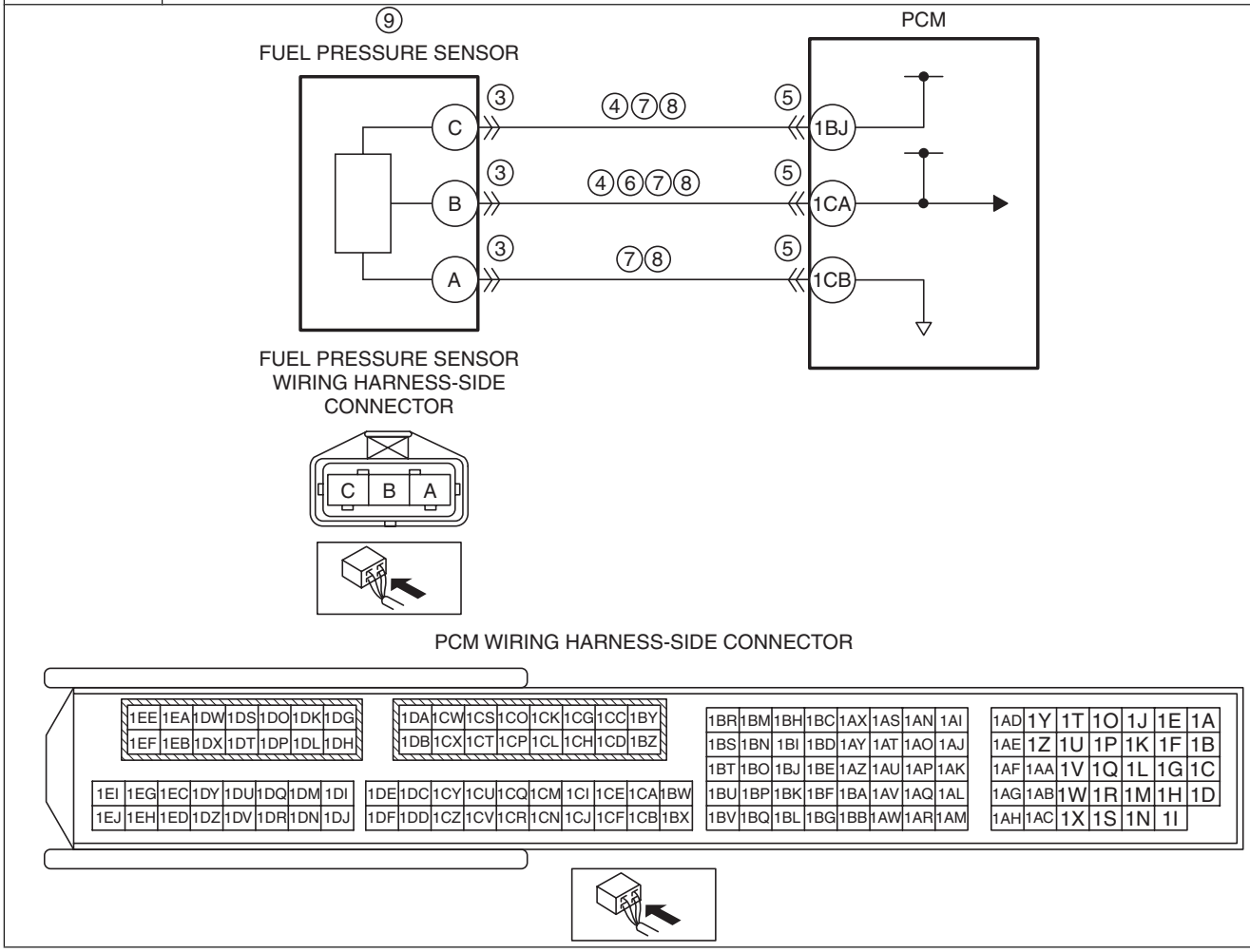
DTC P0191:00 [SKYACTIV-G 2.0]

id0102h1147600

DTC P0191:00	Fuel pressure sensor circuit range/performance problem
DETECTION CONDITION	• The difference between the actual and target fuel pressure is equal to or more than the specification, even though the fuel pressure feedback amount is maintained low or high. **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. • The DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	• Stops the high pressure fuel pump control. • Limits the intake air amount.
POSSIBLE CAUSE	• Fuel pressure sensor connector or terminals malfunction • Short to ground in wiring harness between the following terminals: — Fuel pressure sensor terminal C—PCM terminal 1BJ — Fuel pressure sensor terminal B—PCM terminal 1CA • PCM connector or terminals malfunction • Short to power supply in wiring harness between fuel pressure sensor terminal B and PCM terminal 1CA • Fuel pressure sensor circuits are shorted to each other • Open circuit in wiring harness between the following terminals: — Fuel pressure sensor terminal C—PCM terminal 1BJ — Fuel pressure sensor terminal B—PCM terminal 1CA — Fuel pressure sensor terminal A—PCM terminal 1CB • Fuel pressure sensor malfunction • High pressure fuel pump 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	**INSPECT FUEL PRESSURE SENSOR CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the fuel pressure sensor 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 11.
		No	Go to the next step.
4	**INSPECT FUEL PRESSURE SENSOR CIRCUIT FOR SHORT TO GROUND** • Verify that the fuel pressure sensor connector is disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: — Fuel pressure sensor terminal C — Fuel pressure sensor terminal B • 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 11.
		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 11.
		No	Go to the next step.
6	**INSPECT FUEL PRESSURE SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Verify that the fuel pressure sensor and PCM connectors are disconnected. • Switch the ignition ON (engine off or on). • Measure the voltage at the fuel pressure sensor terminal B (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 11.
7	**INSPECT FUEL PRESSURE SENSOR CIRCUITS FOR SHORT TO EACH OTHER** • Verify that the fuel pressure sensor and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between fuel pressure sensor terminals C, B and A (wiring harness-side). • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to each other, then go to Step 11.
		No	Go to the next step.
8	**INSPECT FUEL PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT** • Verify that the fuel pressure sensor and PCM connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): — Fuel pressure sensor terminal C—PCM terminal 1BJ — Fuel pressure sensor terminal B—PCM terminal 1CA — Fuel pressure sensor terminal A—PCM terminal 1CB • 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 11.

STEP	INSPECTION		ACTION
9	**INSPECT FUEL PRESSURE SENSOR** • Reconnect all disconnected connectors. • Inspect the fuel pressure sensor. (See FUEL PRESSURE SENSOR INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction?	Yes	Replace the fuel distributor, then go to Step 11. (See FUEL INJECTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
10	**INSPECT HIGH PRESSURE FUEL PUMP** • Inspect the high pressure fuel pump. (See HIGH PRESSURE FUEL PUMP INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction?	Yes	Replace the high pressure fuel pump, then go to the next step. (See HIGH PRESSURE FUEL PUMP REMOVAL/ INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
11	**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 and warm it up completely. • Increase and keep the engine speed at **3,000 rpm** for **1 min**. • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC 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.
12	**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.