

GENERIC · POWERTRAIN

P05C5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05C5

Engine Coolant Pressure Sensor Circuit High

P05C5 means the engine control module (ECM) has detected an abnormally high voltage on the engine coolant pressure sensor circuit, indicating the signal wire is likely shorted to power or the sensor has failed. The ECM expects the sensor voltage to stay within a calibrated range, and a sustained high reading sets this code.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Erratic or inaccurate coolant temperature gauge readings on some vehicles
- Reduced engine performance or limp mode if the ECM derates power to protect the engine
- Cooling fan running continuously or not at all due to faulty pressure data
- Overheating warning message on the dashboard in severe cases

Common causes, most likely first

- 1 Faulty engine coolant pressure sensor internally shorted
- 2 Short to voltage on the sensor signal wire between the sensor and ECM
- 3 Corroded, loose, or damaged sensor connector terminals
- 4 Damaged wiring harness rubbed through against a metal component
- 5 Failed ECM driver circuit for the pressure sensor input
- 6 Coolant contamination or air pockets causing abnormal pressure readings

How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then clear codes and verify whether P05C5 returns
- 2 Visually inspect the coolant pressure sensor connector and wiring for corrosion, chafing, or loose pins
- 3 Measure reference voltage and signal voltage at the sensor connector with the key on and engine off
- 4 Backprobe the signal wire at the ECM and compare readings to rule out a wiring short
- 5 Disconnect the sensor and check whether the high voltage reading disappears, confirming sensor failure
- 6 Replace the coolant pressure sensor if voltage remains high with the sensor disconnected and wiring intact
- 7 Repair or replace damaged wiring or connectors, then clear codes and verify the repair with a test drive



Why a high pressure code is not always the sensor

- A short to voltage on the signal wire often mimics a failed sensor, so always check the harness before replacing parts.
- Some vehicles use the coolant pressure sensor to control the electric cooling fan, so a faulty circuit can cause fan run-on or no fan operation.
- Trapped air in the cooling system after a repair can create pressure spikes that set this code intermittently.
- The ECM may set P05C5 as a companion code to a coolant temperature sensor fault, so diagnose related codes first.
- Aftermarket sensors with incorrect resistance curves are a common cause of repeat high-voltage codes on some platforms.

Can I keep driving with P05C5?

You can usually drive with P05C5 set, but monitor the coolant temperature gauge and avoid heavy loads or long idling if the gauge climbs. If the engine overheats or enters limp mode, stop safely and have the vehicle towed to prevent damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the coolant pressure sensor circuit
- Backprobe pins or breakout box
- Socket set and trim removal tools

Reading P05C5

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.
C5	The exact fault within that area.

Often seen with

P0115 Engine Coolant Temperature Circuit Malfunction · **P0117** Engine Coolant Temperature Circuit Low Input
 · **P0118** Engine Coolant Temperature Circuit High Input · **P05C4** Engine Coolant Pressure Sensor Circuit Low
 · **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/p05c5/>

