

VOLKSWAGEN · POWERTRAIN

P1813

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1813 · Volkswagen

Pressure Control Solenoid 1 Electrical

P1813 on Volkswagen vehicles indicates that the transmission control module (TCM) has detected an electrical fault in the circuit for Pressure Control Solenoid 1, which is responsible for regulating hydraulic pressure inside the automatic transmission. The computer monitors the solenoid's electrical current and voltage and sets this code when the readings fall outside the expected range, pointing to an open circuit, short circuit, or faulty solenoid.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Transmission

Symptoms you may notice

- Illumination of the transmission warning light or check engine light on the dashboard
- Harsh or delayed gear shifts, sometimes accompanied by a thumping sensation
- Transmission may enter limp mode, limiting vehicle speed and gear selection
- Slipping gears or failure to engage a gear from a stop
- Often no symptoms besides the warning light, especially in early stages

Common causes, most likely first

- 1 Faulty pressure control solenoid 1 (internally shorted or open coil)
- 2 Damaged or corroded wiring harness or connector at the transmission
- 3 Transmission fluid contamination or degradation causing solenoid malfunction
- 4 Valve body issues, such as stuck valves or worn bores, affecting solenoid operation
- 5 Failed transmission control module (TCM) or internal electrical fault
- 6 Poor ground connection for the transmission electrical system



How to diagnose and fix it

- 1 Scan all modules for stored codes and verify P1813 is current; check freeze frame data for operating conditions
- 2 Inspect the transmission wiring harness and connector for chafing, corrosion, or loose pins; repair as needed
- 3 Check transmission fluid level and condition; service fluid if contaminated or burnt
- 4 Measure resistance of pressure control solenoid 1 at the transmission connector and compare to factory specification
- 5 Perform a voltage drop test on the solenoid circuit to identify excessive resistance or poor ground
- 6 If electrical checks pass, remove the valve body and test the solenoid directly; replace solenoid if out of specification
- 7 After repair, clear codes and perform a road test with live data monitoring to confirm the fault does not return

What Most Techs Miss on P1813

- A contaminated transmission fluid can cause the solenoid to stick mechanically, setting an electrical code without the solenoid being electrically faulty; always check fluid condition first.
- The wiring harness at the transmission often rubs against the battery tray or engine mount, causing intermittent shorts that only appear when the engine moves under load.
- A failing TCM can mimic a solenoid circuit fault; swapping a known-good solenoid without checking the TCM driver circuit can lead to repeat failures.
- Volkswagen's 09G and 09M transmissions are known for valve body wear that alters solenoid current draw, triggering P1813 even when the solenoid coil tests good.
- After replacing a solenoid, adaptation values must be reset with a scan tool; otherwise, harsh shifts may persist and be misdiagnosed as a new fault.

Can I keep driving with P1813?

You can drive cautiously to a repair shop if the transmission shifts normally and the light is steady, but avoid heavy acceleration or towing. If the transmission enters limp mode or slips severely, stop driving and have the vehicle towed to prevent further damage.

Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter
- Transmission fluid level dipstick or scan tool for fluid temperature
- Wiring diagram and factory service information
- Socket set and torque wrench for valve body removal



Reading P1813

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 8** Transmission.
- 13** The exact fault within that area.

Often seen with

P1814 Pressure Control Solenoid 1 Open Short To Ground · **P1815** Pressure Control Solenoid 1 Short To B+ · **P1814** Torque Converter Clutch Overstress · **P1815** Transmission Range Switch Start In Wrong Range · **P1815** Transmission 4-Wheel Drive Mode Select Short Circuit To Grou · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0730** Incorrect Gear Ratio · **P0741** Torque Converter Clutch Circuit Performance or Stuck Off

See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1813/>

