

VOLKSWAGEN · POWERTRAIN

P1230

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1230 · Volkswagen

Cylinder 6 Injector Circuit Short To Ground

P1230 on Volkswagen vehicles means the engine control module (ECM) has detected a short to ground on the electrical circuit that operates the fuel injector for cylinder 6. The ECM monitors the injector driver circuit and sets this code when the voltage on the control wire stays lower than expected, indicating the wire is touching ground or the injector's internal coil has failed.

SYSTEM

Powertrain

CODE TYPE

Volkswagen
specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air
metering (injector
circuits)

Symptoms you may notice

- Rough running or misfire that is often most noticeable at idle or light throttle
- Check Engine Light illuminated, sometimes flashing if the misfire is severe
- Noticeable loss of power and reduced fuel economy
- Shaking or vibration from the engine, especially under load
- Often no symptoms besides the warning light if the short is intermittent
- In some cases, a strong raw fuel smell from the exhaust if the injector is stuck open

Common causes, most likely first

- 1 Faulty fuel injector on cylinder 6 with an internally shorted coil
- 2 Chafed or damaged injector harness wire shorting to ground
- 3 Corroded or loose electrical connector at the cylinder 6 injector
- 4 Short to ground in the engine wiring harness between the ECM and injector
- 5 Failed ECM injector driver circuit (less common)
- 6 Aftermarket alarm or remote start wiring tapped into the injector circuit incorrectly



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the fault is present and identify when it occurs
- 2 Visually inspect the cylinder 6 injector connector and harness for damage, corrosion, or chafing
- 3 Disconnect the injector and measure resistance across its terminals; compare with other injectors
- 4 With the injector disconnected, check for continuity between the injector control wire and ground; repair any short
- 5 Check the injector driver circuit from the ECM side for a short to ground with the injector unplugged
- 6 If the harness and injector test good, substitute a known-good injector or perform an injector balance test
- 7 Replace the faulty injector or repair the harness, clear codes, and verify the repair with a road test

Don't overlook the injector harness

- A short to ground can be intermittent, so wiggle-test the harness while watching live misfire counters or injector pulse width data.
- Volkswagen's injector connectors are prone to corrosion from oil and heat, which can create a partial short that only appears when the engine is warm.
- This code does not always mean the injector itself is bad; a chafed wire against the engine block is a common cause that is missed when technicians replace the injector first.
- A shorted injector can flood the cylinder with fuel, leading to bore wash and secondary misfire codes; always check for fuel contamination in the oil if the code has been present for a while.
- Aftermarket wiring for alarms or audio equipment tapped into the injector circuit can introduce a short to ground that sets P1230 without any fault in the factory harness.

Can I keep driving with P1230?

You can drive the vehicle short distances to a repair shop, but avoid heavy acceleration and prolonged driving because a misfiring cylinder can overheat the catalytic converter and cause expensive damage. If the Check Engine Light is flashing, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data and misfire counters
- Digital multimeter for resistance and continuity checks
- Wiring diagram for the Volkswagen engine management system
- Test light or noid light for injector pulse testing
- Basic hand tools for connector and harness access



Reading P1230

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

Often seen with

P1231 Cylinder 7 Injector Circuit Short To Ground · **P1232** Cylinder 8 Injector Circuit Short To Ground · **P1231** Injector Circuit Cylinder 4 Intermittent · **P1231** High Speed Fuel Pump Relay Activated · **P1232** Low Speed Fuel Pump Primary Circuit Failure · **P1231** Injector Circuit Cylinder 4 Intermittent · **P0206** Injector Circuit/Open - Cylinder 6 · **P0263** Cylinder 1 Contribution/Balance · **P0306** Cylinder 6 Misfire Detected

See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1230/>

