

SUBARU · POWERTRAIN

P1095

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1095 · Subaru

Tumble Generator Valve Circuit #1 Over Current

P1095 on a Subaru means the engine control module (ECM) has detected excessive current draw on the tumble generator valve (TGV) circuit for bank 1, which is the side of the engine that contains cylinder number one. The TGV system uses a motor-driven flap in the intake port to swirl incoming air for better cold-start emissions and low-rpm combustion, and the ECM monitors the circuit for current that exceeds its expected range. An over-current condition tells the ECM that the TGV motor or its wiring is drawing more amperage than the circuit can safely handle.

SYSTEM

Powertrain

CODE TYPE

Subaru specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough or stumbling idle when the engine is cold, especially in the first minute after startup
- Hesitation or a flat spot during light acceleration from a stop
- Reduced fuel economy because the ECM may default to a fixed TGV position
- A buzzing or clicking noise from the intake area after the key is turned on, if the TGV motor is binding
- In rare cases, the engine may enter limp mode with reduced power if the over-current is severe

Common causes, most likely first

- 1 Tumble generator valve motor on bank 1 seized or binding internally, causing high current draw
- 2 Shorted or chafed wiring in the TGV motor circuit, often where the harness passes near hot or moving components
- 3 Corroded or loose electrical connector at the TGV motor or at the ECM, increasing resistance and current
- 4 Failed TGV position sensor or internal motor fault that the ECM interprets as over-current
- 5 Carbon buildup or mechanical obstruction inside the intake port preventing the TGV flap from moving freely
- 6 A faulty ECM driver circuit for the TGV motor, though this is the least common cause



How to diagnose and fix it

- 1 Connect a scan tool and read all stored and pending codes, then command the TGV motor through its full range with the key on and engine off to listen for binding or uneven operation
- 2 Visually inspect the TGV motor connector and the wiring harness for chafing, corrosion, or loose pins, and repair any damaged terminals or insulation
- 3 Measure the resistance of the TGV motor winding with a multimeter and compare it to the factory specification to confirm whether the motor itself is shorted
- 4 Remove the TGV motor and manually operate the valve flap to check for carbon buildup or mechanical binding in the intake port, cleaning the port if necessary
- 5 Back-probe the TGV motor circuit at the ECM and measure current draw while commanding the valve, looking for a reading above the specified limit
- 6 If the motor and wiring test good, substitute a known-good TGV motor from the same bank and clear the code to see whether it returns
- 7 After any repair, clear the ECM memory and perform a TGV learning or idle relearn procedure as required for the Subaru model, then verify the code does not reset

TGV over-current traps Subaru technicians see

- A TGV motor that binds only when the engine is cold can pass a bench resistance test but still draw excessive current during the first cold-start sweep, so always test the circuit with the engine at ambient temperature.
- Carbon buildup on the TGV flap is a common cause of over-current on higher-mileage Subaru engines, and cleaning the intake port often resolves the code without replacing the motor.
- The ECM may set P1095 intermittently if the TGV connector has a poor ground, because a weak ground forces the motor to draw more current to overcome resistance.
- Do not assume the TGV motor is failed just because the code says over-current; a shorted section of harness rubbing against the intake manifold can produce the same reading.
- On some Subaru models, a weak battery or charging system voltage drop can cause the TGV motor to draw higher current during its initialization sweep, setting P1095 alongside charging system codes.

Can I keep driving with P1095?

You can usually drive the vehicle with P1095 set, but expect rough cold-start behavior and slightly higher fuel consumption until it is repaired. Avoid heavy acceleration and prolonged idling while the light is on, and have the circuit inspected soon to prevent damage to the TGV motor or ECM driver.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter with current measurement function
- Factory service information for TGV circuit specifications
- Basic hand tools for intake component removal
- Contact cleaner and dielectric grease for connector repair

Reading P1095

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Subaru): its meaning depends on the make.

0 Fuel and air metering and auxiliary emission controls.

95 The exact fault within that area.

Often seen with

P1094 Tumble Generator Valve Circuit #1 Open Circuit · **P1096** Tumble Generator Valve Circuit #2 Open Circuit · **P1094** O2 Sensor Circuit Slow Response in Rich Control Range Bank 2 · **P1096** O2 Sensor Circuit Slow Switching From Lean to Rich Bank 2 Se · **P2004** Intake Manifold Runner Control Stuck Open (Bank 1) · **P2005** Intake Manifold Runner Control Stuck Open (Bank 2) · **P2006** Intake Manifold Runner Control Stuck Closed (Bank 1)

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-p1095/>

