

SUBARU · POWERTRAIN

P1102

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1102 · Subaru

Pressure Sources Solenoid Valve Circuit Malfunction

P1102 on a Subaru means the engine control module (ECM) has detected an electrical fault in the circuit for the pressure sources solenoid valve, which is used to switch the pressure signal for the manifold absolute pressure (MAP) sensor. The ECM monitors the solenoid's control wire for expected voltage changes and sets this code when the circuit is open, shorted, or the solenoid's resistance is out of range.

SYSTEM

Powertrain

CODE TYPE

Subaru specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or unstable engine speed, especially when the engine is cold.
- Hesitation or stumble during acceleration due to incorrect pressure signal to the ECM.
- Poor fuel economy or rich/lean fuel mixture complaints.
- In some cases, a no-start condition if the pressure signal is severely affected.
- Intermittent driveability issues that may come and go with temperature or vibration.

Common causes, most likely first

- 1 Failed pressure sources solenoid valve (open or shorted coil).
- 2 Damaged or corroded wiring harness or connector at the solenoid or ECM.
- 3 Open circuit in the power or ground circuit to the solenoid.
- 4 Short to ground or short to power in the control wire between the solenoid and ECM.
- 5 Contaminated or clogged vacuum passages in the solenoid or associated hoses.
- 6 ECM internal driver failure (rare but possible).
- 7 Loose or poor ground connection at the engine or chassis.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related pending or stored codes.
- 2 Inspect the solenoid valve connector and wiring for corrosion, damage, or loose pins.
- 3 Measure the resistance of the pressure sources solenoid valve and compare to factory specification.
- 4 Check for battery voltage at the solenoid connector with the key on, engine off (KOEO).
- 5 Test the control circuit between the solenoid and ECM for continuity and shorts to ground or power.
- 6 Apply vacuum to the solenoid and check that it holds and switches correctly when powered.
- 7 Replace the pressure sources solenoid valve if electrical tests fail, then clear codes and verify repair.

Don't overlook the pressure sources solenoid

- This code is often misdiagnosed as a faulty MAP sensor, but the solenoid valve is the actual component that switches the pressure source; testing the solenoid first saves unnecessary MAP sensor replacement.
- A common cause is a brittle or cracked vacuum hose connected to the solenoid, which can cause a mechanical fault that mimics an electrical circuit issue.
- The solenoid is frequently located in a hidden area near the intake manifold, and its connector can be easily damaged during other repairs, leading to intermittent P1102.
- On some Subaru models, the pressure sources solenoid valve is part of a larger assembly, so check whether individual replacement is possible before condemning the whole unit.
- A faulty ground connection at the engine block can cause a voltage drop that sets P1102 without any fault in the solenoid itself, so always verify grounds before replacing parts.

Can I keep driving with P1102?

You can usually drive the vehicle with P1102, but expect reduced fuel economy and possible hesitation; avoid heavy acceleration or towing until the fault is repaired, and have it diagnosed promptly to prevent further driveability issues.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Hand vacuum pump
- Wire probe set
- Service manual with wiring diagrams



Reading P1102

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

Often seen with

P1101 Oxygen Sensor Circuit Bank 1 Sensor 1 Voltage Too Low/Air Le · **P1103** Oxygen Sensor Heating Circuit Bank 1 Sensor 1 Short To B+ · **P1101** Neutral Position Switch Circuit Malfunction M/T · **P1103** Pressure Sources Switching Solenoid Valve Circuit · **P1101** Traction Control Vacuum Solenoid Circuit Fault · **P1103** Turbocharger Wastegate Actuator · **P1101** Mass Air Flow Sensor Circuit Out Of Self-Test Range · **P1103** Mass Air Flow Sensor Signal Inconsistent With Engine Speed · **P1101** Mass Air Flow Sensor Out of Self-Test Range · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0108** MAP/Barometric Pressure Circuit High Input

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-p1102/>

