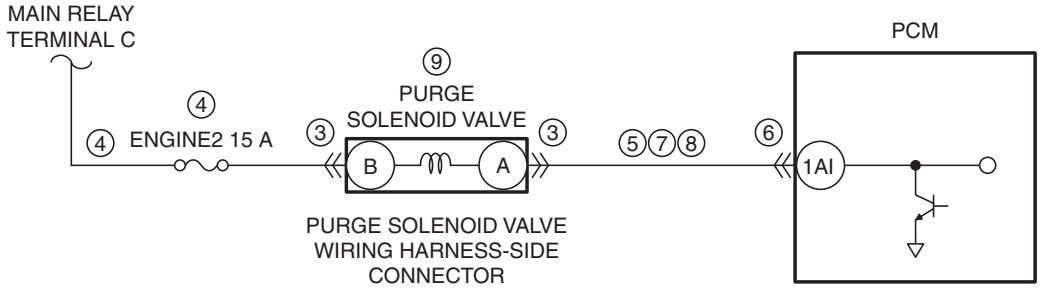
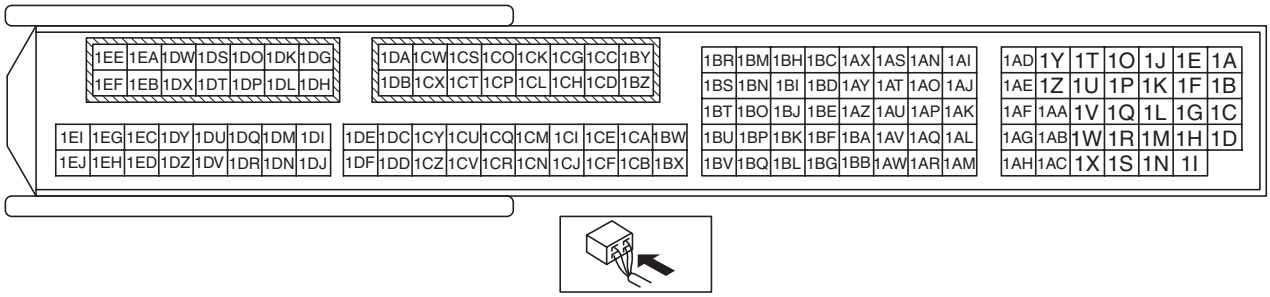
DTC P0443:00 [SKYACTIV-G 2.0]

id0102h1704500

DTC P0443:00	Purge solenoid valve circuit problem
DETECTION CONDITION	• The PCM monitors the purge solenoid valve control signal voltage and current. If the following conditions are met, the PCM determines that there is the purge solenoid valve control circuit problem. — The PCM turns the purge solenoid valve off, but the voltage of the purge solenoid valve control signal remains low. — The PCM turns the purge solenoid valve on, but the current of the purge solenoid valve control signal remains high. **Diagnostic support note** • This is a continuous monitor (CCM). • The check engine light illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. • PENDING CODE is available if the PCM detects the above malfunction condition during first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	—
POSSIBLE CAUSE	• Purge solenoid valve connector or terminals malfunction • Short to ground or open circuit in purge solenoid valve power supply circuit — Short to ground in wiring harness between ENGINE2 15 A fuse and purge solenoid valve terminal B — ENGINE2 15 A fuse malfunction — Open circuit in wiring harness between main relay terminal C and purge solenoid valve terminal B • Short to ground in wiring harness between purge solenoid valve terminal A and PCM terminal 1AI • PCM connector or terminals malfunction • Short to power supply in wiring harness between purge solenoid valve terminal A and PCM terminal 1AI • Open circuit in wiring harness between purge solenoid valve terminal A and PCM terminal 1AI • Purge solenoid valve malfunction • PCM malfunction



PCM WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED** • Has the FREEZE FRAME DATA (Mode 2)/ snapshot data been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.
2	**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.
3	**INSPECT PURGE SOLENOID VALVE CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the purge solenoid valve 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 10.
		No	Go to the next step.
4	**INSPECT PURGE SOLENOID VALVE POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT** • Verify that the purge solenoid valve connector is disconnected. • Switch the ignition ON (engine off or on). • Measure the voltage at the purge solenoid valve terminal B (wiring harness-side). • Is the voltage **B+**?	Yes	Go to the next step.
		No	Inspect the ENGINE2 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 10.
5	**INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO GROUND** • Verify that the purge solenoid valve connector is disconnected. • Switch the ignition to off. • Inspect for continuity between purge solenoid valve terminal A (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 10.
		No	Go to the next step.
6	**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 10.
		No	Go to the next step.
7	**INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY** • Verify that the purge solenoid valve and PCM connectors are disconnected. • Switch the ignition ON (engine off or on). • Measure the voltage at the purge solenoid valve terminal A (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 10.
8	**INSPECT PURGE SOLENOID VALVE CONTROL CIRCUIT FOR OPEN CIRCUIT** • Verify that the purge solenoid valve and PCM connectors are disconnected. • Inspect for continuity between purge solenoid valve terminal A (wiring harness-side) and PCM terminal 1AI (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 10.

STEP	INSPECTION		ACTION
9	**INSPECT PURGE SOLENOID VALVE** • Inspect the purge solenoid valve. (See PURGE SOLENOID VALVE INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction?	Yes	Replace the purge solenoid valve, then go to the next step. (See PURGE SOLENOID VALVE REMOVAL/ INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
10	**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].) • Start the engine. • Perform the KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G 2.0].) • Is the PENDING CODE for this 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.
11	**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.