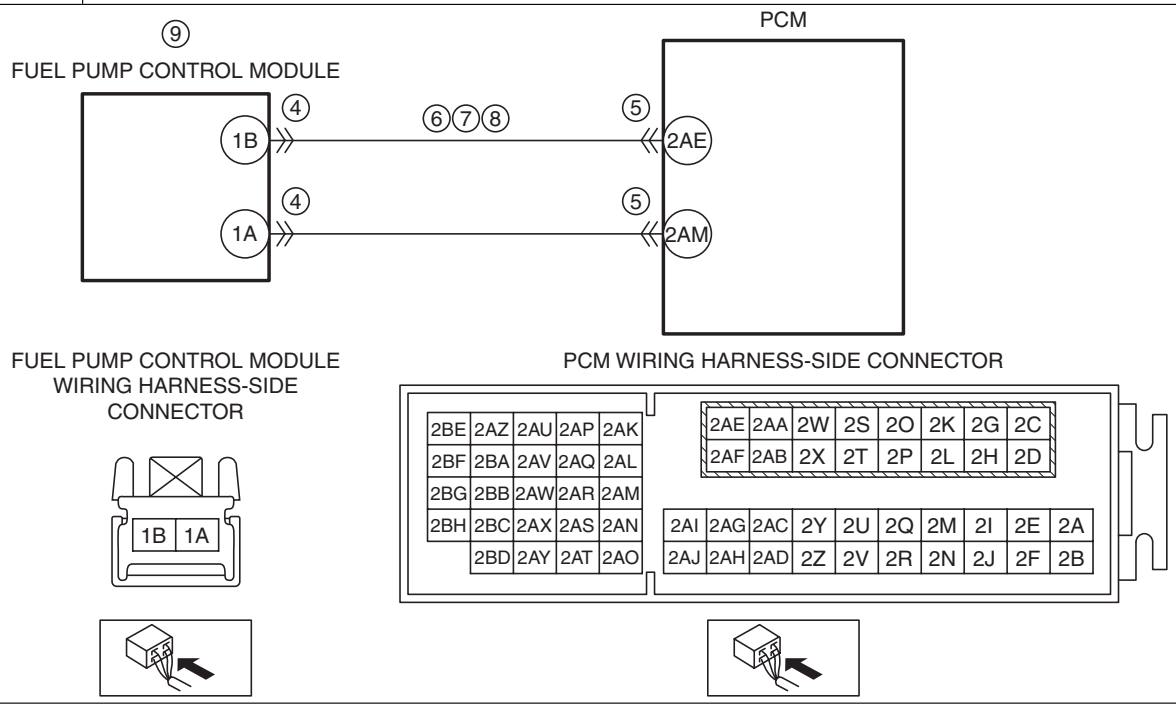
DTC P025B:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

id0102h4312600

DTC P025B: 00	Fuel pump control module circuit range/performance problem
DETECTION CONDITION	• When any of the following conditions is met: — Engine overheating is detected. — Output duty ratio signal received from PCM is in error. — Output signal from fuel pump control module is erratic (noise overlap). **Diagnostic support note** • This is a continuous monitor (CCM). • The check engine light illuminates if the PCM detects the above malfunction condition during the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	• Stops fuel pump control (overheat detected)
POSSIBLE CAUSE	• Engine overheating • Fuel pump control module connector or terminals malfunction • PCM connector or terminals malfunction • Short to ground in wiring harness between fuel pump control module terminal 1B and PCM terminal 2AE • Short to power supply in wiring harness between fuel pump control module terminal 1B and PCM terminal 2AE • Open circuit in wiring harness between fuel pump control module terminal 1B and PCM terminal 2AE • Fuel pump control module malfunction • PCM malfunction



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	**VERIFY ENGINE CONDITION** • Verify the engine condition. • Is the engine overheating?	Yes	Perform the symptom troubleshooting “NO.17 COOLING SYSTEM CONCERNS-OVERHEATING”. (See NO.17 COOLING SYSTEM CONCERNS-OVERHEATING [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.

STEP	INSPECTION		ACTION
4	**INSPECT FUEL PUMP CONTROL MODULE CONNECTOR CONDITION** • Switch the ignition off. • Disconnect the fuel pump control module 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.
5	**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.
6	**INSPECT FUEL PUMP CONTROL MODULE SIGNAL CIRCUIT FOR SHORT TO GROUND** • Verify that the fuel pump control module and PCM connectors are disconnected. • Inspect for continuity between fuel pump control module terminal 1B (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 10.
		No	Go to the next step.
7	**INSPECT FUEL PUMP CONTROL MODULE SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Verify that the fuel pump control module and PCM connectors are disconnected. • Switch the ignition ON (engine off). **Note** • Another DTC may be stored by the PCM detecting an open circuit. • Measure the voltage at the fuel pump control module terminal 1B (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 FUEL PUMP CONTROL MODULE SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Verify that the fuel pump control module and PCM connectors are disconnected. • Switch the ignition off. • Inspect for continuity between fuel pump control module terminal 1B (wiring harness-side) and PCM terminal 2AE (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.
9	**INSPECT FUEL PUMP CONTROL MODULE** • Reconnect all disconnected connectors. • Inspect the fuel pump control module. (See FUEL PUMP CONTROL MODULE INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Is there any malfunction?	Yes	Replace the fuel pump control module, then go to the next step. (See FUEL PUMP CONTROL MODULE REMOVAL/ INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.
10	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Always reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Perform the KOEO or KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • 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, SKYACTIV-G 2.5].) Go to the next step.
		No	Go to the next step.

STEP	INSPECTION		ACTION
11	**VERIFY AFTER REPAIR PROCEDURE** • Perform the “AFTER REPAIR PROCEDURE”. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	DTC troubleshooting completed.