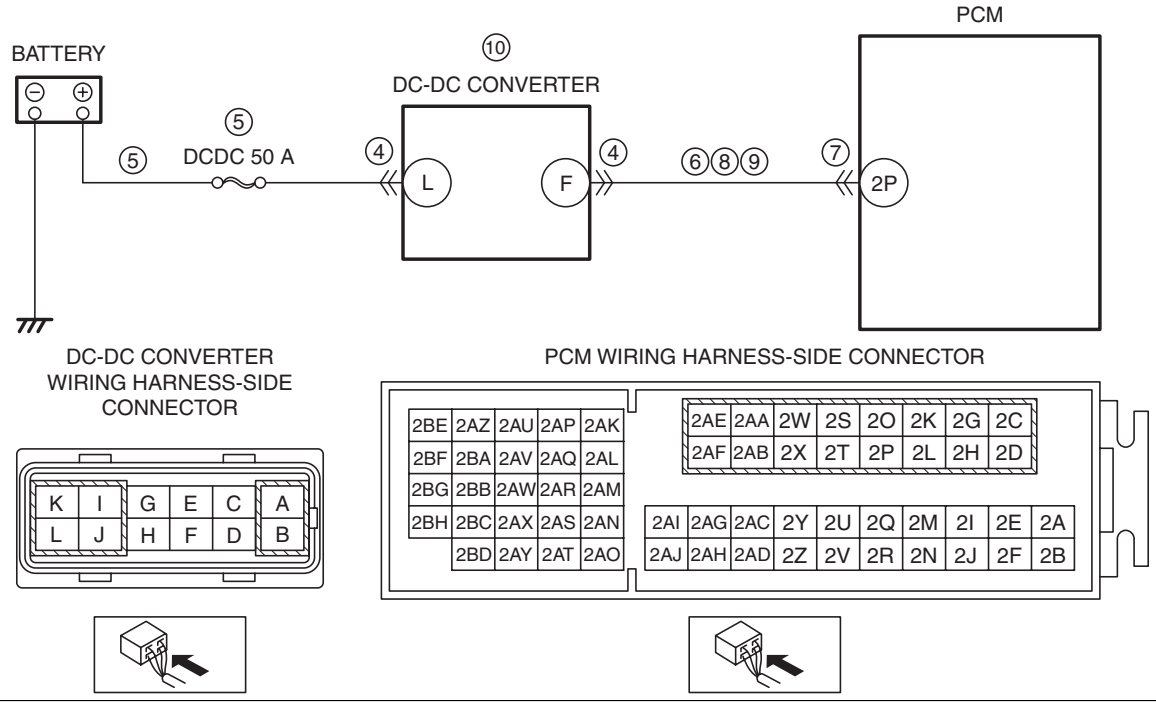
DTC P0A94:00 [SKYACTIV-G 2.0]

id0102h1004400

DTC P0A94:00	DC-DC converter control circuit signal error
DETECTION CONDITION	• Internal malfunction signal from DC-DC converter via front body control module (FBCM) is received.(CAN/LIN communication). • Input signal from the DC-DC converter limits the pressure increase time. • Input signal from the DC-DC converter does not implement pressure increase after a pressure increase command to the DC-DC converter. **Diagnostic support note** • This is a continuous monitor (other). • The check engine light does not illuminate. • FREEZE FRAME DATA (Mode 2)/Snapshot data is not available. • The DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	• Inhibits engine-stop by operating the i-stop function.
POSSIBLE CAUSE	• Battery malfunction • DC-DC converter connector or terminals malfunction • Short to ground or open circuit in DC-DC converter power supply circuit — Short to ground in wiring harness between DCDC 50 A fuse and DC-DC converter terminal L — DCDC 50 A fuse malfunction — Open circuit in wiring harness between battery positive terminal and DC-DC converter terminal L • Short to ground in wiring harness between DC-DC converter terminal F and PCM terminal 2P • PCM connector or terminals malfunction • Short to power supply in wiring harness between DC-DC converter terminal F and PCM terminal 2P • Open circuit in wiring harness between DC-DC converter terminal F and PCM terminal 2P • DC-DC converter malfunction • Front body control module (FBCM) malfunction • PCM malfunction



Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY RELATED SERVICE INFORMATION AVAILABILITY** • Verify related Service Information availability. • Is any related Service Information available?	Yes	Perform repair or diagnosis according to the available Service Information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.

STEP	INSPECTION		ACTION
2	**VERIFY RELATED PENDING CODE AND/OR DTC** • Switch the ignition to off, then to ON (engine off). • Perform the Pending Trouble Code Access Procedure and DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) • Are any other PENDING CODEs and/or DTCs present?	Yes	Go to the applicable PENDING CODE or DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No	Go to the next step.
3	**CONFIRM FRONT BODY CONTROL MODULE (FBCM) DTC** • Perform the front body control module (FBCM) DTC inspection using the M-MDS. (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [FRONT BODY CONTROL MODULE (FBCM)].)
		No	Go to the next step.
4	**INSPECT BATTERY** • Switch the ignition to off. • Inspect the battery. (See BATTERY INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction?	Yes	Recharge or replace the battery, then go to Step 12. (See BATTERY RECHARGING [SKYACTIV-G 2.0].) (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
5	**INSPECT DC-DC CONVERTER CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the DC-DC converter connector. • Inspect for poor connection (such as damaged/ pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector and/or terminals, then go to Step 12.
		No	Go to the next step.
6	**INSPECT DC-DC CONVERTER POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT** • Verify that the DC-DC converter connector is disconnected. • Measure the voltage at the DC-DC converter terminal L (wiring harness-side). • Is the voltage **B+**?	Yes	Go to the next step.
		No	Inspect the DCDC 50 A fuse. • If the fuse is blown: — Repair or replace the wiring harness for a possible short to ground. — Replace the fuse. • If the fuse is deteriorated: — Replace the fuse. • If the fuse is normal: — Repair or replace the wiring harness for a possible open circuit. Go to Step 12.
7	**INSPECT DC-DC CONVERTER SIGNAL CIRCUIT FOR SHORT TO GROUND** • Verify that the DC-DC converter connector is disconnected. • Inspect for continuity between DC-DC converter terminal F (wiring harness-side) and body ground. • Is there continuity?	Yes	If the short to ground circuit could be detected in the wiring harness: • Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected in the wiring harness: • Replace the PCM (short to ground in the PCM internal circuit). (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to Step 12.
		No	Go to the next step.
8	**INSPECT PCM CONNECTOR CONDITION** • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/ pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector and/or terminals, then go to Step 12.
		No	Go to the next step.

STEP	INSPECTION		ACTION
9	**INSPECT DC-DC CONVERTER SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Verify that the DC-DC converter and PCM connectors are disconnected. • Switch the ignition ON (engine off or on). • Measure the voltage at the DC-DC converter terminal F (wiring harness-side). • Is the voltage **0 V**?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to power supply, then go to Step 12.
10	**INSPECT DC-DC CONVERTER SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Verify that the DC-DC converter and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between DC-DC converter terminal F (wiring harness-side) and PCM terminal 2P (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 12.
11	**INSPECT DC-DC CONVERTER** • Inspect the DC-DC converter. (See DC-DC CONVERTER INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction?	Yes	Replace the DC-DC converter, then go to the next step. (See DC-DC CONVERTER REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
12	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Perform the KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G 2.0].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to the next step.
		No	Go to the next step.
13	**VERIFY AFTER REPAIR PROCEDURE** • Perform the “AFTER REPAIR PROCEDURE”. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No	DTC troubleshooting completed.