



P047C

Exhaust Pressure Sensor B Circuit Low

P047C means the powertrain control module (PCM) has detected a low-voltage condition on the signal circuit for Exhaust Pressure Sensor B, which is typically a differential pressure sensor used to monitor the diesel particulate filter (DPF). The PCM expects the sensor's signal voltage to stay within a calibrated range, and a sustained low reading indicates a short to ground, an open circuit, or a failed sensor.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode if the fault triggers a derate strategy
- Poor fuel economy or increased regeneration frequency
- Black smoke or rough running if the DPF load calculation is affected
- A message on the dashboard indicating an exhaust system or emissions fault

Common causes, most likely first

- 1 Failed exhaust pressure sensor B (internal short or drift)
- 2 Damaged or disconnected sensor wiring harness, especially at the connector
- 3 Corroded or loose electrical terminals at the sensor or PCM
- 4 Short to ground on the signal circuit between the sensor and PCM
- 5 Exhaust leaks or blockages that cause the sensor to read outside its expected range
- 6 Water intrusion or contamination in the sensor connector
- 7 PCM internal fault (rare, but possible after other causes are ruled out)

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for related codes in the same circuit
- 2 Inspect the sensor connector and wiring for damage, corrosion, or loose pins
- 3 Measure the sensor reference voltage and ground at the connector with a multimeter
- 4 Check the signal circuit for a short to ground by measuring resistance to chassis ground
- 5 Compare the sensor's live data reading with a known-good value or a mechanical pressure gauge
- 6 Replace the exhaust pressure sensor B if electrical checks confirm it is faulty
- 7 Clear the code and perform a road test to confirm the repair and ensure no pending codes return



Don't overlook the exhaust pressure sensor circuit

- A low signal voltage often comes from a short to ground in the wiring harness where it rubs against the frame or heat shields, not from the sensor itself.
- Exhaust pressure sensor B is frequently the differential pressure sensor across the DPF, so a reading that is low can be caused by a cracked or disconnected pressure hose rather than an electrical fault.
- Some vehicles use the same sensor for both exhaust pressure and DPF differential pressure, and a faulty sensor can cause incorrect regeneration scheduling without setting a separate code.
- A clogged DPF can cause the sensor to read abnormally low if the pressure ports are blocked, leading to a misdiagnosis of the sensor when the real problem is the filter.
- After replacing the sensor, a relearn or adaptation reset may be required on some models to clear the learned values and prevent the code from returning.

Can I keep driving with P047C?

You can usually drive with this code, but avoid heavy acceleration and long trips until it is diagnosed, because a faulty exhaust pressure sensor can lead to incorrect DPF regeneration and potential emissions system damage. If the engine enters limp mode or you notice excessive smoke, have the vehicle inspected promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Hand vacuum pump or pressure gauge for testing sensor response

Reading P047C

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
7C	The exact fault within that area.

Often seen with

P047D Exhaust Pressure Sensor B Circuit High · **P047E** Exhaust Pressure Sensor B Circuit Intermittent/Erratic · **P047F** Exhaust Pressure Control Valve A Stuck Open · **P2002** Particulate Trap Efficiency Below Threshold (Bank 1) · **P2453** Diesel Particulate Filter Pressure Sensor Circuit Range/Perf



See it working

Watch the animated explainer [Car Relay Test Bench: Test 4-Pin and 5-Pin Relays](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p047c/>

