

VOLKSWAGEN · POWERTRAIN

P1211

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1211 · Volkswagen

Intake Valves For Cylinder Shut-Off Open Circuit

P1211 on Volkswagen vehicles means the engine control module (ECM) has detected an open circuit in the wiring for the intake valve cylinder shut-off solenoid, which is part of the active cylinder management system on certain engines. The ECM commands the solenoid to change the intake valve lift for deactivation, but the electrical feedback does not match the expected current, so it flags the circuit as open.

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 slight vibration when the engine transitions between full and reduced displacement
- Reduced fuel economy because cylinder deactivation is disabled and the engine runs on all cylinders
- Intermittent misfire-like shudder under light load if the solenoid sticks or the circuit is intermittent
- A stored P1211 code alone, with no drivability complaint in many cases

Common causes, most likely first

- 1 Broken, chafed, or corroded wiring between the ECM and the intake valve cylinder shut-off solenoid
- 2 Failed intake valve cylinder shut-off solenoid (open coil or damaged connector)
- 3 Loose or corroded electrical connector at the solenoid or at the ECM
- 4 Blown fuse or relay supplying power to the cylinder shut-off circuit
- 5 Internal fault in the ECM driver for that solenoid circuit
- 6 Oil sludge or debris blocking the solenoid plunger, causing it to draw abnormal current and set an open-circuit code



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1211 is active and not a historical ghost code
- 2 Inspect the solenoid connector and wiring harness for corrosion, chafing, or loose pins, and repair as needed
- 3 Measure resistance of the intake valve cylinder shut-off solenoid and compare to the manufacturer specification
- 4 Check for battery voltage and ground at the solenoid connector with the key on and the circuit commanded
- 5 Perform a wiggle test on the harness while monitoring solenoid resistance or circuit status on a scan tool
- 6 If wiring and solenoid test good, check the ECM driver output with a lab scope or substitute a known-good ECM
- 7 Clear codes and road-test the vehicle through several cylinder deactivation cycles to verify the repair

Cylinder shut-off solenoid circuit traps

- A P1211 can be set by a perfectly functional solenoid if the connector terminal tension is lost, so always check pin drag before condemning the solenoid.
On some Volkswagen engines the cylinder shut-off solenoids share a power feed with other components, so a blown fuse may cause multiple codes and P1211 is not the root cause.
- Oil sludge from extended drain intervals can make the solenoid plunger sticky, causing an intermittent open-circuit code that disappears after an oil change.
- The ECM may set P1211 only after a specific number of failed actuation attempts, so a single clear-and-drive may not reproduce the fault immediately.
Do not replace the ECM until you have verified the solenoid coil resistance and loaded the circuit with a test light to confirm the driver can supply current.

Can I keep driving with P1211?

You can usually continue driving with P1211 because the engine defaults to full cylinder operation, but expect higher fuel consumption and slightly rougher running. Avoid heavy towing or sustained high-load driving until the circuit is repaired, and address the code promptly to prevent secondary misfire or catalyst damage.

Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter
- Lab scope
- Wire terminal pick and crimping tools
- Factory service information for wiring diagrams and solenoid specifications



Reading P1211

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

Often seen with

P1210 Intake Valves For Cylinder Shut-Off Short To B+ · **P1210** Traction Control System Signal Fault · **P1212** ABS TCS Communication Line · **P1212** Mass Airflow Circuit Intermittent Low · **P1210** Injector Control Pressure Above Expected Level · **P1212** Injector Control Pressure Not Detected During Crank · **P1212** Mass Air Flow Circuit Intermittent Low · **P0171** System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1211/>

