

## DTC P0140 [ZJ, Z6]

B3E010200100W16

DTC P0140	Rear HO2S circuit no activity detected
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"> <li>The PCM monitors the input voltage from the rear HO2S when the following conditions are met. If the input voltage from the sensor never <b>exceeds 0.55 V</b> for <b>30.4 s</b>, the PCM determines that the sensor circuit is not activated.</li> </ul> <p><b>MONITORING CONDITIONS</b></p> <ul style="list-style-type: none"> <li>HO2S, HO2S heater and TWC repair verification drive mode</li> <li>Following conditions are met:             <ul style="list-style-type: none"> <li>Engine speed is <b>1,500 rpm or more</b>.</li> <li>Engine coolant temperature is <b>70 °C {158 °F} or more</b>.</li> <li>Within feed-back range</li> </ul> </li> </ul> <p><b>Diagnostic support note</b></p> <ul style="list-style-type: none"> <li>This is a continuous monitor (HO2S).</li> <li>The MIL illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM.</li> <li>PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle.</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>Rear HO2S deterioration</li> <li>Rear HO2S heater malfunction</li> <li>Leakage exhaust system</li> <li>Open circuit in wiring harness between rear HO2S terminal A and PCM terminal 2K</li> <li>Short to GND in wiring harness between rear HO2S terminal A and PCM terminal 2K</li> <li>Insufficient compression</li> <li>Engine malfunction</li> </ul>
	<p style="text-align: center;">REAR HO2S                      PCM</p> <p style="text-align: center;">REAR HO2S                      PCM</p> <p style="text-align: center;">WIRING HARNESS-SIDE CONNECTOR                      WIRING HARNESS-SIDE CONNECTOR</p>

### Diagnostic procedure

STEP	INSPECTION	ACTION	
1	<b>VERIFY FREEZE FRAME DATA HAS BEEN RECORDED</b> • 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	<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>VERIFY RELATED PENDING AND STORED DTC</b>  <b>Note</b>  • If fuel monitor DTC, DTC P0132 is retrieved, ignore it until P0140 is fixed.  • Turn the ignition switch off, then the ON position (Engine off). • Verify pending and stored DTCs using WDS or equivalent. • Is other DTC present?	Yes	Go to appropriate DTC troubleshooting procedures. (See <a href="#">DTC TABLE [ZJ, Z6]</a> .)
		No	Go to the next step.
4	<b>VERIFY CURRENT INPUT SIGNAL STATUS</b> • Warm up engine. • Access O2S12 PID using WDS or equivalent. • Verify PID while racing engine at least <b>10 times</b> (in NEUTRAL (MTX) or PARK (ATX)). • Is PID normal?  - <b>More than 0.55 V</b> at least once during engine racing	Yes	Go to step 7.
		No	Go to the next step.
5	<b>INSPECT INSTALLATION OF REAR HO2S</b> • Inspect if rear HO2S is loosely installed. • Is sensor installed securely?	Yes	Go to the next step.
		No	Install sensor securely, then go to Step 9. (See <a href="#">REAR HEATED OXYGEN SENSOR (HO2S) REMOVAL/INSTALLATION [ZJ, Z6]</a> .)
6	<b>INSPECT GAS LEAKAGE FROM EXHAUST SYSTEM</b> • Visually inspect if any gas leakage is found between exhaust pipe and rear HO2S. • Is there gas leakage?	Yes	Repair or replace any malfunctioning exhaust part, then go to Step 9.
		No	• Inspect the following wiring harnesses for open circuit or short to GND in wiring harness.  - Rear HO2S terminal A (wiring harness-side) to PCM terminal 2K (wiring harness-side) • Repair or replace wiring harness if necessary.  • If all items above are normal, replace the malfunctioning sensor. Then go to Step 9.
	<b>INSPECT SEALING OF ENGINE COOLANT PASSAGE</b>  <b>Warning</b>  • Removing radiator cap when radiator is hot is dangerous. Scalding coolant and steam may shoot out and cause serious injury.	Yes	Air gets in from poor sealing on head gasket or other areas between combustion chamber and engine coolant passage.

7	<ul style="list-style-type: none"> <li>• When removing radiator cap, wrap a thick cloth around and turn it slowly.</li> <li>• Remove radiator cap.</li> <li>• Implement procedure to bleed air from engine coolant, then run engine at idle.</li> <li>• Is there any small bubble, which makes engine coolant white at filling opening?</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Large bubbles are normal since they are remaining air coming out from engine coolant passage.</li> </ul>		Repair or replace the malfunctioning part, then go to Step 9.
		No	Go to the next step.
8	<b>INSPECT ENGINE COMPRESSION</b> <ul style="list-style-type: none"> <li>• Inspect engine compression. (See <a href="#">COMPRESSION INSPECTION [ZJ, Z6].</a>)</li> <li>• Is it normal?</li> </ul>	Yes	Go to the next step.
		No	Implement engine overhaul for repairs, then go to the next step.
9	<b>VERIFY TROUBLESHOOTING OF DTC P0140 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 WDS or equivalent.</li> <li>• Perform the "HO2S heater, HO2S, and TWC Repair Verification Drive Mode". (See <a href="#">OBD DRIVE MODE [ZJ, Z6].</a>)</li> <li>• Is the PENDING CODE for this DTC present?</li> </ul>	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.
10	<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.