

CODE 22

THROTTLE POSITION SENSOR (TPS) CIRCUIT (SIGNAL VOLTAGE LOW) 2.5L "P" SERIES (TBI)

Circuit Description:

The throttle position sensor (TPS) provides a voltage signal that changes, relative to the throttle valve. Signal voltage will vary from less than 1.25 volts at idle to about 4.5 volts at wide open throttle (WOT).

The TPS signal is one of the most important inputs used by the ECM for fuel control and for many of the ECM controlled outputs.

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

- This step checks to see if Code 22 is the result of a hard failure or an intermittent condition.
A Code 22 will set if:
 - The engine is running.
 - TPS voltage is below .2 volts (200 mv).
- This step simulates conditions for a Code 21. If a Code 21 is set, or the "Scan" tool displays over 4 volts, the ECM and wiring are OK.
- The "Scan" tool may not display 12 volts. The important thing is that the ECM recognizes the voltage as over 4 volts, indicating that CKT 417 and the ECM are OK.
- If CKT 416 is shorted to ground, there may also be a stored Code 34.

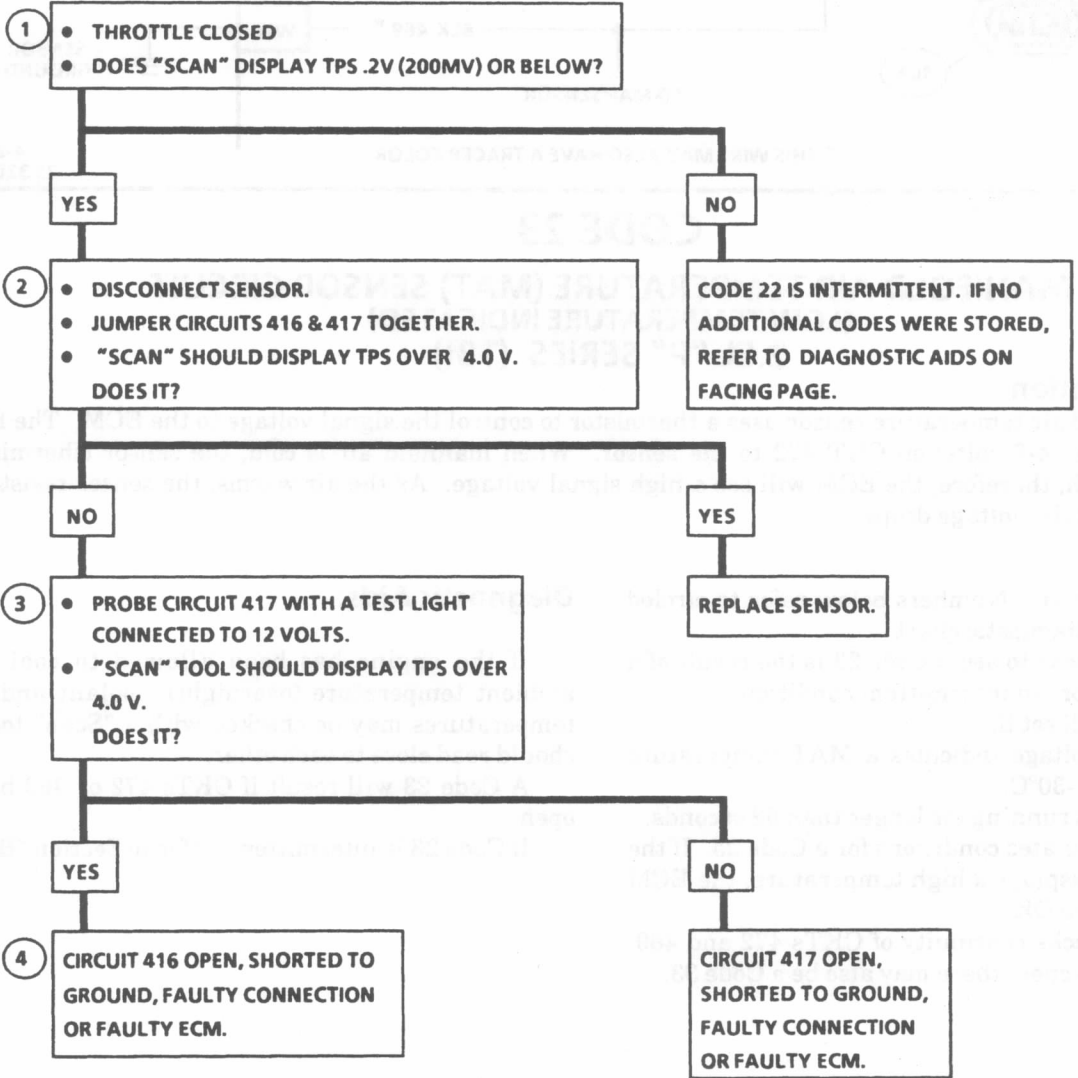
Diagnostic Aids:

A "Scan" tool displays throttle position in volts. Closed throttle voltage should be less than 1.25 volts. TPS voltage should increase at a steady rate as throttle is moved to WOT.

An open, or grounded, 416 or 417 will result in a Code 22.

If Code 22 is intermittent, refer to Section "B".

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(SIGNAL VOLTAGE LOW)
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CLEAR CODES AND CONFIRM "CLOSED LOOP" OPERATION AND NO "SERVICE ENGINE SOON" LIGHT.