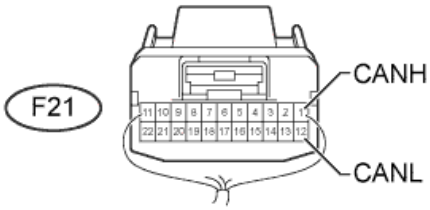
24.CHECK FOR SHORT IN CAN BUS WIRES (NO. 6 JUNCTION CONNECTOR - CLEARANCE WARNING ECU)

a. Measure the resistance according to the value(s) in the table below.

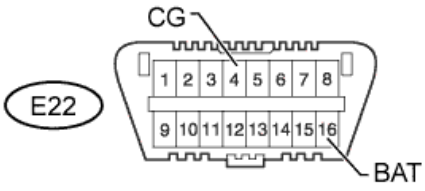
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 6 Junction Connector)



Front view of DLC3:



NG → Go to step 45

OK

REPAIR OR REPLACE NO. 6 JUNCTION CONNECTOR

25.CHECK FOR SHORT IN CAN BUS WIRES (NO. 6 JUNCTION CONNECTOR - PARKING ASSIST ECU)

a. Measure the resistance according to the value(s) in the table below.

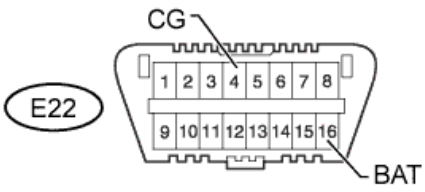
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - F21-12 (CANL)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F21-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F21-12 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 6 Junction Connector)



Front view of DLC3:



NG → Go to step 47

OK

REPAIR OR REPLACE NO. 6 JUNCTION CONNECTOR

26.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

27.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR - NO. 6 JUNCTION CONNECTOR)

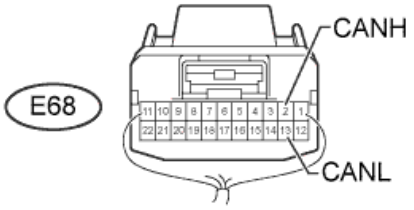
a. Disconnect the E68 No. 5 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

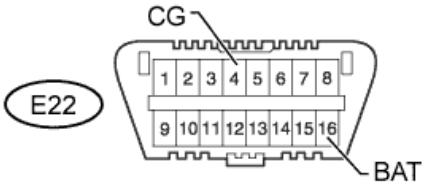
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E68-2 (CANH) - E68-13 (CANL)	Engine switch off	108 to 132 Ω
E68-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E68-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E68-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E68-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Rear view of wire harness connector:
(to No. 5 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 6 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

OK

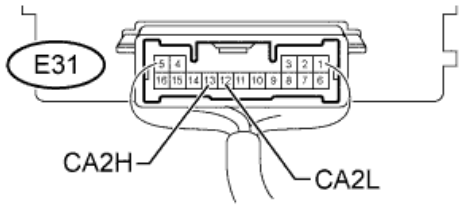
28.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

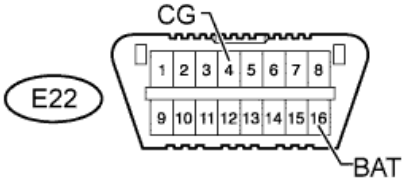
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	200 Ω or higher
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Component with harness connected:
(Network Gateway ECU)



Front view of DLC3:



NG → Go to step 31

OK

29.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR - DISTANCE CONTROL ECU)

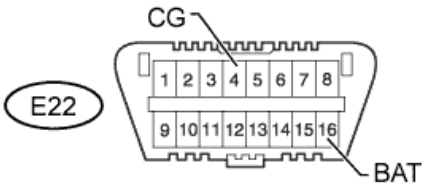
NOTICE:

For vehicles without the dynamic radar cruise control system, go to "Check for short in CAN Bus Wires (No. 5 Junction Control - Yaw Rate Sensor)".

Rear view of wire harness connector:
(to No. 5 Junction Connector)



Front view of DLC3:



a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E68-4 (CANH) - E68-15 (CANL)	Engine switch off	1 Ω or higher	OK
E68-4 (CANH) - E68-15 (CANL)	Engine switch off	Below 1 Ω	NG
E68-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E68-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → Go to step 49

OK

30.CHECK FOR SHORT IN CAN BUS WIRES (NO. 5 JUNCTION CONNECTOR - YAW RATE SENSOR)

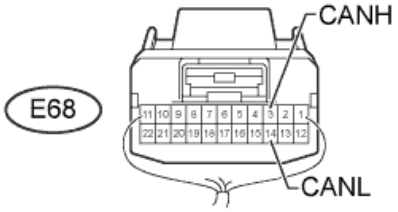
a. Measure the resistance according to the value(s) in the table below.

Result

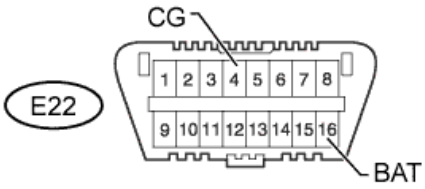
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E68-3 (CANH) - E68-14 (CANL)	Engine switch off	1 Ω or higher	OK
E68-3 (CANH) - E68-14 (CANL)	Engine switch off	Below 1 Ω	NG
E68-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E68-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E68-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E68-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

E68-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 5 Junction Connector)



Front view of DLC3:



NG → Go to step 51

OK

REPAIR OR REPLACE NO. 5 JUNCTION CONNECTOR

31.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

32.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - NO. 5 JUNCTION CONNECTOR)

a. Disconnect the E74 No. 4 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

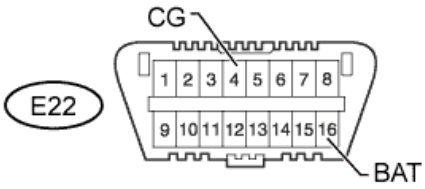
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E74-1 (CANH) - E74-12 (CANL)	Engine switch off	108 to 132 Ω
E74-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E74-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E74-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E74-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Rear view of wire harness connector:
(to No. 4 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 5 JUNCTION CONNECTOR - NO. 4 JUNCTION CONNECTOR)

OK

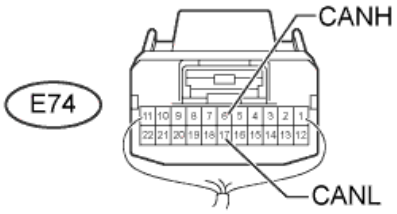
33.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - 4WD CONTROL ECU)

a. Measure the resistance according to the value(s) in the table below.

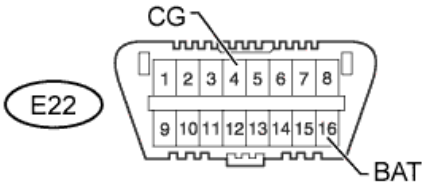
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-6 (CANH) - E74-17 (CANL)	Engine switch off	1 Ω or higher	OK
E74-6 (CANH) - E74-17 (CANL)	Engine switch off	Below 1 Ω	NG
E74-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-17 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-17 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-17 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-17 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 4 Junction Connector)



Front view of DLC3:



NG → Go to step 53

OK →

34.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - STEERING CONTROL ECU)

NOTICE:

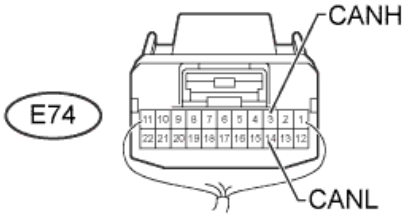
For vehicles without the variable gear ratio steering system, go to "Check for Short in CAN Bus Wires (No. 4 Junction Connector - Steering Angle Sensor)".

a. Measure the resistance according to the value(s) in the table below.

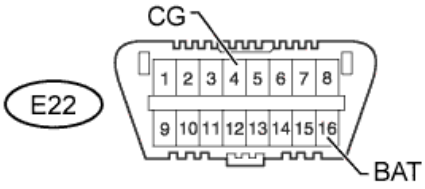
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-3 (CANH) - E74-14 (CANL)	Engine switch off	1 Ω or higher	OK
E74-3 (CANH) - E74-14 (CANL)	Engine switch off	Below 1 Ω	NG
E74-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 4 Junction Connector)



Front view of DLC3:



NG → Go to step 55

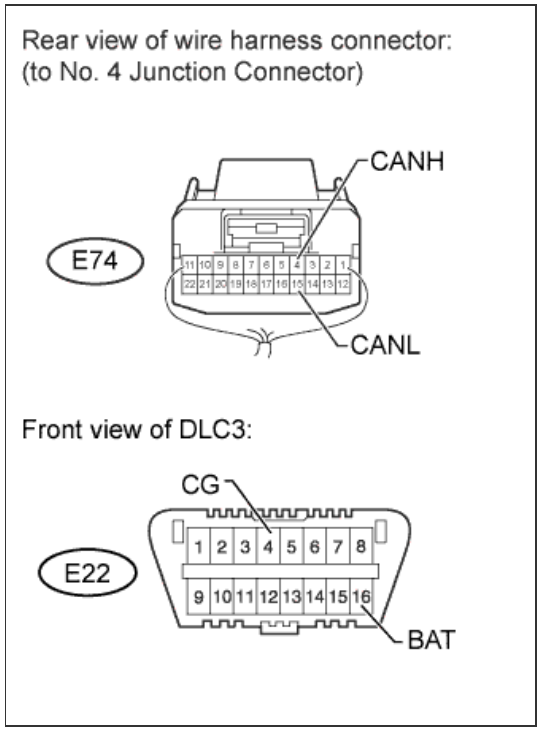
OK

35.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - STEERING ANGLE SENSOR)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-4 (CANH) - E74-15 (CANL)	Engine switch off	1 Ω or higher	OK
E74-4 (CANH) - E74-15 (CANL)	Engine switch off	Below 1 Ω	NG
E74-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 57

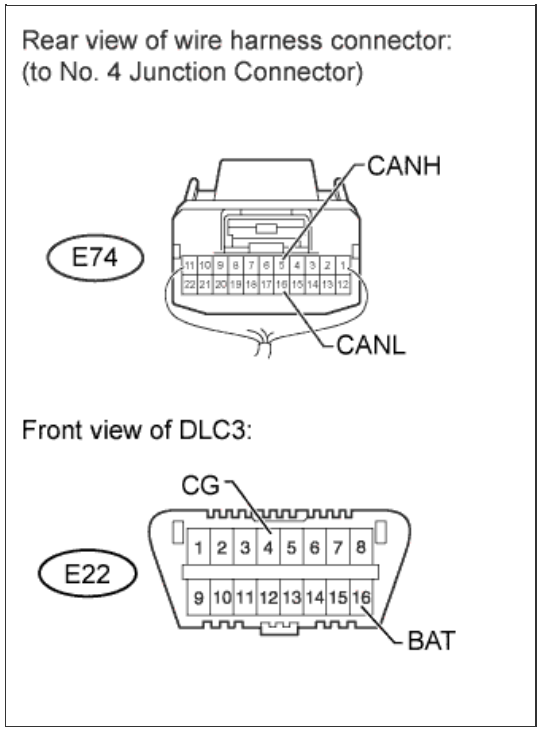
OK

36.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - SKID CONTROL ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-5 (CANH) - E74-16 (CANL)	Engine switch off	1 Ω or higher	OK
E74-5 (CANH) - E74-16 (CANL)	Engine switch off	Below 1 Ω	NG
E74-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 59

OK

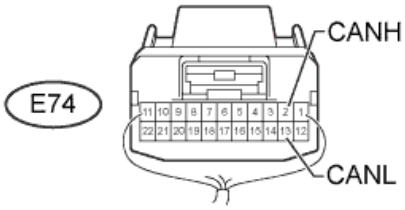
37.CHECK FOR SHORT IN CAN BUS WIRES (NO. 4 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

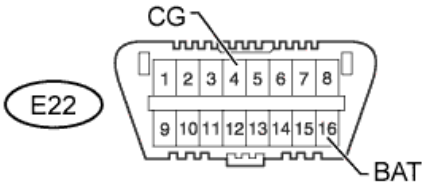
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E74-2 (CANH) - E74-13 (CANL)	Engine switch off	1 Ω or higher	OK
E74-2 (CANH) - E74-13 (CANL)	Engine switch off	Below 1 Ω	NG
E74-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E74-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E74-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E74-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E74-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 4 Junction Connector)



Front view of DLC3:



NG → Go to step 61

OK

REPAIR OR REPLACE NO. 4 JUNCTION CONNECTOR

38.CONNECT CONNECTOR

a. Reconnect the E71 No. 7 junction connector connector.

NEXT

39.CHECK FOR SHORT IN CAN BUS WIRES (SEAT BELT CONTROL ECU)

a. Disconnect the E42 seat belt control ECU connector.

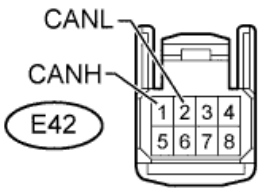
b. Measure the resistance according to the value(s) in the table below.

Result

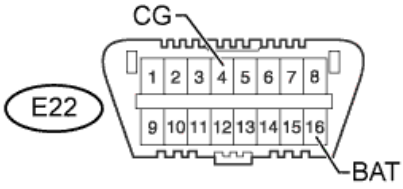
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E42-1 (CANH) - E42-2 (CANL)	Engine switch off	1 Ω or higher	OK
E42-1 (CANH) - E42-2 (CANL)	Engine switch off	Below 1 Ω	NG
E42-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E42-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E42-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

E42-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E42-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E42-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E42-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E42-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Seat Belt Control ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO SEAT BELT CONTROL ECU (CANH, CANL)

OK → REPLACE SEAT BELT CONTROL ECU (Click here)

40.CONNECT CONNECTOR

a. Reconnect the E71 No. 7 junction connector connector.

NEXT

41.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 CAN JUNCTION CONNECTOR - SUSPENSION CONTROL ECU)

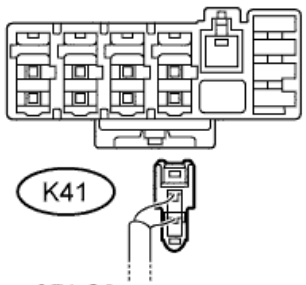
a. Disconnect the K41 No. 1 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

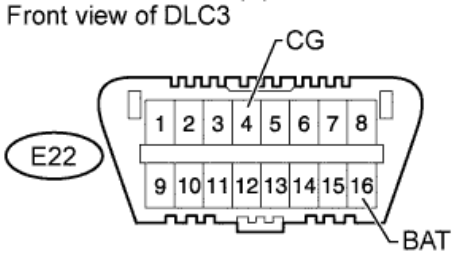
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
K41-1 (CANH) - K41-2 (CANL)	Engine switch off	1 Ω or higher	OK
K41-1 (CANH) - K41-2 (CANL)	Engine switch off	Below 1 Ω	NG
K41-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K41-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K41-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K41-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K41-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K41-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K41-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
K41-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 CAN Junction Connector)



Front view of DLC3



NG → Go to step 44

OK

42.CONNECT CONNECTOR

a. Reconnect the K41 No. 1 CAN junction connector connector.

NEXT

43.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 CAN JUNCTION CONNECTOR)

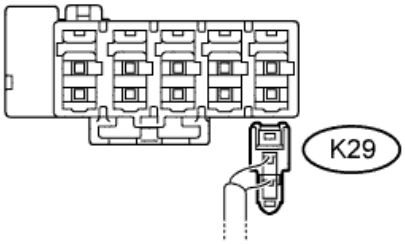
a. Disconnect the K29 No. 1 CAN junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

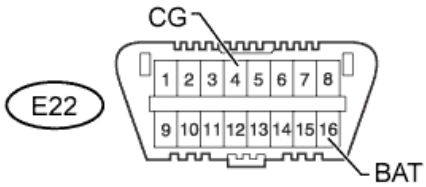
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
K29-1 (CANH) - K29-2 (CANL)	Engine switch off	1 Ω or higher	OK
K29-1 (CANH) - K29-2 (CANL)	Engine switch off	Below 1 Ω	NG
K29-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K29-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K29-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K29-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K29-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K29-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K29-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
K29-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 CAN Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NO. 1 CAN JUNCTION CONNECTOR (CANH, CANL)

OK

REPLACE NO. 1 CAN JUNCTION CONNECTOR

44.CHECK FOR SHORT IN CAN BUS WIRES (SUSPENSION CONTROL ECU)

a. Disconnect the K30 suspension control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

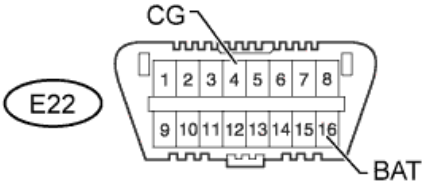
Tester Connection	Switch Condition	Measured Resistance	Proceed to
K30-7 (CANH) - K30-8 (CANL)	Engine switch off	1 Ω or higher	OK
K30-7 (CANH) - K30-8 (CANL)	Engine switch off	Below 1 Ω	NG
K30-7 (CANH) - E22-4	Engine		

(CG)	switch off	1 Ω or higher	OK
K30-8 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
K30-7 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K30-8 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
K30-7 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K30-8 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
K30-7 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
K30-8 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to Suspension Control ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO SUSPENSION CONTROL ECU (CANH, CANL)

OK

REPLACE SUSPENSION CONTROL ECU (Click here)

45.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

46.CHECK FOR SHORT IN CAN BUS WIRES (CLEARANCE WARNING ECU)

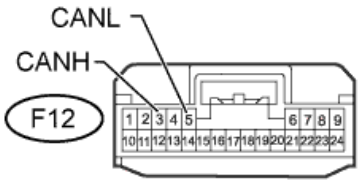
a. Disconnect the F12 clearance warning ECU connector.

b. Measure the resistance according to the value(s) in the table below.

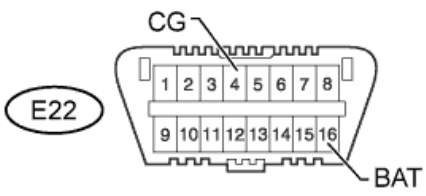
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F12-3 (CANH) - F12-5 (CANL)	Engine switch off	1 Ω or higher	OK
F12-3 (CANH) - F12-5 (CANL)	Engine switch off	Below 1 Ω	NG
F12-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F12-5 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F12-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F12-5 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F12-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F12-5 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F12-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F12-5 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Clearance Warning ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CLEARANCE WARNING ECU (CANH, CANL)

OK

REPLACE CLEARANCE WARNING ECU ASSEMBLY (Click here)

47.CONNECT CONNECTOR

a. Reconnect the F21 No. 6 junction connector connector.

NEXT

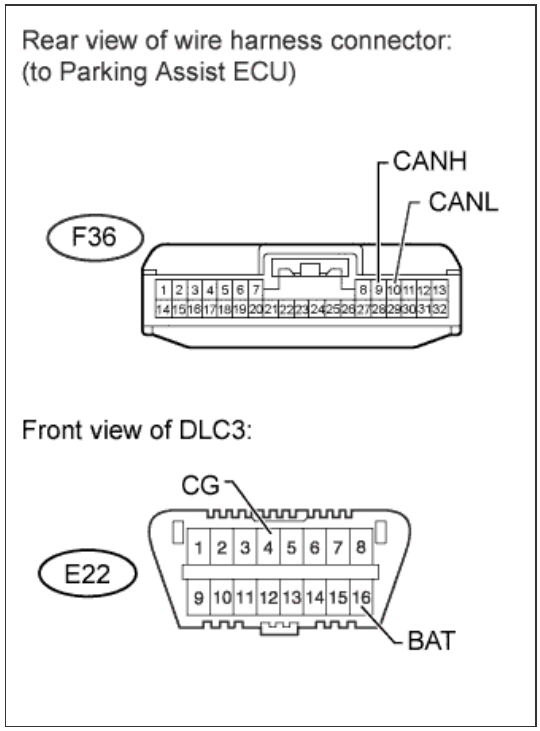
48.CHECK FOR SHORT IN CAN BUS WIRES (PARKING ASSIST ECU)

a. Disconnect the F36 parking assist ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
F36-9 (CANH) - F36-10 (CANL)	Engine switch off	1 Ω or higher	OK
F36-9 (CANH) - F36-10 (CANL)	Engine switch off	Below 1 Ω	NG
F36-9 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F36-10 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
F36-9 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F36-10 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
F36-9 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F36-10 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
F36-9 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
F36-10 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE TO PARKING ASSIST ECU (CANH, CANL)

OK

REPLACE PARKING ASSIST ECU (Click here)

49.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

50.CHECK FOR SHORT IN CAN BUS WIRES (DISTANCE CONTROL ECU)

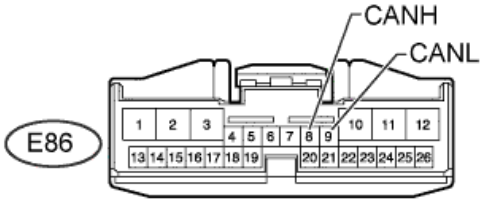
a. Disconnect the E86 distance control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

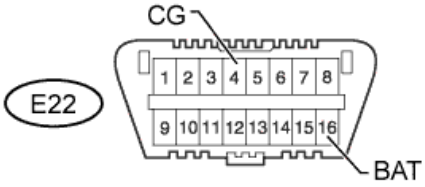
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E86-8 (CANH) - E86-9 (CANL)	Engine switch off	1 Ω or higher	OK
E86-8 (CANH) - E86-9 (CANL)	Engine switch off	Below 1 Ω	NG
E86-8 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E86-9 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E86-8 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E86-9 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E86-8 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E86-9 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E86-8 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E86-9 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Distance Control ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISTANCE CONTROL ECU (CANH, CANL)

OK

REPLACE DISTANCE CONTROL ECU ASSEMBLY (Click here)

51.CONNECT CONNECTOR

a. Reconnect the E68 No. 5 junction connector connector.

NEXT

52.CHECK FOR SHORT IN CAN BUS WIRES (YAW RATE SENSOR)

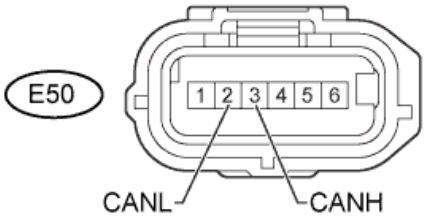
a. Disconnect the E50 yaw rate sensor connector.

b. Measure the resistance according to the value(s) in the table below.

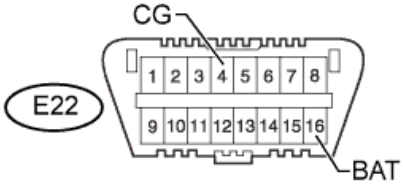
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	1 Ω or higher	OK
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	Below 1 Ω	NG
E50-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E50-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E50-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E50-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E50-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E50-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E50-3 (CANH) - E22-	Engine		

Front view of wire harness connector:
(to Yaw Rate Sensor)



Front view of DLC3:



16 (BAT)	switch off	Below 1 Ω	NG
E50-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO YAW RATE SENSOR (CANH, CANL)

OK

REPLACE YAW RATE SENSOR ASSEMBLY (Click here)

53.CONNECT CONNECTOR

a. Reconnect the E74 No. 4 junction connector connector.

NEXT

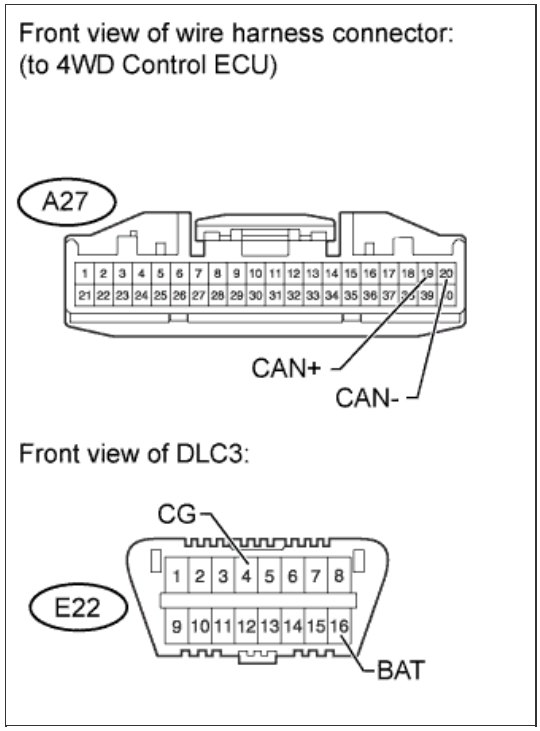
54.CHECK FOR SHORT IN CAN BUS WIRES (4WD CONTROL ECU)

a. Disconnect the A27 4WD control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
A27-19 (CAN+) - A29-20 (CAN-)	Engine switch off	1 Ω or higher	OK
A27-19 (CAN+) - A29-20 (CAN-)	Engine switch off	Below 1 Ω	NG
A27-19 (CAN+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A29-20 (CAN-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A27-19 (CAN+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A29-20 (CAN-) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A27-19 (CAN+) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A29-20 (CAN-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A27-19 (CAN+) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
A29-20 (CAN-) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO 4WD CONTROL ECU (CAN+, CAN-)

OK

REPLACE 4WD CONTROL ECU (Click here)

55.CONNECT CONNECTOR

a. Reconnect the E74 No. 4 junction connector connector.

NEXT

56.CHECK FOR SHORT IN CAN BUS WIRES (STEERING CONTROL ECU)

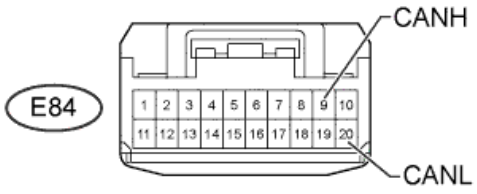
a. Disconnect the E84 suspension control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

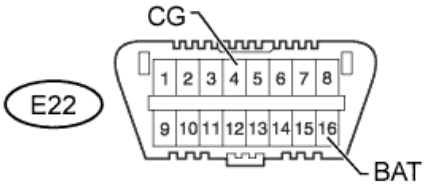
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E84-9 (CANH) - E84-20 (CANL)	Engine switch off	1 Ω or higher	OK
E84-9 (CANH) - E84-20 (CANL)	Engine switch off	Below 1 Ω	NG
E84-9 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E84-20 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E84-9 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E84-20 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E84-9 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E84-20 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E84-9 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E84-20 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Steering Control ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO STEERING CONTROL ECU (CANH, CANL)

OK

REPLACE STEERING CONTROL ECU (Click here)

57.CONNECT CONNECTOR

a. Reconnect the E74 No. 4 junction connector connector.

NEXT

58.CHECK FOR SHORT IN CAN BUS WIRES (STEERING ANGLE SENSOR)

a. Disconnect the E11 steering angle sensor connector.

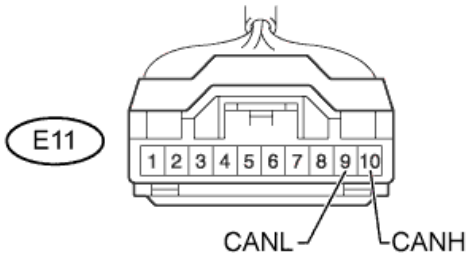
b. Measure the resistance according to the value(s) in the table below.

Result

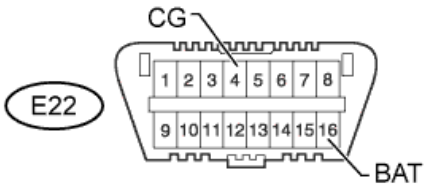
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E11-10 (CANH) - E11-9 (CANL)	Engine switch off	1 Ω or higher	OK
E11-10 (CANH) - E11-9 (CANL)	Engine switch off	Below 1 Ω	NG
E11-10 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E11-9 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E11-10 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E11-9 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E11-10 (CANH) - E22-	Engine		

16 (BAT)	switch off	1 Ω or higher	OK
E11-9 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E11-10 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E11-9 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Steering Angle Sensor)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO STEERING ANGLE SENSOR (CANH, CANL)

OK

REPLACE STEERING ANGLE SENSOR (Click here)

59.CONNECT CONNECTOR

a. Reconnect the E74 No. 4 junction connector connector.

NEXT

60.CHECK FOR SHORT IN CAN BUS WIRES (SKID CONTROL ECU)

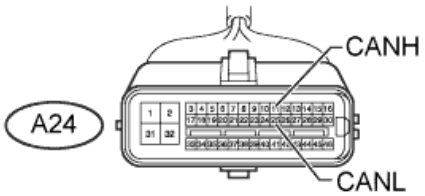
a. Disconnect the A24 skid control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

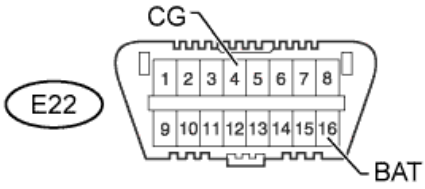
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	1 Ω or higher	OK
A24-11 (CANH) - A24-25 (CANL)	Engine switch off	Below 1 Ω	NG
A24-11 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A24-25 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
A24-11 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A24-25 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
A24-11 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A24-25 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
A24-11 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
A24-25 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Front view of wire harness connector:
(to Skid Control ECU)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO SKID CONTROL ECU (CANH, CANL)

OK

REPLACE MASTER CYLINDER SOLENOID (SKID CONTROL ECU) (Click here)

61.CONNECT CONNECTOR

a. Reconnect the E74 No. 4 junction connector connector.

NEXT

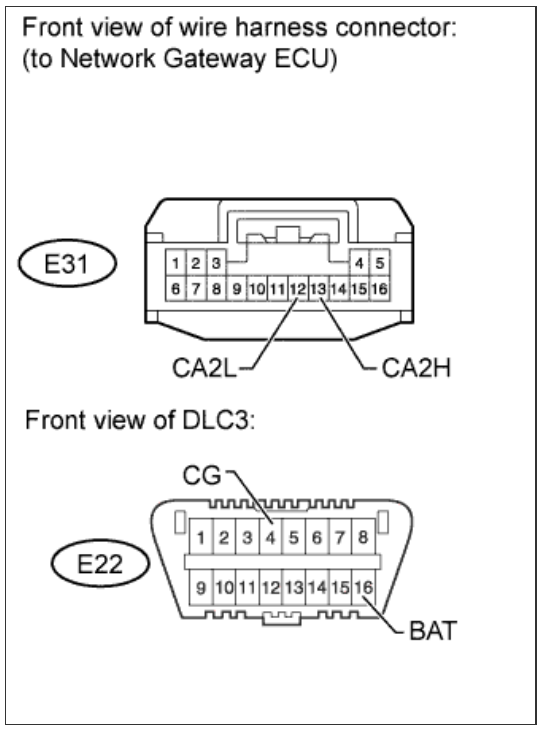
62.CHECK FOR SHORT IN CAN BUS WIRES (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	1 Ω or higher	OK
E31-13 (CA2H) - E31-12 (CA2L)	Engine switch off	Below 1 Ω	NG
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E31-13 (CA2H) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E31-12 (CA2L) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E31-13 (CA2H) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E31-12 (CA2L) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CA2H, CA2L)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

63.CHECK HARNESS AND CONNECTOR (NETWORK GATEWAY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E31 network gateway ECU connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition

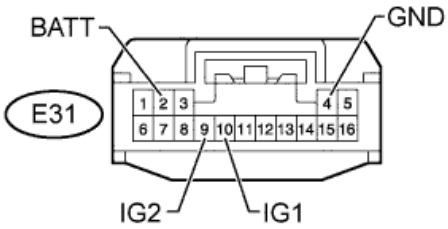
E31-4 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E31-2 (BATT) - Body ground	Always	11 to 14 V
E31-9 (IG2) - Body ground	Engine switch on (IG)	11 to 14 V
E31-10 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Network Gateway ECU)



T

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK → REPLACE NETWORK GATEWAY ECU (Click here)

DTC U0123 Lost Communication with Yaw Rate Sensor Module

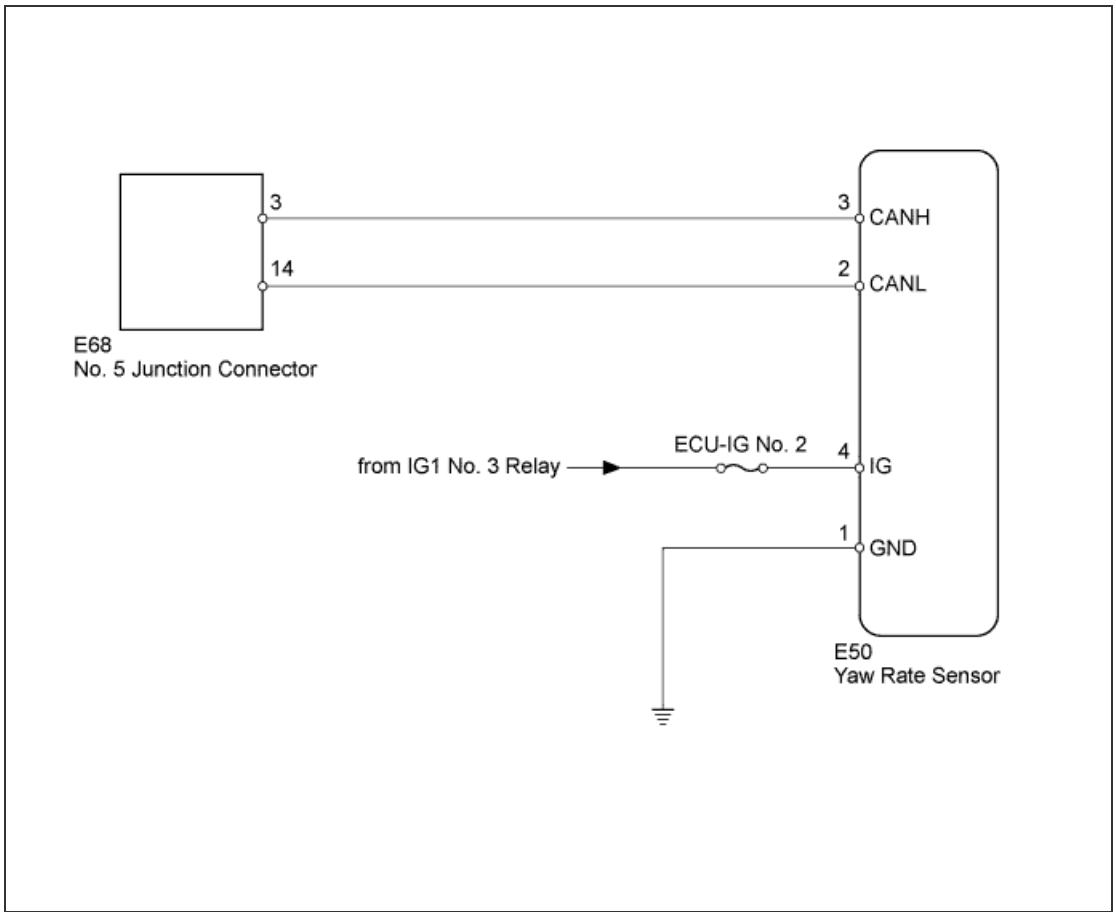
DTC U0124 Lost Communication with Lateral Acceleration Sensor Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0123	There is no communication from the yaw rate sensor.	• Power source circuit of yaw rate sensor • Yaw rate sensor • Yaw rate sensor branch wire or connector
U0124	There is no communication from the yaw rate sensor (lateral acceleration sensor).	• Power source circuit of yaw rate sensor • Yaw rate sensor • Yaw rate sensor branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

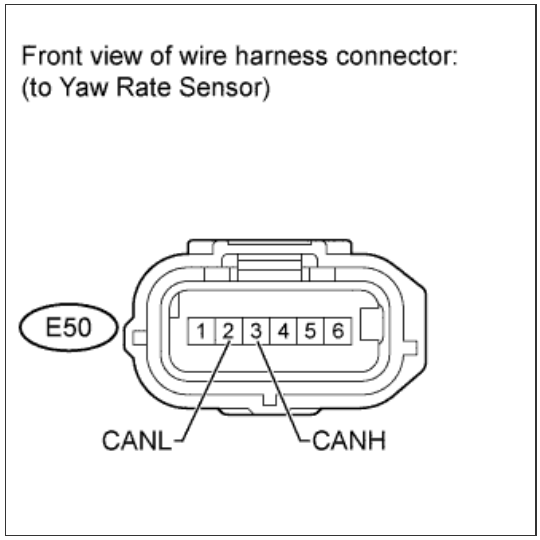
2.CHECK FOR OPEN IN CAN BUS WIRE (YAW RATE SENSOR BRANCH WIRE)

a. Disconnect the E50 yaw rate sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E50-3 (CANH) - E50-2 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE YAW RATE SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (YAW RATE SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E50 yaw rate sensor connector.

c. Measure the resistance according to the value(s) in the table below.

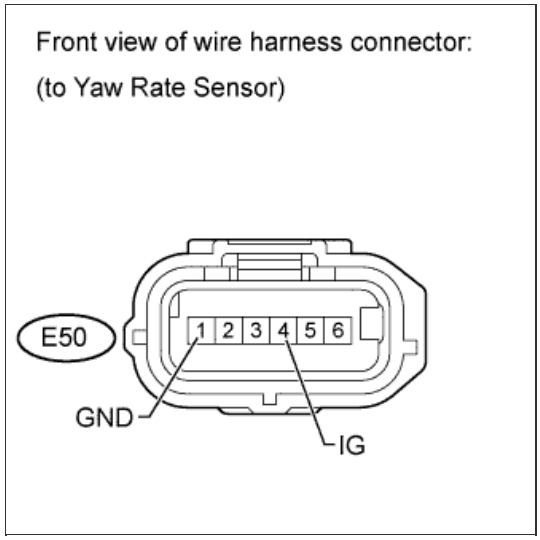
Standard Resistance:

Tester Connection	Condition	Specified Condition
E50-1 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E50-4 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE YAW RATE SENSOR ASSEMBLY (Click here)

DTC U1100 Lost Communication with Seat Belt Control ECU

for Preparation Click here

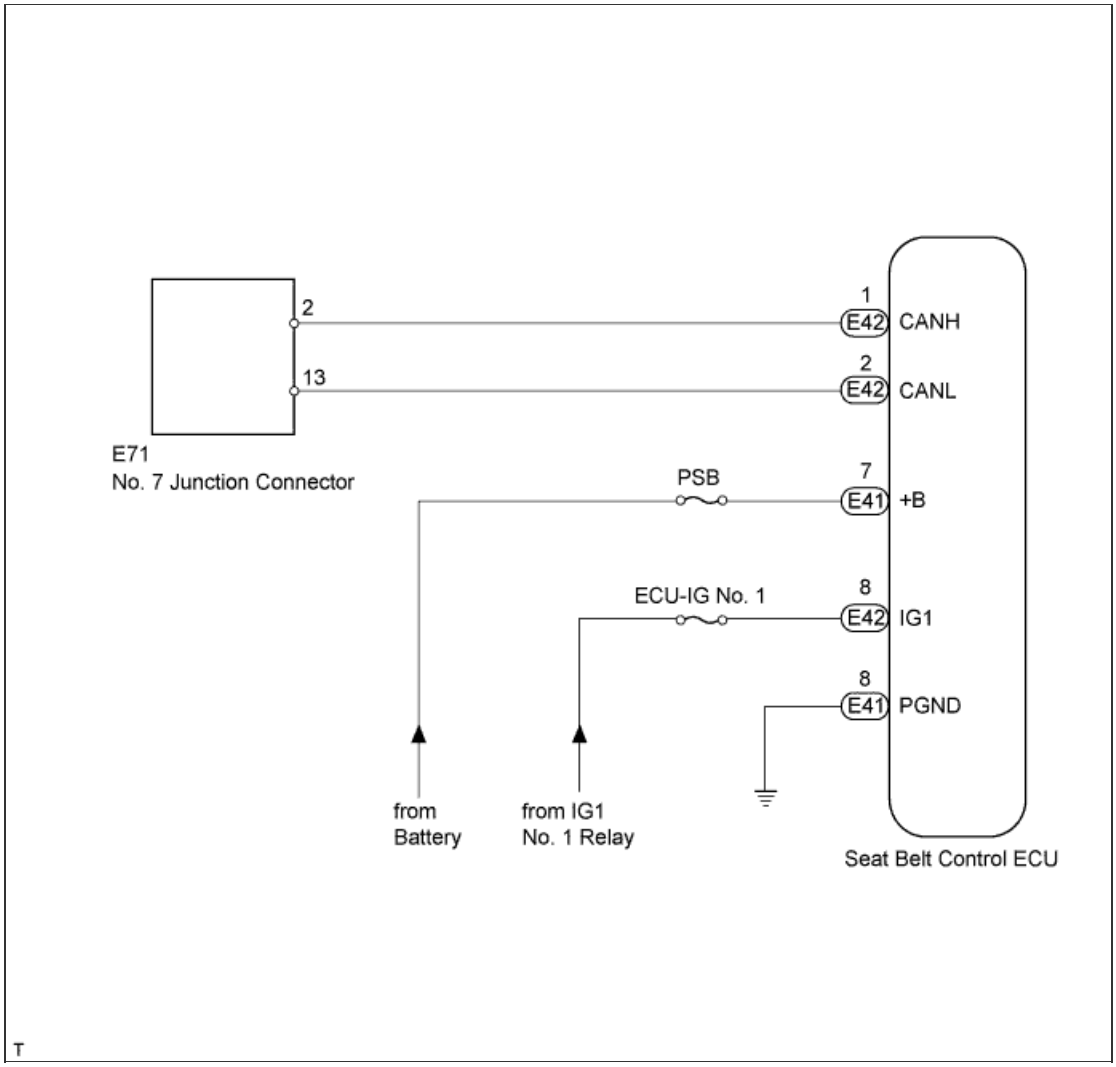
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1100	There is no communication from the seat belt control ECU.	• Power source circuit of seat belt control ECU • Seat belt control ECU • Seat belt control ECU branch wire or connector

HINT:

For vehicles with the pre-crash safety system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (SEAT BELT CONTROL ECU BRANCH WIRE)

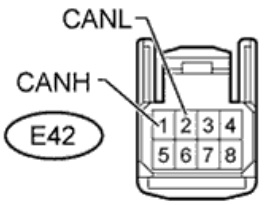
a. Disconnect the E42 seat belt control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E42-1 (CANH) - E42-2 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Seat Belt Control ECU)



NG → REPAIR OR REPLACE SEAT BELT CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SEAT BELT CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E41 and E42 seat belt control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

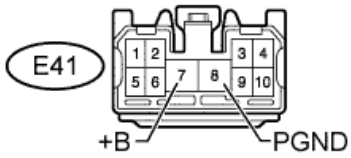
Tester Connection	Condition	Specified Condition
E41-8 (PGND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

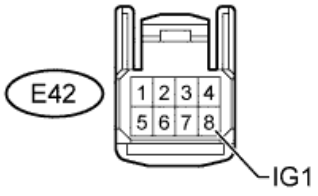
Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E41-7 (+B) - Body ground	Always	11 to 14 V
E42-8 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Seat Belt Control ECU)



Front view of wire harness connector:
(to Seat Belt Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE SEAT BELT CONTROL ECU (Click here)

DTC U0126 Lost Communication with Steering Angle Sensor Module

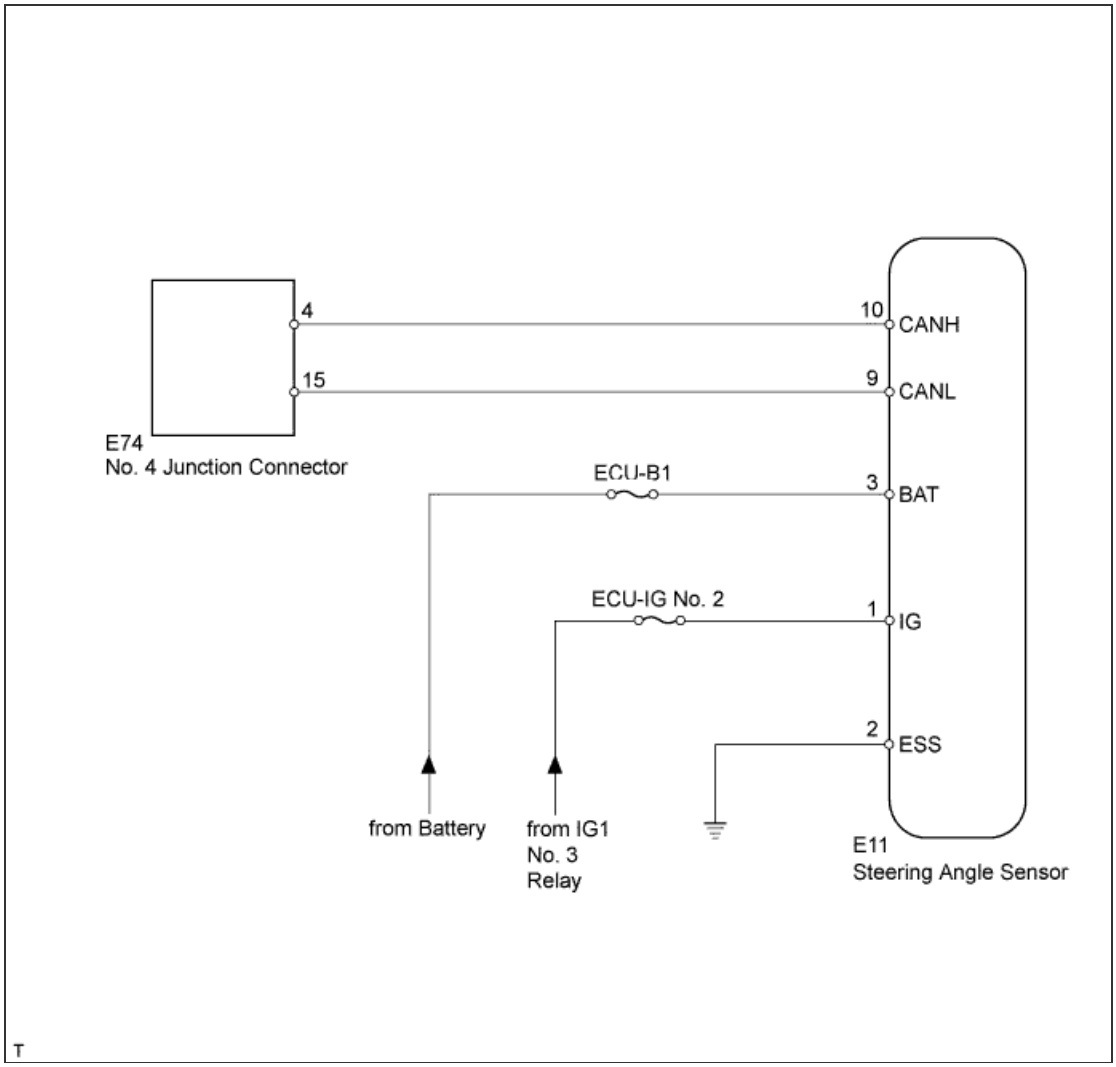
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0126	There is no communication from the steering angle sensor.	• Power source circuit of steering angle sensor • One side of CAN branch wire of other systems • Steering angle sensor • Steering angle sensor branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

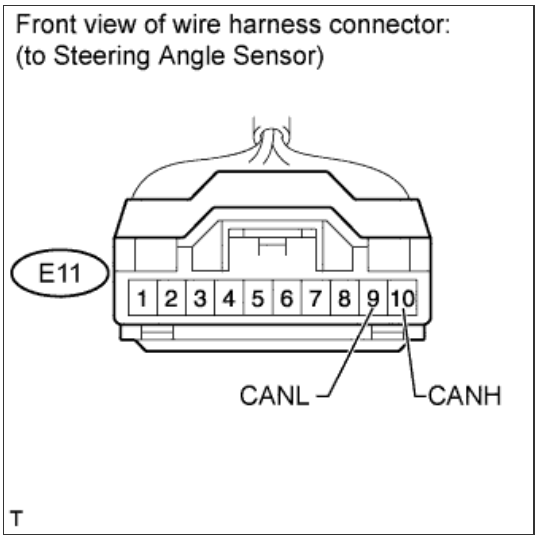
2.CHECK FOR OPEN IN CAN BUS WIRE (STEERING ANGLE SENSOR BRANCH WIRE)

a. Disconnect the E11 steering angle sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E11-10 (CANH) - E11-9 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE STEERING ANGLE SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (STEERING ANGLE SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E11 steering angle sensor connector.

c. Measure the resistance according to the value(s) in the table below.

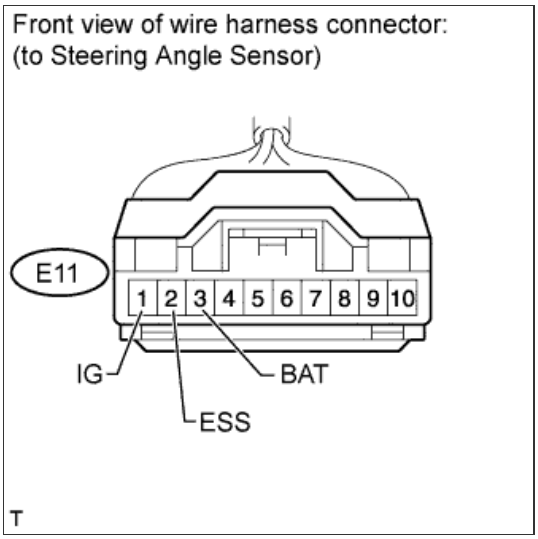
Standard Resistance:

Tester Connection	Condition	Specified Condition
E11-2 (ESS) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E11-3 (BAT) - Body ground	Always	11 to 14 V
E11-1 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE STEERING ANGLE SENSOR (Click here)

DTC U1101 Lost Communication with Distance Control ECU

for Preparation Click here

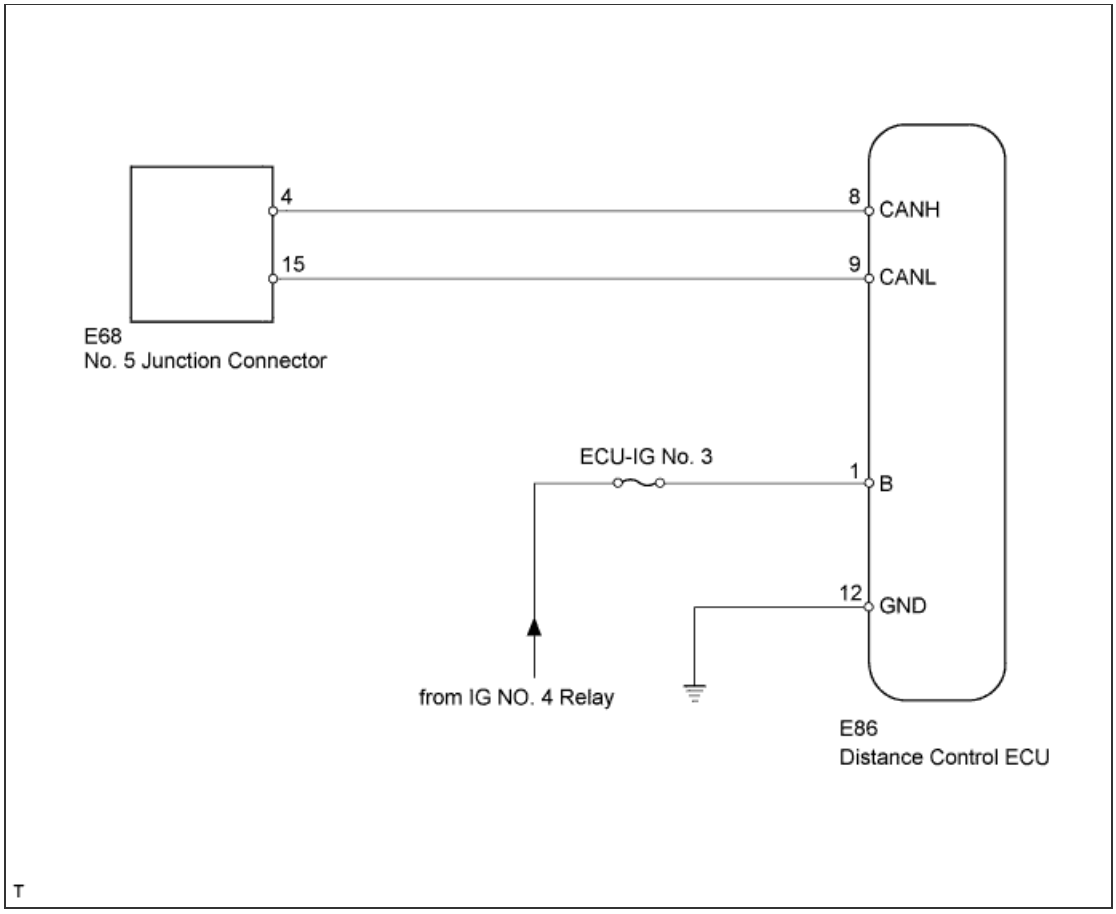
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1101	There is no communication from the distance control ECU.	• Power source circuit of distance control ECU assembly • Distance control ECU assembly • Distance control ECU assembly branch wire or connector

HINT:

For vehicles with the dynamic radar cruise control system.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

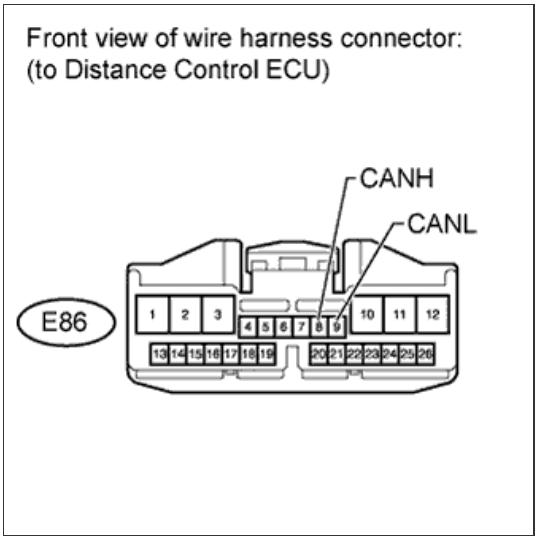
2.CHECK FOR OPEN IN CAN BUS WIRE (DISTANCE CONTROL ECU)

a. Disconnect the E86 distance control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E86-8 (CANH) - E86-9 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE DISTANCE CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (DISTANCE CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E86 distance control ECU connector.

c. Measure the resistance according to the value(s) in the table below.

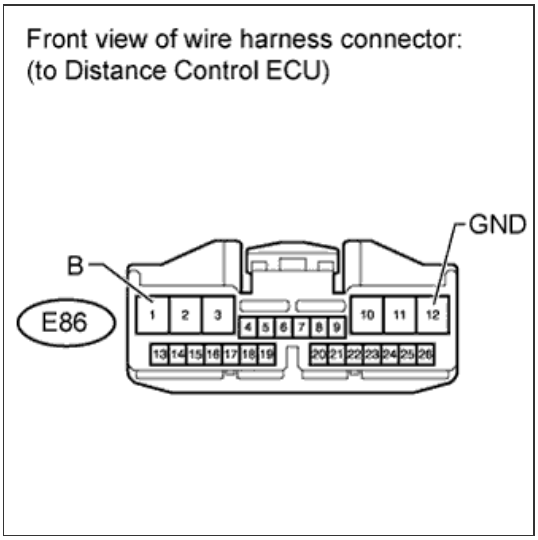
Standard Resistance:

Tester Connection	Condition	Specified Condition
E86-12 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
E86-1 (B) - Body ground	Always	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE DISTANCE CONTROL ECU ASSEMBLY (Click here)

DTC U0130 Lost Communication with Steering Effort Control Module

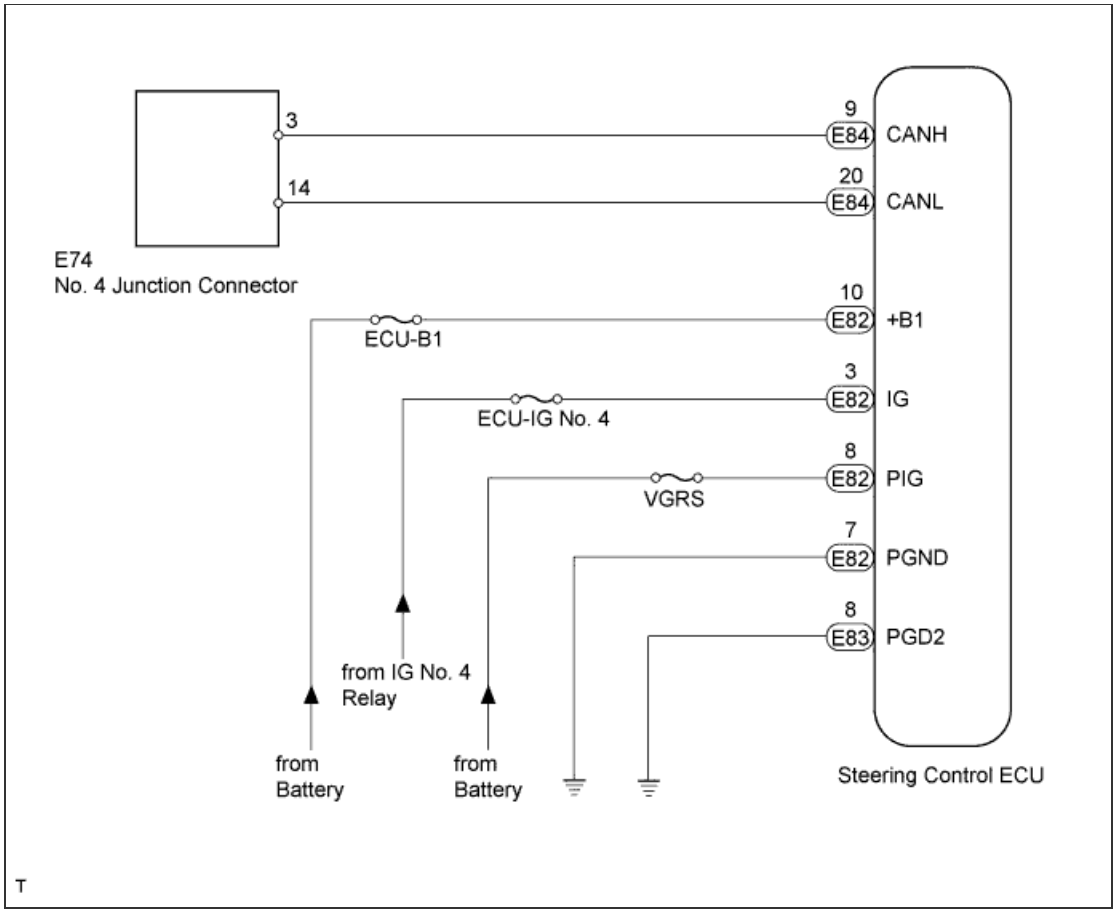
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire] /CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0130	There is no communication from the steering control ECU.	• Power source circuit of steering control ECU • Steering control ECU • Steering control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

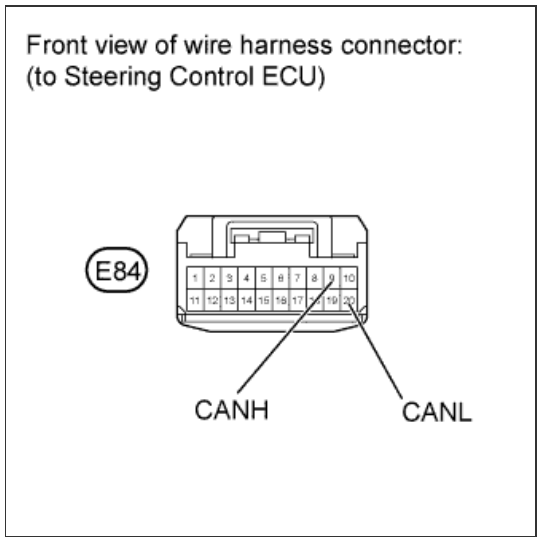
2.CHECK FOR OPEN IN CAN BUS WIRE (STEERING CONTROL ECU BRANCH WIRE)

a. Disconnect the E84 steering control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E84-9 (CANH) - E84-20 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE STEERING CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (STEERING CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E82 and E83 steering control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

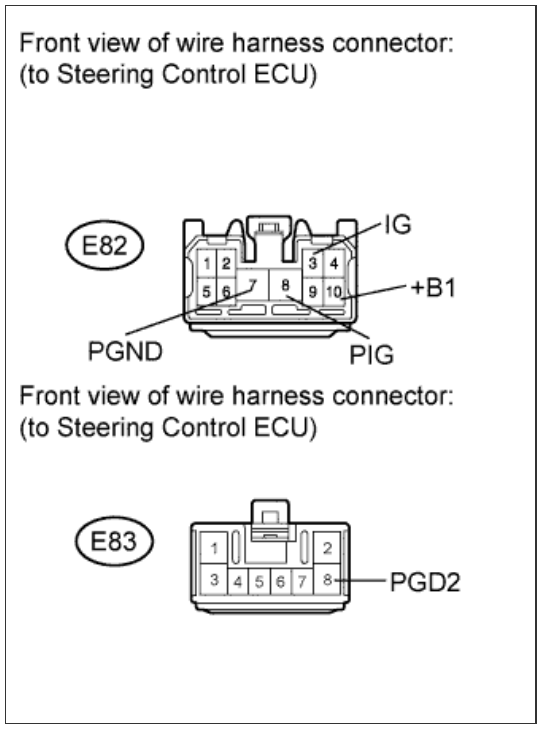
Standard Resistance:

Tester Connection	Condition	Specified Condition
E82-7 (PGND) - Body ground	Always	Below 1 Ω
E83-8 (PGD2) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E82-10 (+B1) - Body ground	Always	11 to 14 V
E82-8 (PIG) - Body ground	Always	11 to 14 V
E82-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE STEERING CONTROL ECU (Click here)

DTC U1110 Lost Communication with Clearance Sonar Module

for Preparation Click here

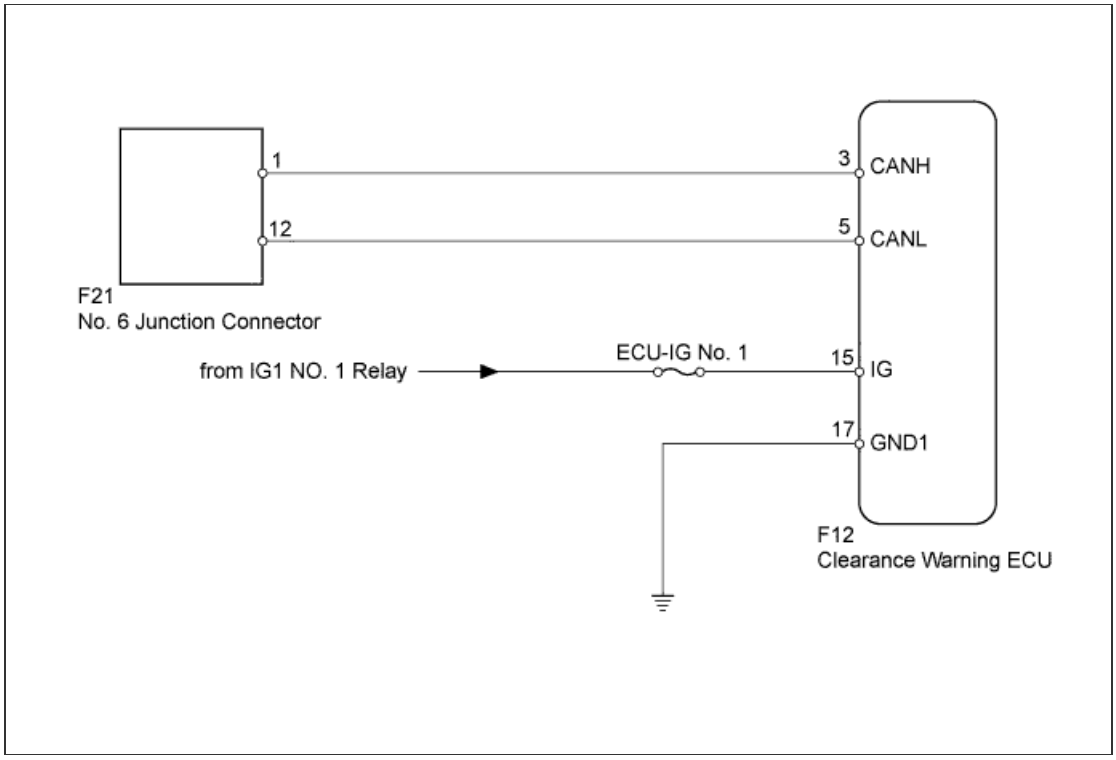
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1110	There is no communication from the clearance warning ECU.	• Power source circuit of clearance warning ECU • Clearance warning ECU • Clearance warning ECU branch wire or connector

HINT:

For vehicles with the LEXUS parking assist-sensor system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (CLEARANCE WARNING ECU BRANCH WIRE)

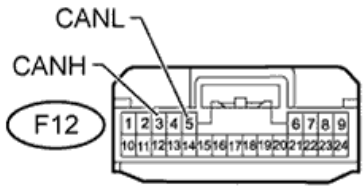
a. Disconnect the F12 clearance warning ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F12-3 (CANH) - F12-5 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Clearance Warning ECU)



NG → REPAIR OR REPLACE CLEARANCE WARNING ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (CLEARANCE WARNING ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F12 clearance warning ECU connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

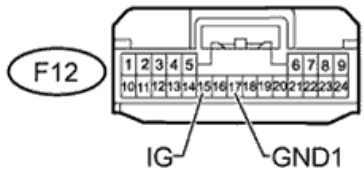
Tester Connection	Condition	Specified Condition
F12-17 (GND1) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F12-15 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Clearance Warning ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE CLEARANCE WARNING ECU ASSEMBLY (Click here)

DTC U0132 Lost Communication with Ride Level Control Module

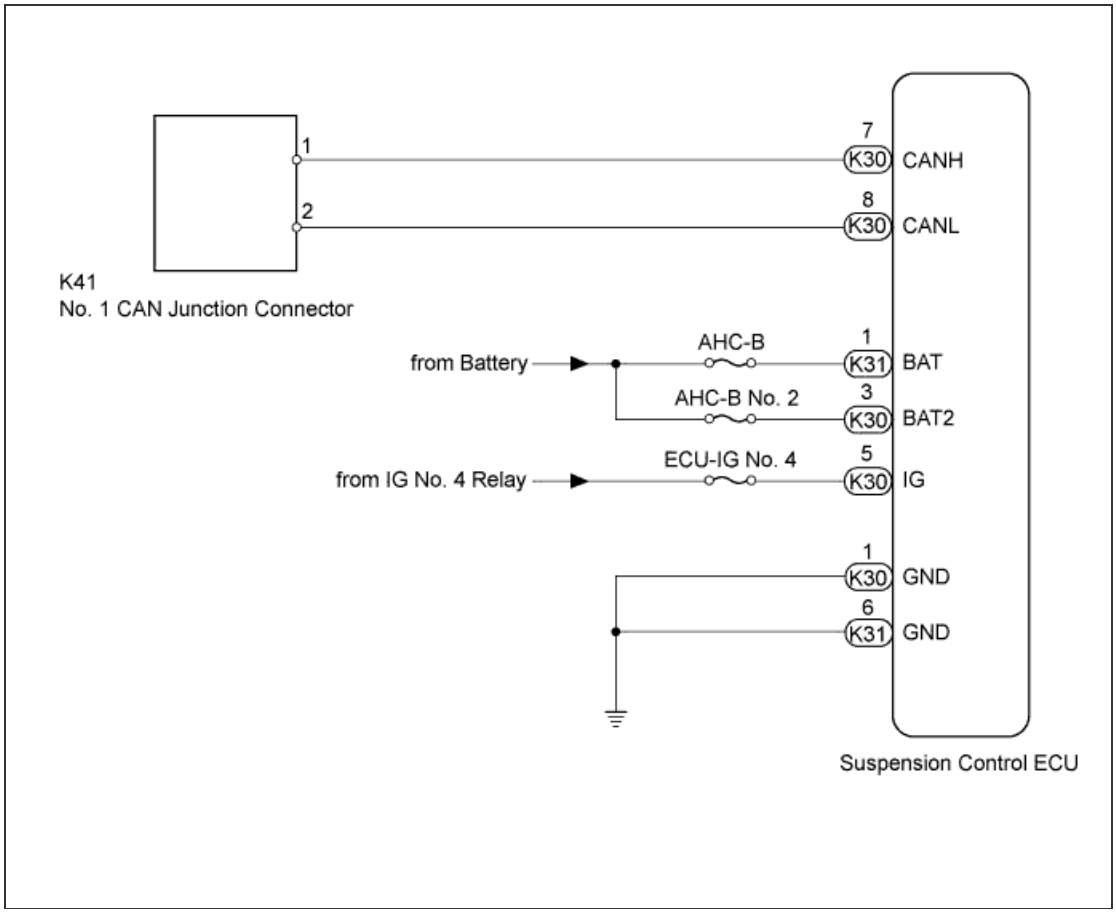
for Preparation Click here

DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (One side of the CANH [branch wire] /CANL [branch wire] of the ECU and/or sensor is open).

DTC Code	DTC Detection Condition	Trouble Area
U0132	There is no communication from the suspension control ECU.	• Power source circuit of suspension control ECU • One side of CAN branch wire of other systems • Suspension control ECU • Suspension control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (SUSPENSION CONTROL ECU BRANCH WIRE)

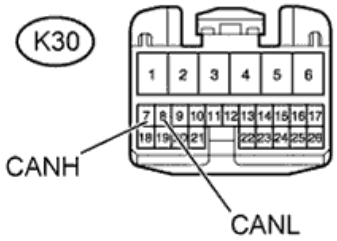
a. Disconnect the K30 suspension control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
K30-7 (CANH) - K30-8 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Suspension Control ECU)



NG → REPAIR OR REPLACE SUSPENSION CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (SUSPENSION CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the K30 and K31 suspension control ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

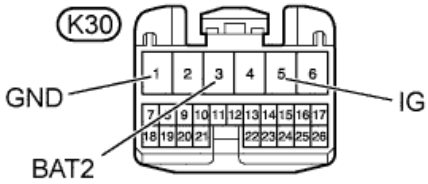
Tester Connection	Condition	Specified Condition
K30-1 (GND) - Body ground	Always	Below 1 Ω
K31-6 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

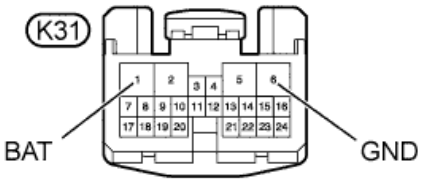
Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
K31-1 (BAT) - Body ground	Always	11 to 14 V
K30-3 (BAT2) - Body ground	Always	11 to 14 V
K30-5 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Suspension Control ECU)



Front view of wire harness connector:
(to Suspension Control ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE SUSPENSION CONTROL ECU (Click here)

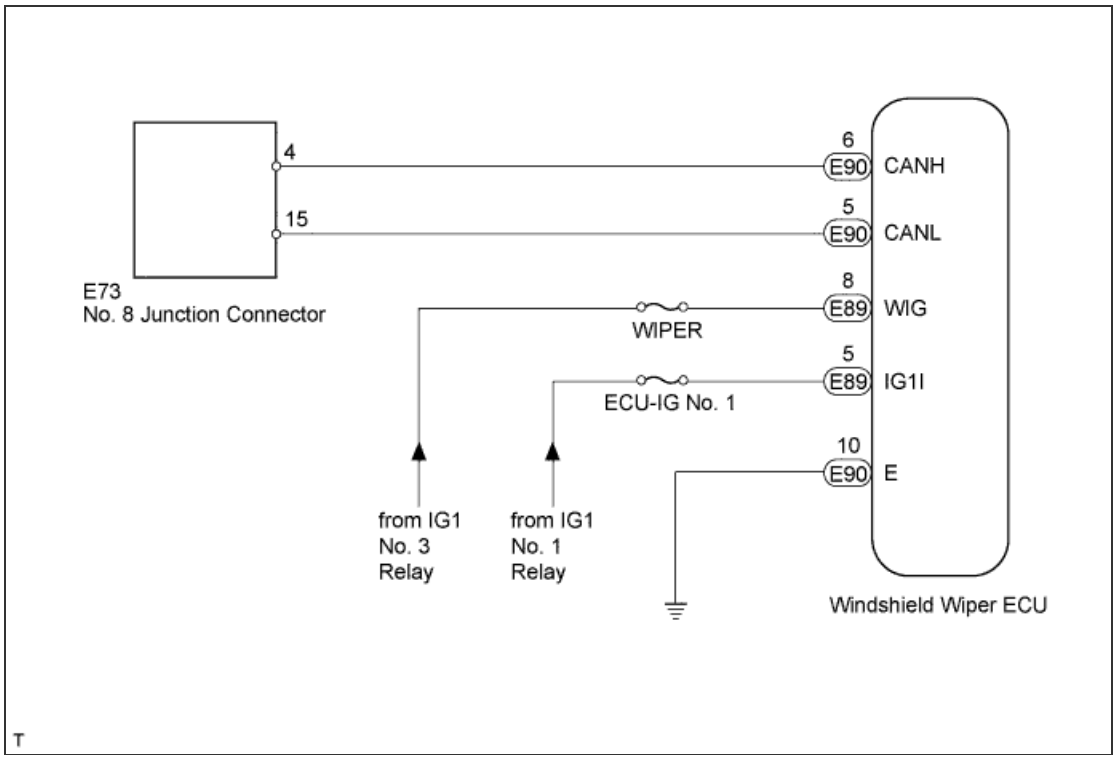
DTC U1111 Lost Communication with Body No. 5 Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1111	There is no communication from the windshield wiper ECU.	• Power source circuit of windshield wiper ECU • Windshield wiper ECU • Windshield wiper ECU main wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

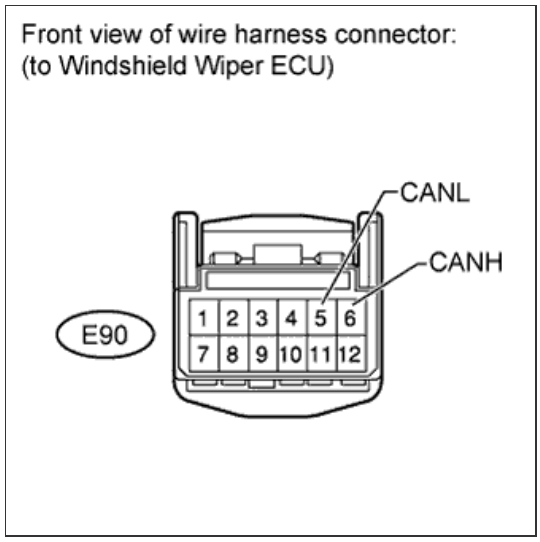
2.CHECK FOR OPEN IN CAN BUS WIRE (WINDSHIELD WIPER ECU BRANCH WIRE)

a. Disconnect the E90 windshield wiper ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE WINDSHIELD WIPER ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (WINDSHIELD WIPER ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E89 and E90 windshield wiper ECU connectors.

c. Measure the resistance according to the value(s) in the table below.

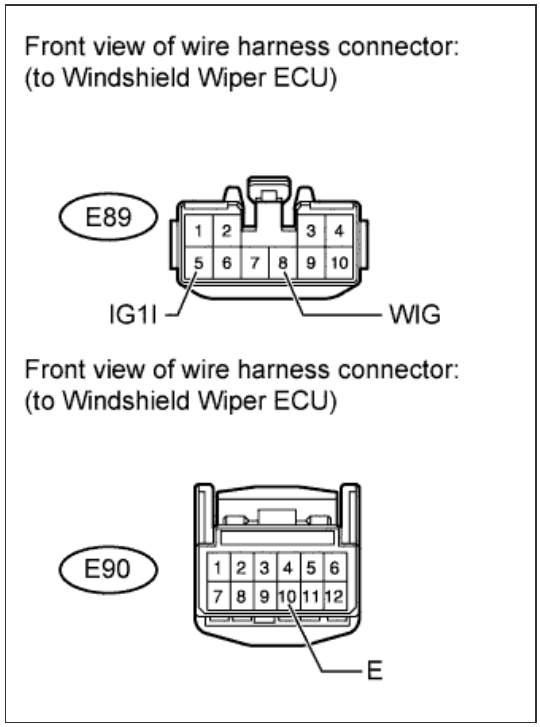
Standard Resistance:

Tester Connection	Condition	Specified Condition
E90-10 (E) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E89-5 (IG1I) - Body ground	Engine switch on (IG)	11 to 14 V
E89-8 (WIG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE WINDSHIELD WIPER ECU (Click here)

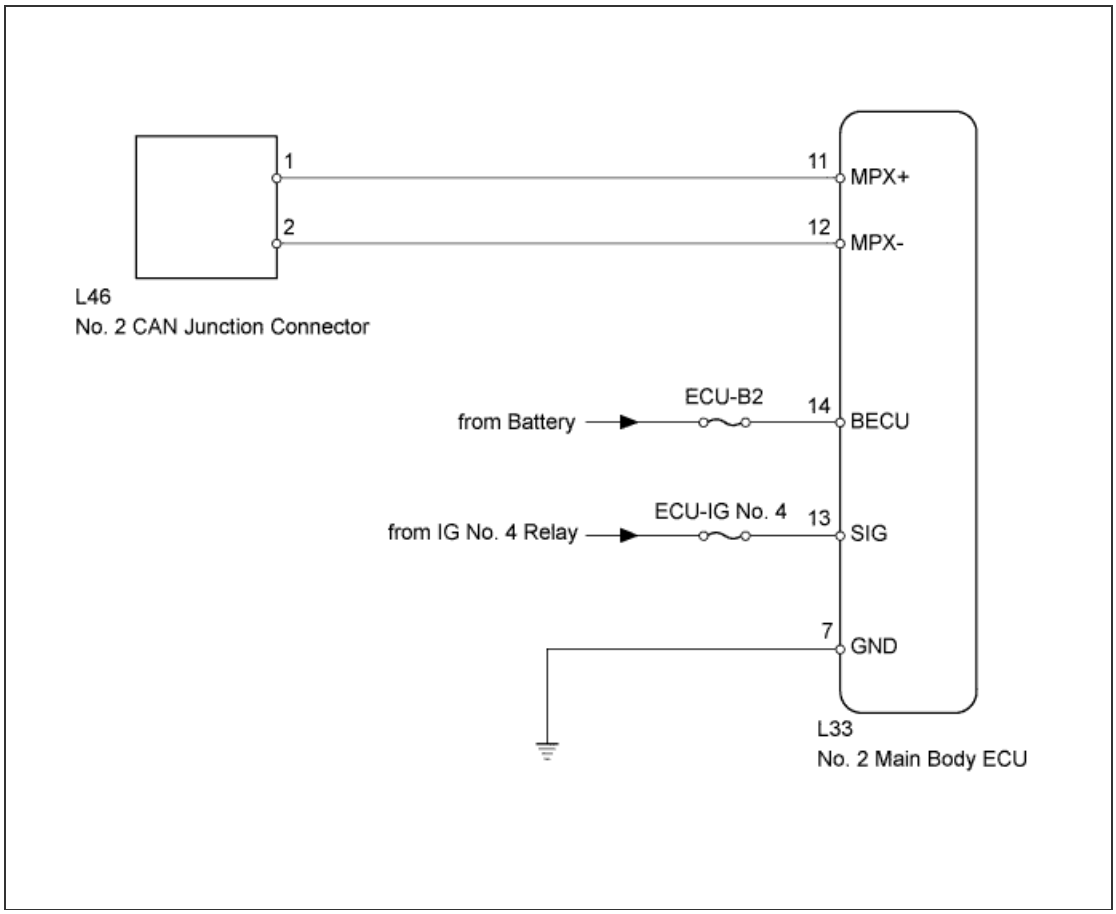
DTC U0141 Lost Communication with Body Control Module "A"

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0141	There is no communication from the No. 2 main body ECU.	• Power source circuit of No. 2 main body ECU • No. 2 main body ECU • No. 2 main body ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

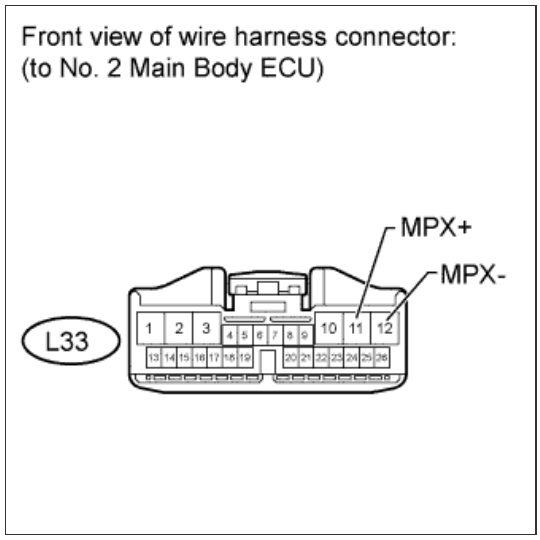
2.CHECK FOR OPEN IN CAN BUS WIRE (REAR JUNCTION BLOCK BRANCH WIRE)

a. Disconnect the L33 No. 2 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE NO. 2 MAIN BODY ECU BRANCH WIRE OR CONNECTOR (MPX+, MPX-)

OK

3.CHECK HARNESS AND CONNECTOR (NO. 2 MAIN BODY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the L33 No. 2 main body ECU connector.

c. Measure the resistance according to the value(s) in the table below.

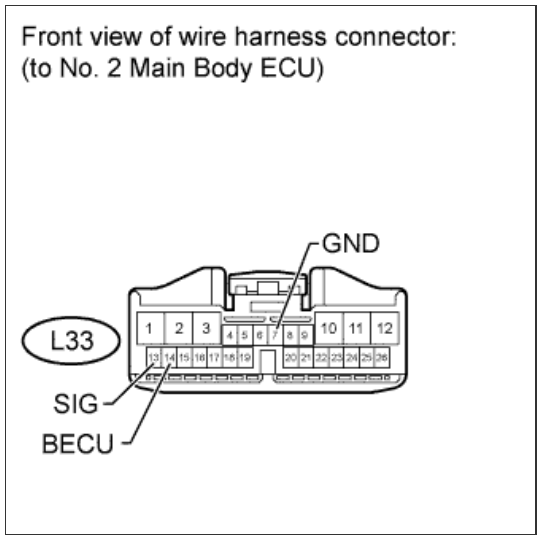
Standard Resistance:

Tester Connection	Condition	Specified Condition
L33-7 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
L33-14 (BECU) - Body ground	Always	11 to 14 V
L33-13 (SIG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE NO. 2 MAIN BODY ECU (Click here)

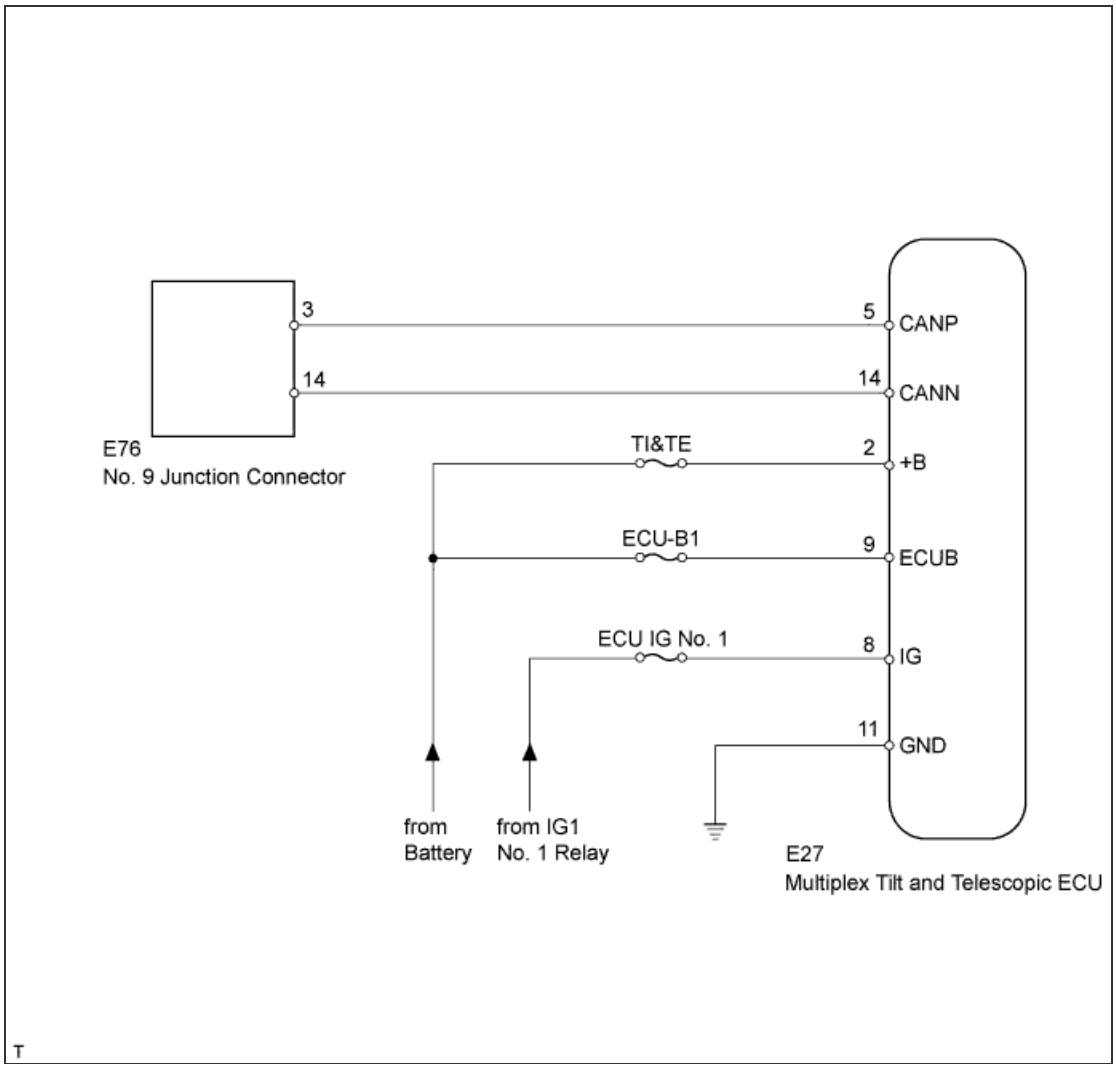
DTC U1115 Lost Communication with Tilt and Telescopic Module

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1115	There is no communication from the multiplex tilt and telescopic ECU.	• Power source circuit of multiplex tilt and telescopic ECU • Multiplex tilt and telescopic ECU • Multiplex tilt and telescopic ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (MULTIPLEX TILT AND TELESCOPIC ECU BRANCH WIRE)

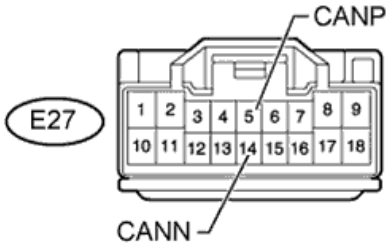
a. Disconnect the E27 multiplex tilt and telescopic ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Multiplex Tilt and Telescopic ECU)



NG → REPAIR OR REPLACE MULTIPLEX TILT AND TELESCOPIC ECU BRANCH WIRE OR CONNECTOR (CANP, CANN)

OK

3.CHECK HARNESS AND CONNECTOR (MULTIPLEX TILT AND TELESCOPIC ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E27 multiplex tilt and telescopic ECU connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

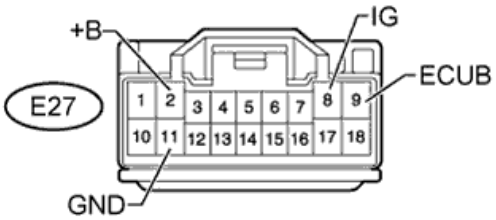
Tester Connection	Condition	Specified Condition
E27-11 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E27-2 (+B) - Body ground	Always	11 to 14 V
E27-9 (ECUB) - Body ground	Always	11 to 14 V
E27-8 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Front view of wire harness connector:
(to Multiplex Tilt and Telescopic ECU)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE MULTIPLEX TILT AND TELESCOPIC ECU (Click here)

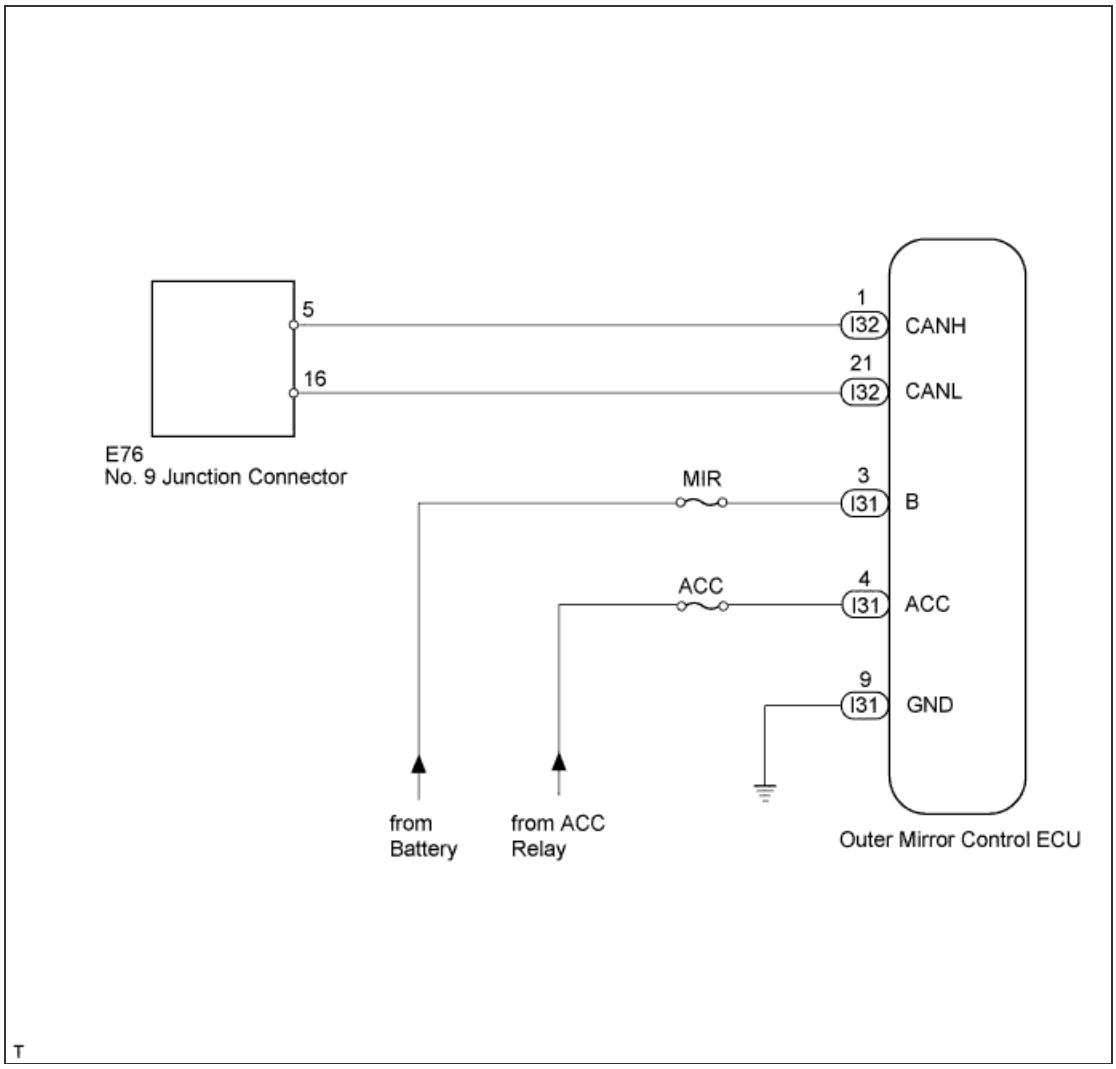
DTC U0199 Lost Communication with "Door Control Module A"

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0199	There is no communication from the outer mirror control ECU.	• Power source circuit of outer mirror control ECU • Outer mirror control ECU • Outer mirror control ECU branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

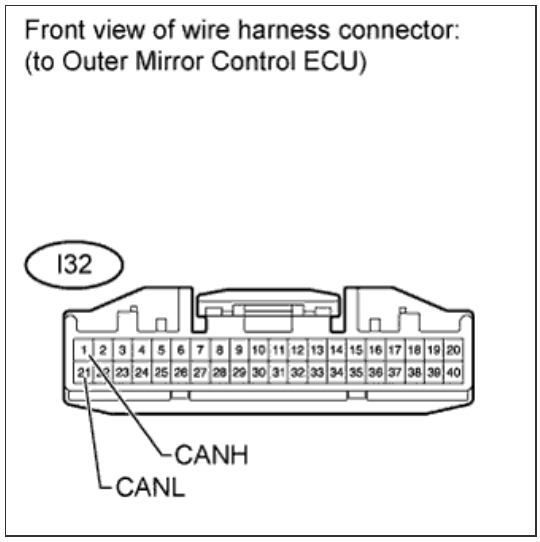
2.CHECK FOR OPEN IN CAN BUS WIRE (OUTER MIRROR CONTROL ECU BRANCH WIRE)

a. Disconnect the I32 outer mirror control ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
I32-1 (CANH) - I32-21 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE OUTER MIRROR CONTROL ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (OUTER MIRROR CONTROL ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the I31 outer mirror control ECU connector.

c. Measure the resistance according to the value(s) in the table below.

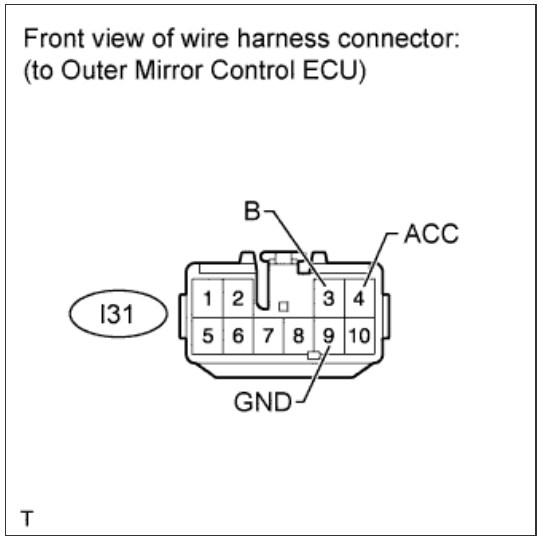
Standard Resistance:

Tester Connection	Condition	Specified Condition
I31-9 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
I31-3 (B) - Body ground	Always	11 to 14 V
I31-4 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE OUTER MIRROR CONTROL ECU ASSEMBLY (Click here)

DTC U1126 Lost Communication with Parking Assist ECU

for Preparation Click here

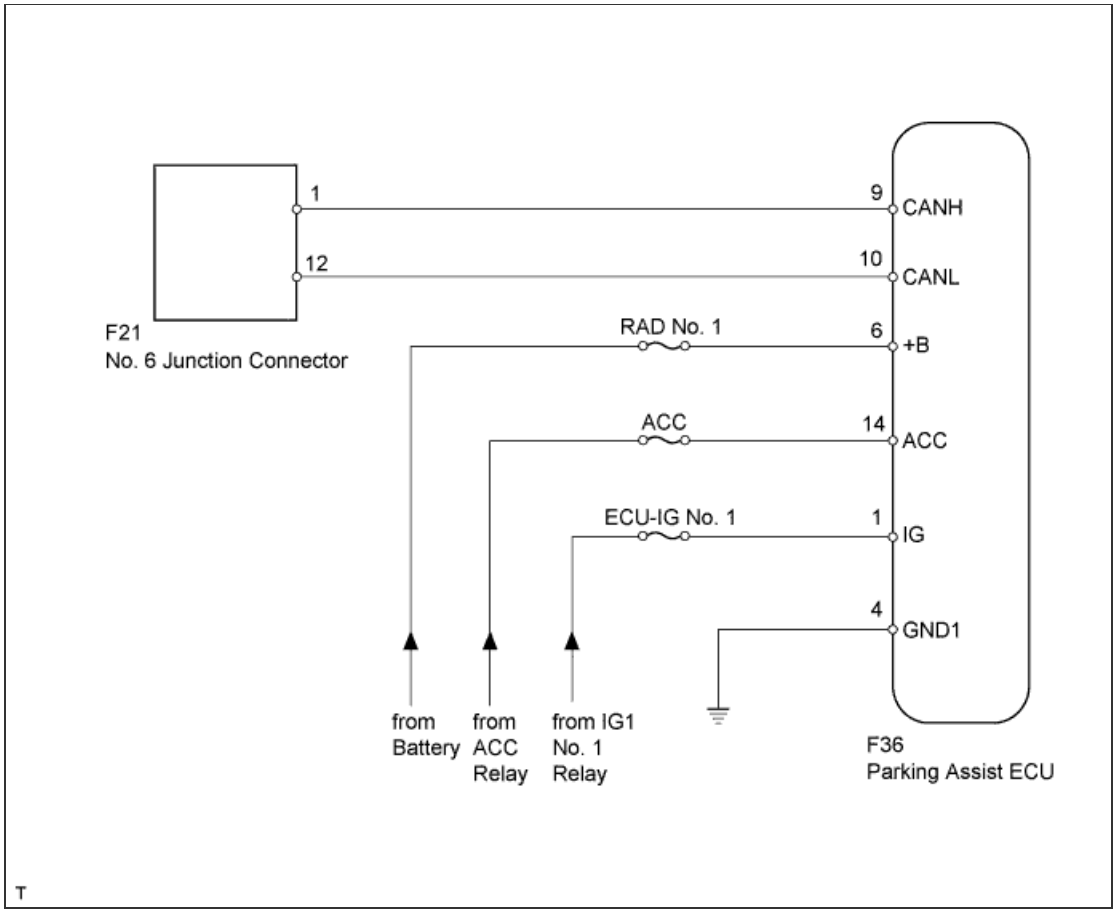
DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U1126	There is no communication from the parking assist ECU.	• Power source circuit of parking assist ECU • Parking assist ECU • Parking assist ECU branch wire or connector

HINT:

For vehicles with the parking assist monitor system only.

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

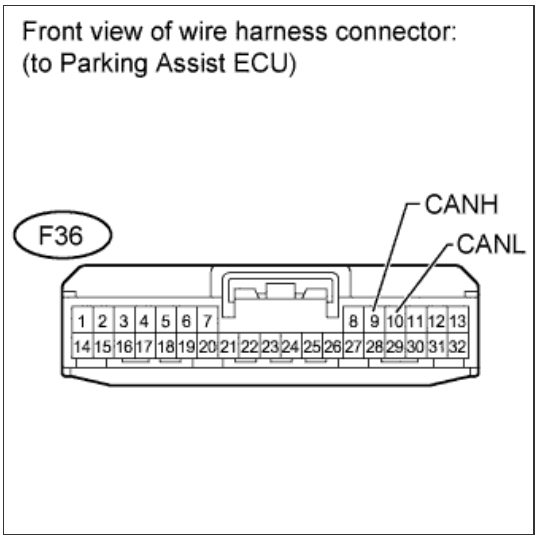
2.CHECK FOR OPEN IN CAN BUS WIRE (PARKING ASSIST ECU BRANCH WIRE)

a. Disconnect the F36 parking assist ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F36-9 (CANH) - F36-10 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE PARKING ASSIST ECU BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F36 parking assist ECU connector.

c. Measure the resistance according to the value(s) in the table below.

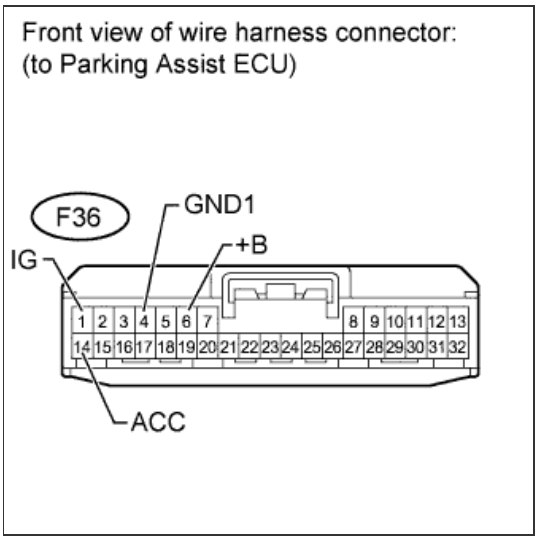
Standard Resistance:

Tester Connection	Condition	Specified Condition
F36-4 (GND1) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F36-6 (+B) - Body ground	Always	11 to 14 V
F36-14 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V
F36-1 (IG) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE PARKING ASSIST ECU (Click here)

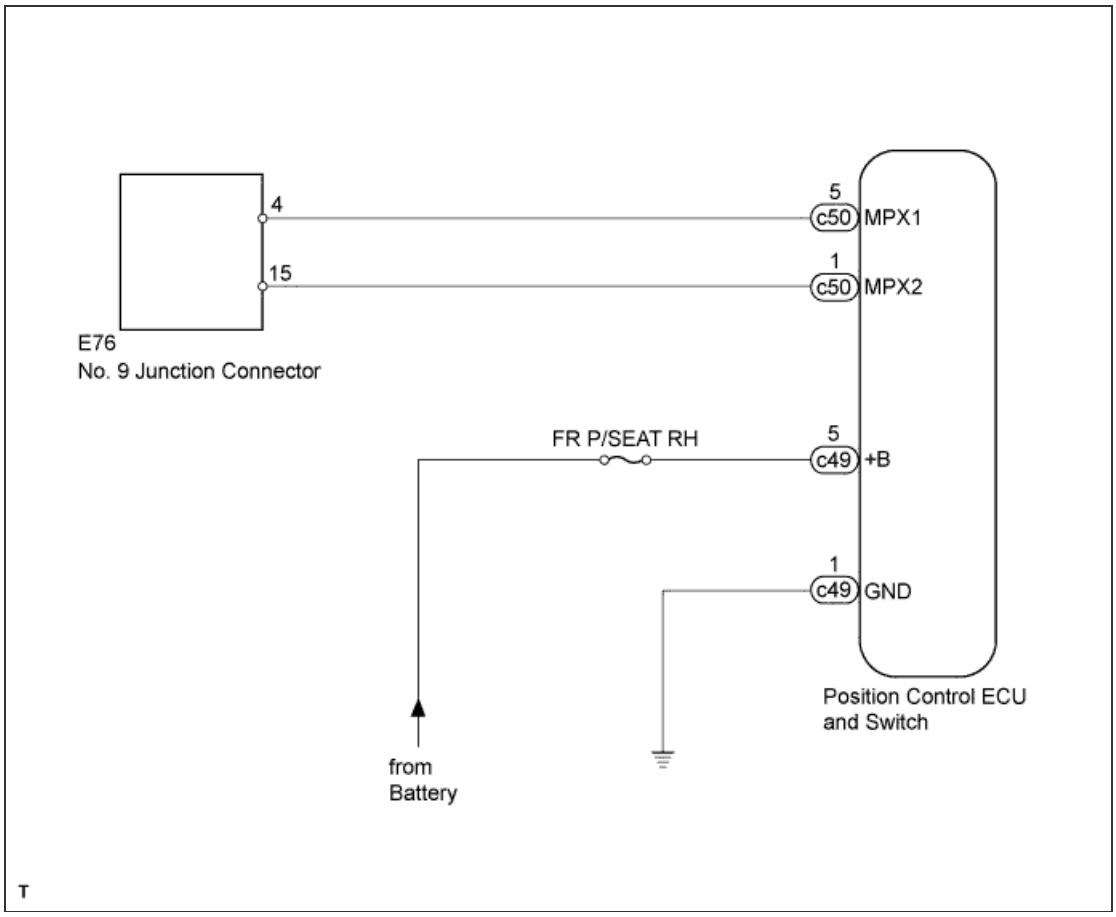
DTC U0208 Lost Communication with "Seat Control Module A"

for Preparation Click here

DESCRIPTION

DTC Code	DTC Detection Condition	Trouble Area
U0208	There is no communication from the position control ECU and switch.	• Power source circuit of position control ECU and switch • Position control ECU and switch • Position control ECU and switch branch wire or connector

WIRING DIAGRAM



INSPECTION PROCEDURE

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (POSITION CONTROL ECU AND SWITCH BRANCH WIRE)

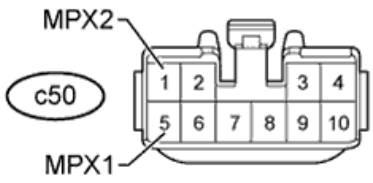
a. Disconnect the c50 position control ECU and switch connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
c50-5 (MPX1) - c50-1 (MPX2)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Position Control ECU and Switch)



NG → REPAIR OR REPLACE POSITION CONTROL ECU AND SWITCH BRANCH WIRE OR CONNECTOR (MPX1, MPX2)

OK

3.CHECK HARNESS AND CONNECTOR (POSITION CONTROL ECU AND SWITCH - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the c49 position control ECU and switch connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

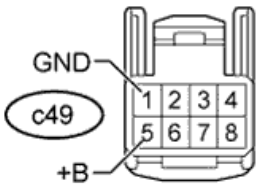
Tester Connection	Condition	Specified Condition
c49-1 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
c49-5 (+B) - Body ground	Always	11 to 14 V

Front view of wire harness connector:
(to Position Control ECU and Switch)



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

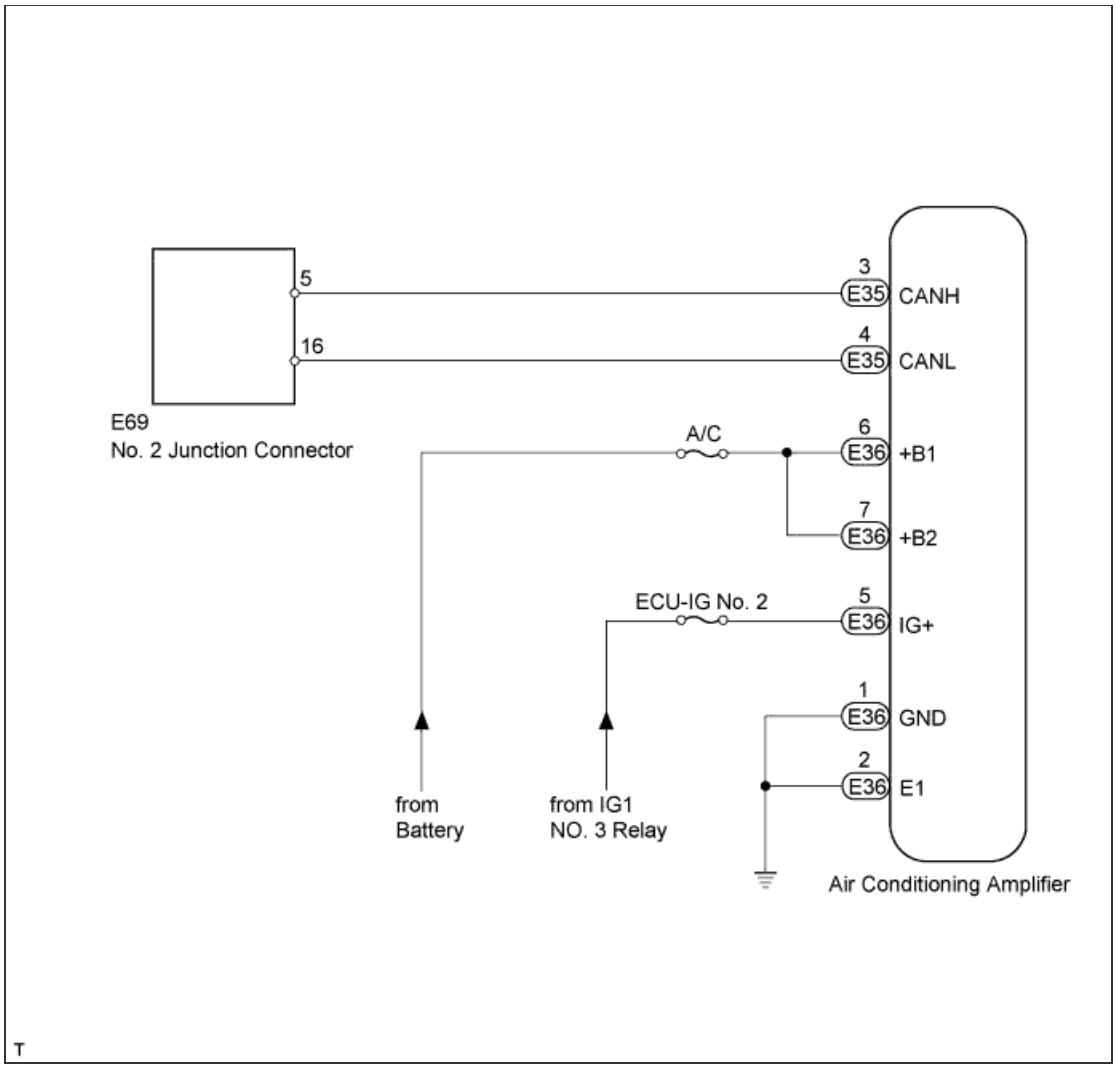
REPLACE POSITION CONTROL ECU AND SWITCH ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Air Conditioning Amplifier Communication Stop Mode	When either condition below is met: • "Air Conditioner" is not displayed on "Bus Check". • "Air Conditioning Amplifier Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or inside air conditioning amplifier • Air conditioning amplifier branch wire or connector • Air conditioning amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

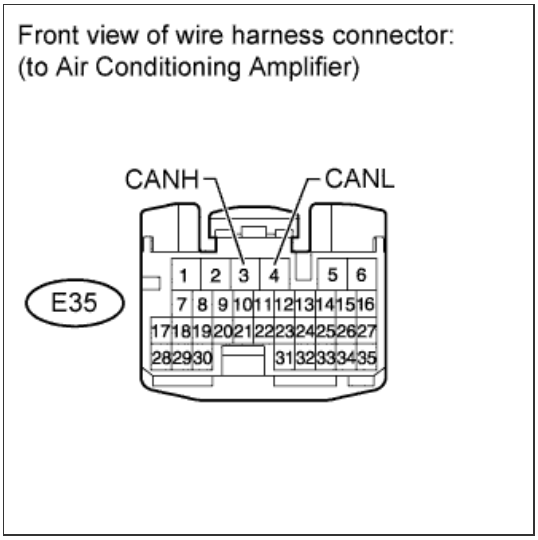
2.CHECK FOR OPEN IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER BRANCH WIRE)

a. Disconnect the E35 air conditioning amplifier connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE AIR CONDITIONING AMPLIFIER BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (AIR CONDITIONING AMPLIFIER - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E36 air conditioning amplifier connector.

c. Measure the resistance according to the value(s) in the table below.

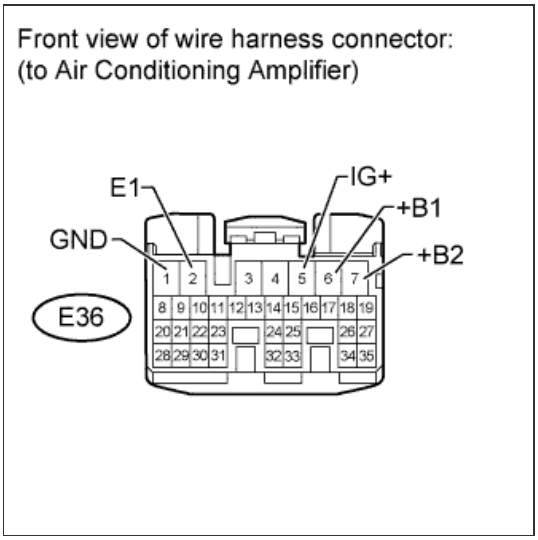
Standard Resistance:

Tester Connection	Condition	Specified Condition
E36-1 (GND) - Body ground	Always	Below 1 Ω
E36-2 (E1) - Body ground		

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E36-6 (+B1) - Body ground	Always	11 to 14 V
E36-7 (+B2) - Body ground		
E36-5 (IG+) - Body	Engine switch on	



ground	(IG)	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

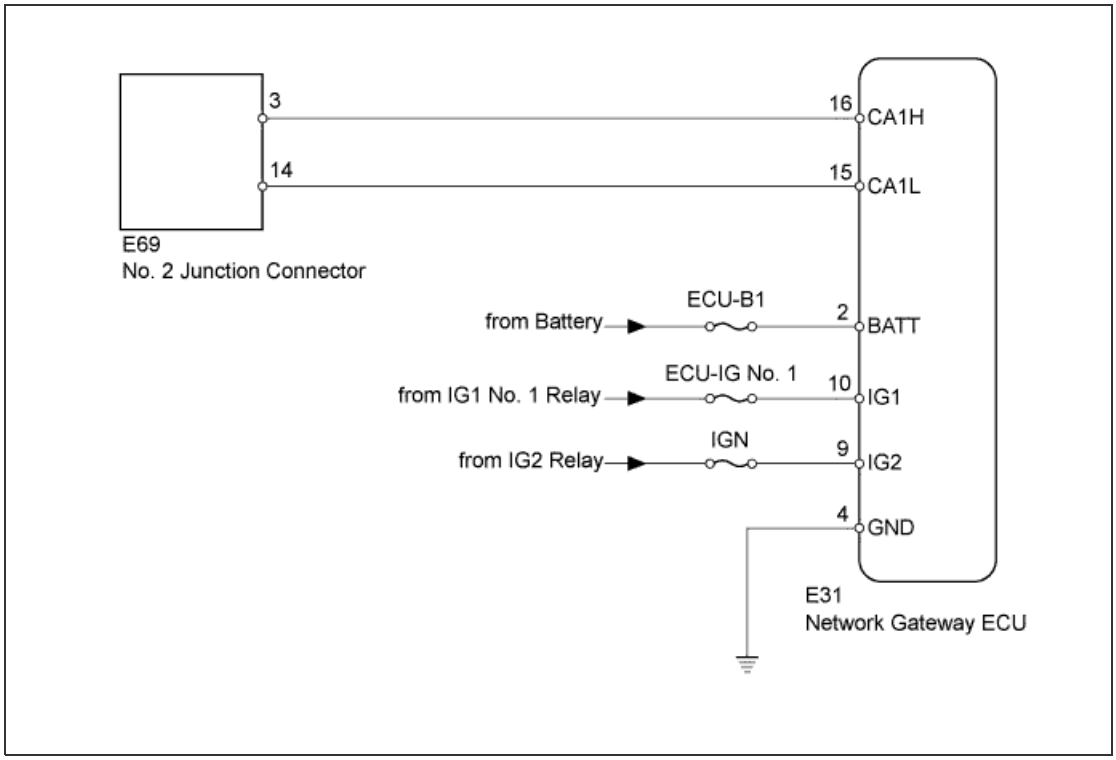
REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Gateway ECU Communication Stop Mode	When either condition below is met: • "CAN Gateway" is not displayed on "Bus Check". • "Gateway Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or inside network gateway ECU • Network gateway ECU main wire or connector • Network gateway ECU

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

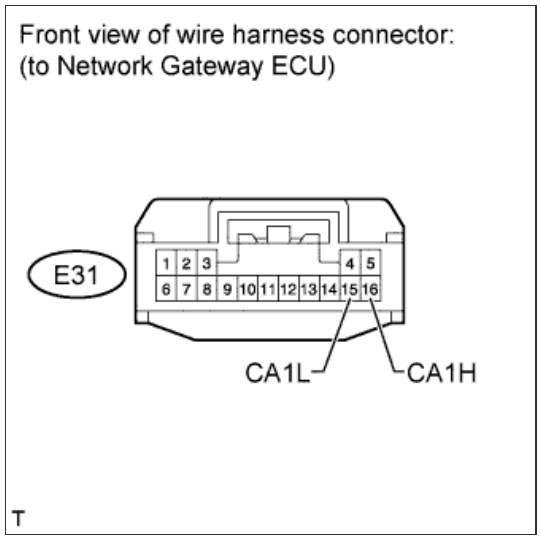
2.CHECK FOR OPEN IN CAN BUS WIRE (NETWORK GATEWAY ECU BRANCH WIRE)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE NETWORK GATEWAY ECU BRANCH WIRE OR CONNECTOR (CA1H, CA1L)

OK

3.CHECK HARNESS AND CONNECTOR (NETWORK GATEWAY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E31 network gateway ECU connector.

c. Measure the resistance according to the value(s) in the table below.

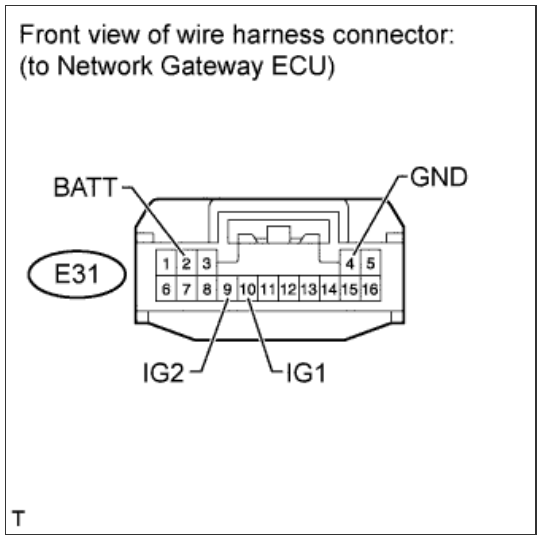
Standard Resistance:

Tester Connection	Condition	Specified Condition
E31-4 (GND) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E31-2 (BATT) - Body ground	Always	11 to 14 V
E31-10 (IG1) - Body ground	Engine switch on (IG)	11 to 14 V
E31-9 (IG2) - Body ground		



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

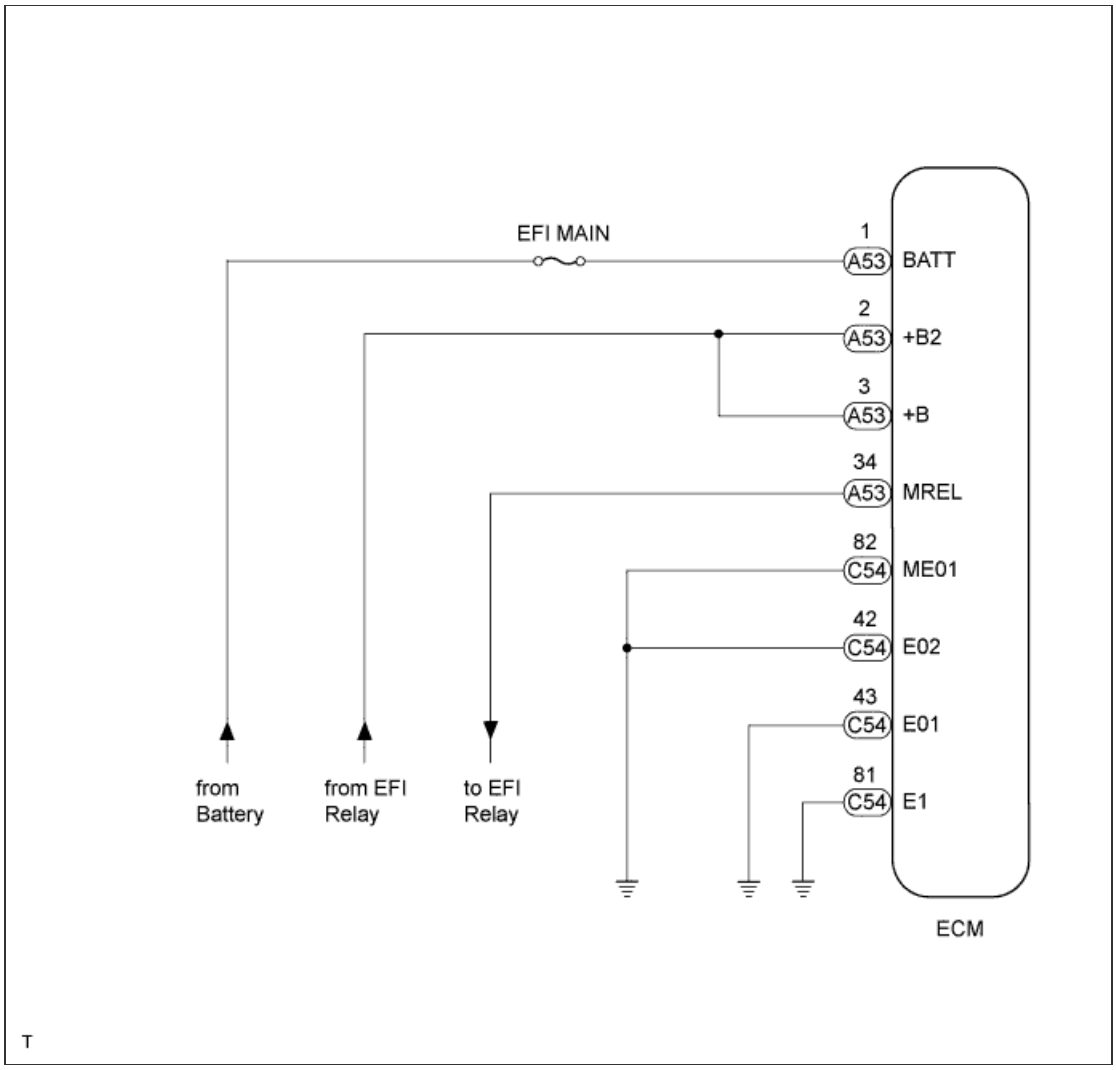
REPLACE NETWORK GATEWAY ECU (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
ECM Communication Stop Mode	When either condition below is met: • Engine is not displayed on "Bus Check". • "ECM Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or ECM • ECM main wire or connector • ECM

WIRING DIAGRAM

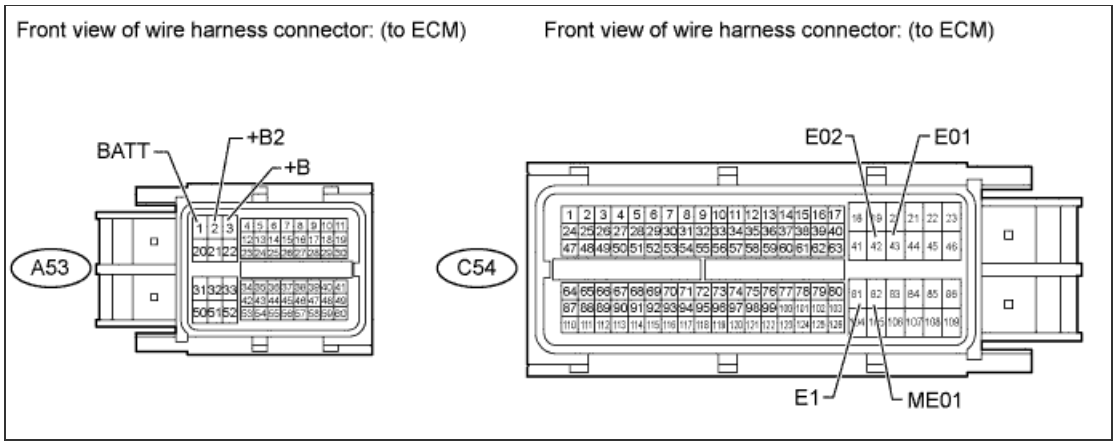


INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.CHECK HARNESS AND CONNECTOR (ECM - BATTERY AND BODY GROUND)



a. Disconnect the A53 and C54 ECU connectors.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
C54-81 (E1) - Body ground	Always	Below 1 Ω
C54-42 (E02) - Body ground		
C54-43 (E01) - Body ground		
C54-82 (ME01) - Body ground		

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
A53-1 (BATT) - Body ground	Always	11 to 14 V
A53-2 (+B2) - Body ground	Battery positive (+) voltage applied to terminal MREL	
A53-3 (+B) - Body ground	Battery positive (+) voltage applied to terminal MREL	

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

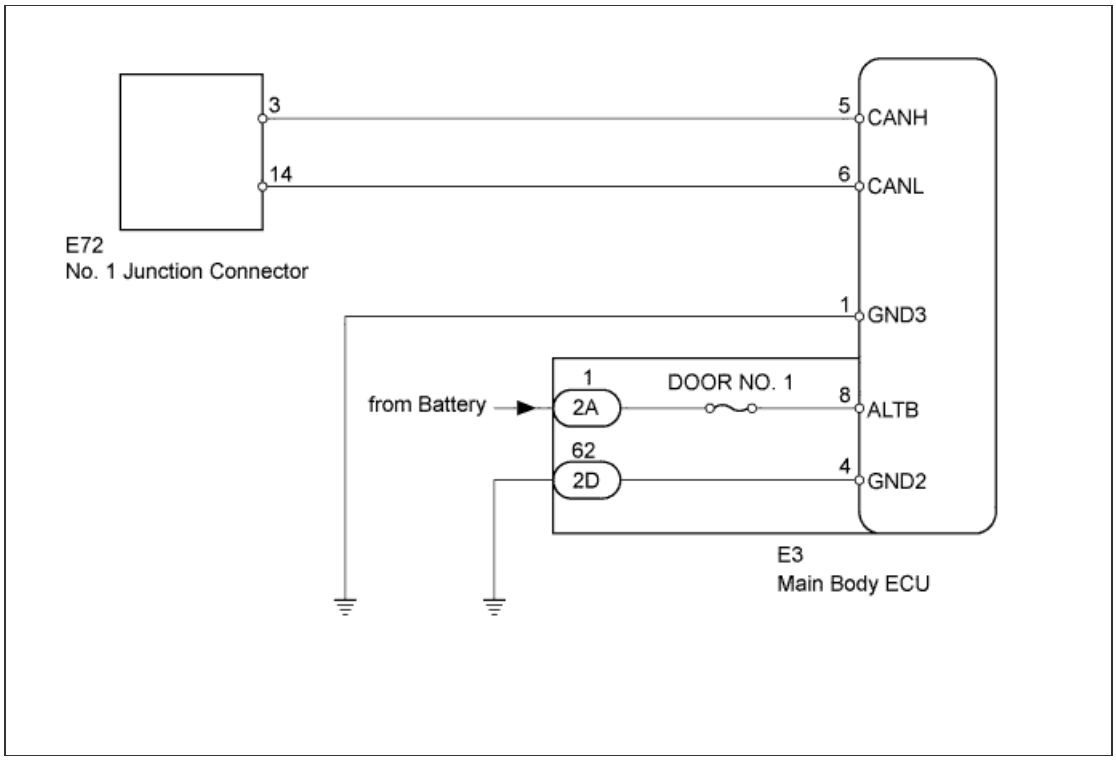
REPLACE ECM (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Main Body ECU Communication Stop Mode	When either condition below is met: • "Main Body" is not displayed on "Bus Check". • "Main Body ECU Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or inside main body ECU • Main body ECU branch wire or connector • Main body ECU

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

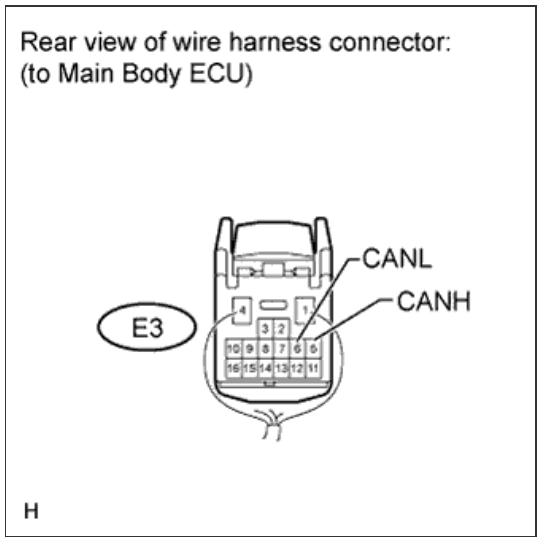
2.CHECK FOR OPEN IN CAN BUS WIRE (MAIN BODY ECU BRANCH WIRE)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

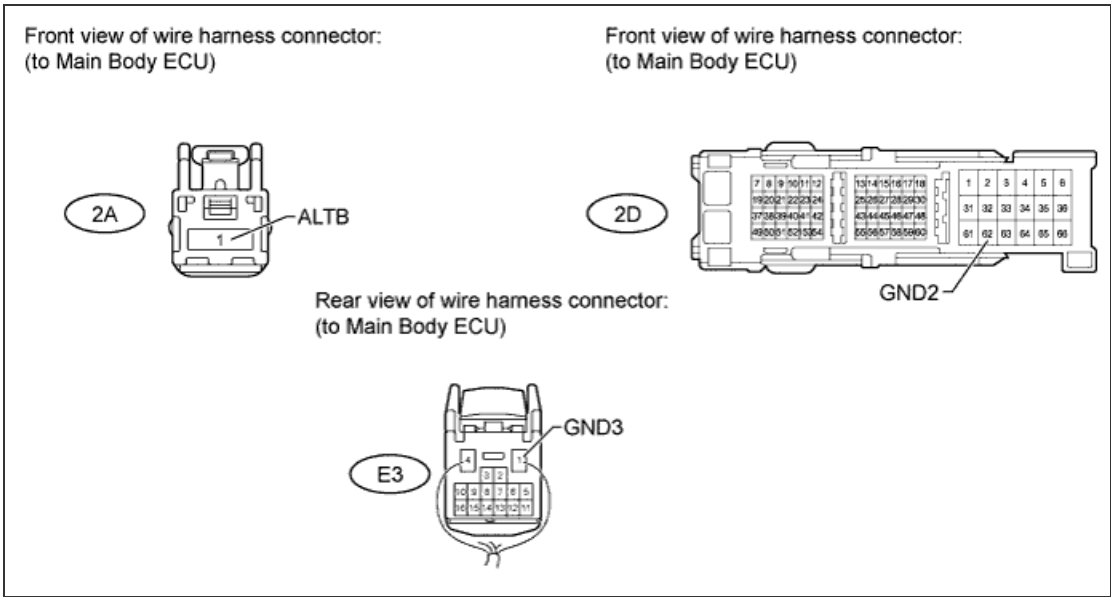
3.CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the 2A and 2D main body ECU (cowl side junction block LH) connectors.



c. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

d. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
2D-62 (GND2) - Body ground	Always	Below 1 Ω

E3-1 (GND3) - Body ground	Always	Below 1 Ω

e. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
2A-1 (ALTB) - Body ground	Always	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

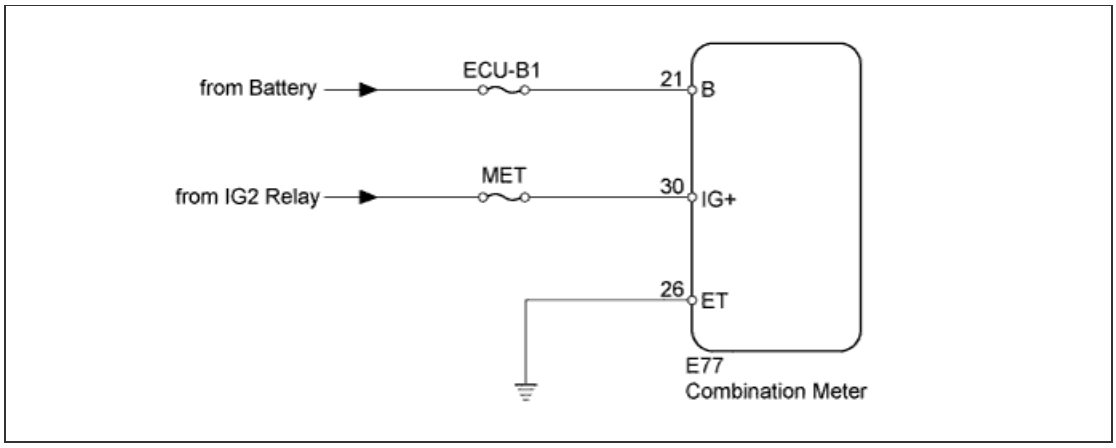
OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Combination Meter ECU Communication Stop Mode	When either condition below is met: • "Combination Meter" is not displayed on "Bus Check". • "Combination Meter ECU Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or inside combination meter • Combination meter

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.CHECK HARNESS AND CONNECTOR (COMBINATION METER - BATTERY AND BODY GROUND)

a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

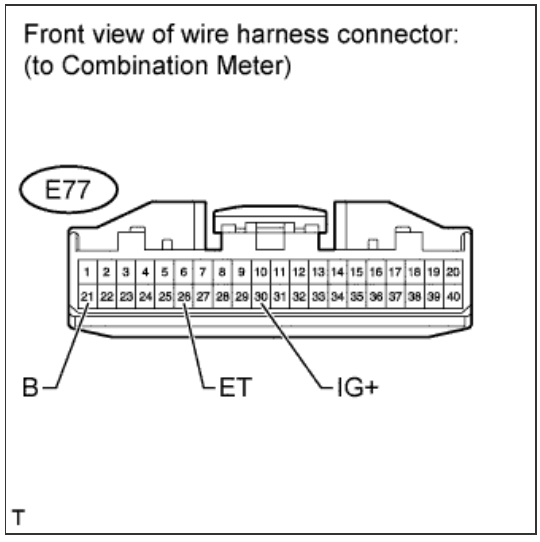
Standard Resistance:

Tester Connection	Condition	Specified Condition
E77-26 (ET) - Body ground	Always	Below 1 Ω

c. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E77-21 (B) - Body ground	Always	11 to 14 V
E77-30 (IG+) - Body ground	Engine switch on (IG)	11 to 14 V



NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

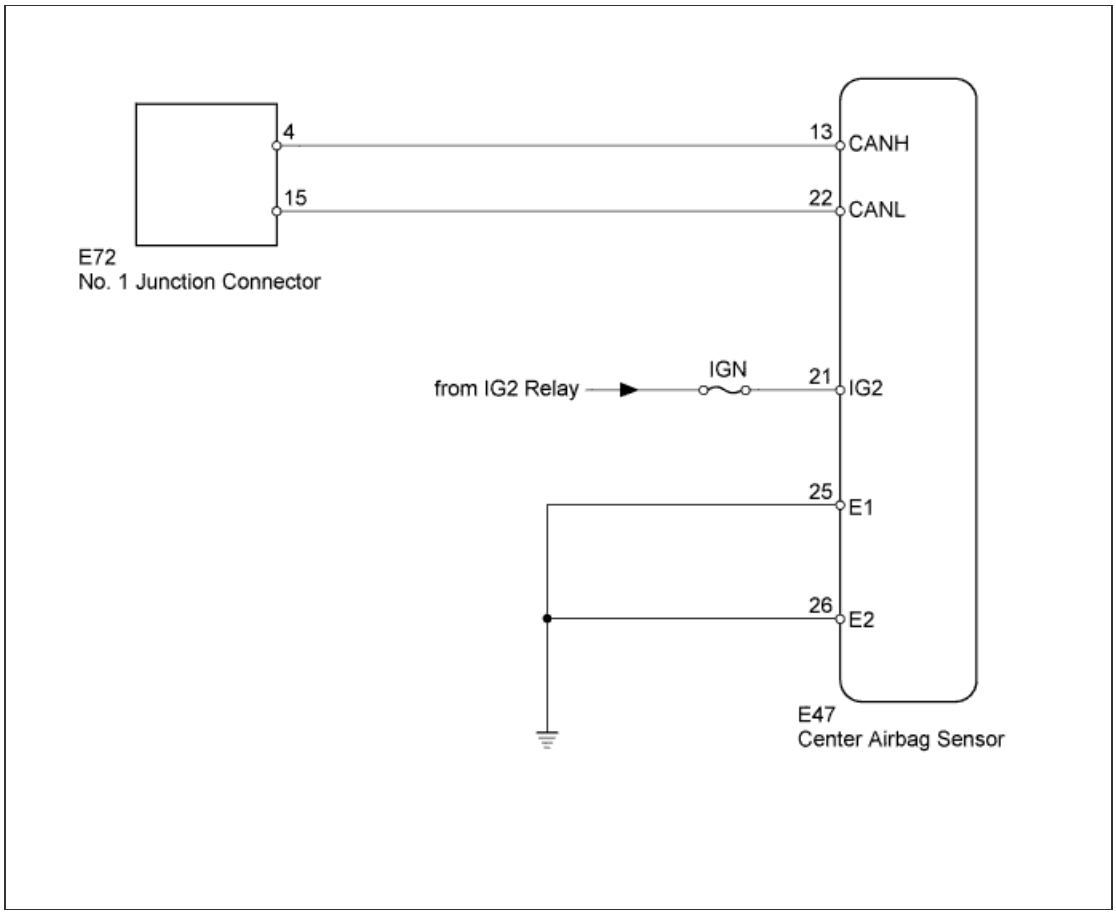
REPLACE COMBINATION METER ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Center Airbag Sensor Communication Stop Mode	When either condition below is met: • "SRS Airbag" is not displayed on "Bus Check". • "Center Airbag Sensor Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or center airbag sensor • Center airbag sensor branch wire or connector • Center airbag sensor assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

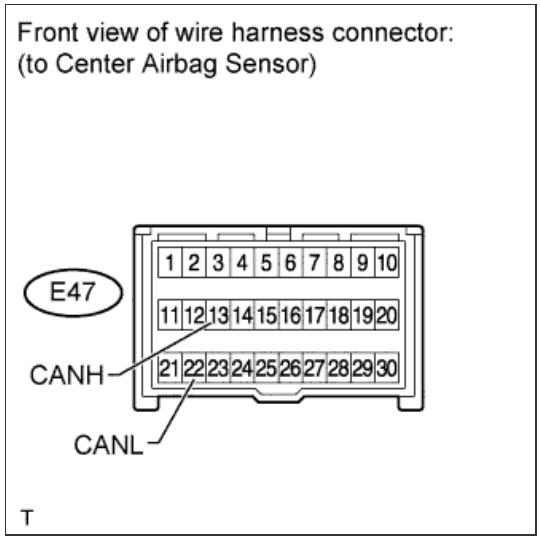
2.CHECK FOR OPEN IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CENTER AIRBAG SENSOR BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (CENTER AIRBAG SENSOR - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

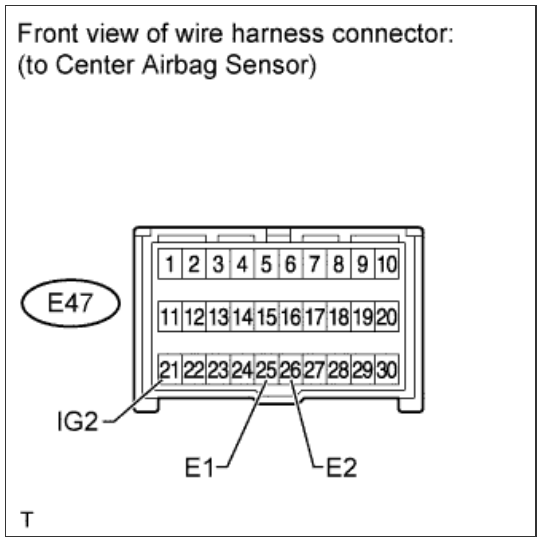
When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E47 center airbag sensor connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
E47-25 (E1) - Body ground	Always	Below 1 Ω
E47-26 (E2) - Body ground		



d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E47-21 (IG2) - Body ground	Engine switch on (IG)	11 to 14 V

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

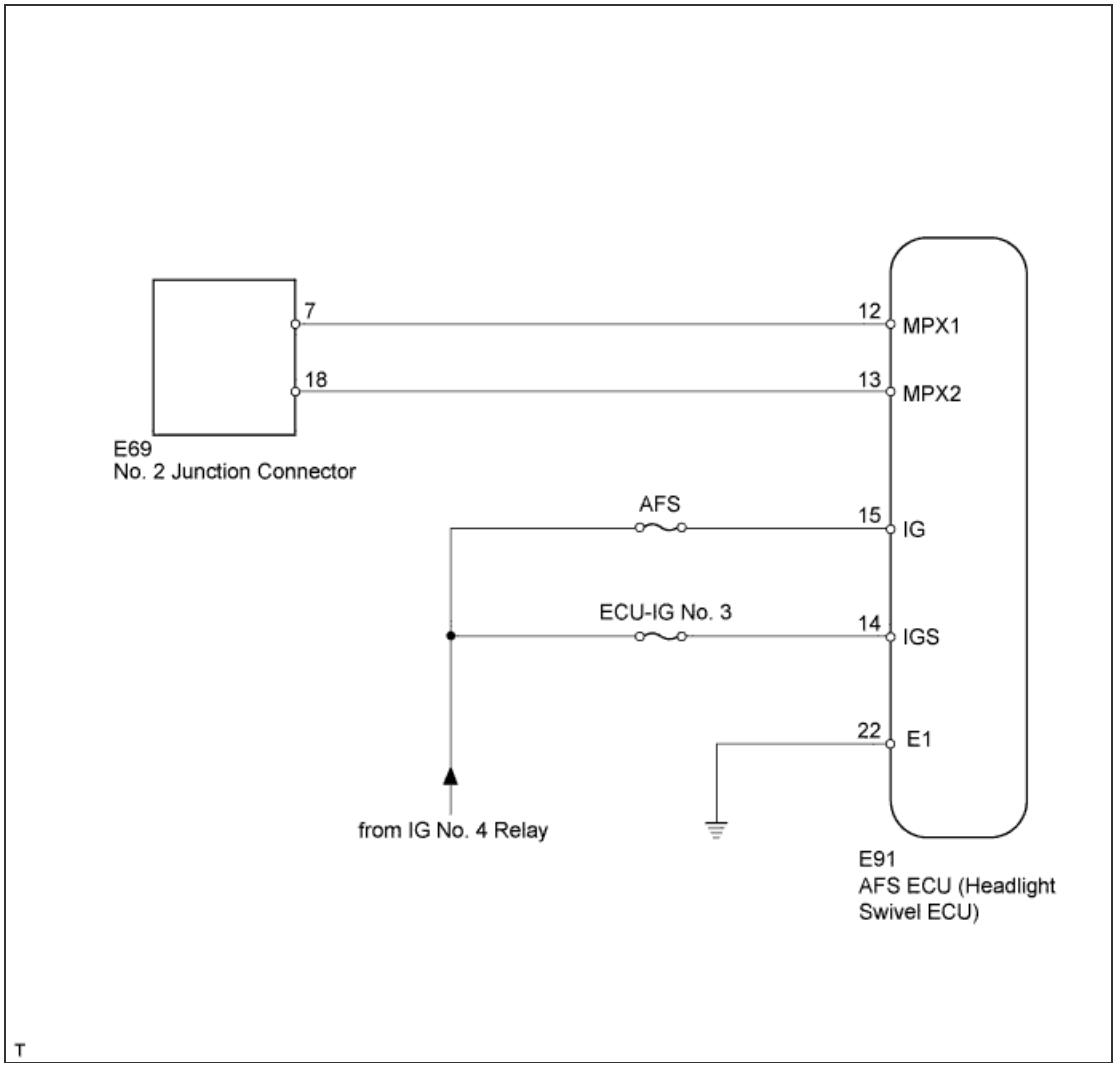
REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
AFS ECU Communication Stop Mode	When either condition below is met: • "AFS/HL AutoLeveling" is not displayed on "Bus Check". • Applies to "AFS ECU Communication Stop Mode" in "DTC Combination Table".	• Power source or inside AFS ECU (headlight swivel ECU assembly) • AFS ECU (headlight swivel ECU assembly) branch wire or connector • AFS ECU (headlight swivel ECU assembly)

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

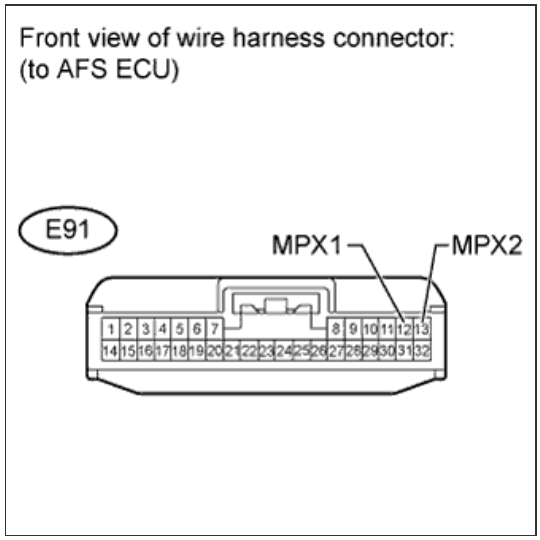
2.CHECK FOR OPEN IN CAN BUS WIRE (AFS ECU BRANCH WIRE)

a. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	Engine switch off	54 to 69 Ω



NG → **REPAIR OR REPLACE AFS ECU BRANCH WIRE OR CONNECTOR (MPX1, MPX2)**

OK

3.CHECK HARNESS AND CONNECTOR (AFS ECU - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the E91 AFS ECU (headlight swivel ECU) connector.

c. Measure the resistance according to the value(s) in the table below.

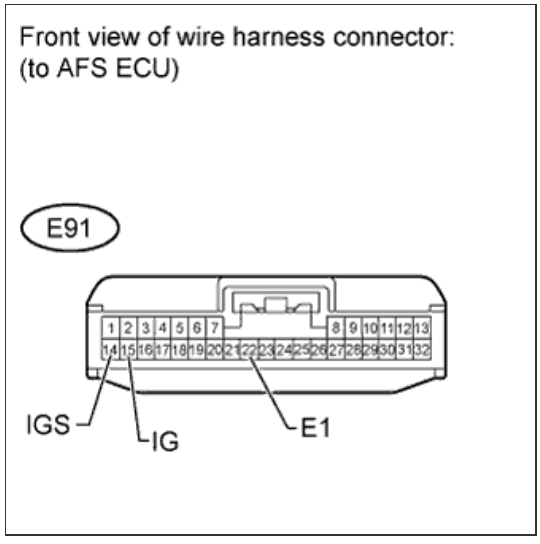
Standard Resistance:

Tester Connection	Condition	Specified Condition
E91-22 (E1) - Body ground	Always	Below 1 Ω

d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
E91-15 (IG) - Body ground	Engine switch on (IG)	11 to 14 V
E91-14 (IGS) - Body ground	Engine switch on (IG)	11 to 14 V



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

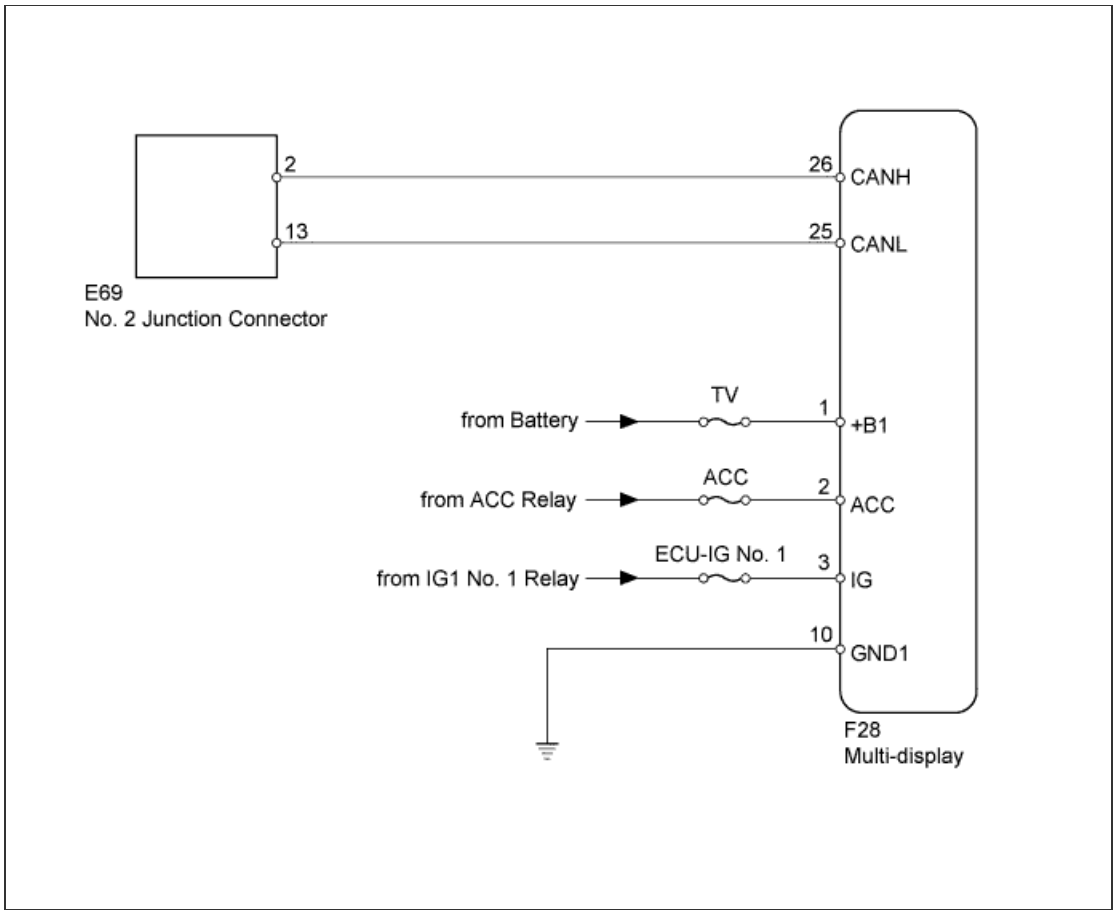
REPLACE AFS ECU (HEADLIGHT SWIVEL ECU ASSEMBLY) (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Display and Navigation Assembly Communication Stop Mode	When either condition below is met: • "AVN" is not displayed on "Bus Check". • "Display and Navigation Assembly Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or inside multi-display • Multi-display branch wire or connector • Multi-display

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

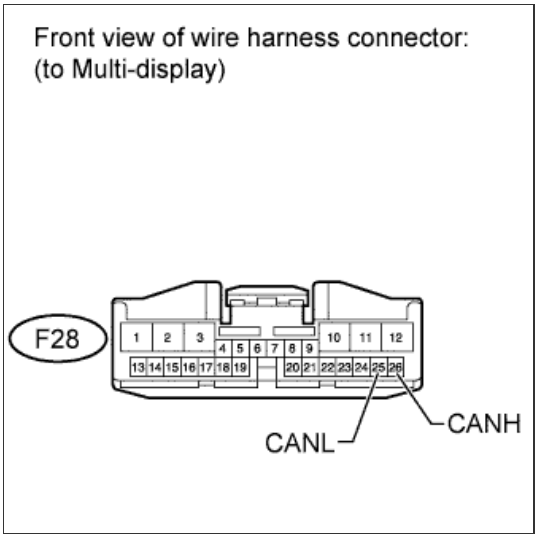
2.CHECK FOR OPEN IN CAN BUS WIRE (MULTI-DISPLAY BRANCH WIRE)

a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F28-26 (CANH) - F28-25 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE MULTI-DISPLAY BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (MULTI-DISPLAY - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

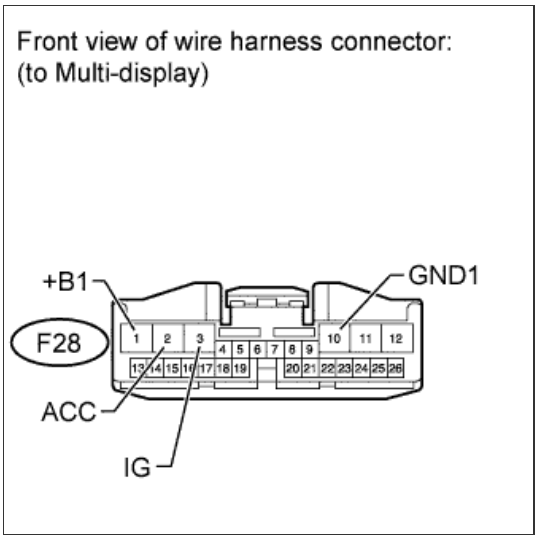
When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F28 multi-display connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
F28-10 (GND1) - Body ground	Always	Below 1 Ω



d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F28-1 (+B1) - Body ground	Always	11 to 14 V
F28-2 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V
F28-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B

NG	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE HARNESS OR CONNECTOR

A

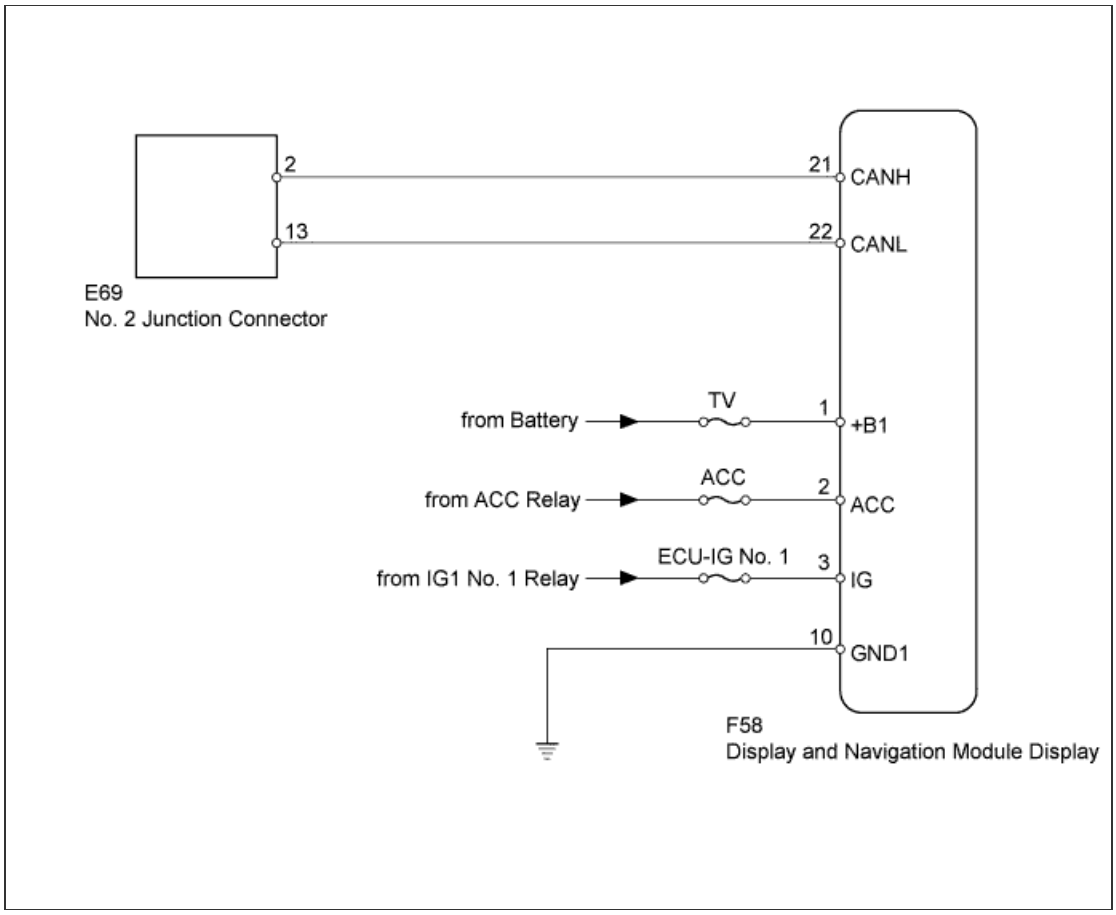
REPLACE MULTI-DISPLAY (Click here)

for Preparation Click here

DESCRIPTION

Detection Item	Symptom	Trouble Area
Display and Navigation Assembly Communication Stop Mode	When either condition below is met: • "AVN1" is not displayed on "Bus Check". • "Display and Navigation Assembly Communication Stop Mode" in "DTC Combination Table" applies.	• Power source or inside display and navigation module display • Display and navigation module display branch wire or connector • Display and navigation module display

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN CAN BUS WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY BRANCH WIRE)

a. Disconnect the F58 display and navigation module display connector.

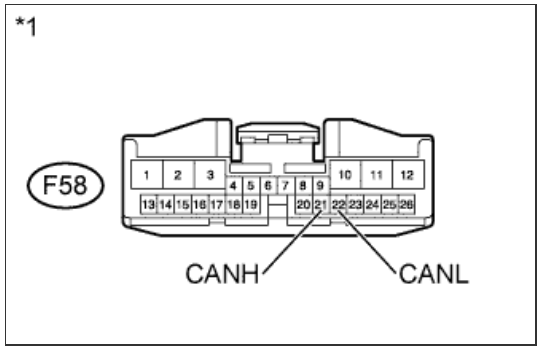
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F58-21 (CANH) - F58-22 (CANL)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to Display and Navigation Module Display)



NG → REPAIR OR REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY BRANCH WIRE OR CONNECTOR (CANH, CANL)

OK

3.CHECK HARNESS AND CONNECTOR (DISPLAY AND NAVIGATION MODULE DISPLAY - BATTERY AND BODY GROUND)

a. Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

b. Disconnect the F58 display and navigation module display connector.

c. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
F58-10 (GND1) - Body ground	Always	Below 1 Ω

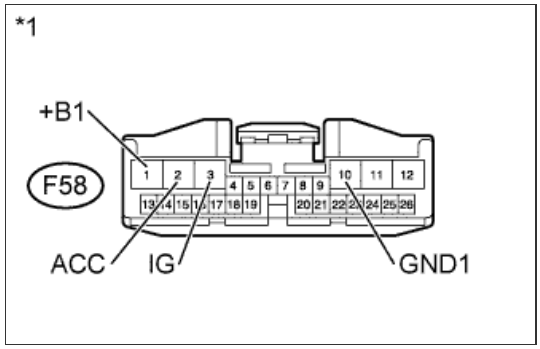
d. Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
F58-1 (+B1) - Body ground	Always	11 to 14 V
F58-2 (ACC) - Body ground	Engine switch on (ACC)	11 to 14 V
F58-3 (IG) - Body ground	Engine switch on (IG)	11 to 14 V

Text in Illustration

*1	Front view of wire harness connector (to Display and Navigation Module Display)



Result

Result	Proceed to
OK (w/ Navigation System)	A
OK	

(w/o Navigation System)	B
NG	C

B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE HARNESS OR CONNECTOR

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

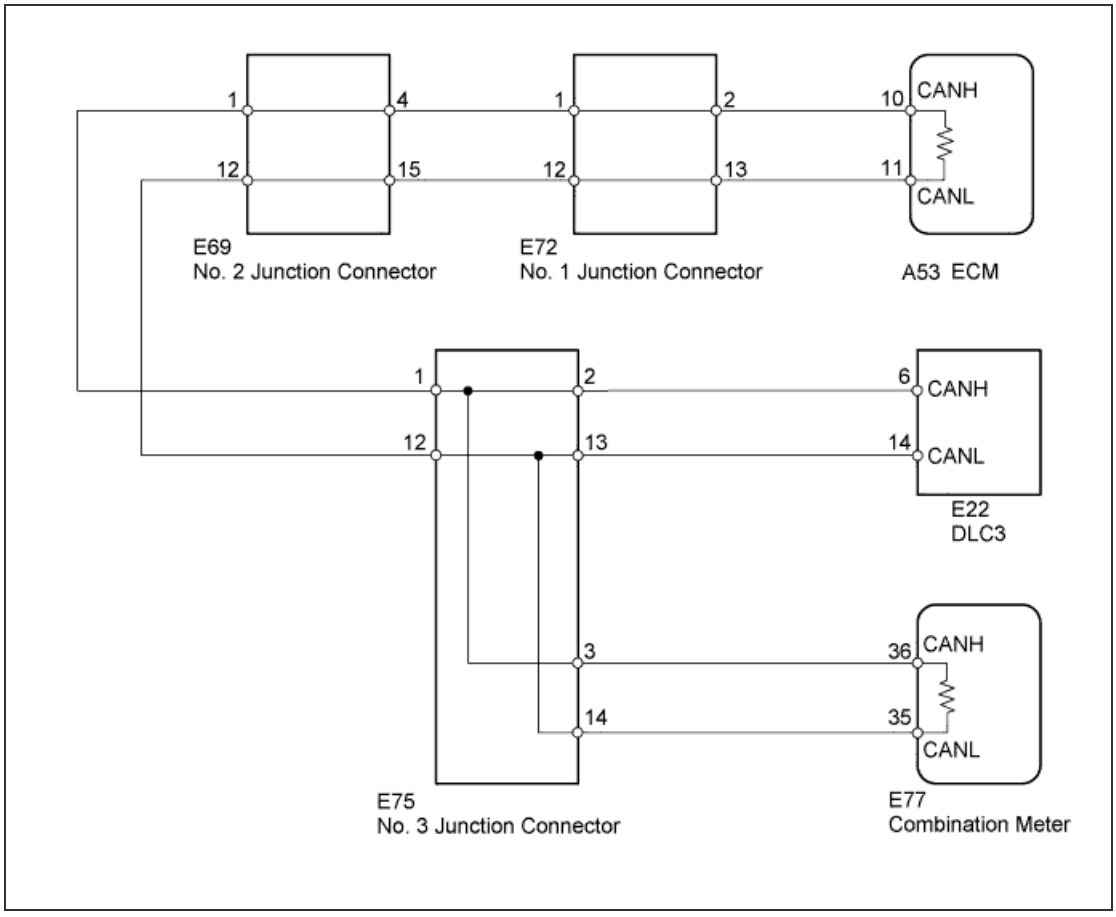
for Preparation Click here

DESCRIPTION

There may be an open circuit in the CAN main wire and/or DLC3 branch wire when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or higher.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or higher.	• CAN main wire and connector • DLC3 branch wire or connector • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector • ECM • Combination meter

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

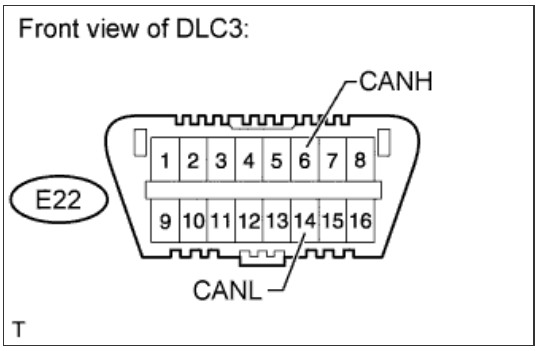
NEXT

2.CHECK DLC3

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω	OK
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	132 Ω or higher	NG



NOTICE:

When the measured value is 132 Ω or higher and a CAN communication system diagnostic trouble code is output, there may be a fault besides disconnection of the DLC3 branch wire. For that reason, troubleshooting should be performed again from "How to Proceed with Troubleshooting" (Click here) after repairing the trouble area.

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

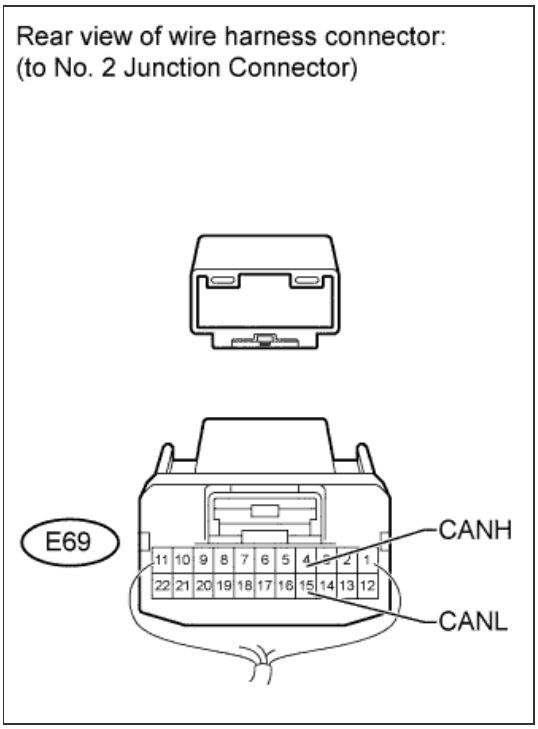
3.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - ECM)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-4 (CANH) - E69-15 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 5

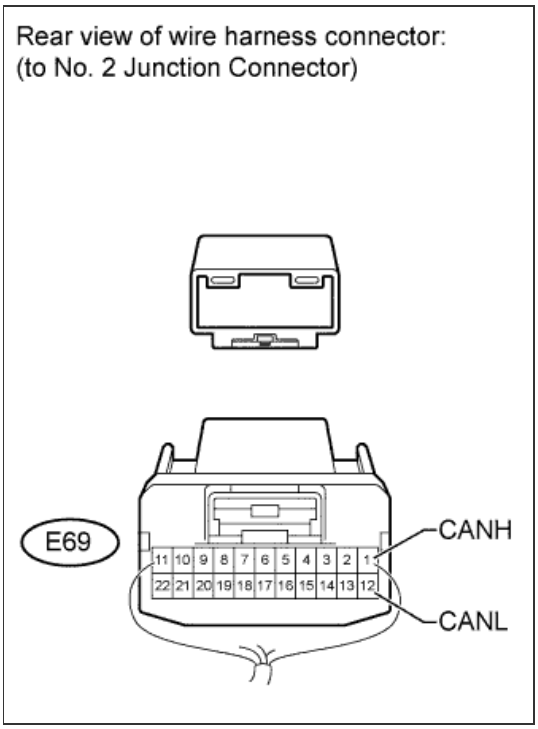
OK

4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-1 (CANH) - E69-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPLACE NO. 2 JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

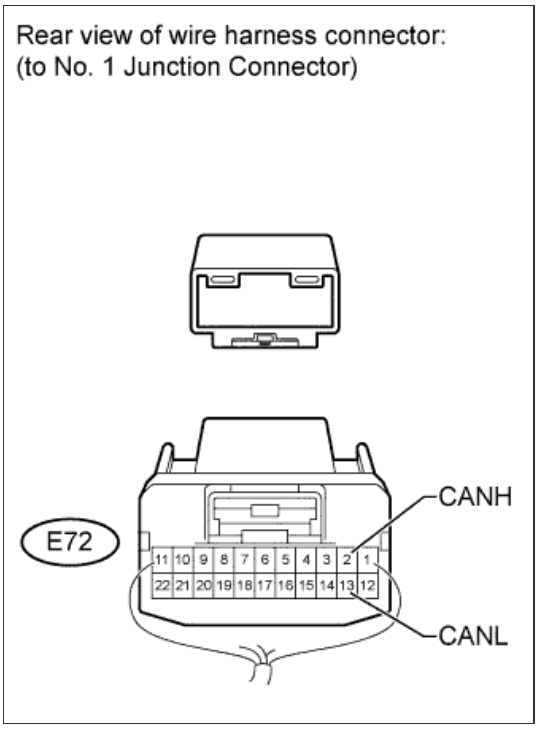
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

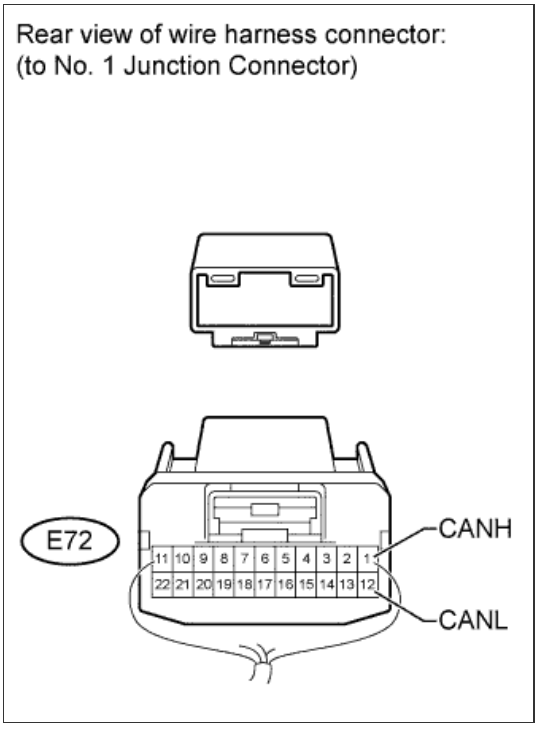
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-1 (CANH) - E72-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

REPLACE NO. 1 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (ECM - NO. 1 JUNCTION CONNECTOR)

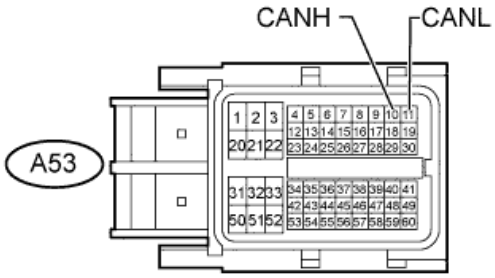
a. Disconnect the A53 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A53-10 (CANH) - A53-11 (CANL)	Engine switch off	108 to 132 Ω

Front view of wire harness connector:
(to ECM)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (ECM - NO. 1 JUNCTION CONNECTOR)

OK

REPLACE ECM (Click here)

10.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

11.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

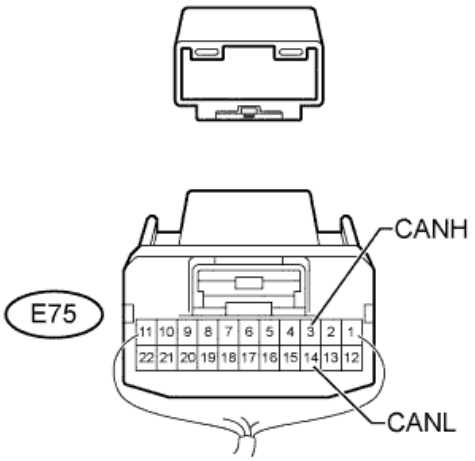
a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 3 Junction Connector)



NG → Go to step 13

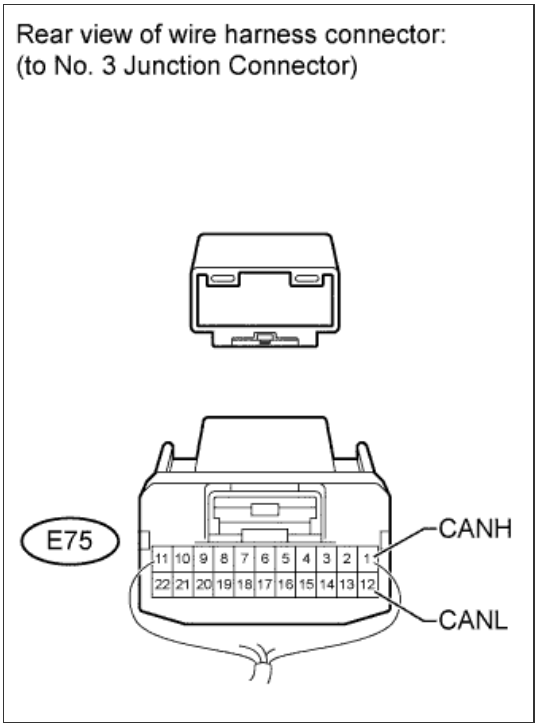
OK

12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE NO. 3 JUNCTION CONNECTOR

13.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

14.CHECK FOR OPEN IN CAN BUS MAIN WIRE (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

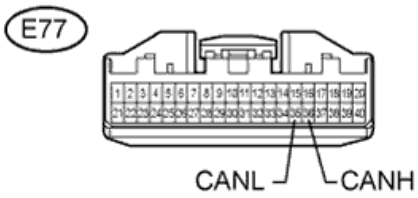
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)	Engine switch off	108 to 132 Ω

Front view of wire harness connector:
(to Combination Meter)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

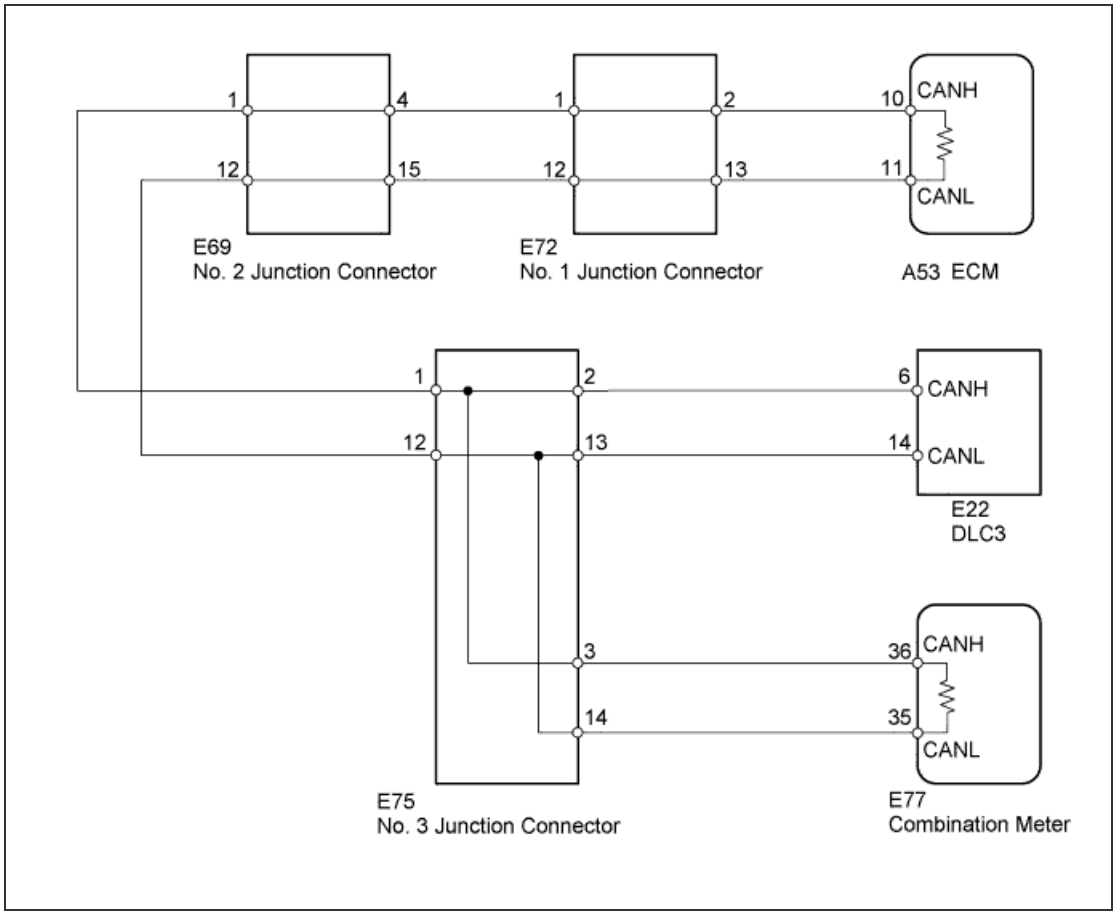
for Preparation Click here

DESCRIPTION

There may be an open circuit in the CAN main wire and/or DLC3 branch wire when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or higher.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or higher.	• CAN main wire and connector • DLC3 branch wire or connector • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector • ECM • Combination meter

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

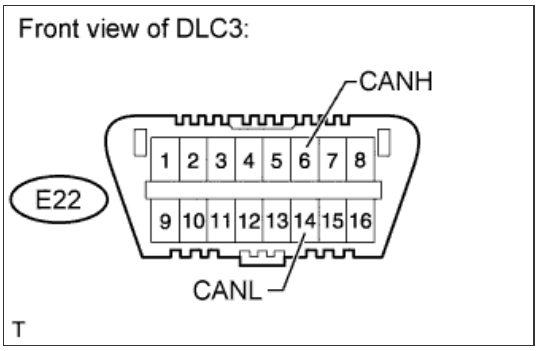
NEXT

2.CHECK DLC3

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω	OK
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	132 Ω or higher	NG



NOTICE:

When the measured value is 132 Ω or higher and a CAN communication system diagnostic trouble code is output, there may be a fault besides disconnection of the DLC3 branch wire. For that reason, troubleshooting should be performed again from "How to Proceed with Troubleshooting" (Click here) after repairing the trouble area.

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

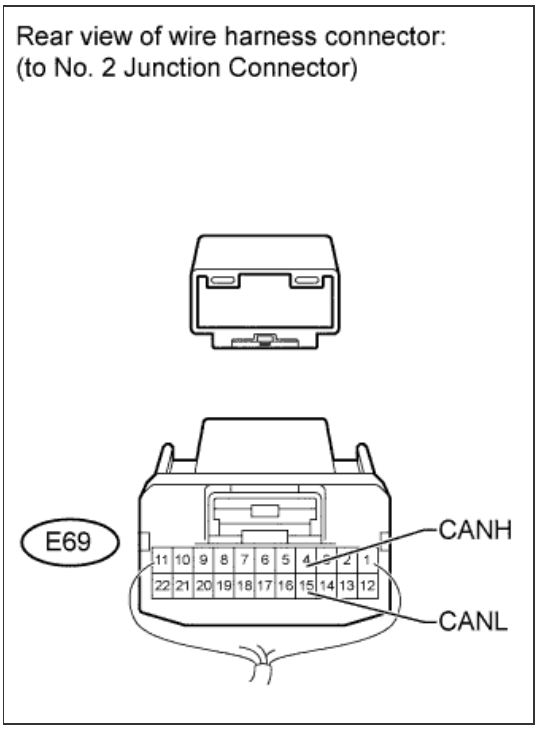
3.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - ECM)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-4 (CANH) - E69-15 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 5

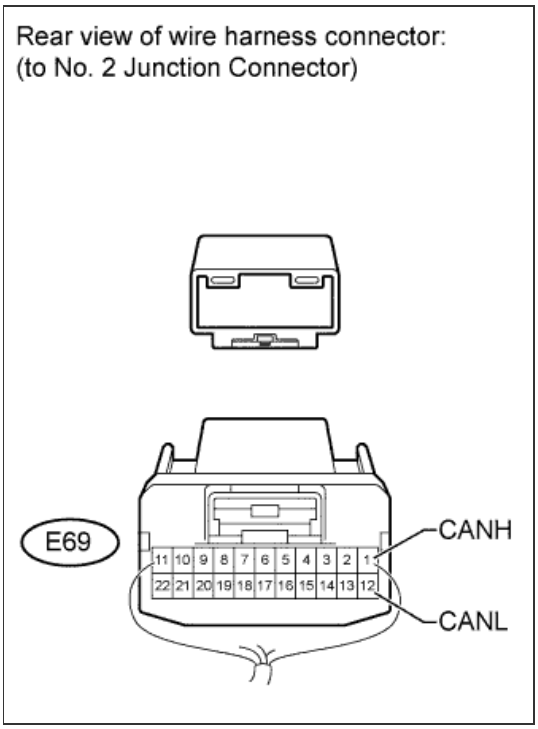
OK

4.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-1 (CANH) - E69-12 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPLACE NO. 2 JUNCTION CONNECTOR

5.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

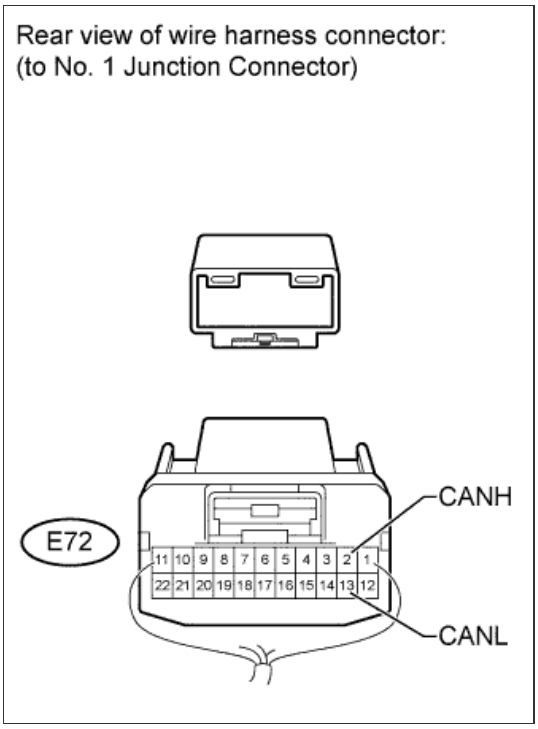
6.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 8

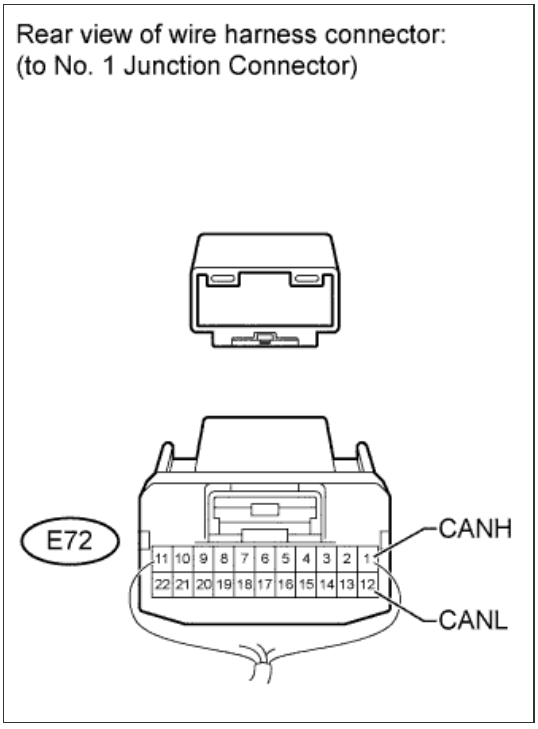
OK

7.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-1 (CANH) - E72-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

REPLACE NO. 1 JUNCTION CONNECTOR

8.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

9.CHECK FOR OPEN IN CAN BUS MAIN WIRE (ECM - NO. 1 JUNCTION CONNECTOR)

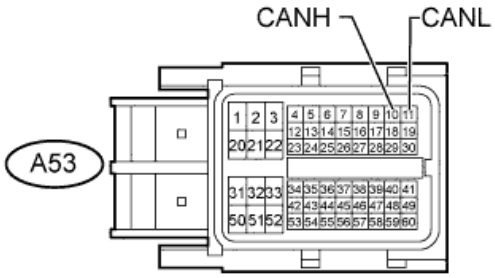
a. Disconnect the A53 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
A53-10 (CANH) - A53-11 (CANL)	Engine switch off	108 to 132 Ω

Front view of wire harness connector:
(to ECM)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (ECM - NO. 1 JUNCTION CONNECTOR)

OK

REPLACE ECM (Click here)

10.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

11.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

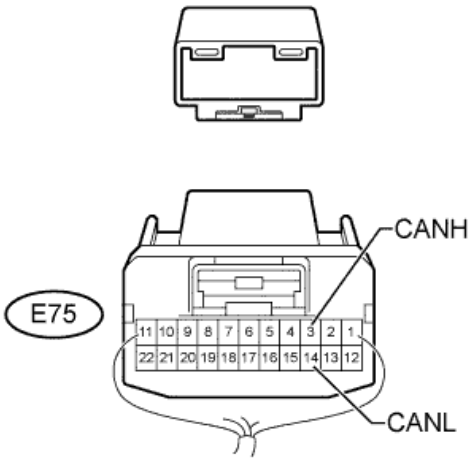
a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	108 to 132 Ω

Rear view of wire harness connector:
(to No. 3 Junction Connector)



NG → Go to step 13

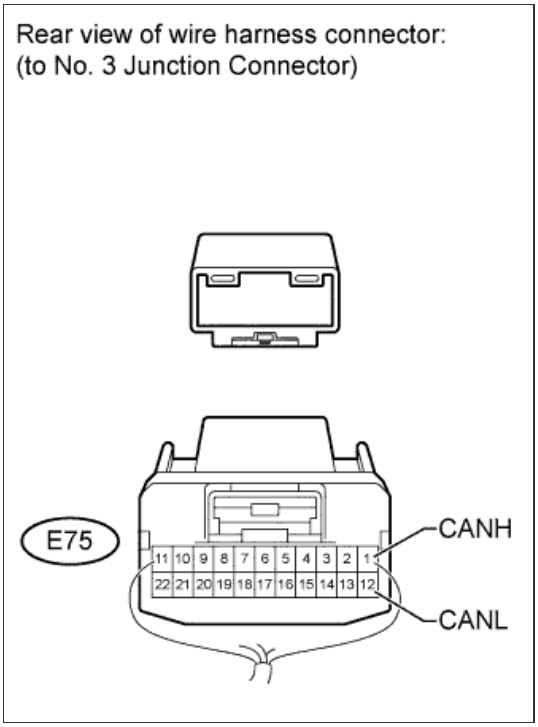
OK

12.CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	108 to 132 Ω



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE NO. 3 JUNCTION CONNECTOR

13.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

14.CHECK FOR OPEN IN CAN BUS MAIN WIRE (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

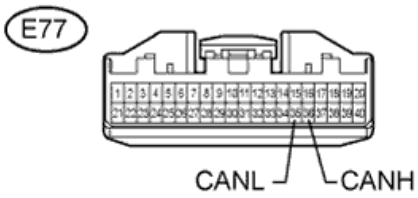
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E77-36 (CANH) - E77-35 (CANL)	Engine switch off	108 to 132 Ω

Front view of wire harness connector:
(to Combination Meter)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (COMBINATION METER - NO. 3 JUNCTION CONNECTOR)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

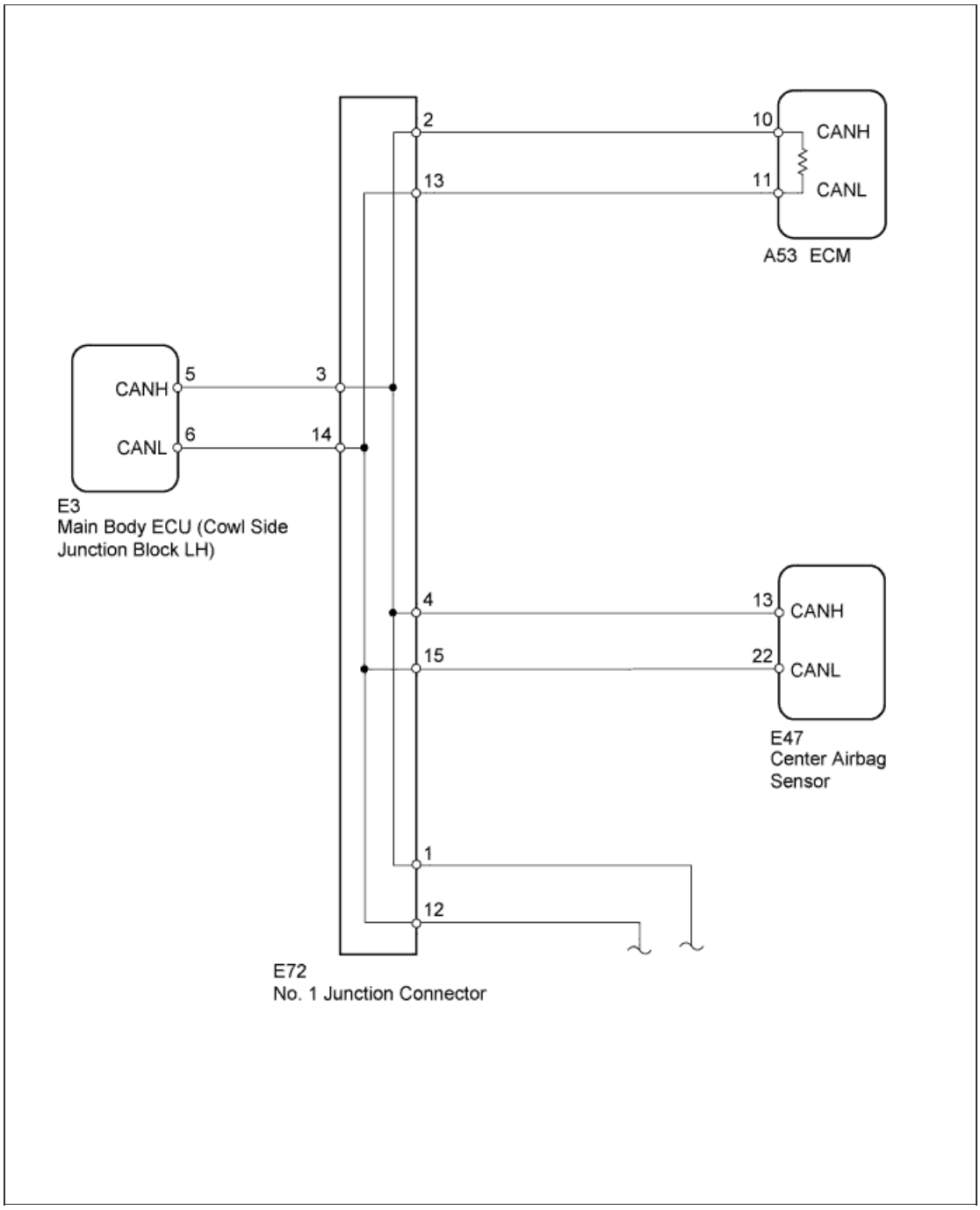
for Preparation Click here

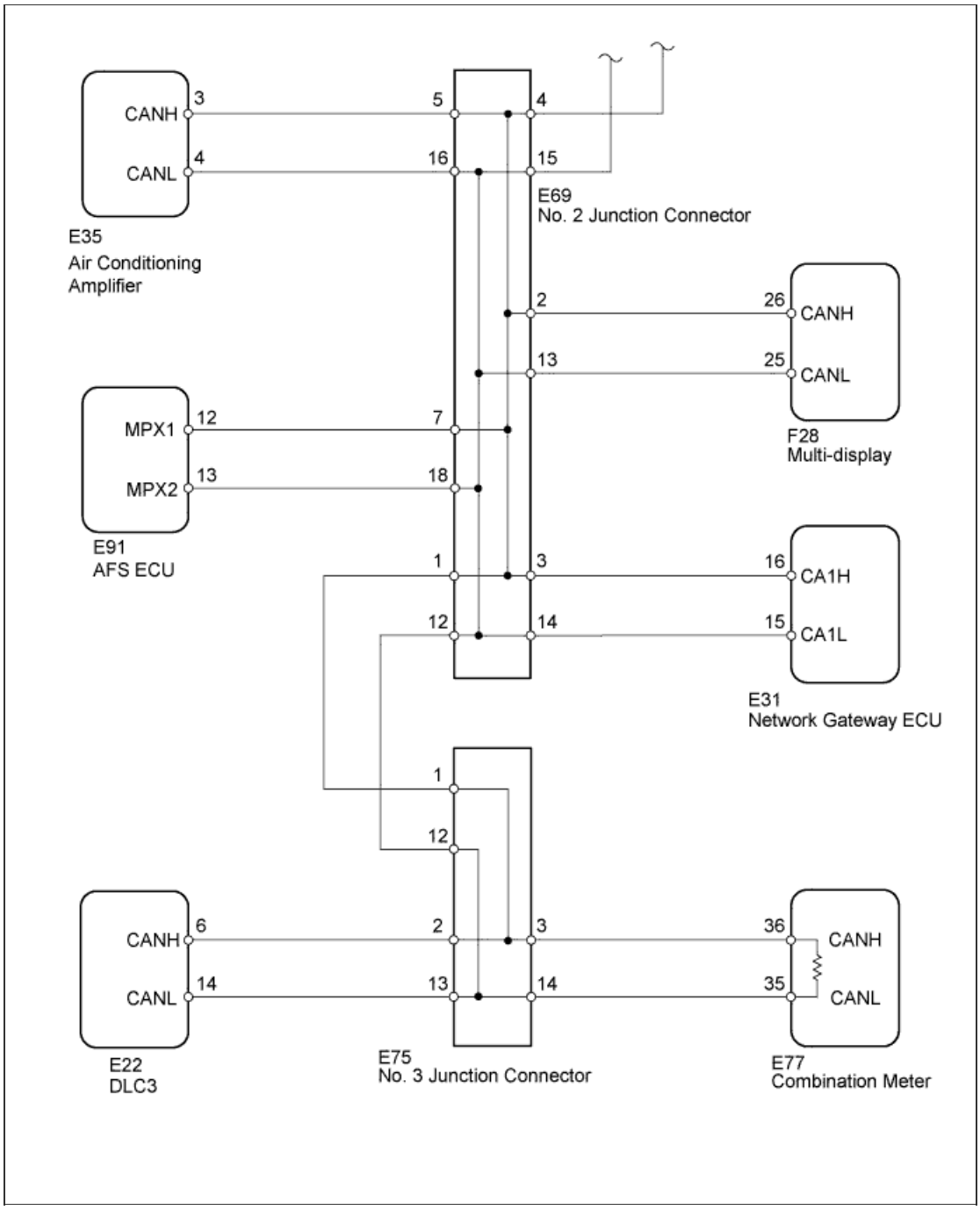
DESCRIPTION

There may be a short circuit between the CAN bus lines when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.	• Short between CAN bus lines • ECM • Center airbag sensor • Multi-display • Air conditioning amplifier • Network gateway ECU • Main body ECU (cowl side junction block LH) • AFS ECU • Combination meter • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM


2
10
CANH
13
11
CANL
A53 ECM
CANH
5
3
CANL
6
14
E3
Main Body ECU (Cowl Side
Junction Block LH)
4
13
CANH
15
22
CANL
E47
Center Airbag
Sensor
1
12
E72
No. 1 Junction Connector



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

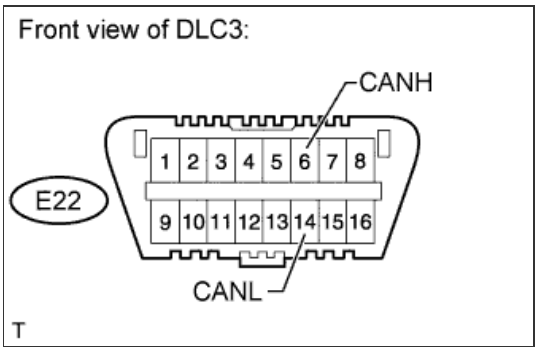
2.CHECK FOR SHORT IN CAN BUS WIRES (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

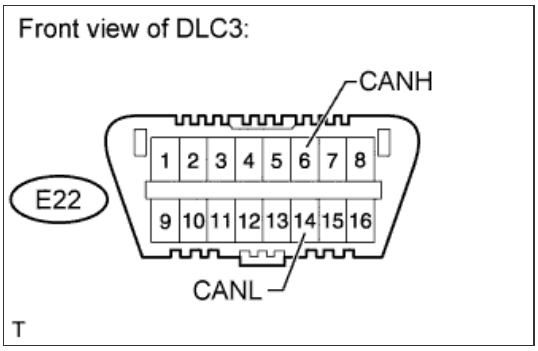
4.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 11

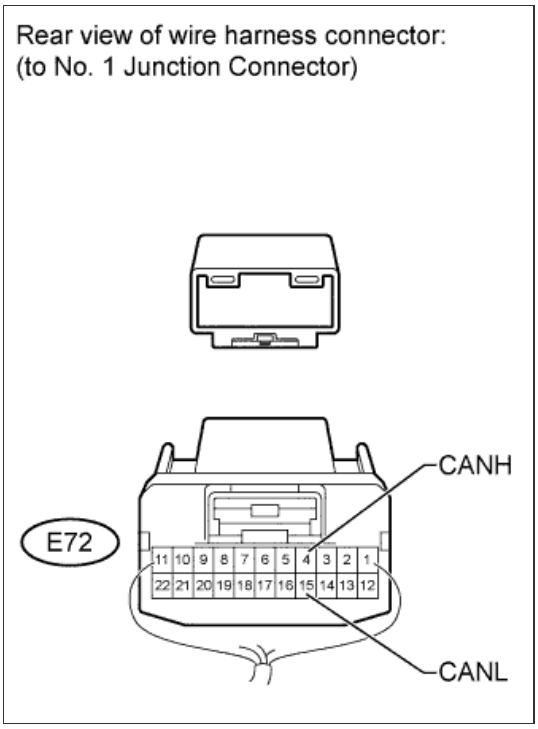
OK

5.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 8

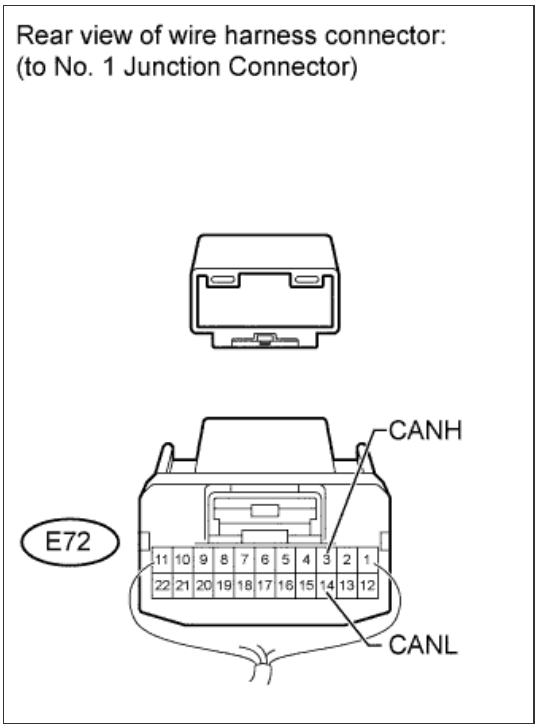
OK

6.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 9

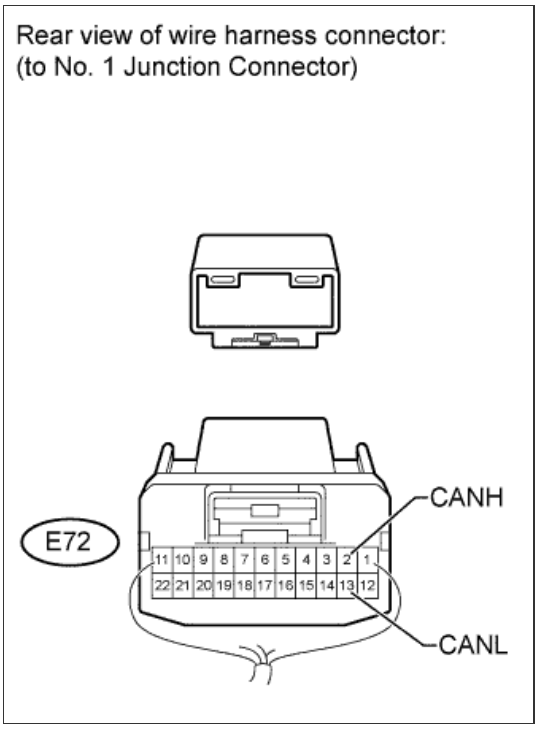
OK

7.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

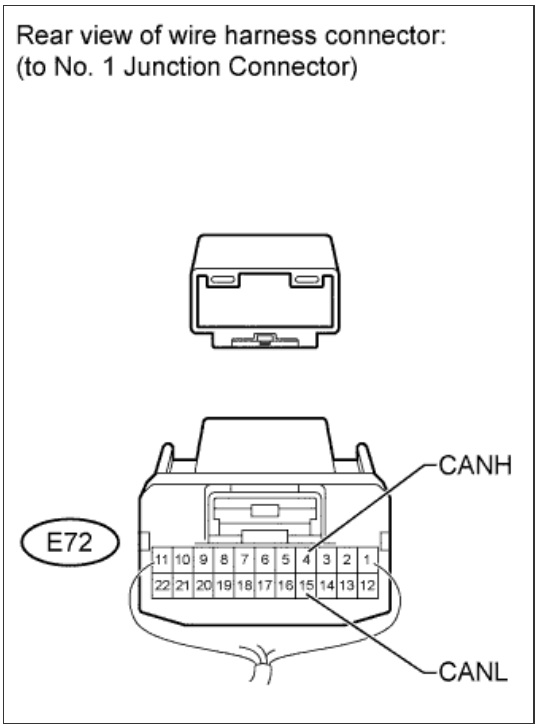
8.CHECK FOR SHORT IN CAN BUS WIRES (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

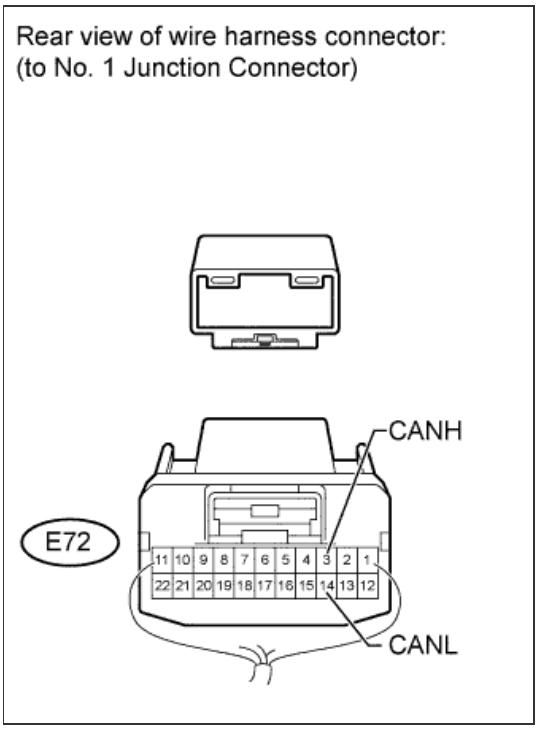
9.CHECK FOR SHORT IN CAN BUS WIRES (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

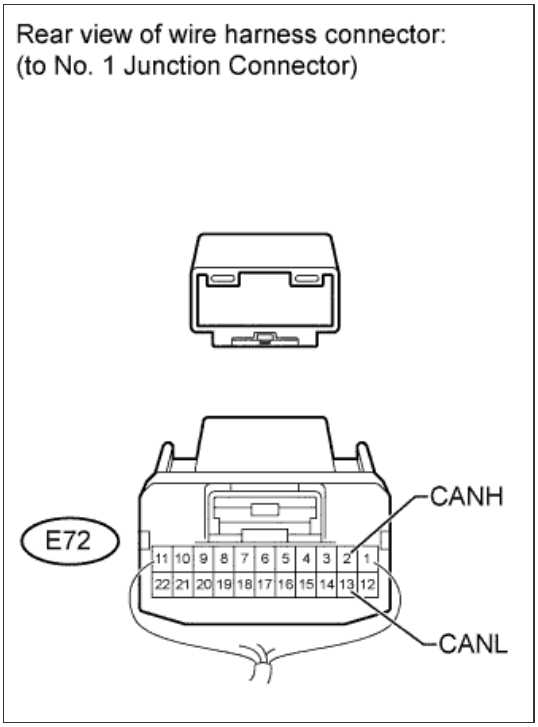
10.CHECK FOR SHORT IN CAN BUS WIRES (ECM)

a. Disconnect the A53 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



B → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

A

REPLACE ECM (Click here)

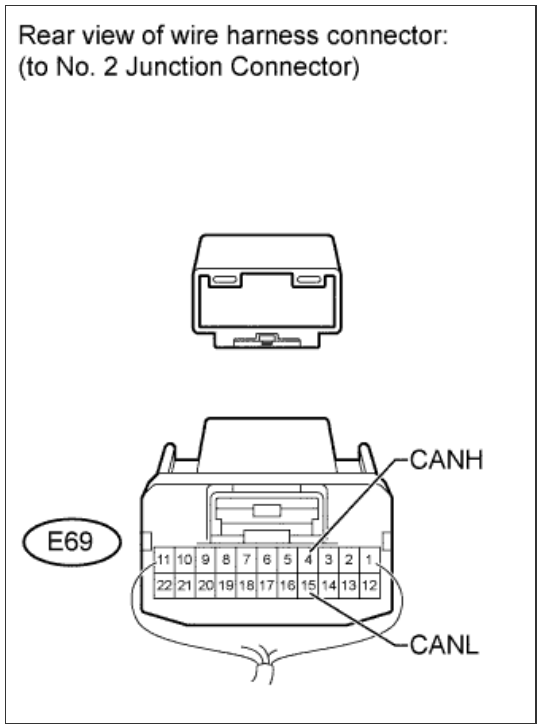
11.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-4 (CANH) - E69-15 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

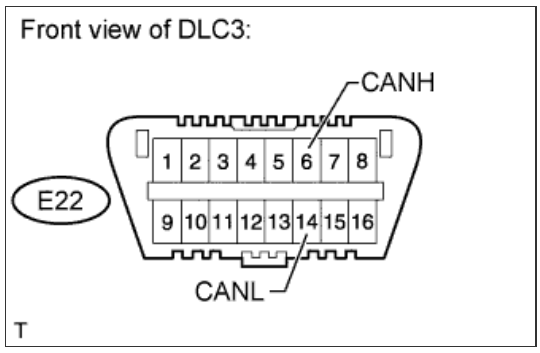
NEXT

13.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω



NG → Go to step 22

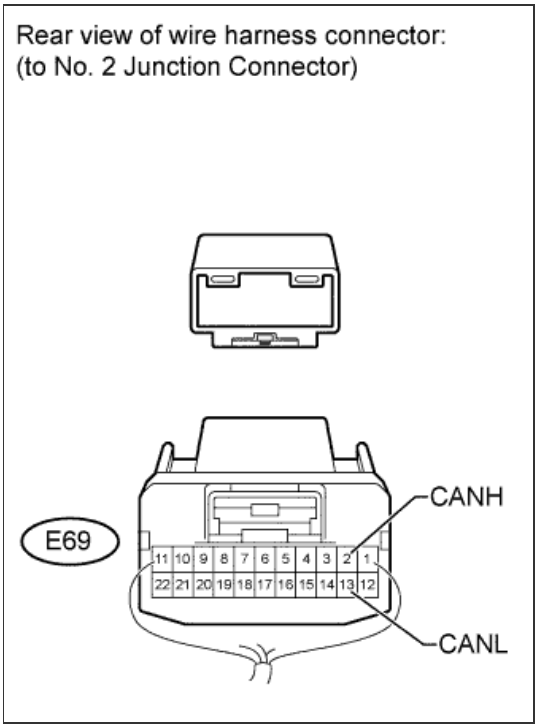
OK

14.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - MULTI-DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-2 (CANH) - E62-13 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 18

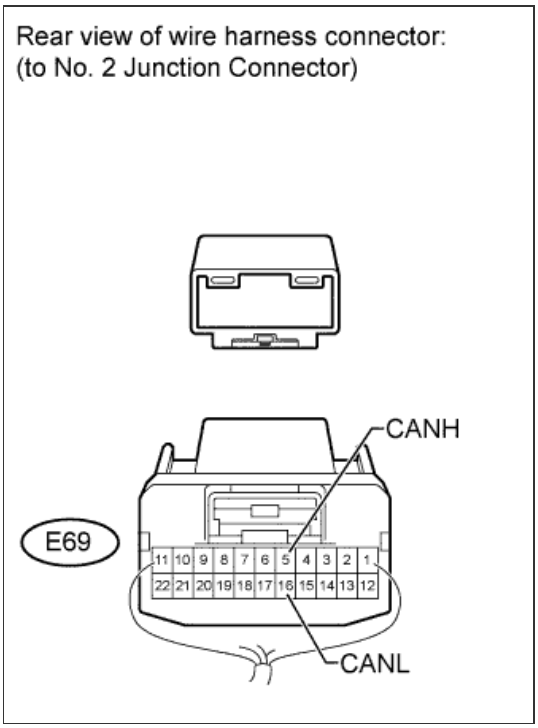
OK

15.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 19

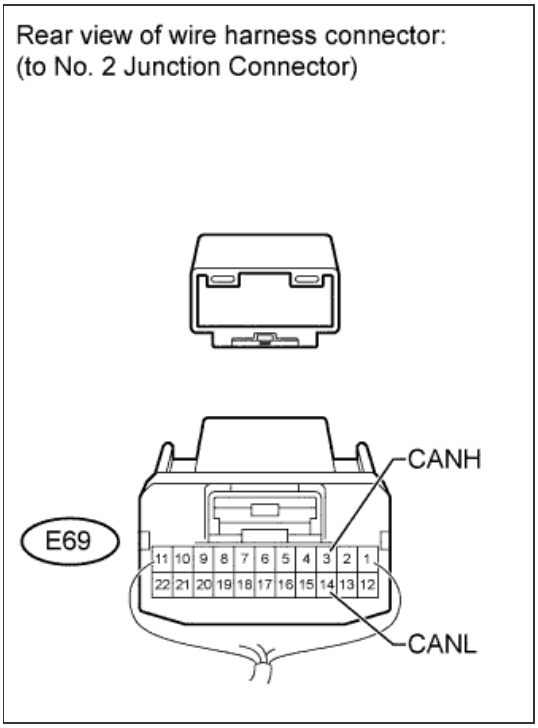
OK

16.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 20

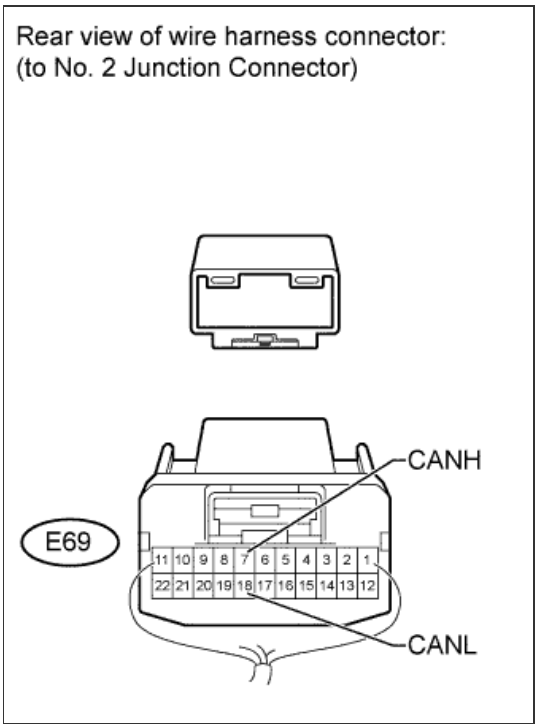
OK

17.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - AFS ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-7 (CANH) - E69-18 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 21

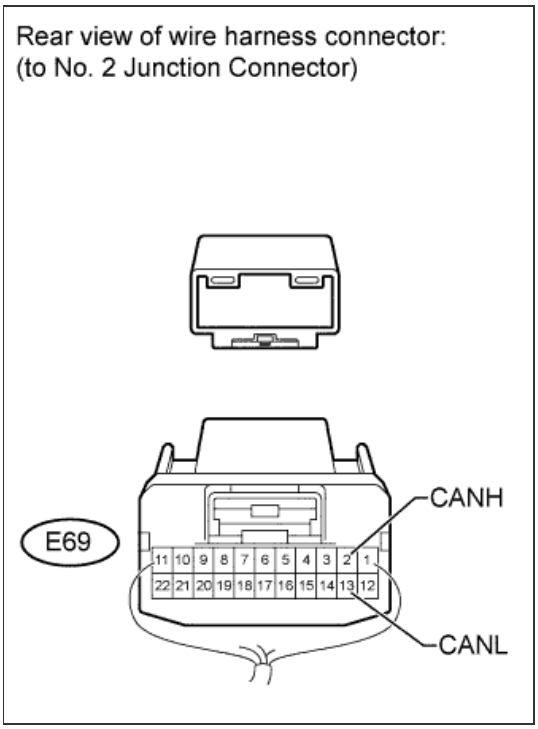
OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

18.CHECK FOR SHORT IN CAN BUS WIRES (MULTI-DISPLAY)

a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Result	Proceed to
E69-2 (CANH) - E69-13 (CANL)	Engine switch off	1 Ω or higher	OK (w/ Navigation System)	A
			OK (w/o Navigation System)	B
		Below 1 Ω	NG	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MULTI-DISPLAY (CANH, CANL)

A → REPLACE MULTI-DISPLAY (Click here)

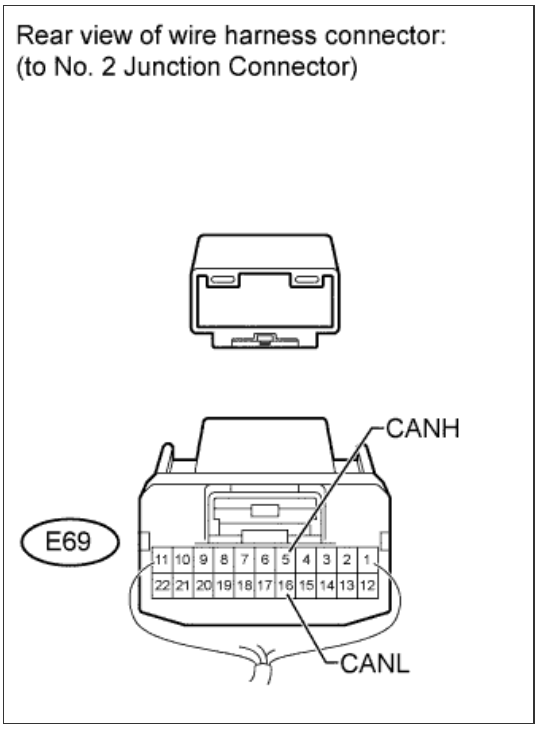
19.CHECK FOR SHORT IN CAN BUS WIRES (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Result
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK → REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

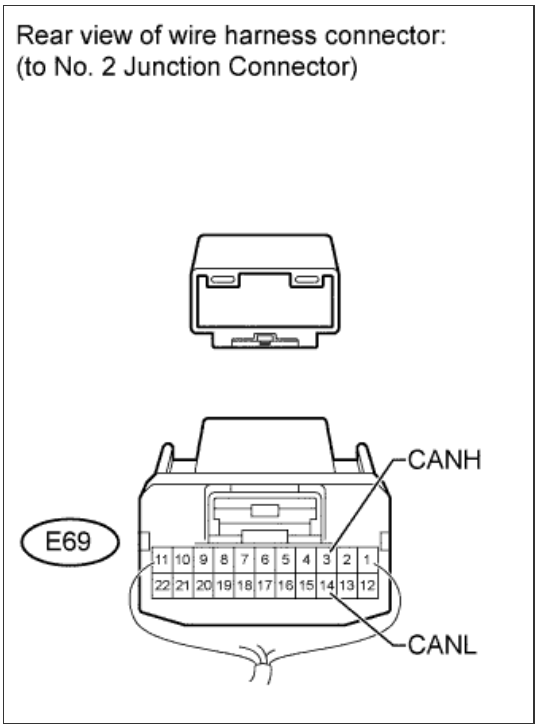
20.CHECK FOR SHORT IN CAN BUS WIRES (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK → REPLACE NETWORK GATEWAY ECU (Click here)

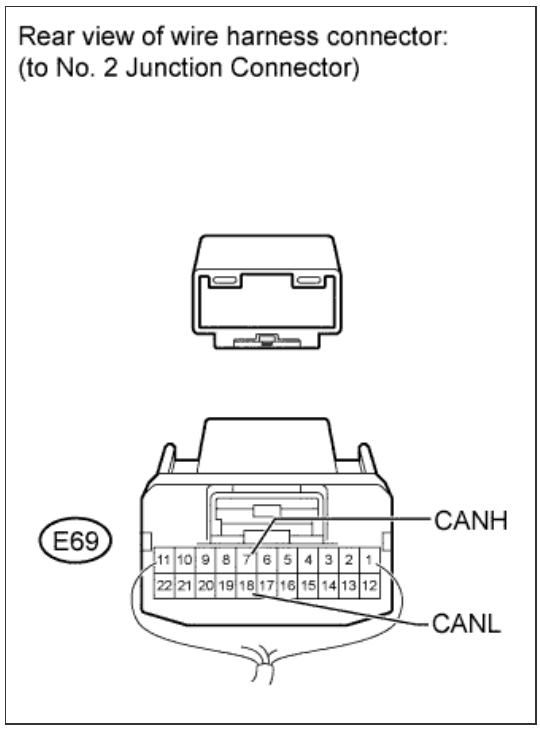
21.CHECK FOR SHORT IN CAN BUS WIRES (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-7 (CANH) - E69-18 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (Click here)

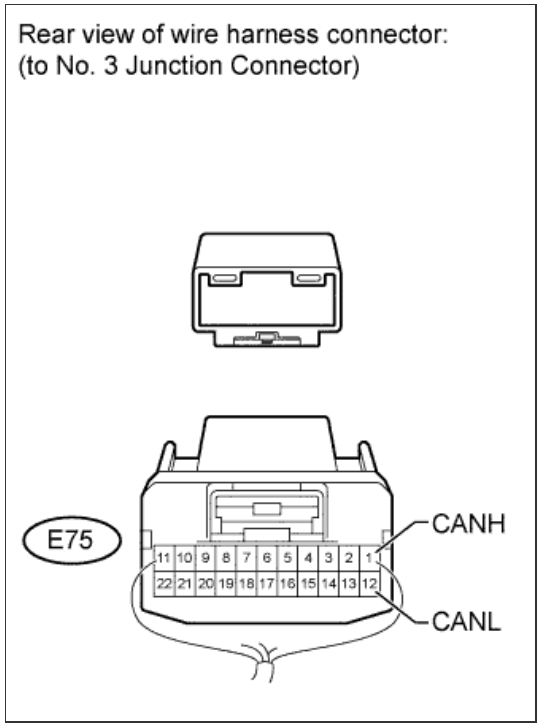
22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

Go to step 21

23.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

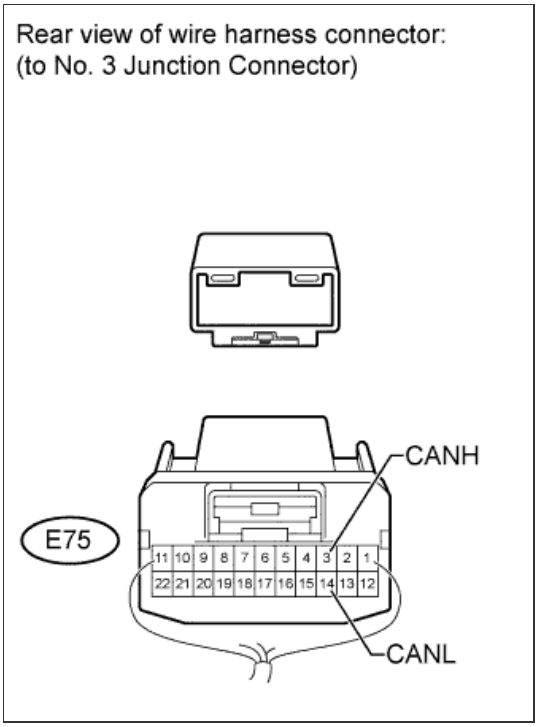
Go to step 22

24.CHECK FOR SHORT IN CAN BUS WIRES (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

25.CHECK FOR SHORT IN CAN BUS WIRES (COMBINATION METER)

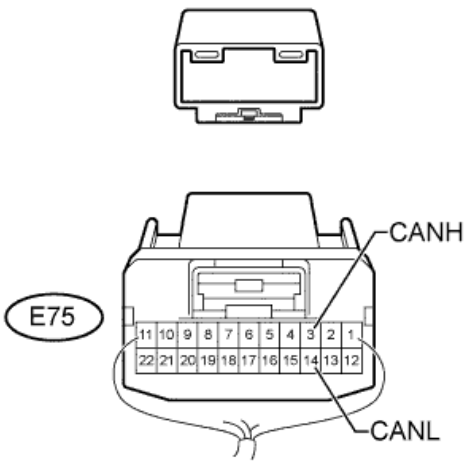
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	1 Ω or higher	OK
		Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

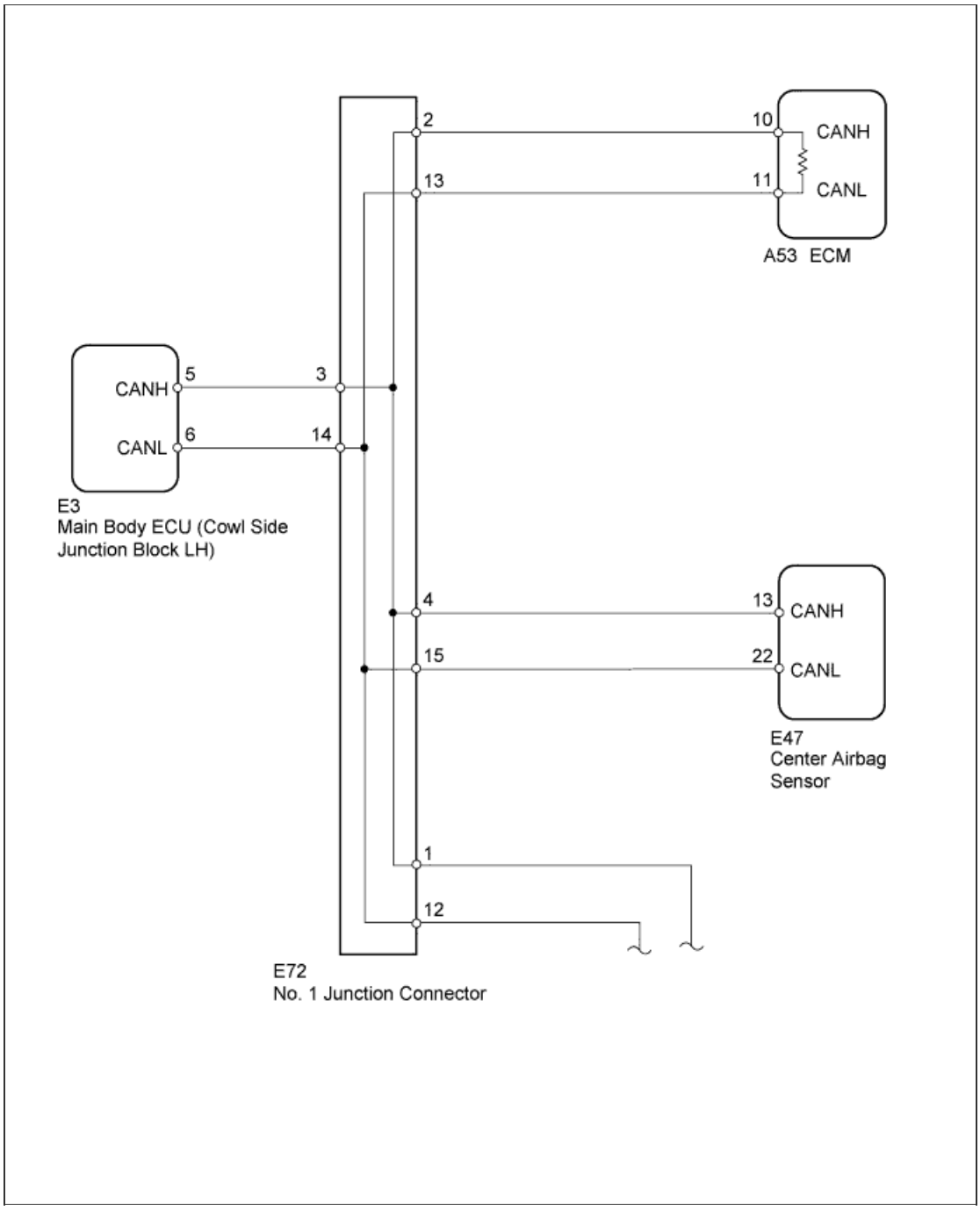
for Preparation Click here

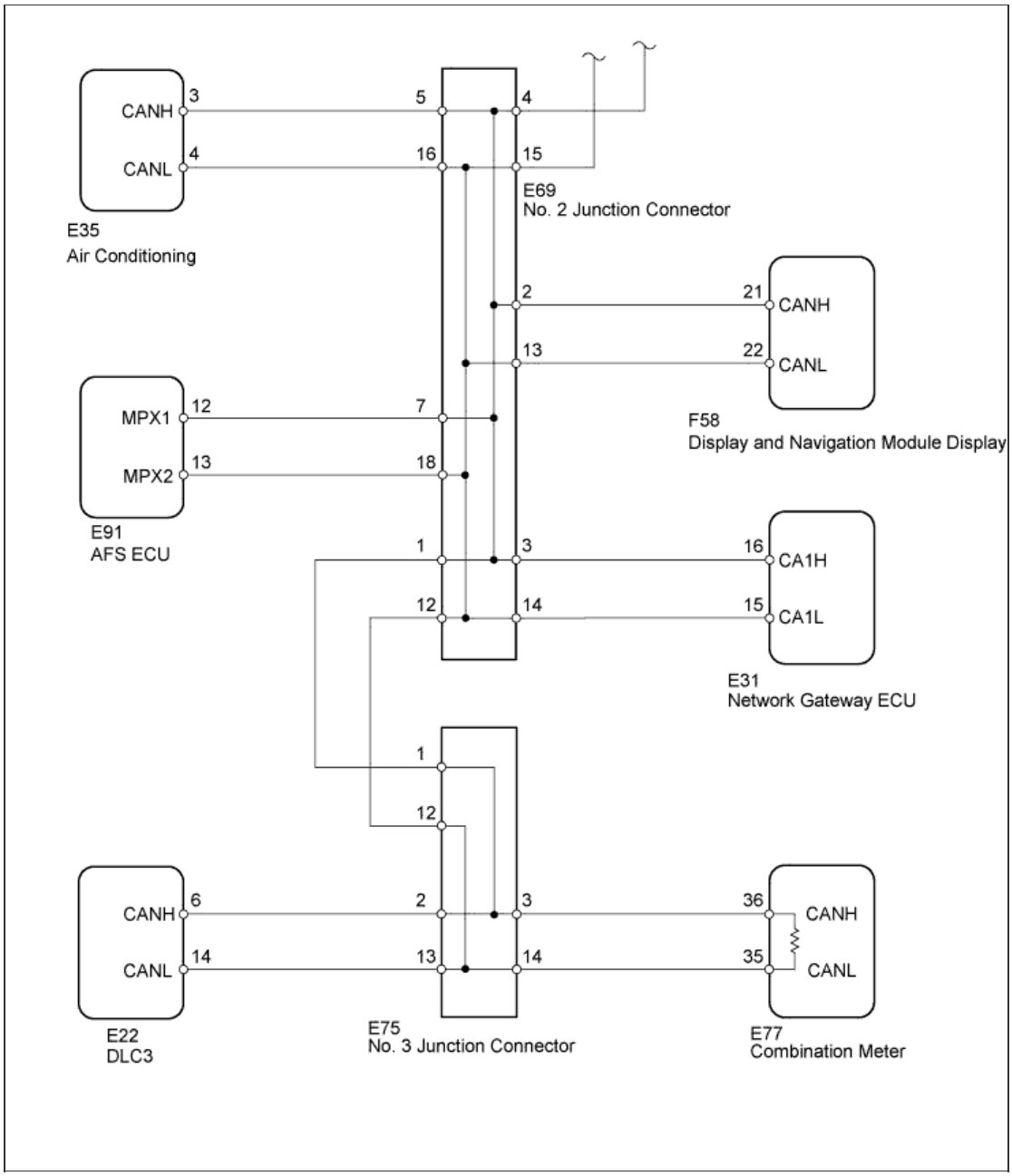
DESCRIPTION

There may be a short circuit between the CAN bus lines when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.	• Short between CAN bus lines • ECM • Center airbag sensor assembly • Display and navigation module display • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • AFS ECU (headlight swivel ECU assembly) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM


2
10
CANH
13
11
CANL
A53 ECM
CANH
5
3
CANL
6
14
E3
Main Body ECU (Cowl Side
Junction Block LH)
4
13
CANH
15
22
CANL
E47
Center Airbag
Sensor
1
12
E72
No. 1 Junction Connector



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

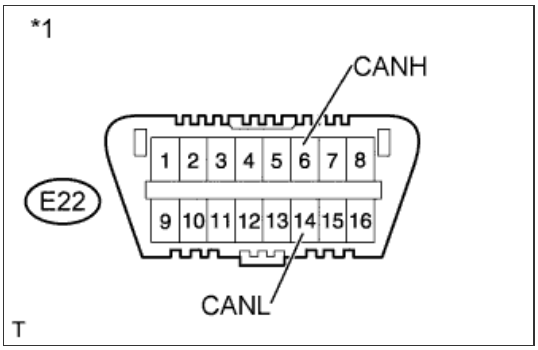
2.CHECK FOR SHORT IN CAN BUS WIRES (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	200 Ω or higher



Text in Illustration

*1	DLC3

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

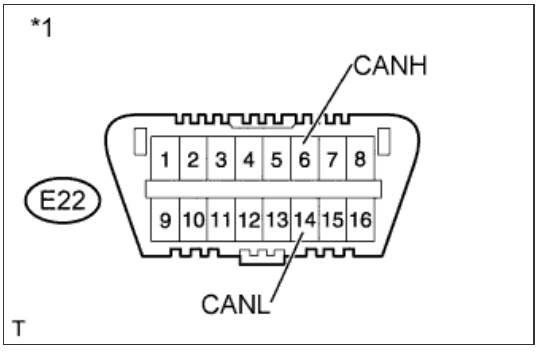
4.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω



Text in Illustration

*1	DLC3

NG → Go to step 11

OK

5.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

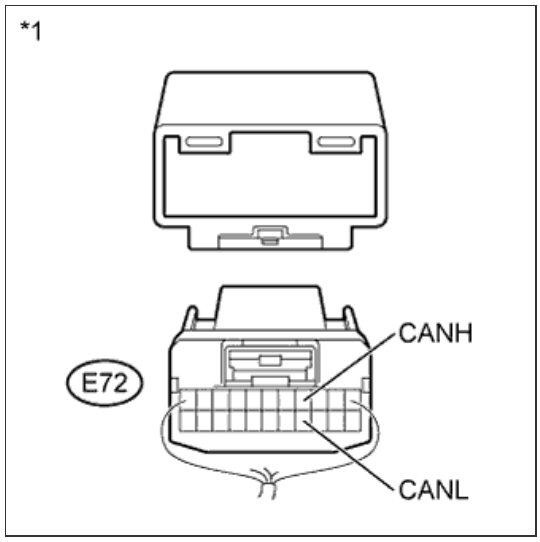
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)

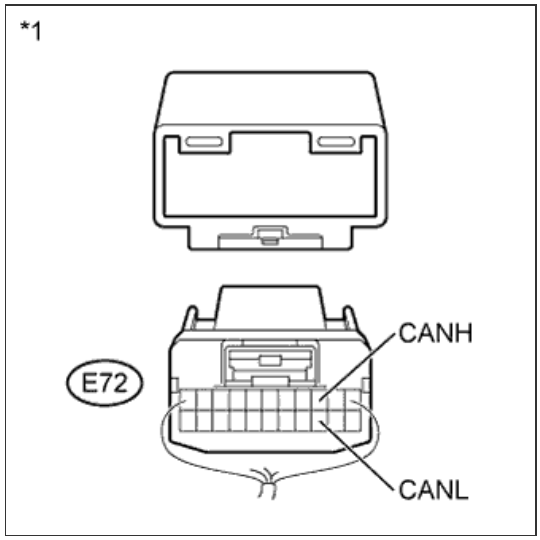


NG → Go to step 8

OK

6.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)

NG → Go to step 9

OK

7.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - ECM)

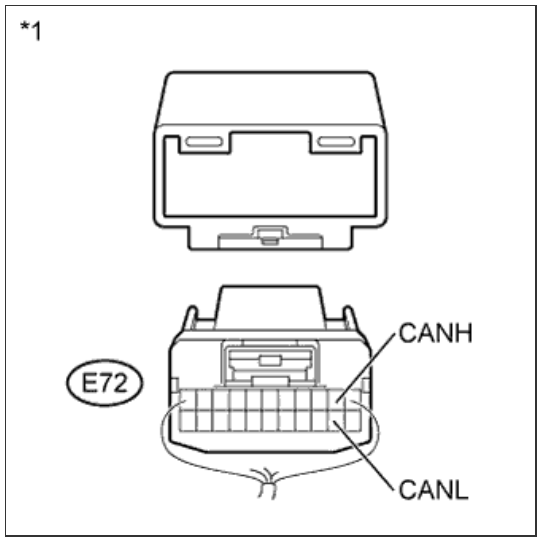
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT IN CAN BUS WIRES (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

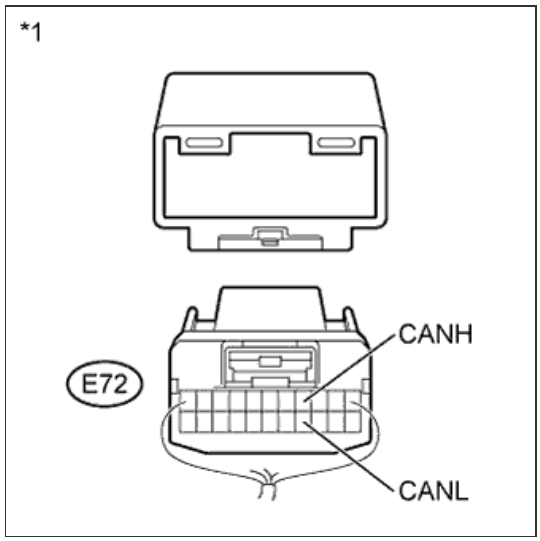
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E72-15 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT IN CAN BUS WIRES (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

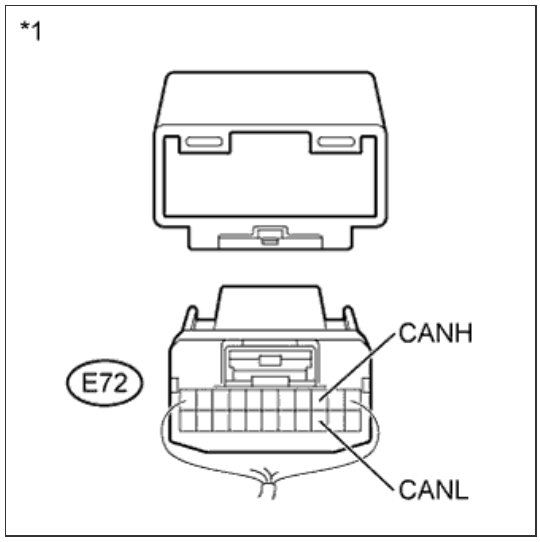
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E72-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR SHORT IN CAN BUS WIRES (ECM)

a. Disconnect the A53 ECM connector.

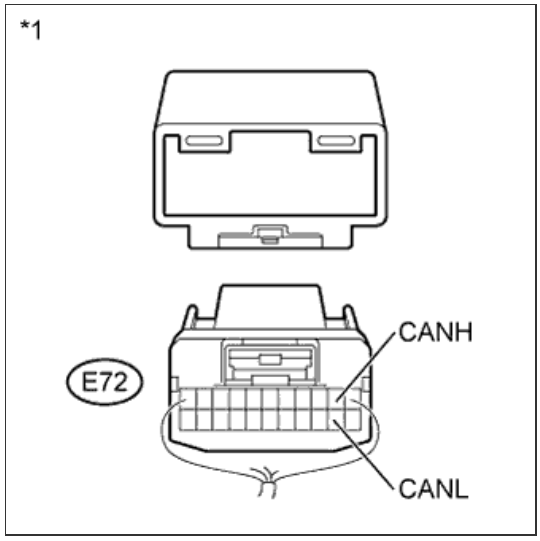
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E72-13 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)



B → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

A

REPLACE ECM (Click here)

11.CHECK FOR SHORT IN CAN BUS WIRES (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

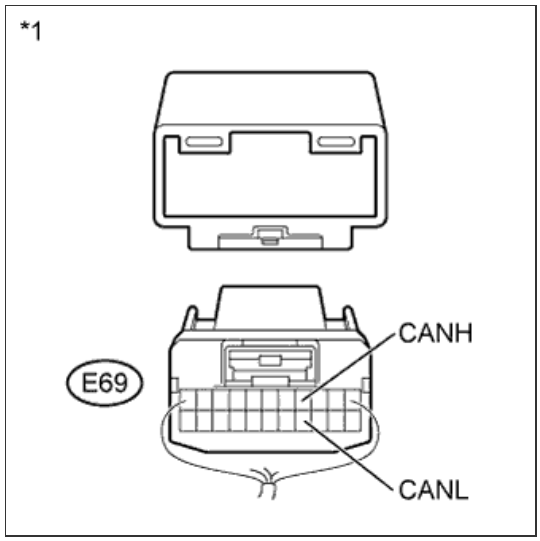
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-4 (CANH) -	Engine switch off	200 Ω or higher

E69-15 (CANL)		

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

13.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR SIDE)

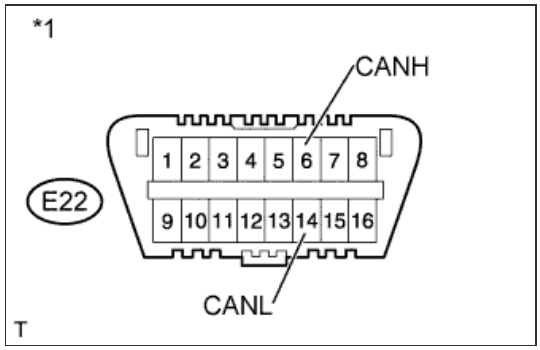
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-14 (CANL)	Engine switch off	108 to 132 Ω

Text in Illustration

*1	DLC3



NG → Go to step 22

OK

14.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - DISPLAY AND NAVIGATION MODULE DISPLAY)

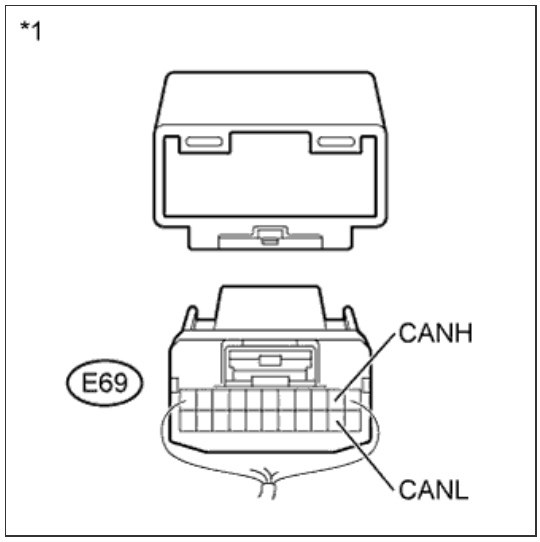
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E62-13 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → Go to step 18

OK

15.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

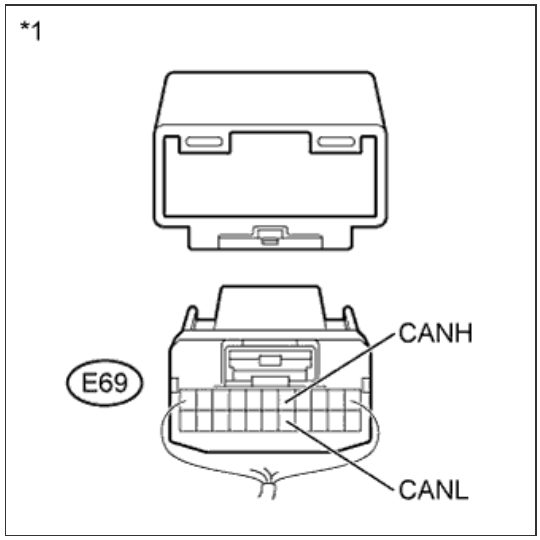
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → Go to step 19

OK

16.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

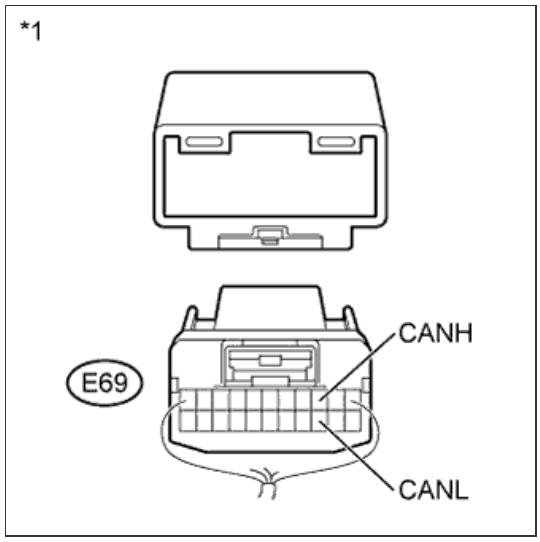
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)

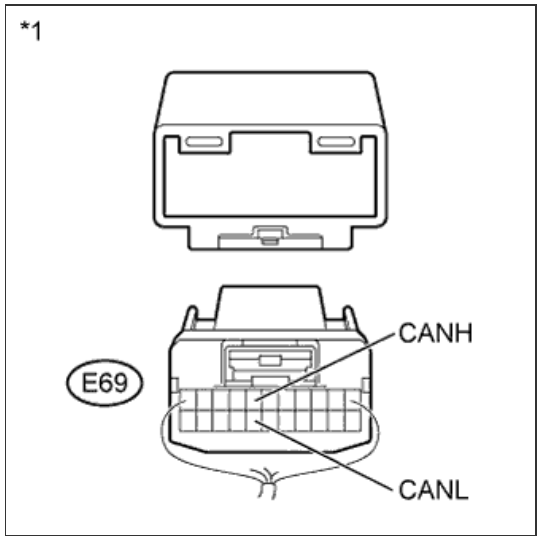


NG → Go to step 20

OK

17.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - AFS ECU)

a. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-7 (CANH) - E69-18 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)

NG → Go to step 21

OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

18.CHECK FOR SHORT IN CAN BUS WIRES (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation module display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E62-13 (CANL)	Engine switch off	200 Ω or higher

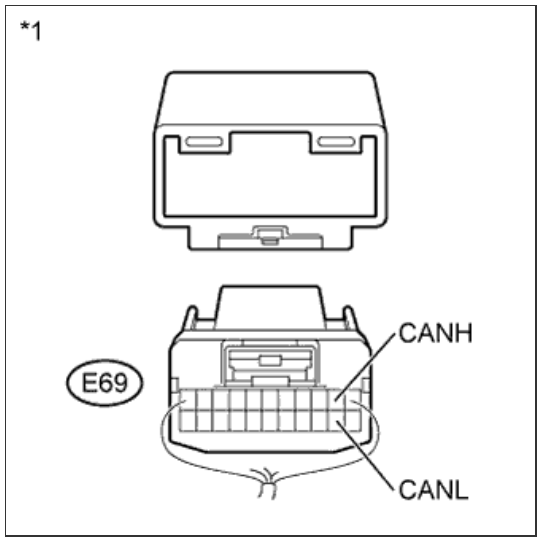
Text in Illustration

*1	Rear view of wire harness connector

	(to No. 2 Junction Connector)

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISPLAY AND NAVIGATION MODULE DISPLAY (CANH, CANL)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

19.CHECK FOR SHORT IN CAN BUS WIRES (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

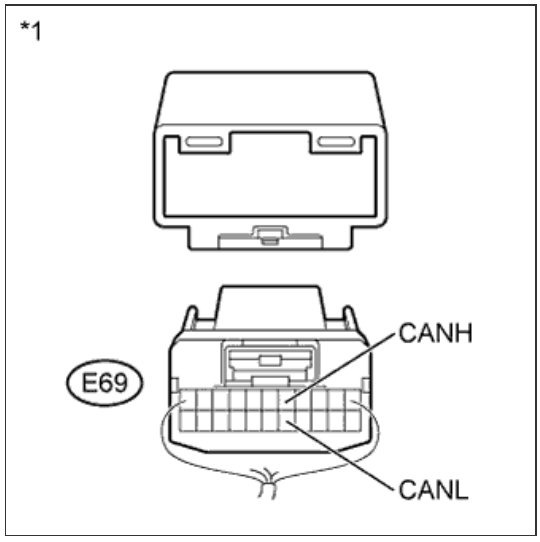
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E69-16 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

20.CHECK FOR SHORT IN CAN BUS WIRES (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

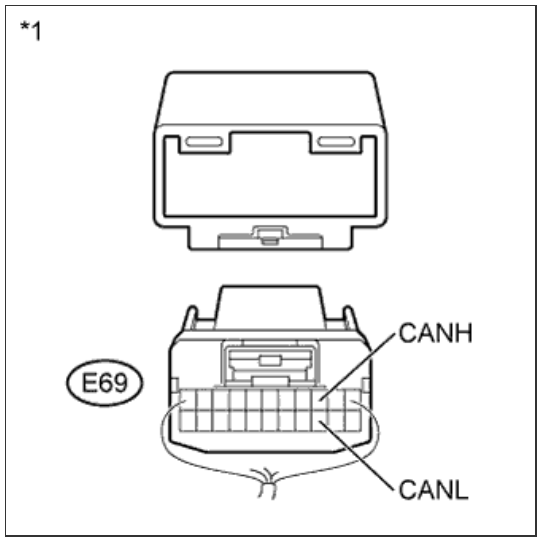
Standard Resistance:

Tester Connection	Switch Condition	Specified

		Condition
E69-3 (CANH) - E69-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

21.CHECK FOR SHORT IN CAN BUS WIRES (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

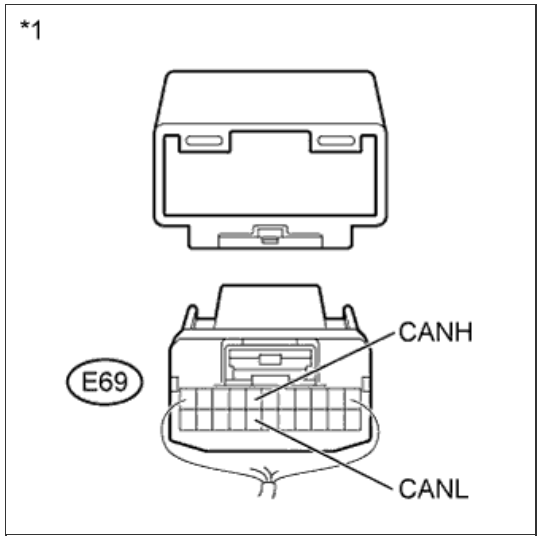
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-7 (CANH) - E69-18 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (Click here)

22.CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

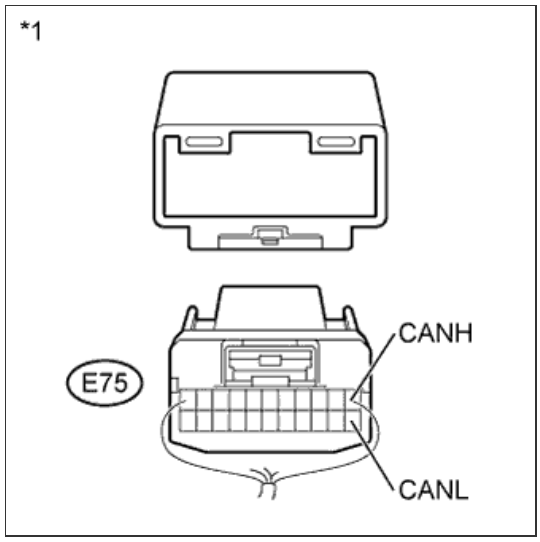
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E75-12 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

Go to step 21

23.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

Go to step 22

24.CHECK FOR SHORT IN CAN BUS WIRES (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

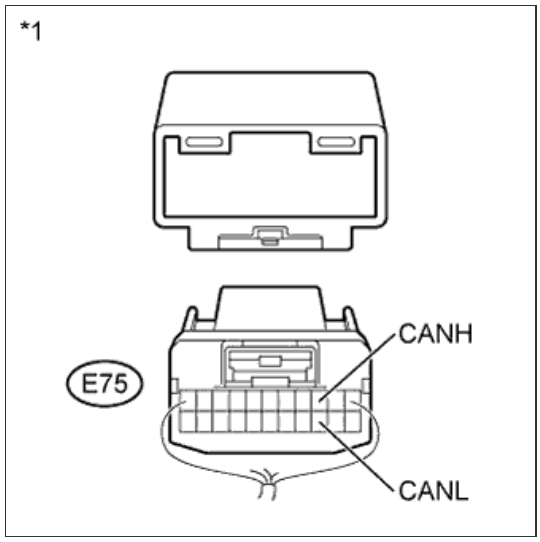
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

25.CHECK FOR SHORT IN CAN BUS WIRES (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

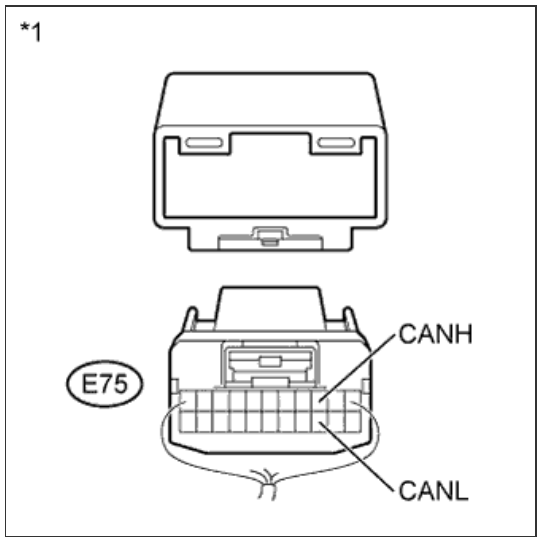
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E75-14 (CANL)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK → REPLACE COMBINATION METER ASSEMBLY (Click here)

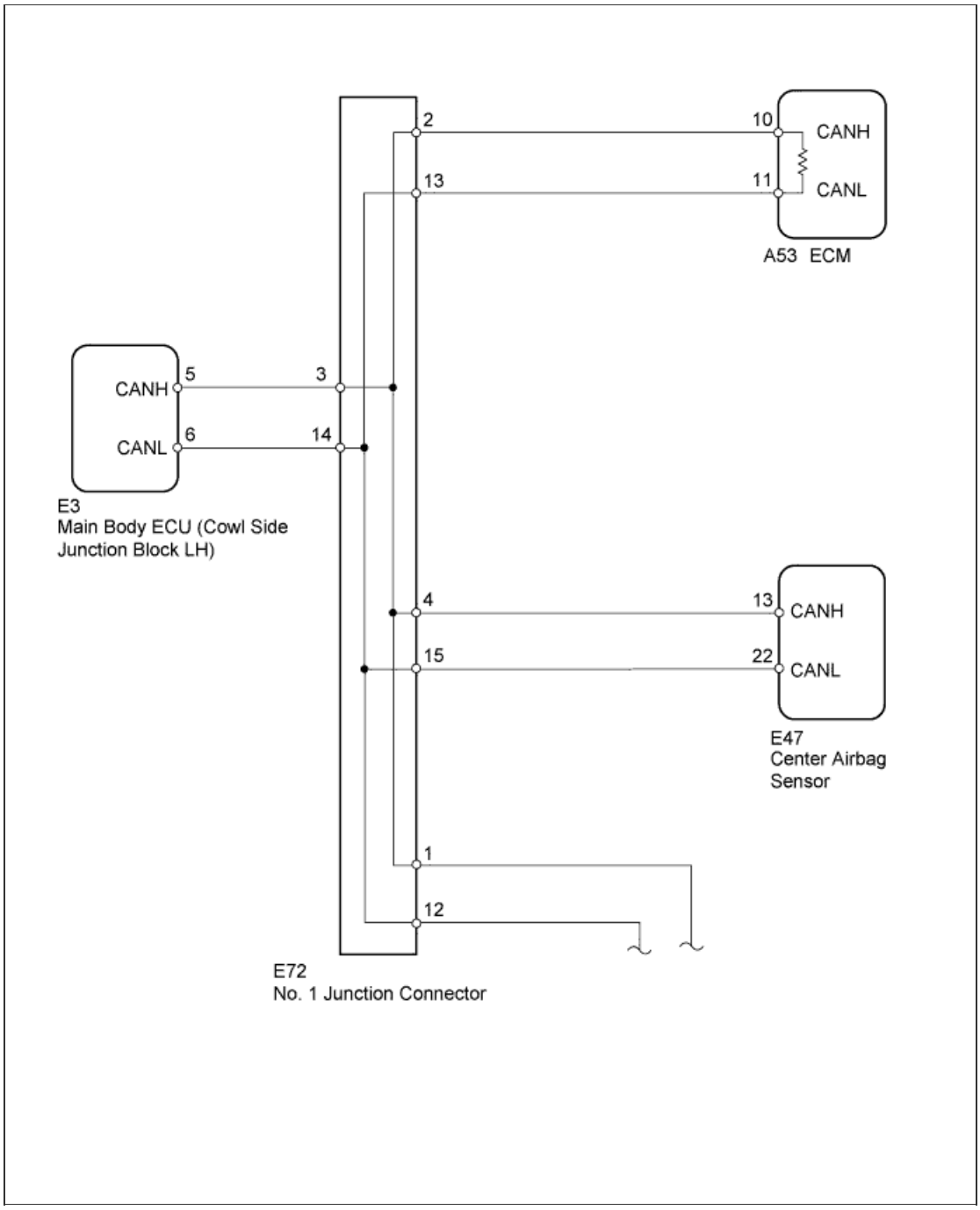
for Preparation Click here

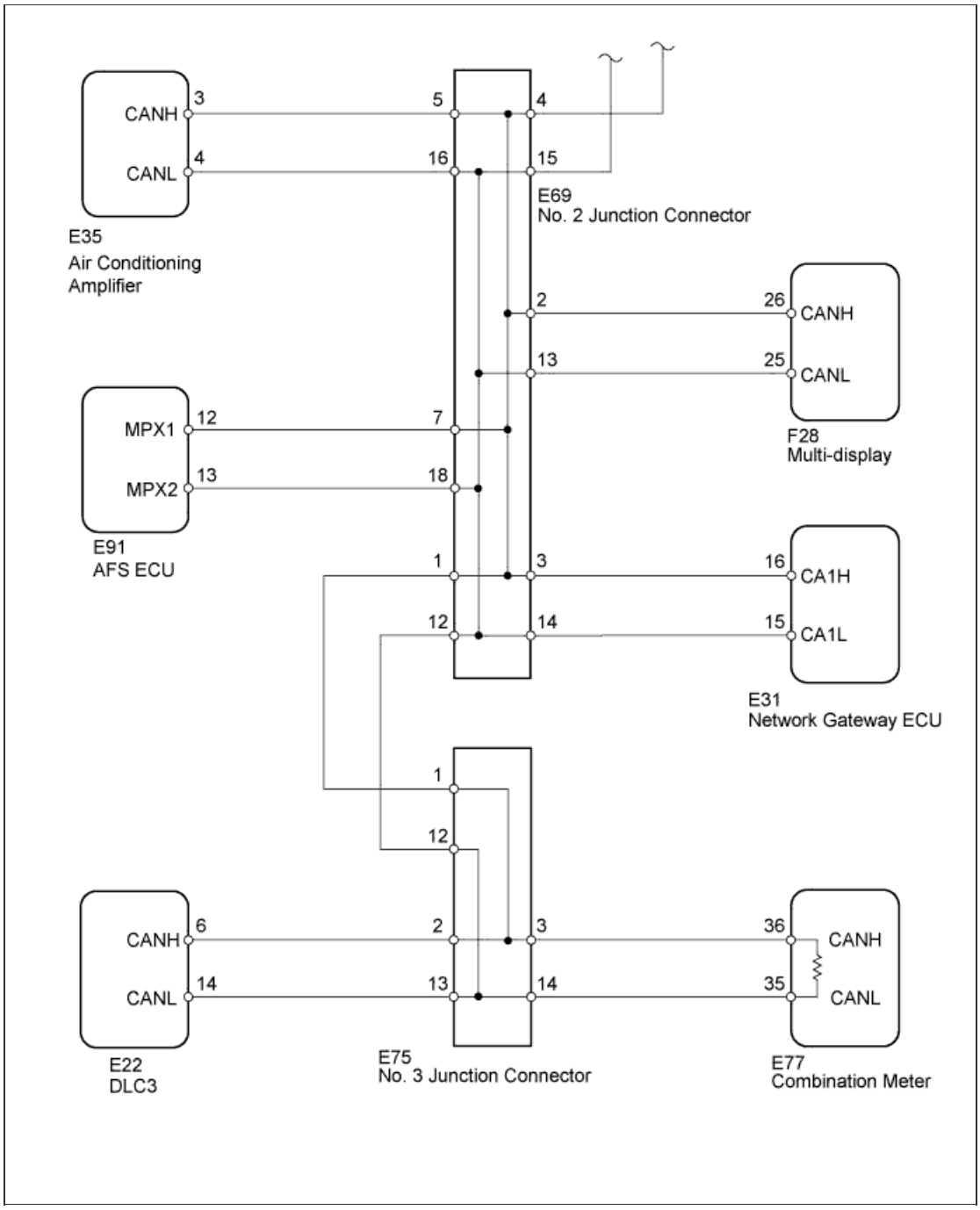
DESCRIPTION

There may be a short circuit between the CAN bus line and +B when there is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.	• Short to +B • ECM • Center airbag sensor • Multi-display • Air conditioning amplifier • Network gateway ECU • Main body ECU • AFS ECU • Combination meter • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM


2
10
CANH
13
11
CANL
A53 ECM
CANH
5
3
CANL
6
14
E3
Main Body ECU (Cowl Side
Junction Block LH)
4
13
CANH
15
22
CANL
E47
Center Airbag
Sensor
1
12
E72
No. 1 Junction Connector



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

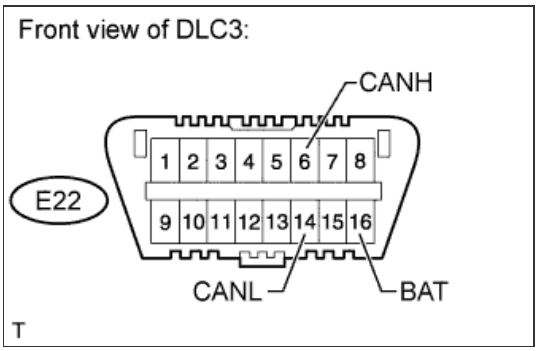
2.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

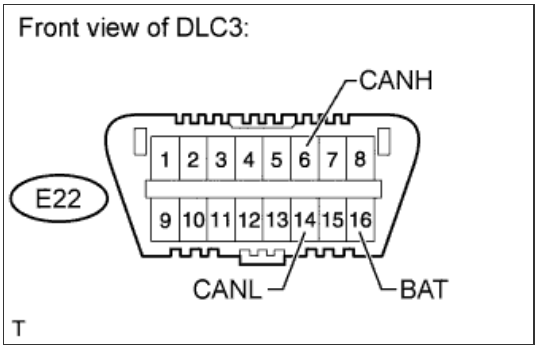
4.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 11

OK

5.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

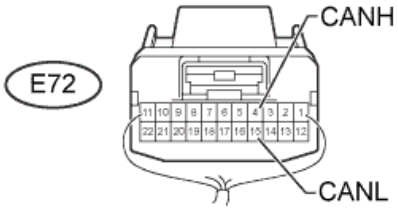
a. Measure the resistance according to the value(s) in the table below.

Result

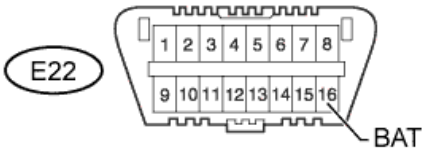
Tester Connection	Switch Condition	Measured Resistance	Proceed to

E72-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → Go to step 8

OK

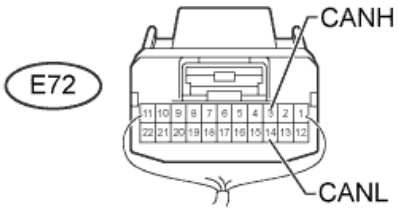
6.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

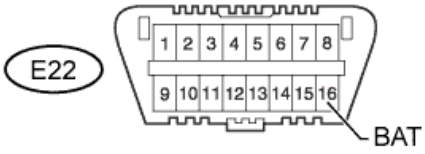
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → Go to step 9

OK

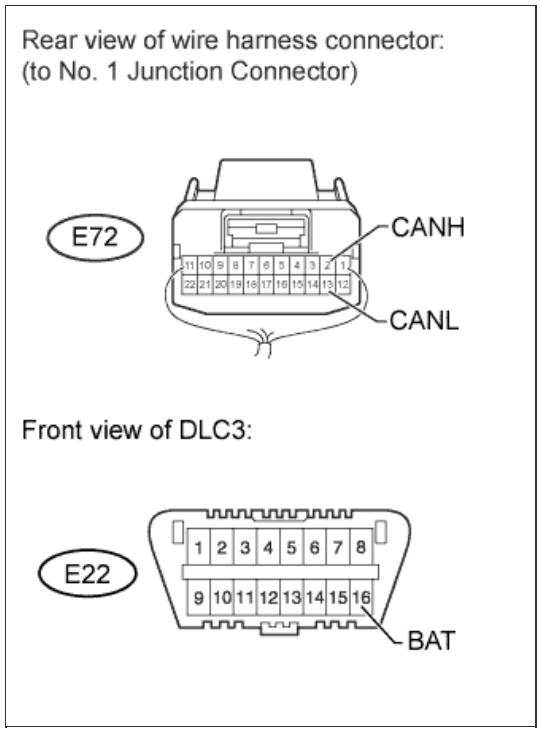
7.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 10

OK →

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

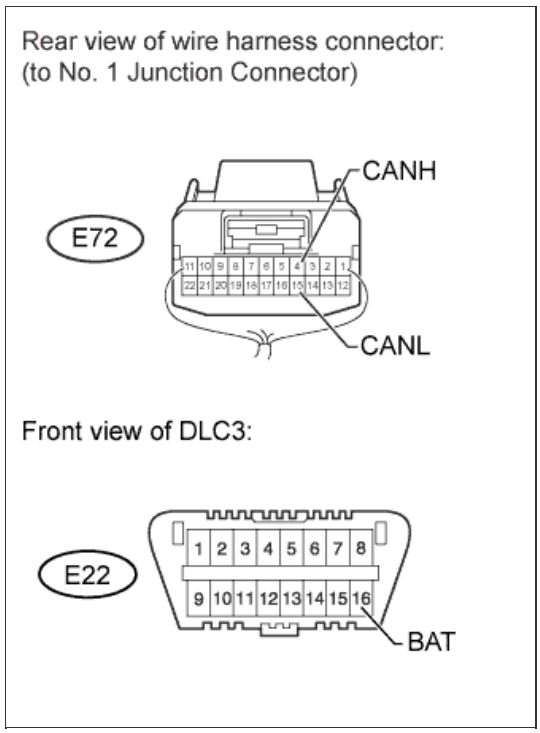
8.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK →

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (MAIN BODY ECU)

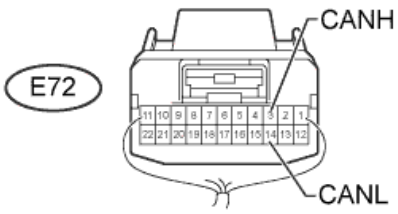
a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

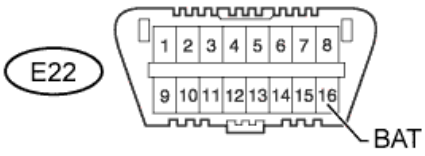
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (ECM)

a. Disconnect the A53 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

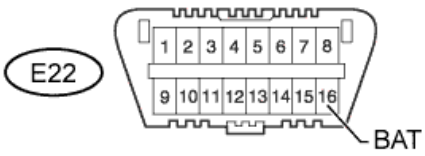
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

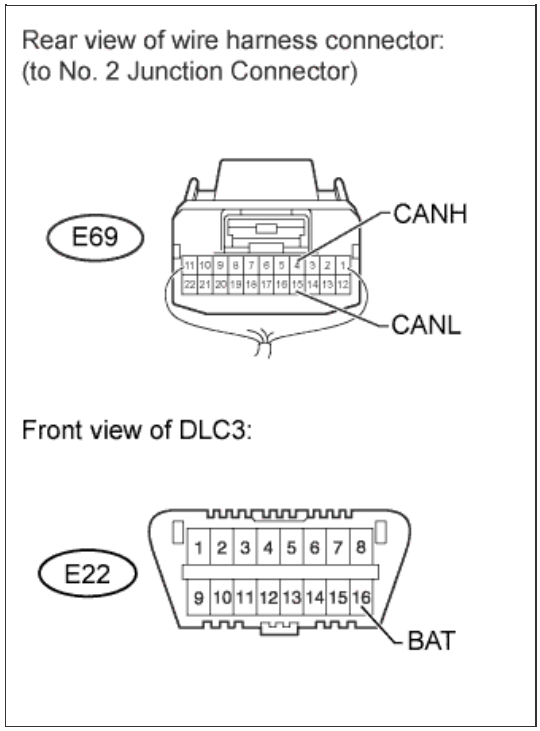
11.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

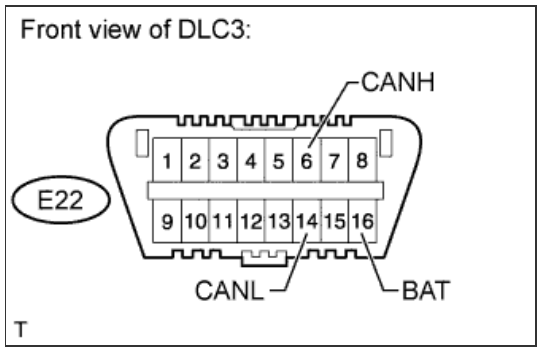
NEXT

13.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 22

OK

14.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - MULTI-DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

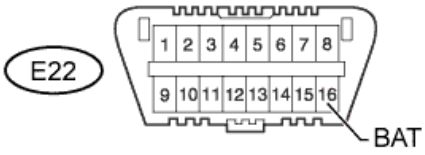
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → Go to step 18

OK

15.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

a. Measure the resistance according to the value(s) in the table below.

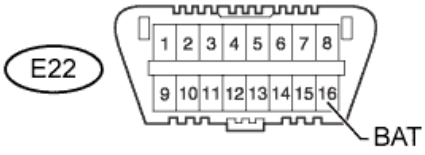
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → Go to step 19

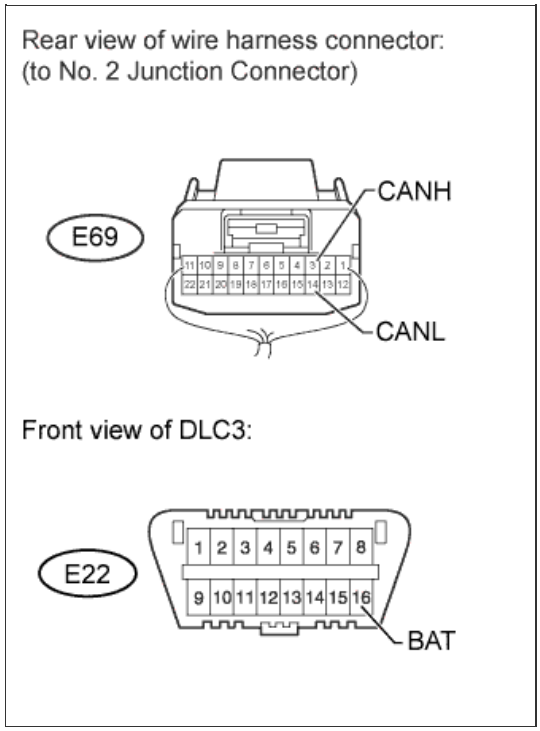
OK

16.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 20

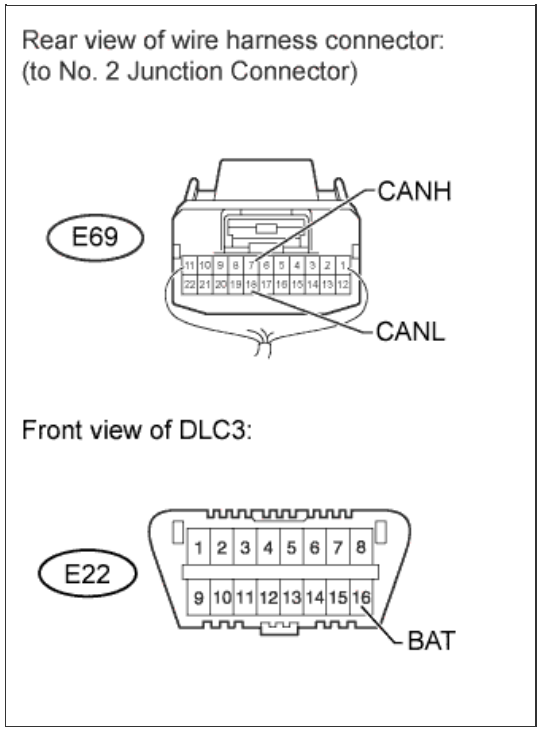
OK →

17.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AFS ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-7 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-18 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-7 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-18 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → Go to step 21

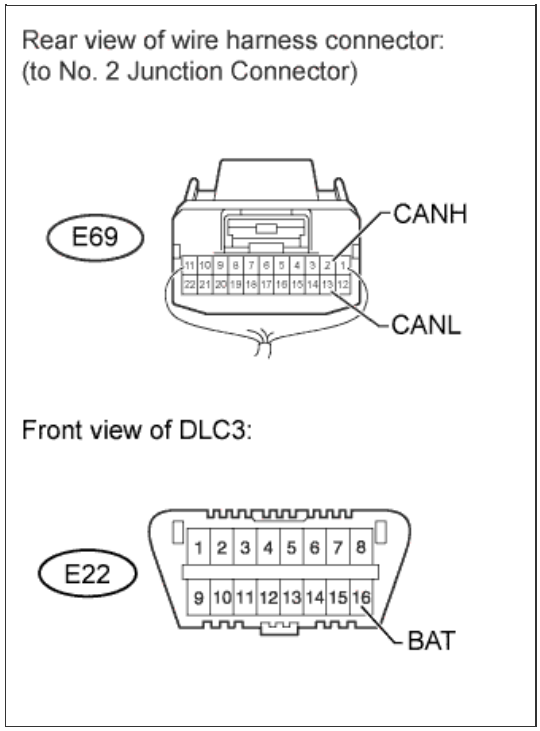
OK →

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

18.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (MULTI-DISPLAY)

a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.



Result

Tester Connection	Switch Condition	Measured Resistance	Result	Proceed to
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK (w/ Navigation System)	A
			OK (w/o Navigation System)	B
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK (w/ Navigation System) OK	A
			OK (w/o Navigation System)	B
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG	C
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MULTI-DISPLAY (CANH, CANL)

A

REPLACE MULTI-DISPLAY (Click here)

19.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

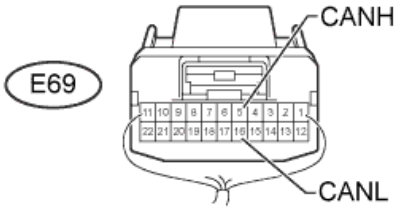
b. Measure the resistance according to the value(s) in the table below.

Result

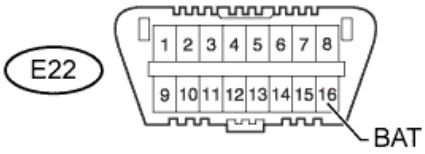
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-	Engine		

16 (BAT)	switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

20.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NETWORK GATEWAY ECU)

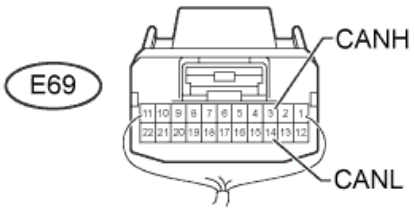
a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

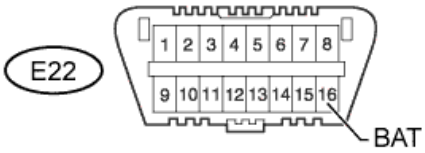
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

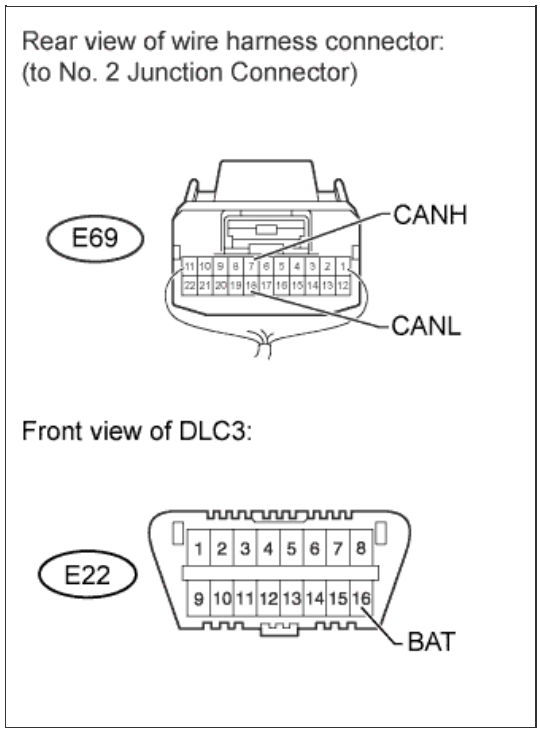
21.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-7 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-18 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E69-7 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E69-18 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (Click here)

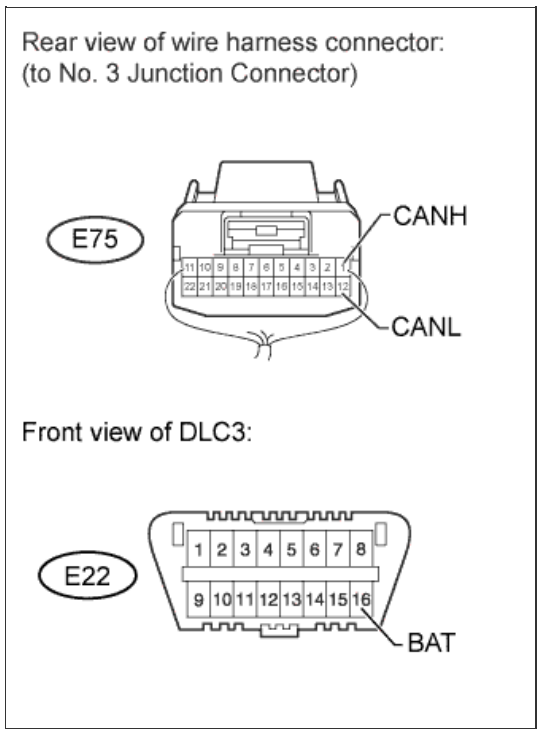
22.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-12 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-12 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

23.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

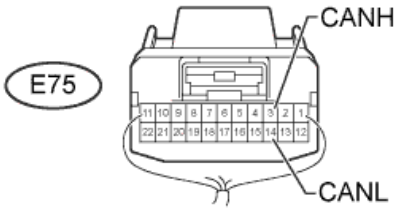
24.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

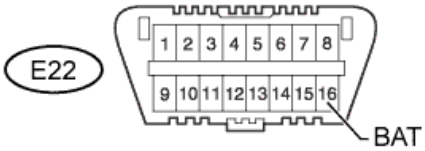
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

25.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (COMBINATION METER)

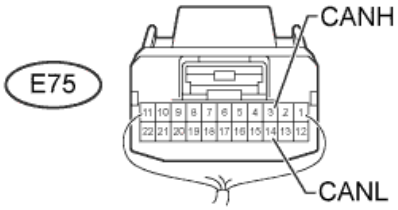
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

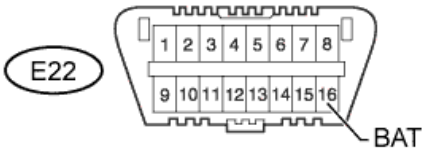
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK

REPLACE COMBINATION METER ASSEMBLY (Click here)

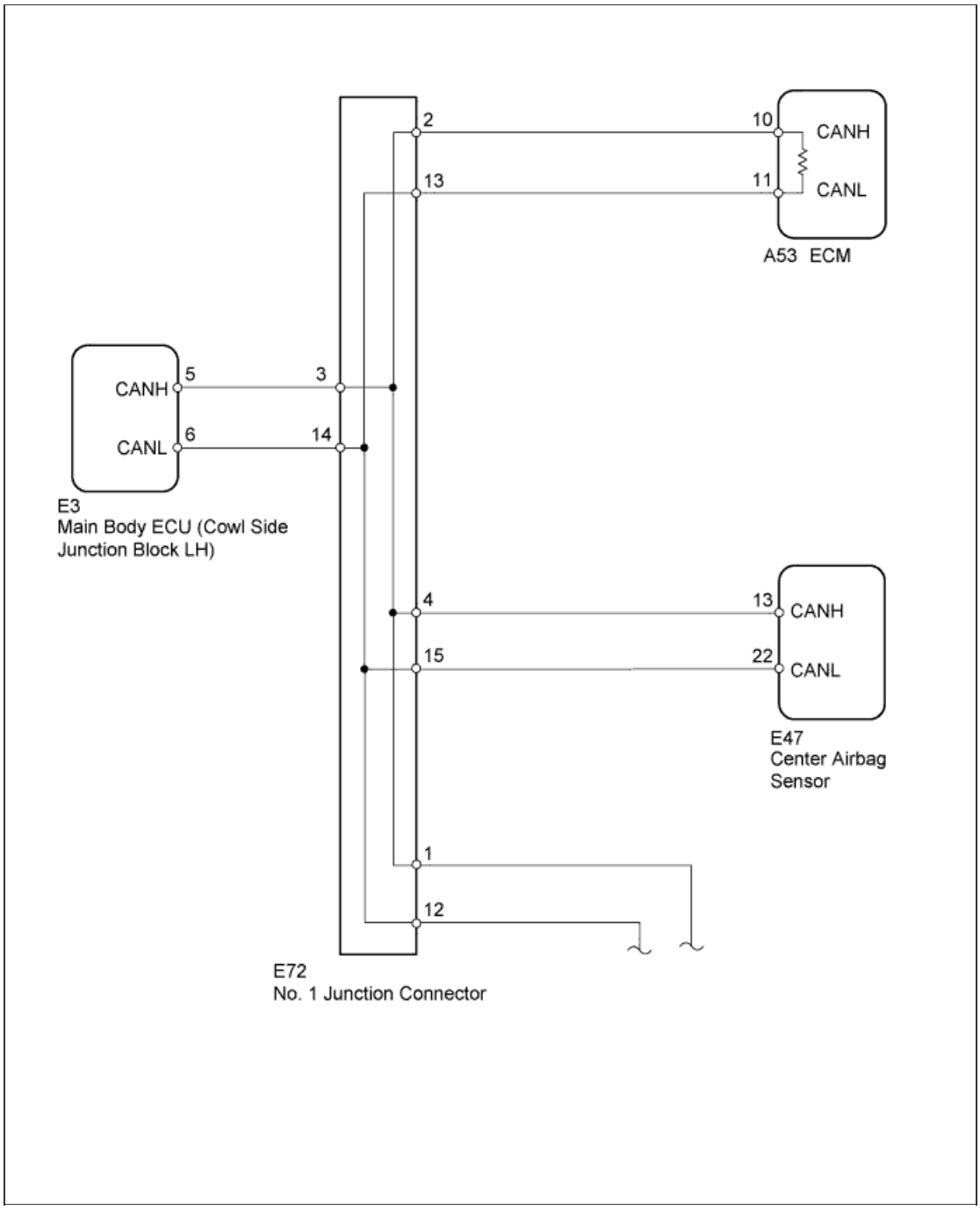
for Preparation Click here

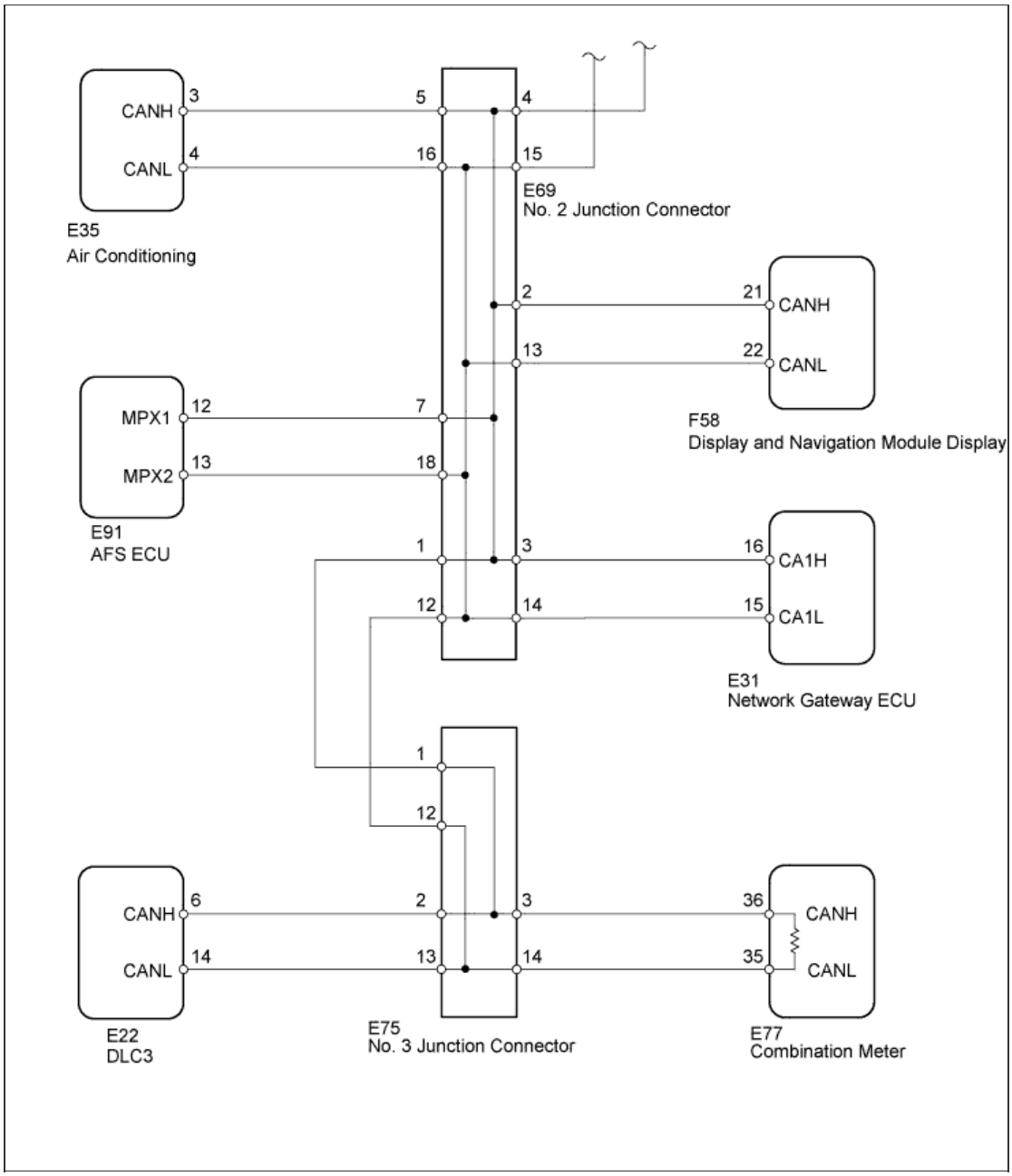
DESCRIPTION

There may be a short circuit between the CAN bus line and +B when there is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.	• Short to +B • ECM • Center airbag sensor assembly • Display and navigation module display • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • AFS ECU (headlight swivel ECU assembly) • Combination meter assembly • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM


2
10
CANH
13
11
CANL
A53 ECM
CANH
5
3
CANL
6
14
E3
Main Body ECU (Cowl Side
Junction Block LH)
4
13
CANH
15
22
CANL
E47
Center Airbag
Sensor
1
12
E72
No. 1 Junction Connector



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

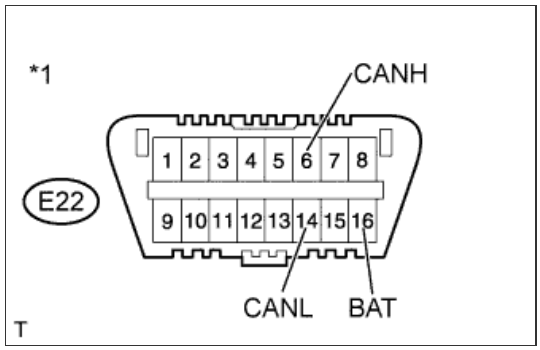
When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	DLC3

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

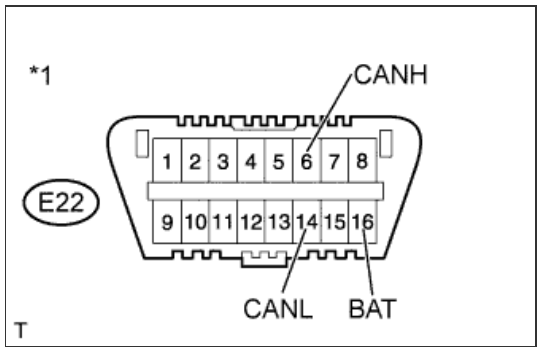
a. Reconnect the E75 No. 3 junction connector connector.

NEXT

4.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	DLC3

NG → Go to step 11

OK

5.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

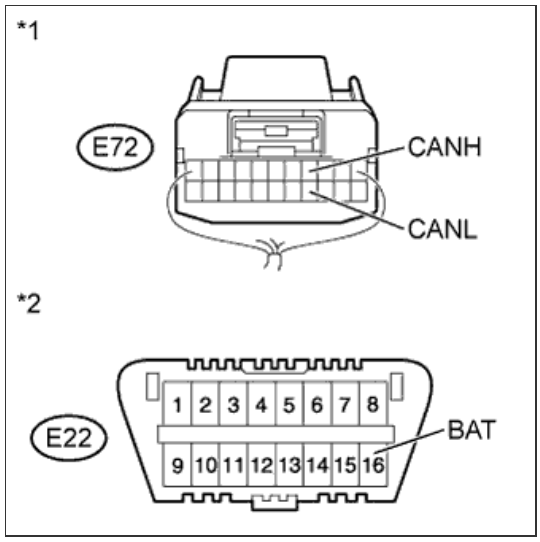
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-15 (CANL) -	Engine switch off	6 kΩ or higher

E22-16 (BAT)

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 8

OK

6.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - MAIN BODY ECU)

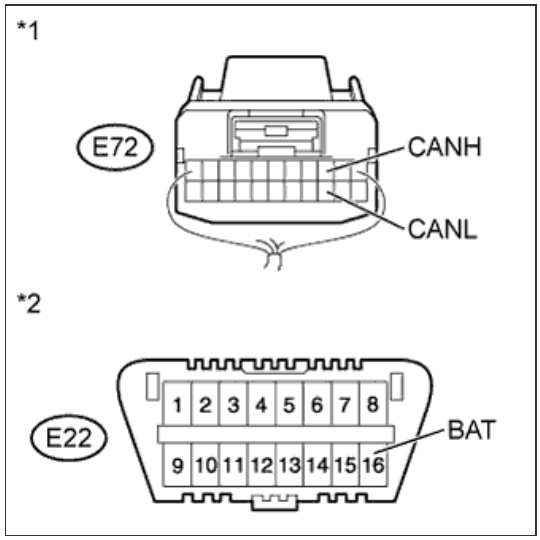
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 9

OK

7.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.

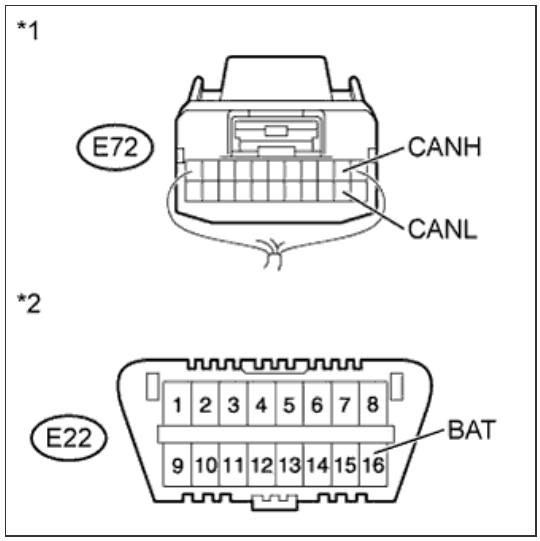
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)

*2	DLC3



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

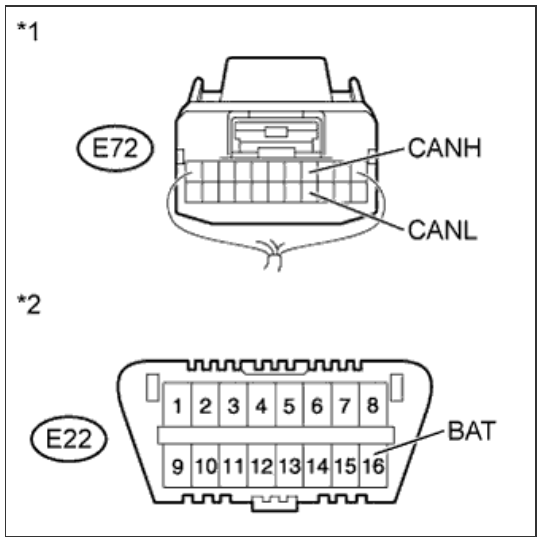
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-15 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Measure the resistance according to the value(s) in the table below.

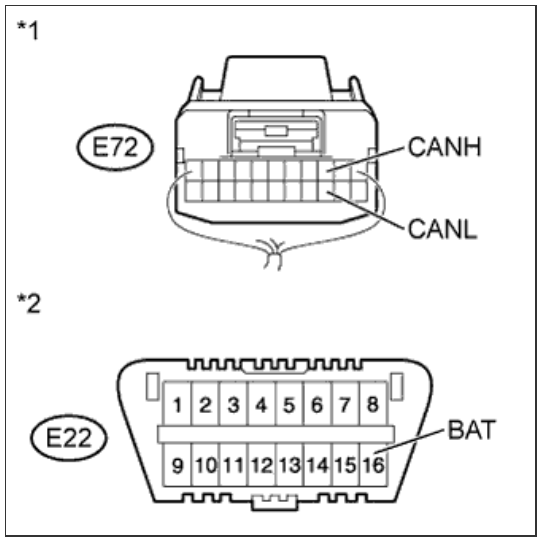
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-14 (CANL) -		

E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH) (CANH, CANL)

OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (ECM)

a. Disconnect the A53 ECM connector.

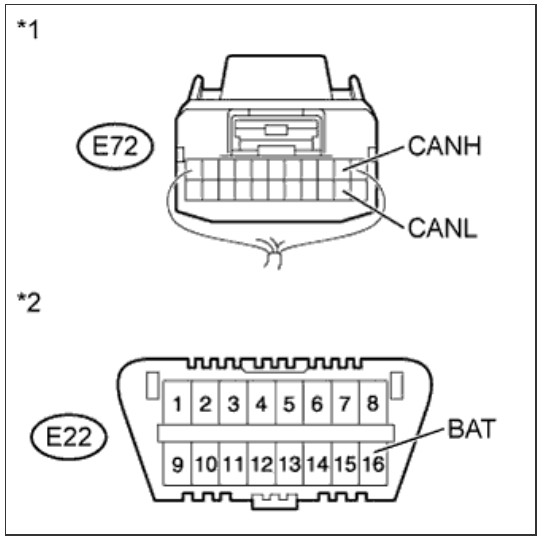
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E72-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

OK → REPLACE ECM (Click here)

11.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

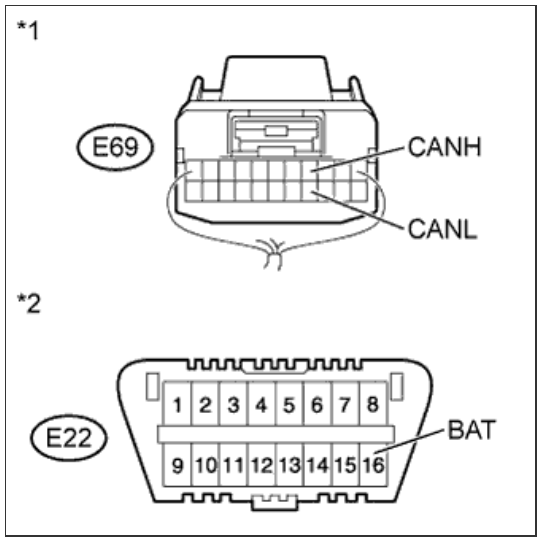
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-4 (CANH) -	Engine switch off	6 kΩ or higher

E22-16 (BAT)		
E69-15 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

13.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

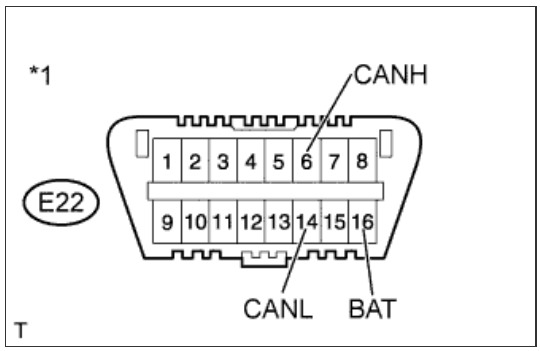
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	DLC3



NG → Go to step 22

OK

14.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

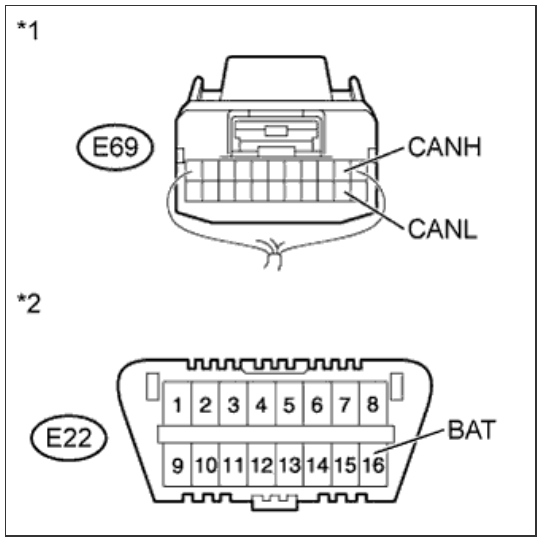
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-13 (CANL) -	Engine switch off	6 kΩ or higher

E22-16 (BAT)

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 18

OK

15.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

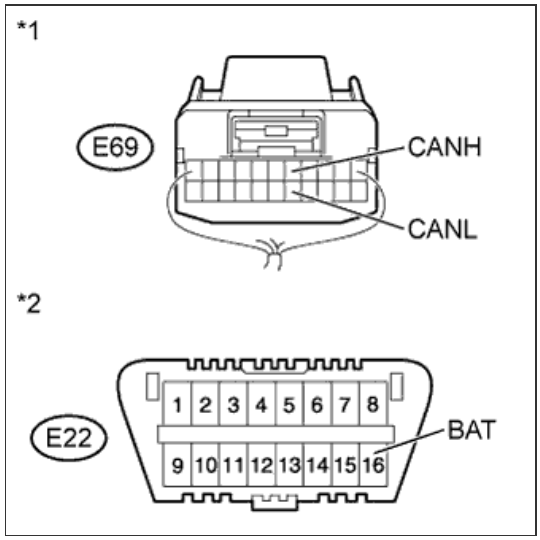
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 19

OK

16.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

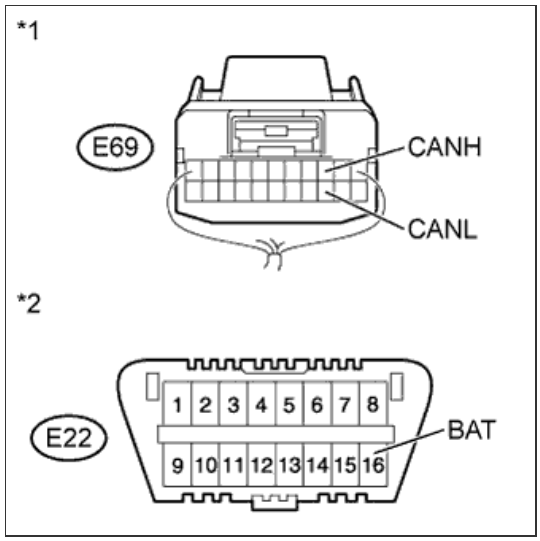
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)

*2	DLC3



NG → Go to step 20

OK

17.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AFS ECU)

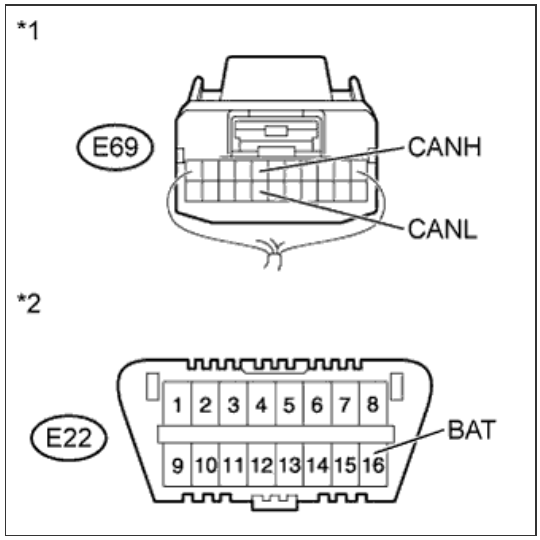
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-7 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-18 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 21

OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

18.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation module display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

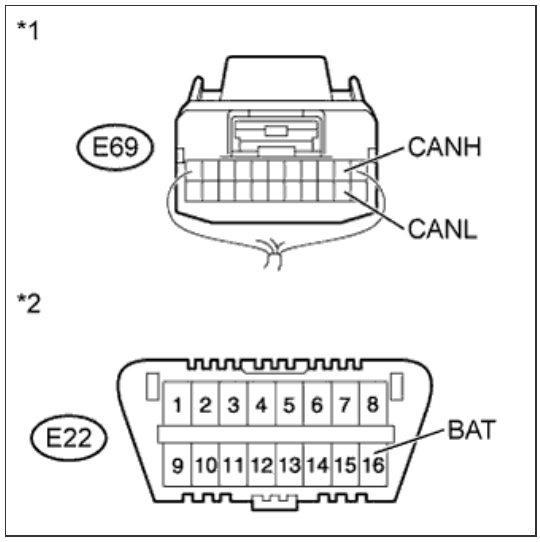
Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-13 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISPLAY AND NAVIGATION MODULE DISPLAY (CANH, CANL)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

19.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

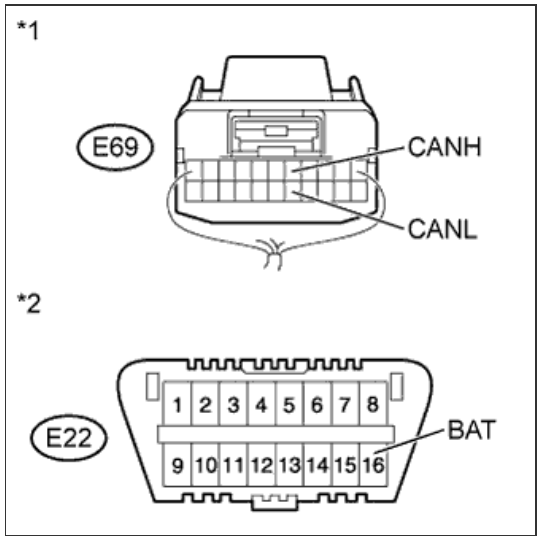
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-16 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

20.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

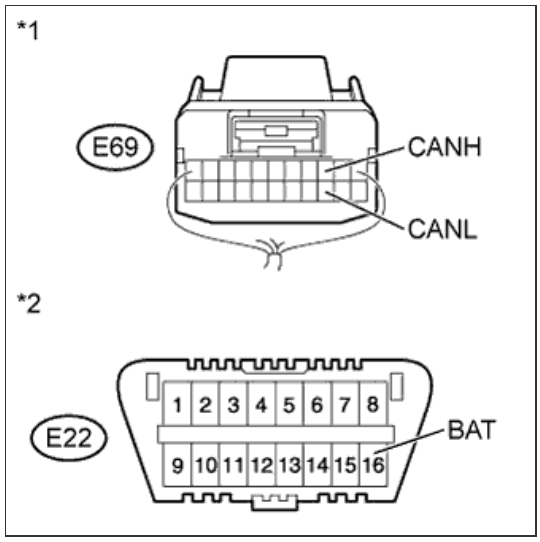
Standard Resistance:

Tester Connection	Switch Condition	Specified

		Condition
E69-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

21.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

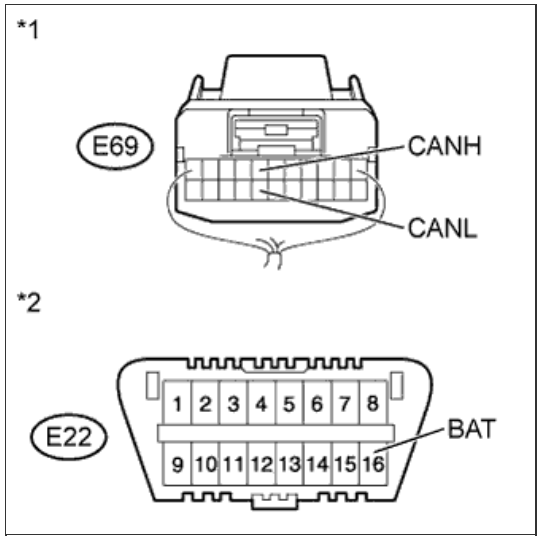
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-7 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E69-18 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (Click here)

22.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

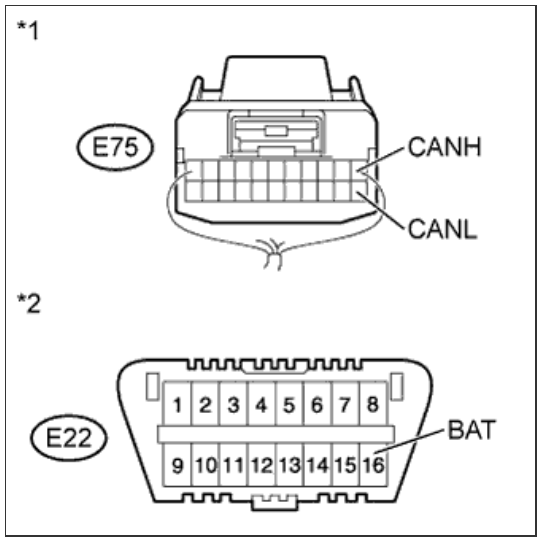
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

E75-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

23.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

24.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

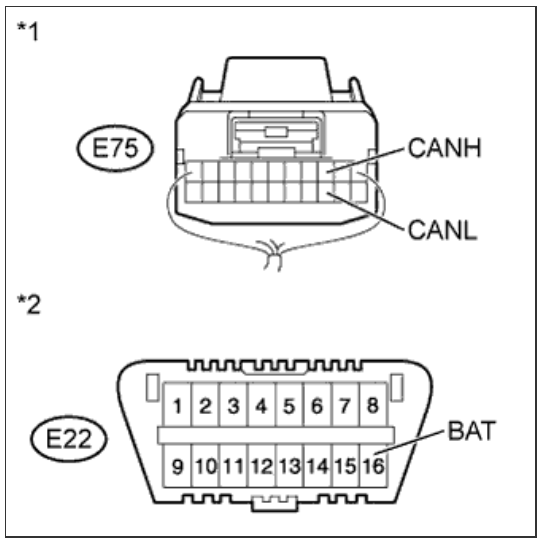
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

25.CHECK FOR SHORT TO B+ IN CAN BUS WIRE (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

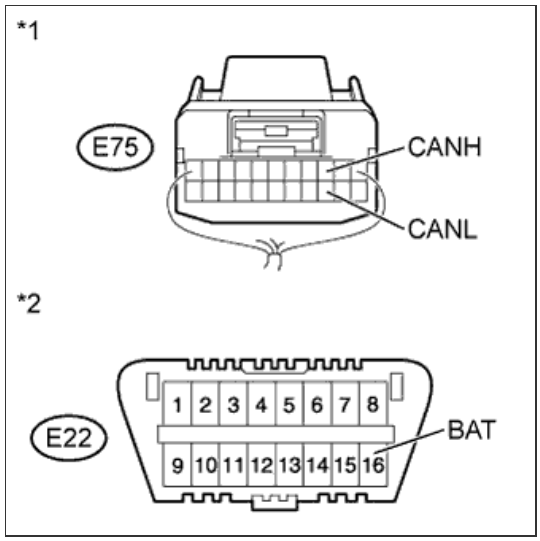
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E75-14 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK → REPLACE COMBINATION METER ASSEMBLY (Click here)

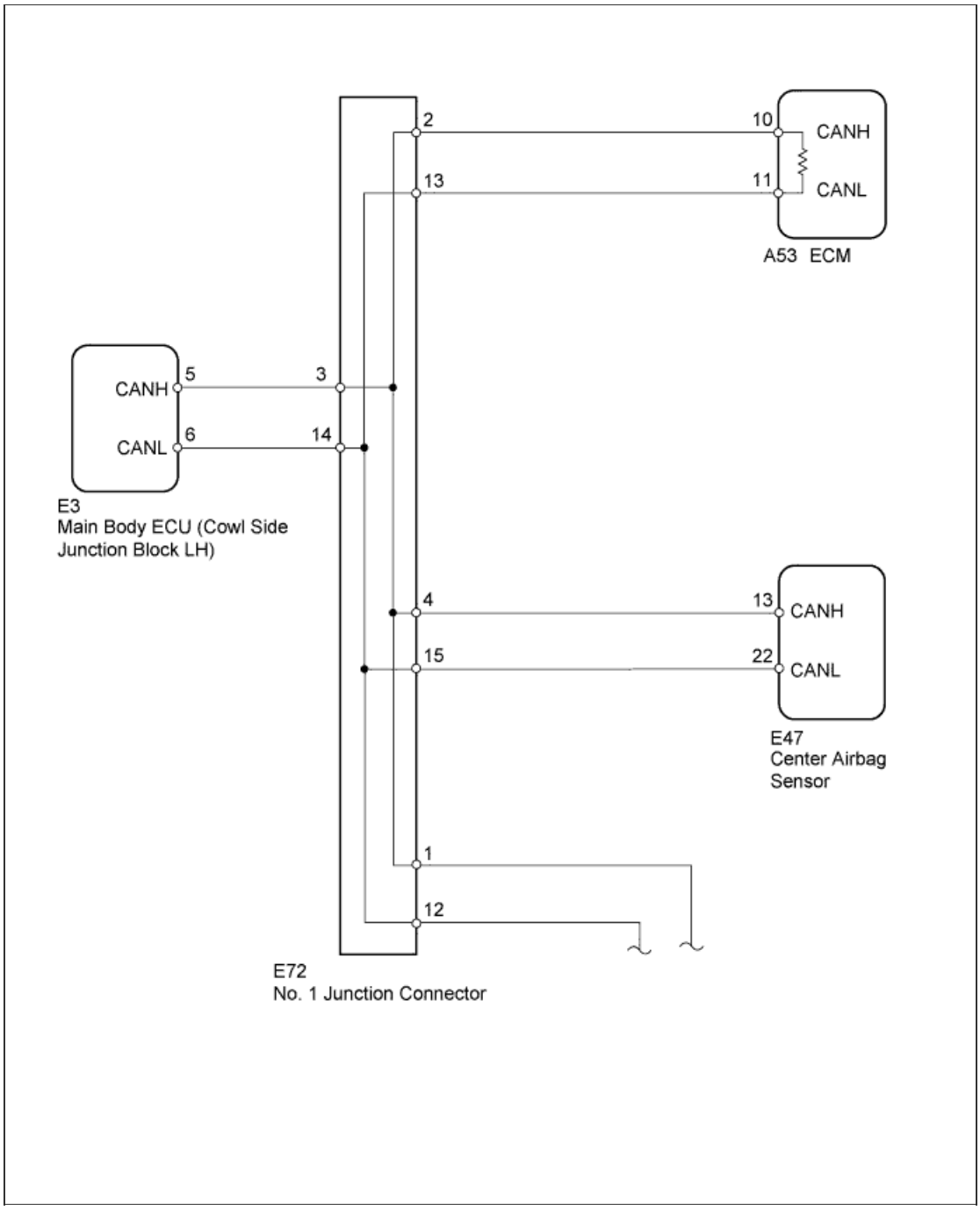
for Preparation Click here

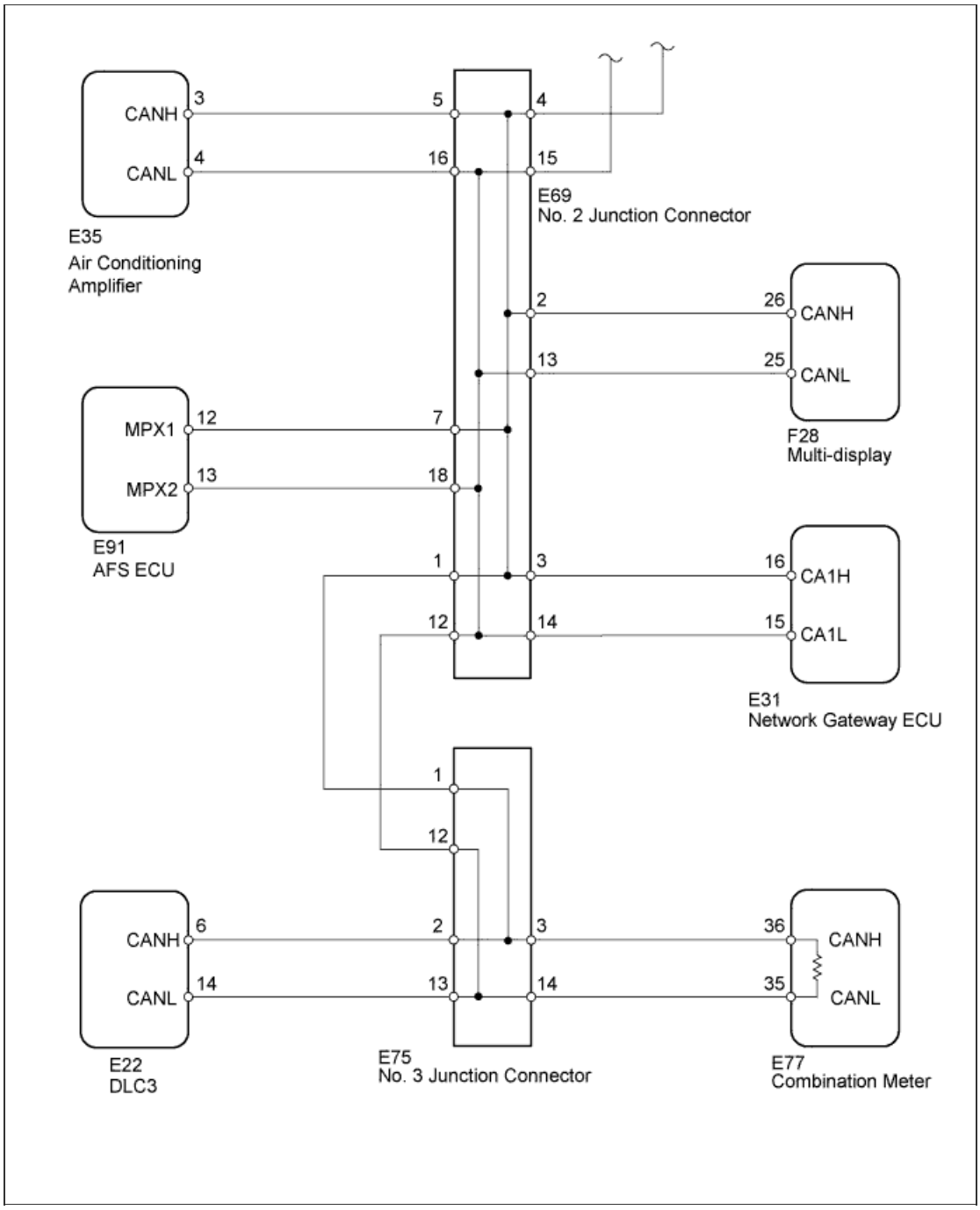
DESCRIPTION

There may be a short circuit between the CAN bus line and GND when there is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.	• Short to GND • ECM • Center airbag sensor • Multi-display • Air conditioning amplifier • Network gateway ECU • Main body ECU • AFS ECU • Combination meter • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM


2
10
CANH
13
11
CANL
A53 ECM
CANH
5
3
CANL
6
14
E3
Main Body ECU (Cowl Side
Junction Block LH)
4
13
CANH
15
22
CANL
E47
Center Airbag
Sensor
1
12
E72
No. 1 Junction Connector



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

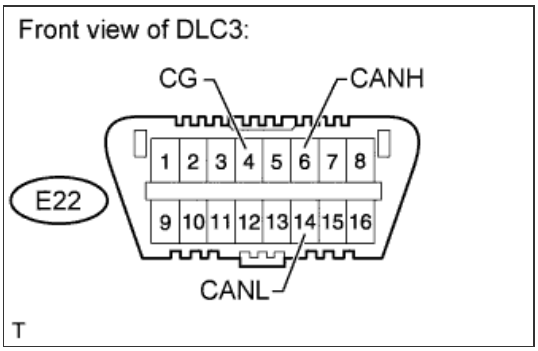
2.CHECK FOR SHORT TO GND IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

a. Reconnect the E75 No. 3 junction connector connector.

NEXT

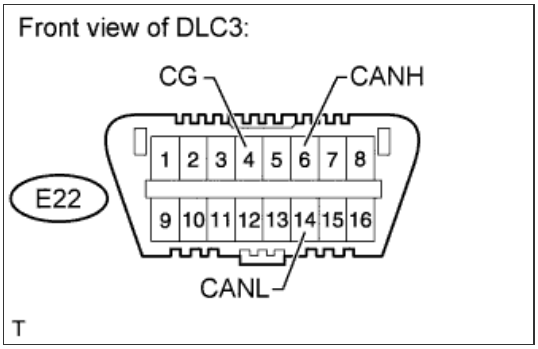
4.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Result
E22-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 11

OK

5.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

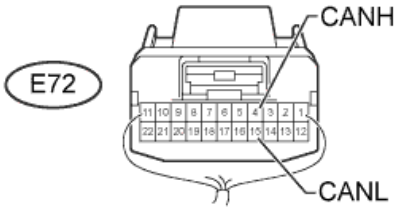
a. Measure the resistance according to the value(s) in the table below.

Result

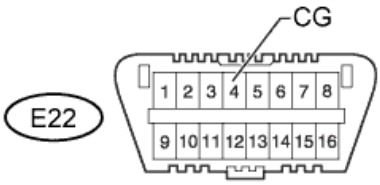
Tester Connection	Switch Condition	Measured Resistance	Proceed to

E72-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → Go to step 8

OK

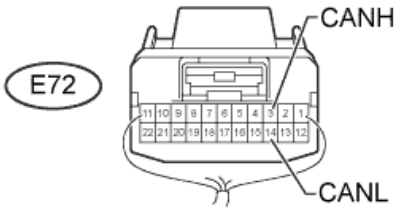
6.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - MAIN BODY ECU)

a. Measure the resistance according to the value(s) in the table below.

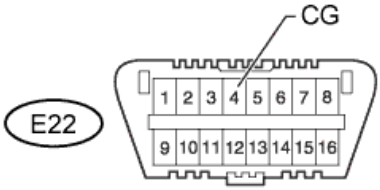
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 1 Junction Connector)



Front view of DLC3:



NG → Go to step 9

OK

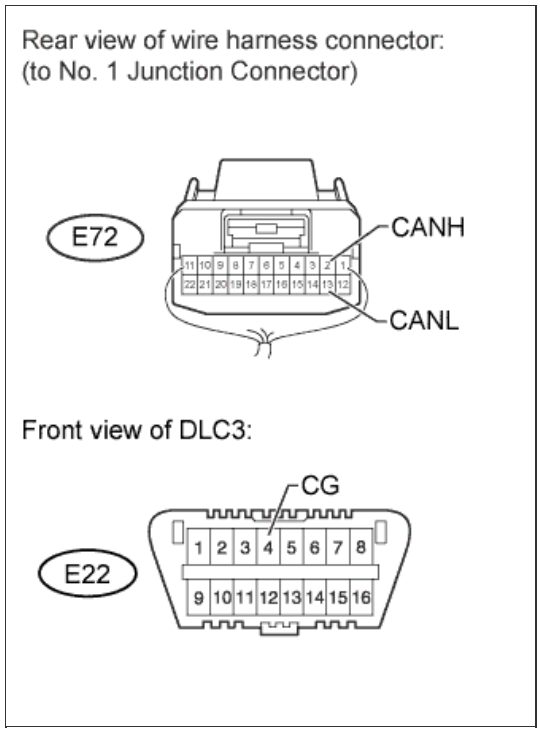
7.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 10

OK → REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

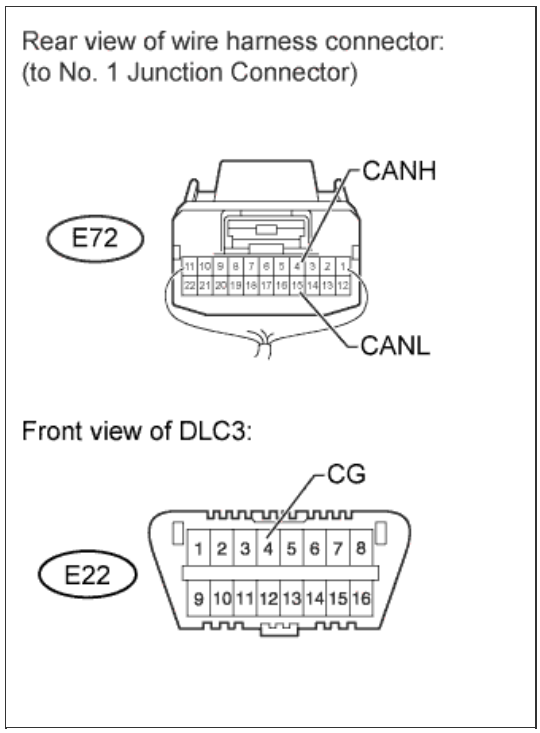
8.CHECK FOR SHORT TO GND IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK → REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

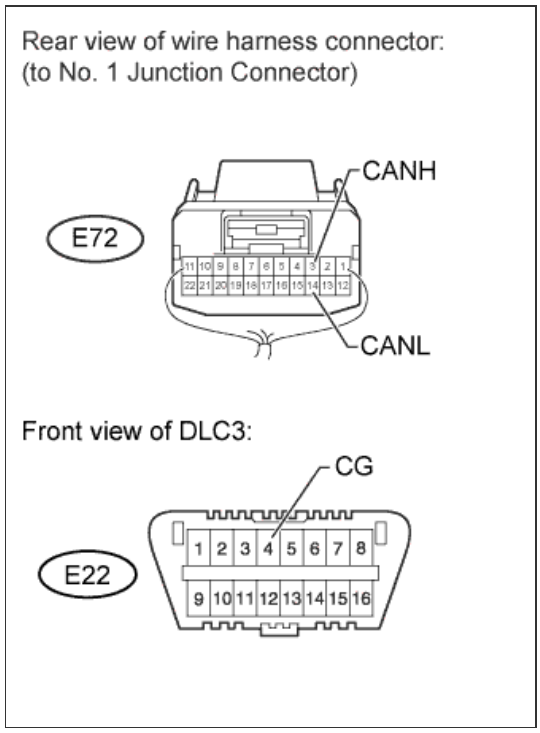
9.CHECK FOR SHORT TO GND IN CAN BUS WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (CANH, CANL)

OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

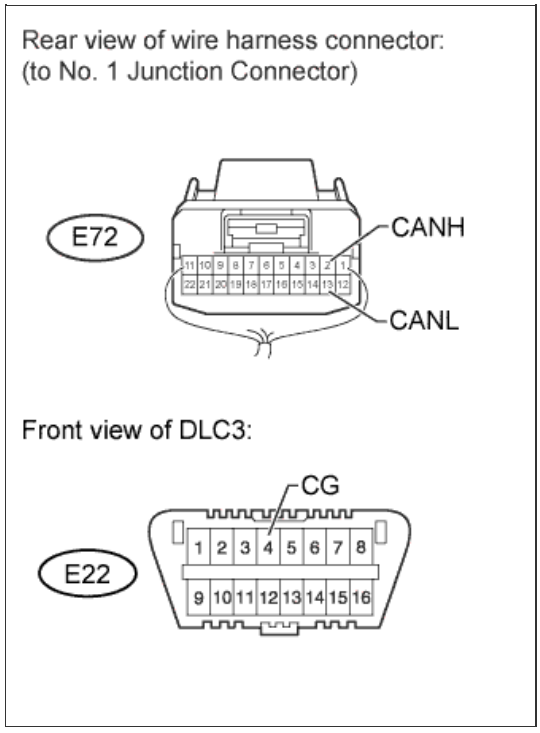
10.CHECK FOR SHORT TO GND IN CAN BUS WIRE (ECM)

a. Disconnect the A53 ECM connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E72-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E72-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E72-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO ECM (CANH, CANL)

OK

REPLACE ECM (Click here)

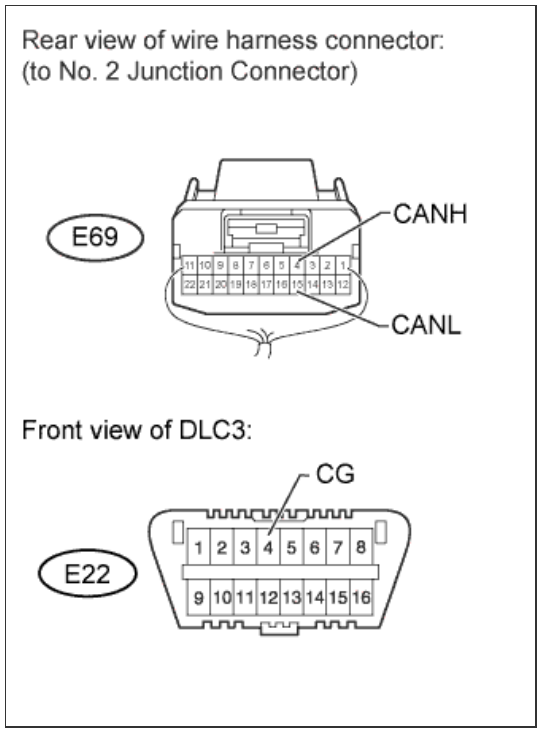
11.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

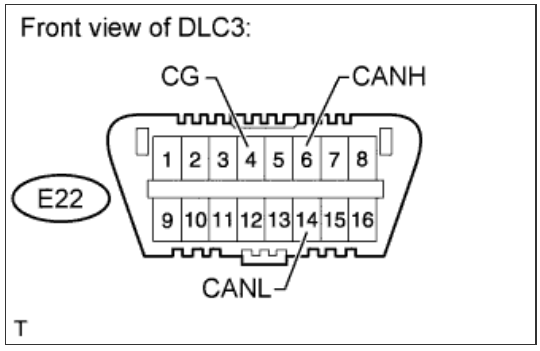
NEXT

13.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E22-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E22-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E22-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 22

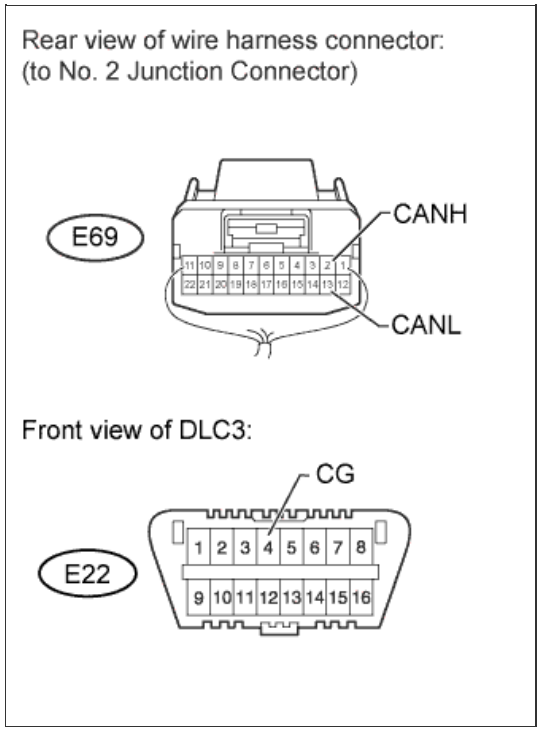
OK

14.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - MULTI-DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 18

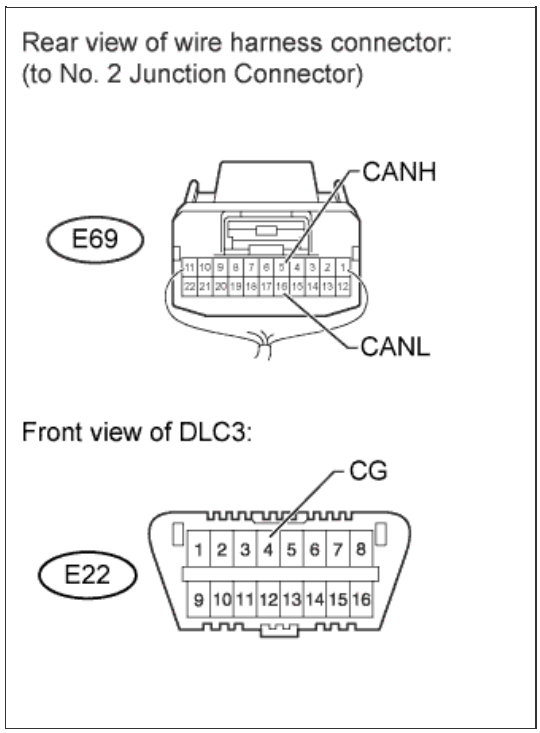
OK

15.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 19

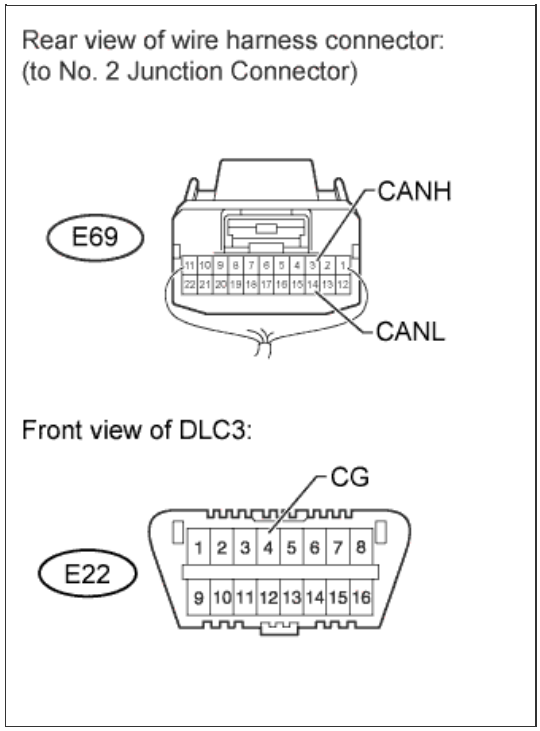
OK

16.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 20

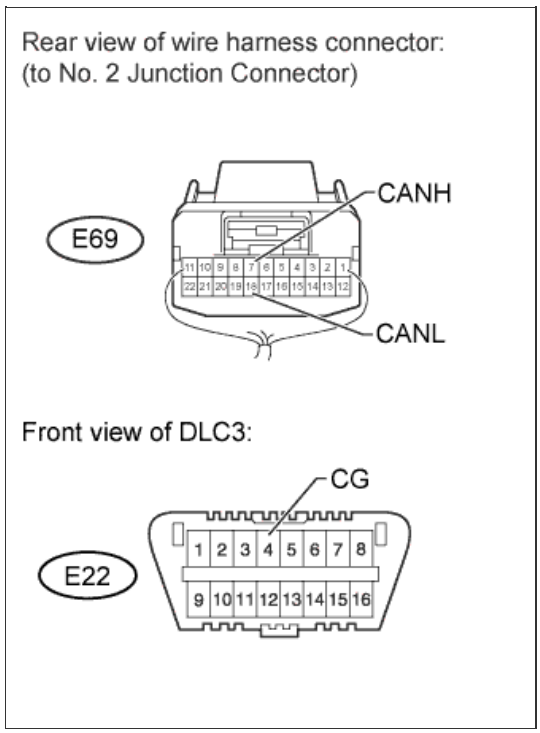
OK

17.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AFS ECU)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-7 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-18 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-7 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-18 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 21

OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

18.CHECK FOR SHORT TO GND IN CAN BUS WIRE (MULTI-DISPLAY)

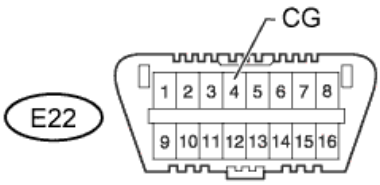
a. Disconnect the F28 multi-display connector.

b. Measure the resistance according to the value(s) in the table below.

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



Result

Tester Connection	Switch Condition	Measured Resistance	Result	Proceed to
E69-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK (w/ Navigation System)	A
			OK (w/o Navigation System)	B
E69-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK (w/ Navigation System)	A
			OK (w/o Navigation System)	B
E69-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG	C
E69-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG	C

B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MULTI-DISPLAY (CANH, CANL)

A

REPLACE MULTI-DISPLAY (Click here)

19.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

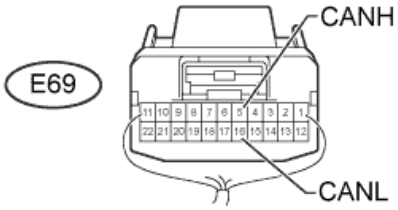
b. Measure the resistance according to the value(s) in the table below.

Result

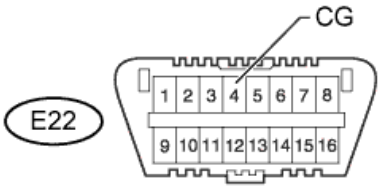
Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-5 (CANH) - E22-	Engine		

4 (CG)	switch off	Below 1 Ω	NG
E69-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

20.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NETWORK GATEWAY ECU)

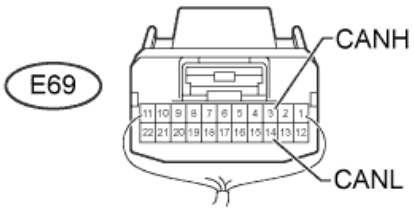
a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

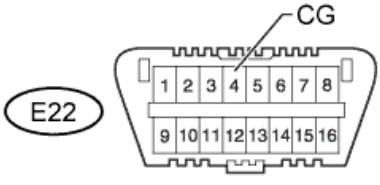
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

21.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

b. Measure the resistance according to the value(s) in the table below.

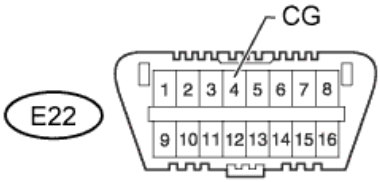
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E69-7 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-18 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E69-7 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E69-18 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 2 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (Click here)

22.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

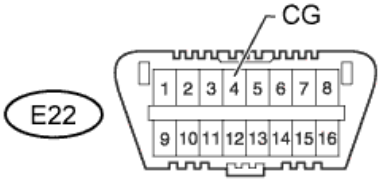
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-12 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-12 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

23.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

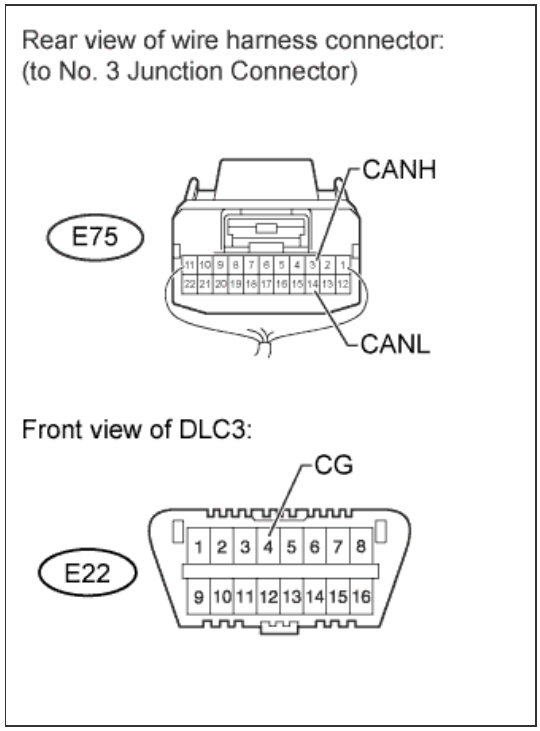
NEXT

24.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

a. Measure the resistance according to the value(s) in the table below.

Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

25.CHECK FOR SHORT TO GND IN CAN BUS WIRE (COMBINATION METER)

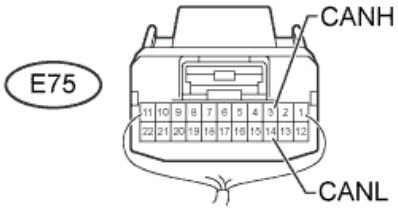
a. Disconnect the E77 combination meter connector.

b. Measure the resistance according to the value(s) in the table below.

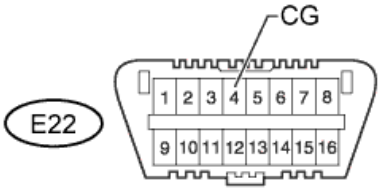
Result

Tester Connection	Switch Condition	Measured Resistance	Proceed to
E75-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E75-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E75-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

Rear view of wire harness connector:
(to No. 3 Junction Connector)



Front view of DLC3:



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK → REPLACE COMBINATION METER ASSEMBLY (Click here)

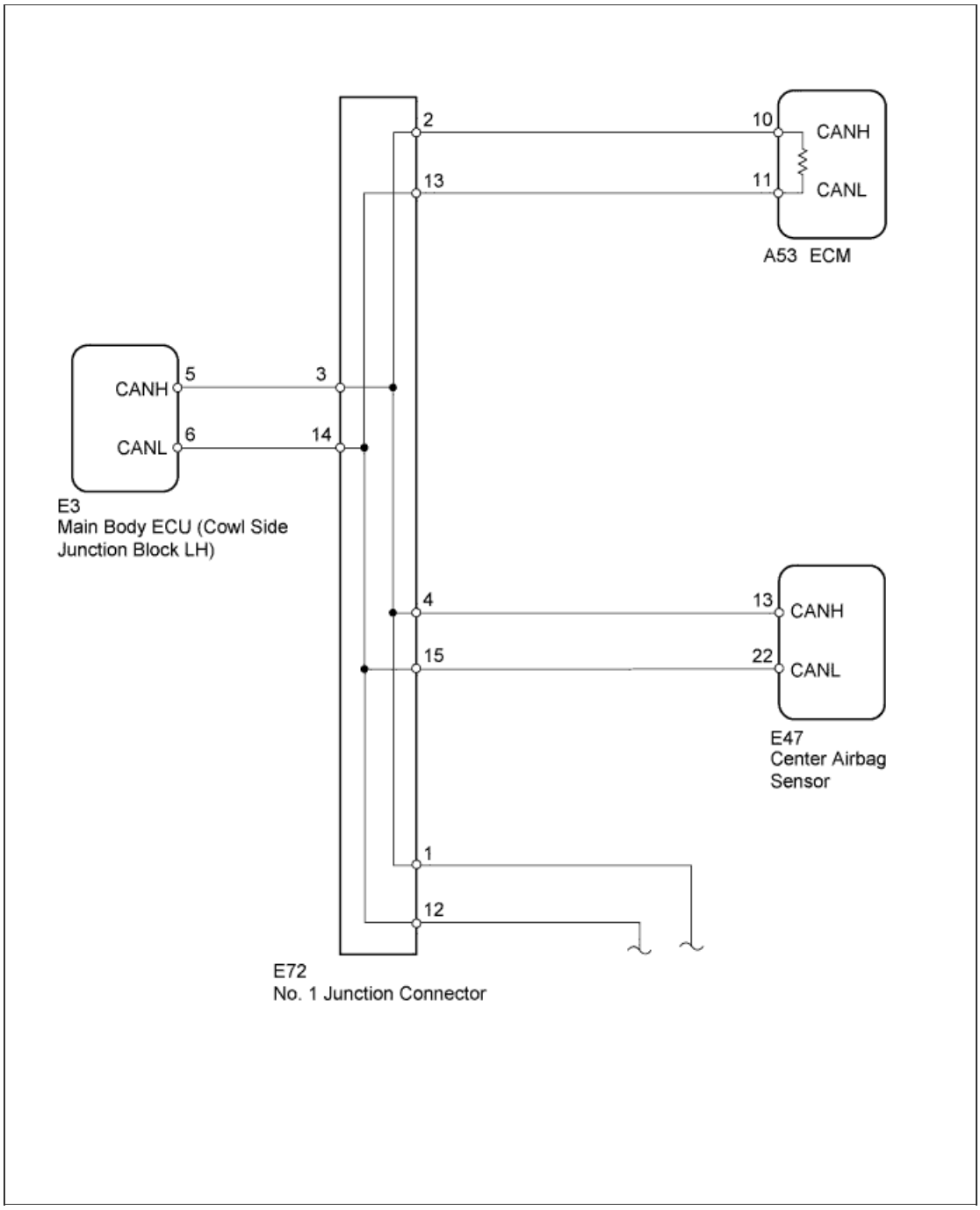
for Preparation Click here

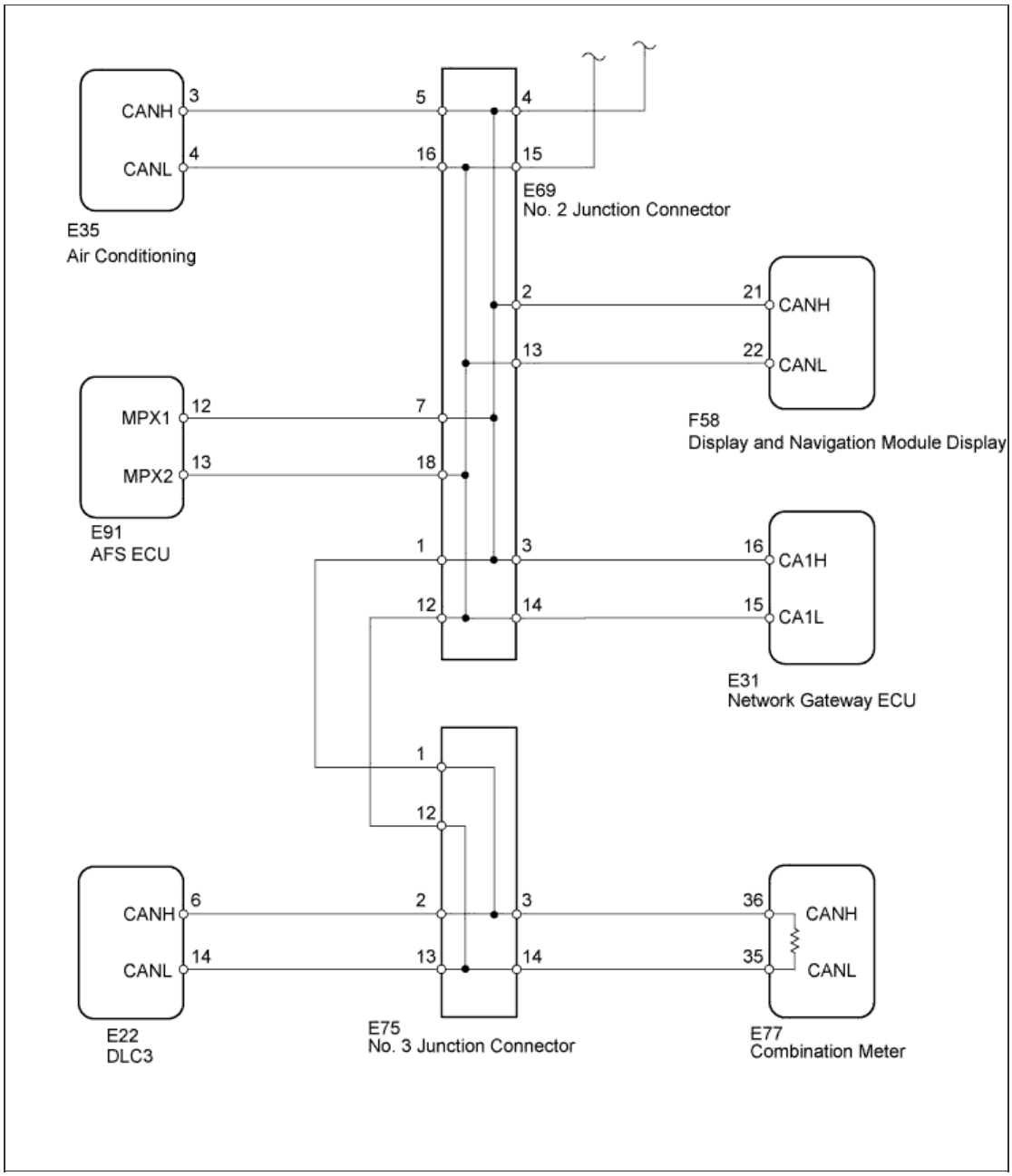
DESCRIPTION

There may be a short circuit between the CAN bus line and GND when there is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 4 (CG) or terminals 14 (CANL) and 4 (CG) of the DLC3.	• Short to GND • ECM • Center airbag sensor assembly • Display and navigation module display • Air conditioning amplifier assembly • Network gateway ECU • Main body ECU (cowl side junction block LH) • AFS ECU (headlight swivel ECU assembly) • Combination meter • No. 1 junction connector • No. 2 junction connector • No. 3 junction connector

WIRING DIAGRAM


2
10
CANH
13
11
CANL
A53 ECM
CANH
5
3
CANL
6
14
E3
Main Body ECU (Cowl Side
Junction Block LH)
4
13
CANH
15
22
CANL
E47
Center Airbag
Sensor
1
12
E72
No. 1 Junction Connector



INSPECTION PROCEDURE

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

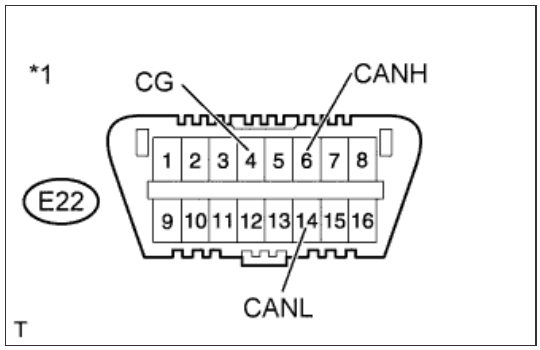
When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR SHORT TO GND IN CAN BUS WIRE (DLC3 BRANCH WIRE)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	DLC3

NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DLC3 (CANH, CANL)

OK

3.CONNECT CONNECTOR

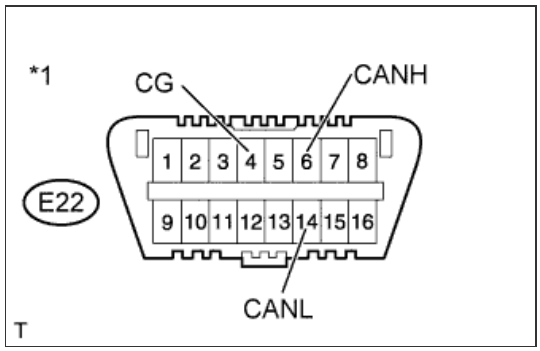
a. Reconnect the E75 No. 3 junction connector connector.

NEXT

4.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR SIDE)

a. Disconnect the E72 No. 1 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	DLC3

NG → Go to step 11

OK

5.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - CENTER AIRBAG SENSOR)

a. Measure the resistance according to the value(s) in the table below.

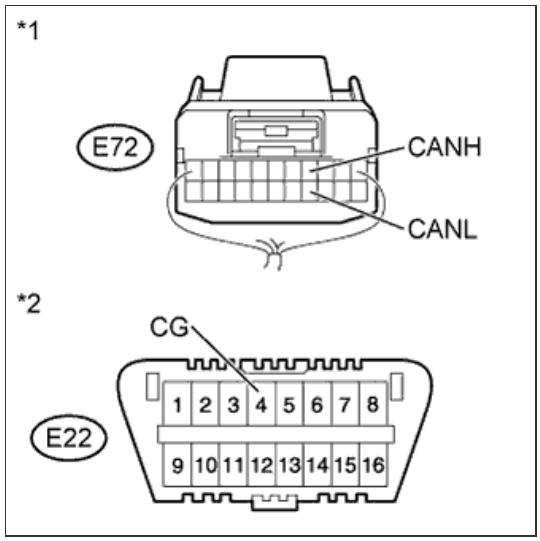
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-15 (CANL) -	Engine switch off	200 Ω or higher

	E22-4 (CG)

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 8

OK →

6.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - MAIN BODY ECU)

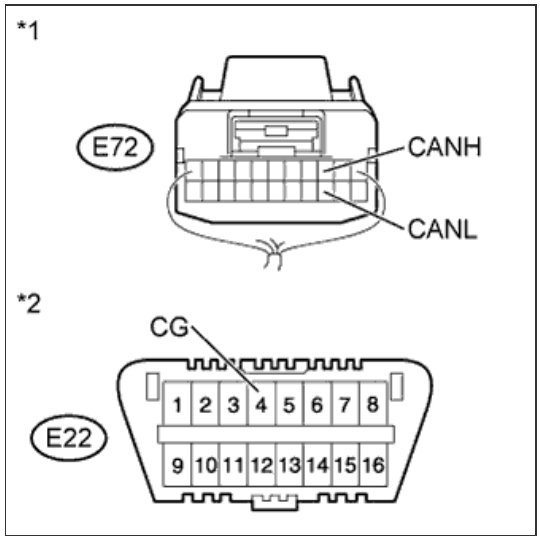
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 9

OK →

7.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - ECM)

a. Measure the resistance according to the value(s) in the table below.
Measure the resistance according to the value(s) in the table below.

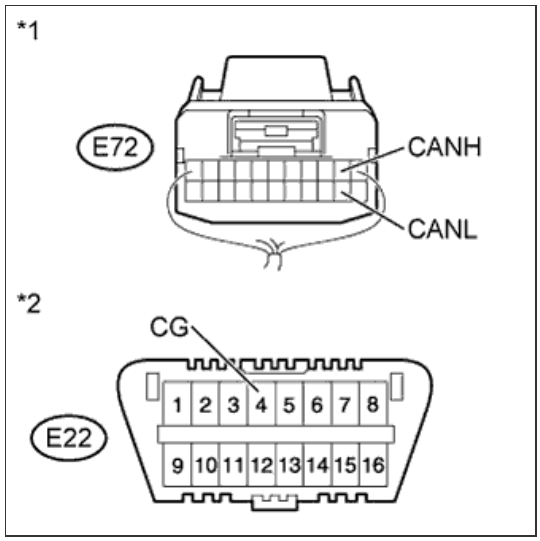
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

	Rear view of wire harness connector

*1	(to No. 1 Junction Connector)
*2	DLC3



NG → Go to step 10

OK

REPAIR OR REPLACE NO. 1 JUNCTION CONNECTOR

8.CHECK FOR SHORT TO GND IN CAN BUS WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

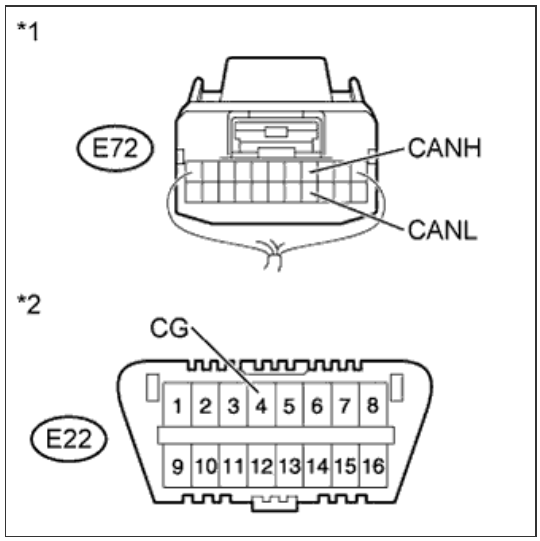
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-4 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-15 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO CENTER AIRBAG SENSOR (CANH, CANL)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

9.CHECK FOR SHORT TO GND IN CAN BUS WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU connector.

b. Measure the resistance according to the value(s) in the table below.

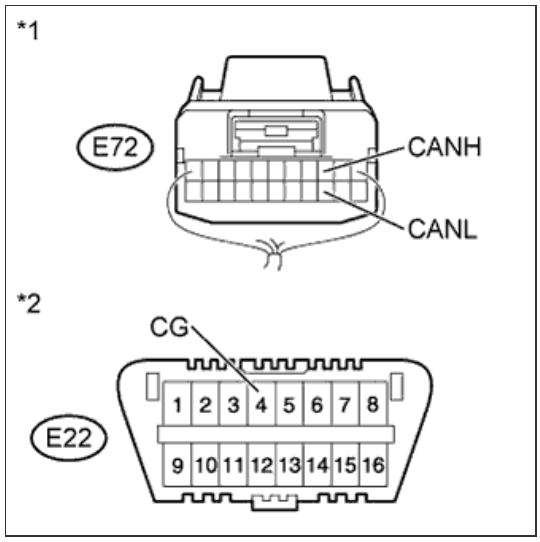
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-14 (CANL) -		

E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO MAIN BODY ECU (CANH, CANL)

OK → REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR SHORT TO GND IN CAN BUS WIRE (ECM)

a. Disconnect the A53 ECM connector.

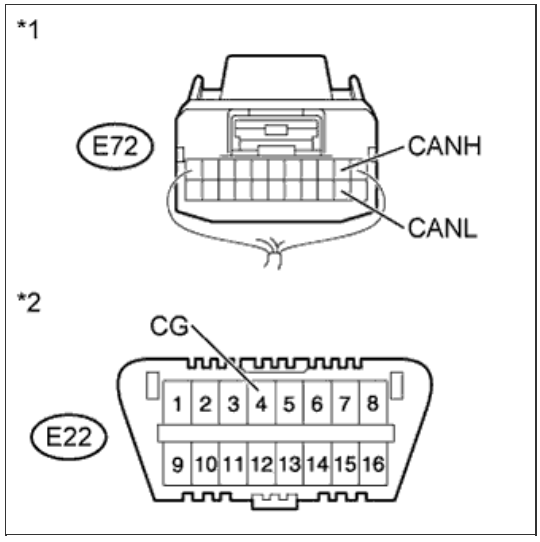
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E72-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E72-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 1 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO ECM (CANH, CANL)

OK → REPLACE ECM (Click here)

11.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

a. Disconnect the E69 No. 2 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

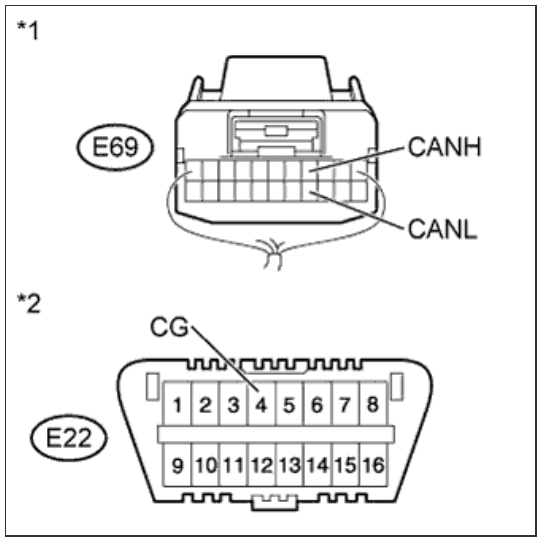
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-4 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher

E69-15 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 1 JUNCTION CONNECTOR - NO. 2 JUNCTION CONNECTOR)

OK

12.CONNECT CONNECTOR

a. Reconnect the E72 No. 1 junction connector connector.

NEXT

13.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR SIDE)

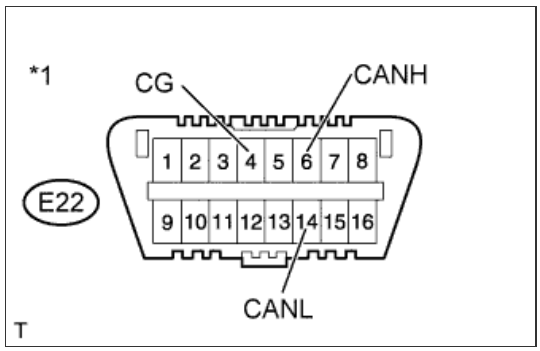
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E22-6 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	DLC3



NG → Go to step 22

OK

14.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Measure the resistance according to the value(s) in the table below.

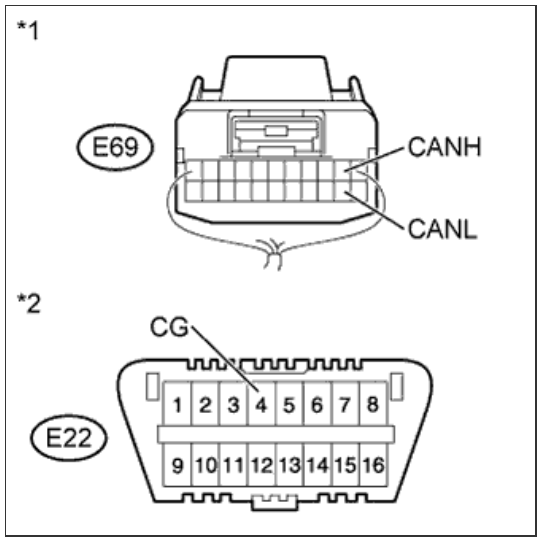
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-13 (CANL) -	Engine switch off	200 Ω or higher

E22-4 (CG)	

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 18

OK ↓

15.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AIR CONDITIONING AMPLIFIER)

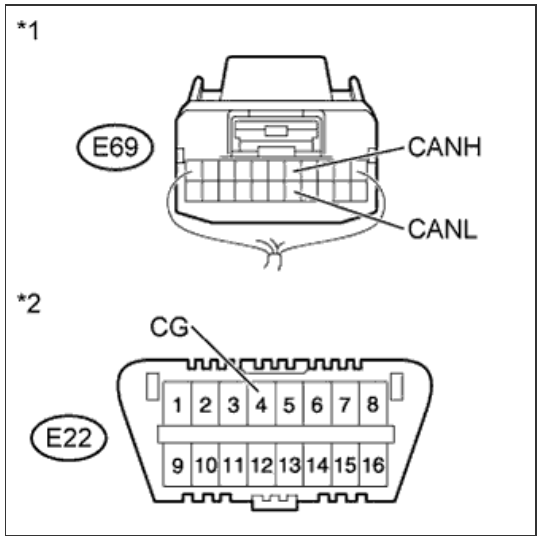
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-16 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 19

OK ↓

16.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NETWORK GATEWAY ECU)

a. Measure the resistance according to the value(s) in the table below.

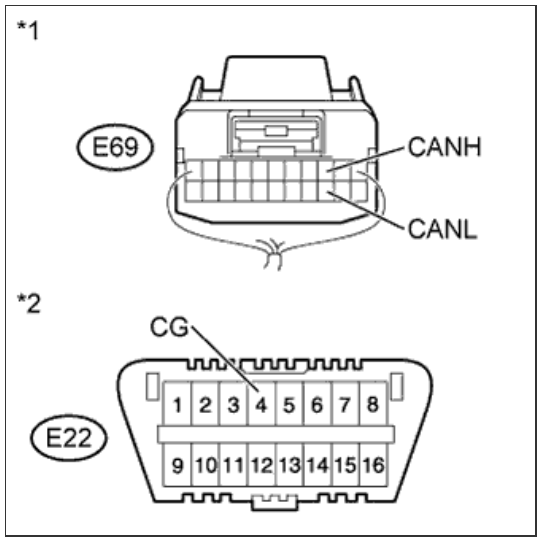
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)

*2	DLC3



NG → Go to step 20

OK

17.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - AFS ECU)

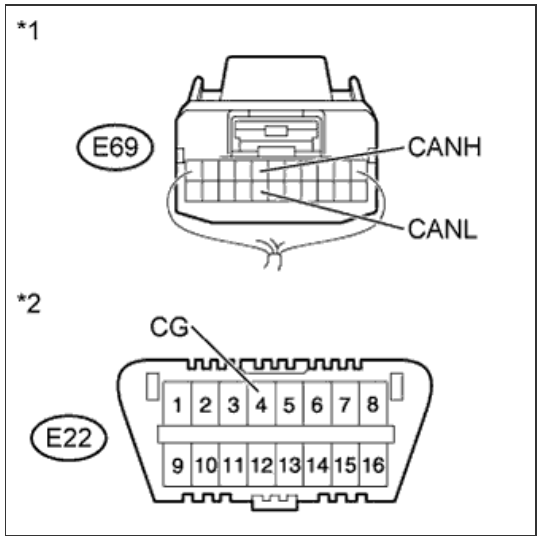
a. Measure the resistance according to the value(s) in the table below.
Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-7 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-18 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → Go to step 21

OK

REPAIR OR REPLACE NO. 2 JUNCTION CONNECTOR

18.CHECK FOR SHORT TO GND IN CAN BUS WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation display connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

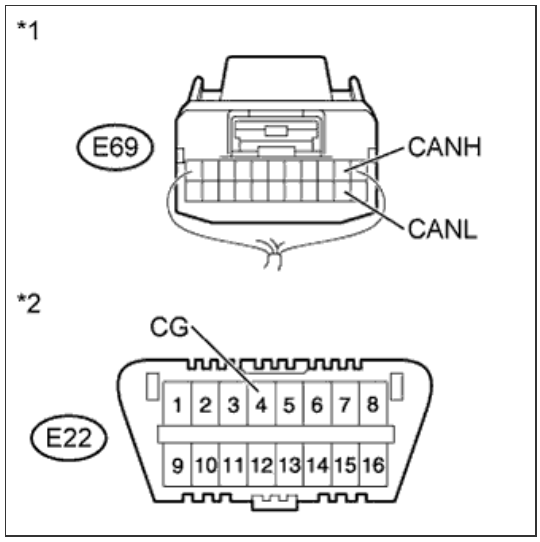
Tester Connection	Switch Condition	Specified Condition
E69-2 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-13 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO DISPLAY AND NAVIGATION MODULE DISPLAY (CANH, CANL)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

19.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

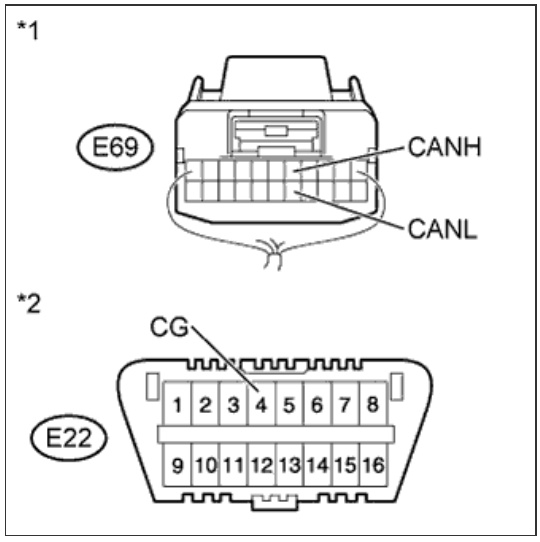
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-5 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-16 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AIR CONDITIONING AMPLIFIER (CANH, CANL)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

20.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NETWORK GATEWAY ECU)

a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

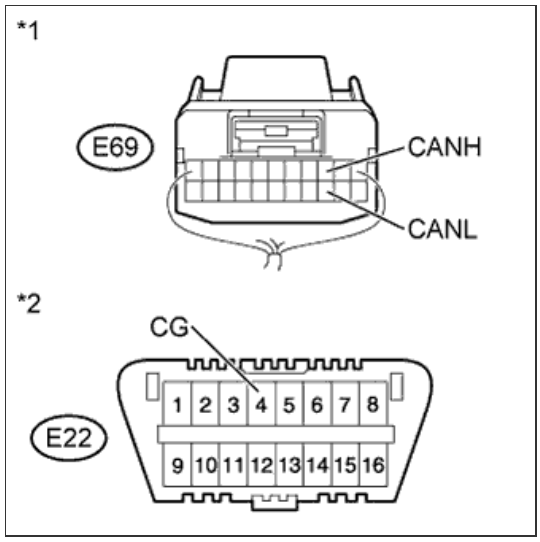
Standard Resistance:

Tester Connection	Switch Condition	Specified

		Condition
E69-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO NETWORK GATEWAY ECU (CANH, CANL)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

21.CHECK FOR SHORT TO GND IN CAN BUS WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

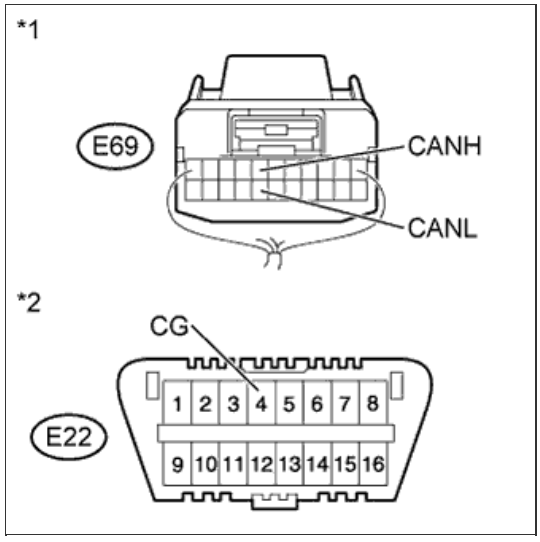
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E69-7 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E69-18 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 2 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN BRANCH WIRE CONNECTED TO AFS ECU (CANH, CANL)

OK

REPLACE AFS ECU (Click here)

22.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

a. Disconnect the E75 No. 3 junction connector connector.

b. Measure the resistance according to the value(s) in the table below.

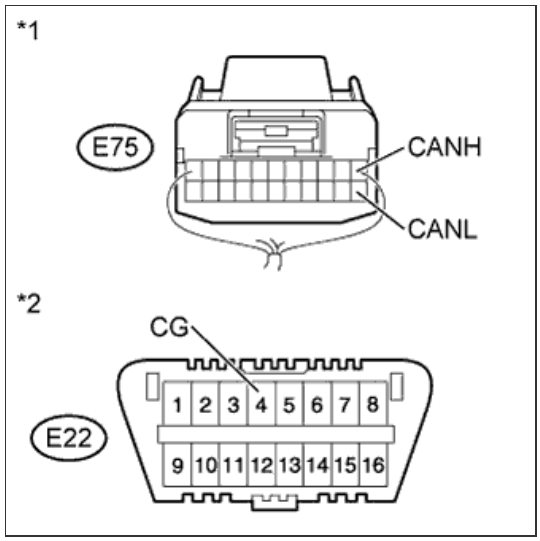
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher

E75-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE OR CONNECTOR (NO. 2 JUNCTION CONNECTOR - NO. 3 JUNCTION CONNECTOR)

OK

23.CONNECT CONNECTOR

a. Reconnect the E69 No. 2 junction connector connector.

NEXT

24.CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 3 JUNCTION CONNECTOR - COMBINATION METER)

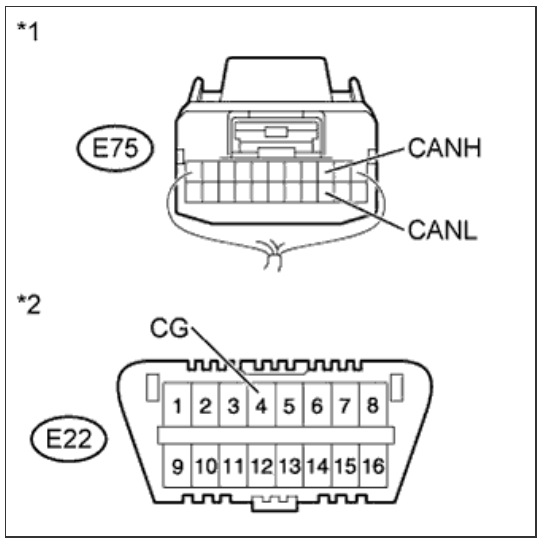
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E75-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → Go to step 25

OK

REPAIR OR REPLACE NO. 3 JUNCTION CONNECTOR

25.CHECK FOR SHORT TO GND IN CAN BUS WIRE (COMBINATION METER)

a. Disconnect the E77 combination meter connector.

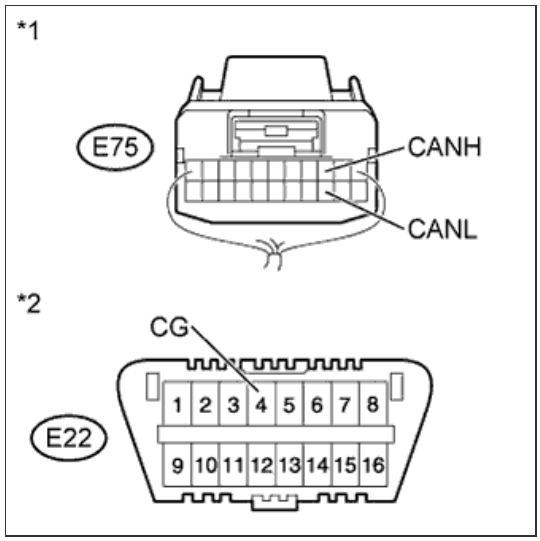
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E75-3 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E75-14 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher

Text in Illustration

*1	Rear view of wire harness connector (to No. 3 Junction Connector)
*2	DLC3



NG → REPAIR OR REPLACE CAN MAIN WIRE CONNECTED TO COMBINATION METER (CANH, CANL)

OK → REPLACE COMBINATION METER ASSEMBLY (Click here)

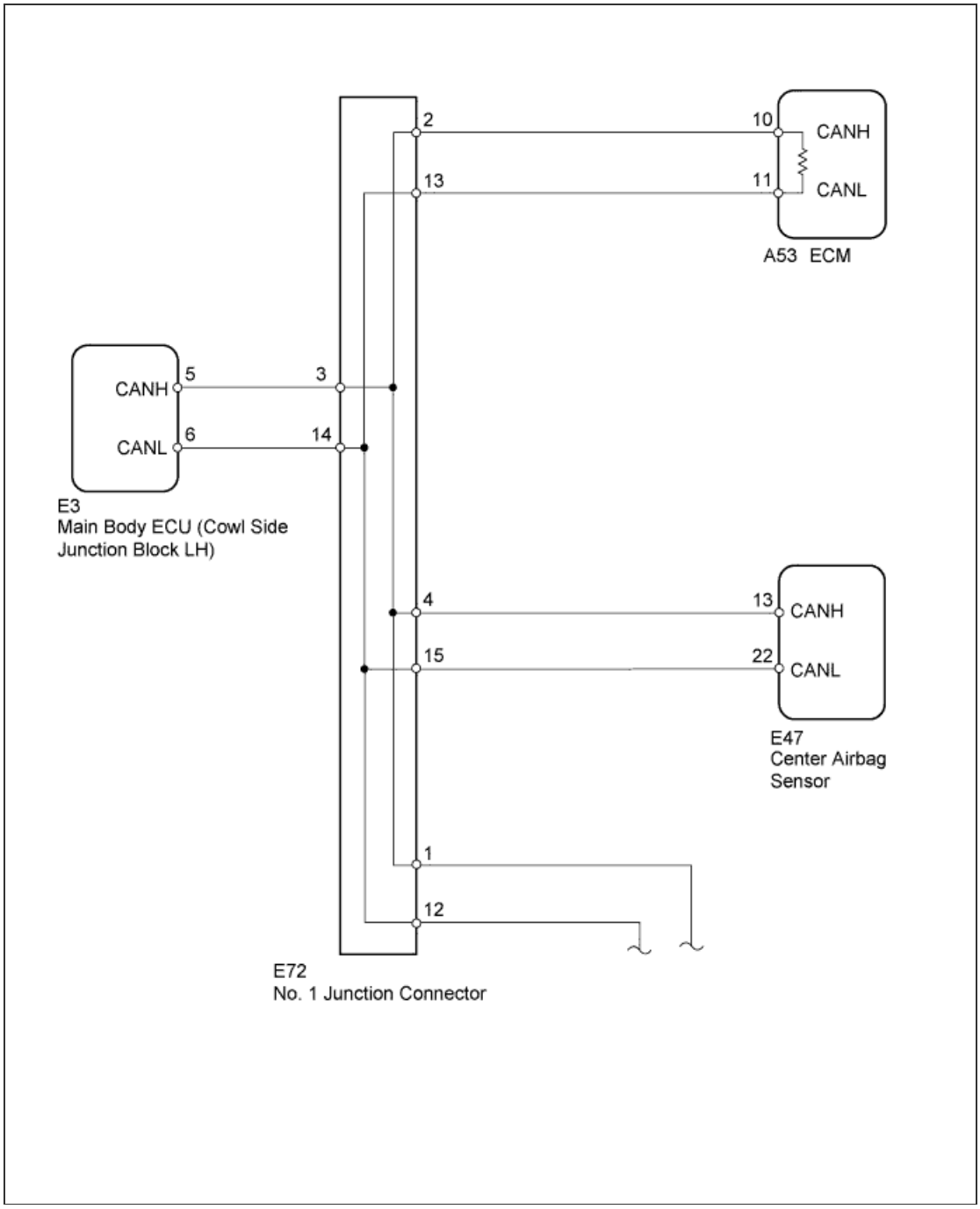
for Preparation Click here

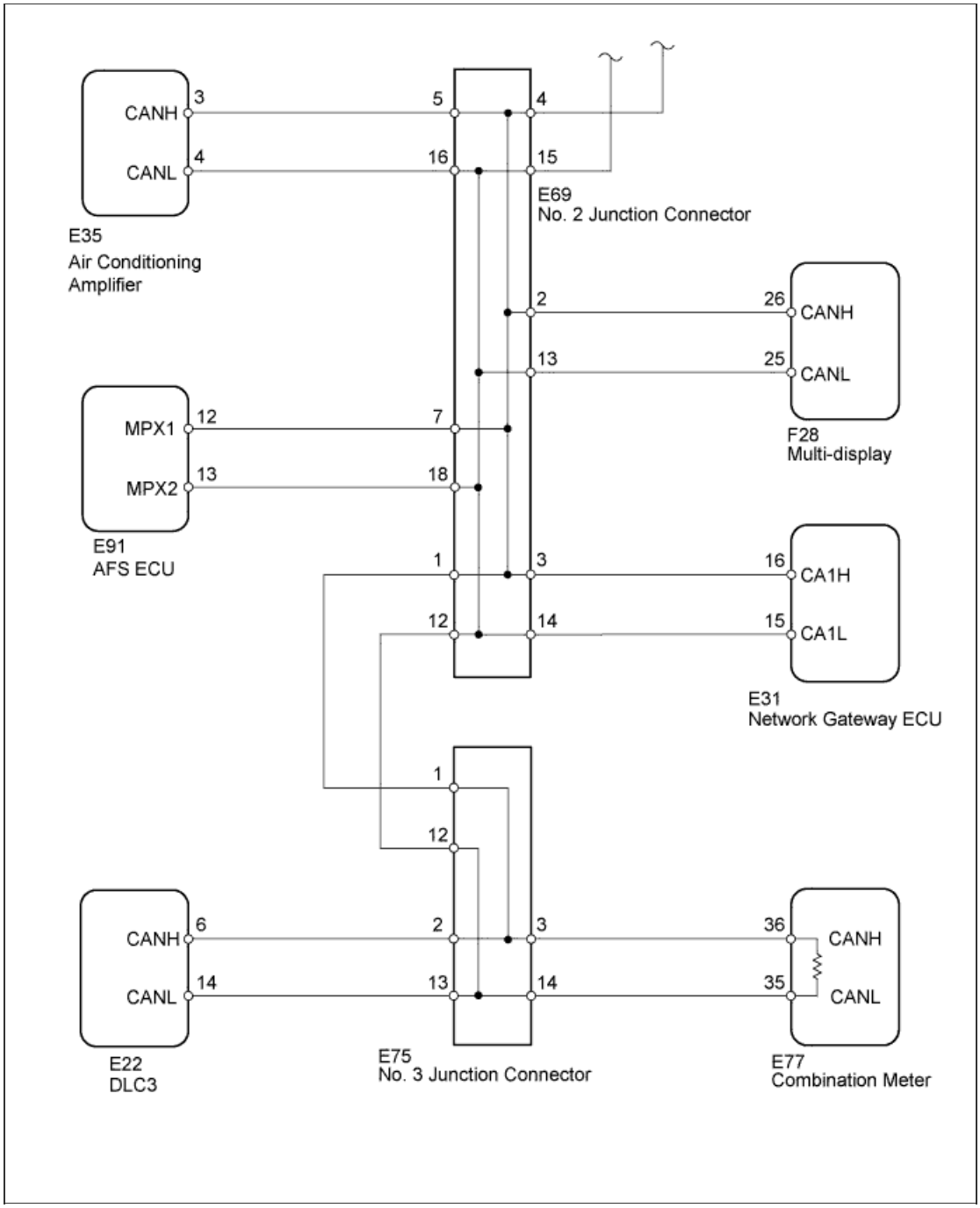
DESCRIPTION

If 2 or more ECUs and/or sensors do not appear on the intelligent tester "Bus Check" screen, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

Symptom	Trouble Area
2 or more ECUs and/or sensors do not appear on the intelligent tester "Bus Check" screen.	• One side of CAN branch wire is open • Multi-display • Center airbag sensor • Air conditioning amplifier • Main body ECU (cowl side junction block LH) • Network gateway ECU • AFS ECU

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

- **Perform the following inspection for the ECUs (sensors) which are not displayed on the intelligent tester. If a malfunction cannot be identified, perform the following inspections for the ECUs (sensors) connected to the CAN communication system.**
- **Do not remove the combination meter and ECM, as they are the end parts of the circuit. If removed, CAN communication will not be possible.**
- **The open circuit confirmation of the combination meter, ECM and main wire is performed in the Check CAN Bus Line procedure of How to Proceed with Troubleshooting. This inspection only has procedures for checking for an open circuit on one side of the CAN branch wire.**

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MULTI-DISPLAY)

a. Disconnect the F28 multi-display connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"AVN" not displayed on intelligent tester.	A
Several ECUs and sensors other than "AVN" not displayed on intelligent tester.	B

B → Go to step 4

A

3.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MULTI-DISPLAY BRANCH WIRE)

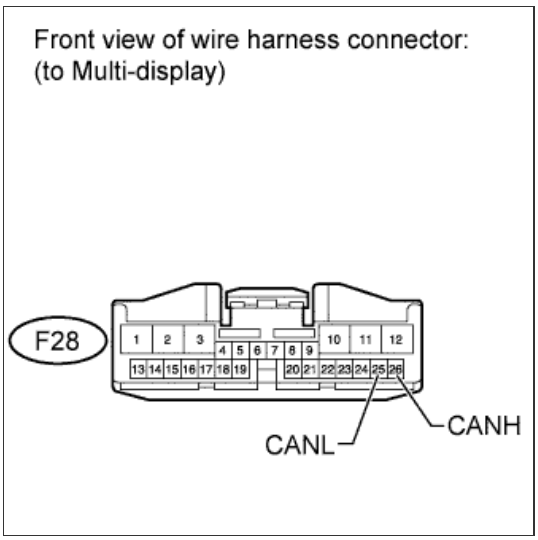
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F28-26 (CANH) - F28-25 (CANL)	Engine switch off	54 to 69 Ω

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C



B → REPLACE MULTI-DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (MULTI-DISPLAY)

A

REPLACE MULTI-DISPLAY (Click here)

4.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"SRS airbag" not displayed on intelligent tester.	A
Several ECUs and sensors other than "SRS airbag" not displayed on intelligent tester.	B

B → Go to step 6

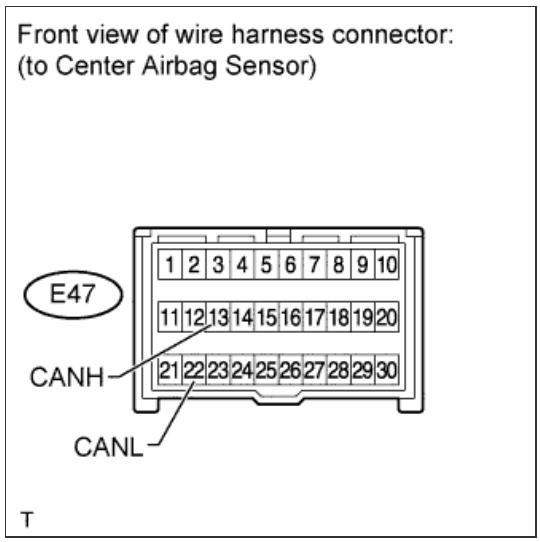
A

5.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (CENTER AIRBAG SENSOR)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

6.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Air Conditioner" not displayed on intelligent tester.	A
Several ECUs and sensors other than "Air Conditioner" not displayed on intelligent tester.	B

B → Go to step 8

A

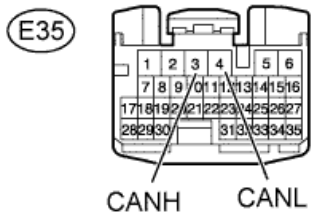
7.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Air Conditioning Amplifier)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (AIR CONDITIONING AMPLIFIER)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

8.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Main Body" not displayed on intelligent tester.	A
Several ECUs and sensors other than "Main Body" not displayed on intelligent tester.	B

B → Go to step 10

A

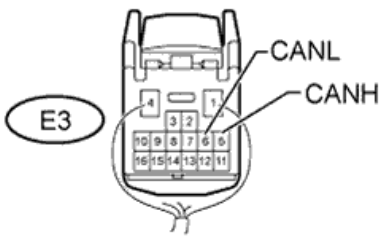
9.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)	Engine switch off	54 to 69 Ω

Rear view of wire harness connector:
(to Main Body ECU)



H

NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (MAIN BODY ECU)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"AFS/HL Auto Leveling" not displayed on intelligent tester.	A
Several ECUs and sensors other than "AFS/HL Auto Leveling" not displayed on intelligent tester.	B

B → Go to step 12

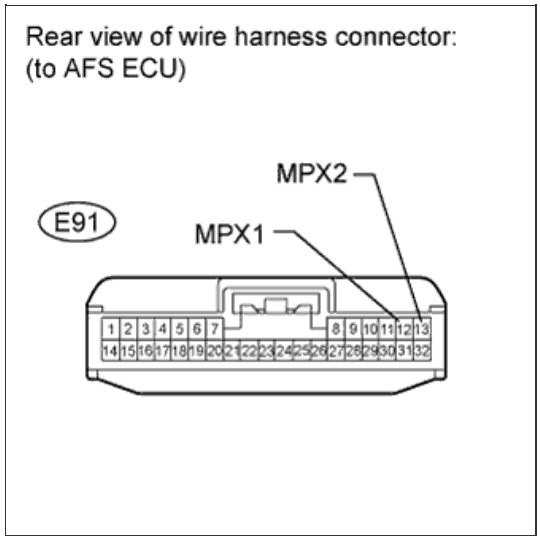
A

11.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AFS ECU BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	Engine switch off	54 to 69 Ω



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (AFS ECU)

OK

REPLACE AFS ECU (Click here)

12.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (NETWORK GATEWAY ECU BRANCH WIRE)

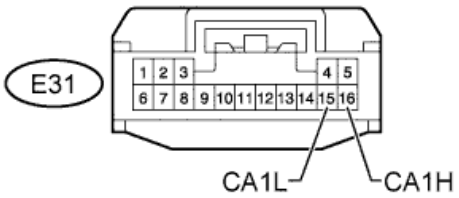
a. Disconnect the E31 network gateway ECU connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)	Engine switch off	54 to 69 Ω

Front view of wire harness connector:
(to Network Gateway ECU)



T

NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (NETWORK GATEWAY ECU)

OK

REPLACE NETWORK GATEWAY ECU (Click here)

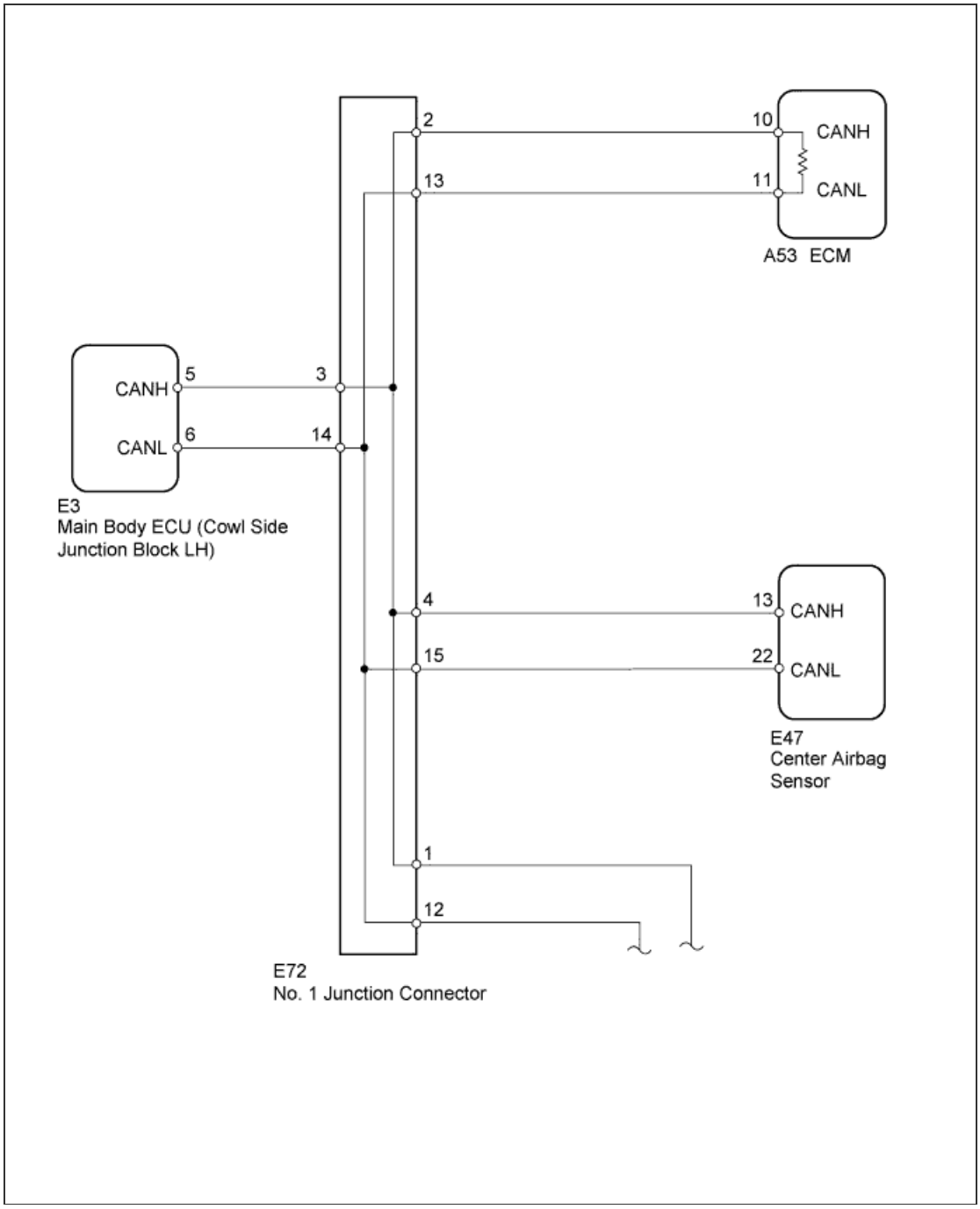
for Preparation Click here

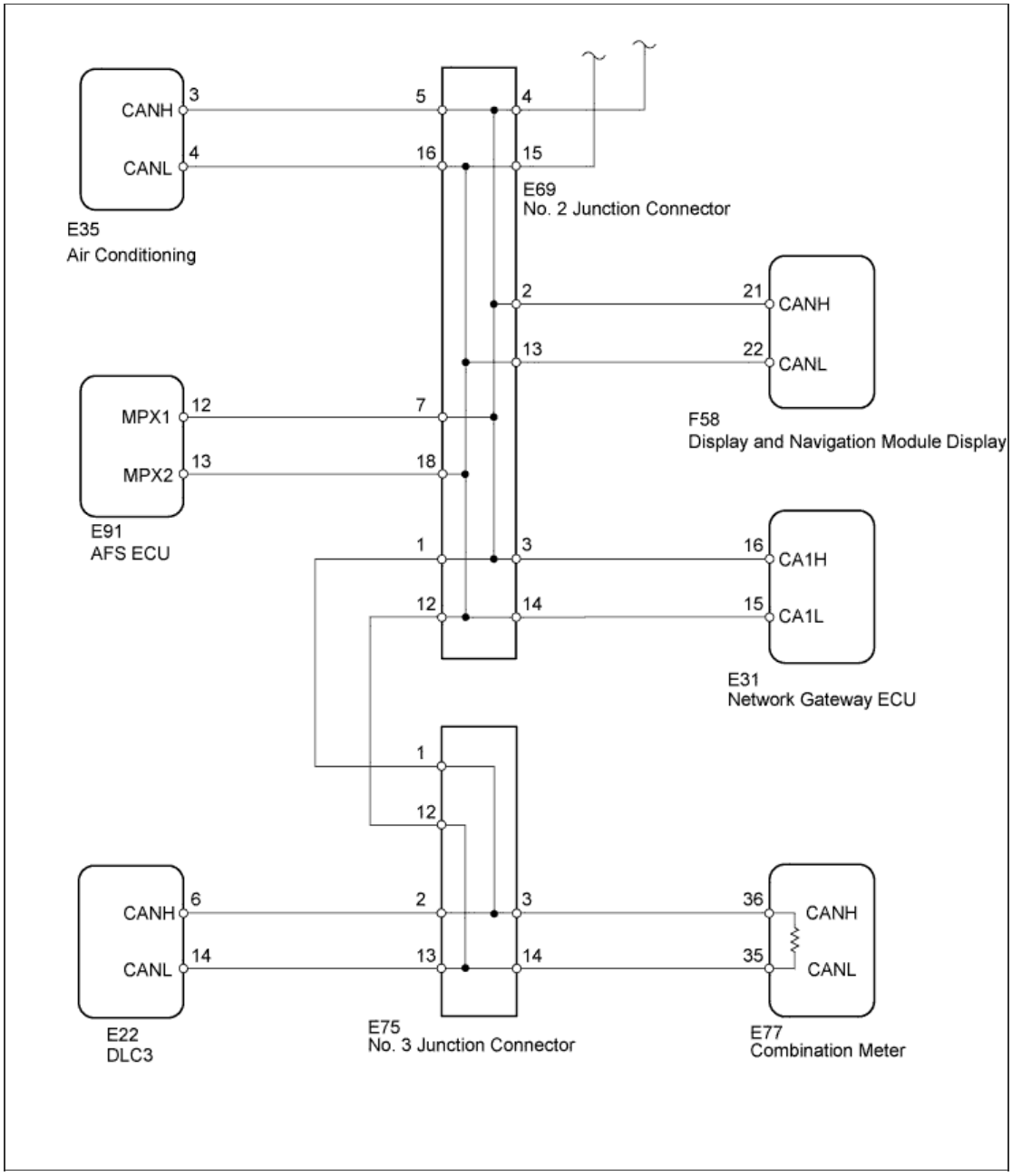
DESCRIPTION

If 2 or more ECUs and/or sensors do not appear on the intelligent tester "Bus Check" screen, one side of the CAN branch wire may be open (One side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

Symptom	Trouble Area
2 or more ECUs and/or sensors do not appear on the intelligent tester "Bus Check" screen.	• One side of CAN branch wire is open • Display and navigation module display • Center airbag sensor assembly • Air conditioning amplifier assembly • Main body ECU (cowl side junction block LH) • Network gateway ECU • AFS ECU (headlight swivel ECU assembly)

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:

- **Perform the following inspection for the ECUs (sensors) which are not displayed on the intelligent tester. If a malfunction cannot be identified, perform the following inspections for the ECUs (sensors) connected to the CAN communication system.**
- **Do not remove the combination meter and ECM, as they are the end parts of the circuit. If removed, CAN communication will not be possible.**
- **The open circuit confirmation of the combination meter, ECM and main wire is performed in the Check CAN Bus Line procedure of How to Proceed with Troubleshooting. This inspection only has procedures for checking for an open circuit on one side of the CAN branch wire.**

1.DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

a. Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

NEXT

2.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY)

a. Disconnect the F58 display and navigation module display connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

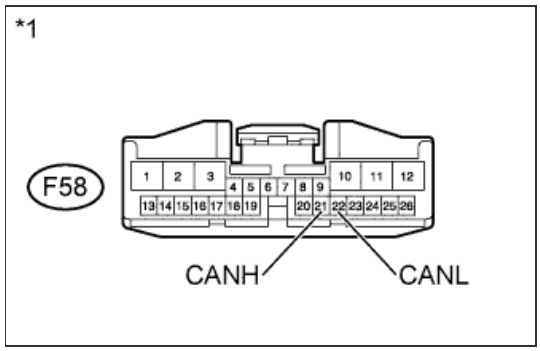
Result	Proceed to
"AVN1" not displayed on intelligent tester.	A
Several ECUs and sensors other than "AVN1" not displayed on intelligent tester.	B

B → Go to step 4

A

3.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (DISPLAY AND NAVIGATION MODULE DISPLAY BRANCH WIRE)

a. Measure the resistance according to the value(s) in the table below.



Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F58-21 (CANH) - F58-22 (CANL)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to Display and Navigation Module Display)

Result

Result	Proceed to
OK (w/ Navigation System)	A
OK (w/o Navigation System)	B
NG	C

B → REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

C → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (DISPLAY AND NAVIGATION MODULE DISPLAY)

A

REPLACE DISPLAY AND NAVIGATION MODULE DISPLAY (Click here)

4.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR)

a. Disconnect the E47 center airbag sensor connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"SRS airbag" not displayed on intelligent tester.	A
Several ECUs and sensors other than "SRS airbag" not displayed on intelligent tester.	B

B → Go to step 6

A

5.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (CENTER AIRBAG SENSOR BRANCH WIRE)

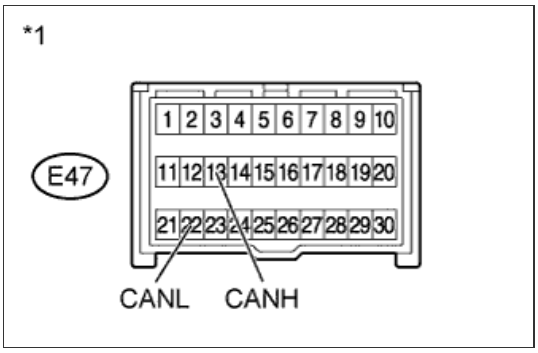
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E47-13 (CANH) - E47-22 (CANL)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to Center Airbag Sensor)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (CENTER AIRBAG SENSOR)

OK

REPLACE CENTER AIRBAG SENSOR ASSEMBLY (Click here)

6.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER)

a. Disconnect the E35 air conditioning amplifier connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Air Conditioner" not displayed on intelligent tester.	A
Several ECUs and sensors other than "Air Conditioner" not displayed on intelligent tester.	B

B → Go to step 8

A

7.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AIR CONDITIONING AMPLIFIER BRANCH WIRE)

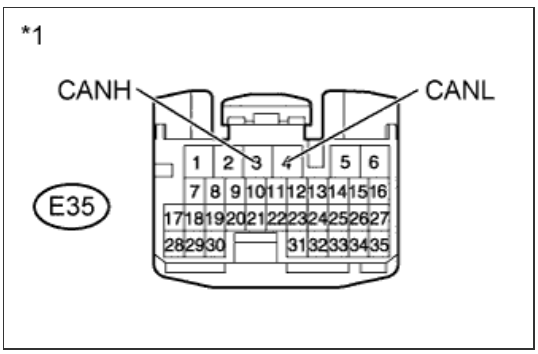
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E35-3 (CANH) - E35-4 (CANL)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to Air Conditioning Amplifier)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR

(AIR CONDITIONING AMPLIFIER)

OK

REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY (Click here)

8.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU)

a. Disconnect the E3 main body ECU (cowl side junction block LH) connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"Main Body" not displayed on intelligent tester.	A
Several ECUs and sensors other than "Main Body" not displayed on intelligent tester.	B

B → Go to step 10

A

9.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (MAIN BODY ECU BRANCH WIRE)

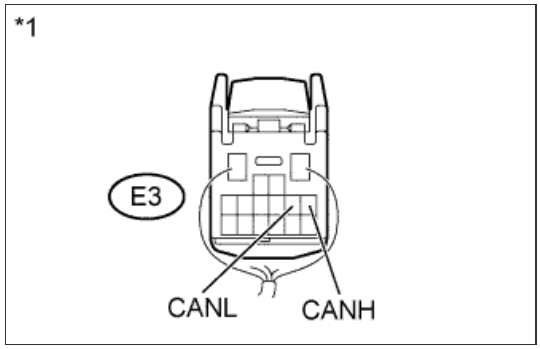
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E3-5 (CANH) - E3-6 (CANL)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Rear view of wire harness connector (to Main Body ECU)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (MAIN BODY ECU)

OK

REPLACE MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)

10.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AFS ECU)

a. Disconnect the E91 AFS ECU connector.

b. Select "Bus Check" on the intelligent tester (Click here).

Result

Result	Proceed to
"AFS/HL Auto Leveling" not displayed on intelligent tester.	A
Several ECUs and sensors other than "AFS/HL Auto Leveling" not displayed on intelligent tester.	B

B → Go to step 12

A

11.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (AFS ECU BRANCH WIRE)

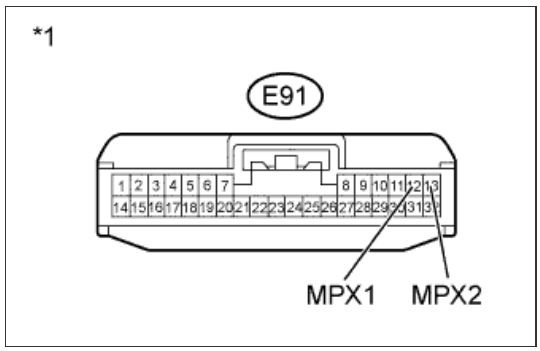
a. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E91-12 (MPX1) - E91-13 (MPX2)	Engine switch off	54 to 69 Ω

Text in Illustration

*1	Front view of wire harness connector (to AFS ECU)



NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (AFS ECU)

OK → REPLACE AFS ECU (Click here)

12.CHECK FOR OPEN IN ONE SIDE OF BRANCH WIRE (NETWORK GATEWAY ECU BRANCH WIRE)

a. Disconnect the E31 network gateway ECU connector.

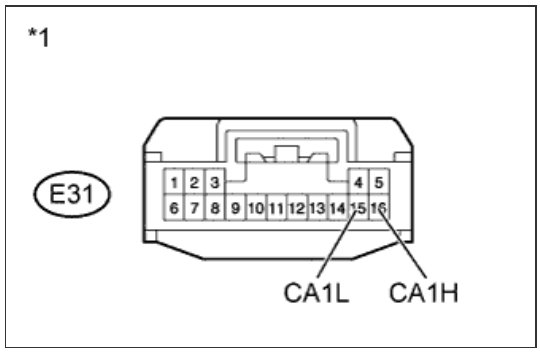
b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
E31-16 (CA1H) - E31-15 (CA1L)	Engine switch off	54 to 69 Ω

Text in Illustration

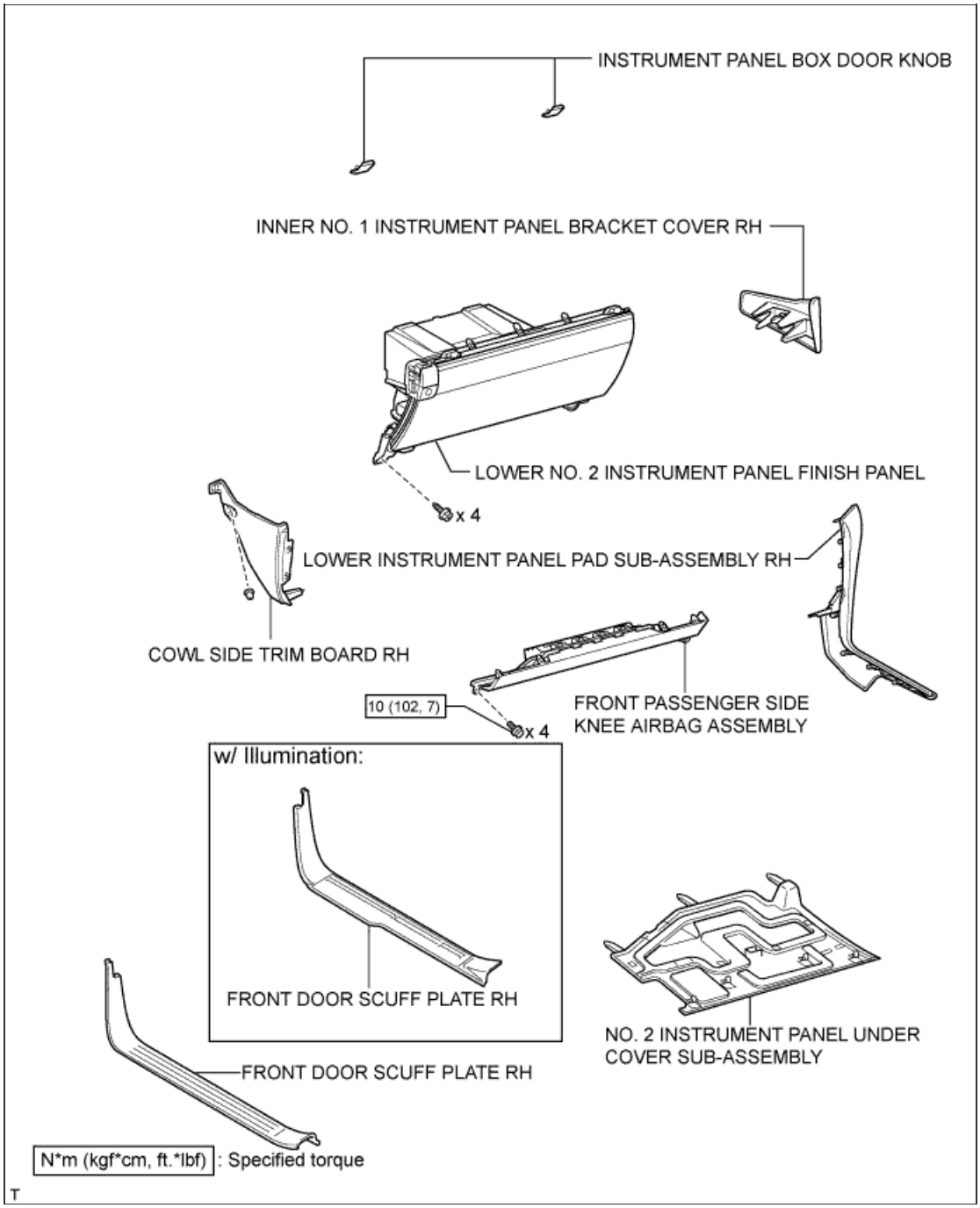
*1	Front view of wire harness connector (to Network Gateway ECU)

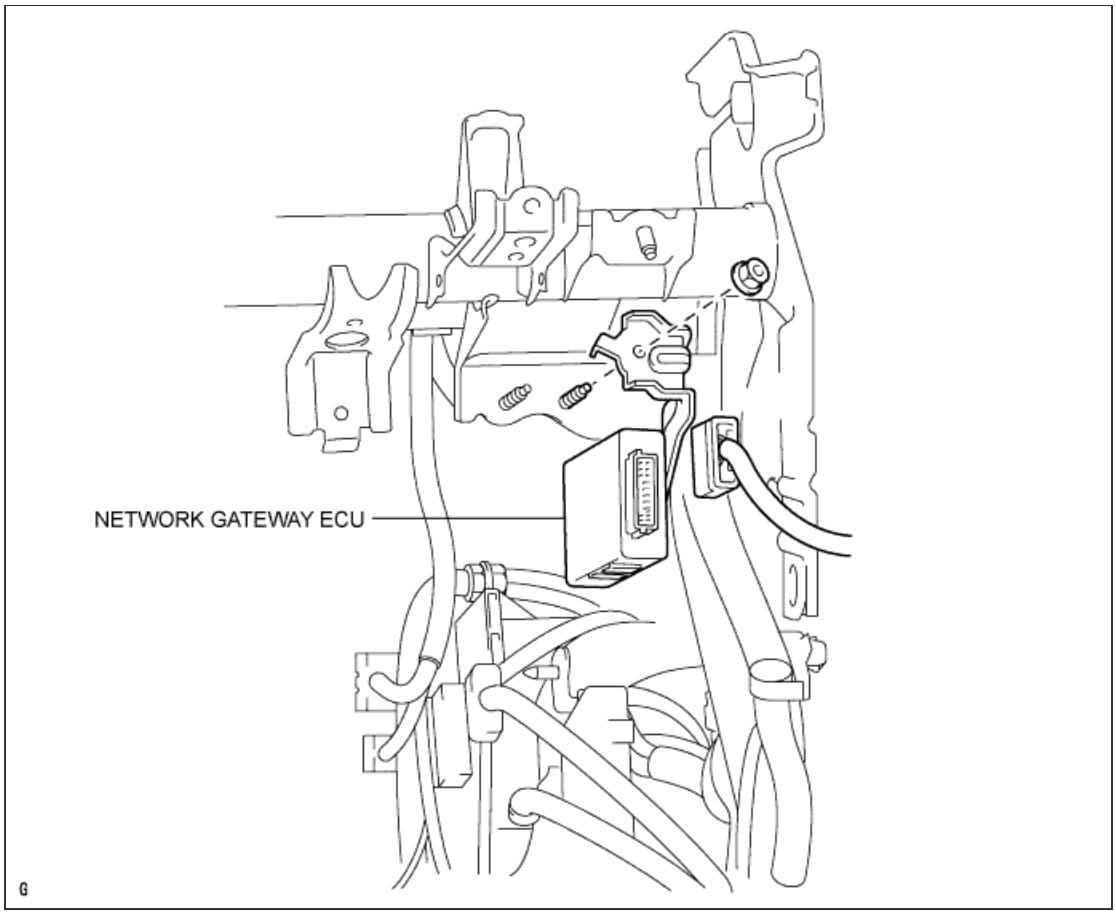


NG → REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR (NETWORK GATEWAY ECU)

OK → REPLACE NETWORK GATEWAY ECU (Click here)

for Preparation Click here

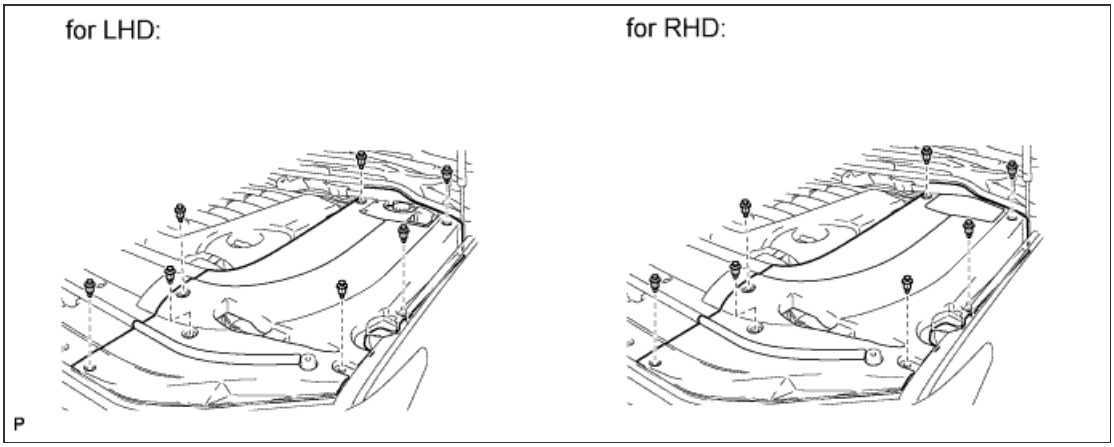



NETWORK GATEWAY ECU
G

for Preparation Click here

1. REMOVE ENGINE ROOM SIDE COVER LH

a. Remove the 7 clips and engine room side cover.



2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

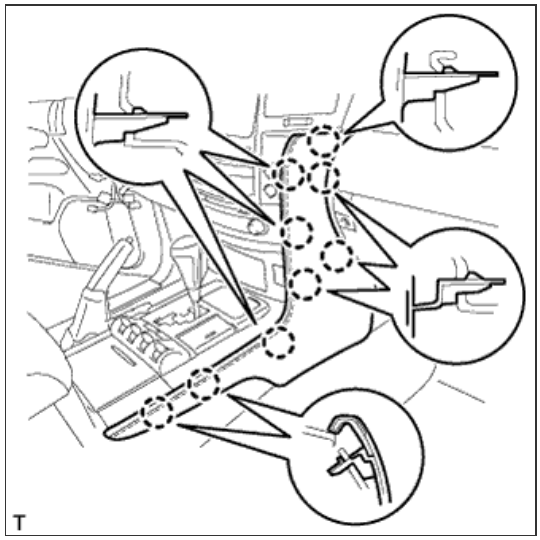
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

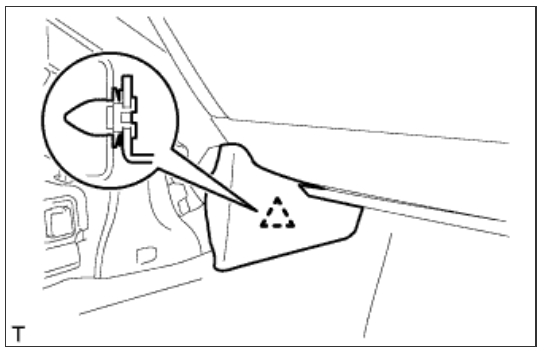
3. REMOVE LOWER INSTRUMENT PANEL PAD SUB-ASSEMBLY RH

a. Detach the 9 claws and remove the panel pad.



4. REMOVE INNER NO. 1 INSTRUMENT PANEL BRACKET COVER RH

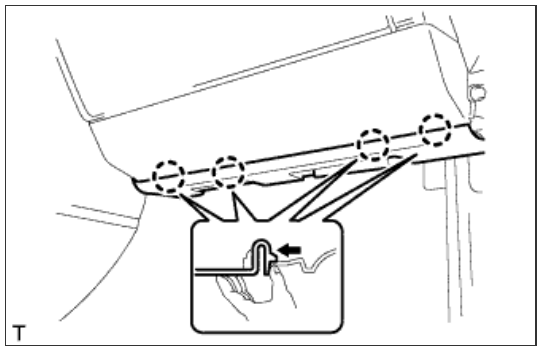
a. Detach the clip and remove the cover.



5. REMOVE NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY

a. Detach the 4 claws.

b. Remove the under cover and disconnect the connector.



6. REMOVE FRONT DOOR SCUFF PLATE RH

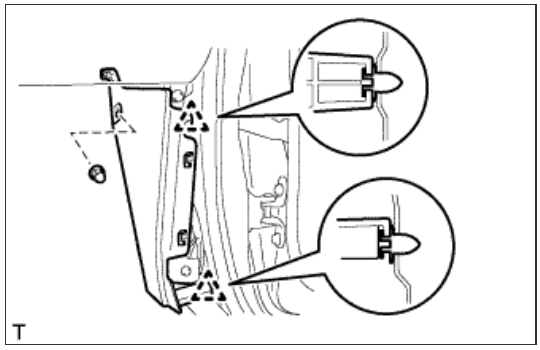
HINT:

Use the same procedures described for the LH side.

7. REMOVE COWL SIDE TRIM BOARD RH

a. Remove the cap nut.

b. Detach the 2 clips and remove the trim board.



8. REMOVE FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY

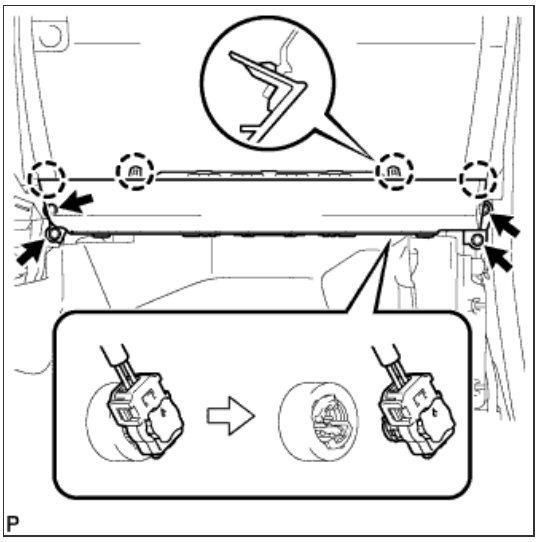
a. Remove the 4 bolts.

b. Detach the 4 claws and remove the front passenger side knee airbag.

c. Disconnect the connector.

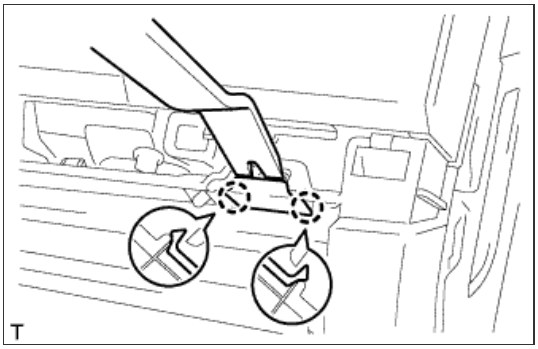
NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.



9. REMOVE INSTRUMENT PANEL BOX DOOR KNOB

a. Using a moulding remover, detach the 2 claws and remove the knob.

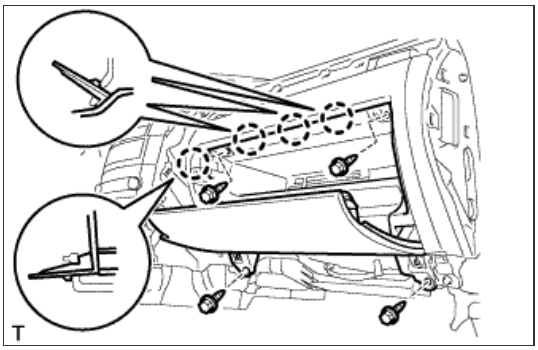


10. REMOVE LOWER NO. 2 INSTRUMENT PANEL FINISH PANEL

a. Remove the 4 bolts.

b. Detach the 4 claws.

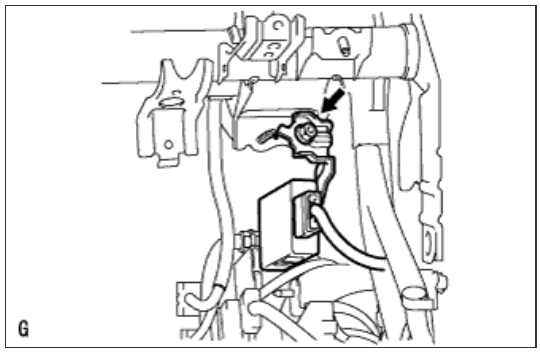
c. Remove the finish panel and then disconnect the connector.



11. REMOVE NETWORK GATEWAY ECU

a. Disconnect the connector.

b. Remove the nut and ECU.

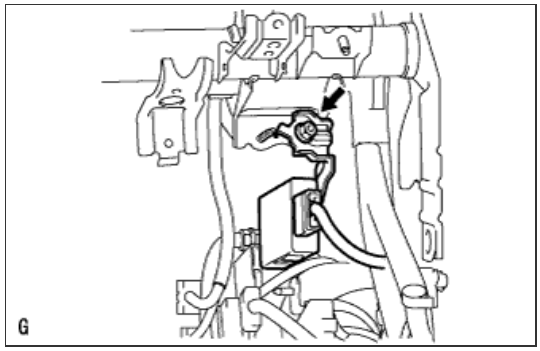

G

for Preparation Click here

1. INSTALL NETWORK GATEWAY ECU

a. Install the ECU with the nut.

b. Connect the connector.

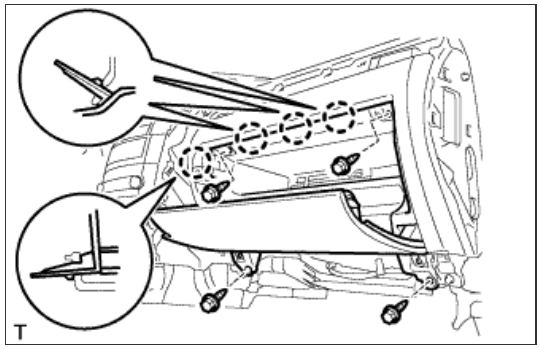


2. INSTALL LOWER NO. 2 INSTRUMENT PANEL FINISH PANEL

a. Connect the connector.

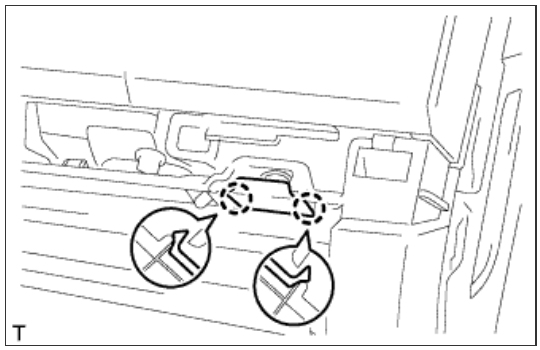
b. Attach the 4 claws to install the finish panel.

c. Install the 4 bolts.



3. INSTALL INSTRUMENT PANEL BOX DOOR KNOB

a. Attach the 2 claws to install the knob.



4. INSTALL FRONT PASSENGER SIDE KNEE AIRBAG ASSEMBLY

a. Connect the connector.

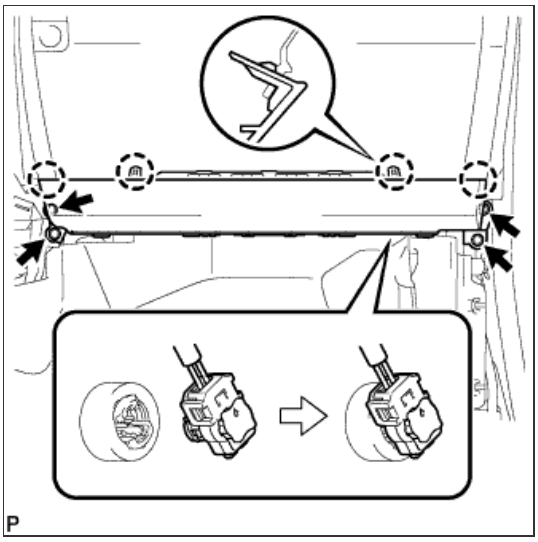
NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.

b. Attach the 4 claws to install the front passenger side knee airbag.

c. Install the 4 bolts.

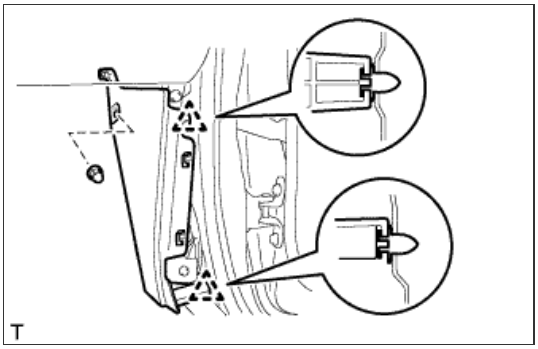
Torque:
10 N*m{ 102 kgf*cm , 7 ft.*lbf }



5. INSTALL COWL SIDE TRIM BOARD RH

a. Attach the 2 clips to install the trim board.

b. Install the cap nut.



6. INSTALL FRONT DOOR SCUFF PLATE RH

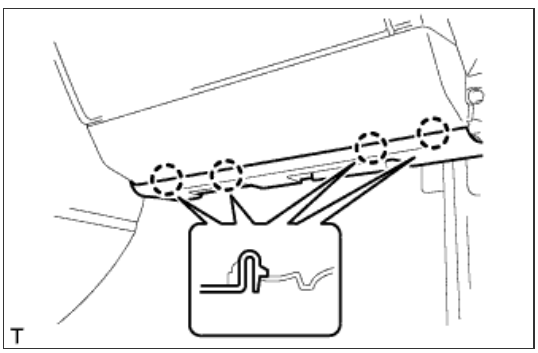
HINT:

Use the same procedures described for the LH side.

7. INSTALL NO. 2 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY

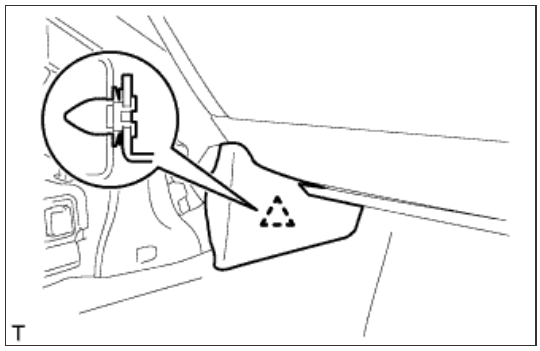
a. Connect the connector.

b. Attach the 4 claws to install the under cover.



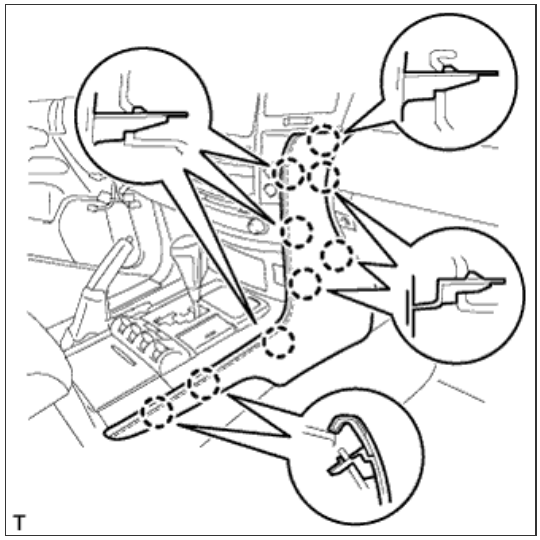
8. INSTALL INNER NO. 1 INSTRUMENT PANEL BRACKET COVER RH

a. Attach the clip to install the cover.



9. INSTALL LOWER INSTRUMENT PANEL PAD SUB-ASSEMBLY RH

a. Attach the 9 claws to install the panel pad.



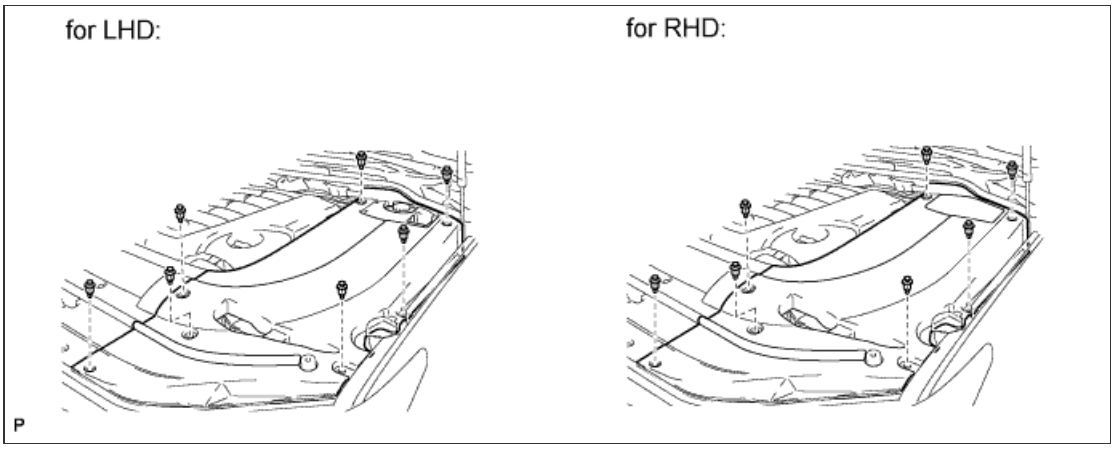
10. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

11. INSTALL ENGINE ROOM SIDE COVER LH

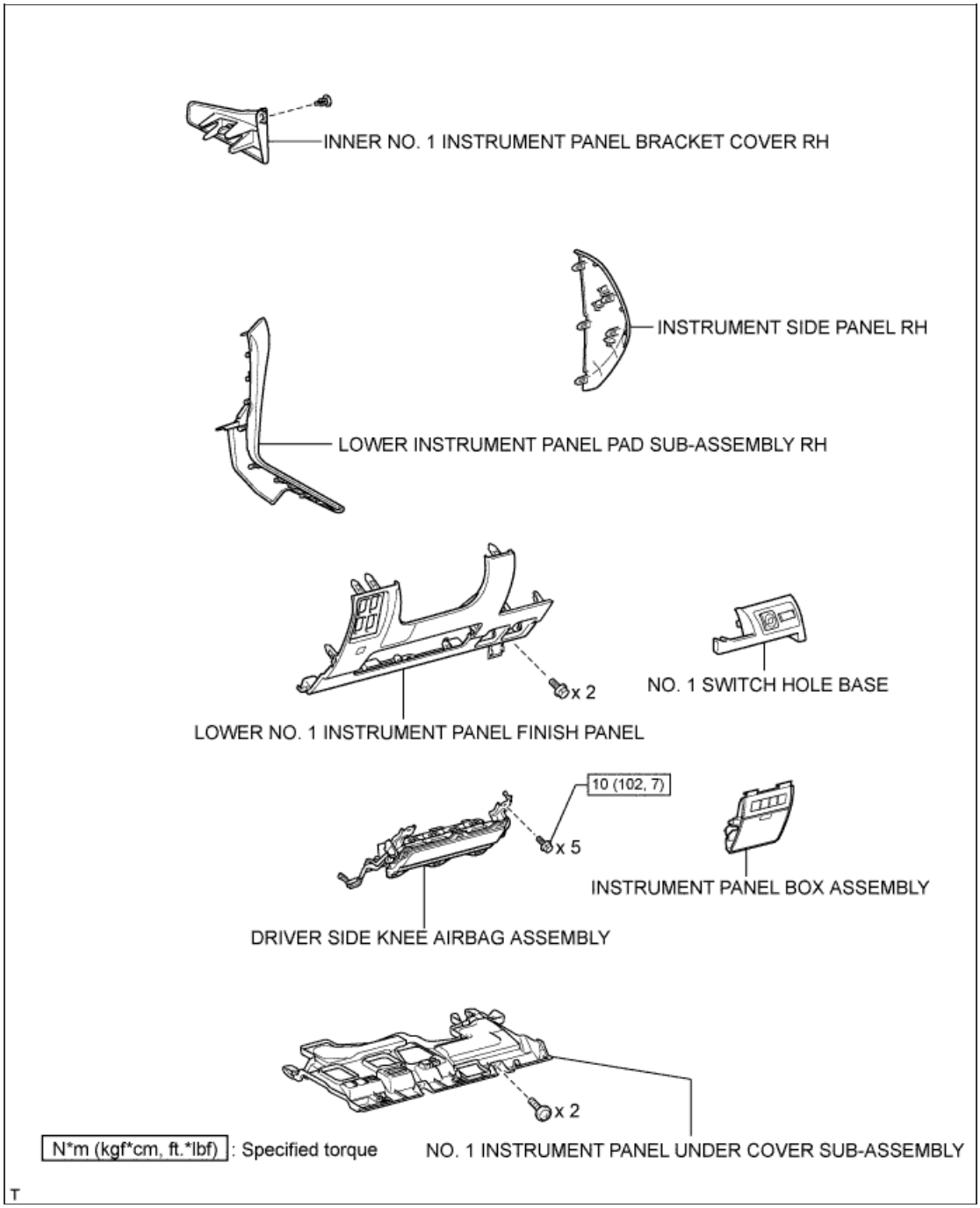
a. Install the engine room side cover with the 7 clips.

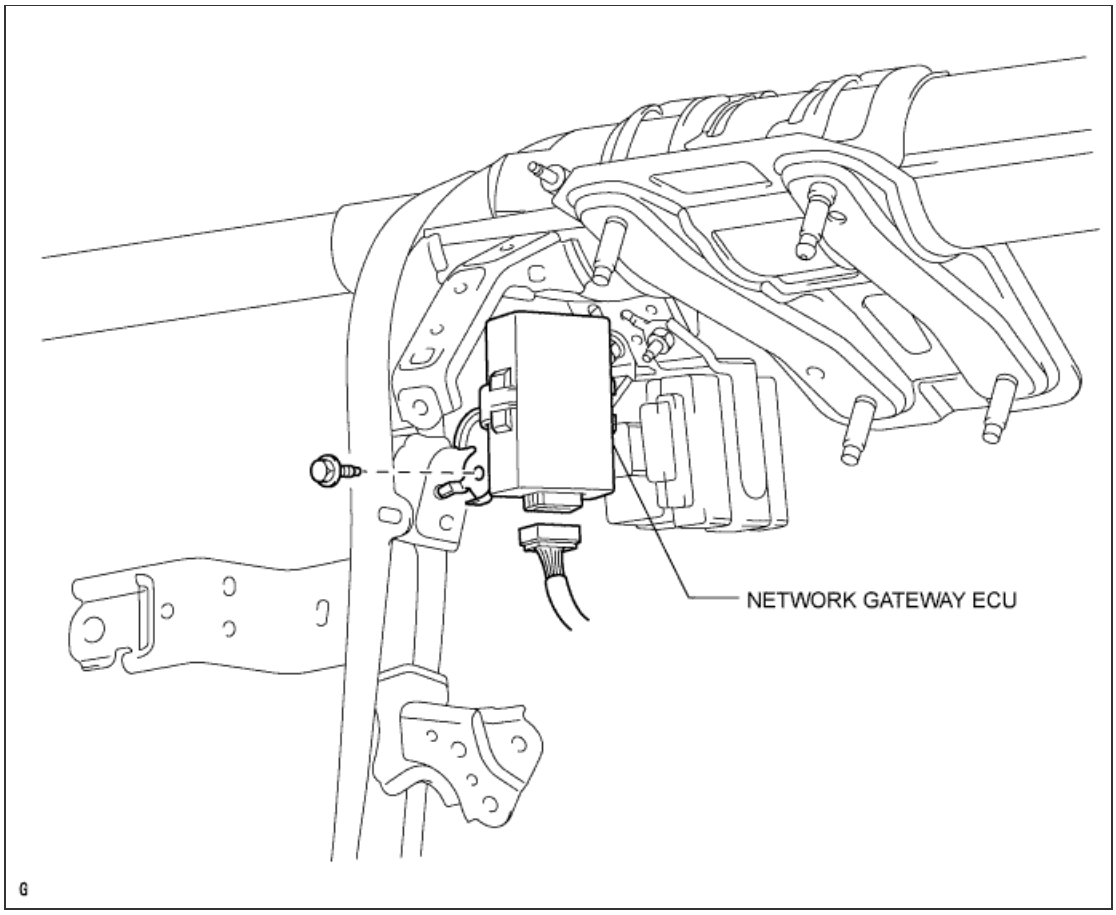


12. CHECK SRS WARNING LIGHT

a. Check the SRS warning light (Click here).

for Preparation Click here

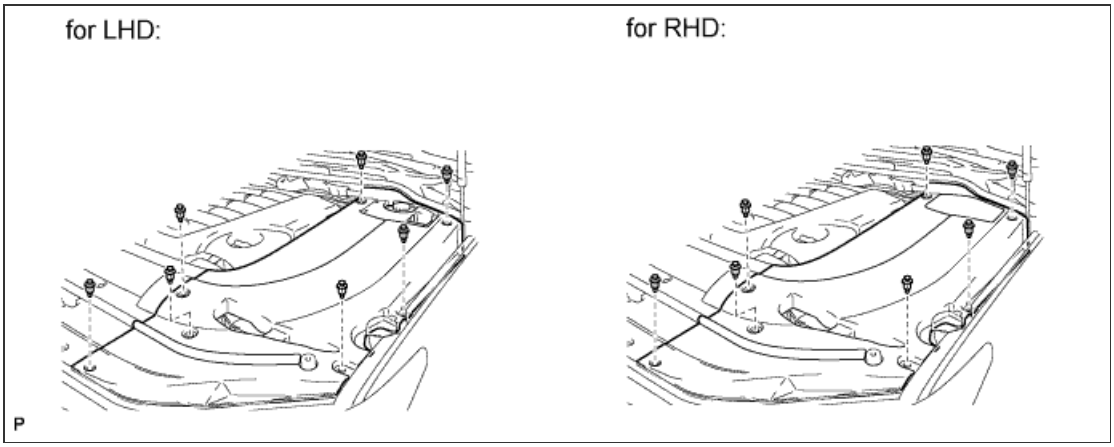



NETWORK GATEWAY ECU
G

for Preparation Click here

1. REMOVE ENGINE ROOM SIDE COVER LH

a. Remove the 7 clips and engine room side cover.



2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

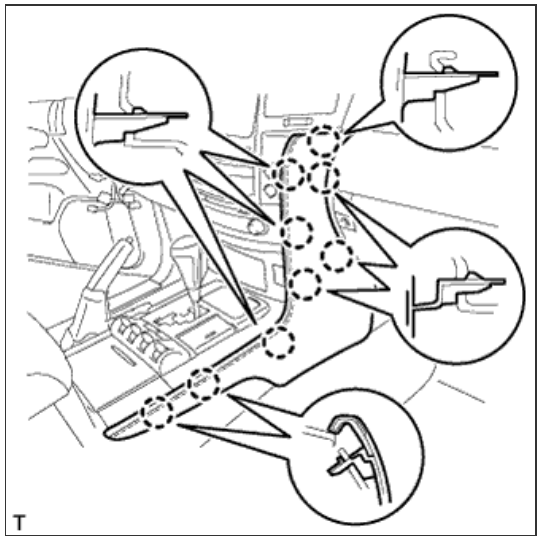
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

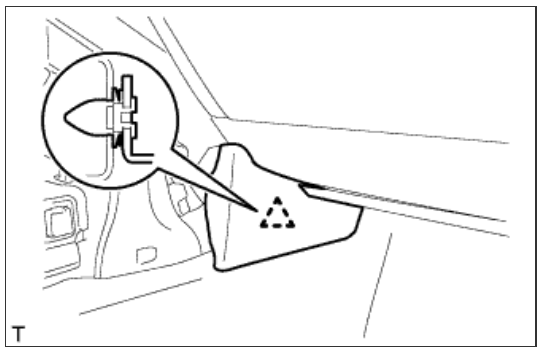
3. REMOVE LOWER INSTRUMENT PANEL PAD SUB-ASSEMBLY RH

a. Detach the 9 claws and remove the panel pad.



4. REMOVE INNER NO. 1 INSTRUMENT PANEL BRACKET COVER RH

a. Detach the clip and remove the cover.



5. REMOVE INSTRUMENT SIDE PANEL RH

a. w/o Airbag Cut Off Switch:

i. Place protective tape as shown in the illustration.

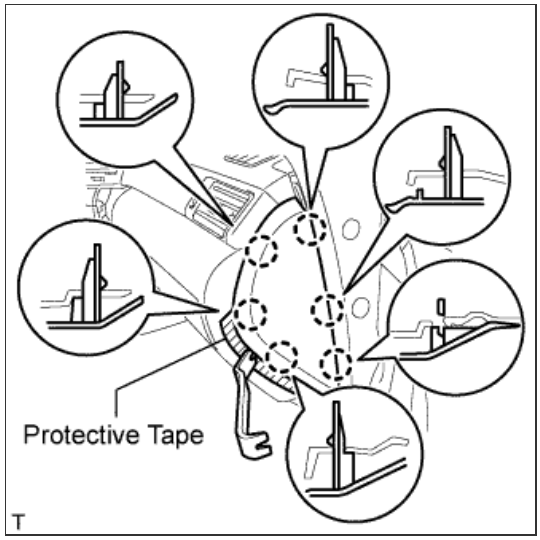
ii. Using a moulding remover, detach the 6 claws and remove the side panel.

b. w/ Airbag Cut Off Switch:

i. Place protective tape as shown in the illustration.

ii. Using a moulding remover, detach the 6 claws.

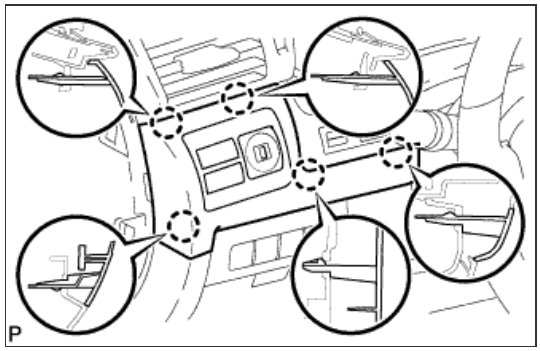
iii. Remove the side panel and disconnect the connector.



6. REMOVE NO. 1 SWITCH HOLE BASE

a. Detach the 5 claws.

b. Disconnect the connectors and remove the switch hole base.

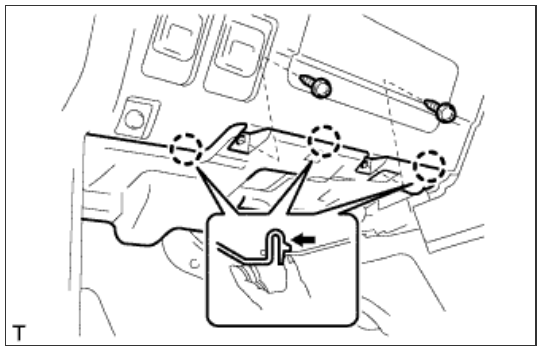


7. REMOVE NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY

a. Remove the 2 screws.

b. Detach the 3 claws.

c. Remove the under cover and disconnect the connectors.

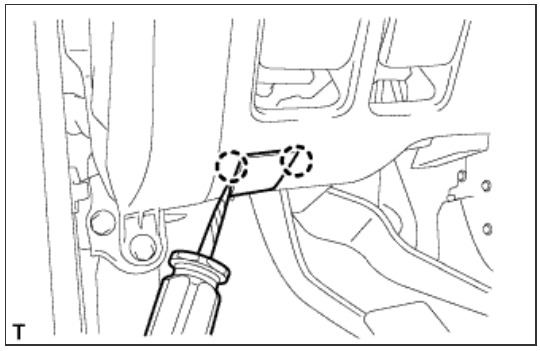


8. REMOVE LOWER NO. 1 INSTRUMENT PANEL FINISH PANEL

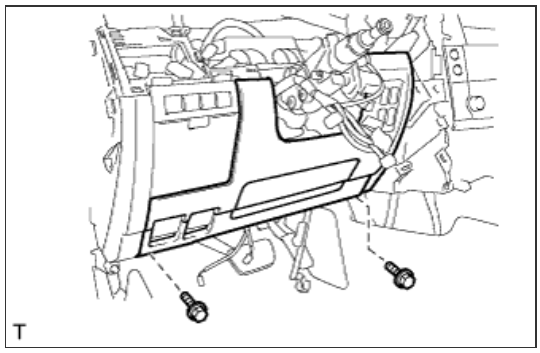
a. Using a screwdriver, detach the 2 claws and open the hole cover.

HINT:

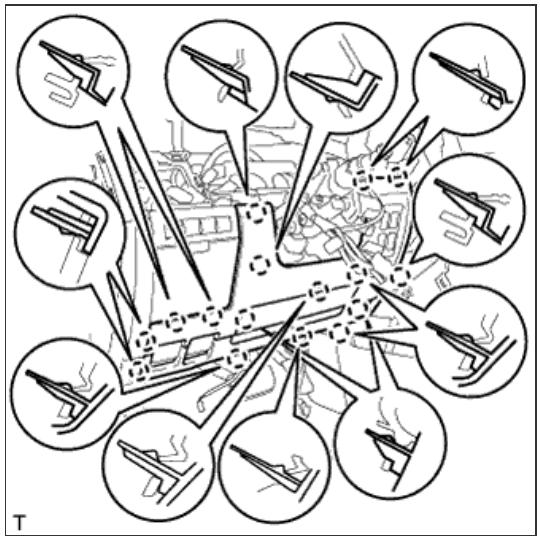
Tape the screwdriver tip before use.



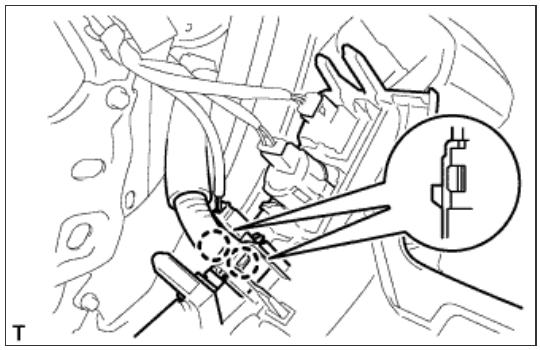
b. Remove the 2 bolts.



c. Detach the 16 claws.

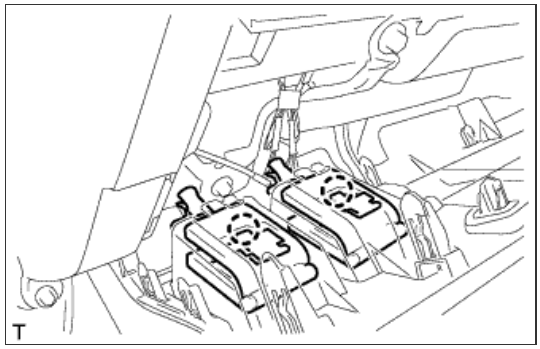


d. Detach the 2 claws and remove the sensor.



e. Detach the 2 claws and disconnect the 2 control cables.

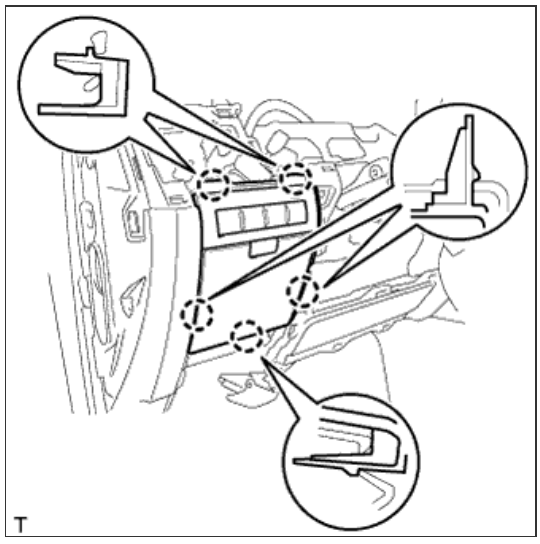
f. Remove the finish panel and then disconnect the connectors.



9. REMOVE INSTRUMENT PANEL BOX ASSEMBLY

a. Detach the 5 claws.

b. Remove the box and then disconnect the connectors.



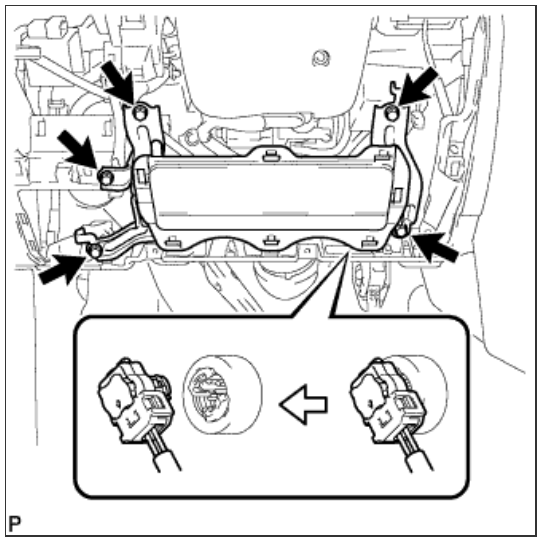
10. REMOVE DRIVER SIDE KNEE AIRBAG ASSEMBLY

a. Remove the 5 bolts and driver side knee airbag.

b. Disconnect the connector.

NOTICE:

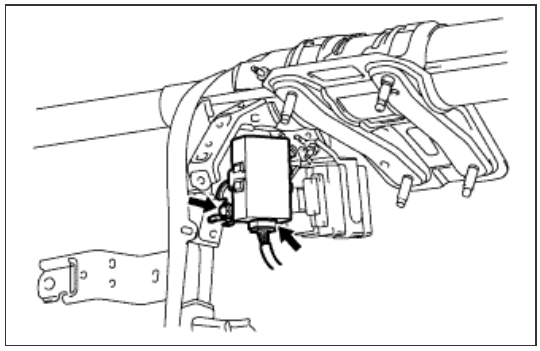
When handling the airbag connector, take care not to damage the airbag wire harness.



11. REMOVE NETWORK GATEWAY ECU

a. Disconnect the connector.

b. Remove the bolt and ECU.

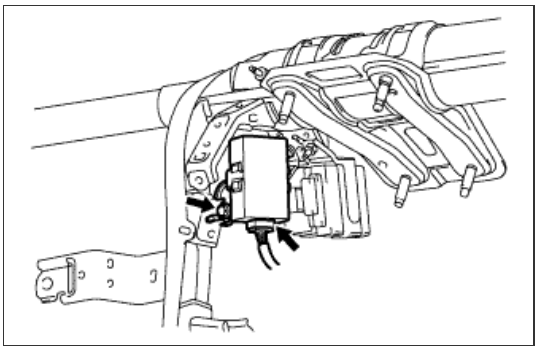


for Preparation Click here

1. INSTALL NETWORK GATEWAY ECU

a. Install the ECU with the bolt.

b. Connect the connector.



2. INSTALL DRIVER SIDE KNEE AIRBAG ASSEMBLY

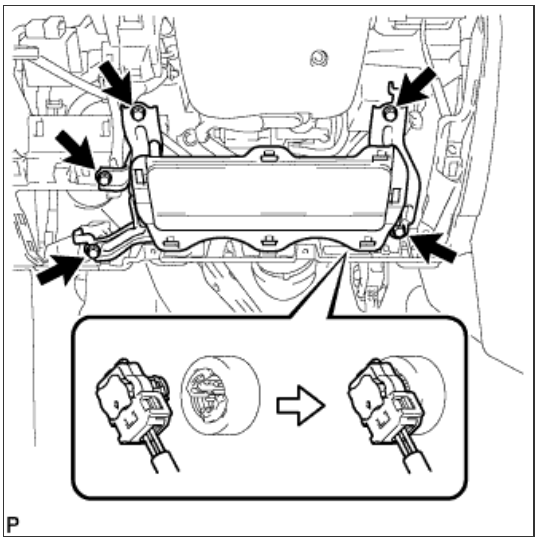
a. Connect the connector.

NOTICE:

When handling the airbag connector, take care not to damage the airbag wire harness.

b. Install the driver side knee airbag with the 5 bolts.

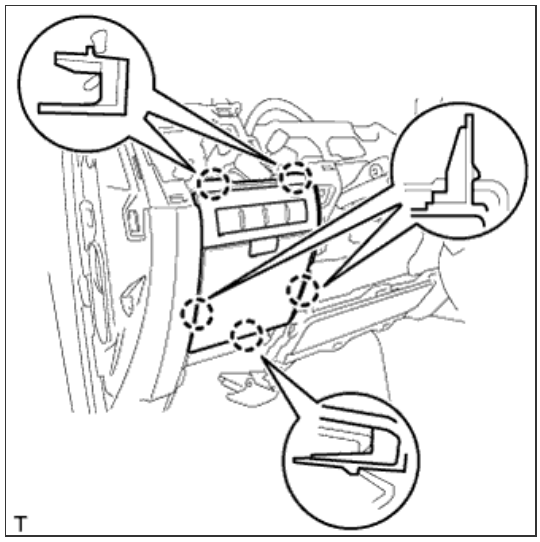
Torque:
10 N*m{ 102 kgf*cm , 7 ft.*lbf }



3. INSTALL INSTRUMENT PANEL BOX ASSEMBLY

a. Connect the connectors.

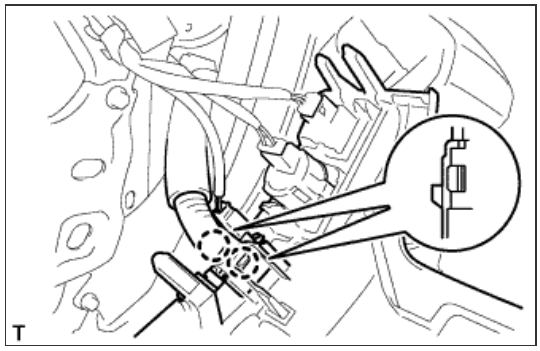
b. Attach the 5 claws to install the box.



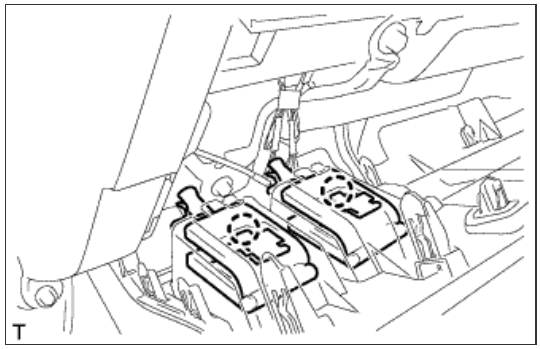
4. INSTALL LOWER NO. 1 INSTRUMENT PANEL FINISH PANEL

a. Connect the connectors.

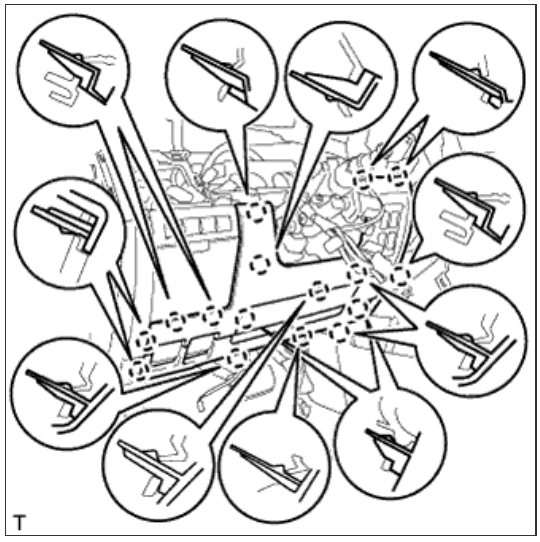
b. Attach the 2 claws to install the sensor.



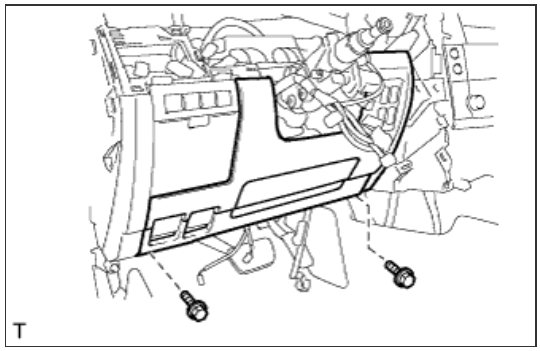
c. Attach the 2 claws to connect the 2 control cables.



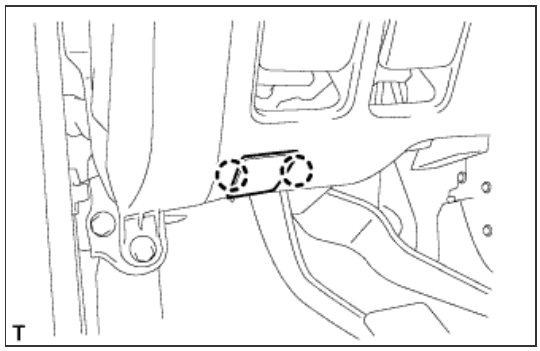
d. Attach the 16 claws to install the finish panel.



e. Install the 2 bolts.



f. Attach the 2 claws to close the hole cover.

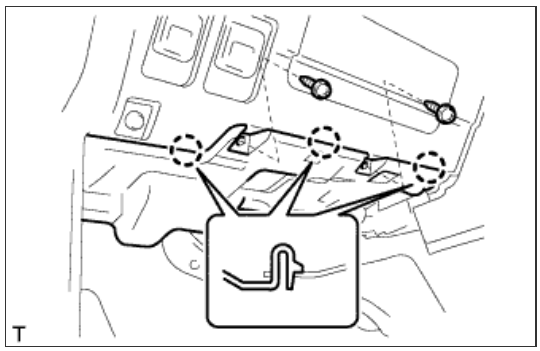


5. INSTALL NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY

a. Connect the connectors.

b. Attach the 3 claws to install the under cover.

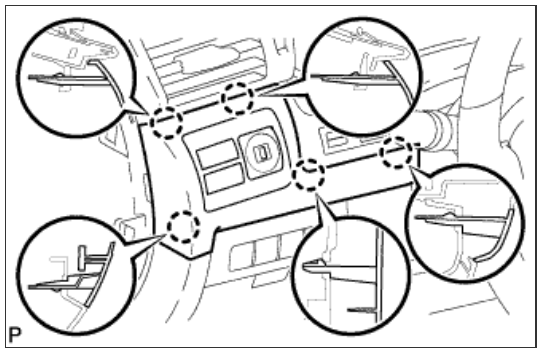
c. Install the 2 screws.



6. INSTALL NO. 1 SWITCH HOLE BASE

a. Connect the connectors.

b. Attach the 5 claws to install the switch hole base.



7. INSTALL INSTRUMENT SIDE PANEL RH

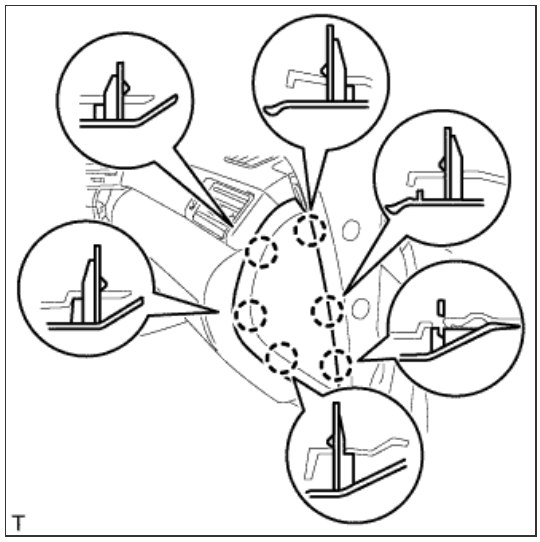
a. w/o Airbag Cut Off Switch:

i. Attach the 6 claws to install the side panel.

b. w/ Airbag Cut Off Switch:

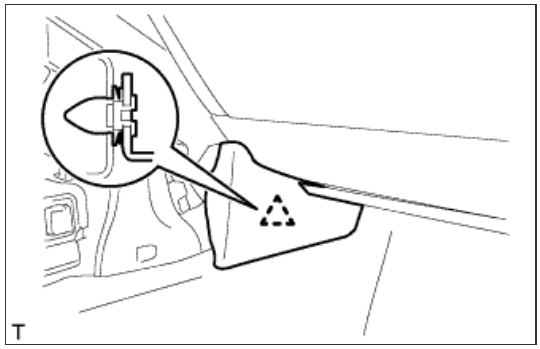
i. Connect the connector.

ii. Attach the 6 claws to install the side panel.



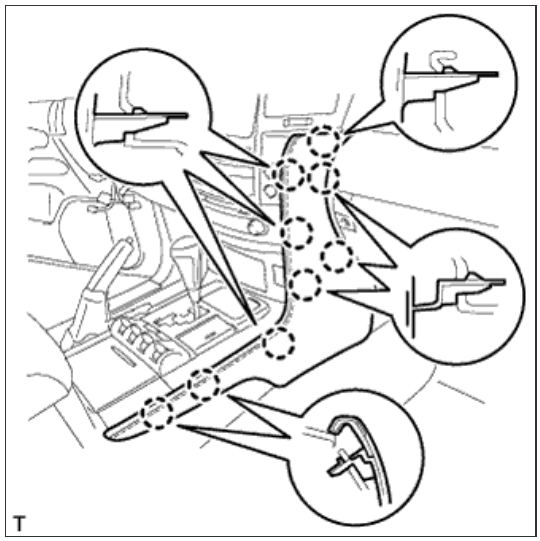
8. INSTALL INNER NO. 1 INSTRUMENT PANEL BRACKET COVER RH

a. Attach the clip to install the cover.



9. INSTALL LOWER INSTRUMENT PANEL PAD SUB-ASSEMBLY RH

a. Attach the 9 claws to install the panel pad.



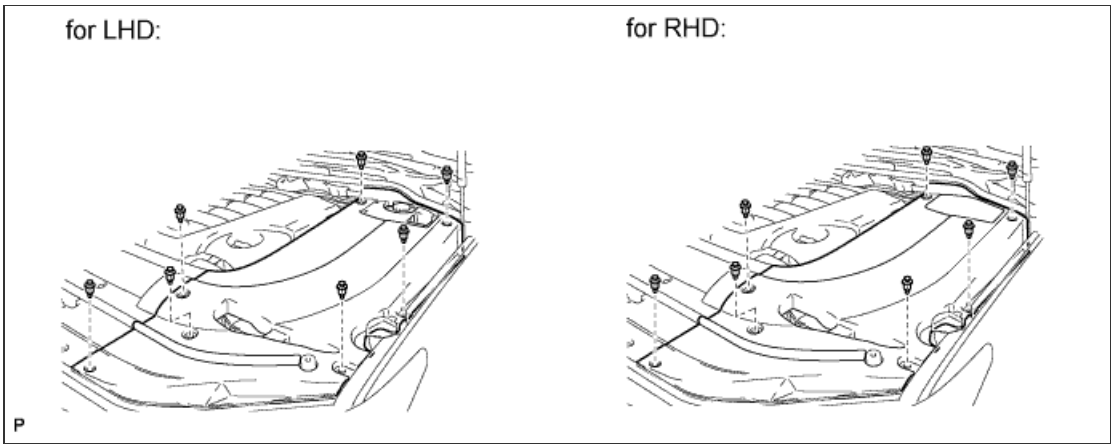
10. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected (Click here).

11. INSTALL ENGINE ROOM SIDE COVER LH

a. Install the engine room side cover with the 7 clips.



12. CHECK SRS WARNING LIGHT

a. Check the SRS warning light (Click here).