

GENERIC · POWERTRAIN

P2528

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2528

Vacuum Reservoir Pressure Sensor Circuit High

P2528 means the powertrain control module (PCM) has detected a voltage signal from the vacuum reservoir pressure sensor that is higher than the expected range for the current operating conditions. The sensor monitors pressure inside the vacuum reservoir used by systems such as the brake booster and HVAC controls, and a high signal typically indicates an open circuit, a short to voltage, or a sensor that has failed internally.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced or inconsistent brake pedal assist, especially after the engine has been off for a short period
- HVAC air flow defaulting to defrost mode or blend door actuators behaving erratically
- A hissing or whistling noise from the engine bay related to a vacuum leak
- Rough idle or lean fuel trim codes if the leak affects engine vacuum
- In some vehicles, a message on the driver information center about a chassis or brake system fault

Common causes, most likely first

- 1 Open circuit in the sensor signal wire, such as a broken wire or poor terminal tension
- 2 Short to voltage on the sensor signal circuit, often from chafed wiring near the engine or battery
- 3 Failed vacuum reservoir pressure sensor reading high or stuck
- 4 Disconnected or cracked vacuum hose between the reservoir and the sensor, causing the sensor to see atmospheric pressure
- 5 Corroded or damaged connector pins at the sensor or PCM
- 6 A faulty PCM driver or internal pull-up resistor, though this is rare
- 7 Aftermarket accessories tapped into the sensor reference or signal circuit



How to diagnose and fix it

- 1 Connect a scan tool and record the sensor voltage with key on, engine off, then compare it to the expected value for your vehicle; a reading near 5 volts points to an open signal circuit or short to voltage
- 2 Visually inspect the sensor, connector, and vacuum hoses for cracks, disconnects, or contamination, and repair any obvious faults
- 3 Backprobe the sensor signal wire at the connector and check voltage while wiggling the harness to reveal intermittent opens
- 4 Measure resistance from the sensor signal pin to the PCM pin to confirm continuity, and check for shorts to battery voltage with the key on
- 5 If wiring and vacuum supply are good, substitute a known-good sensor and clear the code to see if it returns
- 6 Check for aftermarket wiring or accessories spliced into the sensor circuits and restore factory wiring if found
- 7 Clear codes and perform a road test with the scan tool recording sensor voltage to confirm the repair

What a high vacuum sensor signal really means

- A high signal voltage often means the sensor is seeing atmospheric pressure because a vacuum hose has popped off or cracked, not that the sensor itself has failed.
- Many technicians replace the sensor first, but a simple continuity check from the sensor connector to the PCM will find an open signal wire in minutes and save the part.
- This code can be set by a weak or failing vacuum pump on engines that use one for brake assist, so check pump operation and reservoir hold-down before condemning the sensor.
- A short to voltage on the signal circuit can be caused by wiring chafing against a metal bracket near the battery or fuse box, which is easy to miss during a visual inspection.
- On some vehicles, the vacuum reservoir pressure sensor shares a reference voltage with other sensors, so a fault in that shared circuit can set P2528 along with codes for those other sensors.

Can I keep driving with P2528?

You can usually drive the vehicle to a repair shop, but be aware that brake assist and HVAC performance may be reduced, so increase following distance and avoid heavy braking until the fault is repaired.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Vacuum gauge or hand vacuum pump
- Wiring diagram for the specific vehicle
- Terminal pick and wire repair kit



Reading P2528

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 28** The exact fault within that area.

Often seen with

P1471 EVAP Emission Control System LDP Circuit Short To B+ · **P0171** System Too Lean (Bank 1) · **P0174** System Too Lean (Bank 2) · **P2527** Vacuum Reservoir Pressure Sensor Circuit Low · **P2529** Vacuum Reservoir Pressure Sensor Circuit Intermittent

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2528/>

