

## DTC 44 V8 PCM

### LEAN EXHAUST INDICATION

#### Circuit Description:

The PCM supplies a voltage of about 450 millivolts between terminal "C14" and "C13". The Oxygen (O<sub>2</sub>) sensor varies the voltage within a range of about 1 volt if the exhaust is rich, down through about 100 millivolts, if exhaust is lean.

The sensor is like an open circuit and produces no voltage when it is below about 360 degrees C. An open sensor circuit or cold sensor causes "Open Loop" operation.

**Test Description:** Number(s) below refer to step(s) on the diagnostic chart.

2. DTC 44 is set when the O<sub>2</sub> sensor signal voltage on circuit 412:

Remains below 250 millivolts for 46 seconds, and

The system is operating in "Closed Loop", and

IAT sensor signal is below 95 degrees C.

4. The DTC 44 or lean exhaust is most likely caused by one of the following:

O<sub>2</sub> Sensor Wire - Sensor pigtail may be mispositioned and contacting the exhaust manifold.

Check for intermittent earth in wire between connector and sensor.

MAP Sensor - A shifted "Low" MAP sensor could cause the fuel system to go lean. Refer [CHART A-6.1](#) in this Section.

Lean Injector(s) - Perform injector balance test.

Fuel Contamination - Water, even in small amounts, near the in-tank fuel pump inlet can be delivered to the injectors. The water causes a lean exhaust and can set a DTC 44.

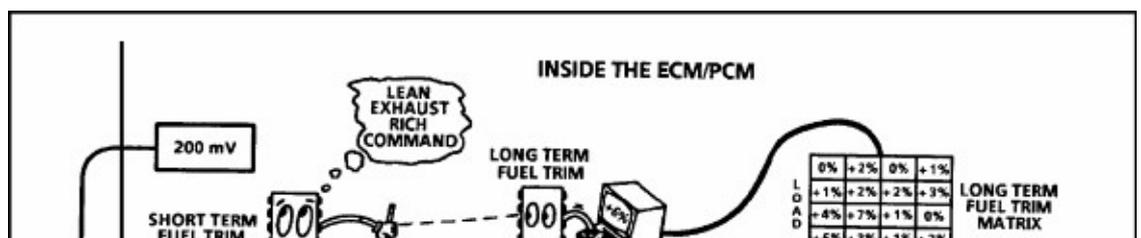
Fuel Pressure - System will go lean if pressure is too low. It may be necessary to monitor fuel pressure while driving the vehicle at various road speeds and/or loads to confirm. Refer [CHART A-4.1](#) in this Section.

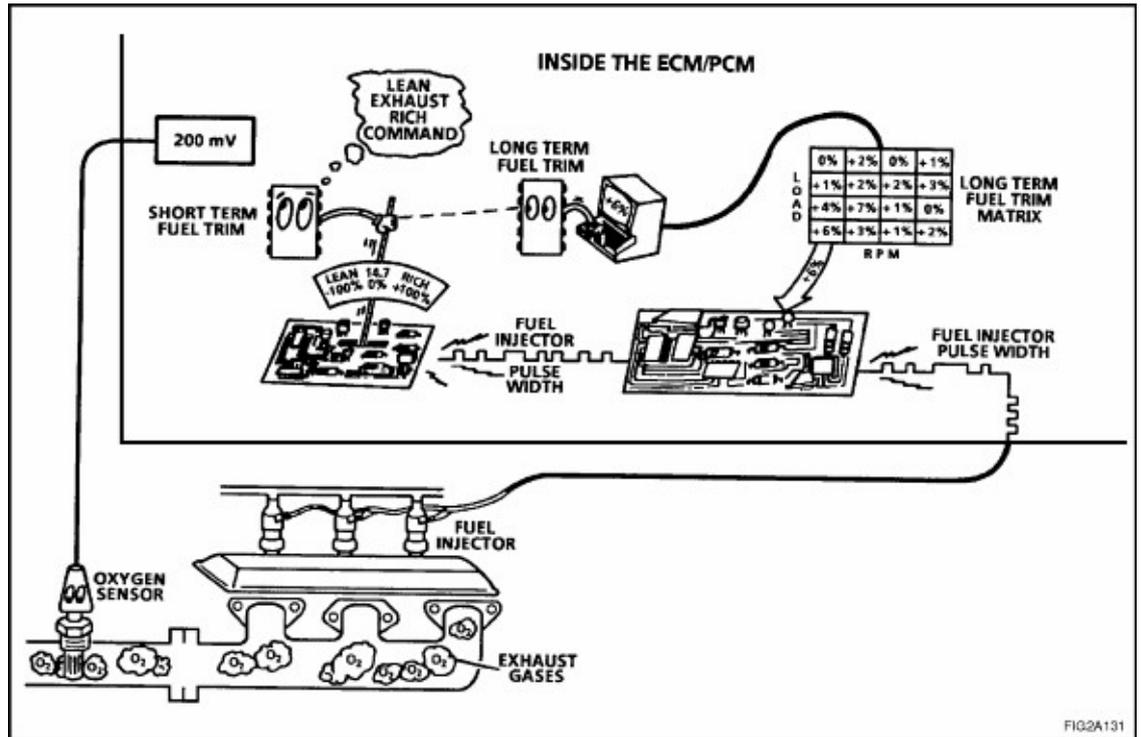
Exhaust Leaks - If there is an exhaust leak, the engine can cause outside air to be pulled into the exhaust and past the sensor. Vacuum or crankcase leaks can cause a lean condition.

If all the above are OK, it is a faulty O<sub>2</sub> sensor.

#### Diagnostic Aids:

Using the Tech 1 "Scan" tool, observe the Long Term Fuel Trim values at different RPMs and air flow conditions. The Tech 1 "Scan" tool also displays the Long Term Fuel Trim cells, so the Long Term Fuel Trim values can be checked in each of the cells to determine when the DTC 44 may have been set. If the conditions for DTC 44 exists, the Long Term Fuel Trim values will be around +18%.





## DTC 44 V8 PCM LEAN EXHAUST INDICATION

STEP	ACTION	VALUE	YES	NO
1.	Was the "On-Board Diagnostic" (OBD) System Check performed?		Go to Step 2	Go to <a href="#">OBD System Check</a> in this Section
2.	1. Start engine. 2. Run engine until it reaches normal operating temperature (Above 80 degrees C). 3. Continue to run at 1600 to 1800 RPM for two minutes. 4. Does Tech 1 "Scan" tool indicate O2 sensor voltage fixed below specified value?	250 mV	Go to Step 3	DTC 44 is intermittent. If no additional DTCs were stored, refer to "Intermittents" in Section 6C2-2C <a href="#">SYMPTOMS</a> in this Volume.
3.	1. Disconnect O2 sensor connector. 2. With engine idling, does Tech 1 "Scan" tool display O2 sensor voltage between the specified values?	Between 350 mV and 550 mV	Go to Step 4	Go to Step 6
4.	1. Refer to facing page. 2. Perform the checks on the items as noted. MAP sensor operation Low fuel pressure Contaminated fuel manifold leaks ahead of O2 sensor Lean injector (possibly restricted) O2 sensor earth circuit 3. Are all items checked found to be OK?		Go to Step 5	Verify Repair
5.	1. Replace Oxygen sensor. 2. Is action complete?		Verify repair	
6.	1. Ignition OFF . 2. Disconnect PCM connectors.		Go to Step 7	Go to Step 8

3. With O2 sensor still disconnected, check O2 signal circuit 412 for a short to earth.
4. Is a short to earth detected?
7. Repair circuit 412. Verify Repair  
Is action complete?
8. Replace PCM. Verify Repair  
Is action complete?