

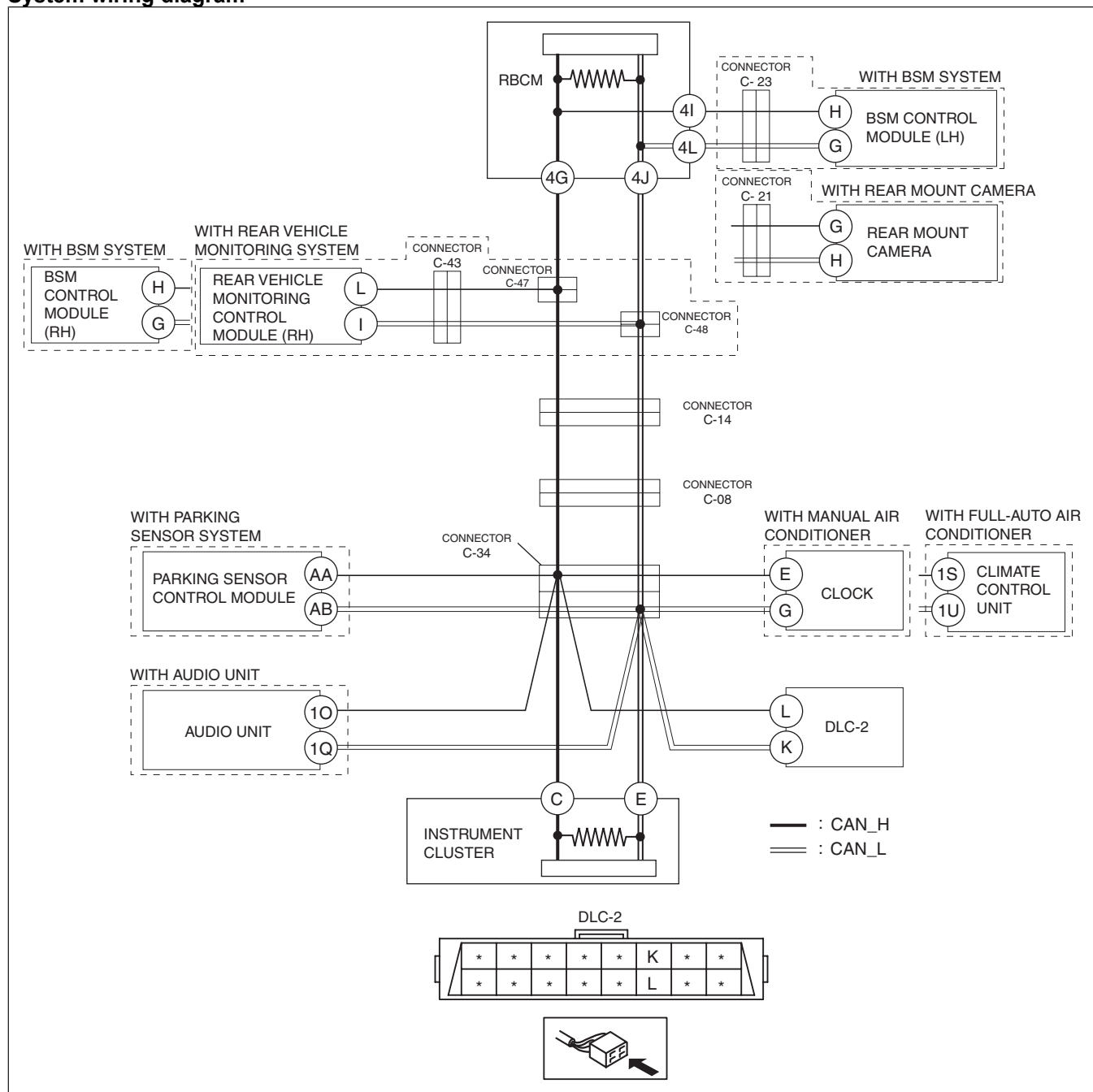
DETERMINING SHORT BETWEEN CIRCUITS LOCATION (MS-CAN) [SKYACTIV-G 2.0 (R.H.D.)]

id100202001100

Caution

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

System wiring diagram



ac5wzw00000685

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 |
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| 1 | INSPECT BETWEEN CONNECTOR C-08 AND INSTRUMENT CLUSTER FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • 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)].) • Disconnect connector C-08. • 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)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage at DLC-2 terminals L and K the same? | Yes Go to the next step. |
| | | No Go to Step 11. |
| 2 | INSPECT BETWEEN CONNECTOR C-34 AND DLC-2 FOR SHORT BETWEEN CIRCUITS <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].) • (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].) • Disconnect connector C-34. • Inspect for continuity between DLC-2 terminals L and K. • Is there continuity? | Yes Repair or replace the wiring harness between connector C-34 and DLC-2 because the wiring harness is shorted between circuits. |
| | | No Go to the next step. |
| 3 | INSPECT BETWEEN CONNECTOR C-34 AND PARKING SENSOR CONTROL MODULE FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Inspect for continuity between parking sensor control module terminals AA and AB. • Is there continuity? | Yes Go to the next step. |
| | | No Go to Step 5. |
| 4 | INSPECT PARKING SENSOR CONTROL MODULE FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect the parking sensor control module connector. • Inspect for continuity between parking sensor control module terminals AA and AB (wiring harness side). • 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 between circuits. |
| | | No Replace the parking sensor control module because there is a short between circuits in the parking sensor control module. (See PARKING SENSOR CONTROL MODULE REMOVAL/INSTALLATION.) |
| 5 | INSPECT BETWEEN CONNECTOR C-34 AND CLIMATE CONTROL UNIT OR CLOCK FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Inspect for continuity between climate control unit terminals 1S and 1U. (with full-auto air conditioner) • Inspect for continuity between clock terminals E and G. (with manual air conditioner) • Is there continuity? | Yes Go to the next step. |
| | | No Go to Step 7. |

| Step | Inspection | | Action |
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| 6 | INSPECT CLIMATE CONTROL UNIT OR CLOCK FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect the climate control unit connector or the clock connector. • Inspect for continuity between climate control unit terminals 1S and 1U (wiring harness side). (with full-auto air conditioner) • Inspect for continuity between clock terminals E and G (wiring harness side). (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 between circuits. |
| | | No | Replace the climate control unit or the clock because there is a short between circuits inside the climate control unit or the clock. (See CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) (See CLOCK REMOVAL/INSTALLATION.) |
| 7 | INSPECT BETWEEN CONNECTOR C-34 AND AUDIO UNIT FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Inspect for continuity between audio unit terminals 1O and 1Q. • Is there continuity? | Yes | Go to the next step. |
| | | No | Go to Step 9. |
| 8 | INSPECT AUDIO UNIT FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect the audio unit connector. • Inspect for continuity between audio unit terminals 1O and 1Q (wiring harness side). • Is there continuity? | Yes | Repair or replace the wiring harness between the audio unit and connector C-34 because the wiring harness is shorted between circuits. |
| | | No | Replace the audio unit because there is a short between circuits in the audio unit. (See AUDIO UNIT REMOVAL/INSTALLATION.) |
| 9 | INSPECT BETWEEN CONNECTOR C-34 AND INSTRUMENT CLUSTER FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Inspect for continuity between instrument cluster terminals C and E. • Is there continuity? | Yes | Go to the next step. |
| | | No | Repair or replace the wiring harness between connectors C-34 and C-08 because the wiring harness is shorted between circuits. |
| 10 | INSPECT INSTRUMENT CLUSTER FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect the instrument cluster connector. • Inspect for continuity between instrument cluster terminals C and E (wiring harness side). • Is there continuity? | Yes | Repair or replace the wiring harness between the instrument cluster and connector C-34 because the wiring harness is shorted between circuits. |
| | | No | Replace the instrument cluster because there is a short between circuits in the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) |
| 11 | INSPECT BETWEEN CONNECTORS C-14 AND C-08 FOR SHORT BETWEEN CIRCUITS <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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage at DLC-2 terminals L and K the same? | Yes | Repair or replace the wiring harness between connectors C-14 and C-08 because the wiring harness is shorted between circuits. |
| | | No | Go to the next step. |

| Step | Inspection | Action | |
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| 12 | INSPECT BETWEEN CONNECTORS C-47 AND C-48 AND CONNECTOR C-14 FOR SHORT BETWEEN CIRCUITS <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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage at DLC-2 terminals L and K the same? | Yes | Repair or replace the wiring harness between connectors C-47 and C-48 and connector C-14 because the wiring harness is shorted between circuits. |
| | | No | Go to the next step. |
| 13 | INSPECT BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) OR BSM CONTROL MODULE (RH) AND CONNECTORS C-47 AND C-48 FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Switch the ignition off (LOCK). • Inspect for continuity between rear vehicle control module (RH) terminals L and I. (With rear vehicle monitoring system) • Inspect for continuity between BSM control module (RH) terminals H and G. (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 BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) AND CONNECTOR C-43 FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect connector C-43. • Inspect for continuity between rear vehicle control module (RH) terminals L and I. • 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 between circuits. |
| 15 | INSPECT BETWEEN REAR VEHICLE MONITORING CONTROL MODULE (RH) OR BSM CONTROL MODULE (RH) FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect the rear vehicle monitoring control modules (RH) connector or the BSM control module (RH) connector. • Inspect for continuity between rear vehicle control module (RH) terminals L and I (wiring harness side). (With rear vehicle monitoring system) • Inspect for continuity between BSM control module (RH) terminals H and G (wiring harness side). (With BSM 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 between circuits. (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 between circuits. (With BSM system) |
| | | No | Replace the rear vehicle monitoring control module (RH) or the BSM control module (RH) because there is a short between circuits 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.) |

| Step | Inspection | Action | |
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| 16 | INSPECT BETWEEN BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA AND REAR BODY CONTROL MODULE (RBCM) FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • 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)].) • Disconnect the rear body control module (RBCM) connector. • Inspect for continuity between BSM control module (LH) terminals H and G (wiring harness side). (With BSM system) • Inspect the continuity between rear mount camera terminals G and H (wiring harness side). (With rear mount camera) • Is there continuity? | Yes | Go to the next step. |
| | | No | Go to Step 19. |
| 17 | INSPECT BETWEEN REAR BODY CONTROL MODULE (RBCM) AND CONNECTOR C-23 OR C-21 FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect connector C-23 or C-21. • Inspect for continuity between BSM control module (LH) terminals H and G (wiring harness side). (With BSM system) • Inspect the continuity between rear mount camera terminals G and H (wiring harness side). (With rear mount camera) • Is there continuity? | Yes | 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 between circuits. |
| | | No | Go to the next step. |
| 18 | INSPECT BSM CONTROL MODULE (LH) OR REAR MOUNT CAMERA FOR SHORT BETWEEN CIRCUITS <ul style="list-style-type: none"> • Disconnect the BSM control module (LH) connector or the rear mount camera connector. • 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].) • (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage at DLC-2 terminals L and K the same? | Yes | <ul style="list-style-type: none"> • Repair or replace the wiring harness between BSM control module (LH) and rear body control module (RBCM) because the wiring harness is shorted between circuits. (With BSM system) • Repair or replace the wiring harness between the rear mount camera and rear body control module (RBCM) because the wiring harness is shorted between circuits. (With rear mount camera) |
| | | No | Replace the BSM control module (LH) or the rear mount camera because there is a short between circuits 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.) |

| Step | Inspection | Action |
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| 19 | INSPECT REAR BODY CONTROL MODULE (RBCM) FOR SHORT BETWEEN CIRCUITS <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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)]).) • Switch the ignition ON (engine off). • Measure the voltage at DLC-2 terminals L and K. • Is the voltage at DLC-2 terminals L and K the same? | Yes |
| | | 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 between circuits. Replace the rear body control module (RBCM) because there is a short between circuits in the rear body control module (RBCM). (See REAR BODY CONTROL MODULE (RBCM) REMOVAL/INSTALLATION.) |