DTC P0335:00 [SKYACTIV-G 2.0]

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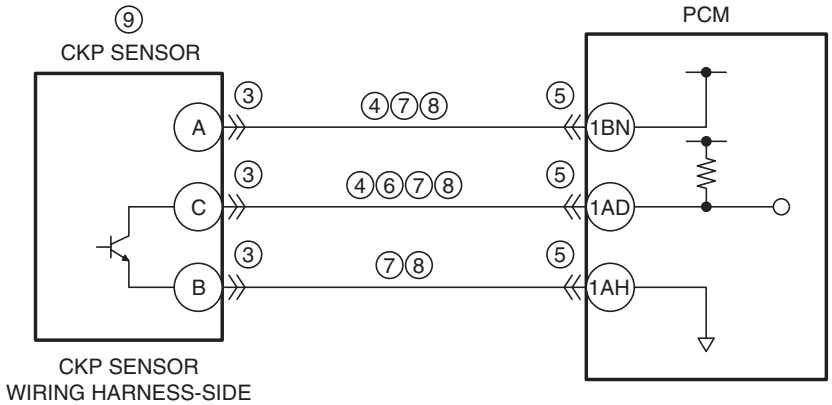
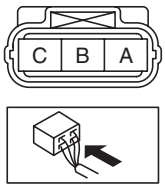
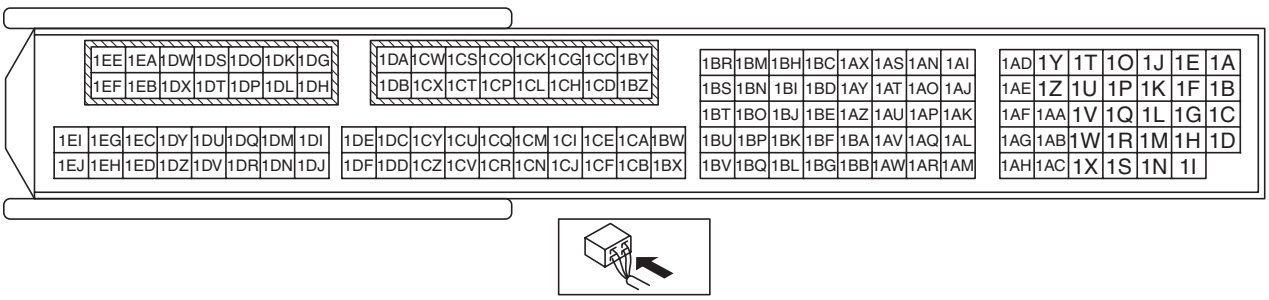
DTC P0335:00	CKP sensor circuit problem
DETECTION CONDITION	• There is no CKP sensor signal input while the exhaust camshaft rotates **5 times**. • CKP sensor input signal pattern, received while crankshaft rotates **10 times**, is incorrect. **Diagnostic support note** • This is a continuous monitor (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. • The DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	• Stops the fuel injection. • Stops the ignition.
POSSIBLE CAUSE	• CKP sensor connector or terminals malfunction • Short to ground in wiring harness between the following terminals: — CKP sensor terminal A—PCM terminal 1BN — CKP sensor terminal C—PCM terminal 1AD • PCM connector or terminals malfunction • Short to power supply in wiring harness between CKP sensor terminal C and PCM terminal 1AD • CKP sensor circuits are shorted to each other • Open circuit in wiring harness between the following terminals: — CKP sensor terminal A—PCM terminal 1BN — CKP sensor terminal C—PCM terminal 1AD — CKP sensor terminal B—PCM terminal 1AH • CKP sensor malfunction — CKP sensor is dirty — CKP sensor pulse wheel malfunction • PCM malfunction



CKP SENSOR WIRING HARNESS-SIDE CONNECTOR



PCM WIRING HARNESS-SIDE CONNECTOR



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	**INSPECT CKP SENSOR CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the CKP 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 10.
		No	Go to the next step.
4	**INSPECT CKP SENSOR CIRCUIT FOR SHORT TO GROUND** • Verify that the CKP sensor connector is disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: — CKP sensor terminal A — CKP sensor terminal C • 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].) Go to Step 10.
		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 10.
		No	Go to the next step.
6	**INSPECT CKP SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Verify that the CKP sensor and PCM connectors are disconnected. • Switch the ignition ON (engine off or on). • Measure the voltage at the CKP sensor terminal C (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 10.
7	**INSPECT CKP SENSOR CIRCUITS FOR SHORT TO EACH OTHER** • Verify that the CKP sensor and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between CKP sensor terminals A, C and B (wiring harness-side). • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to each other, then go to Step 10.
		No	Go to the next step.
8	**INSPECT CKP SENSOR CIRCUIT FOR OPEN CIRCUIT** • Verify that the CKP sensor and PCM connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): — CKP sensor terminal A—PCM terminal 1BN — CKP sensor terminal C—PCM terminal 1AD — CKP sensor terminal B—PCM terminal 1AH • 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 10.

STEP	INSPECTION		ACTION
9	**INSPECT CKP SENSOR** • Inspect the CKP sensor. (See CRANKSHAFT POSITION (CKP) SENSOR INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction?	Yes	Replace the CKP sensor, then go to the next step. (See CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
10	**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].) • Start the engine. • Perform the KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G 2.0].) • 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].) Go to the next step.
		No	Go to the next step.
11	**VERIFY AFTER REPAIR PROCEDURE** • Perform the “AFTER REPAIR PROCEDURE”. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No	DTC troubleshooting completed.