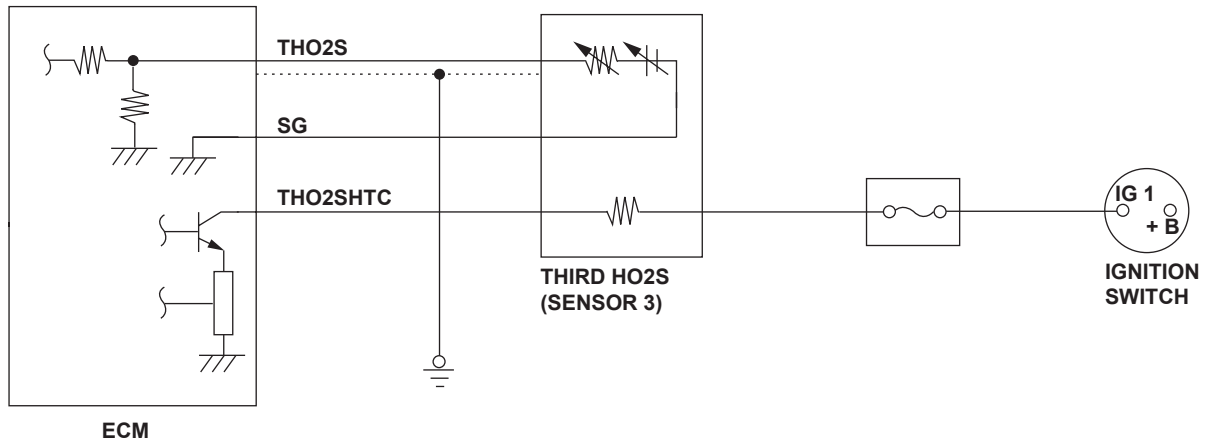


# Advanced Diagnostics

## DTC P0147: Third Heated Oxygen Sensor (Third HO2S) (Sensor 3) Heater Circuit Malfunction (M/T)



P0143-0201

### General Description

A heater for the zirconia element is embedded in the third heated oxygen sensor (third HO2S) and is controlled by the engine control module (ECM). It is activated and heats the sensor to stabilize and speed the detection of oxygen content when the exhaust gas temperature is cold.

If the third HO2S heater draws more or less than a specified amperage, the ECM detects a malfunction and stores a DTC.

### Monitor Execution, Sequence, Duration, DTC Type

Execution	Continuous
Sequence	None
Duration	5 seconds or more
DTC Type	One drive cycle, MIL ON

### Enable Conditions

Condition	Minimum	Maximum
Engine coolant temperature	41°F (5°C)	—
Battery voltage (IGP terminal of ECM)	10.5 V	16 V
State of the engine	Running	
No active DTCs	Third HO2S Heater, ECT	
Other	During third HO2S heater operation	

## **Malfunction Threshold**

The current is 0.1 A or less, or 3.5 A or more, for at least 5 seconds when the heater is on.

## **Driving Pattern**

Start the engine. Hold the engine at 3,000 rpm with no load (in park or neutral) until the radiator fan comes on.

## **Diagnosis Details**

### **Conditions for illuminating the MIL**

When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored in the ECM memory.

### **Conditions for clearing the MIL**

The MIL will be cleared if the malfunction does not recur during three consecutive trips in which the diagnostic runs.

The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.