DTC U0298:00 [SKYACTIV-G 2.0]

id0102h1910500

DTC U0298:00	CAN/LIN communication system: DC-DC converter information communication error with front body control module (FBCM)
DETECTION CONDITION	• PCM detects a DC-DC converter information communication error from front body control module (FBCM). **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	• Communication line between DC-DC converter and front body control module (FBCM) malfunction • Communication line between front body control module (FBCM) and PCM 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 or open circuit in DC-DC converter power supply circuit — Short to ground in wiring harness between C/U IG1 15 A fuse and DC-DC converter terminal H — C/U IG1 15 A fuse malfunction — Open circuit in wiring harness between IG1 relay terminal C and DC-DC converter terminal H • Front body control module (FBCM) connector or terminals malfunction • Short to ground in wiring harness between the following terminals: — DC-DC converter terminal C—Front body control module (FBCM) terminal 2H — Front body control module (FBCM) terminal 2P—PCM terminal 2AK — Front body control module (FBCM) terminal 2N—PCM terminal 2AL • Open circuit in wiring harness between DC-DC converter terminal C and front body control module (FBCM) terminal 2H • PCM connector or terminals malfunction • Open circuit in wiring harness between the following terminals: — Front body control module (FBCM) terminal 2P—PCM terminal 2AK — Front body control module (FBCM) terminal 2N—PCM terminal 2AL • DC-DC converter malfunction • Front body control module (FBCM) malfunction • PCM malfunction

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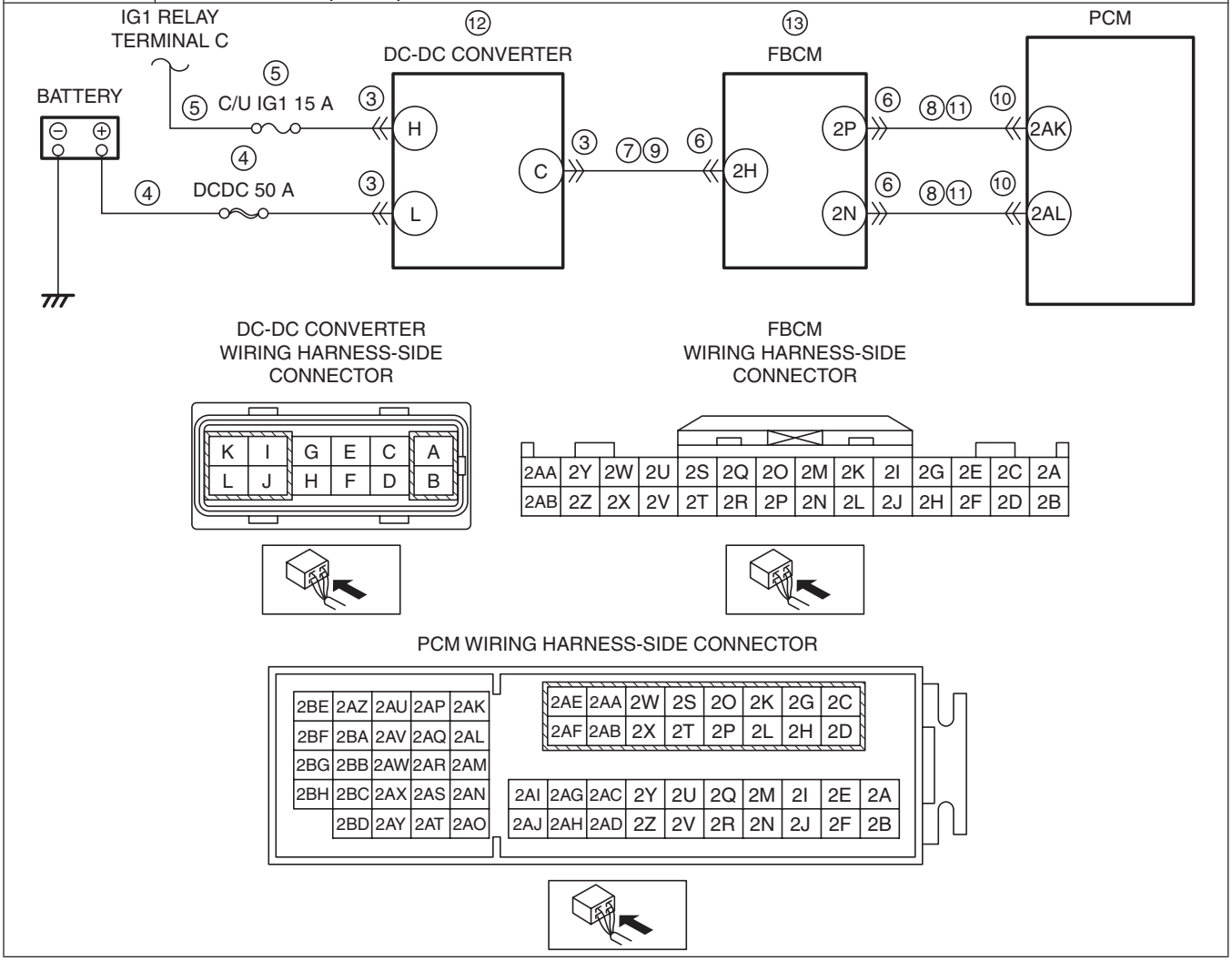

Diagnostic Procedure

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.
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	**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 14.
		No	Go to the next step.

STEP	INSPECTION		ACTION
4	**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 14.
5	**INSPECT DC-DC CONVERTER POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT** • Verify that the DC-DC converter connector is disconnected. • Switch the ignition ON (engine off or on). • Measure the voltage at the DC-DC converter terminal H (wiring harness-side). • Is the voltage **B+**?	Yes	Go to the next step.
		No	Inspect the C/U IG1 15 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 14.
6	**INSPECT FRONT BODY CONTROL MODULE (FBCM) CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the front body control module (FBCM) 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 14.
		No	Go to the next step.
7	**INSPECT DC-DC CONVERTER SIGNAL CIRCUIT FOR SHORT TO GROUND** • Verify that the DC-DC converter and front body control module (FBCM) connectors are disconnected. • Inspect for continuity between DC-DC converter terminal C (wiring harness-side) and body ground. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 14.
		No	Go to the next step.
8	**INSPECT FRONT BODY CONTROL MODULE (FBCM) CIRCUIT FOR SHORT TO GROUND** • Verify that the DC-DC converter and front body control module (FBCM) connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: — Front body control module (FBCM) terminal 2P — Front body control module (FBCM) terminal 2N • 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 14.
		No	Go to the next step.
9	**INSPECT DC-DC CONVERTER SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Verify that the DC-DC converter and front body control module (FBCM) connectors are disconnected. • Inspect for continuity between DC-DC converter terminal C (wiring harness-side) and front body control module (FBCM) terminal 2H (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 14.

STEP	INSPECTION		ACTION
10	**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 14.
		No	Go to the next step.
11	**INSPECT FRONT BODY CONTROL MODULE (FBCM) CIRCUIT FOR OPEN CIRCUIT** • Verify that the DC-DC converter, front body control module (FBCM) and PCM connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): — Front body control module (FBCM) terminal 2P—PCM terminal 2AK — Front body control module (FBCM) terminal 2N—PCM terminal 2AL • 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 14.
12	**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 Step 14. (See DC-DC CONVERTER REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
13	**INSPECT FRONT BODY CONTROL MODULE (FBCM)** • Inspect the front body control module (FBCM). (See FRONT BODY CONTROL MODULE (FBCM) INSPECTION.) • Is there any malfunction?	Yes	Replace the front body control module (FBCM), then go to the next step. (See FRONT BODY CONTROL MODULE (FBCM) REMOVAL/INSTALLATION.)
		No	Go to the next step.
14	**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 KOEO or 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.
15	**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.