Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2002 LEXUS LX OEM Service and Repair Workshop Manual

Go to manual page

Sample

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CAUTION:

When performing the confirmation driving pattern, obey all speed limits and traffic laws.

NOTICE:

- Because the order of diagnosis is important to allow correct diagnosis, make sure to begin troubleshooting using How to Proceed with Troubleshooting when CAN communication system related DTCs are output.

  Click here INFO
- Inspect the fuses for circuits related to this system before performing the following procedure.
- Before measuring the resistance of the CAN bus, turn the ignition switch off and leave the vehicle for 1 minute or more without operating the key or any switches, or opening or closing the doors. After that, disconnect the cable from the negative (-) battery terminal and leave the vehicle for 10 minutes or more before measuring the resistance.
- After the ignition switch is turned off, there may be a waiting time before disconnecting the negative (-) battery terminal.

  Click here INFO
- When disconnecting and reconnecting the battery.

  HINT:

  When disconnecting and reconnecting the battery, there is an automatic learning function that completes learning when the respective system is used.

  Click here INFO
- Some parts must be initialized and set when replacing or removing and installing parts.

  Click here INFO
- After performing repairs, perform the DTC check procedure and confirm that the DTCs are not output again.

  DTC check procedure: Turn the ignition switch to ON and wait for 1 minute or more. Then operate the suspected malfunctioning system and drive the vehicle at 60 km/h (37 mph) or more for 5 minutes or more.
- After the repair, perform the CAN bus check and check that all the ECUs and sensors connected to the CAN communication system are displayed as normal.

  Click here INFO

HINT:

- Before disconnecting related connectors for inspection, push in on each connector body to check that the connector is not loose or disconnected.
- When a connector is disconnected, check that the terminals and connector body are not cracked, deformed or corroded.

Sample

PROCEDURE

1.	CHECK FOR OPEN IN CAN BUS WIRE (FRONT SIDE RADAR SENSOR (A) BRANCH WIRE)

(a) Disconnect the cable from the negative (-) battery terminal.

(b) Disconnect the A64 front side radar sensor (A) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(A64)
Click Connector(A64)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A64-3 (CA1P) - A64-2 (CA1N)	Cable disconnected from negative (-) battery terminal	54 to 69 Ω

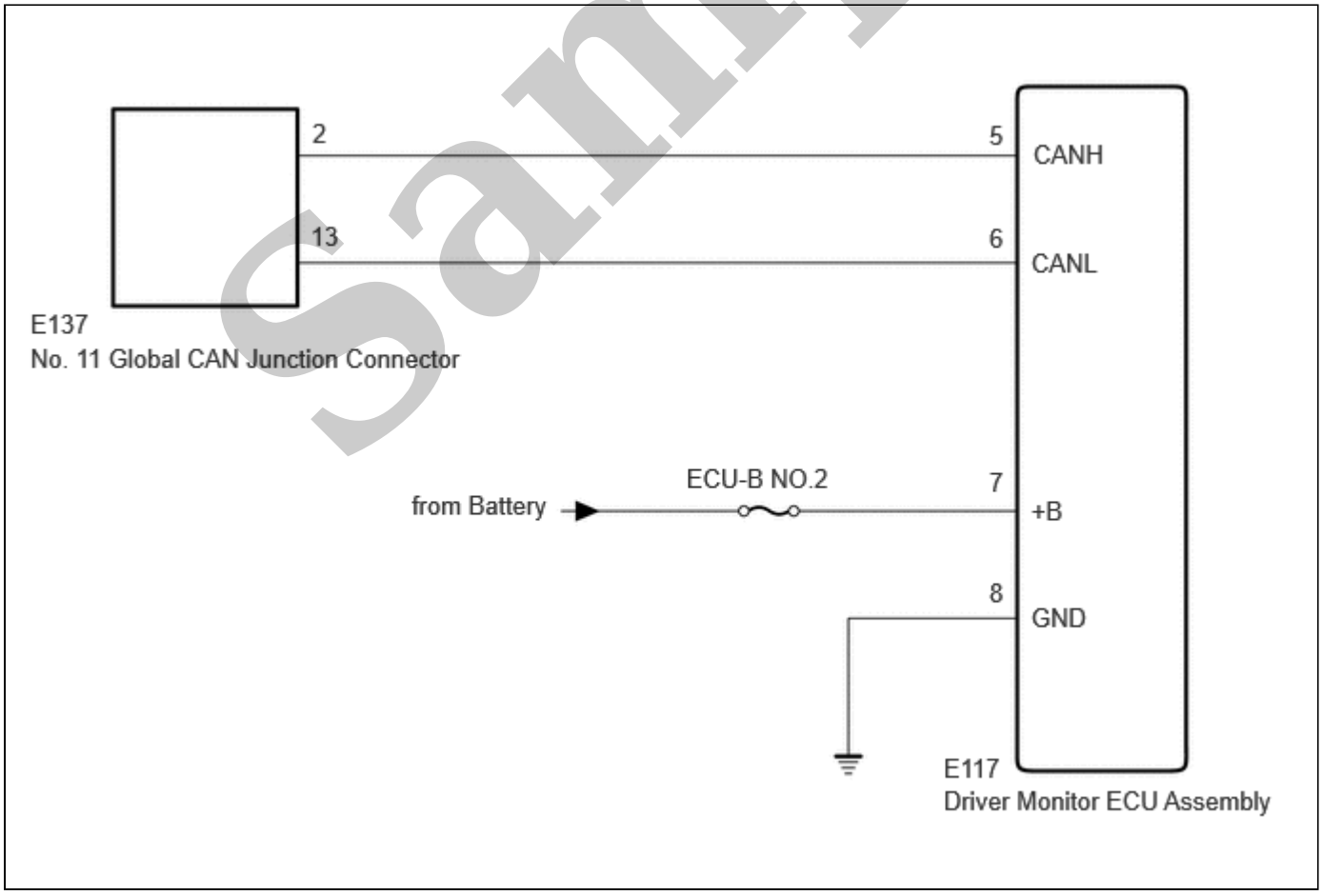
Last Modified: 10-07-2024	6.11:8.1.0	**Doc ID:** RM100000002HACW
Model Year Start: 2024	**Model:** GX550	**Prod Date Range:** [12/2023 -]
Title: NETWORKING: CAN COMMUNICATION SYSTEM: Driver Monitor Camera Control ECU Communication Stop Mode; 2024 MY GX550 [12/2023 -]		

Driver Monitor Camera Control ECU Communication Stop Mode

DESCRIPTION

DETECTION ITEM	SYMPTOM	TROUBLE AREA
Driver Monitor Camera Control ECU Communication Stop Mode	Communication stop for "Driver Monitor Camera Control " is indicated on the "Communication Bus Check" screen of the GTS. Click here INFO	• Driver monitor ECU assembly branch wire or connector • Power source circuit of driver monitor ECU assembly • Driver monitor ECU assembly ground circuit • Driver monitor ECU assembly

WIRING DIAGRAM



Sample

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E117-5 (CANH) - E117-6 (CANL)	Cable disconnected from negative (-) battery terminal	54 to 69 Ω

NG ▶ **REPAIR OR REPLACE CAN BRANCH WIRE OR CONNECTOR**

OK ▼

2.	CHECK HARNESS AND CONNECTOR (POWER SOURCE CIRCUIT)

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

Standard Resistance:

EWD INFO

Click Location & Routing(E117)
Click Connector(E117)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E117-8 (GND) - Body ground	Cable disconnected from negative (-) battery terminal	Below 1 Ω

(b) Reconnect the cable to the negative (-) battery terminal.

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

Standard Voltage:

EWD INFO

Click Location & Routing(E117)
Click Connector(E117)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E117-7 (+B) - Body ground	Always	11 to 14 V

OK ▶ **REPLACE DRIVER MONITOR ECU ASSEMBLY**

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR (POWER SOURCE CIRCUIT)**

Sample

Click here INFO

- When disconnecting and reconnecting the battery.

HINT:

When disconnecting and reconnecting the battery, there is an automatic learning function that completes learning when the respective system is used.

Click here INFO

- Some parts must be initialized and set when replacing or removing and installing parts.

Click here INFO

- After performing repairs, perform the DTC check procedure and confirm that the DTCs are not output again.

DTC check procedure: Turn the ignition switch to ON and wait for 1 minute or more. Then operate the suspected malfunctioning system and drive the vehicle at 60 km/h (37 mph) or more for 5 minutes or more.

- After the repair, perform the CAN bus check and check that all the ECUs and sensors connected to the CAN communication system are displayed as normal.

Click here INFO

HINT:

- Before disconnecting related connectors for inspection, push in on each connector body to check that the connector is not loose or disconnected.
- When a connector is disconnected, check that the terminals and connector body are not cracked, deformed or corroded.

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (POWER SOURCE CIRCUIT)

(a) Disconnect the o3 forward recognition camera connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(o3)
Click Connector(o3)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
o3-13 (GND) - Body ground	Always	Below 1 Ω

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

Standard Voltage:

EWD INFO

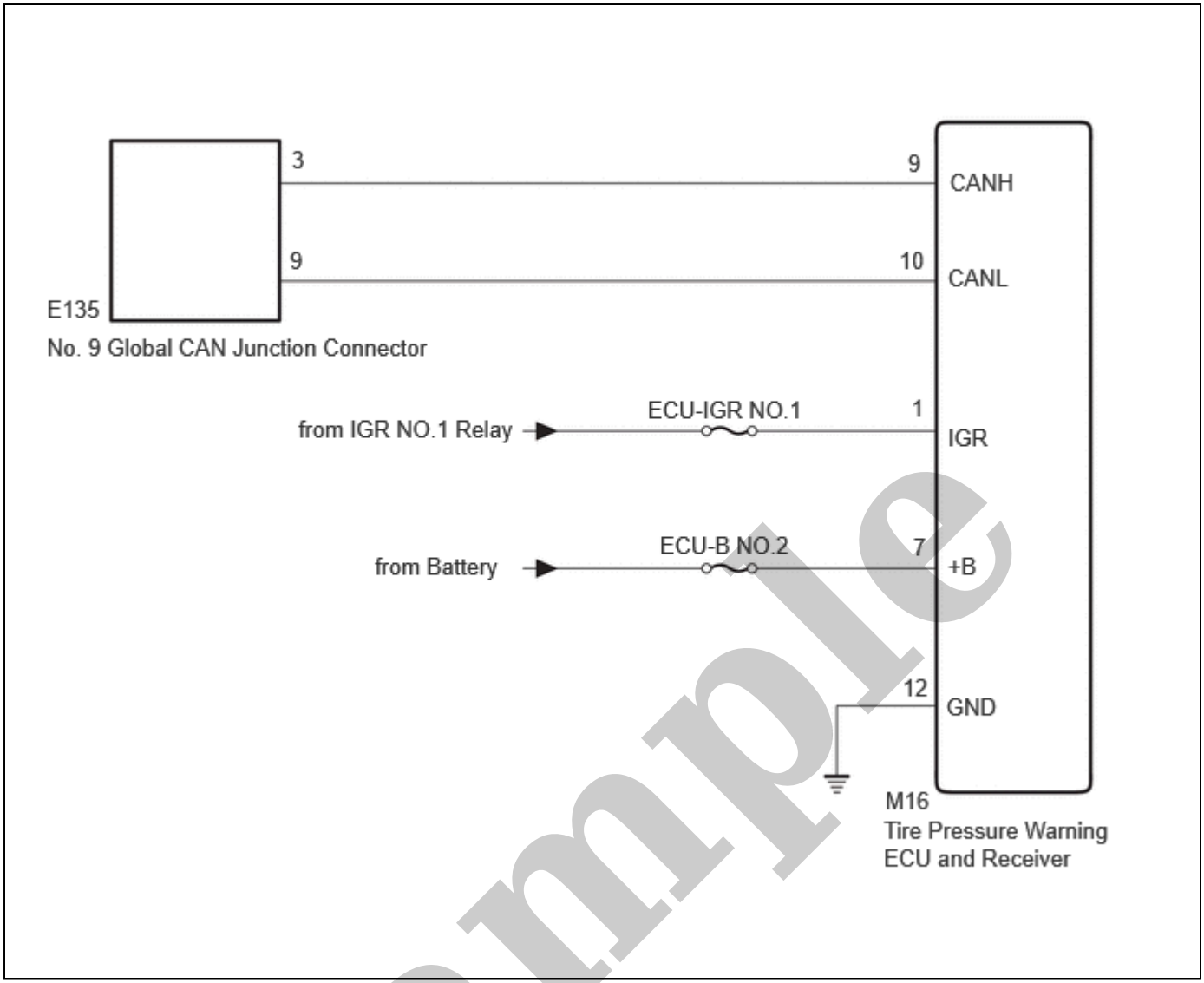
Click Location & Routing(o3)
Click Connector(o3)

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
o3-16 (IGB) - Body ground	Ignition switch ON	11 to 14 V

OK ▶ **REPLACE FORWARD RECOGNITION CAMERA**

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

Sample



Sample

CAUTION / NOTICE / HINT

CAUTION:

When performing the confirmation driving pattern, obey all speed limits and traffic laws.

NOTICE:

- Because the order of diagnosis is important to allow correct diagnosis, make sure to begin troubleshooting using How to Proceed with Troubleshooting when CAN communication system related DTCs are output.

  Click here INFO
- Inspect the fuses for circuits related to this system before performing the following procedure.
- Before measuring the resistance of the CAN bus, turn the ignition switch off and leave the vehicle for 1 minute or more without operating the key or any switches, or opening or closing the doors. After that, disconnect the cable from the negative (-) battery terminal and leave the vehicle for 10 minutes or more before measuring the resistance.
- After the ignition switch is turned off, there may be a waiting time before disconnecting the negative (-) battery terminal.

  Click here INFO
- When disconnecting and reconnecting the battery.

HINT:

When disconnecting and reconnecting the battery, there is an automatic learning function that completes learning when the respective system is used.

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M16-12 (GND) - Body ground	Cable disconnected from negative (-) battery terminal	Below 1 Ω

(b) Reconnect the cable to the negative (-) battery terminal.

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

Standard Voltage:

EWD INFO

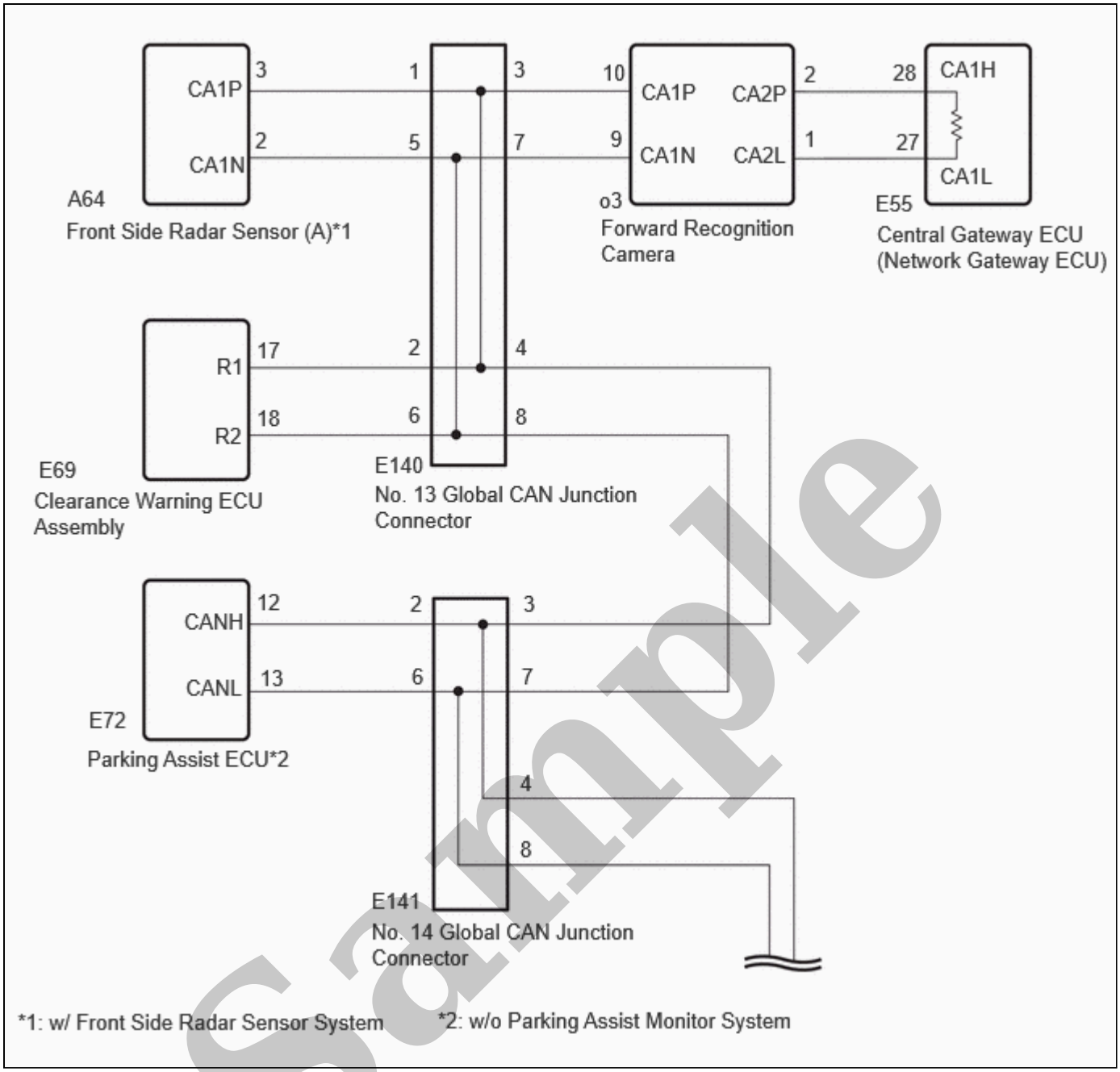
Click Location & Routing(M16)
Click Connector(M16)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
M16-1 (IGR) - Body ground	Ignition switch ON	11 to 14 V
M16-7 (+B) - Body ground	Always	11 to 14 V

OK ▶ **REPLACE TIRE PRESSURE WARNING ECU AND RECEIVER**

NG ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR (POWER SOURCE CIRCUIT)**

Sample


CA1P
CA1N
3
2
A64
Front Side Radar Sensor (A)*1
1
5
3
7
10
9
CA1P
CA2P
CA1N
CA2L
o3
Forward Recognition Camera
2
1
28
27
CA1H
CA1L
E55
Central Gateway ECU (Network Gateway ECU)
R1
R2
17
18
E69
Clearance Warning ECU Assembly
2
6
4
8
E140
No. 13 Global CAN Junction Connector
CANH
CANL
12
13
E72
Parking Assist ECU*2
2
6
3
7
4
8
E141
No. 14 Global CAN Junction Connector
*1: w/ Front Side Radar Sensor System
*2: w/o Parking Assist Monitor System

Sample

- When disconnecting and reconnecting the battery.

HINT:

When disconnecting and reconnecting the battery, there is an automatic learning function that completes learning when the respective system is used.

Click here INFO

- Some parts must be initialized and set when replacing or removing and installing parts.

Click here INFO

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DTC check procedure: Turn the ignition switch to ON and wait for 1 minute or more. Then operate the suspected malfunctioning system and drive the vehicle at 60 km/h (37 mph) or more for 5 minutes or more.

- After the repair, perform the CAN bus check and check that all the ECUs and sensors connected to the CAN communication system are displayed as normal.

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HINT:

- Before disconnecting related connectors for inspection, push in on each connector body to check that the connector is not loose or disconnected.
- When a connector is disconnected, check that the terminals and connector body are not cracked, deformed or corroded.

PROCEDURE

1.	CHECK FOR OPEN IN CAN BUS WIRE

NOTICE:

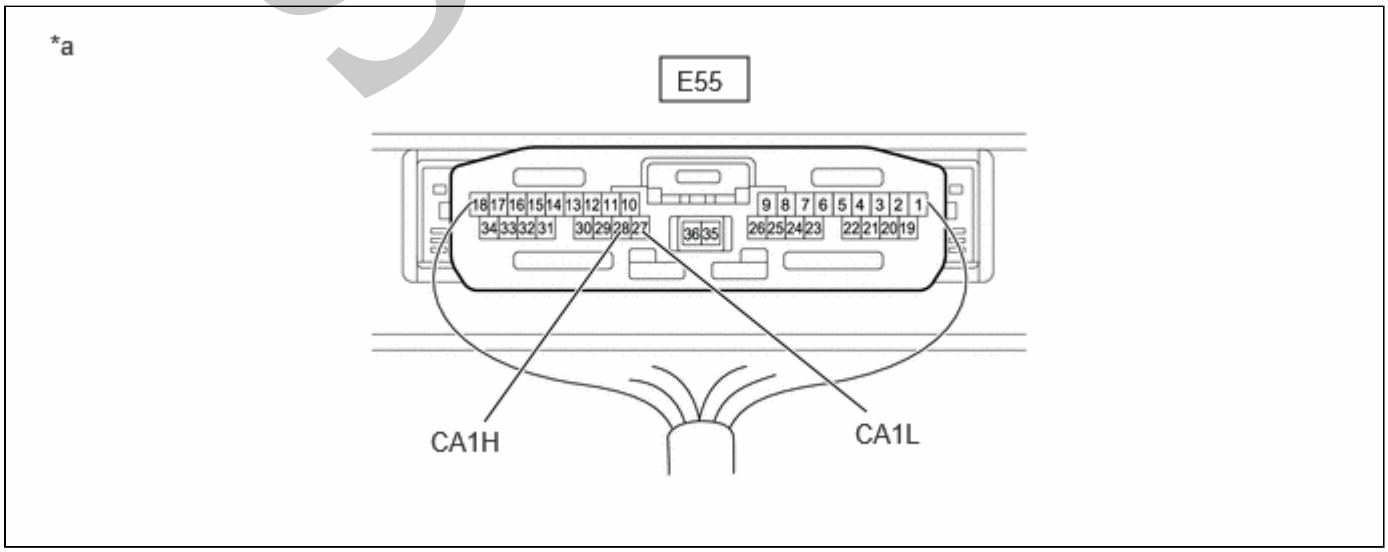
Before measuring the resistance of the CAN bus, turn the ignition switch off and leave the vehicle for 1 minute or more without operating the key or any switches, or opening or closing the doors. After that, disconnect the cable from the negative (-) battery terminal and leave the vehicle for 10 minutes or more before measuring the resistance.

HINT:

Operating the ignition switch, any other switches or door triggers related ECU and sensor communication on the CAN. This communication will cause the resistance value to change.

(a) Disconnect the cable from the negative (-) battery terminal.

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

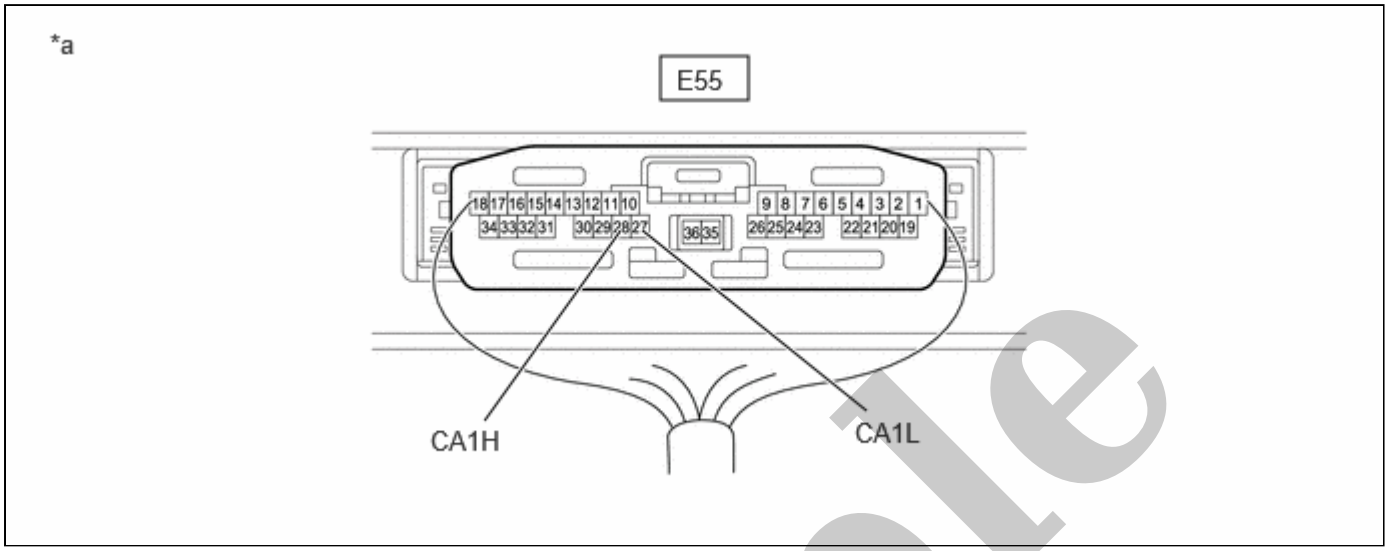


*a	Component with harness connected	-	-

Sample

3.	CHECK FOR SHORT TO B+ IN CAN BUS WIRE

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



*a	Component with harness connected (Central Gateway ECU (Network Gateway ECU))	-	-

Standard Resistance:

EWD INFO

Click Location & Routing(E55)
Click Connector(E55)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E55-28 (CA1H) - Positive (+) battery terminal	Cable disconnected from negative (-) battery terminal	6 kΩ or higher
E55-27 (CA1L) - Positive (+) battery terminal		

NG ▶ **GO TO STEP 30**

OK

4.	CHECK FOR SHORT TO GND IN CAN BUS WIRE

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

Sample