

GENERIC · POWERTRAIN

P2169

OBD-II TROUBLE CODE

P2169

Exhaust Pressure Regulator Vent Solenoid Control Circuit/Open

P2169 indicates that the powertrain control module (PCM) has detected an open circuit or excessive resistance in the control circuit for the exhaust pressure regulator vent solenoid. This solenoid is used on some diesel and gasoline engines to manage exhaust backpressure, and the PCM monitors the circuit for expected voltage or current changes when the solenoid is commanded on or off.

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

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) with no other noticeable symptoms
- Rough running or hesitation during acceleration if the vent solenoid fails to open and exhaust backpressure builds
- Reduced engine power or limp mode in some vehicles as a protective measure
- Increased exhaust noise or a hissing sound from the vent solenoid area
- Poor fuel economy or increased regeneration frequency on diesel engines
- In rare cases, a no-start condition if the backpressure severely restricts exhaust flow

Common causes, most likely first

- 1 Broken, corroded, or disconnected wiring in the vent solenoid control circuit
- 2 Failed vent solenoid (open coil or seized plunger)
- 3 Loose or damaged electrical connector at the vent solenoid
- 4 PCM internal driver failure (less common)
- 5 Exhaust pressure regulator assembly damage affecting solenoid operation
- 6 Water or debris intrusion into the solenoid connector causing corrosion



How to diagnose and fix it

- 1 Use a scan tool to command the vent solenoid on and off while listening for an audible click; no click suggests an electrical or mechanical fault.
- 2 Visually inspect the solenoid connector and wiring for corrosion, chafing, or loose pins, and repair as needed.
- 3 Measure resistance across the solenoid coil with a multimeter and compare to the manufacturer's specification; an open or shorted coil requires solenoid replacement.
- 4 Check for battery voltage at the solenoid connector with the key on and the circuit commanded on; if voltage is missing, trace the circuit back to the PCM or fuse.
- 5 Perform a voltage drop test on both the power and ground sides of the control circuit to identify excessive resistance.
- 6 If the circuit and solenoid test good, check for PCM software updates or internal driver faults before replacing the PCM.
- 7 Clear the code and verify the repair by running the appropriate monitor or test drive to confirm the code does not return.

Don't overlook the vent solenoid circuit

- A common mistake is replacing the exhaust pressure regulator assembly when the actual fault is a simple broken wire or corroded connector, so always perform a thorough circuit test first.
- The vent solenoid is often confused with the EGR valve or turbocharger vanes, but P2169 specifically points to the vent solenoid control circuit, not those components.
- On some vehicles, the vent solenoid shares a ground with other sensors, so a bad ground can set P2169 along with other codes; check for multiple codes before condemning the solenoid.
- Intermittent open circuits can be caused by vibration or heat damage to the wiring harness near the exhaust, so wiggle-test the harness while monitoring solenoid resistance.
- A failed vent solenoid can cause excessive exhaust backpressure that mimics a clogged particulate filter or catalytic converter, leading to misdiagnosis if the circuit is not checked first.

Can I keep driving with P2169?

You can usually drive the vehicle with P2169 set, but avoid heavy acceleration or towing until the fault is repaired because excessive exhaust backpressure can damage the engine or emissions system. If the vehicle enters limp mode or runs poorly, seek service promptly.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Wire piercing probes or back probe pins
- Service information for circuit specifications
- Basic hand tools for connector and component access



Reading P2169

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

Often seen with

P0470 Exhaust Pressure Sensor · **P0471** Exhaust Pressure Sensor Range/Performance · **P0472** Exhaust Pressure Sensor Low · **P2168** Throttle/Pedal Position Sensor 'F' Maximum Stop Performance · **P2170** Exhaust Pressure Regulator Vent Solenoid Control Circuit Low

See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2169/>

