

VOLKSWAGEN · POWERTRAIN

P1410

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1410 · Volkswagen

Tank Ventilation Valve Circuit Short To B+

P1410 on Volkswagen vehicles means the engine control module has detected a short to battery voltage on the control circuit for the tank ventilation valve, which is the solenoid that purges fuel vapor from the charcoal canister into the intake. The computer commands the valve on and off while monitoring the circuit, and it sees voltage present when the ground side should be pulled low, indicating a short to B+ rather than an open or short to ground.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Auxiliary emission
controls**

Symptoms you may notice

- Often no symptoms besides the warning light, because the valve may still function or the fault may be intermittent.
- A faint fuel or gasoline odor around the rear of the car or near the charcoal canister.
- Rough idle or a slight stumble after refueling, especially if the valve sticks open.
- Slightly increased fuel consumption if the purge system stays active when it should be closed.
- In some cases a hard start after fueling due to an over-rich mixture from a stuck-open valve.
- A secondary evaporative emission (EVAP) system code stored alongside P1410.

Common causes, most likely first

- 1 Damaged or chafed wiring in the tank ventilation valve harness shorting to a battery-positive wire.
- 2 A failed tank ventilation valve solenoid with an internal short to its power feed.
- 3 Corroded or pushed-out terminals at the valve connector allowing voltage to back-feed.
- 4 A short inside the engine control module (ECM) driver circuit, though this is less common.
- 5 Water intrusion or road debris damage to the harness near the charcoal canister or underbody.
- 6 Aftermarket alarm or remote start wiring tapped into the same circuit and shorting to power.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1410 is active and not a stored history code.
- 2 Inspect the tank ventilation valve connector and harness for chafing, corrosion, or contact with a power wire.
- 3 Disconnect the valve and measure resistance across its terminals; compare to the manufacturer specification.
- 4 With the valve unplugged and key on, check for battery voltage on the control wire to confirm the short to B+.
- 5 Isolate the circuit by wiggling the harness and checking for voltage changes; repair any damaged section.
- 6 If the wiring is intact, substitute a known-good valve and clear codes to see if P1410 returns.
- 7 As a last step, check the ECM driver output with a lab scope or bidirectional test before condemning the module.

What a short to B+ really means here

- A short to B+ does not always mean the valve is defective; a rubbed-through wire touching a power feed in the same loom is just as common on older Volkswagens.
- The ECM may set P1410 intermittently when the engine bay is hot or after driving over rough roads, so a wiggle test of the harness is essential before replacing parts.
- Some technicians replace the tank ventilation valve first and the code returns because the actual short is in the harness near the charcoal canister where it is hard to see.
- A failed valve with an internal short can back-feed voltage into the ECM driver and cause other EVAP codes, so always check for companion codes before assuming a single fault.
- Aftermarket wiring for alarms or audio equipment tapped into the EVAP circuit is a frequent hidden cause that a visual inspection of non-factory splices will reveal.

Can I keep driving with P1410?

You can usually drive the car short distances to a repair shop, but avoid long trips or hard acceleration because a stuck-open valve can cause a rich mixture and increased emissions. If you smell raw fuel, park the car and have it inspected before driving further.

Tools that help

- OBD-II scan tool with manufacturer-specific code reading
- Digital multimeter with back-probe pins
- Wiring diagram for the specific Volkswagen model
- Lab scope for checking the ECM driver signal
- Trim removal tools and socket set for accessing the valve and harness



Reading P1410

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 4** Auxiliary emission controls.
- 10** The exact fault within that area.

Often seen with

P1423 Secondary Air Injection System Bank 1 Flow Too Low · **P1423** EVAP Vent Control High Input · **P1423** Intake Air High Pressure Switch Circuit High Voltage · **P1423** Intake Air High Pressure Switch Circuit High Voltage · **P0441** EVAP System Incorrect Purge Flow · **P0442** EVAP System Leak Detected (Small) · **P0455** EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak)

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-p1410/>

