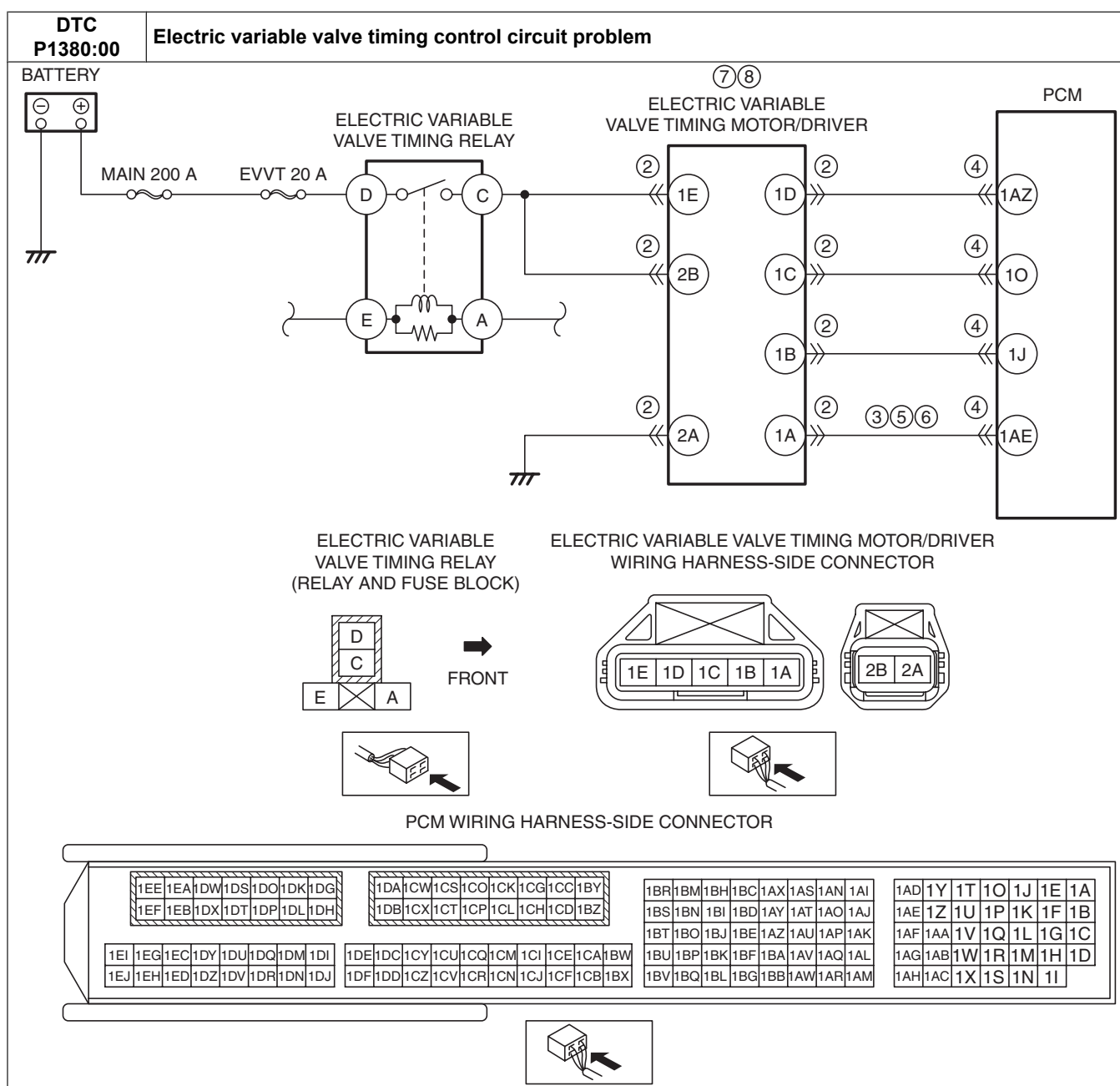


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**DTC P1380:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]**

id0102h4009700

<b>DTC P1380:00</b>	<b>Electric variable valve timing control circuit problem</b>
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"><li>• A malfunction is detected in the results of the on-board diagnostic test received from the electric variable valve timing driver.</li></ul> <b>Diagnostic support note</b> <ul style="list-style-type: none"><li>• This is a continuous monitor (CCM).</li><li>• The check engine light does not illuminate.</li><li>• FREEZE FRAME DATA (Mode 2)/Snapshot data is not available.</li><li>• DTC is stored in the PCM memory.</li></ul>
<b>FAIL-SAFE FUNCTION</b>	<ul style="list-style-type: none"><li>• Stops activation of the electric variable valve timing driver.</li></ul>
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"><li>• Electric variable valve timing motor/driver connectors or terminals malfunction</li><li>• Short to ground in wiring harness between electric variable valve timing motor/driver terminal 1A and PCM terminal 1AE</li><li>• PCM connector or terminals malfunction</li><li>• Short to power supply in wiring harness between electric variable valve timing motor/driver terminal 1A and PCM terminal 1AE</li><li>• Open circuit in wiring harness between electric variable valve timing motor/driver terminal 1A and PCM terminal 1AE</li><li>• Electric variable valve timing driver malfunction</li><li>• Electric variable valve timing motor malfunction</li><li>• PCM malfunction</li></ul>



## 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>INSPECT ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Switch the ignition off.</li> <li>Disconnect the electric variable valve timing motor/driver 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.

STEP	INSPECTION		ACTION
3	<b>INSPECT ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER SIGNAL CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>• Verify that the electric variable valve timing motor/driver connector is disconnected.</li> <li>• Inspect for continuity between electric variable valve timing motor/driver terminal 1A (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 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 ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Verify that the electric variable valve timing motor/driver and PCM connectors are disconnected.</li> <li>• Switch the ignition ON (engine off).</li> <li>• Measure the voltage at the electric variable valve timing motor/driver terminal 1A (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 ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER SIGNAL CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>• Verify that the electric variable valve timing motor/driver and PCM connectors are disconnected.</li> <li>• Switch the ignition off.</li> <li>• Inspect for continuity between electric variable valve timing motor/driver terminal 1A (wiring harness-side) and PCM terminal 1AE (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.
7	<b>INSPECT ELECTRIC VARIABLE VALVE TIMING DRIVER</b> <ul style="list-style-type: none"> <li>• Inspect the electric variable valve timing driver. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>• Is there any malfunction?</li> </ul>	Yes	Replace the electric variable valve timing motor/driver, then go to Step 9. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.
8	<b>INSPECT ELECTRIC VARIABLE VALVE TIMING MOTOR</b> <ul style="list-style-type: none"> <li>• Inspect the electric variable valve timing motor. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>• Is there any malfunction?</li> </ul>	Yes	Replace the electric variable valve timing motor/driver, then go to the next step. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER 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>• Perform the 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.

STEP	INSPECTION	ACTION
10	<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.