

KIA · POWERTRAIN

P1402

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1402 · Kia

EGR Control Solenoid Circuit Signal High

P1402 on a Kia means the engine computer has detected an abnormally high voltage signal on the electrical circuit that controls the exhaust gas recirculation (EGR) control solenoid. The computer expects the solenoid's control wire to pull the voltage low when the solenoid is commanded on, but it is seeing battery voltage or an open circuit instead.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Kia specific	Medium	Intermediate	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
- Increased exhaust emissions, which may fail an emissions test
- In some cases, a noticeable decrease in fuel economy
- The engine may run normally once warmed up, masking the fault

Common causes, most likely first

- 1 Open or damaged wire in the EGR solenoid control circuit (broken wire, corroded connector, or chafed insulation)
- 2 Failed EGR control solenoid (open internal coil or short to voltage)
- 3 Poor electrical connection at the EGR solenoid or powertrain control module (PCM) connector
- 4 Faulty PCM driver for the EGR solenoid circuit (rare but possible)
- 5 Corrosion or water intrusion in the EGR solenoid connector or wiring harness
- 6 Aftermarket or incorrect EGR solenoid installed that does not match the Kia specification



How to diagnose and fix it

- 1 Scan all modules for stored codes and record freeze-frame data to confirm P1402 is the only EGR-related fault
- 2 Visually inspect the EGR solenoid connector and wiring harness for damage, corrosion, or loose pins
- 3 Disconnect the EGR solenoid and measure the resistance of its coil; compare to the Kia service specification
- 4 With the solenoid disconnected and the key on, measure voltage on the control wire from the PCM; it should be near battery voltage with the solenoid off
- 5 Check for continuity and short-to-voltage on the control wire between the PCM and the EGR solenoid
- 6 If the wiring and solenoid test good, substitute a known-good EGR solenoid and clear the code to see if it returns
- 7 If the code persists after all electrical checks, follow the Kia diagnostic flow for PCM driver testing or replacement

What a high EGR solenoid signal really means

- A high signal voltage on the control circuit often indicates an open circuit rather than a shorted solenoid, so a broken wire or corroded connector is more likely than a failed solenoid itself.
- The EGR solenoid on many Kia engines is a duty-cycle controlled valve, and a stuck-open or stuck-closed valve can set a circuit code if the PCM sees unexpected voltage feedback.
- Technicians sometimes replace the EGR valve when the actual fault is a chafed wire in the harness near the exhaust manifold, where heat damage is common.
- A weak or failing battery or charging system can cause erratic solenoid control signals that mimic a circuit fault, so always verify system voltage first.
- After repairs, the PCM may need to relearn the EGR solenoid's operating parameters; clearing the code and performing a drive cycle is essential before assuming the fix failed.

Can I keep driving with P1402?

You can usually drive the car short distances to a repair shop, but avoid prolonged driving because the fault can increase emissions and may lead to poor fuel economy or rough running. If the check engine light starts flashing or the engine misfires, stop driving and seek immediate service.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire probe set and back-probe pins
- Kia service information or wiring diagram
- Basic hand tools for connector and component access



Reading P1402

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

Often seen with

P1400 EGR Valve Circuit Electrical Malfunction · **P1401** EGR Valve Power Stage Short To Ground · **P1401** Sub-Throttle Position Sensor Range Performance Problem · **P1400** Sub-Throttle Position Sensor · **P1400** Fuel Tank Pressure Control Solenoid Low Input · **P1401** Fuel Tank Pressure Control System Performance · **P1400** EGRC Solenoid Valve · **P1401** EGR Temperature Sensor · **P1400** Manifold Differential Pressure Sensor Circuit · **P1401** EGR Lifting Sender B283 · **P1400** DPFE Sensor Circuit Low Input · **P1401** DPFE Sensor Circuit High Input · **P1401** EGR Control Solenoid Circuit Signal Low · **P1400** Exhaust Gas Recirculation Valve Position Control · **P1401** Exhaust Gas Recirculation Valve Position Circuit · **P1400** Differential Pressure Feedback Electronic Sensor Circuit Low · **P1401** Differential Pressure Feedback Electronic Sensor Circuit High · **P1400** Heated Catalyst Battery Voltage or Current Too Low During Heating · **P1401** Heated Catalyst Current Too High During Heating Bank 1 · **P0400** Exhaust Gas Recirculation Flow Malfunction · **P0402** EGR Flow Excessive Detected · **P0401** EGR Flow Insufficient Detected

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/kia-p1402/>

