

Oxygen Sensor Heater

Ho005-01

Oxygen Sensor Heater Monitor Description

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MONITOR SUMMARY

The ECM uses the oxygen sensor information to regulate the air/fuel ratio close to a stoichiometric ratio. This maximizes the catalytic converter's ability to purify the exhaust gases. The sensor detects oxygen levels in the exhaust gas and sends this signal to the ECM.

The inner surface of the sensor element is exposed to outside air. The outer surface of the sensor element is exposed to exhaust gas. The sensor element is made of platinum coated zirconia and includes an integrated heating element. The oxygen sensor has the characteristic whereby its output voltage change suddenly in the vicinity of the stoichiometric air–fuel ratio. When heated, the sensor becomes very efficient. If the temperature of the exhaust is low, the sensor will not generate useful voltage signals without supplemental heating. The ECM regulates the supplemental heating using a duty–cycle approach to regulate the average current in the heater element. If the heater current is out of the normal range, the sensor's output signals will be inaccurate and the ECM cannot regulate the air/fuel ratio properly. When the heater current is out of the normal operating range, the ECM interprets this as a malfunction and sets a DTC.

RELATED DTC

Previous code:

Related DTCs	P0135 (Bank 1 sensor 1)	Heater current is low or high
	P0141 (Bank 1 sensor 2)	
	P0147 (Bank 1 sensor 3)	
	P0155 (Bank 2 sensor 1)	
	P0161 (Bank 2 sensor 2)	
	P0167 (Bank 2 sensor 3)	

Extended code:

Related DTCs	P0031 (Bank 1 sensor 1)	Heater current is low
	P0037 (Bank 2 sensor 2)	
	P0051 (Bank 2 sensor 1)	
	P0057 (Bank 2 sensor 2)	
	P0032 (Bank 1 sensor 1)	Heater current is high
	P0038 (Bank 1 sensor 2)	
	P0052 (Bank 2 sensor 1)	
	P0058 (Bank 2 sensor 2)	

MODEL YEAR CHART

Model Year	See Page
1996 to 2004	Ho-6