

GENERIC · POWERTRAIN

P227A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P227A

Barometric Pressure Sensor C Circuit

P227A indicates that the powertrain control module has detected an electrical fault in the circuit for Barometric Pressure Sensor C, which is one of the pressure sensors used to measure atmospheric pressure for fuel and boost calculations. The computer compares the sensor signal voltage against expected values and sets this code when the reading falls outside the normal range or the circuit behaves erratically.

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 due to incorrect fuel delivery calculations
- Reduced engine performance or poor fuel economy as the computer substitutes default pressure values
- Hesitation or surging during acceleration, especially at higher altitudes
- In rare cases, the engine may stall or fail to start if the sensor signal is completely lost

Common causes, most likely first

- 1 Faulty barometric pressure sensor C itself, due to internal failure or contamination
- 2 Damaged or corroded wiring harness or connector at the sensor
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Poor electrical connection at the powertrain control module connector
- 5 Water intrusion or physical damage to the sensor or its mounting area
- 6 Failed sensor reference voltage supply from the computer



How to diagnose and fix it

- 1 Connect a scan tool and record the barometric pressure sensor C reading with key on, engine off, comparing it to actual atmospheric pressure for your altitude
- 2 Visually inspect the sensor, connector, and wiring for corrosion, cracks, or loose pins, and repair any obvious damage
- 3 Measure reference voltage and ground at the sensor connector with a digital multimeter to confirm the circuit is intact
- 4 Backprobe the signal wire and check for a smooth voltage change when applying vacuum or pressure to the sensor, if accessible
- 5 Check for technical service bulletins or known issues for your vehicle make and model related to barometric pressure sensor faults
- 6 If the circuit tests good but the signal is implausible, replace the barometric pressure sensor C and clear the code
- 7 After repair, clear codes and verify the sensor reading matches actual barometric pressure, then perform a road test to confirm the code does not return

What most technicians overlook with P227A

- A barometric pressure sensor C code can be set by a contaminated or clogged sensor port rather than an electrical failure, so cleaning the sensor opening often restores normal operation without replacement.
- Some vehicles use the barometric pressure sensor to cross-check the mass airflow sensor, so a P227A may appear alongside fuel trim or MAF codes and mislead you into replacing the wrong part.
- The sensor may be integrated into the powertrain control module on certain engines, meaning a faulty sensor requires module replacement or reprogramming rather than a simple bolt-on part.
- Altitude and weather changes can cause the sensor reading to drift slightly, but a code is only set when the signal exceeds the computer's plausibility threshold, so do not dismiss a stored code as a false alarm without testing.
- Corroded pins at the powertrain control module connector can mimic a failed sensor, and a thorough wiggle test of the harness while watching live data often reveals the true cause.

Can I keep driving with P227A?

You can generally continue driving with this code because the computer substitutes a default barometric pressure value, but expect reduced fuel economy and performance. Avoid heavy towing or sustained high-speed driving until the fault is repaired, and address the code promptly to prevent secondary issues.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Hand vacuum pump with gauge
- Wiring diagram for your vehicle
- Basic hand tools for connector and sensor access

Reading P227A

- P** Powertrain: engine, transmission and emissions.
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- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 2** Fuel and air metering (injector circuits).
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- 7A** The exact fault within that area.

Often seen with

P0106 MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0108** MAP/Barometric Pressure Circuit High Input · **P2228** Barometric Pressure Circuit Low · **P2229** Barometric Pressure Circuit High

See it working

Watch the animated explainer [Excavator Simulator: Hydraulics You Can Operate](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p227a/>

