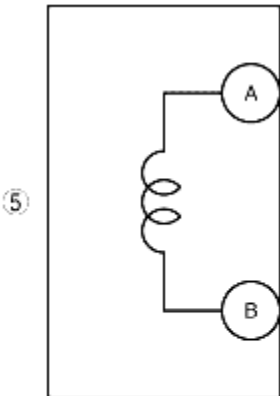


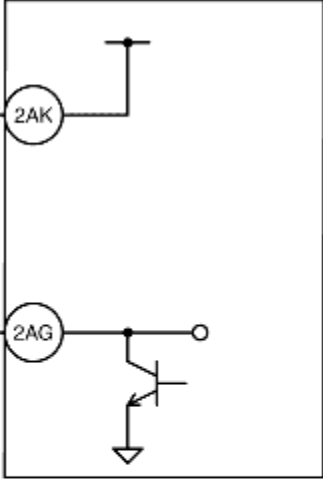
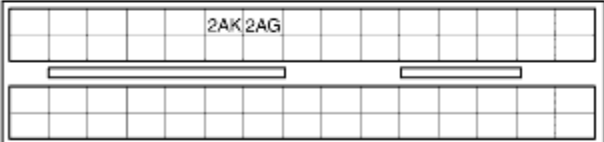



## DTC P2088 [ZJ, Z6]

B3E010202000W08

DTC P2088	Variable valve timing control circuit low
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>If the PCM detects that the OCV drive current is less than the specification* when the OCV control duty target is <b>approx. 100 %</b>, the PCM determines that the variable valve timing control circuit low.</li> <li>*: Detected specification value depends on the battery voltage.</li> <li><b>Diagnostic support note</b></li> <li>This is a continuous monitor (CCM).</li> <li>The MIL illuminates if the PCM detects the above malfunction condition in the first drive cycle.</li> <li>PENDING CODE is available if the PCM detects the above malfunction condition.</li> <li>FREEZE FRAME DATA is available.</li> <li>The DTC is stored in the PCM memory.</li> </ul>
<b>POSSIBLE CAUSE</b>	<ul style="list-style-type: none"> <li>OCV malfunction</li> <li>Connector or terminal malfunction</li> <li>Open circuit in wiring harness between OCV terminal A and PCM terminal 2AK</li> <li>Short to GND in wiring harness between OCV terminal A and PCM terminal 2AK</li> <li>Open circuit in wiring harness between OCV terminal B and PCM terminal 2AG</li> <li>Short to GND in wiring harness between OCV terminal B and PCM terminal 2AG</li> <li>PCM malfunction</li> </ul>
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>OCV</p>  <p>OCV WIRING HARNESS-SIDE CONNECTOR</p>   </div> <div style="text-align: center;"> <p>PCM</p>  <p>PCM WIRING HARNESS-SIDE CONNECTOR</p>   </div> </div>	

### Diagnostic procedure

STEP	INSPECTION	ACTION
	VERIFY FREEZE FRAME DATA HAS BEEN	Yes Go to the next step.

1	<b>RECORDED</b> • Has FREEZE FRAME DATA been recorded?	No	Record the FREEZE FRAME DATA on the repair order, then go to the next step.
2	<b>VERIFY RELATED REPAIR INFORMATION AVAILABILITY</b> • Verify related service repair information availability. • Is any related repair information available?	Yes	Perform repair or diagnosis according to the available repair information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	<b>INSPECT OCV CONNECTOR FOR POOR CONNECTION</b> • Turn the ignition switch off. • Disconnect the OCV connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 8.
		No	Go to the next step.
4	<b>INSPECT OCV CIRCUIT FOR SHORT TO GND</b> • Turn the ignition switch off. • Inspect for continuity between the following circuits:  - OCV terminal A (wiring harness-side) and body GND - OCV terminal B (wiring harness-side) and body GND  • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 8.
		No	Go to the next step.
5	<b>INSPECT OCV</b> • Inspect the OCV. (See <a href="#">OIL CONTROL VALVE (OCV) INSPECTION [ZJ, Z6].</a> ) • Is there any malfunction?	Yes	Replace the OCV, then go to Step 8. (See <a href="#">OIL CONTROL VALVE (OCV) REMOVAL/INSTALLATION [ZJ, Z6].</a> )
		No	Go to the next step.
6	<b>INSPECT PCM CONNECTOR FOR POOR CONNECTION</b> • Turn the ignition switch off. • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 8.
		No	Go to the next step.
7	<b>INSPECT OCV CIRCUIT FOR OPEN CIRCUIT</b> • Turn the ignition switch off. • Inspect for continuity between the following circuits:  - OCV terminal A (wiring harness-side) and PCM terminal 2AK (wiring harness-side) - OCV terminal B (wiring harness-side) and PCM terminal 2AG (wiring harness-side)  • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.
8	<b>VERIFY TROUBLESHOOTING OF DTC P2088 COMPLETED</b> • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the WDS or equivalent. • Start the engine. • Is the same DTC present?	Yes	Replace the PCM, then go to the next step. (See <a href="#">PCM REMOVAL/INSTALLATION [ZJ, Z6].</a> )
		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 <a href="#">AFTER REPAIR PROCEDURE [ZJ, Z6]</a>.)</li><li>• Are any DTCs present?</li></ul>	Yes	Go to the applicable DTC inspection. (See <a href="#">DTC TABLE [ZJ, Z6]</a> .)
		No	DTC troubleshooting completed.