

VOLKSWAGEN · POWERTRAIN

P1657

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1657 · Volkswagen

A/C Clutch Relays Circuit Short To B+

P1657 on Volkswagen vehicles means the engine control module (ECM) has detected a short to battery positive voltage (B+) in the air conditioning (A/C) clutch relay control circuit. The ECM expects to control the relay by providing a ground path, but it sees constant voltage on the control wire, indicating a wiring fault or a failed relay.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Computer and
output circuits**

Symptoms you may notice

- The A/C compressor clutch may not engage, resulting in no cold air from the vents.
- The A/C clutch may stay engaged continuously, even with the A/C switched off, causing the compressor to run unnecessarily.
- The check engine light (malfunction indicator lamp) illuminates on the dashboard.
- In some cases, the A/C system may blow warm air or fluctuate between cold and warm.
- Often no symptoms besides the warning light, especially if the short is intermittent or only affects the control circuit without immediate drivability impact.

Common causes, most likely first

- 1 Faulty A/C clutch relay, internally shorted to battery voltage.
- 2 Chafed or damaged wire in the A/C clutch relay control circuit shorting to a constant power source.
- 3 Corroded or loose connector at the A/C clutch relay or ECM, causing unintended voltage feedback.
- 4 Failed ECM driver for the A/C clutch relay, though rare.
- 5 Aftermarket accessories or improper wiring repairs tapping into the A/C circuit.
- 6 Water intrusion into the relay box or wiring harness, leading to corrosion and shorts.



How to diagnose and fix it

- 1 Verify the fault by scanning all modules and checking freeze-frame data for the A/C clutch relay control circuit status.
- 2 Inspect the A/C clutch relay and its socket for corrosion, loose terminals, or signs of overheating; swap with a known-good relay of the same part number and recheck.
- 3 Disconnect the A/C clutch relay and measure voltage on the control circuit at the relay socket with the key on; if battery voltage is present with the relay removed, trace the wire for a short to B+.
- 4 Visually inspect the wiring harness from the relay to the ECM for chafing, pinches, or damage near sharp edges or heat sources.
- 5 Perform a wiggle test on the harness while monitoring the circuit with a multimeter or scan tool to identify intermittent shorts.
- 6 If the wiring is intact, test the ECM control circuit with a test light or oscilloscope to confirm the ECM is commanding the relay correctly; replace the ECM only if all other possibilities are eliminated.
- 7 Clear the fault codes and road-test the vehicle with the A/C on and off to confirm the repair.

Before you replace the A/C clutch relay

- A short to B+ in the control circuit can be caused by a failed relay that internally bridges the power and control terminals, so always test the relay before condemning the wiring.
- The ECM may set P1657 even if the A/C system appears to work normally, because the short can be intermittent and only detected under specific voltage conditions.
- Aftermarket alarm or remote start installations often tap into the A/C clutch circuit, creating a short to power that triggers this code.
- On some Volkswagen models, the A/C clutch relay is located in the engine bay fuse box, and water intrusion from a clogged drain can corrode the relay terminals and cause a short.
- Do not confuse this code with P1658 or P1659, which refer to different A/C clutch circuit faults; P1657 specifically indicates a short to B+ on the control circuit.

Can I keep driving with P1657?

You can generally drive the vehicle with this code, but avoid using the A/C until the fault is repaired, as a shorted relay could cause the compressor to run continuously and lead to overheating or damage. If the compressor stays engaged with the A/C off, have the system inspected promptly.



Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter
- Test light
- Wire probe kit
- Relay puller or small screwdriver
- Electrical contact cleaner

Reading P1657

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Volkswagen): its meaning depends on the make.
6	Computer and output circuits.
57	The exact fault within that area.

Often seen with

P1658 Data Bus Powertrain Range Performance From Distance Control · **P1658** Wastegate Valve Control Circuit · **P1658** Starter Enable Relay Control Circuit · **P0532** A/C Refrigerant Pressure Sensor 'A' Circuit Low · **P0533** A/C Refrigerant Pressure Sensor 'A' Circuit High · **P0645** A/C Clutch Relay Control Circuit

See it working

Watch the animated explainer [Manual Car Driving Simulator: Learn Clutch Control](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1657/>

