



Figure 28 Wiring Diagram - CODE 14 (2.5L)

CODE 14, COOLANT SENSOR (SIGNAL VOLTAGE LOW)

The Coolant Temperature Sensor uses a thermistor to control the signal voltage to the ECM. The ECM applies a voltage on CKT 410 to the sensor. When the engine is cold the sensor (thermistor) resistance is high, therefore the ECM will see a high signal voltage.

As the engine warms, the sensor resistance becomes less, and the voltage drops. At normal engine operating temperature the voltage will measure about 1 to 1.5 volts at the ECM terminal 4.

Code 14 will set if signal voltage indicates a coolant temperature above 135°C (275°F) for more than two seconds.

Coolant temperature is one of the inputs used to control:

- Fuel delivery.
- Engine Timing (EST)
- Idle (IAC)
- Convertor Clutch (TCC)

1. If voltage is above 4 volts, the ECM and wiring are OK.
2. If checking resistance at the coolant sensor is difficult because of sensor location, disconnect the black ECM connector and check resistance between harness connector terminals 4 and 11.

1984
 CODE 14
 FUEL INJECTION (TBI) 1.8L AND 2.5L
 COOLANT SENSOR CIRCUIT
 (SIGNAL VOLTAGE LOW)

- IGNITION "OFF", CLEAR CODES.
- DIAGNOSTIC TERMINAL NOT GROUNDED.
- START, WARM ENGINE AND RUN FOR 1 MINUTE OR UNTIL "CHECK ENGINE" LIGHT COMES ON.
- IGNITION "ON", ENGINE STOPPED.
- GROUND DIAGNOSTIC TERMINAL AND NOTE CODE.

CODE 14

NO CODE STORED. PROBLEM IS INTERMITTENT. IF NO OTHER CODES WERE STORED, SEE SYMPTOMS SECTION B.

- ①
- DISCONNECT COOLANT SENSOR.
 - IGNITION "ON", ENGINE STOPPED.
 - CHECK VOLTAGE BETWEEN HARNESS CONNECTOR TERMINALS. CKT 410 AND 452.

OVER 4 VOLTS.

BELOW 4 VOLTS.

CHECK RESISTANCE ACROSS COOLANT SENSOR TERMINALS. SHOULD BE MORE THAN 100 OHMS.

- DISCONNECT ECM CONNECTORS.
- CHECK SIGNAL CKT 410 FOR SHORT TO CKT 452 OR CHASSIS GROUND.

OK

NOT OK

INTERMITTENT FAULT IN SENSOR CIRCUIT OR CONN. IF ADDITIONAL CODES WERE STORED, SEE APPLICABLE CHART. IF NO CODES, SEE SYMPTOMS SEC. B.

REPLACE SENSOR.

IF CKT 410 IS OK IT IS A FAULTY ECM.

COOLANT SENSOR		
TEMPERATURE TO RESISTANCE VALUES (APPROXIMATE)		
°F	°C	OHMS
210	100	185
160	70	450
100	38	1,600
70	20	3,400
40	-4	7,500
20	-7	13,500
0	-18	25,000
-40	-40	100,700

8-31-83 CLEAR CODES AND CONFIRM "CLOSED LOOP" OPERATION AND NO "CHECK ENGINE" LIGHT.

Figure 29 Coolant Sensor Circuit (Voltage Low) - CODE 14 (2.5L)