

FORD · POWERTRAIN

P1228

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1228 · Ford

Wastegate Failed Open Under Pressure

P1228 on Ford vehicles means the powertrain control module (PCM) commanded the turbocharger wastegate to build boost, but the manifold pressure sensor reported that boost pressure did not rise as expected, so the PCM concluded the wastegate is stuck open. The turbo is not making the pressure the computer asked for because the exhaust gate that should stay shut under load is bleeding off exhaust energy.

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

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the wastegate leaks only slightly
- Noticeably reduced power and sluggish acceleration, particularly when climbing hills or merging
- The engine may feel like it runs out of breath above 3,000 rpm instead of pulling strongly
- A hissing or fluttering noise from the turbo area under acceleration
- Poor fuel economy because the PCM adds fuel to compensate for missing boost
- In severe cases, the PCM may limit boost further and set a reduced-power limp mode

Common causes, most likely first

- Wastegate actuator rod misadjusted, disconnected, or the actuator diaphragm ruptured so the gate hangs open
- Wastegate flapper valve stuck open due to carbon buildup or a broken internal spring
- Vacuum or pressure hose to the wastegate actuator cracked, split, or disconnected
- Turbocharger wastegate solenoid (boost control solenoid) failed or clogged, so it cannot apply pressure to close the gate
- Leaking charge-air pipe, intercooler, or intake manifold gasket that bleeds off boost before the manifold pressure sensor sees it
- Faulty manifold absolute pressure (MAP) sensor or a restricted boost pressure sensor port giving a false low reading
- Wiring fault or poor connection at the wastegate solenoid or MAP sensor circuit



How to diagnose and fix it

- 1 Inspect all vacuum and pressure hoses between the turbo, wastegate actuator, and boost control solenoid for cracks, soft spots, or disconnection, and replace any suspect hose
- 2 Check the wastegate actuator rod for free movement and correct adjustment, and confirm the flapper closes fully by hand with the actuator disconnected
- 3 Test the boost control solenoid with a scan tool bidirectional control or a hand vacuum pump to confirm it opens and holds pressure
- 4 Pressure-test the charge-air system from the turbo outlet to the throttle body to find leaks at intercooler end tanks, couplers, and intake gaskets
- 5 Compare MAP sensor readings key-on-engine-off and during a road test against expected barometric pressure to rule out a skewed sensor
- 6 Check the wastegate solenoid and MAP sensor wiring for chafing, corrosion, and loose pins, and repair as needed
- 7 Clear the code and run a boosted road test with a scan tool logging desired versus actual boost to confirm the repair

What a wastegate code really tells you

- A P1228 is frequently set by a simple disconnected or split actuator hose rather than a failed turbocharger, so always inspect the plumbing before condemning the turbo
- Carbon buildup on the wastegate flapper is common on higher-mileage Ford turbo engines and can hold the gate slightly open even when the actuator is working correctly
- A boost leak anywhere in the charge-air system will set this code because the PCM only sees manifold pressure, not pressure at the turbo outlet
- The code can be intermittent and only appear during sustained heavy load, so a gentle test drive may not reproduce it
- A sticking or misadjusted wastegate actuator rod can mimic a failed turbo, and adjusting or replacing the actuator is far cheaper than replacing the turbocharger

Can I keep driving with P1228?

You can usually drive the vehicle to a repair shop, but avoid heavy throttle, towing, and sustained high-load driving because the turbo is not building commanded boost and the engine may enter reduced-power mode. If the vehicle feels severely down on power or the warning light flashes, stop driving and have it diagnosed promptly.



Tools that help

- OBD-II scan tool with live data and bidirectional control
- Hand vacuum pump with gauge
- Boost leak tester or smoke machine
- Basic hand tools and hose clamp pliers
- Digital multimeter

Reading P1228

P Powertrain: engine, transmission and emissions.

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

2 Fuel and air metering (injector circuits).

28 The exact fault within that area.

Often seen with

P0106 MAP/Barometric Pressure Circuit Range/Performance · **P0234** Engine Overboost Condition · **P0236** Turbocharger Boost Sensor A Circuit Range/Performance · **P0237** Turbocharger Boost Sensor A Circuit Low · **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/ford-p1228/>

