

GENERIC · POWERTRAIN

P0188

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0188

Fuel Temperature Sensor B Circuit High

P0188 means the engine control module (ECM) has detected an abnormally high voltage on the signal circuit for Fuel Temperature Sensor B, which is typically a thermistor whose resistance drops as fuel temperature rises. The ECM interprets this high voltage as an open circuit or a sensor reporting an impossibly cold fuel temperature, so it flags the circuit as faulty.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) on the dashboard
- Often no symptoms besides the warning light, especially in mild weather
- Rough idle or hesitation when the engine is cold, because fuel temperature is used for cold-start enrichment
- Slightly reduced fuel economy or poor driveability during warm-up
- Hard starting or extended cranking in cold ambient temperatures
- In rare cases, a default value is substituted and the engine runs normally with no noticeable change

Common causes, most likely first

- 1 Open circuit in the signal wire between Fuel Temperature Sensor B and the ECM, often due to a broken wire or corroded connector
- 2 Failed fuel temperature sensor (thermistor) with an internal open circuit
- 3 Poor electrical connection at the sensor or ECM connector, including backed-out pins or water intrusion
- 4 High resistance in the ground circuit for the sensor, causing the signal voltage to float high
- 5 Damaged or chafed wiring harness shorting the signal circuit to a higher voltage source
- 6 Faulty ECM driver or internal pull-up resistor, though this is the least likely cause



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P0188 is the only fuel temperature-related code and note the reported sensor voltage
- 2 Inspect the sensor connector and wiring for corrosion, loose pins, or obvious damage, and repair as needed
- 3 Measure the sensor resistance with a multimeter and compare it to the manufacturer's temperature-resistance chart; replace the sensor if it is open or out of spec
- 4 Backprobe the signal circuit at the ECM connector and check for an open or high-resistance wire between the sensor and ECM
- 5 Check the sensor ground circuit for excessive resistance and repair any corroded or broken ground points
- 6 Clear the code and perform a road test with live data to verify the fuel temperature reading changes smoothly and the code does not return
- 7 If all wiring and the sensor test good, follow the manufacturer's diagnostic flow for an internal ECM fault before replacing the ECM

What a high fuel temp signal really means

- A high signal voltage almost always indicates an open circuit or a disconnected sensor, not a genuinely hot fuel condition, so do not chase fuel cooling problems first.
- Many vehicles use Fuel Temperature Sensor B as part of a combined fuel rail temperature and pressure sensor, so a failed sensor may also set pressure-related codes that lead technicians away from the real fault.
- The ECM may substitute a default fuel temperature value and run the engine almost normally, which is why this code often appears with no driveability complaint at all.
- Corrosion inside the sensor connector is a frequent cause that a simple visual inspection misses; always wiggle-test the harness while watching live data.
- On some applications, the fuel temperature sensor shares a reference voltage or ground with other sensors, so a fault in that shared circuit can set P0188 alongside codes for those sensors.

Can I keep driving with P0188?

The vehicle is generally safe to drive with P0188 because the ECM substitutes a default fuel temperature and the engine remains driveable, but avoid heavy loads or long trips until the circuit is repaired. If you notice rough running, hard starting, or the engine enters limp mode, have it diagnosed promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Backprobe pins or breakout box
- Wiring diagram for the fuel temperature sensor circuit
- Basic hand tools for connector and sensor access



Reading P0188

- 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.
- 88** The exact fault within that area.

Often seen with

P0185 Fuel Temperature Sensor B Circuit · **P0186** Fuel Temperature Sensor B Circuit Range/Performance · **P0187** Fuel Temperature Sensor B Circuit Low · **P0189** Fuel Temperature Sensor B Circuit Intermittent · **P0190** Fuel Rail Pressure Sensor Circuit Malfunction

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0188/>

