

# DTC P2127:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

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<b>DTC P2127:00</b>	<b>APP sensor No.2 circuit low input</b>
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>The PCM monitors the input voltage from APP sensor No.2 when the engine is running. If the input voltage at the PCM terminal 2AS is <b>less than 0.1 V</b>, the PCM determines that the APP sensor No.2 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>DTC is stored in the PCM memory.</li> </ul>
<b>FAIL-SAFE FUNCTION</b>	<ul style="list-style-type: none"> <li>Regulates the upper limit of the APP sensor output.</li> </ul>
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"> <li>APP sensor connector or terminals malfunction</li> <li>Short to ground in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>APP sensor terminal F—PCM terminal 2AW</li> <li>APP sensor terminal E—PCM terminal 2AS</li> </ul> </li> <li>PCM connector or terminals malfunction</li> <li>APP sensor No.2 signal circuit and ground circuit are shorted to each other</li> <li>Open circuit in wiring harness between the following terminals: <ul style="list-style-type: none"> <li>APP sensor terminal F—PCM terminal 2AW</li> <li>APP sensor terminal E—PCM terminal 2AS</li> </ul> </li> <li>APP sensor No.2 malfunction</li> <li>PCM malfunction</li> </ul>

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APP SENSOR NO.2  
(APP SENSOR)

APP SENSOR  
WIRING HARNESS-SIDE  
CONNECTOR

PCM  
WIRING HARNESS-SIDE CONNECTOR

## 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 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	<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. • If the vehicle is not repaired, go to the next step. No Go to the next step.

STEP	INSPECTION		ACTION
3	<b>INSPECT APP SENSOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Switch the ignition off.</li> <li>• Disconnect the APP sensor 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 APP SENSOR NO.2 CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>• Verify that the APP sensor 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>— APP sensor terminal F</li> <li>— APP sensor terminal E</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, SKYACTIV-G 2.5].)</li> </ul> Go to Step 9.
		No	Go to the next step.
5	<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.
6	<b>INSPECT APP SENSOR NO.2 SIGNAL CIRCUIT AND GROUND CIRCUIT FOR SHORT TO EACH OTHER</b> <ul style="list-style-type: none"> <li>• Verify that the APP sensor and PCM connectors are disconnected.</li> <li>• Inspect for continuity between APP sensor terminals E and D (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.
7	<b>INSPECT APP SENSOR NO.2 CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>• Verify that the APP sensor and PCM connectors are disconnected.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— APP sensor terminal F—PCM terminal 2AW</li> <li>— APP sensor terminal E—PCM terminal 2AS</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 Step 9.
8	<b>INSPECT APP SENSOR NO.2</b> <ul style="list-style-type: none"> <li>• Reconnect all disconnected connectors.</li> <li>• Inspect the APP sensor No.2. (See ACCELERATOR PEDAL POSITION (APP) SENSOR INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>• Is there any malfunction?</li> </ul>	Yes	Replace the accelerator pedal, then go to the next step. (See ACCELERATOR PEDAL REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.
9	<b>VERIFY DTC TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>• Always 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, SKYACTIV-G 2.5].)</li> <li>• Start the engine.</li> <li>• Perform the KOEO or KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</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, SKYACTIV-G 2.5].)</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, 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.