DTC P0524:00 [SKYACTIV-G 2.0]

id0102h1339700

	IdU102n1339/00				
DTC P0524:00	Engine oil pressure too low				
DETECTION CONDITION	 The oil pressure switch is on for a continuous 5 s with the following condition met: (engine oil pressure warning light illuminates when 1 s has elapsed) When engine coolant temperature is 30 °C {86 °F} or less and engine speed is above 650 rpm When engine coolant temperature is 68 °C {154 °F} or less and engine speed is above 1,500 rpm When engine coolant temperature is 68 °C {154 °F} or more and engine speed is above 2,500 rpm 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. The DTC is stored in the PCM memory. 				
FAIL-SAFE	_				
FUNCTION	- Engine oil leakage				
POSSIBLE CAUSE	 Engine oil leakage Improper engine oil level Oil pressure switch connector or terminals malfunction Short to ground in wiring harness between oil pressure switch terminal A and PCM terminal 1P PCM connector or terminals malfunction Oil pressure switch malfunction Oil pump malfunction PCM malfunction 				
OIL PRESSURE SWITCH OIL PRESSURE SWITCH WIRING HARNESS-SIDE CONNECTOR PCM IP IP IP IP IP IP IP IP IP I					
1 S.M. W. M. LESS SIDE SOLUTION					
1DA CW CS CO CK CG CC BY 1DB CW CS CO CK CG CC BY 1DB CX CT CP CL CC BY 1DB CX CT CP CL CC CK CG CC BY 1BB BB 1BB 1BB 1AX 1AS 1AN 1A 1AE IZ IU IP IK IF IB 1BB 1BD 1AY 1AT 1AO IAJ 1AE IZ IU IP IK IF IB 1BD IBJ IBB 1BB 1AV IAJ IAK IAB IAV IAJ IAJ					

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	VERIFY RELATED SERVICE INFORMATION	Yes	Perform repair or diagnosis according to the available
	AVAILABILITY		Service Information.
	Verify related Service Information availability.		If the vehicle is not repaired, go to the next step.
	Is any related Service Information available?	No	Go to the next step.
2	INSPECT ENGINE OIL LEAKAGE	Yes	Repair or replace the malfunctioning part according to the
	Start the engine.		inspection results, then add genuine motor oil.
	Verify that there is no engine oil leakage in the		Go to Step 8.
	hydraulic circuit.	No	Go to the next step.
	Is there any leakage?		

INSPECT ENGINE OIL LEVEL Inspect the engine oil level sufficient?	STEP	INSPECTION	ACTION	
Inspect the engine oil level (See ENGINE OIL LEVEL INSPECTION (See ENGINE OIL LEVEL INSPECTION (See ENGINE OIL LEVEL INSPECTION (See ENGINE OIL REPLACEMENT (SKYACTIV-G 2.0).)			Yes	
CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the oil pressure switch connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction? 5 INSPECT OIL PRESSURE SWITCH CONTROL CIRCUIT FOR SHORT TO GROUND - Verify that the oil pressure switch connector is disconnected. - Inspect for continuity between oil pressure switch terminal A (wiring harness-side) and body ground. - Is there continuity? 6 INSPECT PCM CONNECTOR CONDITION - Disconnect the PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction? 7 INSPECT PRIONE OIL PRESSURE - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction? 7 INSPECT PRIONE OIL PRESSURE - Inspect the engine oil pressure. - (See OIL PRESSURE INSPECTION [SKYACTIV-G 2.0].) - Is there any malfunction? 8 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]. - Drive the vehicle under the following conditions for 5 s. - Engine speed: above 2,500 rpm - Perform the DTC Reading Procedure. - (See ON-BOARD DIAGNOSTIC TEST SKYACTIV-G 2.0].) - Is the same DTC present? 9 VERIFY AFTER REPAIR PROCEDURE - VERIFY AFTER		Inspect the engine oil level. (See ENGINE OIL LEVEL INSPECTION [SKYACTIV-G 2.0].)		
Disconnect the oil pressure switch connector.	4	INSPECT OIL PRESSURE SWITCH	Yes	Repair or replace the connector and/or terminals, then go to Step 8.
CIRCUIT FOR SHORT TO GROUND Verify that the oil pressure switch connector is disconnected. Inspect for continuity between oil pressure switch terminal A (wiring harness-side) and body ground. Is there continuity? INSPECT PCM CONNECTOR CONDITION Disconnect the PCM connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? INSPECT PRIME OIL PRESSURE Inspect the engine oil pressure. (See OIL PRESSURE INSPECTION [SKYACTIV-G 2.0].) Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pump, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch, then go to the next step. Yes Replace the oil pressure switch switch and the manner shall be replaced to the switch and the switch and the switch and the switc		 Disconnect the oil pressure switch connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? 	No	·
INSPECT PCM CONNECTOR CONDITION Disconnect the PCM connector.	5	CIRCUIT FOR SHORT TO GROUND Verify that the oil pressure switch connector is disconnected. Inspect for continuity between oil pressure switch terminal A (wiring harness-side) and body ground.		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 8.
Disconnect the PCM connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? INSPECT ENGINE OIL PRESSURE Inspect the engine oil pressure. (See OIL PRESSURE INSPECTION [SKYACTIV-G 2.0].) Is there any malfunction? 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].) Drive the vehicle under the following conditions for 5 s. — Engine speed: above 2,500 rpm Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) is the same DTC present? VERIFY AFTER REPAIR PROCEDURE Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE". (See DTC TABLE [SKYACTIV-G 2.0].) DTC troubleshooting completed.	6	INSPECT DOM CONNECTOR CONDITION		
7 INSPECT ENGINE OIL PRESSURE • Inspect the engine oil pressure. (See OIL PRESSURE INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction? 8 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].) • Drive the vehicle under the following conditions for 5 s. — Engine speed: above 2,500 rpm • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) • Is the same DTC present? 9 VERIFY AFTER REPAIR PROCEDURE (See AFTER REPAIR PROCEDURE) (See DIL PUMP REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) No Replace the oil pressure switch, then go to the next step. (See ENGINE OIL SOLENOID VALVE REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Perform the PCM memory using the M-MDS. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to the next step. No Go to the next step. For the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to the next step. For the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) For the malfunction recurs, replace the oil pump, then go to the next step. See PNGINE OIL SOLENOID VALVE REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) For the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) For the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) For the malfunction recurs, replace the oil pressure switch, then go to the next step. For the malfunction recurs, replace the oil pressure switch, then go to the next step. For the malfunction recurs, replace the oil pressure switch, then go to the next step. For the malfunction recurs, replace the oil pressure switch, then go to the next step. For the malfunction recurs, replace the oil pressure switch, then go to the next step. For the malfunction recurs, replace the oil pressure switch, the processor in the processor in the malfunction recurs, replace	0	 Disconnect the PCM connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). 		Step 8.
8 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].) • Drive the vehicle under the following conditions for 5 s. — Engine speed: above 2,500 rpm • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) • Is the same DTC present? 9 VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE) • Perform the "AFTER REPAIR PROCEDURE". (See DTC TABLE [SKYACTIV-G 2.0].) No DTC troubleshooting completed.	7	INSPECT ENGINE OIL PRESSURE Inspect the engine oil pressure. (See OIL PRESSURE INSPECTION [SKYACTIV-G 2.0].)		(See OIL PUMP REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Replace the oil pressure switch, then go to the next step. (See ENGINE OIL SOLENOID VALVE REMOVAL/
(See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Drive the vehicle under the following conditions for 5 s. — Engine speed: above 2,500 rpm • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) • Is the same DTC present? 9 VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE) • No DTC troubleshooting completed.	8	COMPLETED Make sure to reconnect all disconnected connectors. Clear the DTC from the PCM memory using the		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.
Perform the "AFTER REPAIR PROCEDURE". (See DTC TABLE [SKYACTIV-G 2.0].) (See AFTER REPAIR PROCEDURE) No DTC troubleshooting completed.		(See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Drive the vehicle under the following conditions for 5 s. — Engine speed: above 2,500 rpm • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].)	NO	·
• Are any DTCs present?	9	 Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) 		(See DTC TABLE [SKYACTIV-G 2.0].)