

VOLKSWAGEN · POWERTRAIN

**P1229**

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## P1229 · Volkswagen

# Cylinder 5 Injector Circuit Short To Ground

P1229 on a Volkswagen means the engine control module (ECM) has detected a short to ground on the electrical circuit that fires cylinder 5's fuel injector. The ECM commands the injector on and monitors the circuit, and it sees the voltage stay at or near zero volts when it should pulse, indicating the control wire is touching ground or the injector's internal coil has shorted.

SYSTEM

Powertrain

CODE TYPE

Volkswagen  
specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air  
metering (injector  
circuits)

## Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Rough idle or misfire that is most pronounced at idle and low engine speeds
- Noticeable loss of power and sluggish acceleration under load
- Shaking or vibration from the engine bay, especially when cold
- Fuel smell from the exhaust or black smoke if the injector is stuck open
- In rare cases, the engine may stall or be hard to start

## Common causes, most likely first

- 1 Frayed or chafed injector harness wire shorting to the engine block or chassis
- 2 Failed cylinder 5 fuel injector with an internally shorted solenoid coil
- 3 Corroded or water-intruded injector connector pins causing a short
- 4 Damaged engine wiring harness near the intake manifold or cylinder head
- 5 ECM driver circuit failure for cylinder 5 injector (less common)
- 6 Aftermarket alarm or remote start wiring tapped into the injector circuit



## How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the fault is active and not intermittent
- 2 Visually inspect the cylinder 5 injector connector and harness for chafing, corrosion, or loose pins
- 3 Disconnect the injector and measure resistance across its terminals; compare to the other injectors
- 4 With the injector unplugged and key on, measure voltage on the control wire to ground; a near-zero reading confirms a short
- 5 Isolate the harness by wiggling and flexing sections while watching a multimeter or scope on the control wire
- 6 Repair or replace the damaged section of harness, then clear the code and verify the injector pulses with a noid light or scope
- 7 If the harness and injector test good, check the ECM driver circuit for a short to ground before condemning the ECM

## Why cylinder 5 injector shorts are often misdiagnosed

- A shorted injector coil can test fine on a basic resistance check when cold, so always compare hot and cold readings against the other injectors.
- The harness often rubs through on the metal bracket near the intake manifold, and the short only appears when the engine moves under load.
- A short to ground on the injector control wire can be caused by a failed ignition coil or spark plug wire arcing nearby, so inspect the secondary ignition system first.
- Some technicians replace the injector only to find the code returns because the ECM driver was damaged by the original short, so always check driver resistance after repair.
- P1229 can be set by a low battery or poor ground connection that causes the ECM to see a false short, so verify battery and ground integrity before condemning parts.

## Can I keep driving with P1229?

You can drive short distances to a repair shop, but avoid heavy acceleration and long trips because a shorted injector can dump raw fuel into the exhaust and overheat the catalytic converter. If the engine is misfiring badly or you smell fuel, stop driving and have it towed.

## Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter
- Noid light or oscilloscope
- Wire repair kit with crimp connectors and heat shrink
- Factory service information for wiring diagrams and pinouts



## Reading P1229

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 29** The exact fault within that area.

## Often seen with

**P1228** Cylinder 4 Injector Circuit Short To Ground · **P1230** Cylinder 6 Injector Circuit Short To Ground · **P1230** Fuel Pump Control Unit Malfunction · **P1228** Fuel Injector 4 Circuit Low Voltage · **P1228** Mechanical Guard Circuit High Input · **P1230** Fuel Pump Relay · **P1228** Injector Circuit Cylinder 3 Intermittent · **P1228** Wastegate Failed Open Under Pressure · **P1230** Open Power to Fuel Pump Circuit · **P1228** Injector Circuit Cylinder 3 Intermittent · **P0205** Injector Circuit/Open - Cylinder 5 · **P0261** Cylinder 1 Injector Circuit Low · **P0305** Cylinder 5 Misfire Detected

## See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1229/>

