

Throttle Position Sensor (2-Sensor Type)

Ce003-01

Throttle Position Sensor Monitor Description

MONITOR SUMMARY

Contact type

The throttle position sensor is equipped with 2 measuring elements: one is for engine control (VTA) and the other is for malfunction detection (VTA2). These elements vary their resistance according to how much the throttle valve is open. 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 throttle valve is near the fully closed position, the output voltages of these elements are low. When it is near the fully open position, the output voltages are high.

If the ECM detects that the output voltage of either element is out of the normal range, the ECM interprets this as a malfunction in the throttle position sensor and sets a DTC.

Non-contact type (some 2003 and later models)

The throttle position sensor is equipped with 2 measuring elements: one is for engine control (VTA) and the other is for malfunction detection (VTA2). Each of these elements contains a “Hall-effect” element and a magnet. The magnet rotates with the movement of the throttle shaft. As the magnet approaches the Hall-effect element, the resistance of the element changes and this changes the signal voltage detected by the ECM. The ECM detects how much the throttle valve is open, based on the voltage supplied from the Hall element. When the throttle valve is near the fully closed position, the output voltages of these elements are low. When it is near the fully open position, the output voltages are high.

If the ECM detects that the output voltage of either element is out of the normal range, the ECM interprets this as a malfunction in the throttle position sensor and sets a DTC.

RELATED DTC

Previous code:

Related DTCs	P0120	Throttle position sensor circuit (VTA or VTA2) is open/shorted
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Extended code:

Related DTCs	P0120	Throttle position sensor circuit (VTA) is open/shorted
	P0122	VTA voltage is low output
	P0123	VTA voltage is high output
	P0220	Throttle position sensor circuit (VTA2) is open/shorted
	P0222	VTA2 voltage is low output
	P0223	VTA2 voltage is high output

MODEL YEAR CHART

Model Year	See Page
1998 to 2004	Ce-37