DTC 33 V8 PCM

MANIFOLD ABSOLUTE PRESSURE (MAP) (SIGNAL VOLTAGE HIGH)

Circuit Description:

The Manifold Absolute Pressure (MAP) sensor responds to changes in manifold pressure (vacuum). The PCM receives this information as a signal voltage that will vary from about 0.8 - 1.5 volts at idle to 4 - 4.5 volts at Wide Open Throttle (WOT). The PCM uses this information for fuel and spark control.

The Tech 1 "Scan" tool displays manifold pressure in volts. Low pressure (high vacuum) reads a low voltage while a high pressure (low vacuum) reads a high voltage.

If the MAP circuit fault is detected, the PCM will substitute a MAP "default" value based upon Throttle Position (TP) sensor and RPM plus offset modifiers when in P/N or if A/C is "OFF" on "ON" to control fuel delivery.

Test Description: Number(s) below refer to step number(s) on the diagnostic chart.

3. DTC 33 will set when:

   Engine has been running.

   TP sensor less than about 3%.

   MAP sensor signal voltage is too high, (greater than 88 kPa of pressure) for a time greater than three seconds.

Engine misfire or low, unstable idle may set DTC 33. Disconnect the MAP sensor and the system will go into backup fuel mode. If the misfire or poor idle condition remains, see "Symptoms," in this Section.

4. If the PCM recognises the low MAP signal, the PCM and wiring are OK.
6. Check vacuum hose to MAP sensor for leaking or restriction.

Diagnostic Aids:

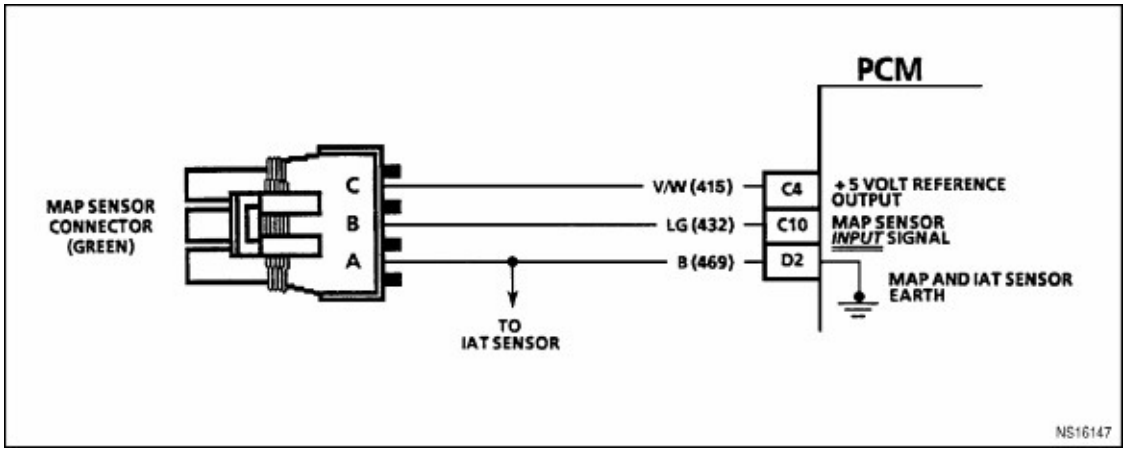
If the idle is rough or unstable, refer to " Symptoms", in this Section for items which can cause an unstable idle.

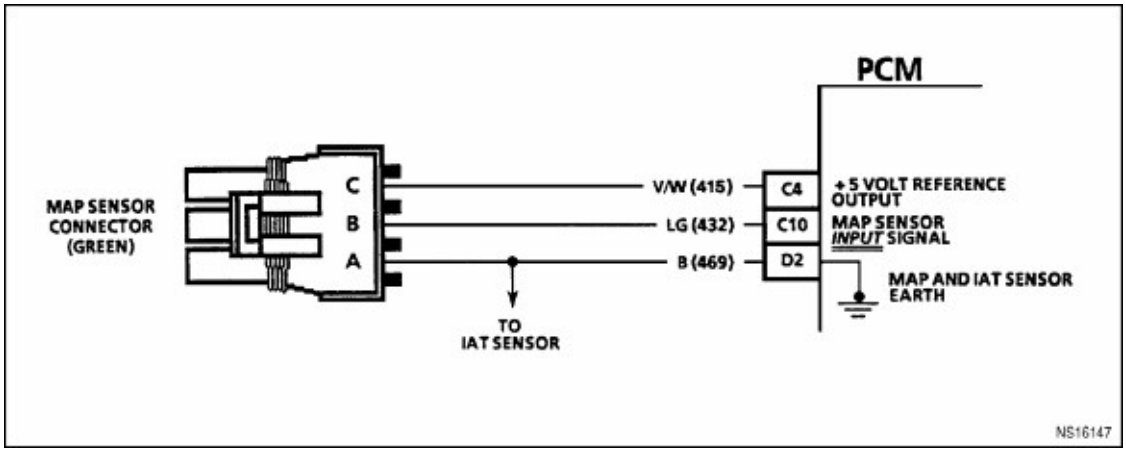
A disconnected vacuum hose to the MAP sensor will set DTC 33.

An open in circuit 469 will set DTC 23 and DTC 33.

With the ignition "ON" and the engine "OFF", the manifold pressure is equal to atmospheric (or barometric) pressure and the signal voltage output will be high. This information is used by the PCM as an indication of vehicle altitude and is referred to as BARO. Comparison of this BARO reading with a known good vehicle with the same sensor is a good way to check the accuracy of a "suspect" sensor. Readings should be the same +/- 0.4 volts.

Refer to "Intermittents" in Section 6C2-2C SYMPTOMS, in this Volume.





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STEP	ACTION	VALUE	YES	NO
1.	Was the "On-Board Diagnostic" (OBD) System Check performed?		Go to Step 2	Go to OBD System Check in this Section.
2.	Is engine idle is rough, incorrect or unstable?		Go to Section 6C2-2C SYMPTOMS in this Volume.	Go to step 3
3.	1. Engine at idle speed. 2. Does Tech 1 "Scan" tool MAP display a voltage equal or greater than specified value?	4.0 volts	Go to Step 4	If no additional DTCs were stored, refer to "Intermittents" in Section 6C2-2C SYMPTOMS in this Volume.
4.	1. Ignition "OFF". 2. Disconnect MAP sensor connector. 3. Ignition "OFF". 4. Does Tech 1 "Scan" tool MAP display a voltage equal or less than specified value?	1.0 volt	Go to Step 5	Go to Step 7
5.	Does a test light connected to 12 volts light when probing circuit 469 connector?		Go to Step 6	Go to Step 9
6.	1. Check for and replace, if faulty, a leaking MAP sensor vacuum hose. 2. Is replacement complete?		Verify Repair	Go to Step 10
7.	1. Check for and repair circuit 432 shorted to voltage or shorted to circuit 416. 2. Is repair completed?		Verify Repair	Go to Step 8

8.	1. Replace PCM. 2. Is repair complete?	Verify Repair
9.	1. Check for and repair open in circuit 469. 2. Is repair completed?	Verify Repair
10.	1. Replace MAP sensor. 2. Is repair complete?	Verify Repair