

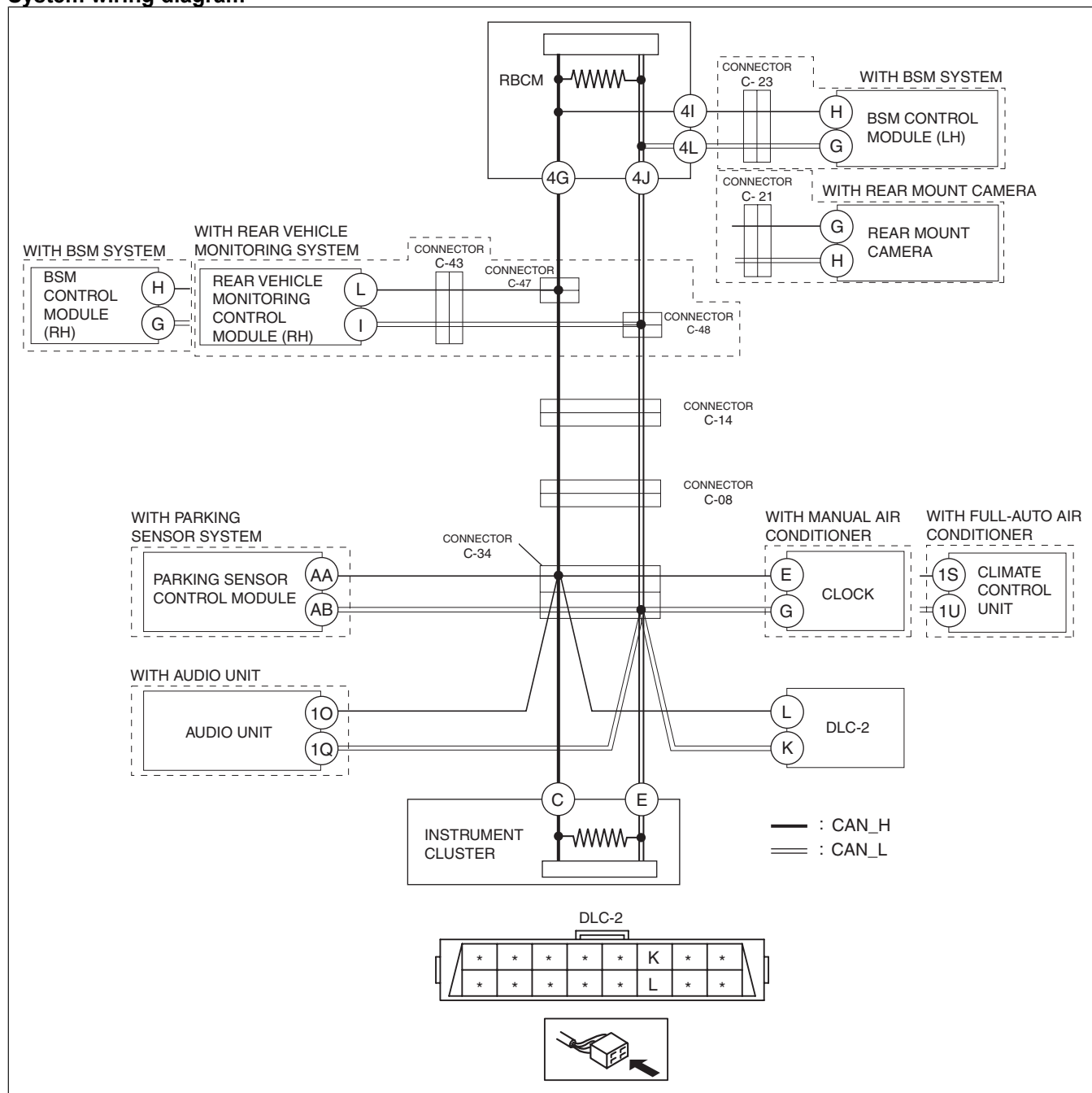
DETERMINING SHORT TO GROUND LOCATION (MS-CAN) [SKYACTIV-D 2.2 (R.H.D.)]

id100206000900

Caution

- Perform the following malfunction diagnosis only when it is diagnosed with a short to ground by CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [SKYACTIV-D 2.2 (R.H.D.)].

System wiring diagram



ac5wzw00000683

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.

Step	Inspection	Action
1	INSPECT FOR SHORT TO GROUND 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-D 2.2].) • Disconnect connector C-08. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between DLC-2 terminal L and body ground — Between DLC-2 terminal K and body ground • Is there continuity? 	Yes Go to the next step.
		No Go to Step 11.
2	INSPECT FOR SHORT TO GROUND BETWEEN CONNECTORS C-34 AND DLC-2 <ul style="list-style-type: none"> • Disconnect connector C-34. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between DLC-2 terminal L and body ground — Between DLC-2 terminal K and body ground • Is there continuity? 	Yes Repair or replace the wiring harness between connector C-34 and DLC-2 because the wiring harness is shorted to ground.
		No Go to the next step.
3	INSPECT FOR SHORT TO GROUND BETWEEN CONNECTOR C-34 AND PARKING SENSOR CONTROL MODULE <ul style="list-style-type: none"> • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between parking sensor control module terminal AA and body ground — Between parking sensor control module terminal AB and body ground • Is there continuity? 	Yes Go to the next step.
		No Go to Step 5.
4	INSPECT CAN LINE IN PARKING SENSOR CONTROL MODULE FOR SHORT TO GROUND <ul style="list-style-type: none"> • Disconnect the parking sensor connector. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between parking sensor control module terminal AA (wiring harness side) and body ground — Between parking sensor control module terminal AB (wiring harness side) and body ground • Is there continuity? 	Yes Repair or replace the wiring harness between the parking sensor control module and connector C-34 because the wiring harness is shorted to ground.
		No Replace the parking sensor control module because there is a short to ground in the parking sensor control module. (See PARKING SENSOR CONTROL MODULE REMOVAL/INSTALLATION.)
5	INSPECT FOR SHORT TO GROUND BETWEEN CONNECTOR C-34 AND CLIMATE CONTROL UNIT <ul style="list-style-type: none"> • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between climate control unit terminal 1S and body ground (with full-auto air conditioner) — Between climate control unit terminal 1U and body ground (with full-auto air conditioner) — Between clock terminal E and body ground (with manual air conditioner) — Between clock terminal G and body ground (with manual air conditioner) • Is there continuity? 	Yes Go to the next step.
		No Go to Step 7.

Step	Inspection	Action	
6	INSPECT CAN LINE IN CLIMATE CONTROL UNIT OR CLOCK FOR SHORT TO GROUND <ul style="list-style-type: none"> • Disconnect the climate control unit connector or clock connector. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between climate control unit terminal 1S (wiring harness side) and body ground (with full-auto air conditioner) — Between climate control unit terminal 1U (wiring harness side) and body ground (with full-auto air conditioner) — Between clock terminal E (wiring harness side) and body ground (with manual air conditioner) — Between clock terminal G (wiring harness side) and body ground (with manual air conditioner) • Is there continuity? 	Yes	Repair or replace the wiring harness between the climate control unit or clock and connector C-34 because the wiring harness is shorted to ground.
		No	Replace the climate control unit or the clock because there is a short to ground inside the climate control unit or the clock. (See CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See CLOCK REMOVAL/INSTALLATION.)
7	INSPECT FOR SHORT TO GROUND BETWEEN CONNECTOR C-34 AND AUDIO UNIT <ul style="list-style-type: none"> • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between audio unit terminal 1O and body ground — Between audio unit terminal 1Q and body ground • Is there continuity? 	Yes	Go to the next step.
		No	Go to Step 9.
8	INSPECT CAN LINE IN AUDIO UNIT FOR SHORT TO GROUND <ul style="list-style-type: none"> • Disconnect the audio unit connector. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between audio unit terminal 1O (wiring harness side) and body ground — Between audio unit terminal 1Q (wiring harness side) and body ground • Is there continuity? 	Yes	Repair or replace the wiring harness between the audio unit and connector C-34 because the wiring harness is shorted to ground.
		No	Replace the audio unit because there is a short to ground in the audio unit. (See AUDIO UNIT REMOVAL/INSTALLATION.)
9	INSPECT FOR SHORT TO GROUND BETWEEN CONNECTOR C-34 AND INSTRUMENT CLUSTER <ul style="list-style-type: none"> • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between instrument cluster terminal C and body ground — Between instrument cluster terminal E and body ground • Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness between connectors C-08 and C-34 because the wiring harness is shorted to ground.
10	INSPECT CAN LINE IN INSTRUMENT CLUSTER FOR SHORT TO GROUND <ul style="list-style-type: none"> • Disconnect the instrument cluster connector. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between instrument cluster terminal C (wiring harness side) and body ground — Between instrument cluster terminal E (wiring harness side) and body ground • Is there continuity? 	Yes	Repair or replace the wiring harness between the instrument cluster and connector C-34 because the wiring harness is shorted to ground.
		No	Replace the instrument cluster because there is a short to ground in the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
11	INSPECT FOR SHORT TO GROUND BETWEEN CONNECTORS C-14 AND C-08 <ul style="list-style-type: none"> • Disconnect connector C-14. • Connect connector C-08. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between DLC-2 terminal L and body ground — Between DLC-2 terminal K and body ground • Is there continuity? 	Yes	Repair or replace the wiring harness between connectors C-14 and C-08 because the wiring harness is shorted to ground.
		No	Go to the next step.

Step	Inspection	Action	
12	INSPECT FOR SHORT TO GROUND BETWEEN CONNECTOR C-14 AND CONNECTORS C-47 AND C-48 <ul style="list-style-type: none"> • Disconnect connectors C-47 and C-48. • Connect connector C-14. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between DLC-2 terminal L and body ground — Between DLC-2 terminal K and body ground • Is there continuity? 	Yes	Repair or replace the wiring harness between connectors C-47 and C-48 and connector C-14 because the wiring harness is shorted to ground.
		No	Go to the next step.
13	INSPECT FOR SHORT TO GROUND BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) OR BSM CONTROL MODULE (RH) AND CONNECTORS C-47 AND C-48 <ul style="list-style-type: none"> • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between rear vehicle monitoring control module (RH) terminal L and body ground (with rear vehicle monitoring system) — Between rear vehicle monitoring control module (RH) terminal I and body ground (with rear vehicle monitoring system) — Between BSM control module (RH) terminal H and body ground (with BSM system) — Between BSM control module (RH) terminal G and body ground (with BSM system) • Is there continuity? 	Yes	<ul style="list-style-type: none"> • Go to the next step. (With rear vehicle monitoring system) • Go to Step 15. (With BSM system)
		No	Go to Step 16.
14	INSPECT FOR SHORT TO GROUND BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) AND CONNECTOR C-43 <ul style="list-style-type: none"> • Disconnect connector C-43. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between rear vehicle monitoring control module (RH) terminal L and body ground — Between rear vehicle monitoring control module (RH) terminal I and body ground • Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness between connector C-43 and connectors C-47 and C-48 because the wiring harness is shorted to ground.

Step	Inspection	Action
15	INSPECT CAN LINE IN REAR VEHICLE MONITORING CONTROL MODULE (RH) OR BSM CONTROL MODULE (RH) FOR SHORT TO GROUND <ul style="list-style-type: none"> Disconnect the rear vehicle monitoring control module (RH) connector or BSM control module (RH) connector. Inspect for continuity at the following terminals: <ul style="list-style-type: none"> Between rear vehicle monitoring control module (RH) terminal L (wiring harness side) and body ground (with rear vehicle monitoring system) Between rear vehicle monitoring control module (RH) terminal I (wiring harness side) and body ground (with rear vehicle monitoring system) Between BSM control module (RH) terminal H (wiring harness side) and body ground (with BSM system) Between rear vehicle monitoring control module (RH) terminal G (wiring harness side) and body ground (with rear vehicle monitoring system) Is there continuity? 	Yes <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 ground. (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 ground. (With BSM system)
		No <p>Replace the rear vehicle monitoring control module (RH) or the BSM control module (RH) because there is a short to ground 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.)</p>
16	INSPECT FOR SHORT TO GROUND BETWEEN REAR BODY CONTROL MODULE (RBCM) AND BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA <ul style="list-style-type: none"> Disconnect the rear body control module (RBCM) connector. Inspect for continuity at the following terminals: <ul style="list-style-type: none"> Between BSM control module (LH) terminal H and body ground (with BSM system) Between BSM control module (LH) terminal G and body ground (with BSM system) Between rear mount camera terminal G and body ground (with rear mount camera) Between rear mount camera terminal H and body ground (with rear mount camera) Is there continuity? 	Yes <p>Go to the next step.</p>
		No <p>Go to Step 19.</p>
17	INSPECT FOR SHORT TO GROUND BETWEEN REAR BODY CONTROL MODULE (RBCM) AND CONNECTOR C-23 OR C-21 <ul style="list-style-type: none"> Disconnect connector C-23 or C-21. Inspect for continuity at the following terminals: <ul style="list-style-type: none"> Between rear body control module (RBCM) terminal 4I (wiring harness side) and body ground Between rear body control module (RBCM) terminal 4L (wiring harness side) and body ground Is there continuity? 	Yes <p>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 ground.</p>
		No <p>Go to the next step.</p>

Step	Inspection	Action
18	INSPECT CAN LINE IN BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA FOR SHORT TO GROUND <ul style="list-style-type: none"> • Disconnect the BSM control module (LH) connector or the rear mount camera connector. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between BSM control module (LH) terminal H (wiring harness side) and body ground (with BSM system) — Between BSM control module (LH) terminal G (wiring harness side) and body ground (with BSM system) — Between rear mount camera terminal G (wiring harness side) and body ground (with rear mount camera) — Between rear mount camera terminal H (wiring harness side) and body ground (with rear mount camera) • Is there continuity? 	Yes <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 ground. (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 ground. (With rear mount camera)
		No <p>Replace the BSM control module (LH) or the rear mount camera because there is a short to ground in the BSM control module (LH) or the rear mount camera. (See BLIND SPOT MONITORING (BSM) CONTROL MODULE REMOVAL/INSTALLATION.)</p>
19	INSPECT CAN LINE INSIDE REAR BODY CONTROL MODULE (RBCM) FOR SHORT TO GROUND <ul style="list-style-type: none"> • Disconnect the rear body control module (RBCM) connector. • Inspect for continuity at the following terminals: <ul style="list-style-type: none"> — Between rear body control module (RBCM) terminal 4G (wiring harness side) and body ground — Between rear body control module (RBCM) terminal 4J (wiring harness side) and body ground • Is there continuity? 	Yes <p>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 ground.</p>
		No <p>Replace the rear body control module (RBCM) because there is a short to ground in the rear body control module (RBCM). (See REAR BODY CONTROL MODULE (RBCM) REMOVAL/INSTALLATION.)</p>