

CHRYSLER · POWERTRAIN

P1451

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1451 · Chrysler

Barometric Pressure Sensor Performance

P1451 on a Chrysler vehicle means the powertrain control module (PCM) has detected that the barometric pressure sensor's output is outside the expected range or is not responding correctly to changes in altitude and engine load. The PCM compares the barometric pressure reading with other sensor inputs, such as the manifold absolute pressure (MAP) sensor and throttle position, and sets this code when the barometric signal is implausible or erratic.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or poor engine performance, especially at high altitudes.
- Hesitation or stumble during acceleration due to incorrect fuel mixture.
- Reduced fuel economy as the PCM compensates for a faulty barometric reading.
- In some cases, the engine may stall or have difficulty starting.

Common causes, most likely first

- 1 Faulty barometric pressure sensor (often integrated into the MAP sensor on Chrysler engines).
- 2 Damaged or corroded wiring or connector at the barometric pressure sensor.
- 3 Vacuum leak or restriction in the sensor's pressure port or hose.
- 4 Failed PCM, though this is less common and should be diagnosed last.
- 5 Contaminated sensor element due to oil or debris ingress.
- 6 Poor electrical ground connection for the sensor circuit.

How to diagnose and fix it

- 1 Use an OBD-II scanner to verify the code and check barometric pressure readings against actual altitude.
- 2 Inspect the sensor and its connector for physical damage, corrosion, or loose pins.
- 3 Check the sensor's vacuum hose and port for blockages or leaks.
- 4 Test the sensor's reference voltage and signal voltage with a multimeter according to Chrysler service information.
- 5 Compare the barometric pressure reading with the MAP sensor reading at key-on, engine-off; they should be close.
- 6 Replace the barometric pressure sensor or MAP sensor if testing indicates it is faulty.
- 7 Clear the code and perform a road test to confirm the repair.



Don't overlook the MAP sensor connection

- On many Chrysler engines, the barometric pressure sensor is integrated into the manifold absolute pressure (MAP) sensor, so a P1451 may actually indicate a failing MAP sensor rather than a separate barometric sensor.
- A dirty or restricted air filter can cause barometric pressure readings to be skewed, leading to a false P1451 code.
- Technicians often misdiagnose P1451 as a PCM failure when the real issue is a poor ground connection at the sensor or a chafed wire in the harness.
- Altitude changes during driving can trigger the code if the sensor is slow to respond, so testing should include a simulated altitude change if possible.
- Related codes such as P0106, P0107, or P0108 may also be present, indicating a broader MAP sensor circuit issue.

Can I keep driving with P1451?

You can usually continue driving with a P1451 code, but expect reduced fuel economy and possible performance issues, especially at high altitudes. Avoid heavy acceleration or towing until the fault is repaired, and address the code promptly to prevent long-term engine management problems.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Hand tools for sensor removal
- Vacuum pump and gauge
- Chrysler service information for voltage specifications

Reading P1451

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Chrysler): its meaning depends on the make.
4	Auxiliary emission controls.
51	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 · **P0171** System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1)



See it working

Watch the animated explainer [How a Starter Motor Works: Pre-Engaged Starter](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1451/>

