

PCV System Monitor

Ford plans to comply with the PCV monitoring requirements by modifying the current PCV system design. The PCV valve will be installed into the rocker cover using a quarter-turn cam-lock design to prevent accidental disconnection. High retention force molded plastic lines will be used from the PCV valve to the intake manifold. The diameter of the lines and the intake manifold entry fitting will be increased so that inadvertent disconnection of the lines after a vehicle is serviced will cause either an immediate engine stall or will not allow the engine to be restarted. Some vehicles will incorporate such designs beginning in the 2001 MY. In the event that the vehicle does not stall if the line between the intake manifold and PCV valve is inadvertently disconnected, the vehicle will have a large vacuum leak that will cause the vehicle to run lean at idle. This will illuminate the MIL after two consecutive driving cycles and will store one or more of the following codes: Lack of O2 sensor switches, Bank1 (P1131 or P2195), Lack of O2 sensor switches Bank 2 (P1151 or P2197), Fuel System Lean, Bank1 (P0171), Fuel System Lean, Bank 2 (P0174)

Thermostat Monitor

Ford plans to comply with the thermostat-monitoring requirement by using a slightly-modified version of the current "Insufficient temperature for closed-loop" test (P0125 or P0128). If the engine is being operated in a manner that is generating sufficient heat, the engine coolant temperature (ECT) or cylinder head temperature (CHT) should warm up in a predictable manner. A timer is incremented while the engine is at moderate load and vehicle speed is above a calibrated limit. The target/minimum timer value is based on ambient air temperature at start-up. If the timer exceeds the target time and ECT/CHT has not warmed up to the target temperature, a malfunction is indicated. The test runs if the start-up IAT temperature is below the target temperature. A 2-hour engine-off soak time is required to erase a pending or confirmed DTC. This feature prevents false-passes where engine coolant temperature rises after the engine is turned off during a short engine-off soak. The target temperature is calibrated to the thermostat regulating temperature minus 20 °F. For a typical 195 °F thermostat, the warm-up temperature would be calibrated to 175 °F. This test is being phased in starting in the 2000 MY. A vehicle, which is not part of the thermostat monitor phase-in, utilizes a 140 °F warm-up temperature.

Insufficient Temperature for Closed Loop Check Operation:

DTCs	P0125 or P0128
Monitor execution	Once per driving cycle
Monitor Sequence	None
Monitoring Duration	300 to 800 seconds within test entry conditions, based on ambient temperature

Typical P0125/P0128 check entry conditions:

Entry Condition	Minimum	Maximum
Vehicle speed	15 mph	
Intake Air Temp at Start-up	20 °F	Target ECT temp.
Engine Load	30%	
Engine off (soak) time to clear pending/confirmed DTC	2 hours	

Typical P0125/P0128 check malfunction thresholds:

Time period expired without reaching 175 °F target ECT temperature.
Time period is 300 to 800 seconds based on ambient temperature at start-up.