

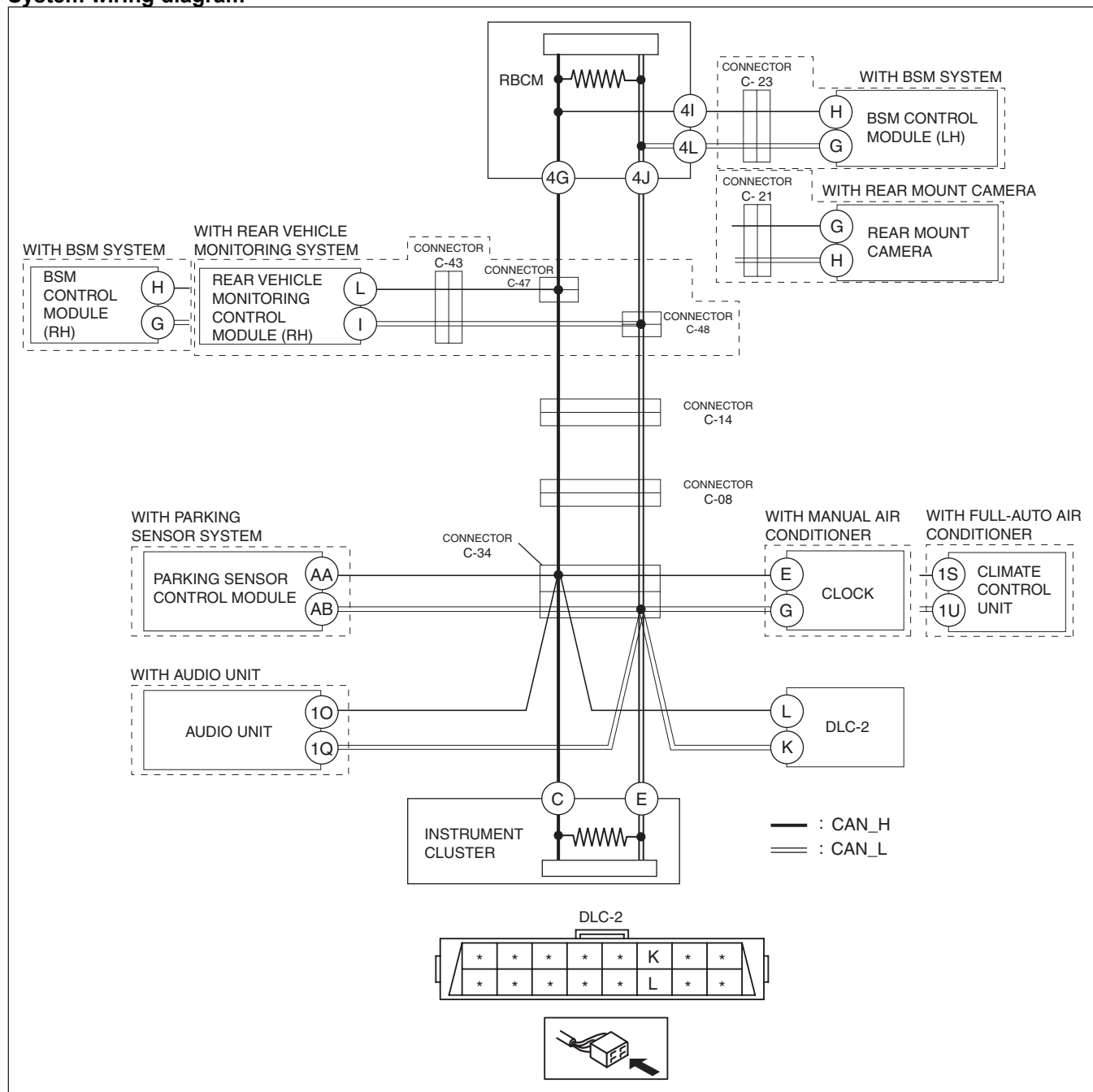
## DETERMINING SHORT TO POWER SUPPLY LOCATION (MS-CAN) [SKYACTIV-G 2.0 (R.H.D.)]

id100202001000

### Caution

- Perform the following malfunction diagnosis only when it is diagnosed with a short to the power supply by **CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [SKYACTIV-G 2.0 (R.H.D.)]**.

### System wiring diagram



ac5wzw00000684

### Determination procedure

#### Caution

- When disconnecting the connector, verify that there is no looseness, damage, deformation, corrosion, or poor connection of the connector terminals.
- When inspecting the DLC-2, touch it with a paper clip or similar thin pin without directly inserting a tester into the terminals.

- **Disconnect the negative battery cable before performing any work that requires handling of connectors.**

Step	Inspection	Action	
1	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-08 AND INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect connector C-08.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to Step 11.
		No	Go to the next step.
2	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTORS C-34 AND DLC-2</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect connector C-34.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage 0 V?</li> </ul>	Yes	Go to the next step.
		No	Repair or replace the wiring harness between DLC-2 and connector C-34 because the wiring harness is shorted to the power supply.
3	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND PARKING SENSOR CONTROL MODULE</b> <ul style="list-style-type: none"> <li>• Measure the voltage at parking sensor control module terminals AA and AB.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to Step 5.
		No	Go to the next step.

Step	Inspection	Action	
4	<b>INSPECT PARKING SENSOR CONTROL MODULE FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect the parking sensor control module connector.</li> <li>• Connect connector C-34.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Replace the parking sensor control module because there is a short to power supply in the parking sensor control module. (See PARKING SENSOR CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness between the parking sensor control module and connector C-34 because the wiring harness is shorted to the power supply.
5	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND CLIMATE CONTROL UNIT OR CLOCK</b> <ul style="list-style-type: none"> <li>• Measure the voltage at climate control unit terminals 1S and 1U. (with full-auto air conditioner)</li> <li>• Measure the voltage at clock terminals E and G. (with manual air conditioner)</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to Step 7.
		No	Go to the next step.
6	<b>INSPECT CLIMATE CONTROL UNIT OR CLOCK FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect the climate control unit connector or the clock connector.</li> <li>• Connect connector C-34.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Replace the climate control unit or the clock because there is a short to power supply inside the climate control unit or the clock. (See CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See CLOCK REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness between the climate control unit or the clock and connector C-34 because the wiring harness is shorted to the power supply.
7	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND AUDIO</b> <ul style="list-style-type: none"> <li>• Measure the voltage at audio unit terminals 1O and 1Q.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to Step 9.
		No	Go to the next step.

Step	Inspection	Action	
8	<b>INSPECT AUDIO UNIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)]).)</li> <li>• Disconnect the audio unit connector.</li> <li>• Connect connector C34.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)]).)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at audio unit terminals 1O and 1Q (wiring harness side).</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Replace the audio unit because there is a short to the power supply in the audio unit. (See AUDIO UNIT REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness between the audio unit and connector C-34 because the wiring harness is shorted to the power supply.
9	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND INSTRUMENT CLUSTER</b> <ul style="list-style-type: none"> <li>• Measure the voltage at instrument cluster terminals C and E.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Repair or replace the wiring harness between connector C-08 and connector C-34 because the wiring harness is shorted to the power supply.
		No	Go to the next step.
10	<b>INSPECT INSTRUMENT CLUSTER FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)]).)</li> <li>• Disconnect the instrument cluster connector.</li> <li>• Connect connector C-34.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)]).)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Replace the instrument cluster because there is a short to the power supply in the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness between the instrument cluster and connector C-34 because the wiring harness is shorted to the power supply.

Step	Inspection	Action	
11	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTORS C-14 AND C-08</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect connector C-14.</li> <li>• Connect connector C-08.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to the next step.
		No	Repair or replace the wiring harness between connector C-14 and connector C-08 because the wiring harness is shorted to the power supply.
12	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTORS C-47 AND C-48 AND CONNECTOR C-14</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect connectors C-47 and C-48.</li> <li>• Connect connector C-14.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to the next step.
		No	Repair or replace the wiring harness between connectors C-47 and C-48 and connector C-14 because the wiring harness is shorted to the power supply.
13	<b>INSPECT BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) OR BSM CONTROL MODULE (RH) AND CONNECTORS C-47 AND C-48 FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Measure the voltage at rear vehicle monitoring control module (RH) terminals L and I. (With rear vehicle monitoring system)</li> <li>• Measure the voltage at BSM control module (RH) terminals H and G. (With BSM system)</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to Step 16.
		No	<ul style="list-style-type: none"> <li>• Go to the next step. (With rear vehicle monitoring system)</li> <li>• Go to Step 15.</li> </ul>

Step	Inspection	Action	
14	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) AND CONNECTOR C-43</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect connectors C-43.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at rear vehicle monitoring (RH) terminals L and I.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Repair or replace the wiring harness between connector C-43 and connectors C-47 and C-48 because the wiring harness is shorted to the power supply.
		No	Go to the next step.
15	<b>INSPECT BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) OR BSM CONTROL MODULE (RH) FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect the rear vehicle monitoring control modules (RH) connector or the BSM control module (RH) connector.</li> <li>• Connect connectors C-47 and C-48.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Replace the rear vehicle monitoring control module (RH) or the BSM control module (RH) because there is a short to the power supply in the rear vehicle monitoring control module (RH) or the BSM control module (RH). (See REAR VEHICLE MONITORING CONTROL MODULE REMOVAL/INSTALLATION.) (See BLIND SPOT MONITORING (BSM) CONTROL MODULE REMOVAL/INSTALLATION.)
		No	<ul style="list-style-type: none"> <li>• Repair or replace the wiring harness between the rear vehicle monitoring control module (RH) and connector C-43 because the wiring harness is shorted to the power supply. (With rear vehicle monitoring system)</li> <li>• Repair or replace the wiring harness between the BSM control module (RH) and connectors C-47 and C-48 because the wiring harness is shorted to the power supply. (With BSM system)</li> </ul>

Step	Inspection	Action	
16	<b>INSPECT FOR SHORT TO POWER SUPPLY BETWEEN REAR BODY CONTROL MODULE (RBCM) AND BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect the rear body control module (RBCM) connector.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at BSM control module (LH) terminals H and G. (With BSM system)</li> <li>• Measure the voltage at BSM control module (LH) terminals H and G. (With rear mount camera)</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to Step 19.
		No	Go to the next step.
17	<b>INSPECT BETWEEN REAR BODY CONTROL MODULE (RBCM) AND CONNECTOR C-23 OR C-21 FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect connector C-23 or C-21.</li> <li>• Connect the rear body control module (RBCM) connector.</li> <li>• Connect connectors C-47 and C-48.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes	Go to the next step.
		No	Repair or replace the wiring harness between the rear body control module (RBCM) and connector C-23 or C-21 because the wiring harness is shorted to the power supply.

Step	Inspection	Action
18	<b>INSPECT BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Disconnect the BSM control module (LH) connector or the rear mount camera connector.</li> <li>• Connect connector C-23 or C-21.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes Replace the BSM control module (LH) or the rear mount camera because there is a short to the power supply in the BSM control module (LH) or the rear mount camera. (See BLIND SPOT MONITORING (BSM) CONTROL MODULE REMOVAL/INSTALLATION.) (See REAR MOUNT CAMERA REMOVAL/INSTALLATION.)
		No <ul style="list-style-type: none"> <li>• Repair or replace the wiring harness between BSM control module (LH) and connector C-23 because the wiring harness is shorted to the power supply. (With BSM system)</li> <li>• Repair or replace the wiring harness between the rear mount camera and connector C-21 because the wiring harness is shorted to the power supply. (With rear mount camera)</li> </ul>
19	<b>INSPECT REAR BODY CONTROL MODULE (RBCM) FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Switch the ignition off (LOCK).</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Connect connectors C-47 and C-48.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].)</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at DLC-2 terminals L and K.</li> <li>• Is the voltage between 1.5 — 3.5 V?</li> </ul>	Yes Replace the rear body control module (RBCM) because there is a short to the power supply in the rear body control module (RBCM). (See REAR BODY CONTROL MODULE (RBCM) REMOVAL/INSTALLATION.)
		No Repair or replace the wiring harness between the rear body control module (RBCM) and connectors C-47 and C-48 because the wiring harness is shorted to the power supply.