

## DTC P2109

DTC P2109	TP sensor minimum stop range/performance problem
<b>DETECTION CONDITION</b>	<ul style="list-style-type: none"><li>• The PCM monitors the minimum TP when the closed TP learning is completed. If the TP is less than 11.5 % or more than 24.3 % , the PCM determines that there is a TP sensor minimum stop range/performance problem.</li></ul> <p><b>Diagnostic support note</b></p> <ul style="list-style-type: none"><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>• Drive-by-wire control system malfunction</li><li>• Throttle actuator malfunction</li><li>• Throttle valve malfunction</li><li>• PCM malfunction</li></ul>

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	<b>VERIFY FREEZE FRAME DATA HAS BEEN RECORDED</b> <ul style="list-style-type: none"> <li>Has FREEZE FRAME DATA been recorded?</li> </ul>	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> <ul style="list-style-type: none"> <li>Verify related Service Bulletins and/or on-line repair information availability.</li> <li>Is any related repair information available?</li> </ul>	Yes	Perform repair or diagnosis according to the available repair information. <ul style="list-style-type: none"> <li>If the vehicle is not repaired, go to the next step.</li> </ul>
		No	Go to the next step.
3	<b>INSPECT DRIVE-BY-WIRE CONTROL SYSTEM OPERATION</b> <ul style="list-style-type: none"> <li>Perform the "Drive-by-wire Control System Inspection".</li> </ul> (See Drive-by-wire Control System Inspection .) <ul style="list-style-type: none"> <li>Is there any malfunction ?</li> </ul>	Yes	Repair or replace the malfunctioning part according to the inspection results. Then go to the Step 6.
		No	Go to the next step.
4	<b>INSPECT THROTTLE ACTUATOR</b> <ul style="list-style-type: none"> <li>Inspect the throttle actuator.</li> </ul> (See Resistance Inspection .) <ul style="list-style-type: none"> <li>Is there any malfunction ?</li> </ul>	Yes	Replace the throttle body, then go to Step 6. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION .)
		No	Go to the next step.
5	<b>INSPECT THROTTLE VALVE</b> <ul style="list-style-type: none"> <li>Inspect the throttle valve.</li> </ul> (See Throttle Valve Inspection .) <ul style="list-style-type: none"> <li>Is there any malfunction ?</li> </ul>	Yes	Replace the throttle body, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION .)
		No	Go to the next step.
6	<b>VERIFY TROUBLESHOOTING OF DTC P2109 COMPLETED</b>	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION .)

	<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>• Start the engine.</li> <li>• Is the same DTC present?</li> </ul>	No	Go to the next step.
7	<b>VERIFY AFTER REPAIR PROCEDURE</b> <ul style="list-style-type: none"> <li>• Perform the "AFTER REPAIR PROCEDURE".</li> </ul> (See AFTER REPAIR PROCEDURE .)	Yes	Go to the applicable DTC inspection. (See DTC TABLE .)
		No	DTC troubleshooting completed.
	<ul style="list-style-type: none"> <li>• Are any DTCs present?</li> </ul>		