

## CODE 25

### MANIFOLD AIR TEMPERATURE (MAT) SENSOR CIRCUIT (HIGH TEMPERATURE INDICATED) 2.8L "P" SERIES (PORT)

#### Circuit Description:

The manifold air temperature (MAT) sensor uses a thermistor to control the signal-voltage to the ECM. The ECM applies a voltage (4-6) on CKT 472 to the sensor. When manifold air is cold, the sensor (thermistor) resistance is high, therefore, the ECM will see a high signal voltage. As the air warms, the sensor resistance becomes less, and the voltage drops.

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

1. Code 25 will set if:
  - Signal voltage indicates a manifold air temperature greater than 135°C (275° F) for 2 seconds
  - Time since engine start is 1 minute or longer

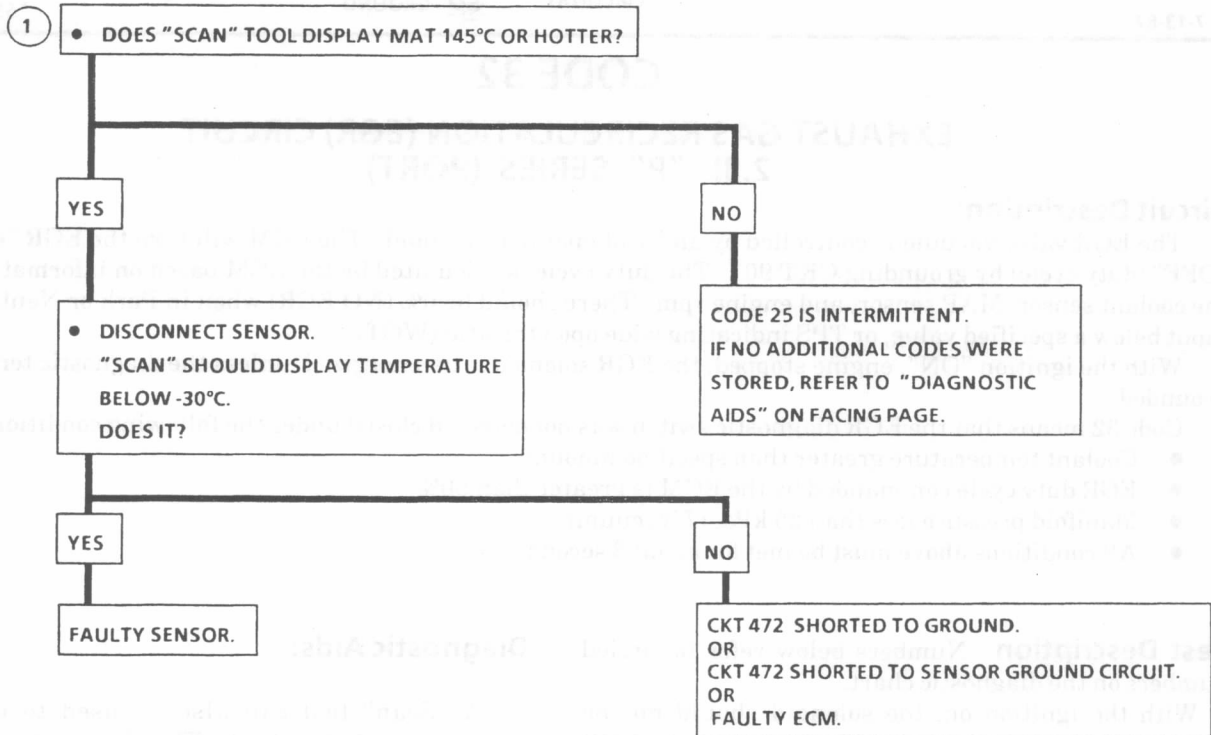
#### Diagnostic Aids:

A "Scan" tool reads temperature of the air entering the engine and should read close to ambient air temperature when engine is cold and rise as underhood temperature increases.

Check harness routing for possible short to ground in CKT 472.

Refer to "Intermittents" in Section "B".

**CODE 25**  
**MANIFOLD AIR TEMPERATURE**  
**(MAT) SENSOR CIRCUIT**  
**(HIGH TEMPERATURE INDICATED)**  
**2.8L "P" SERIES (PORT)**



**DIAGNOSTIC AID**

MAT SENSOR		
TEMPERATURE TO RESISTANCE VALUES (APPROXIMATE)		
°F	°C	OHMS
210	100	185
160	70	450
100	38	1,800
70	20	3,400
40	4	7,500
20	-7	13,500
0	-18	25,000
-40	-40	100,700

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

6-17-87

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