

VOLKSWAGEN · POWERTRAIN

P1173

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1173 · Volkswagen

Throttle Actuation Potentiometer Signal 2 Signal Too High

P1173 on Volkswagen vehicles means the engine control module (ECM) has detected an excessively high voltage on the signal circuit from throttle actuation potentiometer 2, which is the second of two redundant throttle position sensors inside the electronic throttle body. The ECM compares this signal against potentiometer 1 and expects the two to track each other inversely; a signal that stays above the plausible upper limit indicates an open circuit, a short to voltage, or a failed sensor track inside the throttle body.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illuminated check engine light, often with the electronic power control (EPC) warning lamp also on
- Reduced engine power or limp-home mode with the throttle responding sluggishly or not at all
- Erratic or surging idle as the ECM struggles to reconcile the two throttle position signals
- Hesitation or a dead spot during light acceleration from a stop
- Often no symptoms besides the warning light if the fault is intermittent and the signal returns within range
- In some cases the engine may refuse to rev beyond a limited speed or may stall when coming to a stop

Common causes, most likely first

- 1 Failed potentiometer track inside the electronic throttle body assembly, which is the most common cause on high-mileage Volkswagen engines
- 2 Corroded, backed-out, or damaged pins in the throttle body electrical connector
- 3 Chafed or broken signal wire between the throttle body and the ECM, often near the engine mount or harness bend
- 4 Short to voltage on the potentiometer 2 signal circuit from a rubbed-through wire touching a 5-volt reference or battery feed
- 5 Contaminated throttle body bore or butterfly shaft wear causing the sensor wiper to lose contact at certain angles
- 6 Water intrusion into the throttle body connector or housing, leading to intermittent high signal voltage
- 7 Rarely, a faulty ECM driver or corrupted throttle adaptation values that require re-learning after a repair



How to diagnose and fix it

- 1 Scan all modules with a Volkswagen-compatible diagnostic tool and record freeze-frame data for P1173, then clear the code and road test to see if it returns
- 2 Inspect the throttle body connector and harness for corrosion, loose pins, or chafing, and repair any damaged wiring before condemning parts
- 3 Back-probe the potentiometer 2 signal wire at the throttle body and at the ECM and compare voltages with the key on and engine running, looking for a signal that exceeds the normal 0.5 to 4.5-volt range
- 4 Check the 5-volt reference and ground circuits at the throttle body for voltage drop and continuity, since a bad ground can skew both sensor signals
- 5 Remove the throttle body and inspect the bore and butterfly for carbon buildup or shaft play, cleaning it only if the sensor tracks test within specification
- 6 Replace the electronic throttle body with a quality unit and perform throttle adaptation using the scan tool, then clear codes and verify both potentiometer signals track smoothly through the full pedal range
- 7 If the fault persists after a known-good throttle body and verified wiring, check for ECM software updates or internal ECM faults before replacement

Why throttle body replacement often misses the real fault

- A high signal voltage on potentiometer 2 is frequently caused by a poor ground at the throttle body rather than a failed sensor, because the lost ground raises the signal voltage on both tracks and the ECM flags the one that exceeds its limit first
- Volkswagen throttle bodies are adapted to the ECM, so swapping in a used unit without running the adaptation procedure will often set P1173 again even if the replacement part is good
- Intermittent P1173 codes that appear only in cold or wet weather usually point to water ingress at the connector or a chafed harness, not to the throttle body itself
- A dirty throttle body can cause the ECM to misjudge the sensor correlation at closed throttle, so cleaning and re-adapting is a legitimate first step before replacing hardware on higher-mileage engines
- This code does not always mean the throttle body is faulty; a shorted signal wire rubbing on the engine cover or a failed ECM ground can produce the same high-voltage reading and fool a parts-swapping diagnosis

Can I keep driving with P1173?

You can usually drive the vehicle to a workshop if the engine still responds to the accelerator, but expect reduced power and avoid heavy acceleration or highway merging until the fault is repaired. If the car enters limp-home mode with a barely responsive throttle, stop driving and arrange a tow to prevent a dangerous loss of power in traffic.



Tools that help

- Volkswagen-compatible scan tool with live data and throttle adaptation capability
- Digital multimeter with back-probe pins
- Wiring diagram for the throttle body and ECM circuits
- Torx and hex bit socket set for throttle body removal
- Contact cleaner and dielectric grease for connector repair

Reading P1173

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Volkswagen): its meaning depends on the make.

1 Fuel and air metering.

73 The exact fault within that area.

Often seen with

P1171 Throttle Actuation Potentiometer Signal 2 Range Performance · **P1172** Throttle Actuation Potentiometer Signal 2 Signal Too Low · **P1171** System Too Lean Banks 1 And 2 (Lean Fuel Fault) · **P1172** System Too Rich Banks 1 And 2 (Rich Fuel Fault) · **P1171** Fuel System Lean During Acceleration · **P1171** Rotor Sensor Fault · **P1172** Rotor Control Fault · **P1171** Fuel System Lean During Acceleration · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0221** Throttle Position Sensor B Circuit Range/Performance · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How a MAP Sensor Works: Engine Vacuum and Load](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1173/>

