
Comprehensive Component Monitor

The comprehensive component monitor is a self test strategy that detects malfunctions of any electronic power-train component which may have an effect upon engine emission levels.

The inputs monitored include the PCM Identification, Inlet Air Temperature (IAT), Fuel Tank Pressure (FTPT), Cylinder Identification (CID), Fuel Level Indicator (FLI), Crankshaft Position (CKP), Vehicle Speed Sensor (VSS), Mass Air Flow Meter (MAF), Engine Coolant Temperature (ECT), Throttle Potentiometer (TP) sensors and Throttle Pedal Position (TPP) sensors.

Outputs monitored by the comprehensive component monitor include the Ignition System, Fuel Pump, Fan Control, Vapour Management Valves (VMV), Canister Vent Valve (CANVNT), all fuel injectors, the A/C cut-out relay (WAC) and the Throttle Controller.

An input component malfunction is declared if there is a lack of continuity, the signal is out of range, or if the signal is not in the correct relationship to another associated signal.

An output component malfunction is declared if there is a lack of continuity or if an expected output response to an PCM command does not occur.

In the comprehensive component monitor, when a malfunction has been present for two drive cycles, the relevant DTC is stored in the PCMs and the MIL is turned on.

The MIL is turned off after three consecutive trips without the same malfunction being detected provided that no other DTCs are stored which would independently turn on the MIL. The DTC will be erased from memory after 40 warm-up cycles without the malfunction being detected after the MIL is turned off. The code may also be cleared by performing an PCM reset using the Diagnostic System (WDS) or a generic Scan Tool.

During a drive cycle, the individual monitor checks will be completed and entered into the PCM memory. The OBDII Readiness Test screen on the WDS may be used to show which particular monitors have completed since the last PCM reset. All monitors must successfully complete to clear a P1000 code (P1000 = OBD II System Checkout Incomplete).