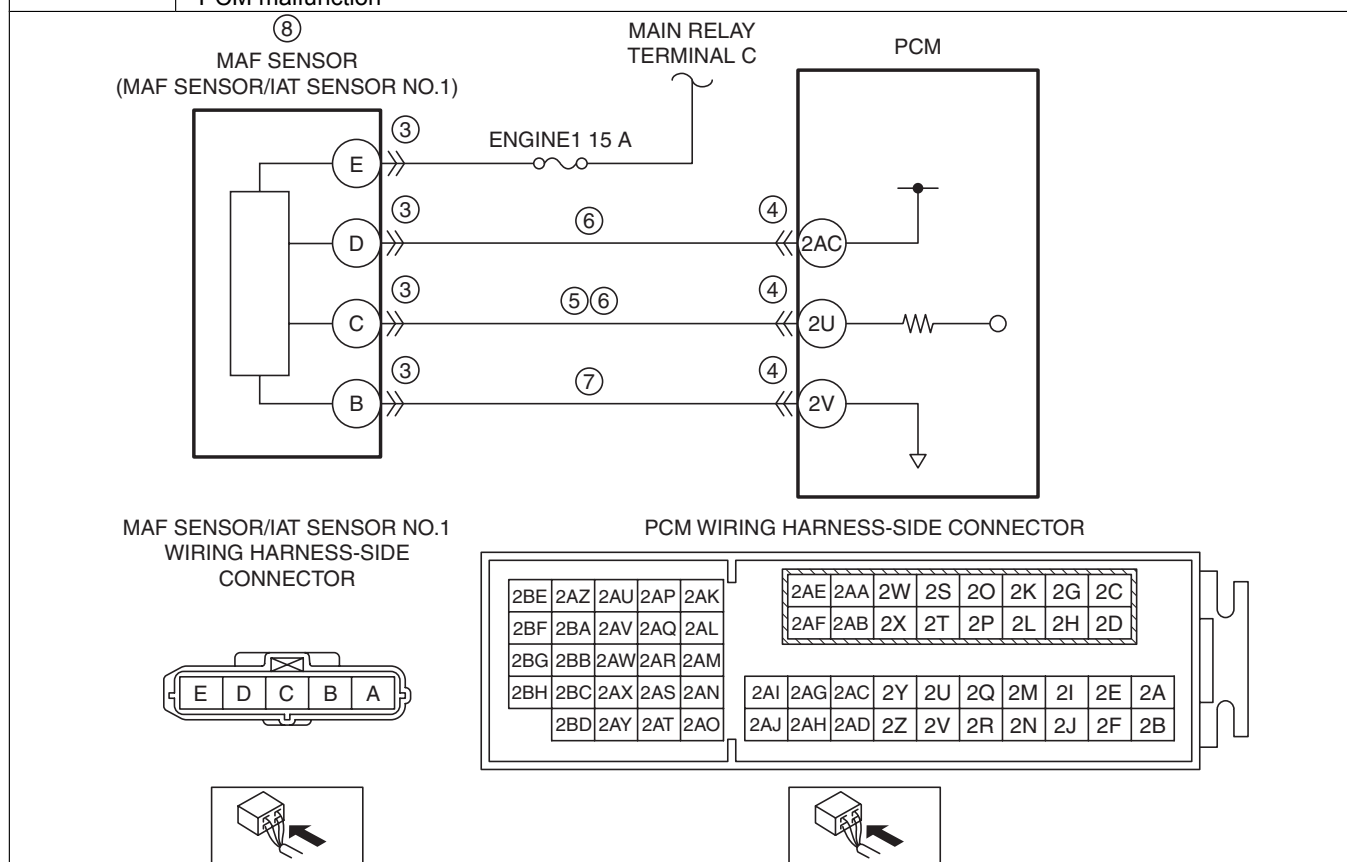


DTC P0103:00	MAF sensor circuit high input
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>The PCM monitors the input voltage from the MAF sensor when the engine is running. If the input voltage at the PCM terminal 2U is <b>above 4.70 V</b> for <b>5 s</b>, the PCM determines that the MAF sensor circuit has a malfunction.</li> </ul> <p><b>MONITORING CONDITIONS</b></p> <ul style="list-style-type: none"> <li>Battery voltage: <b>8—20 V</b></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>PCM restricts engine torque.</li> <li>Inhibits the EGR control.</li> <li>Inhibits the diesel particulate filter regeneration control.</li> <li>The fast idle up correction for the idle speed control is inhibited.</li> <li>Inhibits engine-stop by operating the i-stop function.</li> <li>PCM restricts engine-transaxle integration control.</li> </ul>
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"> <li>Intake airflow amount is large</li> <li>MAF sensor/IAT sensor No.1 connector or terminals malfunction</li> <li>PCM connector or terminals malfunction</li> <li>Short to power supply in wiring harness between MAF sensor/IAT sensor No.1 terminal C and PCM terminal 2U</li> <li>MAF sensor power supply circuit and signal circuit are shorted to each other</li> <li>Open circuit in wiring harness between MAF sensor/IAT sensor No.1 terminal B and PCM terminal 2V</li> <li>MAF sensor malfunction</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> <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.
3	<b>INSPECT MAF SENSOR/IAT SENSOR NO.1 CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Switch the ignition off.</li> <li>Disconnect the MAF sensor/IAT sensor No.1 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 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.
5	<b>INSPECT MAF SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Verify that the MAF sensor/IAT sensor No.1 and PCM connectors are disconnected.</li> <li>Switch the ignition ON (engine off).</li> <li>Measure the voltage at the MAF sensor/IAT sensor No.1 terminal C (wiring harness-side).</li> <li>Is the voltage 0 V?</li> </ul>	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.
6	<b>INSPECT MAF SENSOR POWER SUPPLY CIRCUIT AND SIGNAL CIRCUIT FOR SHORT TO EACH OTHER</b> <ul style="list-style-type: none"> <li>Verify that the MAF sensor/IAT sensor No.1 and PCM connectors are disconnected.</li> <li>Switch the ignition off.</li> <li>Inspect for continuity between MAF sensor/IAT sensor No.1 terminals D and C (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 MAF SENSOR GROUND CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Verify that the MAF sensor/IAT sensor No.1 and PCM connectors are disconnected.</li> <li>Inspect for continuity between MAF sensor/IAT sensor No.1 terminal B (wiring harness-side) and PCM terminal 2V (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 9.
8	<b>INSPECT MAF SENSOR</b> <ul style="list-style-type: none"> <li>Reconnect all disconnected connectors.</li> <li>Inspect the MAF sensor. (See MASS AIR FLOW (MAF) SENSOR INSPECTION [SKYACTIV-D 2.2].)</li> <li>Is there any malfunction?</li> </ul>	Yes	Replace the MAF sensor/IAT sensor No.1, then go to the next step. (See MASS AIR FLOW (MAF) SENSOR/INTAKE AIR TEMPERATURE (IAT) SENSOR NO.1 REMOVAL/ INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.

STEP	INSPECTION	ACTION	
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-D 2.2].)</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.
10	<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.