

GENERIC · POWERTRAIN

P0403

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0403

EGR Circuit Malfunction

P0403 is a generic OBD-II code that indicates a malfunction in the electrical circuit controlling the exhaust gas recirculation (EGR) valve. The engine computer has detected an abnormal voltage or current condition on the EGR valve control circuit, which may be open, shorted, or out of expected range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stalling, especially when the engine is cold
- Engine hesitation or stumble during acceleration
- Reduced fuel economy due to improper EGR flow
- Increased exhaust emissions, which may cause a failure in emissions testing
- In some cases, a slight surge or bucking at steady cruise speeds

Common causes, most likely first

- 1 Faulty EGR valve solenoid or stepper motor
- 2 Damaged or corroded wiring or connector at the EGR valve
- 3 Open or shorted circuit in the EGR control wiring
- 4 Failed engine control module (ECM) driver for the EGR circuit
- 5 Carbon buildup or mechanical binding inside the EGR valve
- 6 Poor electrical connection at the EGR valve harness

How to diagnose and fix it

- 1 Use a scan tool to verify the code and check for related EGR codes
- 2 Inspect the EGR valve connector and wiring for corrosion, damage, or looseness
- 3 Measure resistance of the EGR valve solenoid or motor and compare to specification
- 4 Check for power and ground signals at the EGR valve connector with the key on
- 5 Test the control circuit from the ECM to the EGR valve for continuity and shorts
- 6 Clean or replace the EGR valve if electrically faulty or mechanically stuck
- 7 Clear codes and perform a drive cycle to confirm the repair



What P0403 Often Misleads You About

- A P0403 code is frequently set by a dirty or carbon-fouled EGR valve that causes the solenoid to draw excessive current, not by a failed computer.
- Many technicians replace the EGR valve only to find the real problem is a chafed wire in the harness near the exhaust manifold, so always inspect the loom carefully.
- On some vehicles, a weak battery or poor ground can cause phantom EGR circuit codes, so check charging system and grounds before condemning parts.
- The code can be triggered by a stuck-open EGR valve that causes a rough idle, but the root cause may be a faulty vacuum supply or a cracked hose on vacuum-operated systems.
- After replacing the EGR valve, some vehicles require a relearn or adaptation procedure with a scan tool to prevent the code from returning.

Can I keep driving with P0403?

You can usually continue driving with P0403, but avoid prolonged idling and heavy acceleration until repaired. If the engine runs rough or stalls, have it checked promptly to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wire probe set
- Service manual or wiring diagram
- Socket set and torx bits

Reading P0403

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
03	The exact fault within that area.

Often seen with

P0400 Exhaust Gas Recirculation Flow Malfunction · **P0401** EGR Flow Insufficient Detected · **P0402** EGR Flow Excessive Detected · **P0404** EGR Circuit Range/Performance · **P0405** EGR Sensor A Circuit Low



See it working

Watch the animated explainer [How the PCV System Works: Crankcase Ventilation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0403/>

