DTC P0191:00 [SKYACTIV-D 2.2]

id0102s4147600

DTC P0191:00	Fuel pressure sensor circuit range/performance problem
DETECTION CONDITION	• The PCM monitors the fuel pressure in the common rail and input signal from the fuel pressure sensor. If all of the following conditions is met for **20 s**, the PCM determines that there is malfunction in the fuel pressure sensor range/performance malfunction. — The PCM calculates the difference between actual fuel pressure and target fuel pressure. If the pressure difference is **more than 5 MPa {51 kgf/cm^2, 725 psi}**. — The PCM monitors the input signal from the fuel pressure sensor. If the difference between the maximum and minimum voltage of the fuel pressure sensor is **less than 0.0025 V** **MONITORING CONDITIONS** • Engine speed: **5,200 rpm or less** • Fuel temperature: **90 °C {194 °F} or less** • Target fuel pressure: **more than 20 MPa {204 kgf/cm^2, 2,901 psi}** • When the following conditions are met, the fuel pressure **exceeds 240 MPa {2,447 kgf/cm^2, 34,809 psi}**: **MONITORING CONDITIONS** — Engine speed: **6,000 rpm or less** — Fuel temperature: **20—60 °C {68—140 °F}** — Engine coolant temperature: **80—100 °C {176—212 °F}** — Intake air temperature: **20—40 °C {68—104 °F}** — Barometric pressure: **above 95 kPa {0.97 kgf/cm^2, 14 psi}** — Battery voltage: **above 8 V** **Diagnostic support note** • This is an intermittent monitor (fuel system). • 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 the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	• PCM restricts engine torque. • Inhibits the EGR control. • Inhibits the diesel particulate filter regeneration control. • Inhibits engine-stop by operating the i-stop function. • PCM restricts engine-transaxle integration control.
POSSIBLE CAUSE	• Fuel pressure sensor connector or terminals malfunction • PCM connector or terminals malfunction • Fuel pressure sensor malfunction • PCM malfunction
SYSTEM WIRING DIAGRAM	Not applicable

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA AND DIAGNOSTIC MONITORING TEST RESULTS HAVE BEEN RECORDED** • Have the FREEZE FRAME DATA (Mode 2)/ snapshot data and DIAGNOSTIC MONITORING TEST RESULTS (fuel system related) been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode 2)/snapshot data and DIAGNOSTIC MONITORING TEST RESULTS 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.

STEP	INSPECTION		ACTION
3	**INSPECT FUEL PRESSURE SENSOR CONNECTOR CONDITION** • Switch the ignition 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 6.
		No	Go to the next step.
4	**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 6.
		No	Go to the next step.
5	**INSPECT FUEL PRESSURE SENSOR** • Reconnect all disconnected connectors. • Inspect the fuel pressure sensor. (See FUEL PRESSURE SENSOR INSPECTION [SKYACTIV-D 2.2].) • Is there any malfunction?	Yes	Replace the common rail, then go to the next step. (See COMMON RAIL REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.
6	**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-D 2.2].) • Perform the Drive Mode Type A. (See OBD DRIVE MODE [SKYACTIV-D 2.2].) • Perform the Pending Trouble Code Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) • 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-D 2.2].) Go to the next step.
		No	Go to the next step.
7	**VERIFY AFTER REPAIR PROCEDURE** • Perform the “AFTER REPAIR PROCEDURE”. (See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)
		No	DTC troubleshooting completed.