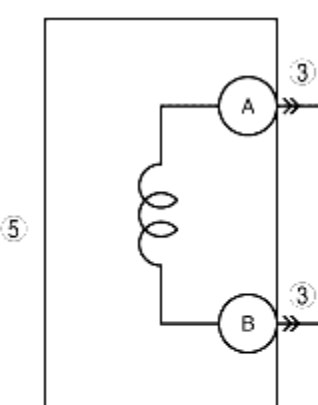


DTC P2089 [ZJ, Z6]



B3E010202000W09

DTC P2089	Variable valve timing control circuit high
DETECTION CONDITION	<ul style="list-style-type: none"> If the PCM detects that the OCV drive current is as specified or more when the OCV control duty target is 3 % or less, the PCM determines that the variable valve timing control circuit high. Diagnostic support note <ul style="list-style-type: none"> This is a continuous monitor (CCM). The MIL illuminates if the PCM detects the above malfunction condition in the first drive cycle. PENDING CODE is available if the PCM detects the above malfunction condition. FREEZE FRAME DATA is available. The DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> OCV circuit malfunction Connector or terminal malfunction Short to power supply in wiring harness between OCV terminal B and PCM terminal 2AG PCM malfunction

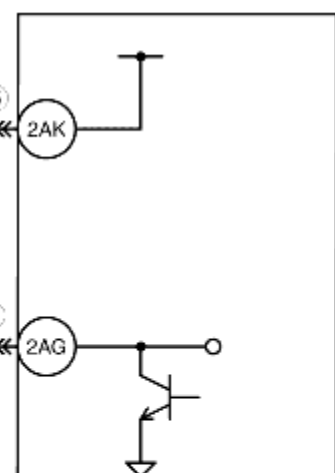
OCV



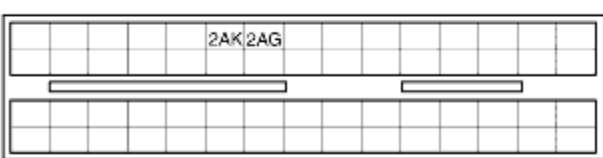

OCV
WIRING HARNESS-SIDE CONNECTOR

PCM



PCM
WIRING HARNESS-SIDE CONNECTOR

③ → ⑥

③ → ④ → ⑥

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED • Has FREEZE FRAME DATA been recorded?	Yes Go to the next step.
		No Record the FREEZE FRAME DATA on the repair order, then go to the next step.

2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY • 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	INSPECT OCV CONNECTOR FOR POOR CONNECTION • Turn the ignition switch off. • Disconnect the OCV connector. • Inspect for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 7.
		No	Go to the next step.
4	INSPECT OCV CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between OCV terminal B (wiring harness-side) and body GND. • Is the voltage B+ ?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 7.
		No	Go to the next step.
5	INSPECT OCV • Inspect the OCV. (See OIL CONTROL VALVE (OCV) INSPECTION [ZJ, Z6].) • Is there any malfunction?	Yes	Replace the OCV, then go to Step 7. (See OIL CONTROL VALVE (OCV) REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
6	INSPECT PCM CONNECTOR FOR POOR CONNECTION • Turn the ignition switch off. • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to the next step.
		No	Go to the next step.
7	VERIFY TROUBLESHOOTING OF DTC P2089 COMPLETED • 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 PCM REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
8	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [ZJ, Z6].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ZJ, Z6].)
		No	DTC troubleshooting completed.