

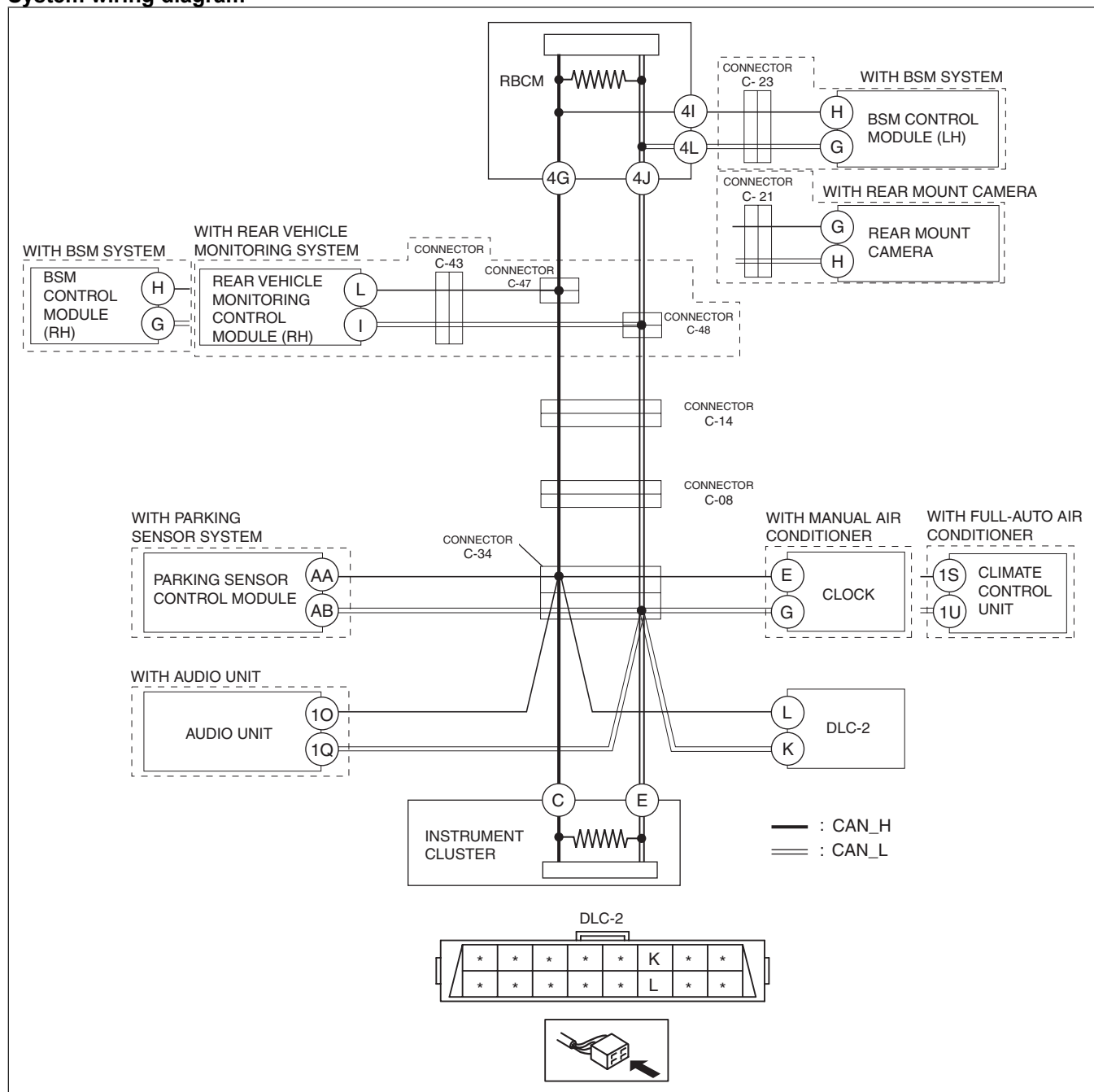
DETERMINING SHORT TO POWER SUPPLY LOCATION (MS-CAN) [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (R.H.D.)]

id100209001000

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, SKYACTIV-G 2.5 (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	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-08 AND INSTRUMENT CLUSTER <ul style="list-style-type: none"> • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect connector C-08. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	Yes	Go to Step 11.
		No	Go to the next step.
2	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTORS C-34 AND DLC-2 <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect connector C-34. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage 0 V? 	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	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND PARKING SENSOR CONTROL MODULE <ul style="list-style-type: none"> • Measure the voltage at parking sensor control module terminals AA and AB. • Is the voltage between 1.5 — 3.5 V? 	Yes	Go to Step 5.
		No	Go to the next step.

Step	Inspection	Action
4	INSPECT PARKING SENSOR CONTROL MODULE FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect the parking sensor control module connector. • Connect connector C-34. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND CLIMATE CONTROL UNIT OR CLOCK <ul style="list-style-type: none"> • Measure the voltage at climate control unit terminals 1S and 1U. (with full-auto air conditioner) • Measure the voltage at clock terminals E and G. (with manual air conditioner) • Is the voltage between 1.5 — 3.5 V? 	Yes Go to Step 7.
		No Go to the next step.
6	INSPECT CLIMATE CONTROL UNIT OR CLOCK FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect the climate control unit connector or the clock connector. • Connect connector C-34. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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.

Step	Inspection	Action	
7	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND AUDIO <ul style="list-style-type: none"> • Measure the voltage at audio unit terminals 1O and 1Q. • Is the voltage between 1.5 — 3.5 V? 	Yes	Go to Step 9.
		No	Go to the next step.
8	INSPECT AUDIO UNIT FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect the audio unit connector. • Connect connector C34. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at audio unit terminals 1O and 1Q (wiring harness side). • Is the voltage between 1.5 — 3.5 V? 	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	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTOR C-34 AND INSTRUMENT CLUSTER <ul style="list-style-type: none"> • Measure the voltage at instrument cluster terminals C and E. • Is the voltage between 1.5 — 3.5 V? 	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	INSPECT INSTRUMENT CLUSTER FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect the instrument cluster connector. • Connect connector C-34. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTORS C-14 AND C-08 <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect connector C-14. • Connect connector C-08. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN CONNECTORS C-47 AND C-48 AND CONNECTOR C-14 <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect connectors C-47 and C-48. • Connect connector C-14. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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	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 <ul style="list-style-type: none"> • Measure the voltage at rear vehicle monitoring control module (RH) terminals L and I. (With rear vehicle monitoring system) • Measure the voltage at BSM control module (RH) terminals H and G. (With BSM system) • Is the voltage between 1.5 — 3.5 V? 	Yes	Go to Step 16.
		No	<ul style="list-style-type: none"> • Go to the next step. (With rear vehicle monitoring system) • Go to Step 15.

Step	Inspection	Action	
14	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) AND CONNECTOR C-43 <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect connectors C-43. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at rear vehicle monitoring (RH) terminals L and I. • Is the voltage between 1.5 — 3.5 V? 	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	INSPECT BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) OR BSM CONTROL MODULE (RH) FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect the rear vehicle monitoring control modules (RH) connector or the BSM control module (RH) connector. • Connect connectors C-47 and C-48. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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"> • 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) • 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)

Step	Inspection	Action	
16	INSPECT FOR SHORT TO POWER SUPPLY BETWEEN REAR BODY CONTROL MODULE (RBCM) AND BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect the rear body control module (RBCM) connector. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at BSM control module (LH) terminals H and G. (With BSM system) • Measure the voltage at BSM control module (LH) terminals H and G. (With rear mount camera) • Is the voltage between 1.5 — 3.5 V? 	Yes	Go to Step 19.
		No	Go to the next step.
17	INSPECT BETWEEN REAR BODY CONTROL MODULE (RBCM) AND CONNECTOR C-23 OR C-21 FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect connector C-23 or C-21. • Connect the rear body control module (RBCM) connector. • Connect connectors C-47 and C-48. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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	INSPECT BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Disconnect the BSM control module (LH) connector or the rear mount camera connector. • Connect connector C-23 or C-21. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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"> • 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) • 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)
19	INSPECT REAR BODY CONTROL MODULE (RBCM) FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Connect connectors C-47 and C-48. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage between 1.5 — 3.5 V? 	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.