

VOLKSWAGEN · POWERTRAIN

**P1512**

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## P1512 · Volkswagen

# Intake Manifold Changeover Valve Circuit Short To B+

P1512 on Volkswagen vehicles means the engine control module (ECM) has detected a short to battery voltage on the intake manifold changeover valve control circuit. The changeover valve alters intake runner length to optimize airflow at different engine speeds, and a short to B+ prevents the ECM from properly commanding the valve, often forcing a default position.

SYSTEM

Powertrain

CODE TYPE

Volkswagen  
specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed,  
idle control and  
auxiliary inputs

## Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly reduced engine power or sluggish acceleration at certain RPM ranges
- Rough idle or hesitation when the engine is cold
- Poor fuel economy in some cases due to incorrect intake tuning
- In rare instances, a noticeable stumble or flat spot during light acceleration

## Common causes, most likely first

- 1 Damaged or chafed wiring in the changeover valve circuit shorting to a battery positive wire
- 2 Failed intake manifold changeover valve solenoid with an internal short to power
- 3 Corroded or loose electrical connector at the changeover valve
- 4 Water intrusion into the valve connector or wiring harness causing a short
- 5 Faulty engine control module (ECM) driver circuit, though this is less common
- 6 Aftermarket accessories or improper previous repairs tapping into the circuit



## How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the fault is active and not intermittent
- 2 Visually inspect the changeover valve connector and wiring for corrosion, chafing, or signs of shorting to nearby power wires
- 3 Disconnect the valve and use a multimeter to check for battery voltage on the control wire with the key on, which would indicate a short to B+
- 4 Isolate the circuit by disconnecting the ECM and checking for continuity between the control wire and battery positive, repairing any shorted section
- 5 Test the changeover valve solenoid resistance and compare to factory specifications, replacing the valve if it is internally shorted
- 6 Clear the fault codes and perform a road test to verify the repair and ensure the code does not return

## Why this code often misleads on VW engines

- A short to B+ can be caused by a pinched wire behind the intake manifold where the harness rubs against a metal bracket, a spot that is easy to overlook during a visual inspection.
- The changeover valve on many Volkswagen engines is vacuum-operated, so a faulty vacuum solenoid or a leaking diaphragm can mimic an electrical short and set this code even when the wiring is intact.
- Technicians sometimes replace the changeover valve only to find the real fault is a shorted wire inside the main engine harness loom, so always perform a voltage drop test on the control circuit before condemning parts.
- This code can be set by a low battery or charging system issue that causes voltage spikes, so check battery health and ground connections before diving into the valve circuit.
- On some Volkswagen models, the changeover valve shares a power feed with other solenoids, and a short in a neighboring circuit can back-feed and trigger P1512 along with other codes.

## Can I keep driving with P1512?

You can usually continue driving with P1512 because the engine will default to a safe intake configuration, but avoid aggressive acceleration or heavy loads until the fault is repaired to prevent potential driveability issues. Have the circuit inspected soon to prevent further electrical damage.

## Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter with voltage and resistance measurement
- Wiring diagram for the specific Volkswagen model
- Trim removal tools and socket set for accessing the valve
- Electrical contact cleaner and dielectric grease



## Reading P1512

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 12** The exact fault within that area.

## Often seen with

**P1513** Intake Manifold Changeover Valve 2 Circuit Short To B+ · **P1514** Intake Manifold Changeover Valve 2 Circuit Short To Ground · **P1513** Idle Air Control Solenoid Signal 2 Circuit High Input · **P1514** Idle Air Control Solenoid Signal 3 Circuit Low Input · **P1514** High Load Neutral Drive Fault · **P1513** Idle Air Control Valve Closing Coil Low Voltage · **P1514** High Load Neutral Drive Fault · **P1514** Throttle Body Performance · **P1513** Intake Manifold Runner Control Stuck Closed · **P1514** Throttle Body Performance · **P1513** DISA Control Circuit Signal High · **P0171** System Too Lean (Bank 1) · **P0441** EVAP System Incorrect Purge Flow · **P2004** Intake Manifold Runner Control Stuck Open (Bank 1)

## 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-p1512/>

