



P1402 · Subaru

Fuel Level Pressure Sensor Circuit Fault

P1402 on Subaru vehicles indicates that the engine control module (ECM) has detected an abnormal signal from the fuel level pressure sensor circuit, which monitors the pressure inside the fuel tank for evaporative emission control. The ECM sets this code when the sensor's voltage or resistance falls outside the expected range, often due to a faulty sensor, wiring issue, or connector problem.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Subaru specific	Low	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) on the dashboard.
- Often no other noticeable symptoms besides the warning light.
- In some cases, a slight hesitation or stumble during acceleration if the fuel pressure is affected.
- Occasional difficulty starting the engine, especially after refueling.
- Reduced fuel efficiency if the sensor fault causes incorrect fuel trim adjustments.
- In rare instances, a strong fuel odor or evaporative emission system leak may be present.

Common causes, most likely first

- 1 Faulty fuel level pressure sensor (also known as fuel tank pressure sensor).
- 2 Damaged or corroded wiring harness or connector at the sensor.
- 3 Open or short circuit in the sensor signal circuit.
- 4 Failed ECM (less common, but possible if all other components test good).
- 5 Contamination or debris blocking the sensor port, leading to false readings.
- 6 Loose or improperly seated electrical connector at the sensor.
- 7 Fuel tank deformation or damage affecting sensor operation.



How to diagnose and fix it

- 1 Perform a visual inspection of the fuel level pressure sensor and its wiring for obvious damage, corrosion, or loose connections.
- 2 Use an OBD-II scanner to read live data from the fuel level pressure sensor and compare to manufacturer specifications.
- 3 Check the sensor's reference voltage and ground circuits with a digital multimeter to ensure they are within spec.
- 4 Test the sensor's resistance or voltage output across its operating range; replace if out of specification.
- 5 Inspect the fuel tank for damage or debris that could affect the sensor.
- 6 Clear the diagnostic trouble code and test-drive the vehicle to verify the repair.
- 7 If the code persists after sensor replacement, perform a thorough circuit continuity test and consider ECM diagnosis.

Common Misdiagnosis Traps for P1402

- A loose or corroded connector at the fuel level pressure sensor is often the real culprit, yet many technicians replace the sensor unnecessarily.
- The fuel level pressure sensor shares wiring with other sensors; a fault in a shared ground circuit can set P1402 without the sensor itself being defective.
- On some Subaru models, a weak fuel pump or restricted fuel filter can cause pressure fluctuations that mimic a sensor fault, so always verify actual fuel pressure.
- P1402 can be triggered by a fuel cap that is not sealing properly, leading to evaporative system pressure changes that the sensor interprets as a fault.
- After replacing the sensor, the ECM may require a relearn procedure or a drive cycle to confirm the repair; simply clearing the code may not be enough.

Can I keep driving with P1402?

The vehicle is generally safe to drive with P1402, as it primarily affects evaporative emissions and not engine performance. However, avoid ignoring the code for extended periods, as a persistent fault could mask other issues or lead to increased emissions; have it diagnosed promptly.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Fuel pressure gauge
- Basic hand tools (screwdrivers, socket set)
- Vehicle service manual for wiring diagrams and specifications



Reading P1402

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

Often seen with

P0442 EVAP System Leak Detected (Small) · **P0451** Evaporative Emission System Pressure Sensor/Switch Range/Per · **P0452** Evaporative Emission System Pressure Sensor/Switch Low · **P0453** Evaporative Emission System Pressure Sensor/Switch High · **P0455** EVAP System Leak Detected (Large)

See it working

Watch the animated explainer [How an Oxygen Sensor Works: Live 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

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

