

GENERIC · POWERTRAIN

P03B7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03B7

Cylinder 4 Pressure Sensor Circuit Intermittent/Erratic

P03B7 means the powertrain control module (PCM) has detected an intermittent or erratic signal from the cylinder 4 pressure sensor, which is used to monitor combustion pressure in that cylinder. The PCM expects a steady, predictable voltage or digital signal from the sensor, and it flags this code when the signal drops out, spikes, or jumps erratically beyond what the engine's operating conditions can explain.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or misfire-like shudder that comes and goes, especially when the engine is cold or under light load.
- Hesitation or stumble during acceleration that may feel like a transmission slip or a bad ignition coil.
- Reduced fuel economy because the PCM may default to a less efficient fueling strategy when the sensor signal is unreliable.
- In some vehicles, a forced limp-home mode with reduced power if the erratic signal is severe enough to trigger torque limiting.
- Intermittent stalling or hard starting when the sensor signal drops out completely during cranking or idle.

Common causes, most likely first

- 1 A failing cylinder 4 pressure sensor that has become heat-soaked or internally damaged, causing intermittent signal loss.
- 2 Damaged or chafed wiring in the sensor harness, often near the exhaust manifold or where the loom bends around the cylinder head.
- 3 Corroded or loose electrical connector pins at the sensor or at the PCM, allowing the signal to cut in and out with engine vibration.
- 4 A poor ground connection for the sensor circuit, which can make the reference voltage float and produce erratic readings.
- 5 Carbon buildup or mechanical damage on the sensor tip from combustion byproducts, altering the pressure reading intermittently.
- 6 PCM software calibration issues or internal driver faults that misread a healthy sensor signal, though this is less common.
- 7 A mechanical engine problem such as a sticking valve or excessive blow-by that creates pressure pulses the sensor cannot interpret consistently.



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then check freeze-frame data to see the engine conditions when P03B7 was set.
- 2 Visually inspect the cylinder 4 pressure sensor, its connector, and the wiring harness for chafing, corrosion, or loose pins, repairing any damage found.
- 3 Back-probe the sensor signal wire at the connector and wiggle the harness while watching a multimeter or scan tool graph to catch intermittent dropouts.
- 4 Check the sensor's reference voltage and ground circuit at the connector with the key on, engine off, comparing readings to the manufacturer's specification.
- 5 If the wiring and connectors pass inspection, swap the cylinder 4 pressure sensor with a known-good unit from another cylinder if the design allows, and see if the code moves.
- 6 Perform a compression test and cylinder leak-down test on cylinder 4 to rule out mechanical faults that could mimic a sensor signal problem.
- 7 After any repair, clear the codes and drive the vehicle through a complete readiness cycle to confirm the code does not return.

Why cylinder 4 pressure sensors fool good technicians

- A chafed signal wire that only shorts when the engine torques over under load will pass every static multimeter test, so always wiggle-test the harness with the engine running and the scan tool graphing live data.
- The cylinder pressure sensor shares its reference voltage and ground with other sensors on many engines, so a fault in a neighbouring circuit can corrupt the cylinder 4 signal and set this code without the sensor itself being bad.
- Technicians often replace the sensor first and then find the real problem is a corroded PCM connector pin, so inspect both ends of the circuit before condemning the sensor.
- This code can be set by a momentary glitch during cranking on a weak battery, so check battery health and charging voltage before diving into sensor diagnostics.
- On some engines the cylinder pressure sensor is used for misfire detection and fuel control, so an erratic signal can cause drivability symptoms that mimic ignition or fuel delivery faults and lead to unnecessary tune-up parts.

Can I keep driving with P03B7?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long highway trips because an erratic cylinder pressure signal can cause misfuelling and eventually damage the catalytic converter. If the engine is running rough, stalling, or in limp mode, stop driving and have it towed.



Tools that help

- OBD-II scan tool with live data graphing capability
- Digital multimeter with back-probe pins
- Wiring diagram and connector pinout for the specific vehicle
- Compression tester and cylinder leak-down tester
- Hand tools for removing engine covers and accessing the sensor

Reading P03B7

- P** Powertrain: engine, transmission and emissions.
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- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 3** Ignition system and misfire.
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- B7** The exact fault within that area.

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0304** Cylinder 4 Misfire Detected · **P03B5** Cylinder 4 Pressure Sensor Circuit Low · **P03B6** Cylinder 4 Pressure Sensor Circuit High · **P03B8** Cylinder 4 Pressure Too Low

See it working

Watch the animated explainer [How the PCV System Works: Crankcase Ventilation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03b7/>

