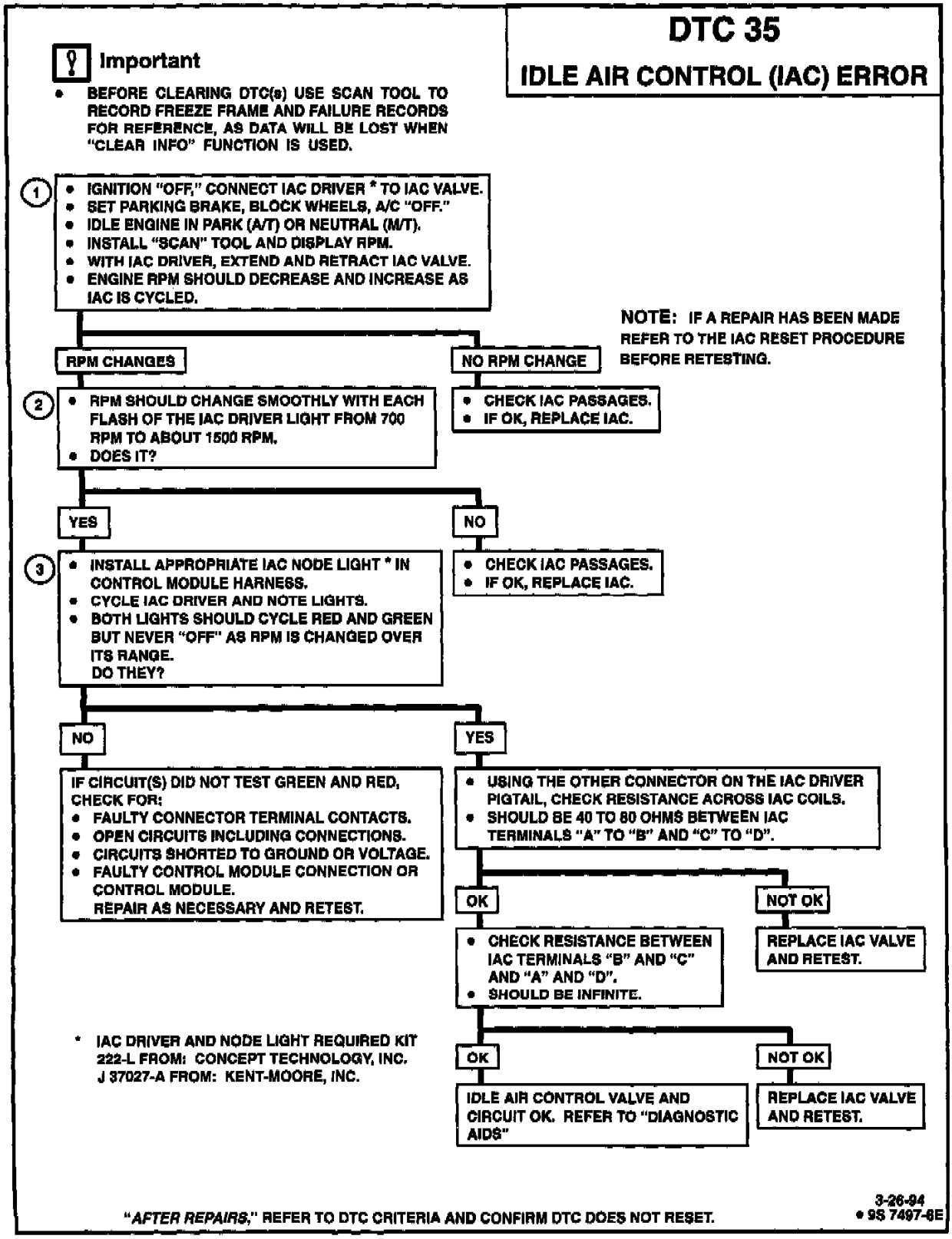
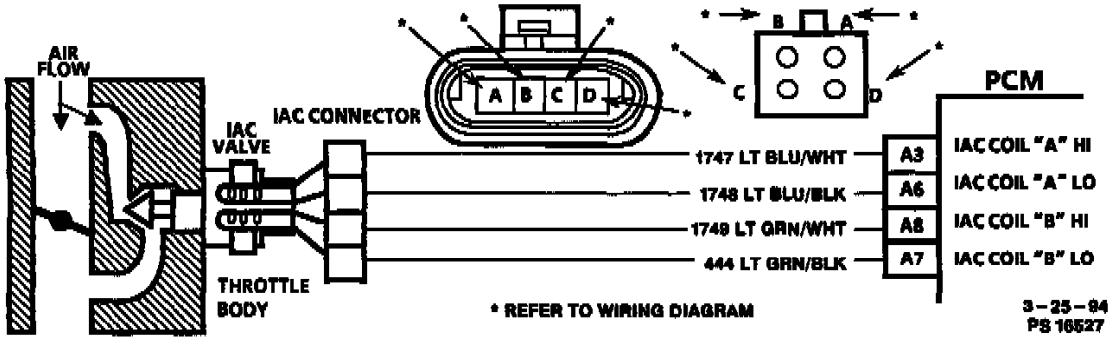
A L L Diagnostic Trouble Codes (DTC): Manufacturer Code Charts
Powertrain Controls - ECM/PCM



Diagnostic Trouble Code 35



IAC Circuit

CIRCUIT DESCRIPTION

The control module controls engine idle speed with the Idle Air Control **(IAC)** valve. To increase idle speed, the control module retracts the IAC valve pintle away from its seat, allowing more air to pass by the throttle bore. To decrease idle speed, it extends the IAC valve pintle towards its seat, reducing bypass air flow. A Tech 1 scan tool will read the control module commands to the IAC valve in counts. Higher the counts indicate more air bypass (higher idle). The lower the counts indicate less air is allowed to bypass (lower idle).

DTC 35 WILL SET WHEN

The PCM sees a different reading in desired IAC and actual IAC.

ACTION TAKEN (PCM WILL DEFAULT TO)

None. The PCM turns "ON" the Malfunction Indicator Lamp **(MIL)**.

DTC 35 WILL CLEAR WHEN

Conditions for fault are no longer present and Tech 1 "clear DTCs" function is used or 50 ignition switch keycycles have passed with no further faults or ignition switch is turned "OFF" and battery feed voltage is removed for 10 seconds.

DTC CHART TEST DESCRIPTION

Number(s) below refer to circled number(s) on the diagnostic chart.

1. The IAC tester is used to extend and retract the IAC valve. Valve movement is verified by an engine speed change. If no change in engine speed occurs, the valve can be retested when removed from the throttle body.

2. This step checks the quality of the IAC movement in Step 1. Between 700 rpm and about 1500 rpm, the engine speed should change smoothly with each flash of the tester light in both extend and retract. If the IAC valve is retracted beyond the control range (about 1500 rpm), it may take many flashes in the extend position before engine speed will begin to drop. This is normal on certain engines, fully extending IAC may cause engine stall. This may be normal.

3. Steps 1 and 2 verified proper IAC valve operation while this step checks the IAC circuits. Each lamp on the node light should flash red and green while the IAC valve is cycled. While the sequence of color is not important, if either light is "OFF" or does not flash red and green, check the circuits for faults beginning with poor terminal contacts.

IAC VALVE RESET PROCEDURE

^ Disconnect negative battery cable for 10 seconds then reconnect cable battery.
^ Key "ON," engine "OFF."
^ Ignition "OFF" for 10 seconds.

DIAGNOSTIC AIDS

A slow, unstable, or fast idle may be caused by a non-IAC system problem that cannot be overcome by the IAC valve. Out of control range, IAC Tech 1 scan tool counts will be above 60 if idle is too low, and zero counts if idle is too high. The following checks should be made to repair a non-IAC system problem.

^ VACUUM LEAK (High Idle) - If idle is too high, stop the engine. Also, check for binding of throttle blade or linkage.
^ SYSTEM TOO RICH (Low Air/Fuel Ratio) - The idle speed will be too low.
^ THROTTLE BODY - Remove IAC valve and inspect bore for foreign material.
^ IAC VALVE ELECTRICAL CONNECTIONS - IAC valve connections should be carefully checked for proper contact.
^ CRANKCASE VENTILATION VALVE - An incorrect or faulty crankcase ventilation valve may result in an incorrect idle speed.
^ A/C COMPRESSOR OR RELAY FAILURE - Refer to A/C diagnosis if circuit is shorted to ground.
^ If intermittent poor driveability or idle symptoms are resolved by disconnecting the IAC, carefully recheck connections, valve terminal resistance or replace IAC.
^ Refer to **Diagnosis By Symptom / Stalls / Rough, Unstable Or Incorrect Idle** See: Powertrain Management/Computers and Control Systems/Testing and Inspection/Symptom Related Diagnostic Procedures/- Diagnosis By Symptom/Rough, Unstable, or Incorrect Idle,

Stalling