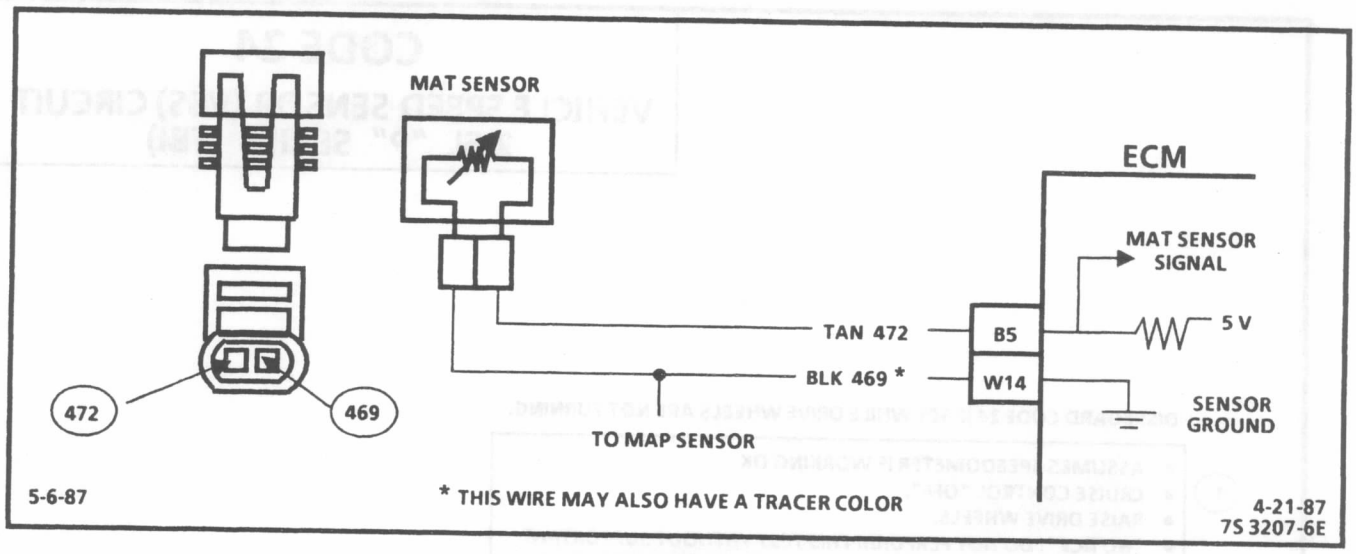

CODE 25

MANIFOLD AIR TEMPERATURE (MAT) SENSOR CIRCUIT
(HIGH TEMPERATURE INDICATED)
2.5L "P" SERIES (TBI)

Circuit Description:

The manifold air temperature sensor uses a thermistor to control the signal voltage to the ECM. The ECM applies a voltage (4-6 volts) 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. This check determines if the Code 25 is the result of a hard failure or an intermittent condition.
   A Code 25 will set if:
   - A MAT temperature greater than 135°C is detected for a time longer than 2 seconds.

Diagnostic Aids:

If the engine has been allowed to cool to an ambient temperature (overnight), coolant and MAT temperatures may be checked with a "Scan" tool and should read close to each other.

A Code 25 will result if CKT 472 is shorted to ground.

If Code 25 is intermittent, refer to Section "B".

CODE 25

MANIFOLD AIR TEMPERATURE (MAT) SENSOR CIRCUIT (HIGH TEMPERATURE INDICATED) 2.5L "P" SERIES (TBI)

(1) • DOES "SCAN" TOOL DISPLAY MAT 145°C OR HOTTER?

YES

• DISCONNECT SENSOR.
"SCAN" SHOULD DISPLAY TEMPERATURE BELOW -30°C.
DOES IT?

YES

FAULTY SENSOR.

NO

CKT 472 SHORTED TO GROUND.
OR
CKT 472 SHORTED TO SENSOR GROUND CIRCUIT.
OR
FAULTY ECM.

NO

CODE 25 IS INTERMITTENT.
IF NO ADDITIONAL CODES WERE STORED, REFER TO "DIAGNOSTIC AIDS" ON FACING PAGE.

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.

4-28-87
• 7S 3190-6E