

GENERIC · POWERTRAIN

P00B5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00B5

Radiator Coolant Temperature Sensor Circuit Intermittent/Erratic

P00B5 indicates that the powertrain control module (PCM) has detected an intermittent or erratic signal from the radiator coolant temperature sensor circuit. The PCM expects a steady voltage that changes smoothly with coolant temperature, but it has seen the signal jump, drop out, or behave unpredictably over a short period.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Inaccurate or fluctuating temperature gauge readings on the dashboard
- Cooling fan running constantly or not engaging when needed
- Poor fuel economy or driveability issues if the PCM relies on the faulty signal for fuel scheduling
- Intermittent overheating warning or false high-temperature alerts

Common causes, most likely first

- 1 Faulty radiator coolant temperature sensor with an internal intermittent connection
- 2 Damaged or corroded wiring harness or connector at the sensor
- 3 Loose or poor ground connection for the sensor circuit
- 4 Chafed or broken wire between the sensor and the PCM
- 5 PCM software glitch or internal fault causing erratic signal processing (rare)

How to diagnose and fix it

- 1 Inspect the sensor connector and wiring for corrosion, looseness, or damage; clean and secure as needed
- 2 Perform a wiggle test on the harness while monitoring live data to identify intermittent opens or shorts
- 3 Measure the sensor resistance with a multimeter and compare to specifications across temperature ranges
- 4 Check the sensor signal voltage at the PCM connector to rule out wiring faults
- 5 Replace the radiator coolant temperature sensor if resistance is out of spec or erratic
- 6 Repair or replace damaged wiring or connectors and clear the code
- 7 Verify the repair by test-driving and confirming the code does not return



Intermittent Sensor Signals Can Fool You

- A sensor that tests fine when cold can still be intermittent when hot, so always test the circuit at operating temperature.
- Corrosion inside the connector pins often causes erratic signals without any visible external damage.
- The radiator coolant temperature sensor is sometimes confused with the engine coolant temperature sensor; verify you are testing the correct component for this code.
- A failing thermostat or low coolant level can cause temperature swings that mimic a sensor fault, so check the cooling system first.
- After replacing the sensor, clear the adaptive learning so the PCM relearns the new sensor's signal range.

Can I keep driving with P00B5?

The vehicle is generally safe to drive with this code, but avoid long trips or heavy loads until repaired because an erratic temperature signal can cause the cooling fan to run incorrectly and lead to overheating. Monitor the temperature gauge closely and stop if it climbs abnormally.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire piercing probes or back-probe kit
- Socket set and wrench set
- Contact cleaner and dielectric grease

Reading P00B5

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
0	Fuel and air metering and auxiliary emission controls.
B5	The exact fault within that area.

Often seen with

P00B4 Radiator Coolant Temperature Sensor Circuit High · **P0115** Engine Coolant Temperature Circuit Malfunction · **P0116** Engine Coolant Temperature Circuit Range/Performance · **P0117** Engine Coolant Temperature Circuit Low Input · **P0118** Engine Coolant Temperature Circuit High Input



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/p00b5/>

