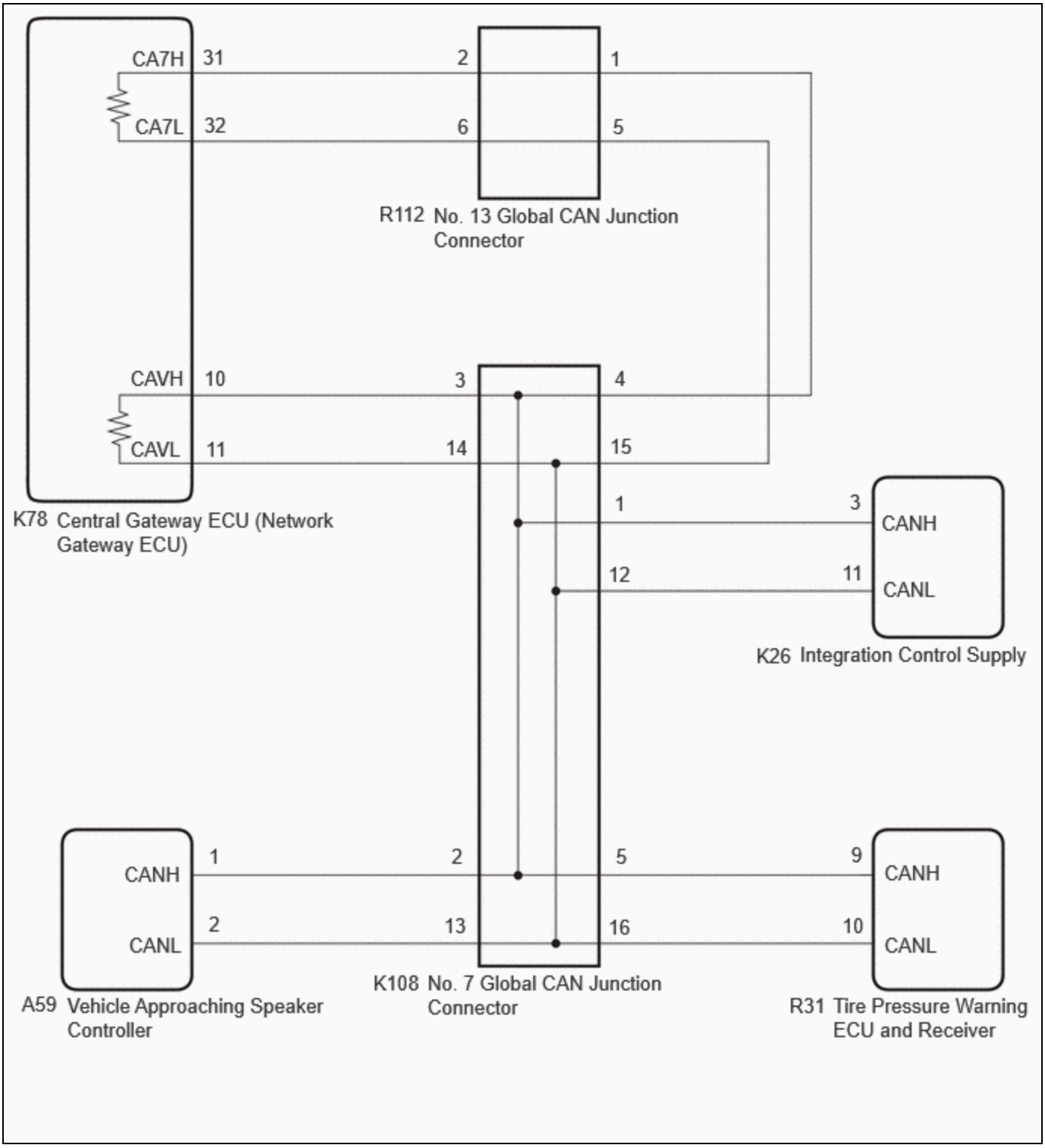
Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002B6JG
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: NETWORKING: CAN COMMUNICATION SYSTEM (for PHEV Model): Check Bus 6 Line; 2023 - 2024 MY Prius Prime [03/2023 -]		

Check Bus 6 Line

DESCRIPTION

SYMPTOM	TROUBLE AREA
There are ECUs or sensors that display a communication stop on the bus diagnostic screen. Or, there are ECUs or sensors that display communication stop history on the "Detail" screen.	• CAN main bus line, CAN branch line or connector • Central gateway ECU (network gateway ECU) • Vehicle approaching speaker controller • Tire pressure warning ECU and receiver • Integration control supply • No. 7 global CAN junction connector • No. 13 global CAN junction connector

WIRING DIAGRAM



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

- 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 (-) auxiliary 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 (-) auxiliary battery terminal.

  Click here INFO
- When disconnecting and reconnecting the auxiliary battery.

  HINT:

  When disconnecting and reconnecting the auxiliary 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 FOR OPEN IN CAN MAIN BUS LINES**

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

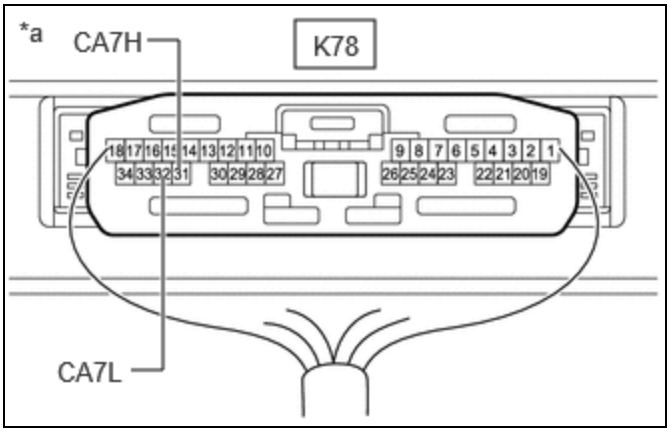
(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(K78)
Click Connector(K78)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K78-31 (CA7H) - K78-32 (CA7L)	Cable disconnected from negative (-) auxiliary battery terminal	Below 70 Ω



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

NG ▶ **GO TO STEP 41**

OK ▼

2.	**CHECK FOR SHORT IN CAN BUS LINES**

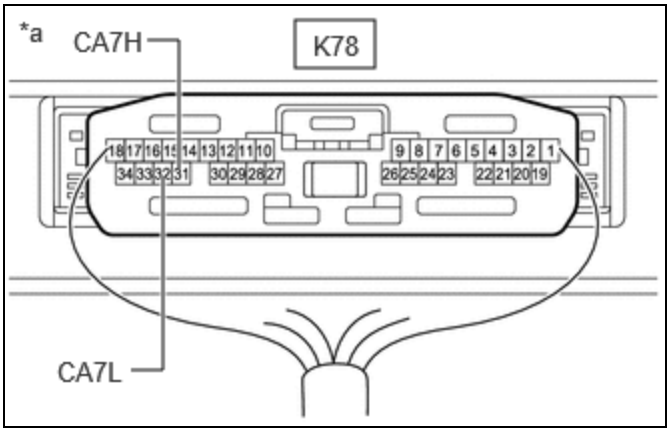
(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(K78)
Click Connector(K78)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K78-31 (CA7H) - K78-32 (CA7L)	Cable disconnected from negative (-) auxiliary battery terminal	54 Ω or higher



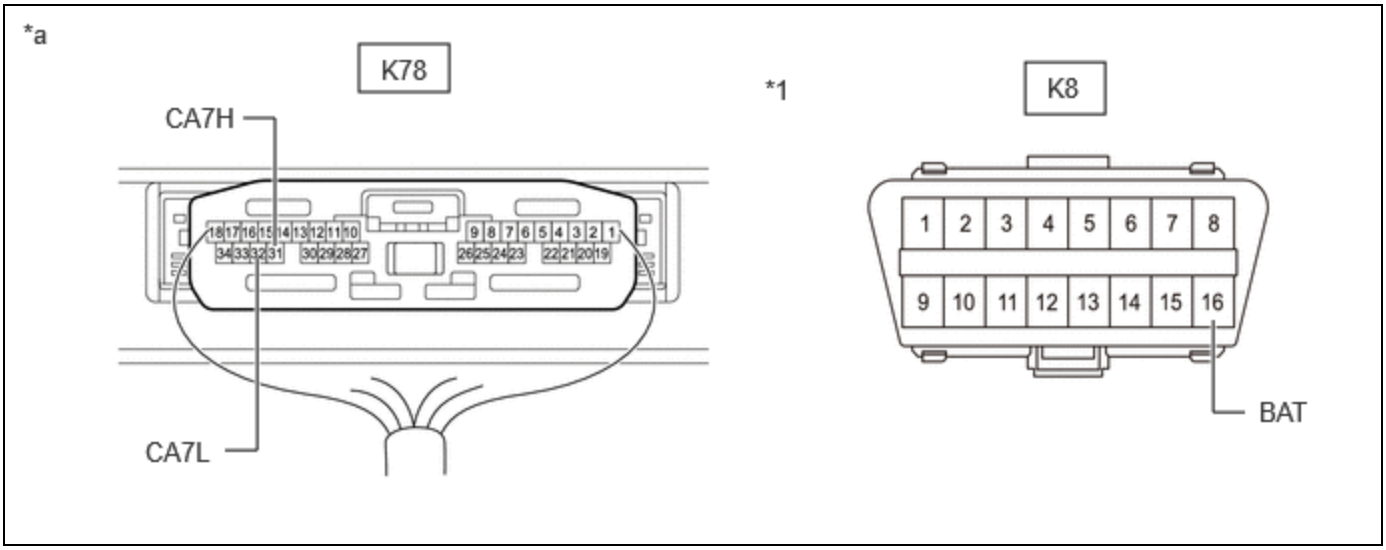
*a	Component with harness connected (Central Gateway ECU (Network Gateway ECU))

NG ▶ **GO TO STEP 29**

OK

3.	**CHECK FOR SHORT TO +B IN CAN BUS LINE**

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



*1	DLC3	-	-
*a	Component with harness connected (Central Gateway ECU (Network Gateway ECU))	-	-

Standard Resistance:

EWD INFO

Click Location & Routing(K78,K8)
Click Connector(K78)
Click Connector(K8)

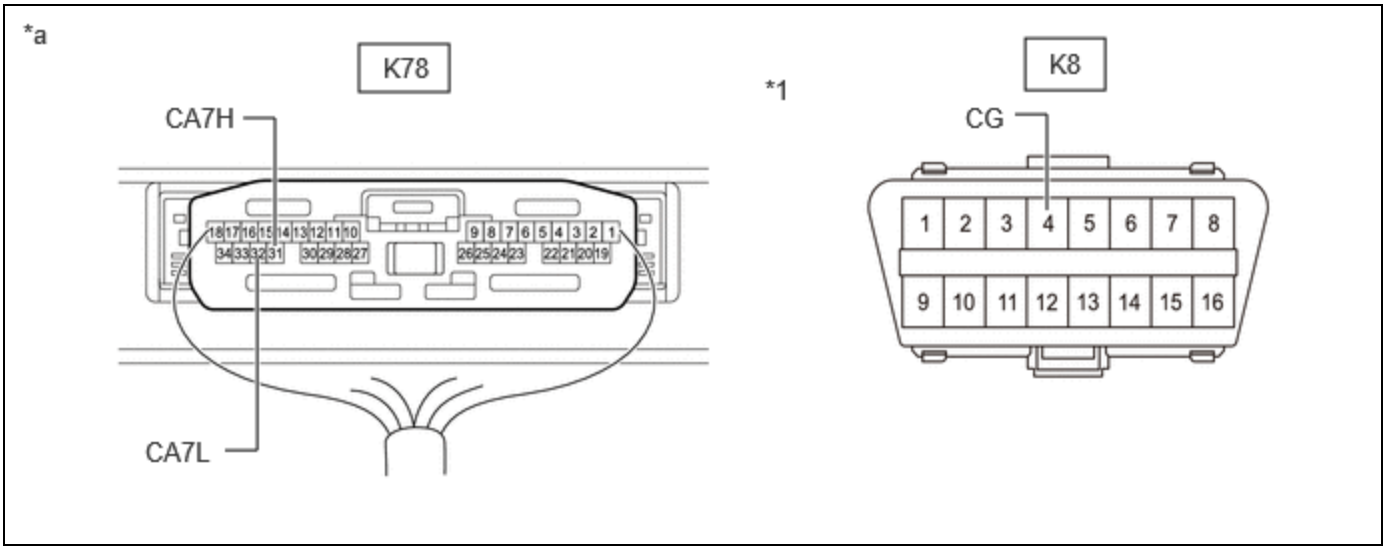
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K78-31 (CA7H) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K78-32 (CA7L) - K8-16 (BAT)		

NG ▶ **GO TO STEP 17**

OK

4.	**CHECK FOR SHORT TO GND IN CAN BUS LINE**

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



*1	DLC3	-	-
*a	Component with harness connected (Central Gateway ECU (Network Gateway ECU))	-	-

Standard Resistance:

EWD INFO

Click Location & Routing(K78,K8)
Click Connector(K78)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K78-31 (CA7H) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K78-32 (CA7L) - K8-4 (CG)		

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

NG ▼

5.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the R112 No. 13 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112,K8)
Click Connector(R112)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-2 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
R112-6 (CANL) - K8-4 (CG)		

NG ▶ **GO TO STEP 7**

OK ▼

6.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - NO. 7 GLOBAL CAN JUNCTION CONNECTOR)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112,K8)
Click Connector(R112)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-1 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
R112-5 (CANL) - K8-4 (CG)		

OK ▶ **REPLACE NO. 13 GLOBAL CAN JUNCTION CONNECTOR**

NG ▶ **GO TO STEP 8**

7.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112,K8)
Click Connector(R112)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-2 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
R112-6 (CANL) - K8-4 (CG)		

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

8.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

(a) Disconnect the K108 No. 7 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-4 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-15 (CANL) - K8-4 (CG)		

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

OK ▼

9.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 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:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-3 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-14 (CANL) - K8-4 (CG)		

NG ▶ **GO TO STEP 13**

OK ▼

10.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-5 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-16 (CANL) - K8-4 (CG)		

NG ▶ **GO TO STEP 14**

OK ▼

11.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-2 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-13 (CANL) - K8-4 (CG)		

NG ▶ **GO TO STEP 15**

OK ▼

12.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-1 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-12 (CANL) - K8-4 (CG)		

OK ▶ **REPLACE NO. 7 GLOBAL CAN JUNCTION CONNECTOR**

NG ▶ **GO TO STEP 16**

13.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-3 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-14 (CANL) - K8-4 (CG)		

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

14.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

(a) Disconnect the R31 tire pressure warning ECU and receiver connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-5 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-16 (CANL) - K8-4 (CG)		

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

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

15.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

(a) Disconnect the A59 vehicle approaching speaker controller connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-2 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-13 (CANL) - K8-4 (CG)		

OK ▶ **REPLACE VEHICLE APPROACHING SPEAKER CONTROLLER**

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

16.	**CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

(a) Disconnect the K26 integration control supply connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-1 (CANH) - K8-4 (CG)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher
K108-12 (CANL) - K8-4 (CG)		

OK ▶ **REPLACE INTEGRATION CONTROL SUPPLY**

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

17.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the R112 No. 13 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112,K8)
Click Connector(R112)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-2 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
R112-6 (CANL) - K8-16 (BAT)		

NG ▶ **GO TO STEP 19**

OK ▼

18.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - NO. 7 GLOBAL CAN JUNCTION CONNECTOR)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112,K8)
Click Connector(R112)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-1 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
R112-5 (CANL) - K8-16 (BAT)		

OK ▶ **REPLACE NO. 13 GLOBAL CAN JUNCTION CONNECTOR**

NG ▶ **GO TO STEP 20**

19.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112,K8)
Click Connector(R112)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-2 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
R112-6 (CANL) - K8-16 (BAT)		

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

20.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

(a) Disconnect the K108 No. 7 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-4 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-15 (CANL) - K8-16 (BAT)		

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

OK

21.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 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:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-3 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-14 (CANL) - K8-16 (BAT)		

NG ▶ **GO TO STEP 25**

OK

22.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-5 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-16 (CANL) - K8-16 (BAT)		

NG ▶ **GO TO STEP 26**

OK ▼

23.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-2 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-13 (CANL) - K8-16 (BAT)		

NG ▶ **GO TO STEP 27**

OK ▼

24.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)

Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-1 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-12 (CANL) - K8-16 (BAT)		

OK ▶ **REPLACE NO. 7 GLOBAL CAN JUNCTION CONNECTOR**

NG ▶ **GO TO STEP 28**

25.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-3 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-14 (CANL) - K8-16 (BAT)		

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

26.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

(a) Disconnect the R31 tire pressure warning ECU and receiver connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-5 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-16 (CANL) - K8-16 (BAT)		

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

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

27.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

(a) Disconnect the A59 vehicle approaching speaker controller connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-2 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-13 (CANL) - K8-16 (BAT)		

OK ▶ **REPLACE VEHICLE APPROACHING SPEAKER CONTROLLER**

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

28.	**CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

(a) Disconnect the K26 integration control supply connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108,K8)
Click Connector(K108)
Click Connector(K8)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-1 (CANH) - K8-16 (BAT)	Cable disconnected from negative (-) auxiliary battery terminal	6 kΩ or higher
K108-12 (CANL) - K8-16 (BAT)		

OK ▶ **REPLACE INTEGRATION CONTROL SUPPLY**

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

29.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the R112 No. 13 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112)
Click Connector(R112)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-2 (CANH) - R112-6 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

NG ▶ **GO TO STEP 31**

OK ▼

30.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - NO. 7 GLOBAL CAN JUNCTION CONNECTOR)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112)
Click Connector(R112)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-1 (CANH) - R112-5 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

OK ▶ **REPLACE NO. 13 GLOBAL CAN JUNCTION CONNECTOR**

NG ▶ **GO TO STEP 32**

31.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112)
Click Connector(R112)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-2 (CANH) - R112-6 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	1 MΩ or higher

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

32.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

(a) Reconnect the R112 No. 13 global CAN junction connector.

(b) Disconnect the K108 No. 7 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-4 (CANH) - K108-15 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

OK ▼

33.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 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:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-3 (CANH) - K108-14 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

NG ▶ **GO TO STEP 37**

OK ▼

34.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-5 (CANH) - K108-16 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher

NG ▶ **GO TO STEP 38**

OK ▼

35.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-2 (CANH) - K108-13 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher

NG ▶ **GO TO STEP 39**

OK ▼

36.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-1 (CANH) - K108-12 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	200 Ω or higher

OK ▶ **REPLACE NO. 7 GLOBAL CAN JUNCTION CONNECTOR**

NG ▶ **GO TO STEP 40**

37.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-3 (CANH) - K108-14 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	1 MΩ or higher

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

38.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

(a) Disconnect the R31 tire pressure warning ECU and receiver connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-5 (CANH) - K108-16 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	1 MΩ or higher

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

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINES OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU AND RECEIVER)**

39.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

(a) Disconnect the A59 vehicle approaching speaker controller connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-2 (CANH) - K108-13 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	1 MΩ or higher

OK ▶ **REPLACE VEHICLE APPROACHING SPEAKER CONTROLLER**

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINES OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - VEHICLE APPROACHING SPEAKER CONTROLLER)**

40.	**CHECK FOR SHORT IN CAN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

(a) Disconnect the K26 integration control supply connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-1 (CANH) - K108-12 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	1 MΩ or higher

OK ▶ **REPLACE INTEGRATION CONTROL SUPPLY**

NG ▶ **REPAIR OR REPLACE CAN BRANCH LINES OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - INTEGRATION CONTROL SUPPLY)**

41.	**CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the R112 No. 13 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112)
Click Connector(R112)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-2 (CANH) - R112-6 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

NG ▶ **GO TO STEP 43**

OK ▼

42.	**CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 13 GLOBAL CAN JUNCTION CONNECTOR - NO. 7 GLOBAL CAN JUNCTION CONNECTOR)**

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

Standard Resistance:

EWD INFO

Click Location & Routing(R112)
Click Connector(R112)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R112-1 (CANH) - R112-5 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

OK ▶ **REPLACE NO. 13 GLOBAL CAN JUNCTION CONNECTOR**

NG ▶ **GO TO STEP 44**

43.	**CHECK FOR OPEN IN CAN MAIN BUS LINES (CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K78,R112)
Click Connector(K78)
Click Connector(R112)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K78-31 (CA7H) - R112-2 (CANH)	Cable disconnected from negative (-) auxiliary battery terminal	Below 1 Ω
K78-32 (CA7L) - R112-6 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	Below 1 Ω

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU) - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

44.	**CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

(a) Reconnect the R112 No. 13 global CAN junction connector.

(b) Disconnect the K108 No. 7 global CAN junction connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-4 (CANH) - K108-15 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 7 GLOBAL CAN JUNCTION CONNECTOR - NO. 13 GLOBAL CAN JUNCTION CONNECTOR)**

OK ▼

45.	**CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 7 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:

EWD INFO

Click Location & Routing(K108)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K108-3 (CANH) - K108-14 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	108 to 132 Ω

OK ▶ **REPLACE NO. 7 GLOBAL CAN JUNCTION CONNECTOR**

NG ▼

46.	**CHECK FOR OPEN IN CAN MAIN BUS LINES (CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

(a) Disconnect the K78 central gateway ECU (network gateway ECU) connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(K78,K108)
Click Connector(K78)
Click Connector(K108)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K78-10 (CAVH) - K108-3 (CANH)	Cable disconnected from negative (-) auxiliary battery terminal	Below 1 Ω
K78-11 (CAVL) - K108-14 (CANL)	Cable disconnected from negative (-) auxiliary battery terminal	Below 1 Ω

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

NG ▶ **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU) - NO. 7 GLOBAL CAN JUNCTION CONNECTOR)**