

GENERIC · POWERTRAIN

P0298

OBD-II TROUBLE CODE

P0298

Engine Oil Over Temperature

P0298 is a generic powertrain code that indicates the engine oil temperature has exceeded a manufacturer-specified safe limit, as reported by the oil temperature sensor to the engine control module. The computer sets this code when the oil temperature signal remains above the threshold for a calibrated period, often under load or during extended driving.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- Illuminated check engine light or oil temperature warning lamp on the dashboard
- Often no symptoms besides the warning light, especially if the over-temperature event was brief
- Reduced engine power or limp mode if the ECU derates output to protect the engine
- Elevated oil temperature gauge reading, if the vehicle is equipped with one
- Burning oil smell or visible smoke from the engine bay in severe cases
- Engine knocking or unusual noise if the oil breaks down from sustained high temperature

Common causes, most likely first

- 1 Low engine oil level due to leaks or consumption, reducing the oil's ability to carry away heat
- 2 Degraded or incorrect engine oil that has lost its thermal stability and cannot dissipate heat properly
- 3 Faulty engine oil temperature sensor sending an inaccurate high reading to the ECU
- 4 Restricted oil cooler or blocked coolant flow to the oil cooler, preventing heat exchange
- 5 Cooling system malfunction such as a stuck thermostat, low coolant, or failed water pump that indirectly raises oil temperature
- 6 Wiring or connector damage in the oil temperature sensor circuit causing a false high signal
- 7 Severe operating conditions like heavy towing or sustained high-speed driving without adequate cooling



How to diagnose and fix it

- 1 Check the engine oil level with the dipstick and top up if low; inspect for leaks around the oil pan, valve covers, and filter housing
- 2 Verify the oil temperature sensor reading with a scan tool and compare it to a known-good infrared thermometer at the oil pan
- 3 Inspect the oil temperature sensor connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 4 Change the engine oil and filter with the manufacturer-recommended viscosity and specification, especially if the oil is dark or smells burnt
- 5 Test the cooling system for proper operation, including thermostat opening, coolant level, and water pump flow
- 6 Inspect and flush the oil cooler and its coolant passages if equipped, checking for sludge or blockage
- 7 Replace the engine oil temperature sensor if testing confirms it is reporting incorrectly, then clear the code and verify the repair

Oil temperature sensor versus real overheating

- A failed oil temperature sensor can report extreme temperatures even when the oil is fine, so always compare the scan tool reading with an independent temperature measurement before condemning the engine.
- Low oil level is the most commonly overlooked cause of P0298 because the remaining oil has less volume to absorb heat and runs hotter than normal.
- Some vehicles set P0298 after a single aggressive driving event, such as a long uphill climb in high ambient temperatures, and the code may not return once conditions normalize.
- A restricted oil cooler or degraded coolant can raise oil temperature without ever triggering a coolant temperature code, so cooling system health must be checked alongside the oil circuit.
- Aftermarket oil additives or the wrong oil viscosity can reduce heat transfer and cause the oil to run hotter than the manufacturer intended.

Can I keep driving with P0298?

Stop driving as soon as it is safe if the oil temperature warning is active or the engine is making noise, because sustained over-temperature can destroy bearings and seize the engine. If only the check engine light is on and the engine sounds normal, drive gently to a repair shop without heavy loads or high speeds.

Tools that help

- OBD-II scan tool with live data capability
- Infrared thermometer
- Oil drain pan and wrench set
- Multimeter for circuit testing
- Coolant hydrometer or test strips



Reading P0298

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 2** Fuel and air metering (injector circuits).
- 98** The exact fault within that area.

Often seen with

P0117 Engine Coolant Temperature Circuit Low Input · **P0118** Engine Coolant Temperature Circuit High Input · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P0218** Transmission Over-Temperature Condition · **P0299** Turbo/Supercharger Underboost

See it working

Watch the animated explainer [Excavator Simulator: Hydraulics You Can Operate](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0298/>

