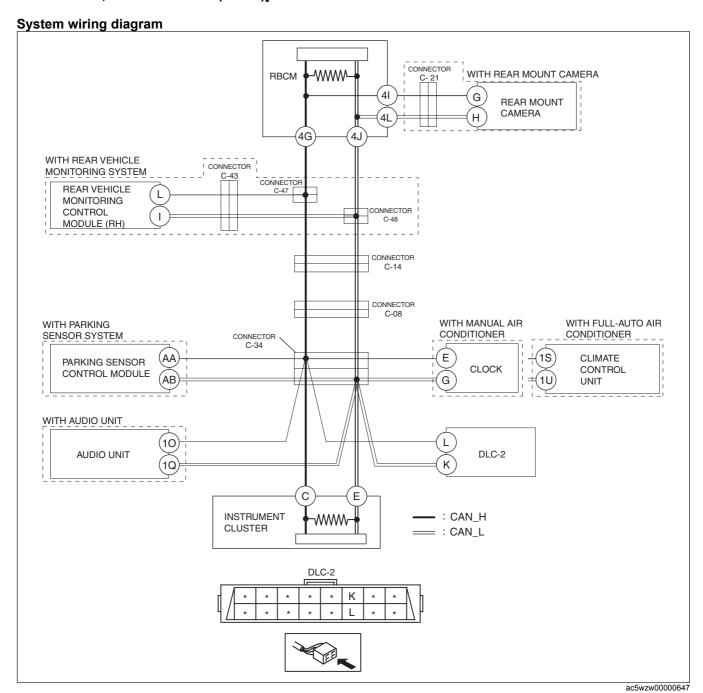
DETERMINING SHORT TO POWER SUPPLY LOCATION (MS-CAN) [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (L.H.D.)]

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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 (L.H.D.)].



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	Yes	Go to Step 11.
	BETWEEN CONNECTOR C-08 AND	No	Go to the next step.
	INSTRUMENT CLUSTER		
	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? 		
2	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to the next step.
	BETWEEN CONNECTORS C-34 AND DLC-2	No	Repair or replace the wiring harness between DLC-2 and
	Switch the ignition off (LOCK).		connector C-34 because the wiring harness is shorted to
	 Disconnect the negative battery cable. 		the power supply.
	(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?	V	0- 4- 04 5
3	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to Step 5.
	BETWEEN CONNECTOR C-34 AND PARKING	No	Go to the next step.
	SENSOR CONTROL MODULE		
	Measure the voltage at parking sensor control A A and A B.		
	module terminals AA and AB.		
	• Is the voltage between 1.5 — 3.5 V?		

Step	Inspection		Action
4	INSPECT PARKING SENSOR CONTROL	Yes	Replace the parking sensor control module because there
	MODULE FOR SHORT TO POWER SUPPLY		is a short to power supply in the parking sensor control
	Switch the ignition off (LOCK).		module.
	Disconnect the negative battery cable.		(See PARKING SENSOR CONTROL MODULE
	(See NEGATIVE BATTERY CABLE		REMOVAL/INSTALLATION.)
	DISCONNECTION/CONNECTION	No	Repair or replace the wiring harness between the parking
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)	''	sensor control module and connector C-34 because the
	(See NEGATIVE BATTERY CABLE		wiring harness is shorted to the power supply.
	DISCONNECTION/CONNECTION		willing harness is shorted to the power suppry.
	[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?		
5	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to Step 7.
	BETWEEN CONNECTOR C-34 AND CLIMATE	No	Go to the next step.
	CONTROL UNIT/CLOCK		
	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? 		
6	INSPECT CLIMATE CONTROL UNIT/CLOCK	Yes	Replace the climate control unit/clock because there is a
	FOR SHORT TO POWER SUPPLY		short to the power supply in the climate control unit/clock.
	Switch the ignition off (LOCK).		(See CLIMATE CONTROL UNIT REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION [FULL-AUTO AIR CONDITIONER].)
	(See NEGATIVE BATTERY CABLE		(See CLOCK REMOVAL/INSTALLATION.)
	DISCONNECTION/CONNECTION	No	Repair or replace the wiring harness between the climate
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		control unit/clock and connector C-34 because the wiring
	(See NEGATIVE BATTERY CABLE		harness is shorted to the power supply.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	Disconnect the climate control unit/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?		
	13 the voltage between 1.3 — 3.3 V!		

Step	Inspection		Action
7	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to Step 9.
	BETWEEN CONNECTOR C-34 AND AUDIO	No	Go to the next step.
	UNIT		·
	Measure the voltage at audio unit terminals 10		
	and 1Q.		
	• Is the voltage between 1.5 — 3.5 V?		
8	INSPECT AUDIO UNIT FOR SHORT TO	Yes	Replace the audio unit because there is a short to the
	POWER SUPPLY		power supply in the audio unit.
	Switch the ignition off (LOCK).		(See AUDIO UNIT REMOVAL/INSTALLATION.)
	Disconnect the negative battery cable.	No	Repair or replace the wiring harness between the audio
	(See NEGATIVE BATTERY CABLE		unit and connector C-34 because the wiring harness is
	DISCONNECTION/CONNECTION		shorted to the power supply.
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	[SKTACTIV-G 2.0, SKTACTIV-G 2.5] (WITHOUT i-stop)].)		
	• Disconnect the audio unit 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?	.,	
9	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Repair or replace the wiring harness between connector
	BETWEEN CONNECTOR C-34 AND INSTRUMENT CLUSTER		C-08 and connector C-34 because the wiring harness is shorted to the power supply.
	Measure the voltage at instrument cluster	No	Go to the next step.
	terminals C and E.	INO	Go to the next step.
	• Is the voltage between 1.5 — 3.5 V?		
10	INSPECT INSTRUMENT CLUSTER FOR	Yes	Replace the instrument cluster because there is a short to
	SHORT TO POWER SUPPLY	. 00	the power supply in the instrument cluster.
	Switch the ignition off (LOCK).		(See INSTRUMENT CLUSTER REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION.)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the
	DISCONNECTION/CONNECTION		instrument cluster and connector C-34 because the wiring
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		harness is shorted to the power supply.
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	Disconnect the instrument cluster connector.		
	Connect the pogative battery cable		
	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?		
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Step	Inspection		Action
11	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to the next step.
	·	Yes No	
	• Is the voltage between 1.5 — 3.5 V?		
12	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to the next step.
	BETWEEN CONNECTORS C-47 AND C-48 AND CONNECTOR C-14 • 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].) (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.	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	• Is the voltage between 1.5 — 3.5 V? INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to Step 16.
	BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) AND CONNECTORS C-47 AND C-48 • Measure the voltage at rear vehicle monitoring (RH) terminals L and I. • Is the voltage between 1.5 — 3.5 V?	No	Go to the next step.

Step	Inspection		Action
14	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Repair or replace the wiring harness between connector
	BETWEEN REAR VEHICLE MONITORING		C-43 and connectors C-47 and C-48 because the wiring
	CONTROL MODULE (RH) AND CONNECTOR		harness is shorted to the power supply.
	C-43	No	Go to the next step.
	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-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?		
15	INSPECT REAR VEHICLE MONITORING	Yes	Replace the rear vehicle monitoring control module (RH)
	CONTROL MODULE (RH) FOR SHORT TO		because there is a short to power supply in the rear vehicle
	POWER SUPPLY		monitoring control module (RH).
	Switch the ignition off (LOCK).		(See REAR VEHICLE MONITORING CONTROL
	 Disconnect the negative battery cable. 		MODULE REMOVAL/INSTALLATION.)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the rear
	DISCONNECTION/CONNECTION		vehicle monitoring control module (RH) and connector
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		C-43 because the wiring harness is shorted to power
	(See NEGATIVE BATTERY CABLE		supply.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	Disconnect the rear vehicle monitoring control		
	modules (RH) connector.		
	Connect connector C-43.		
	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?		

Step	Inspection		Action
16	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to Step 19.
	BETWEEN REAR MOUNT CAMERA AND	No	Go to the next step.
	REAR BODY CONTROL MODULE (RBCM)		os to the new step.
	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 rear mount camera (RH)		
	terminals G and H.		
	• Is the voltage between 1.5 — 3.5 V?		
17	INSPECT FOR SHORT TO POWER SUPPLY	Yes	Go to the next step.
	BETWEEN REAR BODY CONTROL MODULE	No	Repair or replace the wiring harness between the rear body
	(RBCM) AND CONNECTOR C-21		control module (RBCM) and connector C-21 because the
	Switch the ignition off (LOCK).		wiring harness is shorted to the power supply.
	• 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-21.		
	Connect the rear body control module (RBCM)		
	connector.		
	Connect connectors C-47 and C-48. Connect the pagetive bettery cable.		
	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?		
L	12 112 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13		

Step	Inspection		Action
18	INSPECT REAR MOUNT CAMERA FOR	Yes	Replace the rear mount camera because there is a short
	SHORT TO POWER SUPPLY		to power supply in the rear mount camera.
	Switch the ignition off (LOCK).		(See REAR MOUNT CAMERA REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION.)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the rear
	DISCONNECTION/CONNECTION		mount camera and connector C-21 because the wiring
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		harness is shorted to the power supply.
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	Disconnect the rear mount camera connector.		
	Connect connector 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). Management Buckets at DLC 2 terminals I and I		
	Measure the voltage at DLC-2 terminals L and		
	K.		
19	• Is the voltage between 1.5 — 3.5 V? INSPECT REAR BODY CONTROL MODULE	Yes	Replace the rear body control module (RBCM) because
19	(RBCM) FOR SHORT TO POWER SUPPLY	165	there is a short to the power supply in the rear body control
	• Switch the ignition off (LOCK).		module (RBCM).
	Disconnect the negative battery cable.		(See REAR BODY CONTROL MODULE (RBCM)
	(See NEGATIVE BATTERY CABLE		REMOVAL/INSTALLATION.)
	DISCONNECTION/CONNECTION	No	Repair or replace the wiring harness between the rear body
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		control module (RBCM) and connectors C-47 and C-48
	(See NEGATIVE BATTERY CABLE		because the wiring harness is shorted to the power supply.
	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?		