

|  |                           |                                      |
|--|---------------------------|--------------------------------------|
| <b>Last Modified:</b> 12-04-2024   | 6.11:8.1.0                | <b>Doc ID:</b> RM100000002B6JB       |
| <b>Model Year Start:</b> 2023  | <b>Model:</b> Prius Prime | <b>Prod Date Range:</b> [03/2023 - ] |
| <b>Title:</b> NETWORKING: CAN COMMUNICATION SYSTEM (for PHEV Model): Check Bus 1 Line; 2023 - 2024 MY Prius Prime [03/2023 - ] |                           |                                      |

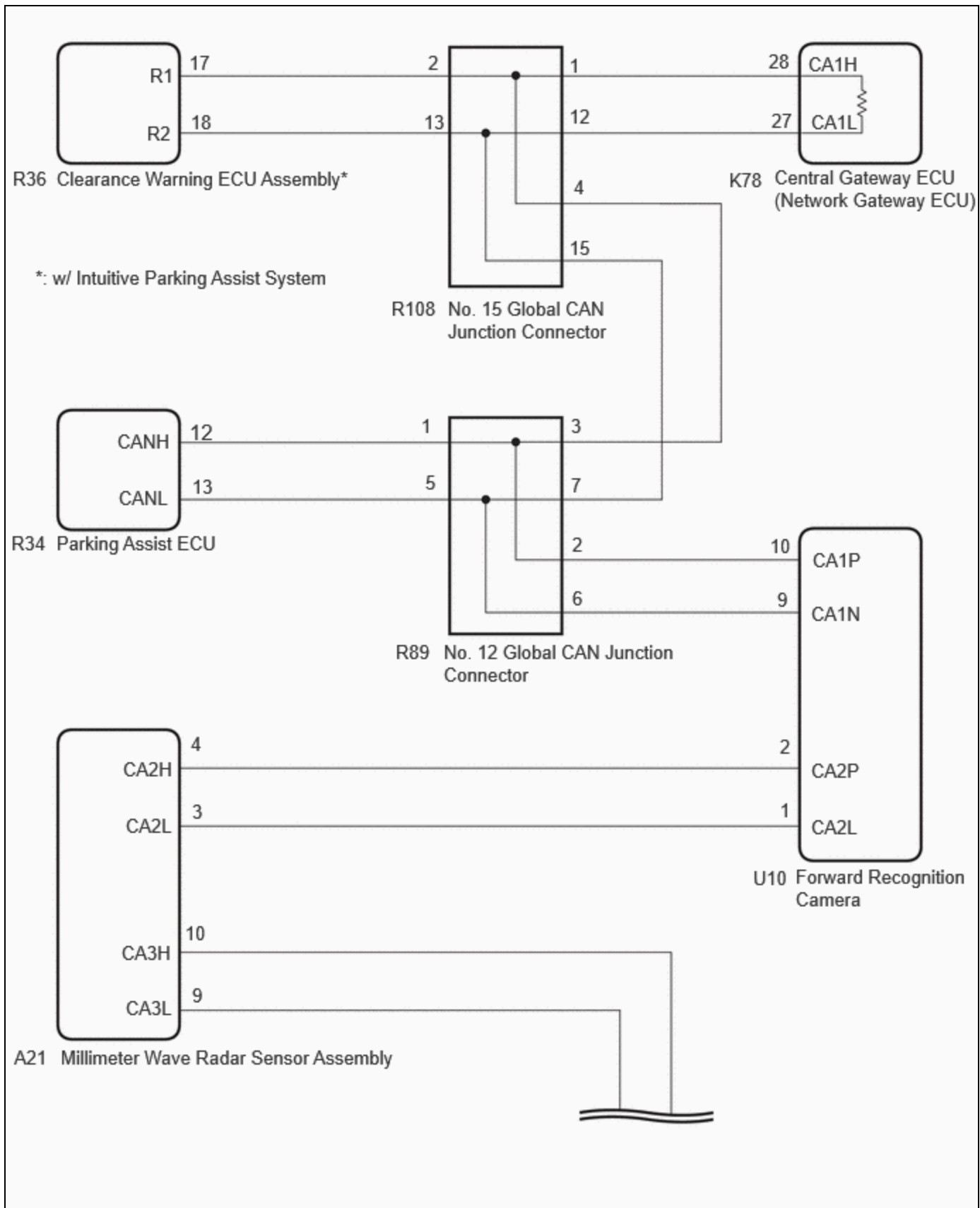
[Check Bus 1 Line](#)

## DESCRIPTION

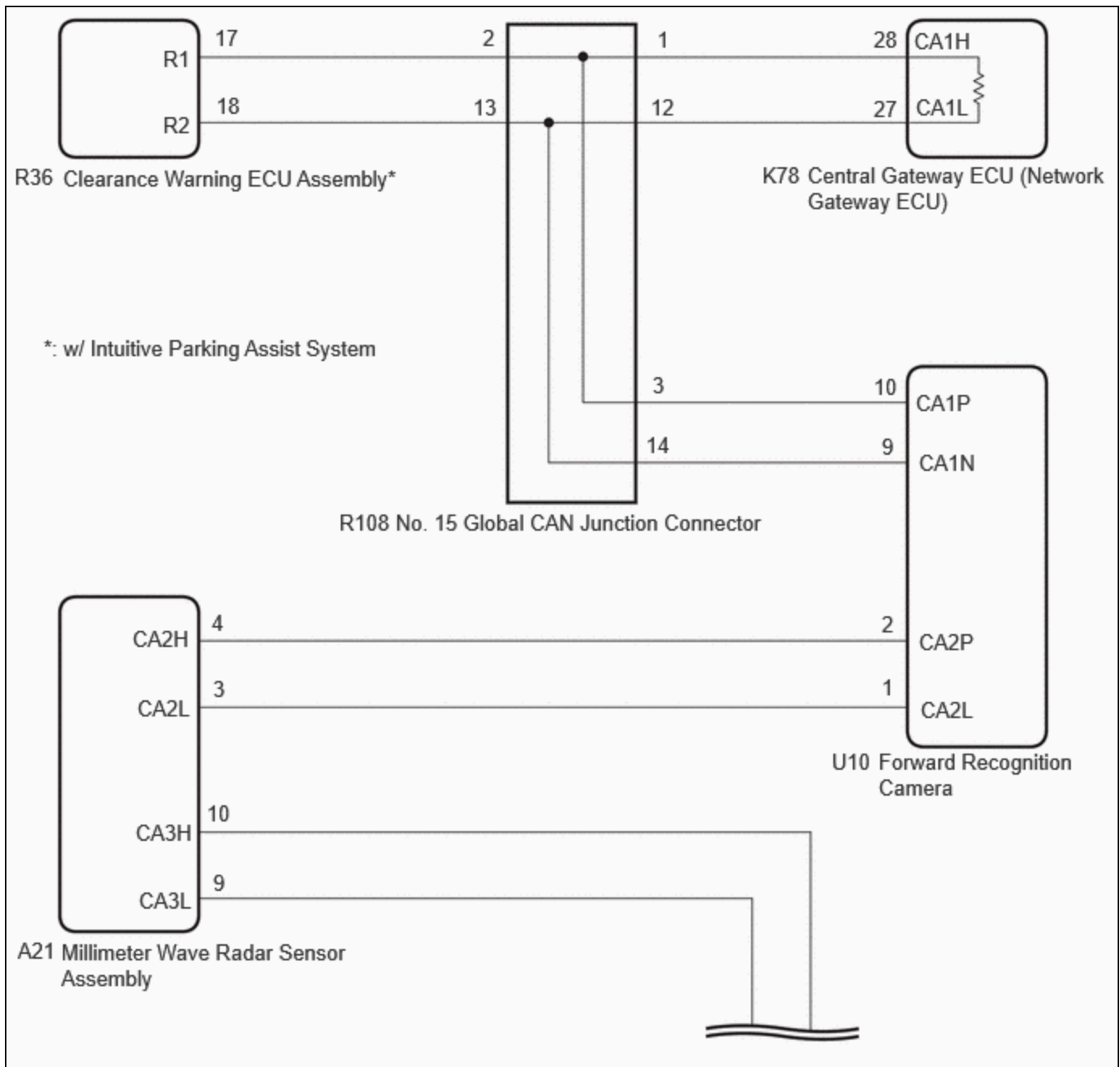
| SYMPTOM  | TROUBLE AREA  |
|--|---|
| <p>There are ECUs or sensors that display a communication stop on the bus diagnostic screen. Or, there are ECUs or sensors that display communication stop history on the "Detail" screen.</p> | <ul style="list-style-type: none"> <li>• CAN main bus line, CAN branch line or connector</li> <li>• Central gateway ECU (network gateway ECU)</li> <li>• Clearance warning ECU assembly (w/ Intuitive Parking Assist System)</li> <li>• Forward recognition camera</li> <li>• Millimeter wave radar sensor assembly</li> <li>• Front side radar sensor (A) (w/ Front Side Radar Sensor System)</li> <li>• Parking assist ECU (w/ Panoramic View Monitor System)</li> <li>• Blind spot monitor sensor LH (B)</li> <li>• No. 2 global CAN junction connector</li> <li>• No. 11 global CAN junction connector</li> <li>• No. 12 global CAN junction connector (w/ Panoramic View Monitor System)</li> <li>• No. 15 global CAN junction connector</li> <li>• No. 2 CAN junction terminal</li> </ul> |

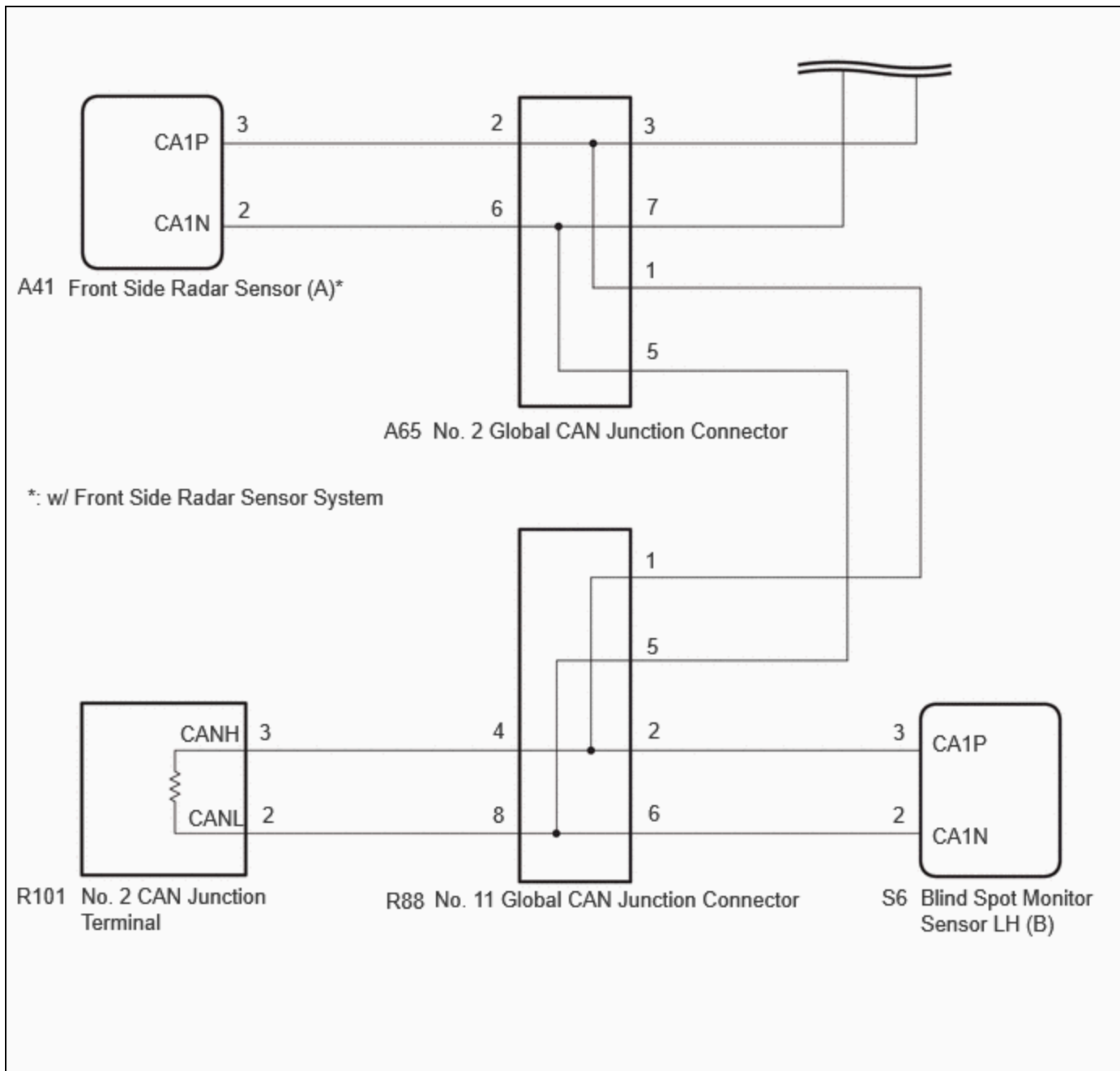
## WIRING DIAGRAM

**w/ Panoramic View Monitor System:**



**w/o Panoramic View Monitor System:**





## 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

|           |   |
|-----------|---|
| <b>1.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES</b> |
|-----------|---|

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

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

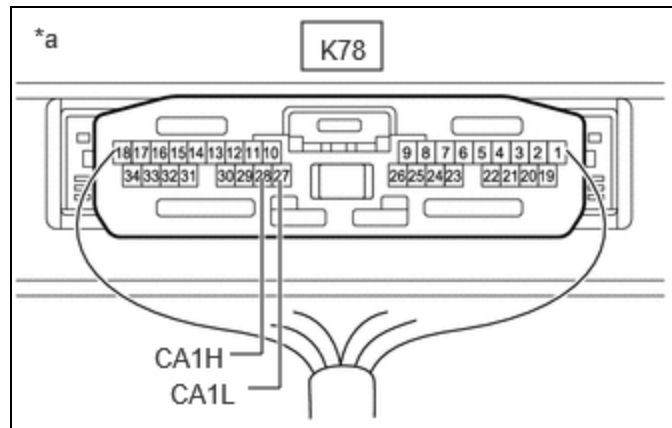
Standard Resistance:



[Click Location & Routing\(K78\)](#)

[Click Connector\(K78\)](#)

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| K78-28 (CA1H) - K78-27 (CA1L) | 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 86**

**OK**



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

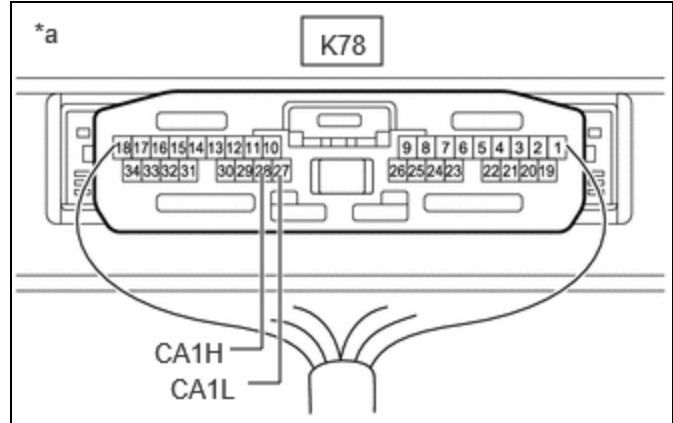
(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(K78\)](#)

[Click Connector\(K78\)](#)



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

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| K78-28 (CA1H) - K78-27 (CA1L) | Cable disconnected from negative (-) auxiliary battery terminal | 54 Ω or higher      |

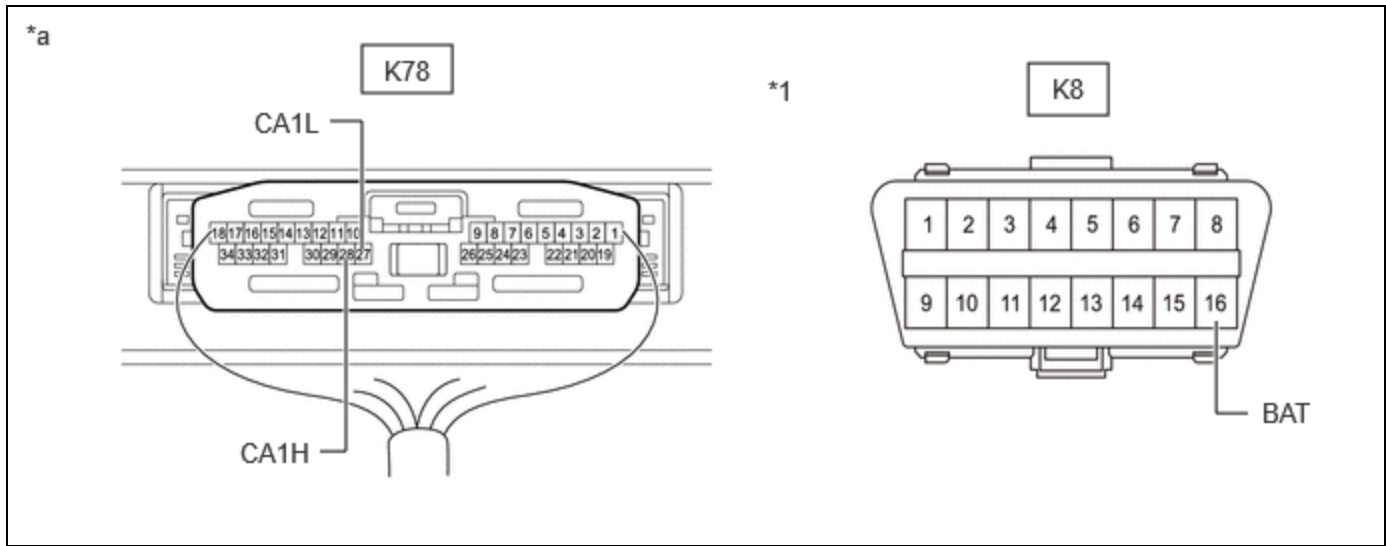
**NG** **GO TO STEP 59**

**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:



[Click Location & Routing\(K78,K8\).](#)

[Click Connector\(K78\).](#)

[Click Connector\(K8\).](#)

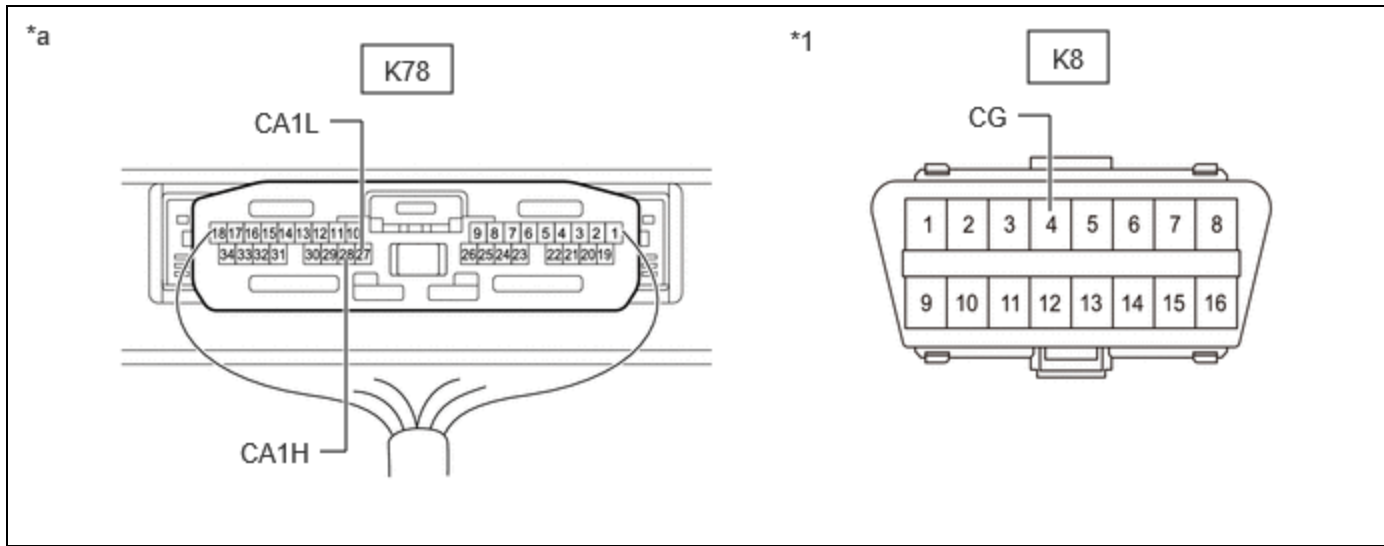
| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| K78-28 (CA1H) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| K78-27 (CA1L) - K8-16 (BAT) |   |                     |

**NG** **GO TO STEP 32**

**OK**

|           |   |
|-----------|---|
| <b>4.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE</b> |
|-----------|---|

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



|    |   |   |   |
|----|---|---|---|
| *1 | DLC3  | - | - |
| *a | Component with harness connected<br>(Central Gateway ECU (Network Gateway ECU)) | - | - |

Standard Resistance:



[Click Location & Routing\(K78,K8\).](#)

[Click Connector\(K78\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION         | CONDITION   | SPECIFIED CONDITION |
|---------------------------|---|---------------------|
| K78-28 (CA1H) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| K78-27 (CA1L) - K8-4 (CG) |   |                     |

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

**NG**  
▼

|           |  |
|-----------|--|
| <b>5.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))</b> |
|-----------|--|

(a) Disconnect the R108 No. 15 global CAN junction connector.

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

Standard Resistance:





[Click Location & Routing\(R108,K8\)](#)

[Click Connector\(R108\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION    |
|----------------------------|---|------------------------|
| R108-1 (CANH) - K8-4 (CG)  | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R108-12 (CANL) - K8-4 (CG) |   |                        |

**NG** **GO TO STEP 8**

**OK**



|           |                           |
|-----------|---------------------------|
| <b>6.</b> | <b>CHECK VEHICLE TYPE</b> |
|-----------|---------------------------|

(a) Check vehicle type.

| RESULT                            | PROCEED TO |
|-----------------------------------|------------|
| w/ Panoramic View Monitor System  | A          |
| w/o Panoramic View Monitor System | B          |

**B** **GO TO STEP 14**

**A**



|           |   |
|-----------|---|
| <b>7.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|-----------|---|

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

Standard Resistance:



[Click Location & Routing\(R108,K8\)](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION    |
|----------------------------|---|------------------------|
| R108-4(CANH) - K8-4 (CG)   | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R108-15 (CANL) - K8-4 (CG) |   |                        |

**OK** ► **GO TO STEP 15**

**NG** ► **GO TO STEP 9**

|           |  |
|-----------|--|
| <b>8.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))</b> |
|-----------|--|

(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:



[Click Location & Routing\(R108,K8\).](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION    |
|----------------------------|---|------------------------|
| R108-1 (CANH) - K8-4 (CG)  | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R108-12 (CANL) - K8-4 (CG) |   |                        |

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

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

|           |   |
|-----------|---|
| <b>9.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|-----------|---|

(a) Disconnect the R89 No. 12 global CAN junction connector.

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

Standard Resistance:



[Click Location & Routing\(R89,K8\)](#)

[Click Connector\(R89\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| R89-3 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R89-7 (CANL) - K8-4 (CG) |   |                        |

**NG** **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |   |
|------------|---|
| <b>10.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R89,K8\)](#)

[Click Connector\(R89\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| R89-2 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R89-6 (CANL) - K8-4 (CG) |   |                        |

**NG** **GO TO STEP 12**



|            |   |
|------------|---|
| <b>11.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R89,K8\).](#)

[Click Connector\(R89\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION |
|--------------------------|---|---------------------|
| R89-1 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| R89-5 (CANL) - K8-4 (CG) |   |                     |

**OK** ► REPLACE NO. 12 GLOBAL CAN JUNCTION CONNECTOR

**NG** ► GO TO STEP 13

|            |   |
|------------|---|
| <b>12.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

(a) Disconnect the U10 forward recognition camera connector.

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

Standard Resistance:



[Click Location & Routing\(U10,K8\).](#)

[Click Connector\(U10\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION         | CONDITION   | SPECIFIED CONDITION |
|---------------------------|---|---------------------|
| U10-10 (CA1P) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| U10-9 (CA1N) - K8-4 (CG)  |   |                     |

**OK** ► **GO TO STEP 19**

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)**

|            |   |
|------------|---|
| <b>13.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)</b> |
|------------|---|

- (a) Disconnect the R34 parking assist ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R89,K8\).](#)

[Click Connector\(R89\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION |
|--------------------------|---|---------------------|
| R89-1 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| R89-5 (CANL) - K8-4 (CG) |   |                     |

**OK** ► **REPLACE PARKING ASSIST ECU**

**NG** ► **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)**

|            |   |
|------------|---|
| <b>14.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R108,K8\).](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R108-3 (CANH) - K8-4 (CG)  | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| R108-14 (CANL) - K8-4 (CG) |   |                     |

**NG**  **GO TO STEP 18**

**OK**



|            |                           |
|------------|---------------------------|
| <b>15.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                              | PROCEED TO |
|-------------------------------------|------------|
| w/ Intuitive Parking Assist System  | A          |
| w/o Intuitive Parking Assist System | B          |

**B**  **REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR**

**A**



|            |   |
|------------|---|
| <b>16.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R108,K8\).](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R108-2 (CANH) - K8-4 (CG)  | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| R108-13 (CANL) - K8-4 (CG) |   |                     |

**OK**  **REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR**

**NG**



|            |   |
|------------|---|
| <b>17.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)</b> |
|------------|---|

- (a) Disconnect the R36 clearance warning ECU assembly connector.
- (b) Measure the resistance according to the value(s) in the table below.  
Standard Resistance:



[Click Location & Routing\(R108,K8\)](#)  
[Click Connector\(R108\)](#)  
[Click Connector\(K8\)](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R108-2 (CANH) - K8-4 (CG)  | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| R108-13 (CANL) - K8-4 (CG) |   |                     |

**OK**  **REPLACE CLEARANCE WARNING ECU ASSEMBLY**

**NG**  **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)**

|            |   |
|------------|---|
| <b>18.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

- (a) Disconnect the U10 forward recognition camera connector.
- (b) Measure the resistance according to the value(s) in the table below.  
Standard Resistance:

### EWD INFO

[Click Location & Routing\(U10,K8\).](#)

[Click Connector\(U10\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION         | CONDITION   | SPECIFIED CONDITION |
|---------------------------|---|---------------------|
| U10-10 (CA1P) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| U10-9 (CA1N) - K8-4 (CG)  |   |                     |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**

|            |  |
|------------|--|
| <b>19.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (FORWARD RECOGNITION CAMERA - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)</b> |
|------------|--|

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

Standard Resistance:

### EWD INFO

[Click Location & Routing\(U10,K8\).](#)

[Click Connector\(U10\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION |
|--------------------------|---|---------------------|
| U10-2 (CA2P) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| U10-1 (CA2L) - K8-4 (CG) |   |                     |

**OK** ► **REPLACE FORWARD RECOGNITION CAMERA**

**NG**



|            |  |
|------------|--|
| <b>20.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)</b> |
|------------|--|

(a) Disconnect the A21 millimeter wave radar sensor assembly connector.

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

Standard Resistance:



[Click Location & Routing\(A21,K8\)](#)

[Click Connector\(A21\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| A21-4 (CA2H) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| A21-3 (CA2L) - K8-4 (CG) |   |                        |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)**

**OK**



|            |   |
|------------|---|
| <b>21.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(A21,K8\)](#)

[Click Connector\(A21\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION         | CONDITION   | SPECIFIED CONDITION    |
|---------------------------|---|------------------------|
| A21-10 (CA3H) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| A21-9 (CA3L) - K8-4 (CG)  |   |                        |

**OK**  **REPLACE MILLIMETER WAVE RADAR SENSOR ASSEMBLY**

**NG**



|            |   |
|------------|---|
| <b>22.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)</b> |
|------------|---|

- (a) Disconnect the A65 No. 2 global CAN junction connector.  
 (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

 **EWD INFO**

[Click Location & Routing\(A65,K8\)](#)

[Click Connector\(A65\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| A65-3 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| A65-7 (CANL) - K8-4 (CG) |   |                        |

**NG**  **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)**

**OK**



|            |  |
|------------|--|
| <b>23.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - NO. 11 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|--|

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

Standard Resistance:

 **EWD INFO**

[Click Location & Routing\(A65,K8\)](#)

[Click Connector\(A65\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION |
|--------------------------|---|---------------------|
| A65-1 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| A65-5 (CANL) - K8-4 (CG) |   |                     |

**NG**  **GO TO STEP 27**

**OK**



|            |                           |
|------------|---------------------------|
| <b>24.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                             | PROCEED TO |
|------------------------------------|------------|
| w/ Front Side Radar Sensor System  | A          |
| w/o Front Side Radar Sensor System | B          |

**B**  **REPLACE NO. 2 GLOBAL CAN JUNCTION CONNECTOR**

**A**



|            |   |
|------------|---|
| <b>25.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(A65,K8\)](#)

[Click Connector\(A65\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| A65-2 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| A65-6 (CANL) - K8-4 (CG) |   |                        |

**OK**  **REPLACE NO. 2 GLOBAL CAN JUNCTION CONNECTOR**

**NG**



|            |   |
|------------|---|
| <b>26.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))</b> |
|------------|---|

(a) Disconnect the A41 front side radar sensor (A) connector.

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

Standard Resistance:



[Click Location & Routing\(A65,K8\).](#)

[Click Connector\(A65\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| A65-2 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| A65-6 (CANL) - K8-4 (CG) |   |                        |

**OK**  **REPLACE FRONT SIDE RADAR SENSOR (A)**

**NG**  **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))**

|            |  |
|------------|--|
| <b>27.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|--|

(a) Disconnect the R88 No. 11 global CAN junction connector.

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

Standard Resistance:



[Click Location & Routing\(R88,K8\).](#)

[Click Connector\(R88\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| R88-1 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R88-5 (CANL) - K8-4 (CG) |   |                        |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |  |
|------------|--|
| <b>28.</b> | <b>CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(R88,K8\).](#)

[Click Connector\(R88\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| R88-4 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R88-8 (CANL) - K8-4 (CG) |   |                        |

**NG** ► **GO TO STEP 30**

**OK**



**29. CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))**

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

Standard Resistance:



[Click Location & Routing\(R88,K8\)](#)

[Click Connector\(R88\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION |
|--------------------------|---|---------------------|
| R88-2 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| R88-6 (CANL) - K8-4 (CG) |   |                     |

**OK** ► REPLACE NO. 11 GLOBAL CAN JUNCTION CONNECTOR

**NG** ► GO TO STEP 31

**30. CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)**

(a) Disconnect the R101 No. 2 CAN junction terminal connector.

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

Standard Resistance:



[Click Location & Routing\(R88,K8\)](#)

[Click Connector\(R88\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION |
|--------------------------|---|---------------------|
| R88-4 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |
| R88-8 (CANL) - K8-4 (CG) |   |                     |

**OK** ► REPLACE NO. 2 CAN JUNCTION TERMINAL

**NG** ► REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION)

**CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)****31.****CHECK FOR SHORT TO GND IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))**

- (a) Disconnect the S6 blind spot monitor sensor LH (B) connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R88,K8\)](#)

[Click Connector\(R88\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION        | CONDITION   | SPECIFIED CONDITION    |
|--------------------------|---|------------------------|
| R88-2 (CANH) - K8-4 (CG) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |
| R88-6 (CANL) - K8-4 (CG) |   |                        |

**OK** ► **REPLACE BLIND SPOT MONITOR SENSOR LH (B)**

**NG** ► **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))**

**32.****CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

- (a) Disconnect the R108 No. 15 global CAN junction connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R108,K8\)](#)

[Click Connector\(R108\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION    |
|-----------------------------|---|------------------------|
| R108-1 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 k $\Omega$ or higher |

| TESTER CONNECTION            | CONDITION | SPECIFIED CONDITION |
|------------------------------|-----------|---------------------|
| R108-12 (CANL) - K8-16 (BAT) |           |                     |

**NG**  **GO TO STEP 35**

**OK**



|            |                           |
|------------|---------------------------|
| <b>33.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                            | PROCEED TO |
|-----------------------------------|------------|
| w/ Panoramic View Monitor System  | A          |
| w/o Panoramic View Monitor System | B          |

**B**  **GO TO STEP 41**

**A**



|            |  |
|------------|--|
| <b>34.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(R108,K8\).](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R108-4 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |



| TESTER CONNECTION            | CONDITION | SPECIFIED CONDITION |
|------------------------------|-----------|---------------------|
| R108-15 (CANL) - K8-16 (BAT) |           |                     |

**OK** ► GO TO STEP 42

**NG** ► GO TO STEP 36

**35. CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 15 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:



[Click Location & Routing\(R108,K8\).](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| R108-1 (CANH) - K8-16 (BAT)  | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R108-12 (CANL) - K8-16 (BAT) |   |                     |

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

**NG** ► REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))

**36. CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

- (a) Disconnect the R89 No. 12 global CAN junction connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R89,K8\).](#)

[Click Connector\(R89\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| R89-3 (CANH) - K8-16<br>(BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R89-7 (CANL) - K8-16<br>(BAT) |   |                     |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |  |
|------------|--|
| <b>37.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(R89,K8\).](#)

[Click Connector\(R89\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| R89-2 (CANH) - K8-16<br>(BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R89-6 (CANL) - K8-16<br>(BAT) |   |                     |

**NG** ► **GO TO STEP 39**

**OK**  
▼

**38. CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)**

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

Standard Resistance:



[Click Location & Routing\(R89,K8\).](#)

[Click Connector\(R89\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R89-1 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R89-5 (CANL) - K8-16 (BAT) |   |                     |

**OK** ► REPLACE NO. 12 GLOBAL CAN JUNCTION CONNECTOR

**NG** ► GO TO STEP 40

**39. CHECK FOR SHORT TO +B IN CAN BUS LINE (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)**

(a) Disconnect the U10 forward recognition camera connector.

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

Standard Resistance:



[Click Location & Routing\(U10,K8\).](#)

[Click Connector\(U10\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| U10-10 (CA1P) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| U10-9 (CA1N) - K8-16 (BAT)  |   |                     |

**OK** ► **GO TO STEP 46**

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)**

|            |  |
|------------|--|
| <b>40.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)</b> |
|------------|--|

- (a) Disconnect the R34 parking assist ECU connector.  
 (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R89,K8\).](#)

[Click Connector\(R89\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| R89-1 (CANH) - K8-16<br>(BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R89-5 (CANL) - K8-16<br>(BAT) |   |                     |

**OK** ► **REPLACE PARKING ASSIST ECU**

**NG** ► **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)**

|            |  |
|------------|--|
| <b>41.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(R108,K8\).](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| R108-3 (CANH) - K8-16 (BAT)  | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R108-14 (CANL) - K8-16 (BAT) |   |                     |

**NG**  **GO TO STEP 45**

**OK**



|            |                           |
|------------|---------------------------|
| <b>42.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                              | PROCEED TO |
|-------------------------------------|------------|
| w/ Intuitive Parking Assist System  | A          |
| w/o Intuitive Parking Assist System | B          |

**B**  **REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR**

**A**



|            |  |
|------------|--|
| <b>43.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(R108,K8\).](#)

[Click Connector\(R108\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| R108-2 (CANH) - K8-16 (BAT)  | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R108-13 (CANL) - K8-16 (BAT) |   |                     |

**OK** ▶ REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR

**NG**



|            |  |
|------------|--|
| <b>44.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)</b> |
|------------|--|

- (a) Disconnect the R36 clearance warning ECU assembly connector.  
 (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R108,K8\)](#)

[Click Connector\(R108\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| R108-2 (CANH) - K8-16 (BAT)  | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R108-13 (CANL) - K8-16 (BAT) |   |                     |

**OK** ▶ REPLACE CLEARANCE WARNING ECU ASSEMBLY

**NG** ▶ REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)

|            |  |
|------------|--|
| <b>45.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|--|

- (a) Disconnect the U10 forward recognition camera connector.  
 (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(U10,K8\).](#)

[Click Connector\(U10\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| U10-10 (CA1P) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| U10-9 (CA1N) - K8-16 (BAT)  |   |                     |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |   |
|------------|---|
| <b>46.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (FORWARD RECOGNITION CAMERA - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(U10,K8\).](#)

[Click Connector\(U10\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| U10-2 (CA2P) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| U10-1 (CA2L) - K8-16 (BAT) |   |                     |

**OK** ► **REPLACE FORWARD RECOGNITION CAMERA**

**NG**



**47. CHECK FOR SHORT TO +B IN CAN BUS LINE (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)**

(a) Disconnect the A21 millimeter wave radar sensor assembly connector.

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

Standard Resistance:



[Click Location & Routing\(A21,K8\).](#)

[Click Connector\(A21\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| A21-4 (CA2H) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| A21-3 (CA2L) - K8-16 (BAT) |   |                     |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)**



**48. CHECK FOR SHORT TO +B IN CAN BUS LINE (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)**

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

Standard Resistance:



[Click Location & Routing\(A21,K8\).](#)

[Click Connector\(A21\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A21-10 (CA3H) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| A21-9 (CA3L) - K8-16 (BAT)  |   |                     |



**OK**  **REPLACE MILLIMETER WAVE RADAR SENSOR ASSEMBLY**

**NG**



|            |  |
|------------|--|
| <b>49.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)</b> |
|------------|--|

- (a) Disconnect the A65 No. 2 global CAN junction connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

 **EWD INFO**

[Click Location & Routing\(A65,K8\)](#)

[Click Connector\(A65\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| A65-3 (CANH) - K8-16<br>(BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| A65-7 (CANL) - K8-16<br>(BAT) |   |                     |

**NG**  **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)**

**OK**



|            |   |
|------------|---|
| <b>50.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - NO. 11 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

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

Standard Resistance:

 **EWD INFO**

[Click Location & Routing\(A65,K8\)](#)

[Click Connector\(A65\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| A65-1 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| A65-5 (CANL) - K8-16 (BAT) |   |                     |

**NG**  **GO TO STEP 54**

**OK**



|            |                           |
|------------|---------------------------|
| <b>51.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                             | PROCEED TO |
|------------------------------------|------------|
| w/ Front Side Radar Sensor System  | A          |
| w/o Front Side Radar Sensor System | B          |

**B**  **REPLACE NO. 2 GLOBAL CAN JUNCTION CONNECTOR**

**A**



|            |  |
|------------|--|
| <b>52.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(A65,K8\).](#)

[Click Connector\(A65\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| A65-2 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| A65-6 (CANL) - K8-16 (BAT) |   |                     |

**OK**  **REPLACE NO. 2 GLOBAL CAN JUNCTION CONNECTOR**

**NG**



|            |  |
|------------|--|
| <b>53.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))</b> |
|------------|--|

- (a) Disconnect the A41 front side radar sensor (A) connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(A65,K8\)](#)

[Click Connector\(A65\)](#)

[Click Connector\(K8\)](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| A65-2 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| A65-6 (CANL) - K8-16 (BAT) |   |                     |

**OK**  **REPLACE FRONT SIDE RADAR SENSOR (A)**

**NG**  **REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))**

|            |   |
|------------|---|
| <b>54.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

- (a) Disconnect the R88 No. 11 global CAN junction connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R88,K8\).](#)

[Click Connector\(R88\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R88-1 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R88-5 (CANL) - K8-16 (BAT) |   |                     |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |   |
|------------|---|
| <b>55.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R88,K8\).](#)

[Click Connector\(R88\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R88-4 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R88-8 (CANL) - K8-16 (BAT) |   |                     |

**NG** ► **GO TO STEP 57**

**OK**



|            |  |
|------------|--|
| <b>56.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(R88,K8\).](#)

[Click Connector\(R88\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R88-2 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R88-6 (CANL) - K8-16 (BAT) |   |                     |

**OK** ► REPLACE NO. 11 GLOBAL CAN JUNCTION CONNECTOR

**NG** ► GO TO STEP 58

|            |   |
|------------|---|
| <b>57.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)</b> |
|------------|---|

(a) Disconnect the R101 No. 2 CAN junction terminal connector.

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

Standard Resistance:



[Click Location & Routing\(R88,K8\).](#)

[Click Connector\(R88\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R88-4 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R88-8 (CANL) - K8-16 (BAT) |   |                     |

**OK** ► REPLACE NO. 2 CAN JUNCTION TERMINAL

**NG** ► REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)

|            |  |
|------------|--|
| <b>58.</b> | <b>CHECK FOR SHORT TO +B IN CAN BUS LINE (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))</b> |
|------------|--|

- (a) Disconnect the S6 blind spot monitor sensor LH (B) connector.  
 (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R88,K8\).](#)

[Click Connector\(R88\).](#)

[Click Connector\(K8\).](#)

| TESTER CONNECTION          | CONDITION   | SPECIFIED CONDITION |
|----------------------------|---|---------------------|
| R88-2 (CANH) - K8-16 (BAT) | Cable disconnected from negative (-) auxiliary battery terminal | 6 kΩ or higher      |
| R88-6 (CANL) - K8-16 (BAT) |   |                     |

**OK** ► REPLACE BLIND SPOT MONITOR SENSOR LH (B)

**NG** ► REPAIR OR REPLACE CAN BRANCH LINE OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))

|            |  |
|------------|--|
| <b>59.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))</b> |
|------------|--|

- (a) Disconnect the R108 No. 15 global CAN junction connector.  
 (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R108\).](#)

[Click Connector\(R108\).](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-1 (CANH) - R108-12 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG**  **GO TO STEP 62**

**OK**



|            |                           |
|------------|---------------------------|
| <b>60.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                            | PROCEED TO |
|-----------------------------------|------------|
| w/ Panoramic View Monitor System  | A          |
| w/o Panoramic View Monitor System | B          |

**B**  **GO TO STEP 68**

**A**



|            |   |
|------------|---|
| <b>61.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R108\)](#)

[Click Connector\(R108\)](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-4 (CANH) - R108-15 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **GO TO STEP 69****NG** ► **GO TO STEP 63**

|            |  |
|------------|--|
| <b>62.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))</b> |
|------------|--|

(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:



[Click Location & Routing\(R108\)](#)

[Click Connector\(R108\)](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-1 (CANH) - R108-12 (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. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

|            |   |
|------------|---|
| <b>63.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

(a) Reconnect the R108 No. 15 global CAN junction connector.

(b) Disconnect the R89 No. 12 global CAN junction connector.

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

Standard Resistance:



[Click Location & Routing\(R89\)](#)

[Click Connector\(R89\)](#)



| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R89-3 (CANH) - R89-7 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |   |
|------------|---|
| <b>64.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R89\)](#)

[Click Connector\(R89\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R89-2 (CANH) - R89-6 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► **GO TO STEP 66**

**OK**



|            |   |
|------------|---|
| <b>65.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R89\)](#)

[Click Connector\(R89\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION    |
|-----------------------------|---|------------------------|
| R89-1 (CANH) - R89-5 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |

**OK** ► **REPLACE NO. 12 GLOBAL CAN JUNCTION CONNECTOR**

**NG** ► **GO TO STEP 67**

|            |   |
|------------|---|
| <b>66.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

- (a) Reconnect the R89 No. 12 global CAN junction connector.
- (b) Disconnect the U10 forward recognition camera connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

[Click Location & Routing\(U10\)](#)[Click Connector\(U10\)](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| U10-10 (CA1P) - U10-9 (CA1N) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **GO TO STEP 73**

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)**

|            |   |
|------------|---|
| <b>67.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)</b> |
|------------|---|

- (a) Disconnect the R34 parking assist ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R89\)](#)

[Click Connector\(R89\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION    |
|-----------------------------|---|------------------------|
| R89-1 (CANH) - R89-5 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 1 M $\Omega$ or higher |

**OK** ► REPLACE PARKING ASSIST ECU

**NG** ► REPAIR OR REPLACE CAN BRANCH LINES OR CONNECTOR (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - PARKING ASSIST ECU)

|            |   |
|------------|---|
| <b>68.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R108\)](#)

[Click Connector\(R108\)](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-3 (CANH) - R108-14 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► GO TO STEP 72

**OK**



|            |                           |
|------------|---------------------------|
| <b>69.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                              | PROCEED TO |
|-------------------------------------|------------|
| w/ Intuitive Parking Assist System  | A          |
| w/o Intuitive Parking Assist System | B          |

**B** ▶ REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR

**A**  
▼

|            |   |
|------------|---|
| <b>70.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R108\)](#)

[Click Connector\(R108\)](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-2 (CANH) - R108-13 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |

**OK** ▶ REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR

**NG**  
▼

|            |   |
|------------|---|
| <b>71.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)</b> |
|------------|---|

(a) Disconnect the R36 clearance warning ECU assembly connector.

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

Standard Resistance:



[Click Location & Routing\(R108\)](#)

[Click Connector\(R108\)](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-2 (CANH) - R108-13 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 1 MΩ or higher      |

**OK** ► REPLACE CLEARANCE WARNING ECU ASSEMBLY

**NG** ► REPAIR OR REPLACE CAN BRANCH LINES OR CONNECTOR (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CLEARANCE WARNING ECU ASSEMBLY)

|            |   |
|------------|---|
| <b>72.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

- (a) Reconnect the R108 No. 15 global CAN junction connector.
- (b) Disconnect the U10 forward recognition camera connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

[Click Location & Routing\(U10\)](#)[Click Connector\(U10\)](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| U10-10 (CA1P) - U10-9 (CA1N) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 Ω        |

**NG** ► REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)

**OK**



|            |  |
|------------|--|
| <b>73.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (FORWARD RECOGNITION CAMERA - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(U10\)](#)

[Click Connector\(U10\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| U10-2 (CA2P) - U10-1 (CA2L) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► REPLACE FORWARD RECOGNITION CAMERA

**NG**



|            |  |
|------------|--|
| <b>74.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)</b> |
|------------|--|

- (a) Reconnect the U10 forward recognition camera connector.
- (b) Disconnect the A21 millimeter wave radar sensor assembly connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(A21\)](#)

[Click Connector\(A21\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A21-4 (CA2H) - A21-3 (CA2L) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)

**OK**



75.

**CHECK FOR SHORT IN CAN BUS LINES (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)**

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

Standard Resistance:

[Click Location & Routing\(A21\)](#)[Click Connector\(A21\)](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| A21-10 (CA3H) - A21-9 (CA3L) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** **REPLACE MILLIMETER WAVE RADAR SENSOR ASSEMBLY****NG**

76.

**CHECK FOR SHORT IN CAN BUS LINES (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)**

(a) Reconnect the A21 millimeter wave radar sensor assembly connector.

(b) Disconnect the A65 No. 2 global CAN junction connector.

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

Standard Resistance:

[Click Location & Routing\(A65\)](#)[Click Connector\(A65\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A65-3 (CANH) - A65-7 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)**

**OK**

|            |  |
|------------|--|
| <b>77.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - NO. 11 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(A65\).](#)

[Click Connector\(A65\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A65-1 (CANH) - A65-5 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** **GO TO STEP 81**

**OK**

|            |                           |
|------------|---------------------------|
| <b>78.</b> | <b>CHECK VEHICLE TYPE</b> |
|------------|---------------------------|

(a) Check vehicle type.

| RESULT                             | PROCEED TO |
|------------------------------------|------------|
| w/ Front Side Radar Sensor System  | A          |
| w/o Front Side Radar Sensor System | B          |

**B** **REPLACE NO. 2 GLOBAL CAN JUNCTION CONNECTOR**

**A**



79.

**CHECK FOR SHORT IN CAN BUS LINES (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))**

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

Standard Resistance:

[Click Location & Routing\(A65\).](#)[Click Connector\(A65\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A65-2 (CANH) - A65-6 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 200 Ω or higher     |

**OK** **REPLACE NO. 2 GLOBAL CAN JUNCTION CONNECTOR****NG**

80.

**CHECK FOR SHORT IN CAN BUS LINES (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))**

(a) Disconnect the A41 front side radar sensor (A) connector.

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

Standard Resistance:

[Click Location & Routing\(A65\).](#)[Click Connector\(A65\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A65-2 (CANH) - A65-6 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 1 MΩ or higher      |

**OK** **REPLACE FRONT SIDE RADAR SENSOR (A)****NG** **REPAIR OR REPLACE CAN BRANCH LINES OR CONNECTOR (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - FRONT SIDE RADAR SENSOR (A))**

|            |  |
|------------|--|
| <b>81.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|--|

- (a) Reconnect the A65 No. 2 global CAN junction connector.
- (b) Disconnect the R88 No. 11 global CAN junction connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R88\)](#)

[Click Connector\(R88\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R88-1 (CANH) - R88-5 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 Ω        |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |  |
|------------|--|
| <b>82.</b> | <b>CHECK FOR SHORT IN CAN BUS LINES (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(R88\)](#)

[Click Connector\(R88\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R88-4 (CANH) - R88-8 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 Ω        |

**NG** ► **GO TO STEP 84**

**OK****83.****CHECK FOR SHORT IN CAN BUS LINES (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))**

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

Standard Resistance:

[Click Location & Routing\(R88\).](#)[Click Connector\(R88\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION    |
|-----------------------------|---|------------------------|
| R88-2 (CANH) - R88-6 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 200 $\Omega$ or higher |

**OK** ► **REPLACE NO. 11 GLOBAL CAN JUNCTION CONNECTOR****NG** ► **GO TO STEP 85****84.****CHECK FOR SHORT IN CAN BUS LINES (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)**

(a) Disconnect the R101 No. 2 CAN junction terminal connector.

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

Standard Resistance:

[Click Location & Routing\(R88\).](#)[Click Connector\(R88\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION    |
|-----------------------------|---|------------------------|
| R88-4 (CANH) - R88-8 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 1 M $\Omega$ or higher |

**OK** ► **REPLACE NO. 2 CAN JUNCTION TERMINAL****NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION**

**CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)****85.****CHECK FOR SHORT IN CAN BUS LINES (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))**

- (a) Disconnect the S6 blind spot monitor sensor LH (B) connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:


[Click Location & Routing\(R88\)](#)
[Click Connector\(R88\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION    |
|-----------------------------|---|------------------------|
| R88-2 (CANH) - R88-6 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 1 M $\Omega$ or higher |

**OK** ► **REPLACE BLIND SPOT MONITOR SENSOR LH (B)**

**NG** ► **REPAIR OR REPLACE CAN BRANCH LINES OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - BLIND SPOT MONITOR SENSOR LH (B))**

**86.****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:


[Click Location & Routing\(K78\)](#)
[Click Connector\(K78\)](#)

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| K78-28 (CA1H) - K78-27 (CA1L) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

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

**NG****87.****CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

- (a) Reconnect the K78 central gateway ECU (network gateway ECU) connector.
- (b) Disconnect the R108 No. 15 global CAN junction connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

[Click Location & Routing\(R108\)](#)[Click Connector\(R108\)](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-1 (CANH) - R108-12 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - CENTRAL GATEWAY ECU (NETWORK GATEWAY ECU))**

**OK****88.****CHECK VEHICLE TYPE**

- (a) Check vehicle type.

| RESULT                            | PROCEED TO |
|-----------------------------------|------------|
| w/ Panoramic View Monitor System  | A          |
| w/o Panoramic View Monitor System | B          |

**B** **GO TO STEP 93**

**A****89. CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)**

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

Standard Resistance:



[Click Location & Routing\(R108\).](#)

[Click Connector\(R108\).](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-4 (CANH) - R108-15 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** **REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR**

**NG****90. CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

(a) Reconnect the R108 No. 15 global CAN junction connector.

(b) Disconnect the R89 No. 12 global CAN junction connector.

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

Standard Resistance:



[Click Location & Routing\(R89\).](#)

[Click Connector\(R89\).](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R89-3 (CANH) - R89-7 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |   |
|------------|---|
| <b>91.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 12 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R89\)](#)

[Click Connector\(R89\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R89-2 (CANH) - R89-6 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **REPLACE NO. 12 GLOBAL CAN JUNCTION CONNECTOR**

**NG**



|            |   |
|------------|---|
| <b>92.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

(a) Reconnect the R89 No. 12 global CAN junction connector.

(b) Disconnect the U10 forward recognition camera connector.

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

Standard Resistance:



[Click Location & Routing\(U10\)](#)

[Click Connector\(U10\)](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| U10-10 (CA1P) - U10-9 (CA1N) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **GO TO STEP 95**

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 12 GLOBAL CAN JUNCTION CONNECTOR)**

|            |   |
|------------|---|
| <b>93.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 15 GLOBAL CAN JUNCTION CONNECTOR - FORWARD RECOGNITION CAMERA)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(R108\)](#)

[Click Connector\(R108\)](#)

| TESTER CONNECTION              | CONDITION   | SPECIFIED CONDITION |
|--------------------------------|---|---------------------|
| R108-3 (CANH) - R108-14 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **REPLACE NO. 15 GLOBAL CAN JUNCTION CONNECTOR**

**NG**



|            |   |
|------------|---|
| <b>94.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

(a) Reconnect the R108 No. 15 global CAN junction connector.

(b) Disconnect the U10 forward recognition camera connector.

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

Standard Resistance:



[Click Location & Routing\(U10\)](#)



[Click Connector\(U10\)](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| U10-10 (CA1P) - U10-9 (CA1N) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (FORWARD RECOGNITION CAMERA - NO. 15 GLOBAL CAN JUNCTION CONNECTOR)**

**OK**



|            |  |
|------------|--|
| <b>95.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (FORWARD RECOGNITION CAMERA - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(U10\)](#)

[Click Connector\(U10\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| U10-2 (CA2P) - U10-1 (CA2L) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **REPLACE FORWARD RECOGNITION CAMERA**

**NG**



|            |  |
|------------|--|
| <b>96.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)</b> |
|------------|--|

(a) Reconnect the U10 forward recognition camera connector.

(b) Disconnect the A21 millimeter wave radar sensor assembly connector.

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

Standard Resistance:



[Click Location & Routing\(A21\)](#)

[Click Connector\(A21\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A21-4 (CA2H) - A21-3 (CA2L) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - FORWARD RECOGNITION CAMERA)**

**OK**



|            |   |
|------------|---|
| <b>97.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (MILLIMETER WAVE RADAR SENSOR ASSEMBLY - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|---|

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

Standard Resistance:



[Click Location & Routing\(A21\)](#)

[Click Connector\(A21\)](#)

| TESTER CONNECTION            | CONDITION   | SPECIFIED CONDITION |
|------------------------------|---|---------------------|
| A21-10 (CA3H) - A21-9 (CA3L) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **REPLACE MILLIMETER WAVE RADAR SENSOR ASSEMBLY**

**NG**



|            |   |
|------------|---|
| <b>98.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)</b> |
|------------|---|

(a) Reconnect the A21 millimeter wave radar sensor assembly connector.

(b) Disconnect the A65 No. 2 global CAN junction connector.

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

Standard Resistance:



[Click Location & Routing\(A65\)](#)

[Click Connector\(A65\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A65-3 (CANH) - A65-7 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 Ω        |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - MILLIMETER WAVE RADAR SENSOR ASSEMBLY)**

**OK**



|            |  |
|------------|--|
| <b>99.</b> | <b>CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 2 GLOBAL CAN JUNCTION CONNECTOR - NO. 11 GLOBAL CAN JUNCTION CONNECTOR)</b> |
|------------|--|

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

Standard Resistance:



[Click Location & Routing\(A65\)](#)

[Click Connector\(A65\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| A65-1 (CANH) - A65-5 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 Ω        |

**OK** ► **REPLACE NO. 2 GLOBAL CAN JUNCTION CONNECTOR**

**NG**



**100.****CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)**

- (a) Reconnect the A65 No. 2 global CAN junction connector.
- (b) Disconnect the R88 No. 11 global CAN junction connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:


[Click Location & Routing\(R88\)](#)
[Click Connector\(R88\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R88-1 (CANH) - R88-5 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**NG** ► **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 GLOBAL CAN JUNCTION CONNECTOR)**

**OK****101.****CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 11 GLOBAL CAN JUNCTION CONNECTOR - NO. 2 CAN JUNCTION TERMINAL)**

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

Standard Resistance:


[Click Location & Routing\(R88\)](#)
[Click Connector\(R88\)](#)

| TESTER CONNECTION           | CONDITION   | SPECIFIED CONDITION |
|-----------------------------|---|---------------------|
| R88-4 (CANH) - R88-8 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** ► **REPLACE NO. 11 GLOBAL CAN JUNCTION CONNECTOR**

**NG****102. CHECK FOR OPEN IN CAN MAIN BUS LINES (NO. 2 CAN JUNCTION TERMINAL)**

- (a) Reconnect the R88 No. 11 global CAN junction connector.
- (b) Disconnect the R101 No. 2 CAN junction terminal connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

[Click Location & Routing\(R101\)](#)[Click Connector\(R101\)](#)

| TESTER CONNECTION             | CONDITION   | SPECIFIED CONDITION |
|-------------------------------|---|---------------------|
| R101-3 (CANH) - R101-2 (CANL) | Cable disconnected from negative (-) auxiliary battery terminal | 108 to 132 $\Omega$ |

**OK** **REPLACE NO. 2 CAN JUNCTION TERMINAL****NG** **REPAIR OR REPLACE CAN MAIN BUS LINES OR CONNECTOR (NO. 2 CAN JUNCTION TERMINAL - NO. 11 GLOBAL CAN JUNCTION CONNECTOR)**