

GENERIC · POWERTRAIN

P2142

OBD-II TROUBLE CODE

P2142

Exhaust Gas Recirculation Throttle Control Circuit High

P2142 indicates that the engine control module (ECM) has detected an abnormally high voltage on the exhaust gas recirculation (EGR) throttle control circuit, which typically points to an open circuit, a short to voltage, or a failed EGR throttle actuator. The ECM monitors the commanded versus actual position of the EGR throttle valve and sets this code when the control circuit feedback exceeds the expected range for a calibrated time.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or stumbling when the engine is cold, due to incorrect EGR throttle positioning.
- Reduced engine power or limp mode in some vehicles as a protective strategy.
- Poor fuel economy or increased emissions during normal driving.
- A noticeable hesitation or surge during light acceleration.
- In rare cases, the engine may stall when coming to a stop.

Common causes, most likely first

- 1 Open or damaged wiring in the EGR throttle control circuit, such as a broken wire or corroded connector.
- 2 Short to voltage on the control circuit, often caused by chafed insulation or water intrusion.
- 3 Failed EGR throttle actuator (motor or solenoid) that no longer responds correctly to commands.
- 4 Faulty EGR throttle position sensor providing incorrect feedback to the ECM.
- 5 Carbon buildup or mechanical binding in the EGR throttle body, preventing proper movement.
- 6 Corroded or loose electrical connectors at the EGR throttle or ECM.
- 7 In rare cases, an internal ECM driver failure affecting the control circuit.



How to diagnose and fix it

- 1 Perform a visual inspection of the EGR throttle body, wiring harness, and connectors for damage, corrosion, or loose pins.
- 2 Use a scan tool to command the EGR throttle open and closed while watching live data to see if the actuator responds and if feedback voltage changes smoothly.
- 3 Check the control circuit voltage with a multimeter at the actuator connector with the key on and engine off, comparing to manufacturer specifications.
- 4 Test the EGR throttle actuator resistance and compare to the service manual value; replace if out of range.
- 5 Inspect the EGR throttle body for carbon deposits and clean it thoroughly if binding is suspected.
- 6 Repair any wiring faults found, such as splicing a new section of wire or replacing corroded terminals.
- 7 After repairs, clear the code and perform a drive cycle to verify the fix and ensure the code does not return.

What the EGR Throttle Code Hides

- A sticking EGR throttle plate due to carbon buildup often mimics an electrical failure and can set P2142 without any wiring fault.
- The EGR throttle control circuit is sometimes shared with other actuators, so a fault in a related system can cause this code to appear.
- Many technicians replace the EGR valve when the actual problem is the separate EGR throttle actuator, leading to a misdiagnosis.
- In some vehicles, a weak battery or charging system issue can cause voltage spikes that trigger this code intermittently.
- The ECM may set P2142 as a result of a failed throttle position sensor inside the EGR throttle body, not just the motor circuit.

Can I keep driving with P2142?

You can usually drive the vehicle with P2142 set, but expect reduced engine performance and possibly poor fuel economy; avoid heavy acceleration or long trips until the fault is repaired, as the engine may enter limp mode.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Wire probe set
- Service manual or wiring diagram for the specific vehicle
- Basic hand tools (sockets, wrenches, screwdrivers)



Reading P2142

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- 42** The exact fault within that area.

Often seen with

P0401 EGR Flow Insufficient Detected · **P0404** EGR Circuit Range/Performance · **P213E** Fuel Injection System Fault - Forced Engine Shutdown · **P2141** Exhaust Gas Recirculation Throttle Control Circuit Low · **P2143** Exhaust Gas Recirculation Vent Control Circuit/Open

See it working

Watch the animated explainer [How a Knock Sensor Works: Spark Timing and Octane](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2142/>

