

VOLKSWAGEN · POWERTRAIN

P1243

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1243 · Volkswagen

Cylinder 7 Injector Circuit Open Circuit

P1243 on a Volkswagen indicates the engine control module (ECM) has detected an open circuit in the electrical path for cylinder 7's fuel injector, meaning no current is flowing when the injector should be energized. This typically results in a misfire on cylinder 7 because that injector is not firing, and the ECM may disable the injector to protect the engine.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Fuel and air
metering (injector
circuits)**

Symptoms you may notice

- Rough idle or shaking, especially noticeable when the engine is cold or under load
- Noticeable loss of power and reduced fuel economy
- Engine misfire code (such as P0307) may be stored alongside P1243
- Often no symptoms besides the warning light if the misfire is subtle at higher speeds
- Possible smell of unburned fuel from the exhaust due to a non-firing injector
- In some cases, the engine may enter limp mode to protect the catalytic converter

Common causes, most likely first

- 1 Faulty fuel injector on cylinder 7 (open coil winding internally)
- 2 Damaged or corroded electrical connector at the cylinder 7 injector
- 3 Broken or chafed wire in the injector harness near the cylinder 7 injector
- 4 Open circuit in the injector driver circuit inside the ECM (less common)
- 5 Rodent damage to the injector wiring harness
- 6 Loose or backed-out terminal in the injector connector



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 7 injector connector and wiring for damage, corrosion, or looseness
- 2 Use a noid light or oscilloscope to check for a pulse signal at the cylinder 7 injector connector while cranking the engine
- 3 Measure the resistance of the cylinder 7 injector with a multimeter and compare to the manufacturer's specification (typically 10-15 ohms)
- 4 Check continuity of the injector circuit from the ECM connector to the injector connector to identify an open wire
- 5 If the injector resistance is out of spec or the coil is open, replace the cylinder 7 fuel injector
- 6 If the wiring is faulty, repair or replace the affected section of the harness
- 7 Clear the fault codes and verify the repair with a test drive, ensuring no misfire or pending codes return

Don't overlook the injector harness connector

- A common mistake is replacing the injector without first checking the connector terminals, which often corrode or lose tension and cause an open circuit that mimics a failed injector.
- The ECM may set P1243 without illuminating the check engine light immediately if the misfire is not severe enough to trigger the federal emissions threshold, so always scan for pending codes.
- On some Volkswagen engines, the injector harness runs near hot components and can suffer heat damage that leads to intermittent open circuits, especially when the engine is cold.
- P1243 can be set by a faulty ECM driver, but this is rare; always rule out the injector and wiring before condemning the ECM.
- A noid light test is quick and definitive for confirming whether the ECM is commanding the injector, but it does not test the injector itself; combine it with a resistance check.

Can I keep driving with P1243?

You can drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because the misfire can overheat the catalytic converter and cause costly damage. If the engine is running very rough or flashing the check engine light, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Noid light or oscilloscope
- Wire repair kit (solder, heat shrink, terminals)
- Basic hand tools (socket set, screwdrivers)



Reading P1243

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

Often seen with

P1246 Needle Lift Sensor Circuit Range Performance · **P1244** Cylinder 8 Injector Circuit Open Circuit · **P1245** Needle Lift Sensor Circuit Short To Ground · **P1244** Wastegate Control Solenoid Valve Malfunction Low Input · **P1245** Wastegate Control Solenoid Valve Malfunction Fail Safe · **P1246** Accelerator Position Sensor 1 Circuit Malfunction · **P1244** Closed Throttle Position Insufficient · **P1246** Crank Signal High Input · **P1245** Crank Signal Low Input · **P1244** Closed Throttle Position Insufficient · **P1246** Accelerator Position Sensor 1 Circuit Malfunction · **P1245** Intake Plenum Switchover Valve · **P1246** Alternator Load Input Failed · **P1245** Alternator Load Input Failed Low · **P1244** Alternator Load Input Failed High · **P1245** Intake Plenum Switchover Valve · **P0207** Injector Circuit/Open - Cylinder 7 · **P0307** Cylinder 7 Misfire Detected

See it working

Watch the animated explainer [Disc Brake Trainer: How Car Brakes Stop a Wheel](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1243/>

