

VOLKSWAGEN · POWERTRAIN

P1240

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1240 · Volkswagen

Cylinder 4 Injector Circuit Open Circuit

P1240 on Volkswagen vehicles indicates that the engine control module (ECM) has detected an open circuit in the electrical path for the cylinder 4 fuel injector, meaning the expected current flow is absent when the injector is commanded on. This typically results in a misfire on cylinder 4 and may cause the engine to run rough or enter limp mode.

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 engine misfire, especially noticeable at idle or low speeds
- Check Engine Light illuminated, often flashing if the misfire is severe
- Reduced engine power or limp mode activation
- Shaking or vibration from the engine bay
- Often no symptoms besides the warning light if the injector circuit is intermittently open

Common causes, most likely first

- 1 Faulty or damaged fuel injector for cylinder 4 (open coil winding)
- 2 Corroded, loose, or damaged electrical connector at the cylinder 4 injector
- 3 Broken or chafed wire in the injector harness, often near the cylinder head or intake manifold
- 4 Open circuit in the injector driver wire between the ECM and the injector
- 5 Failed ECM injector driver (less common but possible)
- 6 Rodent damage to the wiring harness

How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 4 injector connector and wiring for damage or corrosion
- 2 Disconnect the injector and measure resistance across its terminals; compare to the other injectors (typically 12-16 ohms)
- 3 Check for battery voltage at the injector connector with the key on, engine off, using a multimeter or test light
- 4 Inspect the harness for continuity between the ECM and injector, and check for shorts to ground or power
- 5 Swap the cylinder 4 injector with another cylinder to see if the misfire moves, confirming injector fault
- 6 If the injector tests good, check the ECM driver signal with an oscilloscope or noid light
- 7 Replace the faulty injector or repair the wiring as needed, then clear codes and verify the repair



Common Misdiagnosis Traps for P1240

- A misfire on cylinder 4 does not always mean the injector itself is bad; the open circuit could be in the wiring or connector, so always test the circuit before replacing parts.
- Volkswagen engines often suffer from brittle wiring insulation near the cylinder head due to heat cycling, leading to intermittent open circuits that only appear when the engine is hot or vibrating.
- The ECM may set P1240 without storing a misfire code if the open circuit is intermittent, so do not rely solely on misfire counters to confirm the fault.
- Aftermarket injectors with incorrect resistance values can trigger this code even when new, so always verify resistance against the factory specification.
- Corrosion inside the injector connector can cause an open circuit that is not visible from the outside; disconnecting and inspecting the pins is essential.

Can I keep driving with P1240?

Driving with a confirmed cylinder 4 injector open circuit is not recommended because the misfire can damage the catalytic converter and cause poor engine performance. If the check engine light is flashing, stop driving immediately and have the vehicle towed to a repair shop.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Test light
- Noid light
- Oscilloscope (optional for advanced diagnosis)
- Basic hand tools (socket set, screwdrivers, pliers)

Reading P1240

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



Often seen with

P1243 Cylinder 7 Injector Circuit Open Circuit · **P1242** Cylinder 6 Injector Circuit Open Circuit · **P1241** Cylinder 5 Injector Circuit Open Circuit · **P1242** Throttle Vent Control Motor Circuit 2 Malfunction · **P1243** Throttle Position Insufficient · **P1241** Throttle Vent Control Motor Circuit 1 Malfunction · **P1242** Sensor Power Supply High Input · **P1241** Sensor Power Supply Low Input · **P1243** Analog Ground · **P1242** Throttle Vent Control Motor Circuit 2 Malfunction · **P1243** Throttle Position Insufficient · **P1241** Throttle Vent Control Motor Circuit 1 Malfunction · **P1243** Injector Circuit Cylinder 8 Intermittent · **P1243** Second Fuel Pump Faulty or Ground Fault · **P1243** Open Or Shorted Condition Detected In The Turbocharger Surge · **P0204** Injector Circuit Malfunction - Cylinder 4 · **P0304** Cylinder 4 Misfire Detected

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1240/>

