

CHRYSLER · POWERTRAIN

P1403

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1403 · Chrysler

Loss Of 5 Volts To EGR Sensor

P1403 on Chrysler vehicles means the engine computer has lost the 5-volt reference signal that feeds the exhaust gas recirculation (EGR) sensor circuit. The computer monitors this reference voltage and sets the code when the signal at the EGR sensor connector falls outside the expected 4.5 to 5.5-volt range, usually because of an open or short in the wiring, a failed sensor, or a faulty computer driver.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

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 when coming to a stop
- Poor fuel economy or reduced engine performance
- Failed emissions test due to EGR system not functioning
- Intermittent engine stumble or hesitation during light acceleration
- Sometimes no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Open or shorted 5-volt reference wire between the powertrain control module (PCM) and the EGR sensor
- 2 Failed EGR sensor (transducer) internally shorting the 5-volt reference to ground
- 3 Corroded, loose, or damaged EGR sensor connector terminals
- 4 Chafed or broken wire harness near the EGR valve or exhaust components
- 5 Faulty PCM driver circuit for the 5-volt reference (rare but possible)
- 6 Contamination or carbon buildup on the EGR sensor causing abnormal resistance
- 7 Aftermarket or incorrect EGR sensor installed that draws excessive current



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data to confirm P1403 is the primary fault
- 2 Visually inspect the EGR sensor connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 3 Measure the 5-volt reference voltage at the EGR sensor connector with the key on and engine off; if absent, check the wire back to the PCM
- 4 Disconnect the EGR sensor and recheck the 5-volt reference at the connector; if voltage returns, the sensor is internally shorted and must be replaced
- 5 Perform a resistance test on the 5-volt reference wire between the PCM and EGR sensor to check for opens or shorts to ground
- 6 If the wiring and sensor test good, substitute a known-good EGR sensor and clear the code to see if it returns
- 7 As a last resort, check the PCM for a faulty 5-volt reference driver circuit and replace or reprogram the PCM if confirmed

Don't replace the EGR valve blindly

- A shorted EGR sensor can pull the entire 5-volt reference bus low, causing other sensors on the same circuit to set false codes; always check for multiple sensor codes before condemning the PCM.
- The 5-volt reference wire often rubs through near the exhaust manifold or EGR tube, creating an intermittent short that only appears when the engine is hot or vibrating.
- Many technicians replace the EGR valve when the actual fault is a \$20 pigtail connector with corroded terminals; wiggle-test the harness while watching live data.
- P1403 can be set by a faulty aftermarket EGR sensor that draws more current than the OEM design allows, even though the sensor bench-tests fine.
- On some Chrysler models, the 5-volt reference for the EGR sensor is shared with the throttle position sensor (TPS) and manifold absolute pressure (MAP) sensor, so a short in any of those can trigger P1403.

Can I keep driving with P1403?

You can usually drive the vehicle with P1403 set, but the EGR system will be disabled, which may increase emissions and slightly reduce fuel economy. Avoid long periods of idling or heavy load if the engine idles rough, and have the fault diagnosed soon to prevent potential damage to the PCM or other sensors on the 5-volt reference circuit.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM) with voltage and resistance scales
- Wire piercing probes or back-probe kit
- Service manual with wiring diagrams for the specific Chrysler model
- Basic hand tools for connector and sensor removal



Reading P1403

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

Often seen with

P0122 Throttle Position Sensor A Circuit Low Input · **P0401** EGR Flow Insufficient Detected · **P0403** EGR Circuit Malfunction · **P0404** EGR Circuit Range/Performance · **P0406** EGR Sensor A Circuit High

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/chrysler-p1403/>

