

VOLKSWAGEN · POWERTRAIN

P1605

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1605 · Volkswagen

Rough Road Acceleration Sensor Electrical Malfunction

P1605 on Volkswagen vehicles indicates that the engine control module (ECM) has detected an electrical fault in the rough road acceleration sensor circuit, which is used to detect road-induced vibration and misfire events. The ECM monitors the sensor's signal voltage and flags the code when it falls outside the expected range or shows an open or short circuit.

SYSTEM

Powertrain

CODE TYPE

Volkswagen
specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and
output circuits

Symptoms you may notice

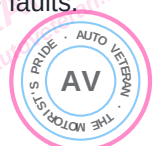
- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough running or hesitation under acceleration if the sensor fault interferes with misfire detection.
- Intermittent misfire codes stored in the ECM due to inaccurate rough road data.
- Reduced engine performance or limp mode in some cases when the ECM cannot reliably detect misfires.
- Poor fuel economy if the ECM adjusts fuel delivery based on faulty rough road input.

Common causes, most likely first

- 1 Failed rough road acceleration sensor (also known as a knock sensor or vibration sensor on some models).
- 2 Damaged or corroded wiring harness between the sensor and the ECM.
- 3 Loose or corroded electrical connector at the sensor.
- 4 Water intrusion or oil contamination in the sensor connector or wiring.
- 5 Faulty ECM, though rare, can misread sensor signals.
- 6 Physical damage to the sensor from road debris or improper installation.

How to diagnose and fix it

- 1 Perform a visual inspection of the sensor and its wiring for obvious damage, corrosion, or loose connections.
- 2 Use a scan tool to check live data from the rough road acceleration sensor and compare to specifications.
- 3 Check resistance and continuity of the sensor circuit with a multimeter, referring to factory wiring diagrams.
- 4 Inspect the sensor mounting surface for debris or damage that could affect signal accuracy.
- 5 Replace the rough road acceleration sensor if electrical tests indicate an internal fault.
- 6 Repair or replace damaged wiring and connectors as needed, then clear codes and verify the repair.
- 7 If the code persists after sensor and wiring repairs, diagnose the ECM and its software for possible faults.



Rough Road Sensor Faults Often Misdiagnosed

- A loose or corroded connector at the sensor is a common cause that is frequently overlooked during diagnosis.
- The rough road acceleration sensor is sometimes confused with a knock sensor, but they serve different purposes and have different part numbers.
- On some Volkswagen models, this sensor is integrated into the engine mount or chassis component, making replacement more involved than expected.
- A faulty sensor can cause the ECM to falsely detect misfires, leading to unnecessary replacement of ignition coils or spark plugs.
- After replacing the sensor, the ECM may require a relearn or adaptation procedure to recognize the new sensor correctly.

Can I keep driving with P1605?

Driving with P1605 is generally safe if the engine runs smoothly, but avoid aggressive acceleration or towing until the fault is repaired to prevent potential misfire detection issues. If the engine runs rough or enters limp mode, seek service promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Factory service information or wiring diagrams
- Socket set and basic hand tools
- Contact cleaner and dielectric grease

Reading P1605

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

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0302** Cylinder 2 Misfire Detected · **P0325** Knock Sensor 1 Circuit Malfunction (Bank 1) · **P0330** Knock Sensor 2 Circuit



See it working

Watch the animated explainer [How a Six-Speed Manual Gearbox Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1605/>

