

# DTC P0120 THROTTLE POSITION SENSOR

VG33E

Diagnostic Procedure (Cont'd)

<b>10</b>	<b>CHECK THROTTLE POSITION SENSOR</b>								
<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Start engine and warm it up to normal operating temperature.</li> <li>2. Stop engine (ignition switch OFF).</li> <li>3. Remove the vacuum hose connected to the throttle opener (If so equipped).</li> <li>4. Connect suitable vacuum hose to the vacuum pump and the opener.</li> <li>5. Apply vacuum [more than -40.0kPa (-300mmHg, 11.81inHG)] until the throttle drum becomes free from the rod of the throttle opener.</li> </ol> <div style="text-align: center; margin: 10px 0;"> </div> <p style="text-align: right; margin-right: 50px;">SEF793W</p> <ol style="list-style-type: none"> <li>6. Turn ignition switch ON.</li> <li>7. Check voltage between ECM terminal 23 (Throttle position sensor signal) and ground.  <b>Voltage measurement must be made with throttle position sensor installed in vehicle.</b></li> </ol> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Throttle valve conditions</th> <th style="text-align: center;">Voltage</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Completely closed (a)</td> <td style="text-align: center;">0.15 - 0.85V</td> </tr> <tr> <td style="text-align: center;">Partially open</td> <td style="text-align: center;">Between (a) and (b)</td> </tr> <tr> <td style="text-align: center;">Completely open (b)</td> <td style="text-align: center;">3.5 - 4.7V</td> </tr> </tbody> </table> <p style="text-align: right; margin-right: 50px;">MTBL0231</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>		Throttle valve conditions	Voltage	Completely closed (a)	0.15 - 0.85V	Partially open	Between (a) and (b)	Completely open (b)	3.5 - 4.7V
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OK	<input type="checkbox"/> GO TO 12.								
NG	<input type="checkbox"/> GO TO 11.								

<b>11</b>	<b>ADJUST CLOSED THROTTLE POSITION SWITCH</b>										
<p>Adjust closed throttle position switch. Refer to "Basic Inspection", EC-669.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Items</th> <th style="text-align: center;">Specifications</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Ignition timing</td> <td style="text-align: center;">15° ± 2° BTDC</td> </tr> <tr> <td style="text-align: center;">Base idle speed</td> <td style="text-align: center;">700 ± 50 rpm (in "P" or "N" position)</td> </tr> <tr> <td style="text-align: center;">Closed throttle position switch idle position adjustment</td> <td style="text-align: center;">Feeler gauge thickness and switch condition 0.3 mm (0.012 in): ON 0.4 mm (0.016 in): OFF</td> </tr> <tr> <td style="text-align: center;">Target idle speed</td> <td style="text-align: center;">750 ± 50 rpm (in "P" or "N" position)</td> </tr> </tbody> </table> <p style="text-align: right; margin-right: 50px;">MTBL0226</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>		Items	Specifications	Ignition timing	15° ± 2° BTDC	Base idle speed	700 ± 50 rpm (in "P" or "N" position)	Closed throttle position switch idle position adjustment	Feeler gauge thickness and switch condition 0.3 mm (0.012 in): ON 0.4 mm (0.016 in): OFF	Target idle speed	750 ± 50 rpm (in "P" or "N" position)
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NG	<input type="checkbox"/> Replace throttle position sensor. To adjust it, perform "Basic Inspection", EC-669.										