

VOLKSWAGEN · POWERTRAIN

P1231

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1231 · Volkswagen

Cylinder 7 Injector Circuit Short To Ground

P1231 on Volkswagen vehicles indicates that the engine control module (ECM) has detected a short to ground in the electrical circuit for cylinder 7's fuel injector. This means the ECM sees the injector control wire as being connected directly to ground, either continuously or intermittently, which prevents the injector from opening when commanded and disrupts fuel delivery to that cylinder.

SYSTEM

Powertrain

CODE TYPE

Volkswagen
specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air
metering (injector
circuits)

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or misfire, especially noticeable at idle or low speeds
- Engine hesitation or stumbling during acceleration
- Reduced engine power and poor fuel economy
- Possible shaking or vibration from the engine bay
- In some cases, the engine may enter limp mode to protect the catalytic converter

Common causes, most likely first

- 1 Faulty fuel injector for cylinder 7 (internal short to ground)
- 2 Damaged or chafed injector wiring harness shorting to ground
- 3 Corroded or loose electrical connector at the cylinder 7 injector
- 4 Water intrusion into the injector connector or harness
- 5 ECM internal driver circuit failure (less common)
- 6 Aftermarket alarm or remote start wiring improperly tapped into injector circuits



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 7 injector connector and wiring for damage, corrosion, or chafing
- 2 Disconnect the injector and check for a short to ground on the control wire using a digital multimeter (DMM) set to resistance or continuity
- 3 Measure the resistance of the cylinder 7 injector and compare it to the manufacturer's specification
- 4 Swap the cylinder 7 injector with a known-good injector from another cylinder to see if the code follows the injector
- 5 Inspect the wiring harness along its routing for any points where it may contact metal or heat sources
- 6 Check for water or oil intrusion in the injector connector and clean or replace as necessary
- 7 If all external checks pass, test the ECM driver circuit or consult a professional for advanced diagnostics

Common misdiagnosis traps for P1231

- A short to ground in the injector circuit can be intermittent, so the code may not reappear immediately after clearing; always wiggle-test the harness while monitoring live data.
The injector itself may test good with a multimeter but still short internally when hot, so a resistance check alone is not definitive.
- Volkswagen's engine management can set this code if the injector circuit is shorted to ground through a faulty suppression capacitor or other shared component in the harness.
- Aftermarket electrical accessories tapped into the injector wiring are a frequent cause of unexplained shorts to ground on Volkswagen engines.
Do not replace the ECM unless all wiring and injector tests are conclusive; ECM driver failures are rare and expensive to misdiagnose.

Can I keep driving with P1231?

Driving with P1231 is possible but not recommended because the misfire can overheat the catalytic converter and cause costly damage. Avoid heavy acceleration or towing, and have the fault diagnosed promptly; if the engine runs very rough or flashes the check engine light, stop driving and seek professional help.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM)
- Factory service information or wiring diagrams
- Basic hand tools (socket set, screwdrivers, trim removal tools)
- Noid light or injector test light
- Electrical contact cleaner and dielectric grease



Reading P1231

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

Often seen with

P1232 Cylinder 8 Injector Circuit Short To Ground · **P1232** Low Speed Fuel Pump Primary Circuit Failure · **P1233** Fuel Pump Driver Module Off-Line · **P0207** Injector Circuit/Open - Cylinder 7 · **P0307** Cylinder 7 Misfire Detected · **P2149** Fuel Injector Group 'B' Supply Voltage Circuit/Open

See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1231/>

