

## Accelerator Pedal Position Sensor Range/Performance Monitor Description

### MONITOR SUMMARY

#### Contact type

The accelerator pedal position sensor is equipped with 2 measuring elements: one is for engine control (VPA1) and the other is for malfunction detection in the sensor itself (VPA2). These elements vary their resistance according to how much the accelerator pedal is depressed. The ECM applies a regulated reference voltage to the throttle position sensor “+” terminal and calculates the angle of the throttle valve based on the voltages present at the throttle position sensor “signal” terminals. When the amount of the accelerator pedal depression is small, the output voltages of these elements are low. When it is large, the output voltages are high.

The ECM compares the output voltages of these 2 elements. If the ECM detects that the difference between them is out of the specified range, the ECM will determine that the accelerator pedal position sensor is malfunctioning and set a DTC.

#### Non-contact type (Some 2003 and later models)

The accelerator pedal position sensor is equipped with 2 measuring elements: one is for engine control (VPA1) and the other is for malfunction detection (VPA2). Each portion of the accelerator position sensor contains a Hall-effect element and magnets. The magnets rotate with the movement of the accelerator pedal. As the magnets approach the Hall-effect element, the resistance of the element changes and the signal voltage returned to the ECM changes. When the amount of the accelerator pedal depression is small, the output voltages of these elements are low. When it is large, the output voltages are high.

The ECM compares the output voltages of these 2 elements. If the ECM detects that the difference between them is out of the specified range, the ECM will determine that the accelerator pedal position sensor is malfunctioning and set a DTC.

### RELATED DTC

#### Previous code:

|              |       |                                               |
|--------------|-------|-----------------------------------------------|
| Related DTCs | P1121 | Accelerator pedal position sensor malfunction |
|--------------|-------|-----------------------------------------------|

#### Extended code:

|              |       |                                               |
|--------------|-------|-----------------------------------------------|
| Related DTCs | P2121 | Accelerator pedal position sensor malfunction |
|--------------|-------|-----------------------------------------------|

### MODEL YEAR CHART

| Model Year | See Page              |
|------------|-----------------------|
| 1998       | <a href="#">Ce-62</a> |
| 1999       | <a href="#">Ce-63</a> |
| 2000       | <a href="#">Ce-64</a> |
| 2001       | <a href="#">Ce-65</a> |
| 2002       | <a href="#">Ce-66</a> |
| 2003       | <a href="#">Ce-67</a> |
| 2004       | <a href="#">Ce-68</a> |