

Identification -

1988 Mercedes Benz 300CE. 85,000miles USA Model

VIN - WDBEA50D6JA776694

Model 124C

Manufactured date - 5/1988

Description of problem:

When driving or just idling, car will stall intermittently. Sometimes happens immediately, day, sometimes will run good for a full day.

Check engine light comes on when problem occurs but does not stay on.

Stalling will happen if car is just idling in the garage or driving.

It will happen when the car is cold or hot.

Problem is sometimes preceded by RPM variation before stalling.

What has been done to correct the problem:

Replaced CIS control unit with a used part

Replaced EZL control unit with a used part

Replaced fuel pump relay with a new part

Replaced ignition coil with new part

Replaced spark plug wires / distributor cap and rotor with new parts.

Removed gas tank, inspected and cleaned fuel strainer

Replaced fuel filters.

Replaced coolant temperature sensor B11/2 with a new part.

Replaced O2 sensor with a new part.

Replaced alternator with a used part.

Replaced crankshaft position sensor L5 with a new part.

Fuel pumps replaced by previous owner.

Replaced OVP relay with a new part.

All of the above changes did not correct the problem.

Diagnostic work performed:

During the problem, both the EHA Y1 and the Idle speed adjuster Y6 are affected by the CIS control causing fuel mixture changes and stalling.

If the EHA and idle speed valve are disconnected, the problem does not happen.

The problem still happens if the O2 sensor is disconnected

The problem still happens if the altitude sensor B18 is disconnected

O2 sensor reading is normally 0.5v at idle. When problem happens, reading goes up to 0.8v

CIS pin 20 coolant temperature sensor voltage is stable at 0.3v hot.

CIS pin 17 air flow sensor voltage changes when RPM varies before stalling.

O2 sensor heater voltage is 13.3v and stable.

CIS pin 1 is 13.5v and stable during problem.

CIS pin 9 TF signal to fuel pump relay is 0.25v and stable during problem.

CIS pin 8 vehicle speed sensor is 10v at idle and stable during problem.

CIS pin 23, check engine signal is a square wave, 6ms high and 4ms low at normal idle.

I have moved and pulled on engine wiring harness and other harnesses in engine compartment looking for a broken wire or loose connection

I have checked fuse panel for corrosion, nothing found.

Questions:

I have not checked fuel pressure, could pressure loss cause CIS to attempt control before stalling?

Could CIS control think engine is in "starting" mode and activate idle control valve and EHA?