

GENERIC · POWERTRAIN

P05C4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05C4

Engine Coolant Pressure Sensor Circuit Low

P05C4 indicates that the engine control module has detected a low voltage signal from the engine coolant pressure sensor circuit, which typically means the sensor is reporting pressure below the expected range or the circuit has a short to ground or open. The computer sets this code when the signal voltage stays below a calibrated threshold for a set period, often indicating a faulty sensor, wiring issue, or low actual coolant pressure.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine performance or power due to protective limp mode
- Overheating warning or temperature gauge fluctuation if coolant pressure is genuinely low
- Poor fuel economy or increased emissions as the computer adjusts fuel and timing
- Coolant leaks or low coolant level noticed during inspection
- Fan running constantly or erratic cooling fan operation

Common causes, most likely first

- 1 Faulty engine coolant pressure sensor
- 2 Damaged or corroded sensor wiring or connector
- 3 Short to ground in the signal circuit
- 4 Open circuit in the sensor reference or ground circuit
- 5 Low actual coolant pressure due to a leak or air pocket
- 6 Failed coolant pump or restricted cooling system
- 7 Corroded or loose ground connection for the sensor



How to diagnose and fix it

- 1 Verify coolant level and condition, and pressure test the cooling system for leaks
- 2 Inspect the sensor connector and wiring for damage, corrosion, or loose pins
- 3 Check the sensor signal voltage with a scan tool or multimeter and compare to specifications
- 4 Test the sensor resistance or output against the manufacturer's chart
- 5 Check for continuity and shorts in the signal, reference, and ground circuits
- 6 Replace the coolant pressure sensor if testing indicates it is faulty
- 7 Clear the code and perform a road test to confirm the repair

Coolant pressure sensor pitfalls to avoid

- A low coolant level or air pocket can cause this code even when the sensor and wiring are perfectly functional, so always verify the cooling system is properly filled and bled before condemning parts.
- The sensor may share a reference voltage or ground with other sensors, so a fault in a shared circuit can set P05C4 along with codes for other sensors, leading to misdiagnosis.
- Some vehicles use the coolant pressure sensor to control the electric fan or coolant pump, so a failed sensor can cause overheating symptoms that mimic a cooling system fault.
- A short to ground in the signal wire can be intermittent and only set the code under certain conditions like vibration or temperature changes, so wiggle tests are essential.
- Replacing the sensor without checking the connector for coolant intrusion or corrosion often leads to a repeat failure, as the root cause may be a leaking sensor housing.

Can I keep driving with P05C4?

It is generally safe to drive with P05C4 if the engine temperature remains normal and there are no overheating signs, but avoid heavy loads or long trips until diagnosed. If the temperature gauge rises or you see coolant loss, stop driving to prevent engine damage.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Cooling system pressure tester
- Wire probe and jumper wires
- Service manual or wiring diagram



Reading P05C4

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- C4** The exact fault within that area.

Often seen with

P0115 Engine Coolant Temperature Circuit Malfunction · **P0116** Engine Coolant Temperature Circuit Range/Performance · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P05C5** Engine Coolant Pressure Sensor Circuit High · **P05C6** Engine Coolant Pressure Sensor Circuit Intermittent/Erratic

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05c4/>

