

ETM Throttle Failure Diagnostic Flow Chart for 1999-2001 Volvo C/S/V70, XC/70, S60 and S80

Connect OBDII code reader to the car and retrieve the diagnostic trouble codes (DTC). If you don't have this tool, take your car to Auto-Zone and they will scan it for you for free. Are there any codes related to the Mass Air Flow sensor?

Yes

No

Are there any misfire codes stored?

Yes

Diagnose and repair all misfire codes first. A malfunctioning ETM will not set misfire codes.

No

Is the following code combination stored? : P-1017, P-1019, P-1020, P-1021, P-1043 and P-1052.

XeMODeX
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No

Are there any ETM TPS sensor codes stored?

No

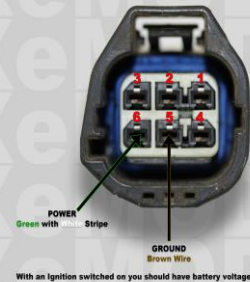
Yes

Replace the ETM



Fig.1

ETM Plug Engine Side Front View



Yes

Switch the ignition on but don't start the engine.
For 99-00 C/S/V70, XC70 pull fuse #2 out (see fig.2)
For 99-01 S80, 01 S60, V70 and XC70, fuse #6 or #21 (Flip over the fuse cover lid and check for description. Look for "ETM" or "Accelerator Pedal/ETS" fuse).
Put the fuse back in. The ETM should click on and whine for 6 sec before shutting off.
Does the ETM switch on when the fuse is re-installed?

Yes

No

Yes, but it clicks on and off repeatedly

Yes

Is the problem intermediate?

Yes

No

Measure voltage across pins 5 and 6 on the engine side of the ETM plug (Fig.1)
Is the voltage equal to the battery voltage?

No voltage at all or voltage is lower

Connect one lead to pin 5 and the other to the positive (+) battery terminal.
Is the voltage equal to the battery voltage?

Yes

No

Check the ETM ground connection located on the middle of the engine block, next to oil pressure switch right above the oil pan.

Inspect all plastic and rubber intake hoses especially the plastic elbow pipe that connects to the ETM (Turbo models). Touch the pipe on the bottom side, see if it feels soft and replace it if necessary. Check upper intercooler rubber hose for splits on the bottom side. Tip: To find a vacuum leak, start the engine and spray some brake cleaner around all intake connections. Engine will stumble if a leak is found.

I could not find any vacuum leaks

Is your car turbocharged?

Yes

No

Replace the ETM unit

Check Mass Air Flow (MAF). A defective MAF can produce very similar symptoms as the ETM. Connect the OBDII scanner and check for codes. If there are any MAF related codes, replace the MAF sensor. In the monitoring function of the scanner select MAF signal and observe the MAF value. The reading should be around 14 Kg/Hr at idle.

There is an open circuit within power supply wire (green/white) from fuse#2 to pin #6 on the connector plug. To remedy the problem either open up engine harness and locate the crimped wire splice close to the fuse box, or run your own wire between the fuse and the plug.

Fig.2

1999 - 2000 VOLVO C/S/V70 W/Out Turbo and XC70
Fuse box located in the Engine compartment by the left strut tower

