

FORD · POWERTRAIN

P1173

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1173 · Ford

Rotor Calibration Fault

P1173 on Ford vehicles indicates the powertrain control module (PCM) has detected a fault in the rotor calibration circuit, which is part of the electronic throttle body or variable cam timing system depending on engine family. The PCM compares the expected rotor position signal against actual feedback and sets this code when the calibration values fall outside the programmed tolerance.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode during acceleration
- Rough idle or stumbling when the throttle is applied
- Poor fuel economy or hesitation on tip-in
- Intermittent stalling when coming to a stop
- Unusual throttle pedal response, such as delayed or surging acceleration

Common causes, most likely first

- 1 Carbon buildup or contamination on the electronic throttle body rotor and feedback sensor
- 2 Failed or sticking electronic throttle body assembly
- 3 Wiring harness damage or poor connection at the throttle body connector
- 4 PCM software calibration issue requiring a reflash or update
- 5 Internal fault in the PCM driver circuit for the rotor calibration
- 6 Corroded or damaged pins in the throttle position sensor circuit
- 7 Mechanical binding in the throttle plate linkage or return spring



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data to confirm when the code sets and check for related throttle body codes
- 2 Inspect the throttle body connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 3 Remove the throttle body and clean the bore and rotor with approved throttle body cleaner, then perform a throttle relearn procedure
- 4 Check the throttle position sensor signal voltage with a multimeter while slowly opening the throttle plate by hand, looking for smooth sweep without drops
- 5 Verify PCM calibration is current and reflash if a newer calibration is available from Ford
- 6 Replace the electronic throttle body if cleaning and wiring checks do not resolve the fault, then perform the idle relearn and clear codes
- 7 If the code persists after throttle body replacement, diagnose the PCM driver circuit and replace the PCM only as a last resort

Why cleaning the throttle body often fixes P1173

- Many technicians replace the throttle body unnecessarily when a thorough cleaning and relearn procedure resolves the rotor calibration fault on high-mileage Ford engines.
- A dirty throttle body can cause the rotor calibration to drift because the PCM learns adaptive values that eventually exceed the programmed limits, setting P1173 without any driveability complaint.
- After any throttle body cleaning or replacement, the PCM must relearn the closed and open throttle stops; skipping this step will immediately reset the code.
- A weak or failing battery can cause voltage drops that corrupt the throttle body calibration during key-on, so always check battery health and charging system output before condemning parts.
- On some Ford models, P1173 can be set by a faulty accelerator pedal position sensor that sends inconsistent signals to the PCM, so inspect both ends of the throttle control system.

Can I keep driving with P1173?

You can usually drive the vehicle to a repair shop, but avoid aggressive acceleration or heavy load because the PCM may limit power unexpectedly. If the engine enters limp mode or stalls repeatedly, stop driving and arrange a tow to prevent a safety hazard.

Tools that help

- OBD-II scan tool with live data and throttle relearn capability
- Digital multimeter for checking sensor signal voltage and wiring continuity
- Throttle body cleaner and soft brush
- Socket set and screwdrivers for throttle body removal
- Torque wrench for proper reinstallation of the throttle body



Reading P1173

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

Often seen with

P0121 Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P2106** Throttle Actuator Control System - Forced Limited Power · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How Crank and Cam Position Sensors Work](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1173/>

