



P1301 · Ford

Boost Calibration High

P1301 on Ford vehicles means the powertrain control module has detected that the boost pressure calibration is higher than the expected range for the current operating conditions. The computer compares signals from the manifold absolute pressure sensor and other boost-related inputs against its internal calibration and flags the fault when the calculated boost value exceeds the allowed threshold.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode under acceleration
- Poor fuel economy or rich-running condition
- Rough idle or hesitation during light throttle
- Black smoke from the exhaust on turbocharged diesel models
- Audible turbocharger surge or whistle under load

Common causes, most likely first

- 1 Faulty manifold absolute pressure sensor or boost pressure sensor giving a high reading
- 2 Damaged or disconnected boost pressure sensor wiring or connector
- 3 Sticking or misadjusted turbocharger wastegate or variable geometry turbo actuator
- 4 Clogged or restricted boost pressure sensor port or intake passage
- 5 Leaking or disconnected charge air cooler piping causing false high boost readings
- 6 Faulty powertrain control module calibration or software issue
- 7 Restricted exhaust or intake system causing abnormal boost pressure



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data to see boost pressure, engine load, and sensor voltage at the time the code set
- 2 Visually inspect the boost pressure sensor, its connector, and the wiring harness for damage, corrosion, or loose pins
- 3 Check the boost pressure sensor port and intake passage for carbon buildup or blockage and clean as needed
- 4 Test the boost pressure sensor with a known pressure source or compare its live reading to a mechanical gauge
- 5 Inspect charge air cooler hoses, clamps, and intercooler for leaks or disconnections that could skew boost readings
- 6 Verify wastegate or variable geometry turbo actuator operation and check for sticking or misadjustment
- 7 If all mechanical and electrical checks pass, check for powertrain control module calibration updates or replace the module as a last resort

Boost sensor faults often mimic turbo failure

- A contaminated or skewed boost pressure sensor is the most common cause of P1301 on Ford engines, yet many technicians replace the turbocharger first and never fix the code.
- The code can set intermittently from a loose sensor connector that only loses contact during engine vibration or cold starts, so wiggle-test the harness while watching live data.
- On Ford Power Stroke diesels, a restricted exhaust or a sticking turbo actuator can cause the calibration to read high even when the sensor itself is accurate.
- P1301 does not always mean the turbo is overboosting; a false high signal from a faulty sensor or wiring can set the same code with normal actual boost pressure.
- After any boost sensor or turbo repair, clear the code and perform a road test with live data to confirm the boost calibration stays within range before returning the vehicle.

Can I keep driving with P1301?

You can usually drive the vehicle with P1301 set, but avoid heavy acceleration and sustained high-load driving until the fault is diagnosed. If the engine enters limp mode or you notice severe power loss, schedule service promptly to prevent potential turbocharger or engine damage.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Hand vacuum/pressure pump with gauge
- Socket and wrench set
- Contact cleaner and dielectric grease



Reading P1301

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 3** Ignition system and misfire.
- 01** The exact fault within that area.

Often seen with

P006A MAP - Mass or Volume Air Flow Correlation Bank 1 · **P0236** Turbocharger Boost Sensor A Circuit Range/Performance · **P0237** Turbocharger Boost Sensor A Circuit Low · **P0238** Turbocharger Boost Sensor A Circuit 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/ford-p1301/>

