



P1285 · Ford

Cylinder Head Over Temp Sensed

P1285 on Ford vehicles means the powertrain control module has determined that the cylinder head temperature has exceeded a safe threshold, based on the cylinder head temperature sensor signal. The computer is not reporting a simple sensor circuit fault; it has calculated that the engine's metal temperature is genuinely too high and has set this code to warn of a potential overheating condition.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	High	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- The check engine light or a message center warning illuminates, often with no other noticeable symptoms at first.
- The temperature gauge may climb above normal or fluctuate erratically during driving.
- The engine may enter a reduced-power limp mode, limiting RPM and vehicle speed.
- You might notice a sweet coolant smell or see coolant residue around the engine bay.
- In severe cases, the engine may run rough, misfire, or stall after overheating.
- The cooling fan may run constantly or not at all, depending on the failure mode.

Common causes, most likely first

- 1 Low coolant level due to a leak from a hose, water pump, radiator, or intake gasket.
- 2 A stuck-closed or faulty thermostat preventing coolant circulation.
- 3 A failed cylinder head temperature sensor or damaged wiring to it, sending a false high reading.
- 4 A weak or inoperative cooling fan, fan clutch, or fan control module.
- 5 A clogged or restricted radiator, or a collapsed radiator hose.
- 6 A failing water pump with a slipping impeller or leaking seal.
- 7 A blown head gasket or cracked cylinder head allowing combustion gases into the cooling system.



How to diagnose and fix it

- 1 Check the coolant level and inspect for visible leaks at hoses, the water pump, and the radiator.
- 2 Use a scan tool to read the cylinder head temperature sensor value cold and compare it to ambient temperature; replace the sensor if the reading is implausible.
- 3 Test the thermostat by monitoring coolant temperature rise after a cold start; replace it if the engine warms too slowly or overheats quickly.
- 4 Verify cooling fan operation by commanding the fan on with the scan tool and checking for power and ground at the fan connector.
- 5 Pressure-test the cooling system to locate hidden leaks and check for combustion gas intrusion with a block tester.
- 6 Inspect the water pump for weepage or a loose impeller, and replace it if suspect.
- 7 Clear the code and perform a road test with live data to confirm the cylinder head temperature stays within normal range.

What Ford technicians check before replacing parts

- A skewed cylinder head temperature sensor is a common cause that mimics a real overheat, so always compare its cold reading to ambient temperature before condemning the cooling system.
- Ford's cylinder head temperature strategy can set P1285 even when the dash gauge looks normal, because the gauge is heavily damped and may not reflect a rapid temperature spike.
- Air pockets trapped in the cooling system after a repair can cause localized hot spots that trigger this code, so proper bleeding of the system is critical.
- A failing cooling fan clutch on rear-wheel-drive models often sets this code without any coolant loss, because airflow drops at low speed and idle.
- Do not overlook a restricted heater core or a kinked hose that reduces coolant flow and creates a hot spot at the cylinder head sensor.

Can I keep driving with P1285?

Stop driving as soon as it is safe if the temperature gauge rises or a warning message appears, because continued operation with an overheated cylinder head can warp the head or blow the head gasket. If the only symptom is the warning light and the gauge reads normal, drive directly to a repair shop without heavy loads or long idling.

Tools that help

- OBD-II scan tool with live data capability
- Infrared thermometer
- Cooling system pressure tester
- Block tester (combustion gas detector)
- Basic hand tools and hose clamp pliers



Reading P1285

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 85** The exact fault within that area.

Often seen with

P1289 Turbocharge Bypass Valve Short To Ground · **P1289** Manifold Tune Valve Solenoid Circuit Open Or Shorted · **P1290** CNG Fuel Pressure Too High · **P1289** Cylinder Head Temperature Sensor Signal Greater Than Self-Te · **P1290** Cylinder Head Temperature Sensor Signal Less Than Self-Test · **P1289** Manifold Tune Valve Solenoid Circuit Open Or Shorted · **P1290** CNG Fuel Pressure Too High · **P1289** Switching Solenoid for Air Assisted Injection Valves Bank 2 · **P0117** Engine Coolant Temperature Circuit Low Input · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P0217** Engine Over-Temperature Condition

See it working

Watch the animated explainer [How an Oxygen Sensor Works: Live 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1285/>

