

SUBARU · POWERTRAIN

P1422

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1422 · Subaru

EVAP Purge Control Solenoid Valve Circuit High Input

P1422 on a Subaru means the engine control module (ECM) has detected an abnormally high voltage on the control circuit for the EVAP purge control solenoid valve, which is the component that meters fuel vapor from the charcoal canister into the intake. The ECM commands the solenoid on and off by grounding its control wire, and a high-voltage reading tells the module that the circuit is open, shorted to power, or that the solenoid coil has failed.

SYSTEM

Powertrain

CODE TYPE

Subaru specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A faint fuel or gasoline odor around the engine bay or near the charcoal canister
- Slightly rough idle or a stumble just after refueling
- Occasional difficulty refueling if the purge system is stuck closed
- A pending P1422 that returns quickly after being cleared
- No drivability change in most cases because the purge solenoid only affects vapor flow

Common causes, most likely first

- 1 Failed purge control solenoid valve with an open internal coil
- 2 Broken, corroded, or disconnected wire in the solenoid control circuit
- 3 Short to battery voltage on the control wire between the ECM and solenoid
- 4 Corroded or loose electrical connector at the purge solenoid
- 5 Faulty ECM driver circuit, though this is rare compared with wiring issues
- 6 Rodent damage to the harness near the intake manifold or canister
- 7 Water intrusion into the connector causing high resistance or an open circuit



How to diagnose and fix it

- 1 Clear the code and test-drive to confirm whether P1422 returns immediately or is intermittent
- 2 Inspect the purge solenoid connector and harness for corrosion, chafing, or rodent damage
- 3 Measure the resistance of the purge solenoid coil with a multimeter and compare to specification
- 4 Check for battery voltage on the control wire with the key on and the solenoid disconnected
- 5 Back-probe the ECM connector to verify the driver circuit is not shorted to power
- 6 Replace the purge control solenoid valve if the coil is open or the valve does not click when commanded
- 7 Repair or replace the affected section of harness and clear the code to verify the repair

What high input really means on a Subaru purge circuit

- A high input code does not always mean the solenoid is bad; a disconnected or corroded connector will produce the same voltage reading because the ECM sees no ground path.
- Subaru purge solenoids are pulse-width modulated, so a simple click test with 12 volts can damage the coil if applied continuously; use a duty-cycle tester or the scan tool activation instead.
- The same P1422 can set from a short to power on the control wire, which is often caused by a pinched harness near the intake manifold rather than by the solenoid itself.
- A stuck-open purge solenoid can cause a rough idle and fuel smell, but P1422 specifically indicates an electrical circuit fault, not a mechanical stuck valve.
- After replacing the solenoid, check the EVAP canister for charcoal debris that can travel through the line and jam the new valve.

Can I keep driving with P1422?

You can usually continue driving with P1422 because the purge solenoid only affects fuel vapor flow and does not change engine performance or safety. Avoid topping off the fuel tank and have the circuit inspected soon, since a persistent fuel vapor leak can fail an emissions test.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Test light
- Wire repair kit with crimpers
- Factory service information for circuit pinouts



Reading P1422

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

Often seen with

P1421 Secondary Air Injection Valve Circuit Short To Ground · **P1421** Exhaust Gas Recirculation Circuit High Input · **P1421** Intake Air Low Pressure Switch Circuit High Voltage · **P1421** Intake Air Low Pressure Switch Circuit High Voltage · **P1421** Secondary Air System Bank 1 · **P0441** EVAP System Incorrect Purge Flow · **P0442** EVAP System Leak Detected (Small) · **P0455** EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak)

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/subaru-p1422/>

