

VOLKSWAGEN · POWERTRAIN

P1401

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1401 · Volkswagen

EGR Valve Power Stage Short To Ground

P1401 on Volkswagen vehicles means the engine control module has detected a short to ground on the electrical circuit that powers the exhaust gas recirculation valve's internal power stage. The computer commands the EGR valve to open, but the feedback voltage on the control wire stays at or near zero volts, indicating the circuit is grounded somewhere between the module and the valve.

SYSTEM

Powertrain

CODE TYPE

Volkswagen
specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission
controls

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or stumbling when the engine is cold
- Slight hesitation or surge during light acceleration
- Poor fuel economy over time as the EGR system stays inactive
- Failed emissions test due to the EGR monitor not completing
- In rare cases, a no-start condition if the short pulls down a shared reference voltage

Common causes, most likely first

- 1 Chafed or pinched EGR valve control wire shorting to the engine block or chassis
- 2 Failed EGR valve with an internally shorted power stage
- 3 Corroded or water-intruded EGR valve connector pins
- 4 Damaged engine wiring harness near the exhaust or intake manifold
- 5 Faulty engine control module driver circuit (less common)
- 6 Aftermarket EGR valve with incorrect internal resistance

How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm when the short is detected
- 2 Visually inspect the EGR valve connector and wiring for chafing, corrosion, or moisture
- 3 Disconnect the EGR valve and measure resistance from the control wire to ground with a multimeter
- 4 Wiggle-test the harness while watching live EGR feedback data to catch an intermittent short
- 5 Repair or replace any damaged section of the control wire and clear the code
- 6 If the wiring is intact, substitute a known-good EGR valve and recheck the circuit
- 7 If the short persists with the valve disconnected, test the ECM driver circuit before condemning the module



What the short-to-ground code really means

- A short to ground on the power stage does not always mean the EGR valve itself has failed, because a rubbed-through wire in the harness can produce the exact same voltage reading at the module.
- Volkswagen EGR valve connectors are prone to water intrusion at the valve, so corrosion inside the plug often mimics a failed valve and gets missed during a quick visual check.
- The engine may run perfectly well with this code stored because the ECM simply disables EGR operation, which is why many drivers notice nothing beyond the warning light.
- An aftermarket EGR valve with the wrong internal resistance can set P1401 even though the original valve was the only faulty part.
- A shorted EGR circuit can pull down a shared five-volt reference on some Volkswagen engine management systems, causing unrelated sensor codes that disappear once the EGR wiring is repaired.

Can I keep driving with P1401?

The car is generally safe to drive with P1401 because the engine management system disables the EGR valve and falls back to normal fuel scheduling. Avoid long periods of stop-and-go driving and get the circuit inspected soon, since a shorted wire can damage the engine control module if it is left unrepaired.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Back probe pins or breakout leads
- Wiring diagram for the specific Volkswagen model
- Torque wrench and basic socket set

Reading P1401

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Volkswagen): its meaning depends on the make.
4	Auxiliary emission controls.
01	The exact fault within that area.



Often seen with

P1402 EGR Valve Circuit Short To B+ · **P1400** EGR Valve Circuit Electrical Malfunction · **P1400** Sub-Throttle Position Sensor · **P1400** Fuel Tank Pressure Control Solenoid Low Input · **P1402** Fuel Level Pressure Sensor Circuit Fault · **P1400** EGRC Solenoid Valve · **P1402** EGR System · **P1400** Manifold Differential Pressure Sensor Circuit · **P1400** DPFE Sensor Circuit Low Input · **P1402** EGR Valve Position Sensor Circuit · **P1402** EGR Control Solenoid Circuit Signal High · **P1400** Exhaust Gas Recirculation Valve Position Control · **P1400** Differential Pressure Feedback Electronic Sensor Circuit Low · **P1402** EGR Metering Orifice Restricted · **P1400** Heated Catalyst Battery Voltage or Current Too Low During He · **P1402** Heated Catalyst Power Switch Overtemperature Condition Bank · **P0401** EGR Flow Insufficient Detected · **P0403** EGR Circuit Malfunction · **P0402** EGR Flow Excessive 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-p1401/>

