

FORD · POWERTRAIN

P1589

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1589 · Ford

Throttle Control Unit Unable To Control Desired Throttle Angle

P1589 means the powertrain control module (PCM) commanded a specific throttle plate angle through the electronic throttle control (ETC) motor, then compared the result against the throttle position sensor feedback and found the two did not agree within the expected window. In plain terms, the computer asked the throttle to move and the throttle did not go where it was told, so it flagged the control circuit as unable to achieve the desired angle.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Wrench or powertrain malfunction light illuminated, often with no other obvious change in how the vehicle drives
- Reduced engine power or limp-home mode where the throttle responds sluggishly or refuses to open past a limited angle
- Rough or hunting idle as the PCM struggles to hold a commanded throttle angle
- Hesitation or a flat spot on acceleration, especially from a stop or during light cruise
- Occasional stall or near-stall when coming to a stop as the throttle plate settles
- Cruise control dropping out or refusing to engage because throttle authority is compromised

Common causes, most likely first

- 1 Carbon and oil sludge buildup on the throttle plate and bore, restricting movement and skewing the learned closed position
- 2 Faulty or contaminated throttle position sensor (TPS) inside the throttle body assembly giving inaccurate angle feedback
- 3 Wiring damage or corroded connector pins in the throttle body harness, including chafed wires near the intake
- 4 Sticking or failing electronic throttle control motor inside the throttle body
- 5 PCM calibration or adaptive throttle learning that has drifted and needs a relearn after service
- 6 A weak battery or charging system issue causing low voltage that disrupts throttle motor operation
- 7 Less commonly, a PCM internal driver fault on the throttle control circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1589, then check for related throttle and pedal codes before touching any parts
- 2 Inspect the throttle body and intake boot for carbon buildup, cracks, and oil residue, and clean the throttle bore and plate with throttle-body cleaner
- 3 Perform a throttle body relearn or idle relearn with a capable scan tool after cleaning or replacement
- 4 Back-probe the throttle body connector and check motor and sensor circuits for opens, shorts, and excessive resistance while wiggling the harness
- 5 Compare commanded throttle angle to actual TPS voltage on a scan tool through a slow sweep of the pedal to confirm whether feedback or motor drive is at fault
- 6 Test the throttle motor winding resistance and verify battery and charging voltage under load before condemning the throttle body
- 7 Replace the throttle body assembly if cleaning, relearn, and circuit tests all pass but the angle still fails to track the command, then clear codes and verify the repair

Why cleaning alone often does not fix P1589

- A dirty throttle body is the most common trigger, but if the plate is cleaned without a relearn the PCM keeps the old learned closed position and the code returns within a few drive cycles
- A failing throttle position sensor can report a plausible angle that is slightly off, so the code sets even though the plate physically moves freely and the motor tests good
- Low system voltage from a weak battery or a failing alternator can starve the throttle motor and set P1589 without any hard fault in the throttle body itself
- Chafed harness wiring behind the intake or near the cowl often shows good continuity at rest and only fails under engine movement, so a static ohm check can miss it
- A pedal position sensor fault on the accelerator side can command an angle the throttle cannot reach, so always scan the pedal circuits before replacing the throttle body

Can I keep driving with P1589?

The vehicle usually remains drivable in reduced-power limp mode, but throttle response can be unpredictable and stalling is possible, so keep speeds low and avoid heavy traffic or highway merging until it is diagnosed. If the engine stalls repeatedly or the throttle sticks, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data and throttle relearn capability
- Digital multimeter
- Throttle body cleaner and lint-free shop rags
- Basic socket and Torx set
- Back-probe kit or breakout leads



Reading P1589

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 89** The exact fault within that area.

Often seen with

P0121 Throttle Position Sensor A Circuit Range/Performance · **P2104** Throttle Actuator Control System - Forced Idle · **P2105** Throttle Actuator Control System - Forced Engine Shutdown · **P2111** Throttle Actuator Control System - Unable to Open · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1589/>

