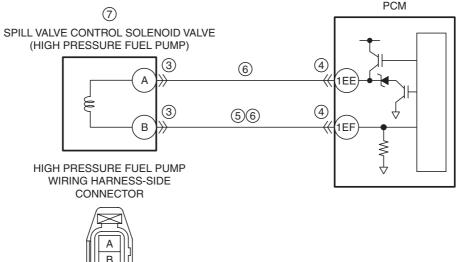
DTC P0091:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

id0102h4009100

DTC P0091:00	Fuel pressure regulator control circuit low input				
DETECTION CONDITION	When the PCM turns the spill valve control solenoid valve off but the spill valve control solenoid valve control circuit voltage is low for 5 s, the PCM determines that the spill valve control solenoid valve control circuit has a malfunction. MONITORING CONDITIONS The following conditions are met: Engine speed: 5,700 rpm or less Battery voltage: 10.5 V or more 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	Stops high pressure fuel pump control				
FUNCTION					
POSSIBLE CAUSE	 High pressure fuel pump connector or terminals malfunction PCM connector or terminals malfunction Short to ground in wiring harness between high pressure fuel pump terminal B and PCM terminal 1EF Open circuit in wiring harness between the following terminals: High pressure fuel pump terminal A—PCM terminal 1EE High pressure fuel pump terminal B—PCM terminal 1EF Spill valve control solenoid valve (built-into high pressure fuel pump) malfunction PCM malfunction 				
	PCM				





PCM WIRING HARNESS-SIDE CONNECTOR

N	1BR 1BM 1BH 1BC 1AX 1AS 1AN 1AI 1AD 1Y 1T 1O 1J 1E 1A
1EF 1EB 1DX 1DT 1DP 1DL 1DH	1BS 1BN 1BI 1BD 1AY 1AT 1AO 1AJ 1BT 1BO 1BJ 1BE 1AZ 1AU 1AP 1AK 1AF 1AA 1V 1Q 1L 1G 1C
1EI 1EG 1EC 1DY 1DU 1DQ 1DM 1DI 1DE 1DC 1CY 1CU 1CQ 1CM 1CI 1CE 1CA 1BW 1EJ 1EH 1ED 1DZ 1DV 1DR 1DJ 1DJ 1CZ 1CV 1CR 1CJ 1CF 1CB 1BX	18U 18P 18K 18F 18A 14V 14Q 14L 14G 14B 1 M 1 R 1 M 1 H 1 D 18V 18Q 18L 18G 18B 14W 14R 14M 14K 14



Diagnostic Procedure

STEP	DSTIC Procedure		ACTION
1 4	INSPECTION	1/	
1	VERIFY FREEZE FRAME DATA (MODE 2)/	Yes	Go to the next step.
	SNAPSHOT DATA HAS BEEN RECORDED	No	Record the FREEZE FRAME DATA (Mode 2)/snapshot data
	Has the FREEZE FRAME DATA (Mode 2)/		on the repair order, then go to the next step.
	snapshot data been recorded?		
2	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.
3	INSPECT HIGH PRESSURE FUEL PUMP	Yes	Repair or replace the connector and/or terminals, then go to
"	CONNECTOR CONDITION	103	Step 8.
		NIa	'
	Switch the ignition off.	No	Go to the next step.
	Disconnect the high pressure fuel pump		
	connector.		
	Inspect for poor connection (such as damaged/		
	pulled-out pins, corrosion).		
	Is there any malfunction?		
4	INSPECT PCM CONNECTOR CONDITION	Yes	Repair or replace the connector and/or terminals, then go to
	Disconnect the PCM connector.		Step 8.
	 Inspect for poor connection (such as damaged/ 	No	Go to the next step.
	pulled-out pins, corrosion).		of to the north stop.
	• Is there any malfunction?		
5	INSPECT SPILL VALVE CONTROL SOLENOID	Yes	Repair or replace the wiring harness for a possible short to
5	VALVE CONTROL CIRCUIT FOR SHORT TO	162	ground, then go to Step 8.
	GROUND	Nic	
		No	Go to the next step.
	Verify that the high pressure fuel pump and PCM		
	connectors are disconnected.		
	Inspect for continuity between high pressure fuel		
	pump terminal B (wiring harness-side) and body		
	ground.		
	Is there continuity?		
6	INSPECT SPILL VALVE CONTROL SOLENOID	Yes	Go to the next step.
	VALVE CIRCUIT FOR OPEN CIRCUIT	No	Repair or replace the wiring harness for a possible open
	Verify that the high pressure fuel pump and PCM		circuit, then go to Step 8.
	connectors are disconnected.		on early their go to etop of
	Inspect for continuity between the following		
	Inspect for continuity between the following terminals (wiring harness-side):		
	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM		
	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM terminal 1EE		
	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM terminal 1EE High pressure fuel pump terminal B—PCM		
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	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM terminal 1EE High pressure fuel pump terminal B—PCM terminal 1EF Is there continuity?		
7	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM terminal 1EE High pressure fuel pump terminal B—PCM terminal 1EF	Yes	Replace the high pressure fuel pump, then go to the next
7	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM terminal 1EE High pressure fuel pump terminal B—PCM terminal 1EF Is there continuity?	Yes	step.
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7	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM terminal 1EE High pressure fuel pump terminal B—PCM terminal 1EF Is there continuity? INSPECT SPILL VALVE CONTROL SOLENOID VALVE Reconnect all disconnected connectors.	Yes	step. (See HIGH PRESSURE FUEL PUMP REMOVAL/
7	Inspect for continuity between the following terminals (wiring harness-side): High pressure fuel pump terminal A—PCM terminal 1EE High pressure fuel pump terminal B—PCM terminal 1EF Is there continuity? INSPECT SPILL VALVE CONTROL SOLENOID VALVE Reconnect all disconnected connectors. Inspect the spill valve control solenoid valve.		step. (See HIGH PRESSURE FUEL PUMP REMOVAL/ INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
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STEP	INSPECTION		ACTION
9	VERIFY AFTER REPAIR PROCEDURE	Yes	Go to the applicable DTC inspection.
	Perform the "AFTER REPAIR PROCEDURE".		(See DTC TABLE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
	(See AFTER REPAIR PROCEDURE	No	DTC troubleshooting completed.
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	Are any DTCs present?		