

<b>DTC P0327:00</b>	<b>KS circuit low input</b>
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>The PCM monitors input signal from the KS when the engine is running. If the input voltage is <b>below 1.1 V for 5 s</b>, the PCM determines that the KS circuit has a malfunction.</li> </ul> <p><b>Diagnostic support note</b></p> <ul style="list-style-type: none"> <li>This is a continuous monitor (CCM).</li> <li>The check engine light illuminates if the PCM detects the above malfunction condition during the first drive cycle.</li> <li>FREEZE FRAME DATA (Mode 2)/Snapshot data is available.</li> <li>The DTC is stored in the PCM memory.</li> </ul>
<b>FAIL-SAFE FUNCTION</b>	<ul style="list-style-type: none"> <li>Sets the knocking spark retard correction value of the ignition control to the fixed value.</li> </ul>
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"> <li>KS connector or terminals malfunction</li> <li>KS malfunction</li> <li>Short to ground in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>KS terminal A—PCM terminal 1H</li> <li>KS terminal B—PCM terminal 1D</li> </ul> </li> <li>PCM connector or terminals malfunction</li> <li>KS circuits are shorted to each other</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>KS terminal A—PCM terminal 1H</li> <li>KS terminal B—PCM terminal 1D</li> </ul> </li> <li>PCM malfunction</li> </ul>

KS WIRING HARNESS-SIDE CONNECTOR

PCM WIRING HARNESS-SIDE CONNECTOR

1EE 1EA 1DW 1DS 1DO 1DK 1DG	1DA 1CW 1CS 1CO 1CK 1CG 1CC 1BY	1BR 1BM 1BH 1BC 1AX 1AS 1AN 1AI	1AD 1Y 1T 1O 1J 1E 1A
1EF 1EB 1DX 1DT 1DP 1DL 1DH	1DB 1CX 1CT 1CP 1CL 1CH 1CD 1BZ	1BS 1BN 1BI 1BD 1AY 1AT 1AO 1AJ	1AE 1Z 1U 1P 1K 1F 1B
		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	1BU 1BP 1BK 1BF 1BA 1AV 1AQ 1AL	1AG 1AB 1W 1R 1M 1H 1D
1EJ 1EH 1ED 1DZ 1DV 1DR 1DN 1DJ	1DF 1DD 1CZ 1CV 1CR 1CN 1CJ 1CF 1CB 1BX	1BV 1BQ 1BL 1BG 1BB 1AW 1AR 1AM	1AH 1AC 1X 1S 1N 1I

## Diagnostic Procedure

STEP	INSPECTION		ACTION
1	<b>VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED</b> <ul style="list-style-type: none"> <li>Has the FREEZE FRAME DATA (Mode 2)/ snapshot data been recorded?</li> </ul>	Yes No	Go to the next step. Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.

STEP	INSPECTION		ACTION
2	<b>VERIFY RELATED SERVICE INFORMATION AVAILABILITY</b> <ul style="list-style-type: none"> <li>• Verify related Service Information availability.</li> <li>• Is any related Service Information available?</li> </ul>	Yes	Perform repair or diagnosis according to the available Service Information.
		No	Go to the next step.
3	<b>INSPECT KS CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Switch the ignition to off.</li> <li>• Disconnect the KS connector.</li> <li>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).</li> <li>• Is there any malfunction?</li> </ul>	Yes	Repair or replace the connector and/or terminals, then go to Step 9.
		No	Go to the next step.
4	<b>INSPECT KS</b> <ul style="list-style-type: none"> <li>• Inspect the KS.</li> <li>(See KNOCK SENSOR (KS) INSPECTION [SKYACTIV-G 2.0].)</li> <li>• Is there any malfunction?</li> </ul>	Yes	Replace the KS, then go to Step 9. (See KNOCK SENSOR (KS) REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
5	<b>INSPECT KS CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>• Verify that the KS connector is disconnected.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— KS terminal A</li> <li>— KS terminal B</li> </ul> </li> <li>• Is there continuity?</li> </ul>	Yes	If the short to ground circuit could be detected in the wiring harness: <ul style="list-style-type: none"> <li>• Repair or replace the wiring harness for a possible short to ground.</li> </ul> If the short to ground circuit could not be detected in the wiring harness: <ul style="list-style-type: none"> <li>• Replace the PCM (short to ground in the PCM internal circuit). (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)</li> </ul> Go to Step 9.
		No	Go to the next step.
6	<b>INSPECT PCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the PCM connector.</li> <li>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).</li> <li>• Is there any malfunction?</li> </ul>	Yes	Repair or replace the connector and/or terminals, then go to Step 9.
		No	Go to the next step.
7	<b>INSPECT KS CIRCUITS FOR SHORT TO EACH OTHER</b> <ul style="list-style-type: none"> <li>• Verify that the KS and PCM connectors are disconnected.</li> <li>• Inspect for continuity between KS terminals A and B (wiring harness-side).</li> <li>• Is there continuity?</li> </ul>	Yes	Repair or replace the wiring harness for a possible short to each other, then go to Step 9.
		No	Go to the next step.
8	<b>INSPECT KS CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>• Verify that the KS and PCM connectors are disconnected.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— KS terminal A—PCM terminal 1H</li> <li>— KS terminal B—PCM terminal 1D</li> </ul> </li> <li>• Is there continuity?</li> </ul>	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.
9	<b>VERIFY DTC TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>• Make sure to reconnect all disconnected connectors.</li> <li>• Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].)</li> <li>• Start the engine.</li> <li>• Perform the KOEO or KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G 2.0].)</li> <li>• Is the same DTC present?</li> </ul>	Yes	Repeat the inspection from Step 1. <ul style="list-style-type: none"> <li>• If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)</li> </ul> Go to the next step.
		No	Go to the next step.

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STEP	INSPECTION		ACTION
10	<b>VERIFY AFTER REPAIR PROCEDURE</b> • 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.