

<b>DTC P0134:00</b>	<b>A/F sensor circuit problem</b>
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>If the PCM detects the A/F sensor voltage is <b>below 0.10 V</b> for <b>5 s</b> with the following condition met, the PCM determines that the A/F sensor circuit has problem.</li> </ul> <p><b>MONITORING CONDITIONS</b></p> <ul style="list-style-type: none"> <li>A/F sensor terminal A voltage: <b>4.7 V or more</b></li> <li>A/F sensor terminal B voltage: <b>1.8 V or less</b></li> <li>Battery voltage: <b>11—16 V</b></li> </ul> <p><b>Diagnostic support note</b></p> <ul style="list-style-type: none"> <li>This is an intermittent monitor (A/F sensor).</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>PCM restricts engine torque.</li> <li>Inhibits the EGR control.</li> <li>Inhibits the diesel particulate filter regeneration control.</li> <li>Inhibits engine-stop by operating the i-stop function.</li> </ul>
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"> <li>A/F sensor connector or terminals malfunction</li> <li>Short to ground in wiring harness between A/F sensor terminal A and PCM terminal 1H</li> <li>PCM connector or terminals malfunction</li> <li>Open circuit in wiring harness between A/F sensor terminal A and PCM terminal 1H</li> <li>A/F sensor malfunction               <ul style="list-style-type: none"> <li>A/F sensor deterioration</li> </ul> </li> <li>PCM malfunction</li> </ul>
<div style="text-align: center;"> <p>A/F SENSOR</p> <p>A/F SENSOR WIRING HARNESS-SIDE CONNECTOR</p> <p>PCM WIRING HARNESS-SIDE CONNECTOR</p> </div>	

## 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>Perform the Freeze Frame PID Data Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].)</li> <li>Is the DTC P0134:00 on FREEZE FRAME DATA (Mode 2)?</li> </ul>	Yes	Go to the next step.
		No	Go to the troubleshooting procedure for DTC on FREEZE FRAME DATA (Mode 2). (See DTC TABLE [SKYACTIV-D 2.2].)
2	<b>VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA AND DIAGNOSTIC MONITORING TEST RESULTS HAVE BEEN RECORDED</b> <ul style="list-style-type: none"> <li>Have the FREEZE FRAME DATA (Mode 2)/ snapshot data and DIAGNOSTIC MONITORING TEST RESULTS (A/F sensor related) been recorded?</li> </ul>	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode 2)/snapshot data and DIAGNOSTIC MONITORING TEST RESULTS on the repair order, then go to the next step.
3	<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.
4	<b>VERIFY RELATED PENDING CODE AND/OR DTC</b> <ul style="list-style-type: none"> <li>Switch the ignition off, then ON (engine off).</li> <li>Perform the Pending Trouble Code Access Procedure and DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].)</li> <li>Are any other PENDING CODEs and/or DTCs present?</li> </ul>	Yes	Go to the applicable PENDING CODE or DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)
		No	Go to the next step.
5	<b>INSPECT A/F SENSOR CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Switch the ignition off.</li> <li>Disconnect the A/F 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 10.
		No	Go to the next step.
6	<b>INSPECT A/F SENSOR CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Verify that the A/F sensor connector is disconnected.</li> <li>Inspect for continuity between A/F sensor terminal A (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: • 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-D 2.2].) Go to Step 10.
		No	Go to the next step.
7	<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 10.
		No	Go to the next step.
8	<b>INSPECT A/F SENSOR CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Verify that the A/F sensor and PCM connectors are disconnected.</li> <li>Inspect for continuity between A/F sensor terminal A (wiring harness-side) and PCM terminal 1H (wiring harness-side).</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 10.

STEP	INSPECTION	ACTION	
9	<b>INSPECT A/F SENSOR</b> <ul style="list-style-type: none"> <li>• Reconnect all disconnected connectors.</li> <li>• Inspect the A/F sensor. (See AIR FUEL RATIO (A/F) SENSOR INSPECTION [SKYACTIV-D 2.2].)</li> <li>• Is there any malfunction?</li> </ul>	Yes	Replace the A/F sensor, then go to the next step. (See AIR FUEL RATIO (A/F) SENSOR REMOVAL/ INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.
10	<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-D 2.2].)</li> <li>• Start the engine and wait for <b>40 s</b>.</li> <li>• Perform the KOEO or KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-D 2.2].)</li> <li>• Is the same DTC present?</li> </ul>	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) Go to the next step.
		No	Go to the next step.
11	<b>VERIFY AFTER REPAIR PROCEDURE</b> <ul style="list-style-type: none"> <li>• Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].)</li> <li>• Are any DTCs present?</li> </ul>	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)
		No	DTC troubleshooting completed.