

GENERIC · POWERTRAIN

P01BC

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P01BC

Engine Oil Temperature Sensor B Circuit High

P01BC indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the signal circuit for Engine Oil Temperature Sensor B, which is typically a second oil temperature sensor used for monitoring or control. The PCM expects the sensor's signal voltage to stay within a calibrated range as oil temperature changes, and a sustained high voltage tells the PCM that the circuit is open, shorted to voltage, or the sensor has failed.

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

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) with no other noticeable symptoms
- Oil temperature gauge or dashboard display may read incorrectly or stay at a fixed value
- Possible reduced engine performance or altered fuel economy if the PCM uses oil temperature for control strategies
- In rare cases, the engine may enter a limp-home mode or show a message related to oil temperature
- No drivability issues at all in many vehicles, especially those that use the sensor only for monitoring

Common causes, most likely first

- 1 Open circuit in the signal wire between Engine Oil Temperature Sensor B and the PCM
- 2 Faulty Engine Oil Temperature Sensor B (internal open or high resistance)
- 3 Corroded, loose, or damaged electrical connector at the sensor or PCM
- 4 Short to voltage on the signal circuit, often due to chafed wiring
- 5 Failed PCM (rare, but possible if all other causes are ruled out)
- 6 Poor ground connection for the sensor circuit, causing a reference shift



How to diagnose and fix it

- 1 Connect a scan tool and record the freeze-frame data and sensor voltage reading to confirm the fault is present and not intermittent
- 2 Visually inspect the sensor and its connector for damage, corrosion, or loose pins, and repair as needed
- 3 Disconnect the sensor and measure resistance across its terminals; compare to the manufacturer's temperature-resistance chart to verify sensor operation
- 4 Check the signal circuit for an open or short to voltage using a digital multimeter, including wiggle tests on the harness
- 5 Verify the sensor's ground circuit has low resistance to the engine block or battery negative
- 6 If wiring and sensor test good, substitute a known-good sensor and clear codes to see if the fault returns
- 7 As a last step, check for PCM software updates or, if no other faults are found, diagnose the PCM itself

What P01BC really tells you about the oil sensor circuit

- Many vehicles use two oil temperature sensors, and Sensor B is often a redundant or auxiliary sensor; a failure may not affect drivability at all.
- A high voltage reading on the signal circuit usually means the circuit is open, not that the oil is actually too hot, so do not assume an overheating condition.
- Corrosion inside the sensor connector is a frequent cause that can mimic a failed sensor, so always inspect the pins before replacing parts.
- The PCM may set this code only after a specific driving cycle, so an intermittent fault might not reappear immediately after clearing.
- On some models, the oil temperature sensor shares a ground with other sensors, and a bad ground can set multiple codes including P01BC.

Can I keep driving with P01BC?

You can generally continue driving with P01BC because it rarely affects engine operation or safety, but avoid ignoring it if the oil temperature gauge behaves erratically or if other warning lights appear. Have the circuit inspected soon to prevent a minor electrical fault from becoming a larger diagnostic issue.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire piercing probes or back-probe kit
- Service information with wiring diagrams and sensor resistance charts
- Basic hand tools for connector and sensor access



Reading P01BC

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

Often seen with

P0196 Engine Oil Temperature Sensor Range/Performance · **P0197** Engine Oil Temperature Sensor Low · **P01BB** Engine Oil Temperature Sensor B Circuit Low · **P01BD** Engine Oil Temperature Sensor B Circuit Intermittent/Erratic · **P01BE** Fuel Rail Pressure Sensor Circuit Bank 2

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p01bc/>

