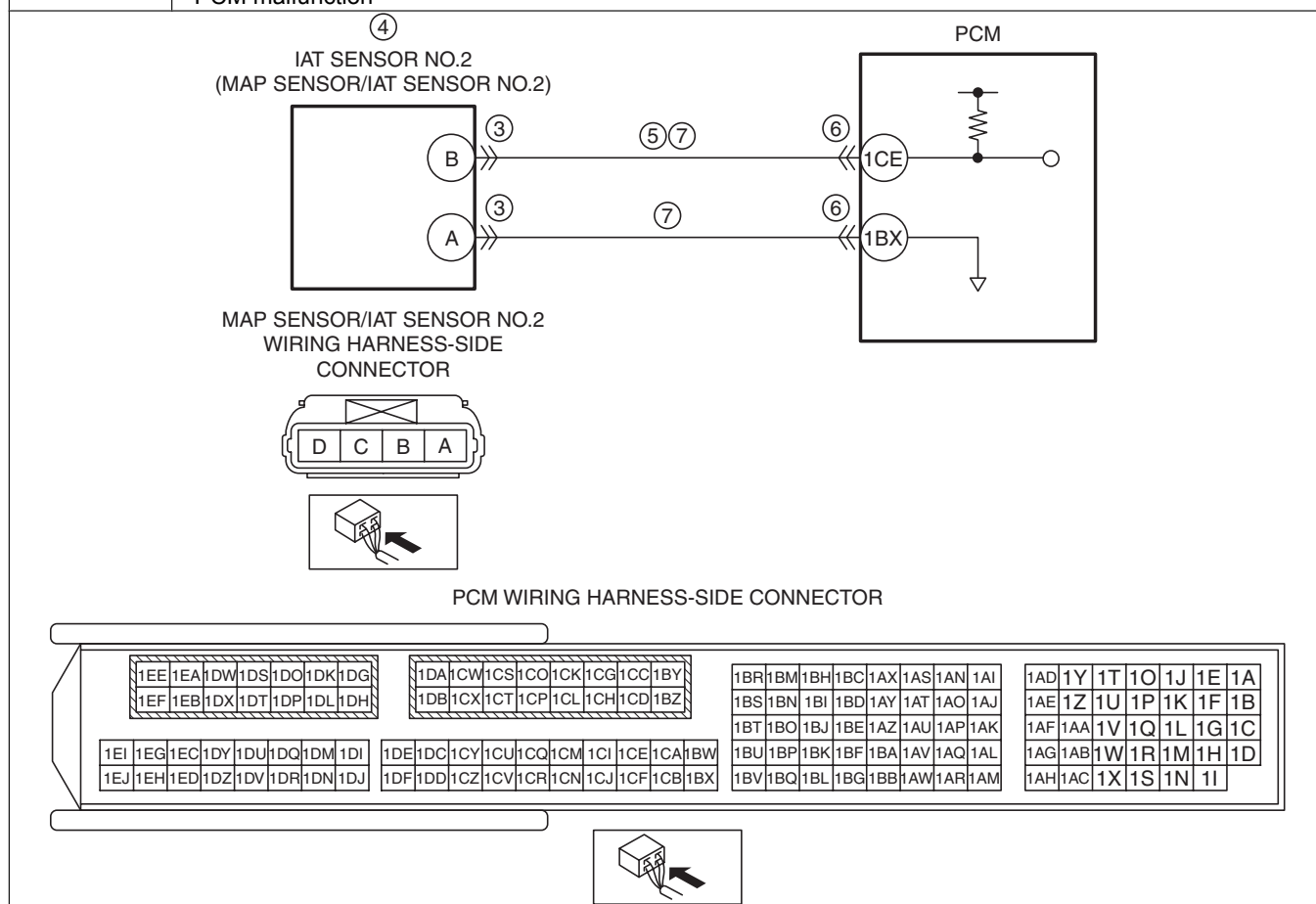


# DTC P0097:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

id0102h4146400

<b>DTC P0097:00</b>	<b>IAT sensor No.2 circuit low input</b>
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>If the PCM detects that the IAT sensor No.2 voltage at the PCM terminal 1CE is <b>0.33 V or less</b> for <b>5 s</b>, the PCM determines that the IAT sensor No.2 circuit voltage is low.</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>	Not applicable
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"> <li>MAP sensor/IAT sensor No.2 connector or terminals malfunction</li> <li>IAT sensor No.2 malfunction</li> <li>Short to ground in wiring harness between MAP sensor/IAT sensor No.2 terminal B and PCM terminal 1CE</li> <li>PCM connector or terminals malfunction</li> <li>IAT sensor No.2 signal circuit and ground circuit are shorted to each other</li> <li>PCM malfunction</li> </ul>



## Diagnostic Procedure

STEP	INSPECTION		ACTION
1	<b>VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED</b>	Yes	Go to the next step.
	• Has the FREEZE FRAME DATA (Mode 2)/ snapshot data been recorded?	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>	Yes	Perform repair or diagnosis according to the available Service Information.
	• Verify related Service Information availability. • Is any related Service Information available?	No	Go to the next step.

STEP	INSPECTION		ACTION
3	<b>INSPECT MAP SENSOR/IAT SENSOR NO.2 CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Switch the ignition off.</li> <li>Disconnect the MAP sensor/IAT sensor No.2 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 8.
		No	Go to the next step.
4	<b>INSPECT IAT SENSOR NO.2</b> <ul style="list-style-type: none"> <li>Inspect the IAT sensor No.2. (See INTAKE AIR TEMPERATURE (IAT) SENSOR INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>Is there any malfunction?</li> </ul>	Yes	Replace the MAP sensor/IAT sensor No.2, then go to Step 8. (See MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR/INTAKE AIR TEMPERATURE (IAT) SENSOR NO.2 REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.
5	<b>INSPECT IAT SENSOR NO.2 SIGNAL CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Verify that the MAP sensor/IAT sensor No.2 connector is disconnected.</li> <li>Inspect for continuity between MAP sensor/IAT sensor No.2 terminal B (wiring harness-side) and body ground.</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 8.
		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 8.
		No	Go to the next step.
7	<b>INSPECT IAT SENSOR NO.2 SIGNAL CIRCUIT AND GROUND CIRCUIT FOR SHORT TO EACH OTHER</b> <ul style="list-style-type: none"> <li>Verify that the MAP sensor/IAT sensor No.2 and PCM connectors are disconnected.</li> <li>Inspect for continuity between MAP sensor/IAT sensor No.2 terminals B and A (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 the next step.
		No	Go to the next step.
8	<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>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.
9	<b>VERIFY AFTER REPAIR PROCEDURE</b> <ul style="list-style-type: none"> <li>Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>Are any DTCs present?</li> </ul>	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	DTC troubleshooting completed.