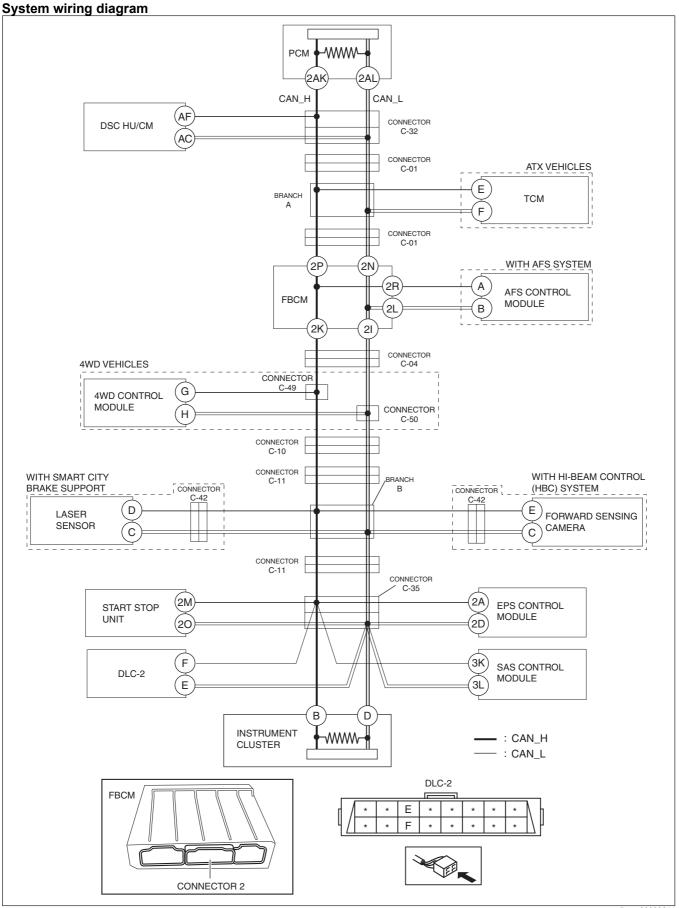
DETERMINING SHORT TO POWER SUPPLY LOCATION (HS-CAN) [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (L.H.D.)]

id100208000700

Caution

 Perform the following malfunction diagnosis only when it is diagnosed with a short to 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 the next step.
	BETWEEN FRONT BODY CONTROL MODULE	No	Go to Step 4.
	(FBCM) AND 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 2 which has front body		
	control module (FBCM) terminals 2K and 2I		
	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 F and		
	E		
	• Is the voltage between 1.5 — 3.5 V?		
2	INSPECT CAN LINE BETWEEN AFS	Yes	Go to Step 24.
	CONTROL MODULE AND FRONT BODY	No	Go to the next step.
	CONTROL MODULE (FBCM) FOR SHORT TO		
	POWER SUPPLY		
	Measure the voltage at AFS control module		
	terminals A and B.		
	• Is the voltage between 1.5 — 3.5 V?		

Step Inspection Action 3 INSPECT AFS CONTROL MODULE FOR SHORT TO POWER SUPPLY Yes Replace the AFS control module because to the power supply in the AFS co	nodule.
SHORT TO POWER SUPPLY • Switch the ignition off (LOCK). • Disconnect the negative battery cable. to the power supply in the AFS control m (See ADAPTIVE FRONT LIGHTING SY CONTROL MODULE REMOVAL/INSTA	nodule.
Switch the ignition off (LOCK). Disconnect the negative battery cable. (See ADAPTIVE FRONT LIGHTING SY CONTROL MODULE REMOVAL/INSTA	
Disconnect the negative battery cable. CONTROL MODULE REMOVAL/INSTA	STEW (AFS)
	, ,
DISCONNECTION/CONNECTION module and the front body control module	
[SKYACTIV-G 2.0, SKYACTIV-G 2.5].) because the wiring harness is shorted to	
(See NEGATIVE BATTERY CABLE	
DISCONNECTION/CONNECTION	
[SKYACTIV-G 2.0, SKYACTIV-G 2.5	
(WITHOUT i-stop)].)	
Disconnect the AFS control module connector.	
Connect connector 2 which has front body	
control module (FBCM) terminals 2K and 2I	
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 F and	
E.	
• Is the voltage between 1.5 — 3.5 V?	
4 INSPECT CAN LINE BETWEEN CONNECTOR Yes Repair or replace the wiring harness bet	
C-04 AND INSTRUMENT CLUSTER FOR body control module (FBCM) and connect	
SHORT TO POWER SUPPLY the wiring harness is shorted to the power than the state of the power state of the po	er supply.
Switch the ignition off (LOCK). No Go to the next step.	
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-04.	
• 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 F and	
E.	
• Is the voltage between 1.5 — 3.5 V?	

Step	Inspection		Action
5	INSPECT CAN LINE BETWEEN	Yes	Go to the next step.
	CONNECTORS C-49 AND C-50 AND	No	Go to Step 8.
	INSTRUMENT CLUSTER FOR SHORT TO		
	POWER SUPPLY		
	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-49 and C-50.		
	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 F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
6	INSPECT CAN LINE BETWEEN 4WD	Yes	Repair or replace the wiring harness between connector
	CONTROL MODULE AND CONNECTORS		C-04 and connectors C-49 and C-50 because the wiring
	C-49 AND C-50 FOR SHORT TO POWER		harness is shorted to the power supply.
	SUPPLY	No	Go to the next step.
	Measure the voltage at 4WD control module		
	terminals G and H.		
	• Is the voltage between 1.5 — 3.5 V?		
7	INSPECT 4WD CONTROL MODULE FOR	Yes	Replace the 4WD control module because there is a short
	SHORT TO POWER SUPPLY		to the power supply in the 4WD control module.
	Switch the ignition off (LOCK).		(See 4WD CONTROL MODULE REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION.)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the 4WD
	DISCONNECTION/CONNECTION		control module and connectors C-49 and C-50 because the
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		wiring harness is shorted to the power supply.
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	Connect connectors C-49 and C-50.		
	Disconnect the 4WD control module 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 DLC-2 terminals F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
	io the voltage between 1.0 — 0.0 v:		

Step	Inspection		Action
8	INSPECT CAN LINE BETWEEN CONNECTOR	Yes	Repair or replace the wiring harness between connectors
	C-10 AND INSTRUMENT CLUSTER FOR		C-49 and C-50 and connector C-10 because the wiring
	SHORT TO POWER SUPPLY		harness is shorted to the power supply.
	Switch the ignition off (LOCK).	No	Go to the next step.
	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-10.		
	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 F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
9	INSPECT CAN LINE BETWEEN CONNECTOR	Yes	Go to the next step.
	C-11 AND INSTRUMENT CLUSTER FOR	No	Go to Step 15.
	SHORT TO POWER SUPPLY		
	Switch the ignition off (LOCK). Disconnect the postetive better cable.		
	Disconnect the negative battery cable. One NEGATIVE BATTERY CARLE.		
	(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-11.		
	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 F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
10	INSPECT CAN LINE BETWEEN CONNECTOR	Yes	Repair or replace the wiring harness between connector
	C-11 AND FORWARD SENSING CAMERA/		C-10 and connector C-11 because the wiring harness is
	LASER SENSOR FOR SHORT TO POWER	NI.	shorted to the power supply.
	SUPPLY Measure the voltage at the ferward consing	No	Go to the next step.
	Measure the voltage at the forward sensing camera terminals E and C (with high beam		
	control (HBC) system).		
	Measure the voltage at laser sensor terminals D		
	and C (with smart city brake support).		
	• Is the voltage between 1.5 — 3.5 V?		
	is the voltage between 1.0 - 3.5 v:		

Step	Inspection		Action
11	INSPECT CAN LINE BETWEEN LASER	Yes	Go to Step 13.
	SENSOR AND CONNECTOR C-42 FOR	No	Go to the next step.
	SHORT TO POWER SUPPLY		os 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-42.		
	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 laser sensor terminals D		
	and C.		
	• Is the voltage between 1.5 — 3.5 V?		
12	INSPECT LASER SENSOR FOR SHORT TO	Yes	Replace the laser sensor because there is a short to the
12	POWER SUPPLY	100	power supply in the laser sensor.
	Switch the ignition off (LOCK).		(See LASER SENSOR REMOVAL/INSTALLATION.)
	Disconnect the negative battery cable.	No	Repair or replace the wiring harness between the laser
	(See NEGATIVE BATTERY CABLE		sensor and connector C-42 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		
	(WITHOUT i-stop)].)		
	Disconnect the laser sensor connector.		
	Connect connector C-42.		
	Connect connector C-11.		
	• 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 F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
13	INSPECT CAN LINE BETWEEN FORWARD	Yes	Repair or replace the wiring harness between connector
	SENSING CAMERA AND CONNECTOR C-42		C-11 and connector C-42 because the wiring harness is
	FOR SHORT TO POWER SUPPLY		shorted to the power supply.
	Measure the voltage at forward sensing camera	No	Go to the next step.
	terminals E and C.		
	• Is the voltage between 1.5 — 3.5 V?		

Step	Inspection		Action
14	INSPECT FORWARD SENSING CAMERA FOR	Yes	Replace the forward sensing camera because there is a
	SHORT TO POWER SUPPLY		short to the power supply in the forward sensing camera.
	Switch the ignition off (LOCK).		(See FORWARD SENSING CAMERA (FSC) REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION.)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the forward
	DISCONNECTION/CONNECTION		sensing camera and connector C-42 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 forward sensing camera		
	connector.		
	Connect connector C-42.		
	Connect connector C-11.		
	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 F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
15	INSPECT CAN LINE BETWEEN CONNECTOR	Yes	Go to the next step.
'0	C-35 AND DLC-2 FOR SHORT TO POWER	No	Repair or replace the wiring harness between connector
	SUPPLY	140	C-35 and DLC-2 because the wiring harness is shorted to
	Switch the ignition off (LOCK).		the power supply.
	Disconnect the negative battery cable.		and power dappry.
	(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-35.		
	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 F and		
	E.		
	• Is the voltage 0 V?		
16	INSPECT CAN LINE BETWEEN START STOP	Yes	Go to Step 18.
	UNIT AND CONNECTOR C-35 FOR SHORT TO	No	Go to the next step.
	POWER SUPPLY		
	Measure the voltage at start stop unit terminals		
	2M and 2O.		
	• Is the voltage between 1.5 — 3.5 V?		

Step	Inspection		Action
17	INSPECT START STOP UNIT FOR SHORT TO	Yes	Replace the start stop unit because there is a short to the
	POWER SUPPLY		power supply in the start stop unit.
	Switch the ignition off (LOCK).		(See START STOP UNIT REMOVAL/INSTALLATION.)
	Disconnect the negative battery cable.	No	Repair or replace the wiring harness between the start stop
	Connect connector C-35.	110	unit and connector C-35 because the wiring harness is
	Disconnect the start stop unit connector.		shorted to the power supply.
	Connect the negative battery cable.		onorted to the power suppry.
	(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 E and		
	F.		
	• Is the voltage between 1.5 — 3.5 V?		
18	INSPECT CAN LINE BETWEEN EPS	Yes	Go to Step 20.
10	CONTROL MODULE AND CONNECTOR C-35	No	Go to the next step.
	FOR SHORT TO POWER SUPPLY	INO	Go to the next step.
	Measure the voltage at EPS control module		
	terminals 2A and 2D.		
	• Is the voltage between 1.5 — 3.5 V?		
19	INSPECT EPS CONTROL MODULE FOR	Yes	Replace the EPS control module because there is a short
	SHORT TO POWER SUPPLY		to the power supply in the EPS control module.
	Switch the ignition off (LOCK).		(See STEERING WHEEL AND COLUMN REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION.)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the EPS
	DISCONNECTION/CONNECTION	''	control module and connector C-35 because the wiring
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		harness is shorted to the power supply.
	(See NEGATIVE BATTERY CABLE		The manage is a shortest to the points. Supply.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	Connect connector C-35.		
	Disconnect the EPS control module 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 DLC-2 terminals E and		
	F.		
	• Is the voltage between 1.5 — 3.5 V?		
20	INSPECT CAN LINE BETWEEN INSTRUMENT	Yes	Go to Step 22.
	CLUSTER AND CONNECTOR C-35 FOR	No	Go to the next step.
	SHORT TO POWER SUPPLY		l l
	Measure the voltage at instrument cluster		
	terminals B and D.		
	• Is the voltage between 1.5 — 3.5 V?		
		I	

Step	Inspection		Action
21	INSPECT INSTRUMENT CLUSTER FOR	Yes	Replace the instrument cluster because the instrument
	SHORT TO POWER SUPPLY		cluster is shorted to the power supply.
	Switch the ignition off (LOCK).		(See INSTRUMENT CLUSTER REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION.)
	Connect connector C-35.	No	Repair or replace the wiring harness between the
	Disconnect the instrument cluster connector.		instrument cluster and connector C-35 because the wiring
	 Connect the negative battery cable. 		harness is shorted to 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)].)		
	Switch the ignition ON (engine off).		
	 Measure the voltage at DLC-2 terminals F and 		
	E.		
	 Is the voltage between 1.5 — 3.5 V? 		
22	INSPECT CAN LINE BETWEEN SAS	Yes	Go to the next step.
	CONTROL MODULE AND CONNECTOR C-35	No	Repair or replace the wiring harness between the SAS
	FOR SHORT TO POWER SUPPLY		control module and connector C-35 because the wiring
	Switch the ignition off (LOCK).		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 the SAS control module 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 SAS control module terminals 31/ and 31/ (wiring barrage side)		
	terminals 3K and 3L (wiring harness side).		
	• Is the voltage 0 V?		

Step	Inspection		Action
23	INSPECT CAN LINE BETWEEN CONNECTOR C-11 AND CONNECTOR C-35 FOR SHORT TO POWER SUPPLY • Switch the ignition off (LOCK).	Yes	Replace the SAS control module because there is a short to the power supply in the SAS control module. (See SAS CONTROL MODULE REMOVAL/INSTALLATION.)
	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 connector C-35. Disconnect the SAS control module 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].) (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 F and E. Is the voltage between 1.5 — 3.5 V?	No	Repair or replace the wiring harness between connector C-11 and connector C-35 because the wiring harness is shorted to the power supply.
24	INSPECT CAN LINE BETWEEN PCM AND	Yes	Replace the front body control module (FBCM) because
	FRONT BODY CONTROL MODULE (FBCM) FOR SHORT TO POWER SUPPLY • Measure voltage at PCM terminals 2AK and 2AL. • Is the voltage between 1.5 — 3.5 V?	No	there is a short to the power supply in the front body control module (FBCM). (See FRONT BODY CONTROL MODULE (FBCM) REMOVAL/INSTALLATION.) Go to the next step.
25	INSPECT CAN LINE BETWEEN CONNECTOR	Yes	Go to the next step.
	C-01 AND FRONT BODY CONTROL MODULE (FBCM) FOR SHORT TO POWER SUPPLY • 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-01. • Connect connector 2 which has front body control module (FBCM) terminals 2K and 2I. • 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 F and E.	No	Repair or replace the wiring harness between connector C-01 and the front body control module (FBCM) because the wiring harness is shorted to the power supply.
26	• Is the voltage between 1.5 — 3.5 V? INSPECT CAN LINE BETWEEN TCM AND	Yes	Go to Step 28.
	CONNECTOR C-01 FOR SHORT TO POWER SUPPLY • Measure the voltage at TCM terminals E and F. • Is the voltage between 1.5 — 3.5 V?	No	Go to the next step.

Step	Inspection		Action
27	INSPECT TCM FOR SHORT TO POWER	Yes	Replace the TCM because there is a short to the power
	SUPPLY		supply in the TCM.
	Switch the ignition off (LOCK).		(See CONTROL VALVE BODY REMOVAL/
	Disconnect the negative battery cable.		INSTALLATION [FW6A-EL, FW6AX-EL].)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the TCM and
	DISCONNECTION/CONNECTION		connector C-01 because the wiring harness is shorted to
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		the power supply.
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	Connect connector C-01.		
	Disconnect the TCM 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 DLC-2 terminals F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
28	INSPECT CAN LINE BETWEEN CONNECTOR	Yes	Go to the next step.
	C-32 AND CONNECTOR C-01 FOR SHORT TO	No	Repair or replace the wiring harness between connector
	POWER SUPPLY		C-32 and connector C-01 because the wiring harness is
	Switch the ignition off (LOCK).		shorted to the power supply.
	Disconnect the negative battery cable.		
	Connect connector C-01.		
	Disconnect connector C-32.		
	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 F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
29	INSPECT CAN LINE BETWEEN DSC HU/CM	Yes	Go to Step 31.
	AND CONNECTOR C-32 FOR SHORT TO	No	Go to the next step.
	POWER SUPPLY	•	
	Measure voltage at DSC HU/CM terminals AF		
	and AC.		
	• Is the voltage between 1.5 — 3.5 V?		

Step	Inspection		Action
30	INSPECT DSC HU/CM FOR SHORT TO	Yes	Replace the DSC HU/CM because the DSC HU/CM is
	POWER SUPPLY		shorted to the power supply.
	Switch the ignition off (LOCK).		(See DSC HU/CM REMOVAL/INSTALLATION.)
	Disconnect the negative battery cable.	No	Repair or replace the wiring harness between the DSC HU/
	(See NEGATIVE BATTERY CABLE		CM and connector C-32 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		
	(WITHOUT i-stop)].)		
	Connect connector C-32.		
	Disconnect the DSC HU/CM 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 DLC-2 terminals F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
31	INSPECT PCM FOR SHORT TO POWER	Yes	Replace the PCM because there is a short to the power
	SUPPLY		supply in the PCM.
	Switch the ignition off (LOCK).		(See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0,
	Disconnect the negative battery cable.		SKYACTIV-G 2.5].)
	(See NEGATIVE BATTERY CABLE	No	Repair or replace the wiring harness between the PCM and
	DISCONNECTION/CONNECTION	ı	connector C-32 because the wiring harness is shorted to
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		the power supply.
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	• Connect connector C-32.		
	Disconnect the PCM 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 DLC-2 terminals F and		
	E.		
	• Is the voltage between 1.5 — 3.5 V?		
	is the voltage between 1.5 — 3.5 v :		