

GENERIC · POWERTRAIN

P03BF

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03BF

Cylinder 5 Pressure Sensor Circuit Low

P03BF indicates that the powertrain control module (PCM) has detected a low-voltage condition on the signal circuit of the cylinder 5 pressure sensor, which is typically a glow plug pressure sensor used on diesel engines to monitor combustion pressure. The PCM expects the sensor to report a voltage within a calibrated range, and a sustained low reading tells the module that the circuit is shorted to ground or the sensor has failed.

SYSTEM Powertrain	CODE TYPE Generic (all makes)	SEVERITY Medium	FIX DIFFICULTY Intermediate	AREA Ignition system and misfire
---	---	---------------------------------------	---	--

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or misfire under load if the faulty sensor causes incorrect fuel timing or quantity adjustments.
- Reduced engine power or limp mode in some vehicles when the PCM relies on the sensor for closed-loop combustion control.
- Increased fuel consumption or excessive black smoke from the exhaust due to inaccurate pressure feedback.
- Hard starting or extended cranking, especially in cold weather, if the sensor shares a circuit with glow plug operation.
- In rare cases, a no-start condition if the PCM disables the engine for protection after detecting implausible pressure signals.

Common causes, most likely first

- 1 A short to ground in the signal wire between the cylinder 5 pressure sensor and the PCM.
- 2 A failed cylinder 5 pressure sensor, often due to heat damage, carbon fouling, or internal failure.
- 3 Corroded, loose, or damaged electrical connector pins at the sensor or PCM.
- 4 A chafed or pinched wire harness near the cylinder head or exhaust manifold where heat and vibration are severe.
- 5 A faulty PCM driver circuit, though this is less common than wiring or sensor faults.
- 6 Water intrusion into the connector or sensor body causing a low-resistance path to ground.



How to diagnose and fix it

- 1 Connect a scan tool and verify P03BF is current, then check freeze-frame data and live cylinder 5 pressure sensor voltage to confirm the low signal.
- 2 Visually inspect the sensor, connector, and harness for obvious damage, corrosion, or chafing, and repair any damaged pins or wires.
- 3 Disconnect the sensor and measure resistance from the signal wire to ground; a very low resistance indicates a short that must be traced and repaired.
- 4 With the sensor disconnected, check reference voltage at the connector to ensure the PCM is supplying the correct voltage and the circuit is not shorted internally.
- 5 Swap the cylinder 5 pressure sensor with a known-good sensor from another cylinder, if accessible, and see if the code moves to confirm sensor failure.
- 6 If wiring and connectors are good, perform a resistance test on the sensor itself and compare to manufacturer specifications; replace the sensor if out of range.
- 7 After repairs, clear codes and run a road test with live data monitoring to confirm the pressure signal returns to normal and the code does not reset.

Cylinder 5 pressure sensor low-voltage traps

- A low signal code often results from a shorted sensor rather than a wiring problem, but technicians frequently replace the sensor without checking the harness first and end up with a repeat failure.
- On many diesel engines, the cylinder pressure sensor is integrated into the glow plug, so a glow plug fault or glow plug control module issue can set a pressure sensor code even when the sensor element itself is fine.
- The PCM may set P03BF intermittently if the connector is only loose when the engine is hot, so a cold-engine inspection can miss the fault; always wiggle-test the harness while watching live data.
- A weak battery or poor ground connection can cause a low-voltage reference signal that mimics a sensor fault, so check charging system and grounds before condemning the sensor.
- This code does not always mean the sensor is bad; a shorted signal wire can be caused by a pinched harness under the valve cover or near the exhaust, which is a common oversight during reassembly after engine work.

Can I keep driving with P03BF?

You can usually continue driving with P03BF if the engine runs smoothly and the check engine light is steady, but avoid heavy loads and long trips until the fault is diagnosed. If the engine misfires, loses power, or enters limp mode, stop driving and have the vehicle inspected promptly to prevent damage to the emissions system or engine.



Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with resistance and voltage measurement
- Wiring diagram or service information for the specific vehicle
- Basic hand tools for connector and sensor access
- Electrical contact cleaner and dielectric grease
- Test light or jumper wires for circuit testing

Reading P03BF

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
3	Ignition system and misfire.
BF	The exact fault within that area.

Often seen with

P03B9 Cylinder 4 Pressure Too High · **P03BA** Cylinder 4 Pressure Variation Low · **P03BB** Cylinder 4 Pressure Variation High · **P03BE** Cylinder 5 Pressure Sensor Circuit Range/Performance · **P03C0** Cylinder 5 Pressure Sensor Circuit High

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/p03bf/>

