DTC P0191:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

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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. • DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	• Stops high pressure fuel pump control • Limits intake air amount
POSSIBLE CAUSE	• Air suction in fuel line due to fuel is runout • High pressure fuel pump connector or terminals malfunction • Fuel pressure sensor connector or terminals malfunction • PCM connector or terminals malfunction • Fuel pressure sensor malfunction • Insufficient fuel pressure (low pressure line) • Fuel injector malfunction • High pressure fuel pump malfunction — Relief valve (built-into high pressure fuel pump) malfunction • PCM malfunction
SYSTEM WIRING DIAGRAM	Not applicable

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 WHETHER MALFUNCTION IS AIR SUCTION IN FUEL LINE BY FUEL RUNOUT OR ELSEWHERE** • Verify the fuel gauge indicator on the instrument cluster. • Does the fuel gauge indicate empty?	Yes	Refill the fuel and warm up the engine, then go to the next step.
		No	Go to the next step.
4	**INSPECT HIGH PRESSURE FUEL PUMP CONNECTOR CONDITION** • Switch the ignition off. • Disconnect the high pressure fuel pump 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 9.
		No	Go to the next step.
5	**INSPECT FUEL PRESSURE SENSOR CONNECTOR CONDITION** • 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 9.
		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 9.
		No	Go to the next step.

STEP	INSPECTION		ACTION
7	**INSPECT FUEL PRESSURE SENSOR** • Reconnect all disconnected connectors. • Inspect the fuel pressure sensor. (See FUEL PRESSURE SENSOR INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Is there any malfunction?	Yes	Replace the fuel distributor, then go to Step 9. (See FUEL INJECTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.
8	**INSPECT FUEL LINE PRESSURE (LOW PRESSURE LINE)** • Measure the low side fuel pressure. (between fuel pump and high pressure fuel pump). (See FUEL LINE PRESSURE INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Is the low side fuel pressure within specification? **Specification:** • **405—485 kPa {4.13—4.94 kgf/cm^2, 58.8—70.3 psi}**	Yes	Remove the fuel injector and visually inspect fuel injector or leakage. (See FUEL INJECTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • If there is any malfunction: — Replace the fuel injector if necessary, then go to the next step. • If there is no malfunction: — Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results, then go to the next step.
9	**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].) • 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, 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.
10	**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.