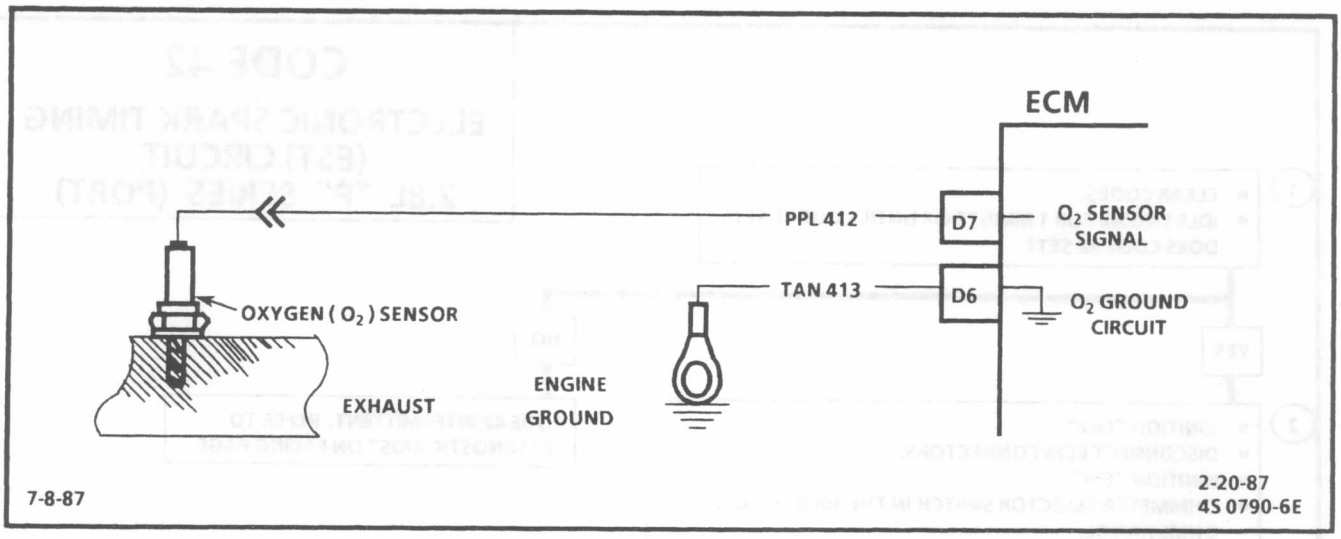

CODE 44

OXYGEN SENSOR CIRCUIT
(LEAN EXHAUST INDICATED)
2.8L "P" SERIES (PORT)

Circuit Description:

The ECM supplies a voltage of about .45 volt to CKT 412. (If measured with a 10 megohm digital voltmeter, this may read as low as .32 volt.) The O_2 sensor varies the voltage within a range of about 1 volt if the exhaust is rich, down through about .10 volt if exhaust is lean.

The sensor is like an open circuit and produces no voltage when it is below about 315°C (600°F). An open sensor circuit or cold sensor causes "Open Loop" operation.

Test Description: Numbers below refer to circled numbers on the diagnostic chart.

1. Code 44 is set when the O_2 sensor signal voltage on CKT 412
   - Remains below .2 volt for 20 seconds
   - And the system is operating in "Closed Loop"

Diagnostic Aids:

Using the "Scan", observe the block learn values at different rpm and air flow conditions to determine when the Code 44 may have been set. If the conditions for Code 44 exists, the block learn values will be around 150.

Check:

- O_2 sensor wire Sensor pigtail may be mispositioned and contacting the exhaust manifold.
- For intermittent ground in wire between connector and sensor
- MAP sensor A (MAP) sensor output that causes the ECM to sense a higher than normal vacuum will cause the system to go lean. Disconnect the MAP sensor, and if the lean condition is gone, check for Code 34.
- For lean injector(s) Perform injector balance test CHART C-2A.
- For 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 Code 44.
- Fuel pressure System will be lean if pressure is too low. It may be necessary to monitor fuel pressure while driving the car at various road speeds and/or loads to confirm. See fuel system diagnosis CHART A-7.
- 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.
- EGR In normal operation the ECM delivers less fuel and advances spark when EGR comes in. If the EGR does not open, the system will go lean and may have slight spark knock.

CODE 44

OXYGEN SENSOR CIRCUIT (LEAN EXHAUST INDICATED) 2.8L "P" SERIES (PORT)

- RUN WARM ENGINE (75°C TO 95°C) AT 1200 RPM.
- DOES "SCAN" INDICATE O_2 SENSOR VOLTAGE FIXED BELOW .35 VOLTS (350 mV)?

NO → CODE 44 IS INTERMITTENT. IF NO ADDITIONAL CODES WERE STORED, REFER TO "DIAGNOSTIC AIDS" ON FACING PAGE.

YES →

- DISCONNECT O_2 SENSOR.
- WITH ENGINE IDLING "SCAN" SHOULD DISPLAY O_2 SENSOR BETWEEN .35 VOLTS AND .55 VOLTS (350 mV AND 550 mV). DOES IT?

NO → CKT 412 SHORTED TO GROUND OR FAULTY ECM.

YES → REFER TO "DIAGNOSTIC AIDS" ON FACING PAGE..

CLEAR CODES AND CONFIRM "CLOSED LOOP" OPERATION AND NO "SERVICE ENGINE SOON" LIGHT.