

GENERIC · POWERTRAIN

P0247

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0247

Turbo/Super Charger Wastegate Solenoid 'B'

P0247 indicates that the powertrain control module (PCM) has detected an electrical fault in the control circuit for wastegate solenoid 'B', which is the second wastegate solenoid on engines equipped with twin turbochargers. The PCM monitors the solenoid's command circuit for expected voltage or current and sets this code when the signal falls outside the manufacturer's specified range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering (injector circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or a limp-home mode, especially under heavy acceleration
- Poor fuel economy or sluggish throttle response
- Audible turbocharger whistle or whoosh that is louder or different than normal
- Overboost or underboost conditions that may trigger additional codes

Common causes, most likely first

- 1 Failed wastegate solenoid 'B' (open or shorted coil)
- 2 Damaged, corroded, or disconnected electrical connector at solenoid 'B'
- 3 Broken, chafed, or shorted wire in the solenoid control circuit
- 4 Faulty powertrain control module (PCM) driver for that circuit
- 5 Restricted or disconnected vacuum/boost hoses to the solenoid or wastegate actuator
- 6 Sticking or seized wastegate actuator or linkage on the turbocharger



How to diagnose and fix it

- 1 Inspect the solenoid 'B' connector and wiring for corrosion, looseness, or damage; clean and secure as needed
- 2 Check vacuum/boost hoses for cracks, splits, or disconnection and repair or replace them
- 3 Measure the resistance of solenoid 'B' with a multimeter and compare to the manufacturer's specification
- 4 Test the control circuit for continuity, shorts to ground, and shorts to power using a wiring diagram
- 5 Command the solenoid on and off with a scan tool to verify operation and listen for clicking
- 6 Replace the wastegate solenoid 'B' if electrical tests indicate a failed coil or valve
- 7 If the circuit and solenoid test good, diagnose the PCM driver or internal fault per service information

Wastegate Solenoid B Diagnostics

- A P0247 can be set by a simple unplugged connector that was disturbed during unrelated service, so always check connection integrity before condemning the solenoid.
- On some vehicles, a faulty wastegate solenoid 'B' may cause no driveability symptoms at all, leading owners to ignore the code until a secondary overboost or underboost code appears.
- The PCM may set P0247 even when the solenoid coil tests good, because the driver circuit inside the PCM can fail; a noid light or oscilloscope test at the PCM connector confirms driver operation.
- Vacuum or boost leaks at the solenoid 'B' hoses can mimic an electrical failure by altering the solenoid's expected response, so pressure-test the system before replacing parts.
- This code is specific to the control circuit, not the wastegate actuator itself; a stuck actuator will usually set a boost-related code rather than P0247.

Can I keep driving with P0247?

You can usually drive the vehicle with P0247, but avoid aggressive acceleration and towing until the fault is repaired, because the turbocharger may not regulate boost correctly and could cause engine damage or trigger limp mode.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Vacuum pump and gauge
- Wiring diagram for the specific vehicle
- Basic hand tools (screwdrivers, socket set, pliers)



Reading P0247

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 2** Fuel and air metering (injector circuits).
- 47** The exact fault within that area.

Often seen with

P0234 Engine Overboost Condition · **P0245** Turbo/Super Charger Wastegate Solenoid 'A' Low · **P0246** Turbo/Super Charger Wastegate Solenoid 'A' High · **P0248** Turbo/Super Charger Wastegate Solenoid 'B' Range/Performance · **P0299** Turbo/Supercharger Underboost

See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0247/>

