

SUBARU · POWERTRAIN

P1421

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1421 · Subaru

Exhaust Gas Recirculation Circuit High Input

P1421 on a Subaru means the engine control module has detected an abnormally high voltage on the exhaust gas recirculation circuit, which usually points to an open circuit or a failed sensor rather than a stuck valve. The computer monitors the EGR (exhaust gas recirculation) system's electrical feedback and sets this code when the signal stays above the expected threshold for a calibrated time.

SYSTEM

Powertrain

CODE TYPE

Subaru 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
- Slight hesitation or stumble during light-throttle acceleration
- Rough idle or intermittent idle fluctuation
- Reduced fuel economy over time
- Failed emissions inspection due to the check engine light
- In rare cases, a noticeable ping or knock under load if EGR flow is completely lost

Common causes, most likely first

- 1 Open or damaged wire in the EGR circuit, especially at the connector or where the harness bends near the engine
- 2 Failed EGR valve position sensor or integrated EGR valve assembly
- 3 Corroded or loose electrical connector at the EGR valve
- 4 Poor ground connection for the EGR circuit or engine block
- 5 Faulty engine control module (less common but possible after other causes are ruled out)
- 6 Carbon buildup causing the valve to stick, which can skew the position sensor signal high



How to diagnose and fix it

- 1 Inspect the EGR valve connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 2 Check the EGR circuit ground and power supply with a multimeter to confirm voltage and continuity
- 3 Measure the resistance of the EGR valve position sensor and compare to Subaru specifications
- 4 Backprobe the signal wire at the EGR valve and observe voltage while commanding the valve with a scan tool
- 5 Remove and clean the EGR valve and passages if carbon buildup is present, then retest
- 6 Replace the EGR valve assembly if electrical tests confirm an internal sensor failure
- 7 Clear the code and perform a drive cycle to verify the repair, addressing any remaining wiring issues if the code returns

What most Subaru owners miss about P1421

- A high input code often means an open circuit, not a stuck valve, so replacing the EGR valve without checking wiring first is a common and expensive misdiagnosis.
- Subaru EGR valves on some models are integrated with the position sensor, so a sensor failure requires replacing the entire valve assembly rather than a separate sensor.
- Carbon buildup inside the EGR valve can cause the position sensor to read high even when the electrical circuit is intact, so cleaning the valve is sometimes the only repair needed.
- The engine control module rarely fails, but a shorted sensor or water intrusion into the connector can mimic a module fault, so always rule out the harness before condemning the computer.
- This code can be set by a poor engine ground that affects the EGR circuit reference voltage, which is often overlooked during diagnosis.

Can I keep driving with P1421?

You can usually drive the car short distances to a repair shop, but avoid sustained highway driving or heavy loads because a faulty EGR system can cause pinging and increased emissions. If the check engine light starts flashing or you notice severe hesitation, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire probe set or backprobe pins
- Socket set and screwdrivers for EGR valve removal
- Carburetor or EGR cleaner and soft brushes for carbon removal



Reading P1421

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Subaru): its meaning depends on the make.
- 4** Auxiliary emission controls.
- 21** 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 · **P0403** EGR Circuit Malfunction · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/subaru-p1421/>

