

VOLKSWAGEN · POWERTRAIN

P1587

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1587 · Volkswagen

Engine Mount Solenoid Valves Short To Ground

P1587 on Volkswagen vehicles means the engine control module (ECM) has detected a short to ground on the circuit that powers the active engine mount solenoid valves. The ECM monitors the voltage on the control circuit and flags this code when the signal line is pulled to ground, typically due to damaged wiring or a failed solenoid coil inside the mount.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Increased vibration or harshness felt through the steering wheel, seats, or floorboards, especially at idle
- A noticeable clunk or thud during engine start-up or shutdown as the mount fails to soften
- Roughness or droning noise at certain engine speeds that was not present before
- In some cases, the engine may feel less refined during light acceleration or deceleration
- Often no symptoms besides the warning light, particularly if the short is intermittent

Common causes, most likely first

- 1 Chafed or broken solenoid valve wiring harness shorting to the engine block or chassis
- 2 Failed engine mount solenoid valve with an internally shorted coil
- 3 Corroded or water-intruded electrical connector at the engine mount solenoid
- 4 Rodent damage to the solenoid valve wiring loom
- 5 Internal short inside the ECM driver circuit (rare, but possible after other causes are ruled out)



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1587 is active and not a stored history code
- 2 Visually inspect the engine mount solenoid valve wiring and connector for chafing, corrosion, or rodent damage
- 3 Disconnect the solenoid valve connector and measure resistance across the solenoid terminals to check for a shorted coil
- 4 With the connector disconnected, measure resistance from each solenoid terminal to a clean engine ground to check for a short to ground in the harness
- 5 Inspect the harness routing near hot or moving components and repair any damaged insulation with proper automotive wire and heat-shrink
- 6 If the harness tests good, substitute a known-good solenoid valve or perform a bidirectional actuator test with a scan tool to confirm the mount is at fault
- 7 Clear the code and verify the repair with a road test that includes idle and light-load driving conditions

What most technicians miss on P1587

- A short to ground in the engine mount solenoid circuit can be caused by the wiring harness rubbing against the engine block or a sharp bracket, which is often overlooked when only the solenoid is replaced.
- The engine mount solenoid valve is not always the culprit; a corroded connector pin can create a short to ground that mimics a failed solenoid and is much cheaper to fix.
- P1587 can set intermittently when the engine moves under load and temporarily shorts a chafed wire, so a wiggle test of the harness while monitoring live data is essential.
- On some Volkswagen models, the active engine mount solenoid shares a ground circuit with other components, so a fault in that shared ground can trigger P1587 along with other codes.
- Replacing the engine mount without checking the harness resistance to ground often leads to a repeat failure, because the underlying wiring damage remains.

Can I keep driving with P1587?

The vehicle remains safe to drive with P1587 because the fault affects engine mount comfort rather than engine operation or safety systems. Avoid aggressive acceleration and high-speed driving until the repair is completed, as the increased engine movement can worsen wiring damage or accelerate mount wear.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter with resistance and continuity functions
- Wire terminal pick and electrical contact cleaner
- Automotive wire repair kit with heat-shrink tubing
- Vehicle-specific wiring diagram for the engine mount solenoid circuit



Reading P1587

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

Often seen with

P1586 Engine Mount Solenoid Valves Short To B+ · **P1588** Engine Mount Solenoid Valves Open Circuit · **P1586** A/T To M/T Codification · **P1586** Cruise Control Brake Switch 2 Circuit · **P1588** Cruise Control Clutch Control Circuit High · **P1586** Throttle Control Unit Throttle Position Malfunction · **P1588** Throttle Control Unit Detected Loss of Return Spring · **P1589** Throttle Control Unit Unable To Control Desired Throttle Ang · **P1586** Cruise Control Brake Switch 2 Circuit · **P1588** Cruise Control Clutch Control Circuit High · **P1589** Control Module Self Test Knock Control Test Pulse Bank 1 · **P0171** System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder 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-p1587/>

