



CODE 44

LEAN EXHAUST INDICATION

5.7L "Y" SERIES FUEL INJECTION (PORT)

The ECM supplies a voltage of about .45 volt between terminals "D-6" and "D-7". (If measured with a 10 megohm digital voltmeter, this may read as low as .32 volts.) The O₂ 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 360°C (600°F) An open sensor circuit or cold sensor causes open loop operation.

Code 44 is set when the O₂ sensor signal voltage at the ECM C-D connector terminal "D-7".

- Remains below .2 volt for 60 seconds or more:
- And the system is operating in closed loop.

1. Grounding the diagnostic terminal with the engine running, enables the "Field Service Mode" and allows the ECM to confirm either open or closed loop operation.

2. A light out or "Open Loop" indicates the fault is present. Disconnecting the O₂ sensor will raise the signal voltage above .2 volt. If the ECM and wiring are OK, the ECM should recognize the higher voltage, .35 to .55, and flash open loop when the engine is started.

3. Diagnostic aids:

- O₂Sensor Wire. Sensor pigtail may be mispositioned and contacting the exhaust manifold.

Check for ground in wire between connector and sensor.

- MAF Sensor. A Mass Air Flow (MAF) sensor output that causes the ECM to sense a lower than normal air flow will cause the system to go lean. Disconnect the MAF sensor and if the light flashes closed loop (Field Service mode) and the lean condition is gone, replace the MAF sensor.
- Lean Injectors. Perform injector balance test Chart C-2A.
- 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.
- 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 (see Chart C-7)
- 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-7A.
- Exhaust Leaks. If there is an exhaust leak, the engine can cause outside air to be pulled into the exhaust and past the sensor. Also check AIR System for air being pumped to the exhaust ports while in closed loop. See chart C-6. Also check for vacuum and intake leak.
- If the above are OK, and the instructions at the top of the chart will set a Code 44, or "SERVICE ENGINE SOON" light is "off" more than "on", or flashing "open loop", it is a faulty oxygen sensor.

"SCAN" STEP ONLY ■

CODE 44

LEAN EXHAUST INDICATION

5.7L "Y" SERIES
FUEL INJECTION (PORT)START
NON-SCAN

1

- GROUND DIAGNOSTIC TERMINAL.
- RUN WARM ENGINE AT APPROX. 1200 TO 1800 RPM FOR 1 MINUTE AND NOTE "SERVICE ENGINE SOON LIGHT".

LIGHT STAYING "OFF" MORE THAN "ON" OR FLASHING
"OPEN LOOP"

FLASHING "CLOSED LOOP"

2

- IGNITION "OFF".
- DIAGNOSTIC TERMINAL GROUNDED.
- DISCONNECT OXYGEN SENSOR.
- START ENGINE AND IMMEDIATELY NOTE "SERVICE ENGINE SOON" LIGHT.

■ IF SENSOR VOLTAGE IS FIXED BELOW .35 VOLTS,
WITH ENGINE RUNNING.■ DISCONNECT OXYGEN SENSOR, START ENGINE
AND NOTE VOLTAGECODE IS INTERMITTENT. IF NO
ADDITIONAL CODES WERE
STORED, REFER TO FACING
PAGE DIAGNOSTIC AIDS FOR
POSSIBLE CAUSES OF CODE 44.
IF ALL OK, REFER TO
INTERMITTENTS SECTION B.START
SCAN

LIGHT FLASHING OPEN LOOP.

VOLTAGE BETWEEN .35 AND .55 VOLTS

LIGHT WENT OFF FOR AT LEAST 30 SECONDS

■ VOLTAGE LESS THAN .35 VOLTS

3

- SEE THE FACING PAGE DIAGNOSTIC AIDS TO CHECK THE FOLLOWING :
 - SENSOR (S)
 - LEAN INJECTOR(S)
 - CONTAMINATED FUEL
 - EGR
 - FOR LOW FUEL PRESSURE.
 - EXHAUST MANIFOLD LEAKS AHEAD OF SENSOR.

CHECK SIGNAL CKT 412 FOR SHORT
TO GROUND.

CKT 412 OK,

IT IS A FAULTY ECM.

ALL CHECKS OK,

FAULTY OXYGEN SENSOR.

FIELD SERVICE MODE :

ENGINE RUNNING, DIAGNOSTIC TERMINAL GROUNDED.

OPEN - LOOP, "SERVICE ENGINE SOON" LIGHT FLASHES AT A RATE OF 2 TIMES PER SECOND.

CLOSED - LOOP, "SERVICE ENGINE SOON" LIGHT FLASHES AT A RATE OF 1 TIME PER SECOND.

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

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*4S 0894-6EA
10-08-85