

FORD · POWERTRAIN

P1587

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1587 · Ford

Throttle Control Unit Modulated Command Malfunction

P1587 on Ford vehicles indicates that the powertrain control module (PCM) has detected a malfunction in the modulated command signal it sends to the throttle control unit, which is part of the electronic throttle control system. The PCM expects a specific pulse-width-modulated (PWM) signal to control the throttle plate, but the feedback or circuit response falls outside the expected range, so the computer sets this code and typically illuminates the wrench light.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the powertrain malfunction or wrench indicator light on the dashboard
- Reduced engine power or limp-home mode with limited throttle response
- Hesitation or stumble when accelerating from a stop
- Unstable or surging idle quality
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Damaged or chafed wiring in the throttle control unit modulated command circuit
- 2 Corroded or loose electrical connector at the throttle body or PCM
- 3 Faulty throttle body assembly with an internal electronic fault in the command circuit
- 4 PCM software calibration issue or internal driver fault
- 5 Poor ground connection for the throttle control unit or PCM
- 6 Aftermarket electronic throttle controller or piggyback device interfering with the command signal



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes, freeze-frame data, and throttle position sensor readings to confirm P1587 is the primary fault.
- 2 Visually inspect the throttle body connector and PCM connector for corrosion, pushed pins, or loose terminals, and repair as needed.
- 3 Perform a wiggle test on the throttle control unit command wire while monitoring the commanded and actual throttle position on the scan tool to reveal intermittent wiring faults.
- 4 Check the throttle control unit command circuit for continuity, short to ground, and short to power using a digital multimeter, and repair any damaged wiring.
- 5 Verify the throttle body is clean and the plate moves freely without binding, and clean the throttle bore if carbon buildup is present.
- 6 If wiring and connectors are good, substitute a known-good throttle body and clear the code to see if the fault returns.
- 7 As a last step, check for Ford technical service bulletins (TSBs) or PCM calibration updates that address P1587, and reprogram or replace the PCM only if all other causes are ruled out.

Don't replace the throttle body first

- A loose or corroded throttle body connector is a far more common cause of P1587 than a failed throttle body, so always inspect and clean the terminals before condemning the assembly.
- Intermittent P1587 codes often appear after engine work that disturbs the throttle body harness, so check for stretched or pinched wires near the intake manifold.
- Aftermarket throttle controllers or performance tuners that splice into the pedal or throttle wiring can corrupt the modulated command signal and set this code, so remove them before diagnosing.
- A weak battery or poor ground can cause the PCM to misread the throttle command signal, so verify battery voltage and ground integrity before replacing expensive parts.
- P1587 can be stored alongside throttle actuator control codes, but it specifically points to the command signal path rather than the motor circuit, so do not confuse it with P2100-series codes.

Can I keep driving with P1587?

You can usually drive the vehicle to a repair shop, but expect reduced power and avoid heavy acceleration or highway merging until the fault is repaired. If the vehicle enters limp mode or the throttle response becomes unpredictable, stop driving and have it towed.



Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter (DMM) with back-probing pins
- Wiring diagram for the specific Ford model and engine
- Torque wrench and basic hand tools for throttle body removal
- Contact cleaner and dielectric grease for connector repair

Reading P1587

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

Often seen with

P1588 Engine Mount Solenoid Valves Open Circuit · **P1588** Cruise Control Clutch Control Circuit High · **P1588** Throttle Control Unit Detected Loss of Return Spring · **P1588** Cruise Control Clutch Control Circuit High · **P2100** Throttle Actuator Control Motor Circuit/Open · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **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 a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1587/>

