

MAZDA · POWERTRAIN

P1248

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1248 · Mazda

Turbo Boost Pressure Not Detected

P1248 on Mazda vehicles means the powertrain control module (PCM) commanded a boost level from the turbocharger but did not see the expected rise in manifold pressure from the boost sensor. The PCM compares desired boost against actual boost and flags this code when the actual pressure stays too low for the conditions.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Mazda specific	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms noticed by the driver
- Noticeable loss of power and sluggish acceleration, especially when climbing hills or merging
- Reduced fuel economy because the PCM limits boost and runs richer under load
- A hissing or whistling noise from the engine bay under acceleration, indicating a boost leak
- Rough running or misfire-like symptoms under heavy load if the leak is large
- Transmission may hold gears longer or shift differently as the PCM compensates for low torque

Common causes, most likely first

- 1 Split, disconnected, or loose charge-air hose between the turbocharger and intake manifold
- 2 Failed boost pressure sensor or a clogged sensor port on the intake manifold
- 3 Sticking or failed turbocharger wastegate actuator or electronic bypass valve
- 4 Restricted or collapsed intercooler, or a leaking intercooler end tank
- 5 Exhaust leak before the turbocharger, such as a cracked manifold or failed gasket, reducing drive pressure
- 6 Faulty boost control solenoid or a disconnected vacuum line to the wastegate
- 7 Rarely, a failing turbocharger compressor or turbine, or a PCM calibration issue



How to diagnose and fix it

- 1 Inspect all charge-air hoses and clamps from the turbocharger to the throttle body for splits, looseness, or oil residue, and repair or replace as needed
- 2 Check the boost pressure sensor wiring and connector for corrosion or damage, then remove and clean the sensor port if it is carboned up
- 3 Test the wastegate actuator and bypass valve for free movement and correct vacuum or electronic operation, replacing if stuck
- 4 Perform a boost leak test by pressurizing the intake tract and listening for leaks at the intercooler, hoses, and gaskets
- 5 Inspect the exhaust manifold and turbo flange for cracks or black soot marks indicating a pre-turbo exhaust leak
- 6 Verify boost control solenoid operation and check all vacuum lines for cracks or disconnection
- 7 If all mechanical checks pass, use a scan tool to compare commanded boost to actual boost under load and follow the Mazda diagnostic flow chart for the turbo system

Before you replace the turbocharger

- A loose or split charge-air hose is the most common cause of P1248 on Mazda turbo engines, so inspect every clamp and hose before condemning the turbocharger.
- The boost pressure sensor on many Mazda engines is located on the intake manifold and can become clogged with carbon, causing a false low-boost reading even when the turbo is working correctly.
- A stuck-open wastegate or a disconnected wastegate actuator rod will bleed off all boost pressure and set this code, and it is often misdiagnosed as a failed turbocharger.
- An exhaust leak before the turbocharger reduces the pressure that spins the turbine, so look for cracked manifolds or failed gaskets that can mimic a bad turbo.
- This code can be set by a faulty boost control solenoid or a cracked vacuum line, so test the solenoid and inspect all vacuum hoses before replacing expensive turbo components.

Can I keep driving with P1248?

You can usually drive the vehicle to a repair shop, but avoid heavy acceleration and sustained high-load driving because the engine is not producing full boost and may run rich. If you hear loud hissing or notice severe power loss, stop driving and have the vehicle towed to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Boost leak tester kit
- Vacuum pump with gauge
- Basic hand tools (screwdrivers, sockets, pliers)
- Flashlight or inspection mirror



Reading P1248

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

Often seen with

P0101 Mass/Volume Air Flow Circuit Range/Performance · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0171** System Too Lean (Bank 1) · **P0234** Engine Overboost Condition · **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/mazda-p1248/>

