

SUBARU · POWERTRAIN

P1442

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1442 · Subaru

Fuel Level Sensor Circuit Range Performance

P1442 on a Subaru means the engine control module (ECM) has detected that the fuel level sensor signal is out of its expected range or is not responding in a plausible way as fuel is consumed or added. The ECM compares the fuel level sensor voltage against expected values and flags the code when the signal stays too high, too low, or fails to change during a known fuel event.

SYSTEM

Powertrain

CODE TYPE

Subaru specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Fuel gauge reads empty or full constantly, or fluctuates erratically
- Fuel gauge does not move as fuel is consumed or after refueling
- Often no symptoms besides the warning light, especially if the gauge still appears to work
- Low fuel warning light may illuminate at the wrong time or fail to illuminate when fuel is low
- Rough running or stalling in rare cases if the ECM uses fuel level for evaporative emission calculations
- Distance-to-empty or fuel economy display reads incorrectly

Common causes, most likely first

- 1 Fuel level sensor (sending unit) in the tank is worn, dirty, or has a dead spot on its resistive track
- 2 Wiring harness to the fuel tank is chafed, corroded, or has a loose connector at the tank or under the rear seat
- 3 Fuel level sensor float is stuck, saturated, or mechanically binding on the sending unit arm
- 4 Poor ground connection for the fuel level sensor circuit at the chassis or tank
- 5 Aftermarket or incorrect fuel pump/sending unit assembly installed previously
- 6 Engine control module (ECM) internal fault on the fuel level input circuit (rare)



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1442, then clear the code and verify whether it returns immediately or only after a drive cycle
- 2 Inspect the fuel level sensor wiring and connector at the fuel tank for corrosion, chafing, or loose pins; repair as needed
- 3 Check the fuel level sensor resistance with a multimeter while moving the float through its full range and compare to Subaru specifications
- 4 Verify the fuel gauge operation by adding a known quantity of fuel and watching for a smooth, proportional change in the sensor signal
- 5 Remove the fuel pump/sending unit assembly and inspect the float arm, resistor card, and connector for contamination or mechanical binding
- 6 Replace the fuel level sensor or complete sending unit assembly if resistance checks are out of specification or the float is damaged
- 7 After repair, clear codes and perform a complete drive cycle including refueling to confirm the code does not reset

Before you replace the fuel pump assembly

- A common misdiagnosis is replacing the entire fuel pump assembly when only the fuel level sensor card is faulty; on many Subaru models the sensor is available separately.
- The ECM may set P1442 only after a refueling event because it expects the fuel level to rise by a certain amount; a sensor that works at half tank but fails near full or empty can still trigger this code.
- Corrosion inside the connector at the top of the fuel tank is a frequent cause on older Subaru models, especially in areas that use road salt, and it can mimic a failed sensor.
- Aftermarket fuel pump assemblies often have sending units with resistance curves that do not match Subaru specifications, causing P1442 even though the gauge appears to work.
- A weak battery or low charging voltage can cause erratic fuel level readings and set this code on some Subaru models, so check system voltage before condemning the sensor.

Can I keep driving with P1442?

The vehicle remains safe to drive because P1442 does not affect engine operation or safety systems, but you should refuel based on the trip odometer rather than the gauge until it is repaired. Avoid running the tank very low, since an inaccurate gauge could leave you stranded.



Tools that help

- OBD-II scan tool with Subaru-specific software or live data capability
- Digital multimeter
- Fuel tank sending unit wrench or lock ring tool
- Basic hand tools for rear seat and access panel removal
- Flashlight and inspection mirror

Reading P1442

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

Often seen with

P1441 EGR Valve Circuit Open Short To Ground · **P1441** Fuel Tank Pressure Control System High Input · **P1441** Vacuum Cut Valve Bypass Valve · **P1441** ELC System 1 · **P1441** Evaporative Emission (EVAP) System Flow During Non-Purge · **P1441** Evaporative Emission (EVAP) System Flow During Non-Purge · **P1441** Leakage Diagnostic Pump Control Open Circuit · **P0460** Fuel Level Sensor Circuit Malfunction · **P0461** Fuel Level Sensor Circuit Range/Performance · **P0462** Fuel Level Sensor Circuit Low Input · **P0463** Fuel Level Sensor Circuit High Input

See it working

Watch the animated explainer [V6 Engine Explained: 60° Bank and Firing Order](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/subaru-p1442/>

