DTC P06DA:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

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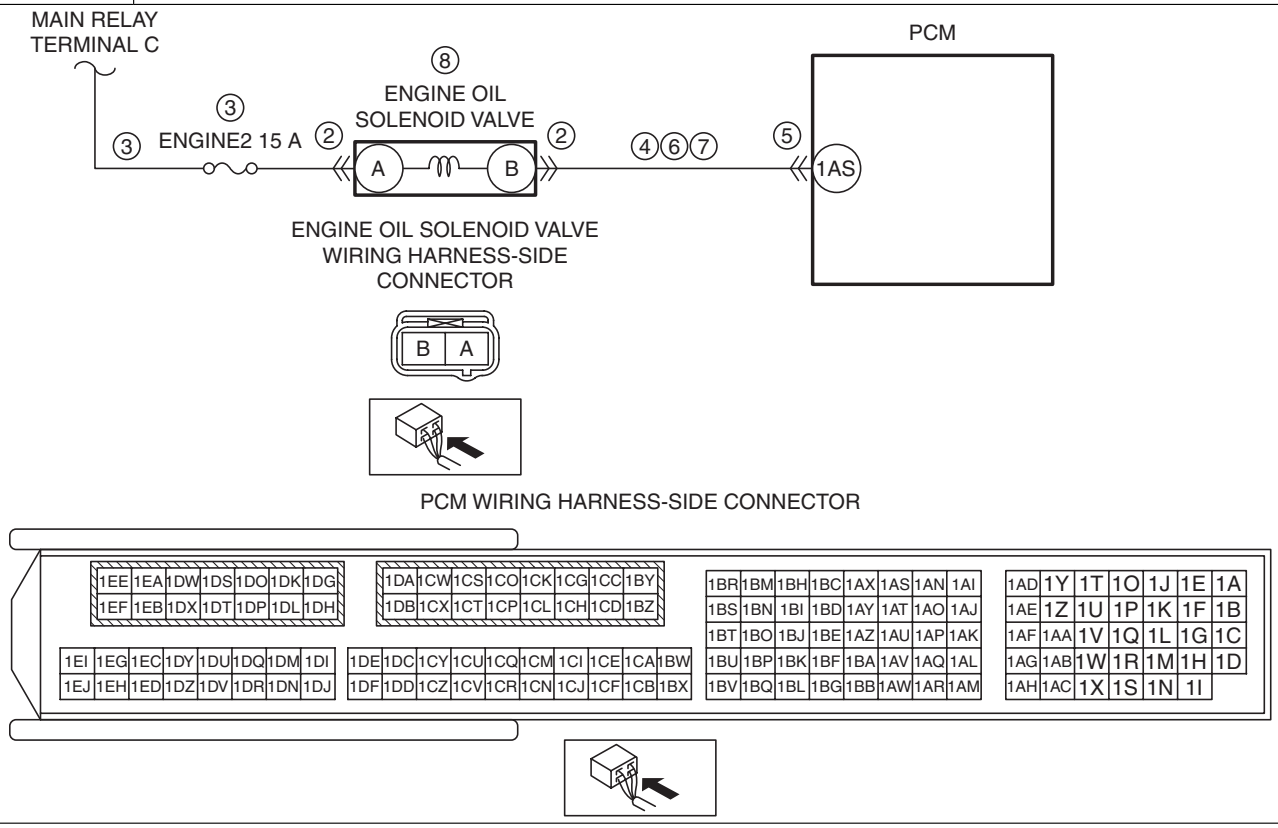
DTC P06DA:00	Engine oil solenoid valve circuit problem
DETECTION CONDITION	• The engine oil solenoid valve control current exceeds the specification or the control voltage at the PCM terminal 1AS is less than the specification relative to the PCM control condition. **Diagnostic support note** • This is a continuous monitor (other). • The check engine light does not illuminate. • FREEZE FRAME DATA (Mode 2)/Snapshot data is not available. • DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	• Inhibits the engine oil control.
POSSIBLE CAUSE	• Engine oil solenoid valve connector or terminals malfunction • Short to ground or open circuit in engine oil solenoid valve power supply circuit — Short to ground in wiring harness between ENGINE2 15 A fuse and engine oil solenoid valve terminal A — ENGINE2 15 A fuse malfunction — Open circuit in wiring harness between main relay terminal C and engine oil solenoid valve terminal A • Short to ground in wiring harness between engine oil solenoid valve terminal B and PCM terminal 1AS • PCM connector or terminals malfunction • Short to power supply in wiring harness between engine oil solenoid valve terminal B and PCM terminal 1AS • Open circuit in wiring harness between engine oil solenoid valve terminal B and PCM terminal 1AS • Engine oil solenoid valve malfunction • PCM malfunction



Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**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
2	**INSPECT ENGINE OIL SOLENOID VALVE CONNECTOR CONDITION** • Switch the ignition off. • Disconnect the engine oil 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 9.
		No	Go to the next step.
3	**INSPECT ENGINE OIL SOLENOID VALVE POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT** • Verify that the engine oil solenoid valve connector is disconnected. • Switch the ignition ON (engine off). • Measure the voltage at the engine oil solenoid valve terminal A (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 9.
4	**INSPECT ENGINE OIL SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO GROUND** • Verify that the engine oil solenoid valve connector is disconnected. • Switch the ignition off. • Inspect for continuity between engine oil solenoid valve terminal B (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, SKYACTIV-G 2.5].) Go to Step 9.
		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 9.
		No	Go to the next step.
6	**INSPECT ENGINE OIL SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY** • Verify that the engine oil solenoid valve and PCM connectors are disconnected. • Switch the ignition ON (engine off). • Measure the voltage at the engine oil solenoid valve 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 9.
7	**INSPECT ENGINE OIL SOLENOID VALVE CONTROL CIRCUIT FOR OPEN CIRCUIT** • Verify that the engine oil solenoid valve and PCM connectors are disconnected. • Switch the ignition off. • Inspect for continuity between engine oil solenoid valve terminal B (wiring harness-side) and PCM terminal 1AS (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 9.
8	**INSPECT ENGINE OIL SOLENOID VALVE** • Inspect the engine oil solenoid valve. (See ENGINE OIL SOLENOID VALVE INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Is there any malfunction?	Yes	Replace the engine oil solenoid valve, then go to the next step. (See ENGINE OIL SOLENOID VALVE REMOVAL/ INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.

STEP	INSPECTION		ACTION
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].) • Perform the 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.
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.