



P1171 · Ford Rotor Sensor Fault

P1171 on a Ford indicates the powertrain control module (PCM) has detected a fault in the rotor sensor circuit, which is part of the distributorless ignition system. The PCM monitors the rotor sensor signal to determine the position of the distributor rotor and synchronize fuel injection and ignition timing; when the signal is missing, erratic, or out of expected range, this code is stored.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Engine may crank but fail to start or start hard
- Rough running, misfiring, or stalling, especially at idle or low speeds
- Loss of power or hesitation during acceleration
- Poor fuel economy due to incorrect timing
- In some cases, the engine may stall intermittently or cut out while driving

Common causes, most likely first

- 1 Faulty rotor sensor (also known as the camshaft position sensor or distributor sensor) inside the distributor
- 2 Damaged or corroded wiring or connector at the rotor sensor or PCM
- 3 Worn or misaligned distributor rotor or distributor shaft
- 4 Failed ignition control module (ICM) affecting sensor signal
- 5 PCM internal fault (rare but possible)
- 6 Contamination or debris on the sensor tip
- 7 Loose or damaged reluctor wheel or shutter inside the distributor

How to diagnose and fix it

- 1 Perform a visual inspection of the rotor sensor, wiring, and connector for damage or corrosion
- 2 Check for stored or pending codes and freeze-frame data to confirm the fault conditions
- 3 Test the rotor sensor signal with a multimeter or oscilloscope according to Ford service procedures
- 4 Inspect the distributor cap, rotor, and internal components for wear or misalignment
- 5 Replace the rotor sensor if testing indicates it is faulty
- 6 Repair or replace damaged wiring or connectors as needed
- 7 Clear codes and verify the repair with a test drive and recheck



Rotor sensor faults often misdiagnosed

- A failing rotor sensor can mimic a bad ignition coil or spark plug issue, leading to unnecessary replacement of those parts.
- The rotor sensor signal is critical for sequential fuel injection; a fault can cause injector timing errors that feel like transmission problems.
- On some Ford models, the rotor sensor is integrated into the distributor and cannot be replaced separately, requiring distributor replacement.
- Intermittent faults may only appear when the engine is hot or under vibration, so a wiggle test of the harness while monitoring sensor signal is essential.
- A weak or failing battery or charging system can cause voltage spikes that disrupt sensor signals and set this code without a hard sensor failure.

Can I keep driving with P1171?

If the engine runs smoothly and the only symptom is the check engine light, you can drive cautiously to a repair shop, but avoid heavy acceleration or long trips. If the engine misfires, stalls, or is hard to start, stop driving and have the vehicle towed to prevent damage to the catalytic converter or a safety hazard.

Tools that help

- OBD-II scanner with Ford-specific software
- Digital multimeter
- Oscilloscope (for signal analysis)
- Service manual with wiring diagrams
- Basic hand tools (sockets, wrenches, screwdrivers)

Reading P1171

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

Often seen with

P0340 Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0341** Camshaft Position Sensor A Circuit Range/Performance · **P0344** Camshaft Position Sensor A Circuit Intermittent · **P0350** Ignition Coil Primary/Secondary Circuit · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction



See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1171/>

