

CODE 34

MASS AIR FLOW (MAF) SENSOR CIRCUIT (GM/SEC LOW)

5.7L (VIN 8) "Y" CARLINE (PORT)

Circuit Description:

The Mass Air Flow (MAF) sensor measures the amount of air which passes through it. The ECM uses this information to determine the operating condition of the engine to control fuel delivery. For a detailed description of the MAF sensor operation refer to Section "C".

The oil pressure switch or the ECM, through control of the fuel pump relay, will provide 12 volts for the MAF power relay which provides the 12 volts needed by the MAF sensor.

The ECM provides a current limiting 5 volts on the signal line (CKT 998). The MAF sensor then changes the signal by dropping the voltage so that with low air flow the ECM sees a low voltage and a high air flow will cause the ECM to see near the 5 volts supply.

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

Code 34 indicates: ECM has seen low air flow less than 2.5 gm/sec (low voltage) for one second when:

- Engine is first started

OR

- RPM above 600
- TPS above 6%. To obtain 6%, the engine has to be running at about 2300 rpm in neutral.

1. A Code 34 may be caused by an engine that exhibits a low, rough, unstable or incorrect idle problem. If this condition exists, disconnect the MAF sensor. If the unstable idle still exists, see "Symptoms" in Section "B". (Rough, Unstable, Incorrect Idle, or Stalling). If the idle improved with the sensor disconnected, replace it. Code 34 could also result from a dirty or misadjusted throttle body. Refer to Section "C2" for minimum idle speed adjustment.

2. This test will determine if the conditions still exist to set a code or if the problem is intermittent. With the MAF sensor disconnected, the ECM should see a high signal voltage and set a Code 33. If a Code 34 resets, then the wiring or the ECM is at fault.

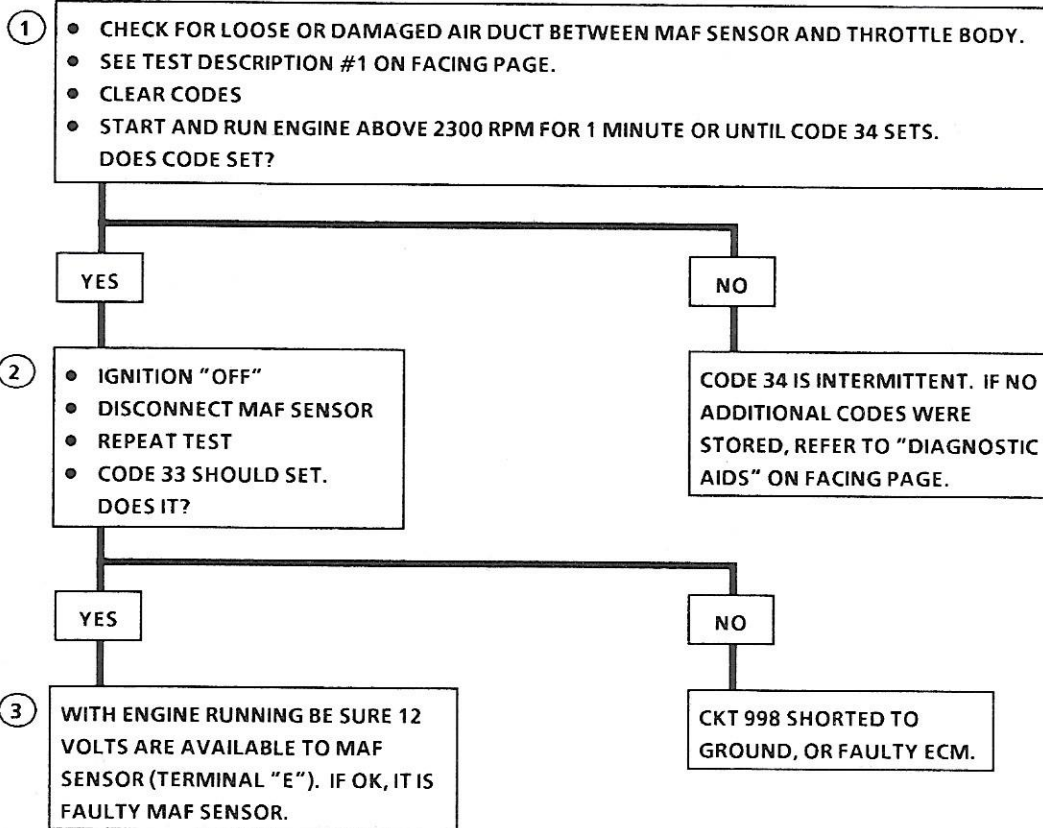
3. With engine running and MAF sensor disconnected probe harness terminal "E" (CKT 993) with a test light to ground. Light should be bright which indicates proper voltage (12 volts) available to MAF sensor.

Diagnostic Aids:

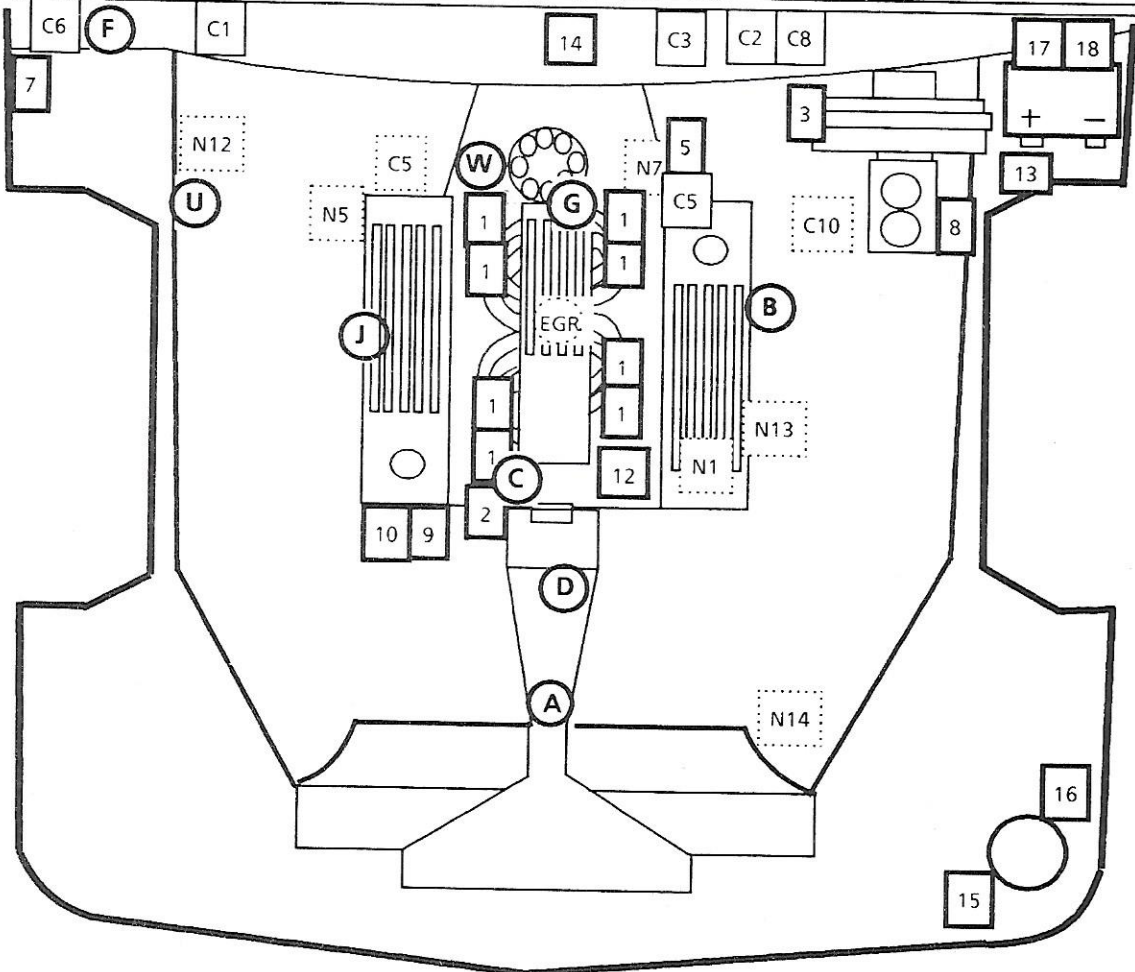
A low, rough, or unstable idle could result in a Code 34. Air ducts are tight and not cracked, thoroughly inspect the induction system for vacuum leaks. Check CKT 998 for a potential short to ground. Code 34 could also result from a dirty or misadjusted throttle body. Refer to Section "C2" for minimum idle speed check.

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'Y' CARLINE RPO:L98 VIN CODE:8 5.7L V8 PFI



COMPUTER HARNESS

- C1 Electronic Control Module (ECM)
- C2 ALDL diagnostic connector
- C3 "SERVICE ENGINE SOON" light
- C5 ECM harness grounds
- C6 Fuse panel
- C8 Fuel pump test connector (Terminal "G" of ALDL connector)
- C10 Set timing connector

NOT ECM CONNECTED

- N1 Crankcase vent valve (PCV)
- N5 Engine temp. sensor (gauge/overheat)
- N7 Oil pressure sensor (gauge) and switch (fuel pump)
- N12 A/C pressure cycling switch
- N13 Fan switch (H.D. cooling)
- N14 H.D. cooling fan relay

CONTROLLED DEVICES

- 1 Fuel injector
- 2 Idle air control motor
- 3 Fuel pump relay
- 5 Torque converter clutch connector
- 7 Electronic spark control module
- 8 Primary cooling fan relay
- 9 AIR port solenoid
- 10 AIR converter solenoid
- 12 EGR solenoid
- 13 1-4 Upshift relay (M/T)
- 14 1-4 Upshift solenoid (M/T)
- 15 Fuel vapor canister solenoid
- 16 Fuel vapor canister
- 17 MAF sensor power relay
- 18 MAF sensor burn-off relay

INFORMATION SENSORS

- A Mass air flow
- B Exhaust oxygen
- C Throttle position
- D Coolant temperature
- F Vehicle speed (buffer)
- G Manifold air temperature
- J ESC knock
- U Fan control switch
- W EGR diagnostic temperature switch

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Figure A-1 - Engine Component Locations 5.7L (VIN 8) "Y" Carline