

GENERIC · POWERTRAIN

P222C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P222C

Barometric Pressure Sensor B Circuit Low

P222C indicates that the powertrain control module has detected a low voltage signal on the barometric pressure sensor B circuit, which is used to measure atmospheric pressure for fuel and boost calculations. The computer expects the sensor's signal voltage to stay within a calibrated range, and a sustained low reading tells it the circuit is shorted to ground, the sensor has failed, or the reference voltage is missing.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling acceleration because the engine computer is using an incorrect atmospheric pressure value
- Reduced fuel economy or black smoke from the tailpipe if the engine runs rich
- Poor performance at high altitude, where the pressure difference is greatest
- A stored freeze-frame showing the fault occurred during a key-on or steady-cruise moment
- In some vehicles, a message in the driver information center about a service engine soon condition

Common causes, most likely first

- 1 Failed barometric pressure sensor B, often due to internal contamination or age
- 2 Corroded, loose, or damaged electrical connector at the sensor
- 3 Chafed or open signal wire between the sensor and the powertrain control module
- 4 Signal wire shorted to ground along its routing
- 5 Missing or low 5-volt reference voltage at the sensor connector
- 6 Faulty powertrain control module, though this is rare and should be confirmed last
- 7 Water intrusion into the sensor housing or connector causing a low-resistance path to ground



How to diagnose and fix it

- 1 Connect a scan tool and record the barometric pressure sensor B voltage with the key on, engine off, then compare it to a known-good value or a nearby vehicle at the same altitude
- 2 Visually inspect the sensor and its connector for corrosion, pushed-out pins, or cracked housing, and clean or repair as needed
- 3 Backprobe the sensor connector to verify the 5-volt reference and ground circuits are present and stable
- 4 Measure resistance or continuity on the signal wire from the sensor to the powertrain control module to rule out an open or short to ground
- 5 If the wiring and reference voltage are good, substitute a known-good sensor and recheck the live data to confirm the reading normalizes
- 6 Clear the diagnostic trouble code and perform a road test with the scan tool recording to ensure the code does not return
- 7 If the code persists after all circuit and sensor checks pass, follow the manufacturer's diagnostic flow for powertrain control module testing before replacement

What a low baro reading really tells you

- A barometric pressure sensor B circuit low code often sets because the sensor's ground circuit is shared with other sensors, so a bad ground elsewhere can pull the signal low without the sensor itself being faulty.
- Many technicians replace the sensor first, but a simple voltage drop test on the ground side of the circuit frequently reveals the real problem in minutes.
- The barometric pressure reading is used to calculate air density for fuel delivery, so a low signal can make the engine run rich and mask itself as a fuel system or mass airflow sensor issue.
- On some vehicles, the barometric pressure sensor is integrated into the mass airflow sensor or the powertrain control module, so the repair path changes entirely and the code may not point to a stand-alone part.
- A low circuit code can also set intermittently from water intrusion after a car wash or heavy rain, leaving no fault present when the technician inspects it.

Can I keep driving with P222C?

You can usually drive the vehicle to a repair shop, but avoid heavy acceleration, towing, or high-altitude driving because the engine may run rich and lack power. If the check engine light starts flashing or the engine runs very poorly, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with backprobe pins
- Wiring diagram for the barometric pressure sensor circuit
- Basic hand tools for connector and sensor access
- Voltage drop tester or test light



Reading P222C

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 2** Fuel and air metering (injector circuits).
- 2C** The exact fault within that area.

Often seen with

P0106 MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P2228** Barometric Pressure Circuit Low · **P2229** Barometric Pressure Circuit High · **P222D** Barometric Pressure Sensor B Circuit High

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/p222c/>

