

# DTC P151B:00 [SKYACTIV-G 2.0]

id0102h1889300

<b>DTC P151B:00</b>	<b>IAC system problem</b>
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>The PCM cannot control the idle speed toward the target idle speed during the KOER self test.</li> </ul> <b>Diagnostic support note</b> <ul style="list-style-type: none"> <li>The check engine light does not illuminate.</li> <li>FREEZE FRAME DATA (Mode 2)/Snapshot data is not available.</li> <li>The DTC is stored in the PCM memory.</li> </ul>
<b>FAIL-SAFE FUNCTION</b>	—
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"> <li>A/C magnetic clutch malfunction</li> <li>Drive-by-wire control system related sensor malfunction               <ul style="list-style-type: none"> <li>TP sensor malfunction</li> </ul> </li> <li>Purge solenoid valve malfunction</li> <li>Air cleaner element restricted</li> <li>Throttle body passage blockage</li> <li>Engine malfunction               <ul style="list-style-type: none"> <li>Insufficient engine compression (over capacity of blow-by gas)</li> <li>Poor quality fuel</li> </ul> </li> <li>Generator malfunction</li> <li>PCM malfunction</li> </ul>
<b>SYSTEM WIRING DIAGRAM</b>	—

## Diagnostic Procedure

STEP	INSPECTION		ACTION
1	<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.
2	<b>VERIFY RELATED PENDING CODE AND/OR DTC</b> <ul style="list-style-type: none"> <li>Switch the ignition to off, then to ON (engine off).</li> <li>Perform the Pending Trouble Code Access Procedure and DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].)</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-G 2.0].)
		No	Go to the next step.
3	<b>INSPECT A/C MAGNETIC CLUTCH OPERATION</b> <ul style="list-style-type: none"> <li>Turn the fan switch off.</li> <li>Is the magnetic clutch still on?</li> </ul>	Yes	Perform the symptom troubleshooting “NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY”. (See NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY [SKYACTIV-G 2.0].)
		No	Go to the next step.
4	<b>INSPECT DRIVE-BY-WIRE CONTROL SYSTEM MALFUNCTION</b> <ul style="list-style-type: none"> <li>Inspect the TP sensor. (See THROTTLE POSITION (TP) SENSOR INSPECTION [SKYACTIV-G 2.0].)</li> <li>Is there any malfunction?</li> </ul>	Yes	Replace the throttle body, then go to Step 10. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
5	<b>INSPECT PURGE SOLENOID VALVE</b> <ul style="list-style-type: none"> <li>Inspect the purge solenoid valve. (See PURGE SOLENOID VALVE INSPECTION [SKYACTIV-G 2.0].)</li> <li>Is there any malfunction?</li> </ul>	Yes	Replace the purge solenoid valve, then go to Step 10. (See PURGE SOLENOID VALVE REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
6	<b>INSPECT AIR CLEANER ELEMENT</b> <ul style="list-style-type: none"> <li>Remove the air cleaner element with the engine is running.</li> <li>Does the engine speed increase?</li> </ul>	Yes	Clean or replace the air cleaner element, then go to Step 10.
		No	Go to the next step.

STEP	INSPECTION		ACTION
7	<b>INSPECT THROTTLE BODY PASSAGE</b> <ul style="list-style-type: none"> <li>Visually inspect the throttle body passage.</li> <li>Is the throttle body passage dirty and/or restricted?</li> </ul>	Yes	Clean or replace the throttle body passage, then go to Step 10. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
8	<b>INSPECT ENGINE COMPRESSION</b> <ul style="list-style-type: none"> <li>Inspect the engine compression. (See COMPRESSION INSPECTION [SKYACTIV-G 2.0].)</li> <li>Are compression pressures within specification? <b>Specification:</b> <ul style="list-style-type: none"> <li>Compression [European (L.H.D. U.K.) specs.] <ul style="list-style-type: none"> <li>Standard: <b>978 kPa {9.97 kgf/cm<sup>2</sup>, 142 psi} (300 rpm)</b></li> <li>Minimum: <b>783 kPa {7.98 kgf/cm<sup>2</sup>, 114 psi} (300 rpm)</b></li> <li>Maximum difference between cylinders: <b>166 kPa {1.69 kgf/cm<sup>2</sup>, 24.1 psi}</b></li> </ul> </li> <li>Compression [Except European (L.H.D. U.K.) specs.] <ul style="list-style-type: none"> <li>Standard: <b>885 kPa {9.02 kgf/cm<sup>2</sup>, 128 psi} (300 rpm)</b></li> <li>Minimum: <b>708 kPa {7.22 kgf/cm<sup>2</sup>, 103 psi} (300 rpm)</b></li> <li>Maximum difference between cylinders: <b>150 kPa {1.53 kgf/cm<sup>2</sup>, 21.8 psi}</b></li> </ul> </li> </ul> </li> <li><b>Note</b> <ul style="list-style-type: none"> <li>Because the SKYACTIV-G 2.0 retards the intake valve closing timing, compression pressure is low.</li> </ul> </li> </ul>	Yes	Go to the next step.
		No	Overhaul the engine for repairs, then go to Step 10.
9	<b>INSPECT GENERATOR</b> <ul style="list-style-type: none"> <li>Inspect the generator. (See GENERATOR INSPECTION [SKYACTIV-G 2.0].)</li> <li>Is there any malfunction?</li> </ul>	Yes	Repair or replace the malfunctioning part according to the inspection results, then go to the next step. (See GENERATOR DISASSEMBLY/ASSEMBLY [SKYACTIV-G 2.0].) (See GENERATOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
10	<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>Perform the 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.
11	<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].)</li> <li>Are any DTCs present?</li> </ul>	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No	DTC troubleshooting completed.