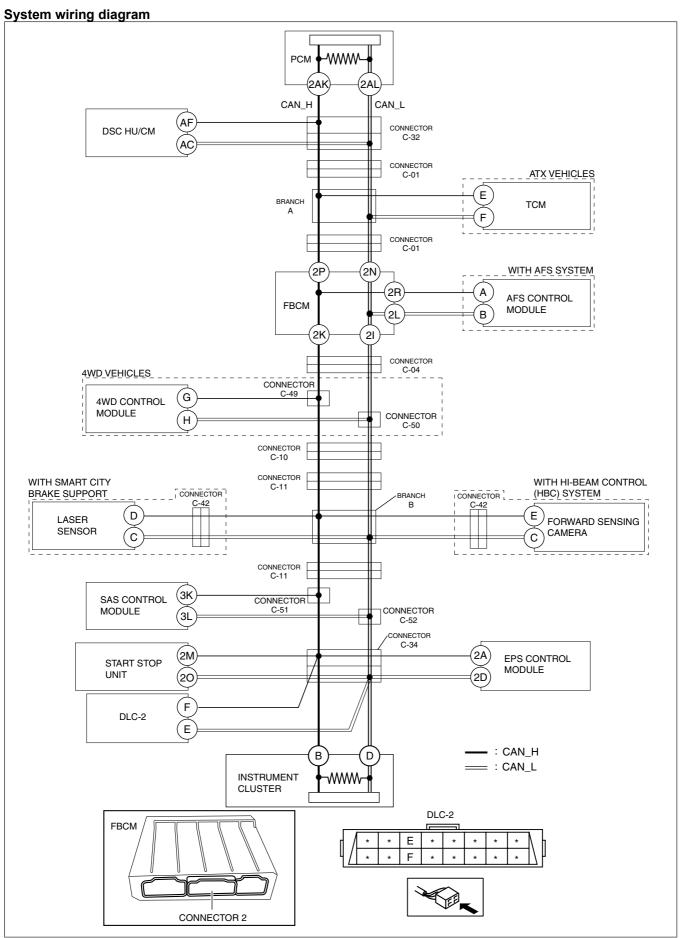
DETERMINING SHORT TO POWER SUPPLY LOCATION (HS-CAN) [SKYACTIV-G 2.0 (R.H.D.)]

id100202000700

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 (R.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].) | | |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (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].) | | |
| | (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 F and | | |
| | E | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| 2 | INSPECT CAN LINE BETWEEN AFS | Yes | Go to Step 25. |
| | 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. | | |
| 1 | Is the voltage between 1.5 — 3.5 V? | | |

| Step | Inspection | | Action |
|------|--|-----|--|
| 3 | INSPECT AFS CONTROL MODULE FOR | Yes | Replace the AFS control module because there is a short |
| | SHORT TO POWER SUPPLY | | to the power supply in the AFS control module. |
| | Switch the ignition off (LOCK). | | (See ADAPTIVE FRONT LIGHTING SYSTEM (AFS) |
| | Disconnect the negative battery cable. | | CONTROL MODULE REMOVAL/INSTALLATION.) |
| | (See NEGATIVE BATTERY CABLE | No | Repair or replace the wiring harness between AFS control |
| | DISCONNECTION/CONNECTION | 110 | module and the front body control module (FBCM) |
| | [SKYACTIV-G 2.0].) | | because the wiring harness is shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | booddoo the minightaniose is offered to the perior supply. |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (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].) | | |
| | (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 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 between the front |
| | C-04 AND INSTRUMENT CLUSTER FOR | | body control module (FBCM) and connector C-04 because |
| | SHORT TO POWER SUPPLY | | the wiring 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].) | | |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (WITHOUT i-stop)].) | | |
| | • Disconnect connector C-04. | | |
| | 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 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 | INO | Go to Step o. |
| | POWER SUPPLY | | |
| | 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-49 and C-50. | | |
| | 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 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 | 110 | control module and connectors C-49 and C-50 because the |
| | [SKYACTIV-G 2.0].) | | wiring harness is shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | willing harriess is shorted to the power suppry. |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (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].) | | |
| | (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 F and | | |
| | E. | | |
| | • Is the voltage between 1.5 — 3.5 V? | <u> </u> | |

| Step | Inspection | | Action |
|------|--|-----|---|
| 8 | INSPECT CAN LINE BETWEEN CONNECTOR | Yes | Repair or replace the wiring harness between connectors |
| | C-10 AND INSTRUMENT CLUSTER FOR | 103 | 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. | .,, | Go to the next step. |
| | (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-10. | | |
| | 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 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 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-11. | | |
| | 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 F and | | |
| | E. | | |
| 10 | • Is the voltage between 1.5 — 3.5 V? INSPECT CAN LINE BETWEEN CONNECTOR | Yes | Repair or replace the wiring harness between connector |
| 10 | C-11 AND FORWARD SENSING CAMERA/ | 1 5 | C-10 and connector C-11 because the wiring harness is |
| | LASER SENSOR FOR SHORT TO POWER | | shorted to the power supply. |
| | SUPPLY | No | Go to the next step. |
| | Measure the voltage at forward sensing camera | INU | OU TO THE HEAT STEP. |
| | 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? | | |
| L | | | |

| 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 | 140 | Go to the flext step. |
| | 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-42. | | |
| | 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 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 |
| | POWER SUPPLY | | 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].) | | , |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (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].) | | |
| | (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 F and | | |
| | E | | |
| 40 | • Is the voltage between 1.5 — 3.5 V? | | Desire the start of the start o |
| 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].) | | harness is shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (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].) | | |
| | (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 F and | | |
| | E. | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| 15 | INSPECT CAN LINE BETWEEN CONNECTOR | Yes | Go to Step 23. |
| | C-51, C-52 AND INSTRUMENT CLUSTER FOR | No | Go to the next step. |
| | SHORT TO POWER SUPPLY | | |
| | Switch the ignition off (LOCK). | | |
| | Disconnect the negative battery cable. | | |
| | • Disconnect connector C-51, C-52. | | |
| | 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 F and | | |
| | E | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |

| Step | Inspection | | Action |
|------|---|-----|---|
| 16 | INSPECT CAN LINE BETWEEN CONNECTOR | Yes | Go to the next step. |
| | C-34 AND DLC-2 FOR SHORT TO POWER | No | Repair or replace the wiring harness between connector |
| | SUPPLY | | C-34 and DLC-2 because the wiring harness is shorted to |
| | Switch the ignition off (LOCK). | | the power supply. |
| | 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. | | |
| | 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 F and | | |
| | E. • Is the voltage 0 V? | | |
| 17 | INSPECT CAN LINE BETWEEN START STOP | Yes | Go to Step 19. |
| | UNIT AND CONNECTOR C-34 FOR SHORT TO | No | Go to the next step. |
| | POWER SUPPLY | | · |
| | Measure the voltage at start stop unit terminals | | |
| | 2M and 2O. | | |
| 18 | • Is the voltage between 1.5 — 3.5 V? INSPECT START STOP UNIT FOR SHORT TO | Yes | Replace the start stop unit because there is a short to the |
| 10 | POWER SUPPLY | 103 | 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 |
| | (See NEGATIVE BATTERY CABLE | | unit and connector C-34 because the wiring harness is |
| | DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) | | shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (WITHOUT i-stop)].) | | |
| | Connect connector C-34. | | |
| | Disconnect the start stop unit connector. | | |
| | Connect the negative battery cable. 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 E and | | |
| | Measure the voltage at DLC-2 terminals F and E. | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| 19 | INSPECT CAN LINE BETWEEN EPS | Yes | Go to Step 21. |
| | CONTROL MODULE AND CONNECTOR C-34 | No | Go to the next step. |
| | FOR SHORT TO POWER SUPPLY | | |
| | Measure the voltage at EPS control module terminals 2A and 2D. | | |
| | terminals 2A and 2D. • Is the voltage between 1.5 — 3.5 V? | | |
| | is the voltage between 1.5 — 3.5 V? | | |

| Step | Inspection | | Action |
|------|--|-----|--|
| 20 | 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-34 because the wiring |
| | [SKYACTIV-G 2.0].) | | harness is shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | The state of the s |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (WITHOUT i-stop)].) | | |
| | Connect connector C-34. | | |
| | Disconnect the EPS control module connector. | | |
| | 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 F and | | |
| | E. | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| 21 | INSPECT CAN LINE BETWEEN INSTRUMENT | Yes | Repair or replace the wiring harness between connector |
| | CLUSTER AND CONNECTOR C-34 FOR | | C-51, C-52 and connector C-34 because the wiring |
| | SHORT TO POWER SUPPLY | | harness is shorted to the power supply. |
| | Measure the voltage at instrument cluster | No | Go to the next step. |
| | terminals B and D. | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| 22 | 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.) |
| | (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].) | | harness is shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (WITHOUT i-stop)].) | | |
| | • Connect connector C-34. | | |
| | Disconnect the instrument cluster connector. | | |
| | 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). Magazine the voltage at DLC 2 terminals E and | | |
| | 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 |
|------|--|-----|--|
| 23 | INSPECT CAN LINE BETWEEN SAS | Yes | Go to the next step. |
| 23 | CONTROL MODULE AND CONNECTOR C-51, C-52 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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].) • Disconnect the SAS control module connector. • 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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].) • Switch the ignition ON (engine off). • Measure the voltage at SAS control module terminals 3K and 3L (wiring harness side). • Is the voltage 0 V? | No | Repair or replace the wiring harness between the SAS control module and connector C-51, C-52 because the wiring harness is shorted to the power supply. |
| 24 | INSPECT CAN LINE BETWEEN CONNECTOR C-11 AND CONNECTOR C-51, C-52 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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (WITHOUT i-stop)].) • Connect connector C-51, C-52. • 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].) (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 F and E. • Is the voltage between 1.5 — 3.5 V? | 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.) Repair or replace the wiring harness between connector C-11 and connector C-51, C-52 because the wiring harness is shorted to the power supply. |
| 25 | INSPECT CAN LINE BETWEEN PCM AND FRONT BODY CONTROL MODULE (FBCM) FOR SHORT TO POWER SUPPLY • Measure voltage at PCM terminals 2AK and 2AL. | Yes | Replace the front body control module (FBCM) because there is a short to the power supply in the front body control module (FBCM). (See FRONT BODY CONTROL MODULE (FBCM) REMOVAL/INSTALLATION.) |
| | • Is the voltage between 1.5 — 3.5 V? | No | Go to the next step. |

| Step | Inspection | | Action |
|------|--|-----|---|
| 26 | INSPECT CAN LINE BETWEEN CONNECTOR | Yes | Go to the next step. |
| 26 | 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].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (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].) (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 F and | 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. |
| | E. • Is the voltage between 1.5 — 3.5 V? | | |
| 27 | INSPECT CAN LINE BETWEEN TCM AND | Yes | Go to Step 29. |
| | CONNECTOR C-01 FOR SHORT TO POWER SUPPLY • Measure the voltage at TCM terminals E and F. | No | Go to the next step. |
| 28 | • Is the voltage between 1.5 — 3.5 V? INSPECT TCM FOR SHORT TO POWER | Yes | Replace the TCM because there is a short to the power |
| | SUPPLY Switch the ignition off (LOCK). Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE) | No | supply in the TCM. (See CONTROL VALVE BODY REMOVAL/ INSTALLATION [FW6A-EL, FW6AX-EL].) Repair or replace the wiring harness between the TCM and connector C-01 because the wiring harness is shorted to the power supply. |
| | DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (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].) (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 F and E. • Is the voltage between 1.5 — 3.5 V? | | |

| Step | Inspection | | Action |
|------|--|-----|--|
| 29 | 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 | 110 | 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. | | shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0].) | | |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (WITHOUT i-stop)].) | | |
| | • Connect connector C-01. | | |
| | • Disconnect connector C-32. | | |
| | 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 F and | | |
| | E. | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| 30 | INSPECT CAN LINE BETWEEN DSC HU/CM | Yes | Go to Step 32. |
| 30 | AND CONNECTOR C-32 FOR SHORT TO | No | Go to the next step. |
| | POWER SUPPLY | 110 | Outo the next step. |
| | Measure voltage at DSC HU/CM terminals AF | | |
| | and AC. | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| 31 | INSPECT DSC HU/CM FOR SHORT TO | Yes | Replace the DSC HU/CM because the DSC HU/CM is |
| | POWER SUPPLY | 103 | 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 | 110 | CM and connector C-32 because the wiring harness is |
| | DISCONNECTION/CONNECTION | | shorted to the power supply. |
| | [SKYACTIV-G 2.0].) | | shorted to the power supply. |
| | (See NEGATIVE BATTERY CABLE | | |
| | DISCONNECTION/CONNECTION | | |
| | [SKYACTIV-G 2.0 (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].) | | |
| | (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 F and | | |
| | E. | | |
| | • Is the voltage between 1.5 — 3.5 V? | | |
| | 15 the voltage between 1.5 — 5.5 v: | | |

| Step | Inspection | | Action |
|------|--|-----|--|
| 32 | INSPECT PCM FOR SHORT TO POWER SUPPLY • Switch the ignition off (LOCK). • Disconnect the negative battery cable. | Yes | Replace the PCM because there is a short to the power supply in the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) |
| | (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0 (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].) (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 F and E. • Is the voltage between 1.5 — 3.5 V? | No | Repair or replace the wiring harness between the PCM and connector C-32 because the wiring harness is shorted to the power supply. |