

GENERIC · POWERTRAIN

P0129

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0129

Barometric Pressure Too Low

P0129 means the powertrain control module (PCM) has detected a barometric pressure (BARO) signal that is lower than the minimum plausible value for the vehicle's operating conditions. The PCM compares the BARO sensor reading against expected atmospheric pressure derived from other sensors, and when the signal falls below the calibrated threshold, it stores this code and illuminates the check engine light.

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

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Rough idle or stalling, especially at high altitude or during cold starts
- Poor fuel economy or rich-running condition due to incorrect air density calculation
- Hesitation or lack of power during acceleration
- Black smoke from the exhaust or a strong fuel odor in severe cases
- Elevated idle speed or erratic shifting in some transmissions

Common causes, most likely first

- 1 Faulty barometric pressure sensor (integrated into the mass air flow sensor on many vehicles)
- 2 Damaged or corroded wiring or connector at the BARO sensor or MAF sensor
- 3 Restricted or blocked sensor port or reference tube due to dirt, debris, or ice
- 4 Vacuum leak or intake air leak upstream of the throttle body affecting sensor readings
- 5 PCM software calibration issue or internal PCM fault (less common)
- 6 Extremely high altitude operation beyond the sensor's calibrated range (rare, usually accompanied by other codes)



How to diagnose and fix it

- 1 Connect an OBD-II scan tool and record freeze-frame data, including BARO, MAP, and MAF readings, to compare against expected values for your altitude
- 2 Visually inspect the BARO sensor (or MAF sensor with integrated BARO) for physical damage, contamination, or a blocked sensing port
- 3 Check the sensor's electrical connector and wiring for corrosion, loose pins, or chafed insulation, and perform a wiggle test while monitoring live data
- 4 Measure reference voltage and ground at the sensor connector with a multimeter to confirm the circuit is intact
- 5 Compare the BARO reading with a known-good pressure source or a nearby weather station's barometric pressure to validate sensor accuracy
- 6 If the sensor is integrated into the MAF, clean the MAF element with approved cleaner and recheck live data before replacement
- 7 Replace the faulty sensor only after confirming the circuit and sensor signal are out of specification, then clear codes and verify repair with a road test

Barometric pressure sensor misdiagnosis traps

- Many technicians replace the mass air flow sensor unnecessarily because the BARO sensor is built into it, but a simple wiring fault or dirty sensing element often causes the same low-signal code.
- A P0129 can be set by a vacuum leak or unmetered air entering the intake, which skews the PCM's pressure model and makes a healthy BARO sensor look faulty.
- Altitude changes during driving can trigger this code if the sensor's calibration drift is borderline, so always verify the code's freeze-frame data against the actual altitude where the fault set.
- The BARO sensor shares a 5-volt reference and ground with other sensors on many vehicles, so a short in a related circuit can pull down the BARO signal and set P0129 without any fault in the sensor itself.
- Clearing the code without repairing the root cause often leads to a repeat failure, and the PCM may substitute a default barometric value that masks driveability symptoms while the underlying fault remains.

Can I keep driving with P0129?

You can usually drive the vehicle short distances to a repair shop, but avoid sustained high-speed driving, heavy towing, or aggressive acceleration because the incorrect air density calculation can cause rich running and increased exhaust emissions. If the engine runs rough, stalls, or the check engine light flashes, stop driving and seek immediate service.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Hand tools for connector and sensor removal
- MAF sensor cleaner (if applicable)
- Vacuum gauge or smoke machine for intake leak testing

Reading P0129

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

Often seen with

P0101 Mass/Volume Air Flow Circuit Range/Performance · **P0102** Mass/Volume Air Flow Circuit Low Input · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0172** System Too Rich (Bank 1)

See it working

Watch the animated explainer [How Variable Valve Timing Works: Cam Phaser and VVT Solenoid](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0129/>

