The Acceleration Pedal Position (APP) sensor is mounted on the accelerator pedal assembly. The sensor is actually two individual APP sensors and one housing. This sensor works with the Throttle Position (TP) sensor to provide input to the Engine Control Module (ECM) regarding driver requested accelerator pedal and throttle angle at the throttle body.

**When the APP sensor is defected:**
When the APP 1 or APP 2 sensor is defected condition, the engine is still running at idle condition but, the accelerator pedal reaction is not response correctly and also, the engine rpm will be reacted to 4,000 rpm slowly. If the APP 1 sensor is out of order, the APP 2 sensor will be conducted with signal as a default signal but, the throttle valve opening is limited 60% and delayed opening speed.

**When the TP sensor or servo motor is defected:**
When the TP 1, 2 sensor or servomotor is defected condition, the throttle valve will be closed to the spring capsule by spring force, at this condition, the throttle valve will open 10° ~ 20° and engine rpm will be controlled by ECM will opening (On/Off) time of injector. The engine rpm will be maintaining 900 rpm (at idle) to 1,800 according to the engine load.
**Circuit Description**

The ECM supplies a 5 or 2.5 volt reference signal and a ground to the APP sensor 1 or 2. The ECM calculates on these signal lines. The APP sensor output changes as the accelerator pedal is moved. The output of the APP 1 and APP 2 sensor are low, about 0.4 ~ 0.7 volts and 0.2 ~ 0.35 volts respectively at the closed throttle position. As pushing the accelerator pedal, the output increases so that the output voltages will be about 4.3 ~ 4.8 volts and 2.1 ~ 2.4 volts individually when accelerating fully with the kick down, at Wide Open Throttle (WOT).
Acceleration Pedal Position Sensor 1 Inspection
1. Turn the ignition switch to “ON” position.
2. Measure the signal voltage between the ECM pin No. 47 and No. 31 while operating the accelerator pedal as following conditions.
   • Not depress the pedal (closed throttle position)
   • Fully depress the pedal (full throttle with kick down)

<table>
<thead>
<tr>
<th>Condition of Throttle Valve</th>
<th>Specified Value (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed Throttle Valve</td>
<td>0.3 ~ 0.7</td>
</tr>
<tr>
<td>Fully Depressed Throttle Valve</td>
<td>4.3 ~ 4.8</td>
</tr>
</tbody>
</table>

**Notice**: If measured value is not within the specified value, check the pedal valve sensor and the supply voltage to APP 1 sensor.

Acceleration Pedal Position Sensor 2 Inspection
1. Turn the ignition switch to “ON” position.
2. Measure the signal voltage between the ECM pin No. 48 and No. 50 while operating the accelerator pedal as following conditions.
   • Not depress the pedal (closed throttle position)
   • Fully depress the pedal (full throttle with kick down)

<table>
<thead>
<tr>
<th>Condition of Throttle Valve</th>
<th>Specified Value (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed Throttle Valve</td>
<td>0.1 ~ 0.4</td>
</tr>
<tr>
<td>Fully Depressed Throttle Valve</td>
<td>2.1 ~ 2.5</td>
</tr>
</tbody>
</table>

**Notice**: If measured value is not within the specified value, check the pedal valve sensor and the supply voltage to APP sensor 2.