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2003 LEXUS LX OEM Service and Repair Workshop Manual

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[Click Location & Routing\(E136\).](#)
[Click Connector\(E136\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E136-4 (CANH) - E136-10 (CANL)	Cable disconnected from negative (-) battery terminal	108 to 132 Ω

NG ► **REPAIR OR REPLACE CAN BUS WIRE OR CONNECTOR (NO. 10 GLOBAL CAN JUNCTION CONNECTOR - NO. 4 GLOBAL CAN JUNCTION CONNECTOR)**

OK



89.	CHECK FOR OPEN IN CAN BUS WIRE (NO. 10 GLOBAL CAN JUNCTION CONNECTOR - NO. 18 GLOBAL CAN JUNCTION CONNECTOR)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(E136\).](#)
[Click Connector\(E136\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E136-1 (CANH) - E136-7 (CANL)	Cable disconnected from negative (-) battery terminal	108 to 132 Ω

OK ► **REPLACE NO. 10 GLOBAL CAN JUNCTION CONNECTOR**

NG



90.	CHECK FOR OPEN IN CAN BUS WIRE (NO. 18 GLOBAL CAN JUNCTION CONNECTOR - NO. 10 GLOBAL CAN JUNCTION CONNECTOR)
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(a) Reconnect the E136 No. 10 global CAN junction connector.

(b) Disconnect the K84 No. 18 global CAN junction connector.

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

Standard Resistance:



[Click Location & Routing\(K84\).](#)
[Click Connector\(K84\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K84-3 (CANH) - K84-7 (CANL)	Cable disconnected from negative (-) battery terminal	108 to 132 Ω

- (a) Reconnect the E130 No. 4 global CAN junction connector.
- (b) Disconnect the E55 central gateway ECU (network gateway ECU) connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



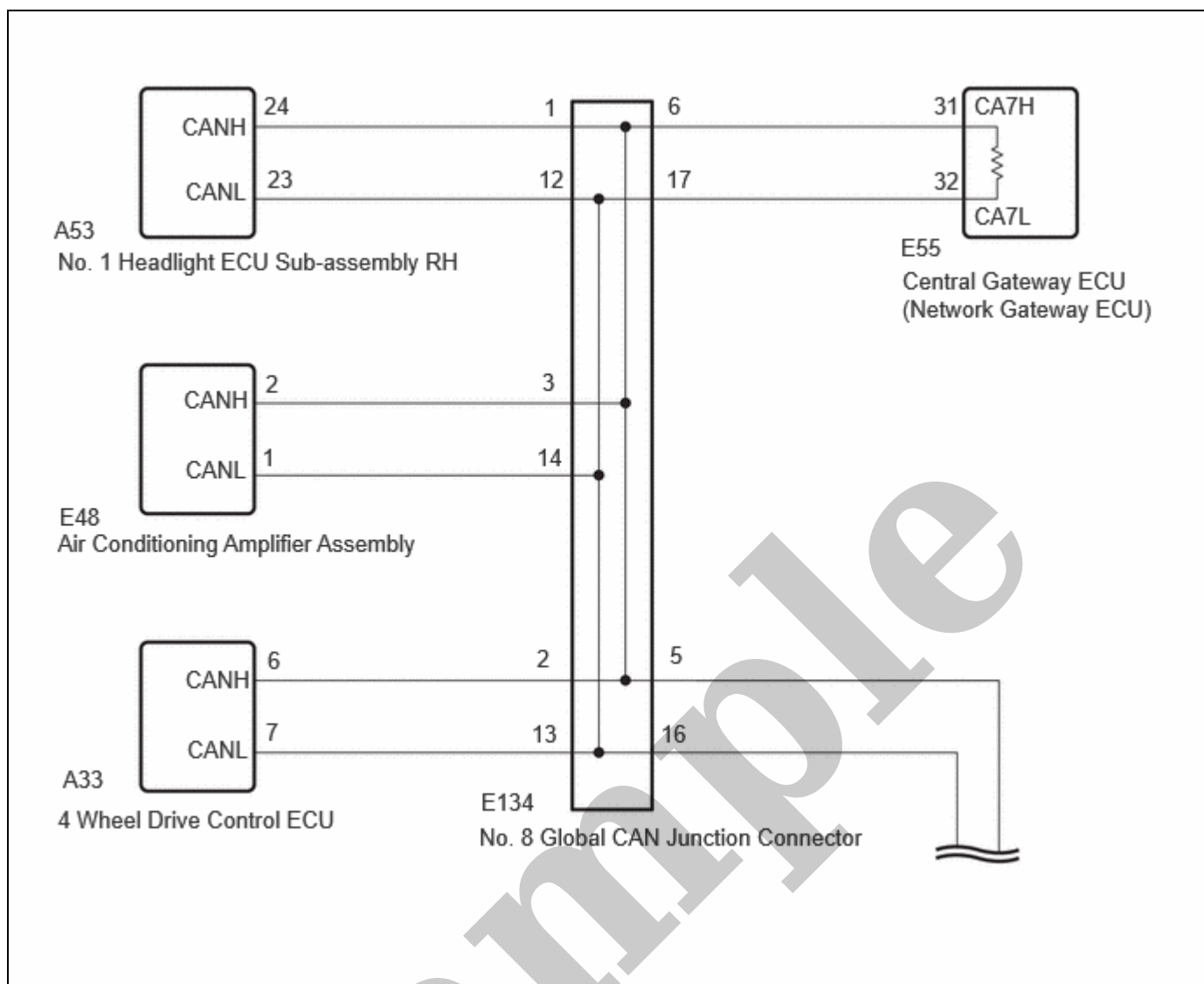
[Click Location & Routing\(E55\).](#)

[Click Connector\(E55\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E55-7 (CA5H) - E55-8 (CA5L)	Cable disconnected from negative (-) battery terminal	108 to 132 Ω

OK ► **REPLACE CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU)**

NG ► **REPAIR OR REPLACE CAN BUS WIRE OR CONNECTOR (CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU) - NO. 4 GLOBAL CAN JUNCTION CONNECTOR)**



[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 FOR OPEN IN CAN BUS WIRE
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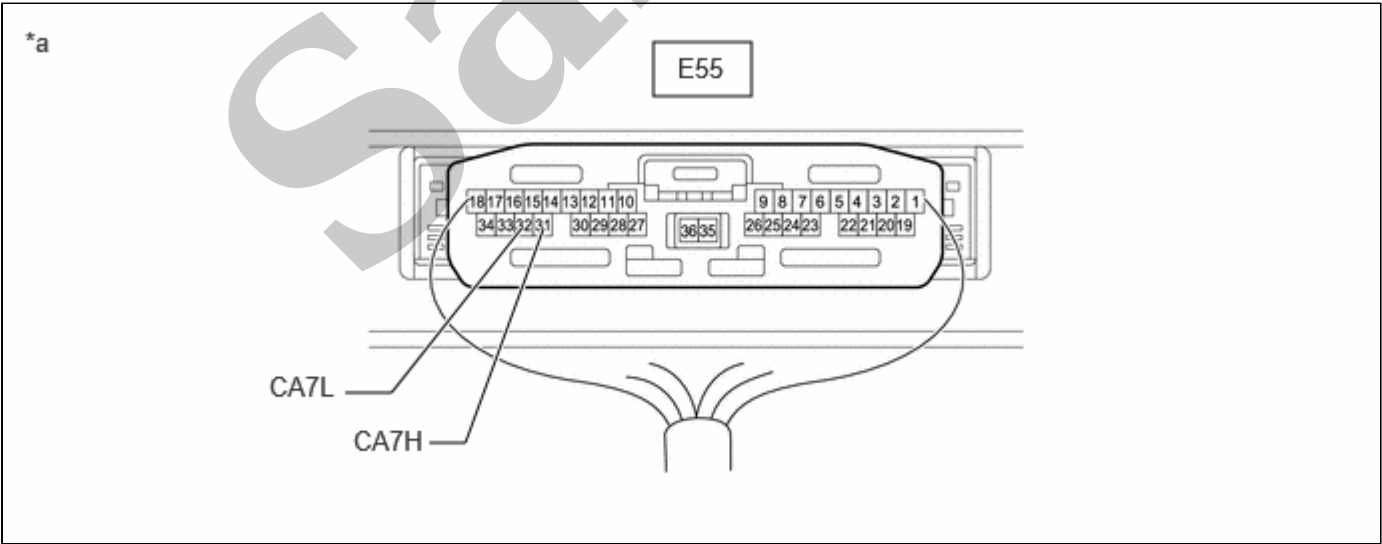
NOTICE:

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.



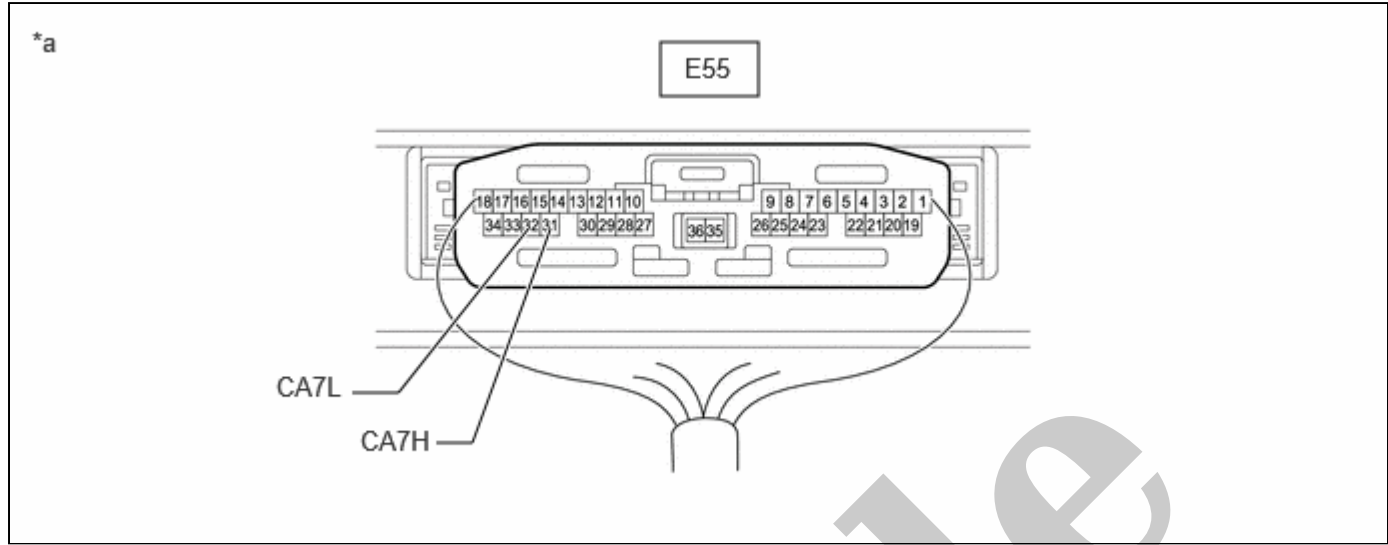
*a	Component with harness connected (Central Gateway ECU (Network Gateway ECU))	-	-
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Standard Resistance:

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))	-	-
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Standard Resistance:



[Click Location & Routing\(E55\).](#)
[Click Connector\(E55\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E55-31 (CA7H) - Positive (+) battery terminal	Cable disconnected from negative (-) battery terminal	6 kΩ or higher
E55-32 (CA7L) - Positive (+) battery terminal		

NG ► GO TO STEP 25



4.

CHECK FOR SHORT TO GND IN CAN BUS WIRE

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

NG  **GO TO STEP 9****OK****6.****CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 8 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

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

Standard Resistance:

[Click Location & Routing\(E134\).](#)[Click Connector\(E134\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E134-6 (CANH) - Body ground	Cable disconnected from negative (-) battery terminal	200 Ω or higher
E134-17 (CANL) - Body ground		

NG  **GO TO STEP 22****OK****7.****CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 8 GLOBAL CAN JUNCTION CONNECTOR - 4 WHEEL DRIVE CONTROL ECU)**

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

Standard Resistance:

[Click Location & Routing\(E134\).](#)[Click Connector\(E134\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E134-2 (CANH) - Body ground	Cable disconnected from negative (-) battery terminal	200 Ω or higher
E134-13 (CANL) - Body ground		

NG  **GO TO STEP 23****OK****8.****CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 8 GLOBAL CAN JUNCTION CONNECTOR - HEADLIGHT ECU SUB-ASSEMBLY RH)**

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E135-7 (CANL) - Body ground		

NG  **GO TO STEP 17**

OK



11.	CHECK VEHICLE TYPE
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(a) Check the vehicle type.

RESULT	PROCEED TO
w/ Electronic-kinetic Dynamic Suspension System	A
w/o Electronic-kinetic Dynamic Suspension System	B

B  **GO TO STEP 13**

A



12.	CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - STABILIZER CONTROL ECU)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(E135\).](#)
[Click Connector\(E135\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E135-2 (CANH) - Body ground	Cable disconnected from negative (-) battery terminal	200 Ω or higher
E135-8 (CANL) - Body ground		

NG  **GO TO STEP 18**

OK



13.	CHECK VEHICLE TYPE
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(a) Check the vehicle type.

**16.****CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - HEADLIGHT ECU SUB-ASSEMBLY LH)**

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

Standard Resistance:



[Click Location & Routing\(E135\).](#)

[Click Connector\(E135\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E135-6 (CANH) - Body ground	Cable disconnected from negative (-) battery terminal	200 Ω or higher
E135-12 (CANL) - Body ground		

OK ► **REPLACE NO. 9 GLOBAL CAN JUNCTION CONNECTOR**

NG ► **GO TO STEP 21**

17.**CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the E55 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:



[Click Location & Routing\(E135\).](#)

[Click Connector\(E135\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E135-1 (CANH) - Body ground	Cable disconnected from negative (-) battery terminal	200 Ω or higher
E135-7 (CANL) - Body ground		

OK ► **REPLACE CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU)**

NG ► **REPAIR OR REPLACE CAN BUS WIRE OR CONNECTOR (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

18.**CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - STABILIZER CONTROL ECU)**

(a) Disconnect the L20 absorber control ECU connector.

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

Standard Resistance:

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

NG ► **REPAIR OR REPLACE CAN BUS WIRE OR CONNECTOR (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

21. CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - HEADLIGHT ECU SUB-ASSEMBLY LH)

(a) Disconnect the A52 headlight ECU sub-assembly LH connector.

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

Standard Resistance:



[Click Location & Routing\(E135\).](#)

[Click Connector\(E135\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E135-6 (CANH) - Body ground	Cable disconnected from negative (-) battery terminal	200 Ω or higher
E135-12 (CANL) - Body ground		

OK ► **REPLACE HEADLIGHT ECU SUB-ASSEMBLY LH**

NG ► **REPAIR OR REPLACE CAN BUS WIRE OR CONNECTOR (NO. 9 GLOBAL CAN JUNCTION CONNECTOR - HEADLIGHT ECU SUB-ASSEMBLY LH)**

22. CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 8 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))

(a) Disconnect the E55 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:



[Click Location & Routing\(E134\).](#)

[Click Connector\(E134\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E134-6 (CANH) - Body ground	Cable disconnected from negative (-) battery terminal	200 Ω or higher
E134-17 (CANL) - Body ground		

OK ► **REPLACE CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU)**

NG ► **REPAIR OR REPLACE CAN BUS WIRE OR CONNECTOR (NO. 8 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

23. CHECK FOR SHORT TO GND IN CAN BUS WIRE (NO. 8 GLOBAL CAN JUNCTION CONNECTOR - 4 WHEEL DRIVE CONTROL ECU)