

VOLKSWAGEN · POWERTRAIN

P1538

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1538 · Volkswagen

Engine Shutoff Solenoid Open Short To Ground

P1538 on Volkswagen vehicles means the engine control module (ECM) has detected an open circuit or a short to ground in the engine shutoff solenoid circuit. The solenoid is the actuator that cuts fuel or air to stop the engine when the ignition is switched off, and the ECM monitors the circuit for expected voltage and current. When the signal is outside the expected range, the ECM stores this code and may illuminate the check engine light.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Engine may not shut off when the ignition key is turned to the off position
- Engine may stall unexpectedly while driving or at idle
- Check engine light (malfunction indicator lamp) illuminated on the dashboard
- Rough running or difficulty starting if the solenoid affects fuel delivery
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Failed engine shutoff solenoid (open winding or shorted internally)
- 2 Damaged or corroded wiring harness between the ECM and the solenoid
- 3 Loose or dirty electrical connector at the solenoid or ECM
- 4 Blown fuse or faulty relay supplying power to the solenoid circuit
- 5 Short to ground in the wiring due to chafing or moisture intrusion
- 6 Faulty engine control module (ECM) driver circuit (rare)



How to diagnose and fix it

- 1 Verify the code with a Volkswagen-specific scan tool and check for related codes in other modules
- 2 Inspect the solenoid connector and wiring for corrosion, looseness, or visible damage
- 3 Test the solenoid resistance with a multimeter and compare to the manufacturer's specification
- 4 Check the fuse and relay that supply power to the shutoff solenoid circuit
- 5 Perform a voltage drop test on the ground and power circuits to the solenoid
- 6 If the solenoid tests good, trace the wiring back to the ECM for opens or shorts to ground
- 7 Replace the faulty solenoid or repair the wiring as needed, then clear the code and verify the repair

What Most Techs Miss on P1538

- A short to ground in the solenoid circuit can be caused by the wiring rubbing against a metal bracket near the engine mount, which is often overlooked during a visual inspection.
- The engine shutoff solenoid on some Volkswagen models is integrated into the fuel injection pump, so a failed solenoid may require pump replacement rather than a simple solenoid swap.
- Intermittent P1538 codes often appear only when the engine is hot or after driving over rough roads, so a wiggle test of the harness while monitoring live data is essential.
- A faulty ignition switch or relay can mimic a solenoid circuit fault by dropping power intermittently, so always check voltage at the solenoid during crank and run.
- This code does not always mean the solenoid itself is bad; a poor ground connection at the engine block can cause the same open-circuit detection.

Can I keep driving with P1538?

If the engine still shuts off normally and the only symptom is the warning light, you can drive cautiously to a repair shop. However, if the engine fails to shut off with the key or stalls while driving, stop driving immediately and have the vehicle towed, as this can be a safety hazard.

Tools that help

- Volkswagen-specific OBD-II scan tool
- Digital multimeter
- Wiring diagram for the vehicle
- Test light
- Socket set and screwdrivers



Reading P1538

- 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.
- 38** The exact fault within that area.

Often seen with

P1543 Throttle Actuation Potentiometer Signal Too Low · **P1539** Clutch Pedal Switch Signal Fault · **P1542** Throttle Actuation Potentiometer Range Performance · **P1540** Vehicle Speed Sensor High Input · **P1541** Fuel Pump Relay Circuit Open · **P1540** Vehicle Speed Sensor Malfunction · **P1539** Air Conditioning (A/C) Clutch Feedback Circuit High Voltage · **P1543** A/C System Performance · **P1540** A/C System High Pressure · **P1542** A/C System High Pressure High Temperature · **P1541** A/C High Side Over Temperature · **P1539** Power to A/C Compressor Clutch Circuit Exceeded Normal Curre · **P1541** A/C High Side Over Temperature · **P1542** A/C System High Pressure High Temperature · **P1540** A/C System High Pressure · **P1543** A/C System Performance · **P1539** Air Conditioning (A/C) Clutch Feedback Circuit High Voltage · **P1542** Pedal Position Sensor Electrical · **P1541** Pedal Position Sensor Double Error · **P1543** Pedal Position Sensor · **P1540** Pedal Position Sensor

See it working

Watch the animated explainer [How a Rotary Engine Works: Wankel in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1538/>

