

GENERIC · POWERTRAIN

P0249

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0249

Turbo/Super Charger Wastegate Solenoid 'B' Low

P0249 indicates that the powertrain control module has detected a low voltage condition on the control circuit for wastegate solenoid 'B', which is the second wastegate solenoid on a turbocharged or supercharged engine. The solenoid is commanded by the computer to regulate boost pressure, and a low circuit reading means the signal is below the expected threshold, often due to a wiring fault, poor connection, or a failing solenoid.

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 as the computer limits boost
- Poor acceleration or sluggish throttle response due to lost boost control
- Rough idle or hesitation if the wastegate remains open or closed incorrectly
- Increased fuel consumption from the engine operating outside optimal boost parameters

Common causes, most likely first

- 1 Damaged or corroded wiring in the wastegate solenoid 'B' control circuit, such as a short to ground or an open circuit
- 2 Failed wastegate solenoid 'B' itself, often due to a burned-out coil or mechanical sticking
- 3 Loose or corroded electrical connector at the solenoid or at the powertrain control module
- 4 Blown fuse or faulty relay that supplies power to the solenoid circuit
- 5 Faulty powertrain control module driver, though this is less common
- 6 Boost pressure sensor or related sensor fault that indirectly affects solenoid control



How to diagnose and fix it

- 1 Inspect the wastegate solenoid 'B' connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 2 Check the fuse and relay that supply power to the solenoid circuit and replace any failed components
- 3 Measure resistance across the solenoid coil and compare to the manufacturer's specification to confirm it is within range
- 4 Test the control circuit for a short to ground or an open circuit using a multimeter, and repair the harness if faulty
- 5 Command the solenoid on and off with a scan tool to verify it clicks and that the circuit responds correctly
- 6 If the solenoid fails electrical tests, replace it and clear the code to see if it returns
- 7 If all external circuits and the solenoid test good, check for a faulty powertrain control module driver as a last resort

What a low circuit code really means

- A low voltage code on a solenoid control circuit often points to a short to ground rather than a failed solenoid, so inspect the harness for rubbed-through insulation before replacing parts.
- The wastegate solenoid 'B' may be the second solenoid on a twin-turbo system, and its failure can cause a boost imbalance that is not always obvious from the driver's seat.
- Some vehicles use the wastegate solenoid to control vacuum rather than boost directly, so a low circuit reading can be caused by a leaking vacuum line that affects solenoid operation.
- A faulty boost pressure sensor can cause the computer to command the wastegate solenoid to a position that triggers a low circuit code, so check sensor readings before condemning the solenoid.
- After repairs, the code may not clear immediately because the computer needs to see the circuit operate correctly through several drive cycles before turning off the light.

Can I keep driving with P0249?

You can usually drive the vehicle with this code, but avoid heavy acceleration and towing because the engine may enter limp mode or produce reduced power. Have the fault diagnosed soon to prevent potential damage to the turbocharger or supercharger from uncontrolled boost.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and screwdrivers for accessing the solenoid
- Vacuum pump and gauge for testing vacuum-operated wastegate systems



Reading P0249

- 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).
- 49** The exact fault within that area.

Often seen with

P0234 Engine Overboost Condition · **P0235** Turbocharger Boost Sensor A Circuit Malfunction · **P0248** Turbo/Super Charger Wastegate Solenoid 'B' Range/Performance · **P0250** Turbo/Super Charger Wastegate Solenoid 'B' High · **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/p0249/>

