

FORD · POWERTRAIN

P1309

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1309 · Ford

Misfire Detection Monitor Not Enabled

P1309 on Ford vehicles means the powertrain control module (PCM) has detected that the misfire detection monitor has not been enabled or has been disabled during the current drive cycle. The PCM is not reporting a specific misfire; instead, it is flagging that the misfire monitoring strategy itself is not running, which can be caused by a fault in the crankshaft position sensor circuit, a PCM configuration issue, or a problem that prevents the monitor from completing its self-test.

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.
- Rough idle or engine stumble if the underlying cause also affects ignition or fuel delivery.
- Reduced engine performance or hesitation during acceleration in some cases.
- Poor fuel economy if the misfire monitor is disabled and actual misfires go undetected.
- Intermittent stalling or hard starting when the crankshaft position sensor signal is erratic.
- No symptoms besides the warning light in many instances, especially if the monitor was disabled by a temporary condition.

Common causes, most likely first

- 1 Faulty crankshaft position sensor or damaged sensor wiring/connector.
- 2 PCM software calibration issue or corrupted configuration preventing the misfire monitor from enabling.
- 3 Low battery voltage or charging system problems causing the PCM to disable non-critical monitors.
- 4 Aftermarket tuner or performance calibration that intentionally disables the misfire monitor.
- 5 Engine mechanical issues (e.g., excessive crankshaft end play or reluctor wheel damage) that prevent a stable crank signal.
- 6 Wiring harness damage between the crankshaft sensor and PCM, including chafed or corroded circuits.
- 7 Failed or improperly installed PCM after a replacement or reprogramming event.



How to diagnose and fix it

- 1 Verify battery voltage and charging system operation; clear the code and test-drive to see if it returns.
- 2 Inspect the crankshaft position sensor and its wiring for damage, corrosion, or loose connections.
- 3 Use a scan tool to check for pending or stored codes in other modules and to view crankshaft position sensor signal integrity (RPM signal) during cranking and running.
- 4 Check for any aftermarket calibration or tuner device and restore the factory PCM calibration if present.
- 5 Perform a PCM reset/relearn procedure and ensure the misfire monitor is enabled in the PCM configuration.
- 6 If the sensor and wiring are good, follow Ford diagnostic procedures for the misfire monitor enable criteria, which may involve checking the crankshaft reluctor wheel and sensor gap.
- 7 Reprogram or replace the PCM only after all other causes have been ruled out and verified with Ford-specific diagnostic software.

Why the misfire monitor may be disabled

- A common oversight is assuming P1309 means the engine is misfiring, but it actually indicates the misfire detection system is not running, so no misfire data is being collected.
- Low battery voltage or a weak battery can cause the PCM to disable the misfire monitor as a protective strategy, setting P1309 without any actual sensor fault.
- Aftermarket performance tunes or chips often disable the misfire monitor to prevent false check engine lights, and this code will appear if the factory calibration is not restored.
- A damaged crankshaft reluctor wheel or excessive crankshaft end play can prevent a clean signal, causing the monitor to abort and set P1309 even when the sensor itself tests good.
- On some Ford models, a PCM reprogramming or replacement requires a specific configuration procedure to enable the misfire monitor, and skipping this step will set P1309 immediately.

Can I keep driving with P1309?

You can generally drive the vehicle with P1309 set, but be aware that the misfire monitor is not protecting the engine or emissions system, so any actual misfires may go undetected and could lead to catalytic converter damage over time. Avoid heavy acceleration or towing until the fault is diagnosed, and address the code promptly to restore full monitoring.

Tools that help

- OBD-II scan tool with Ford-specific software or enhanced diagnostics
- Digital multimeter for checking sensor resistance and wiring continuity
- Oscilloscope for analyzing crankshaft position sensor signal waveform
- Factory service information for misfire monitor enable criteria and wiring diagrams
- Basic hand tools for sensor and connector inspection



Reading P1309

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

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0302** Cylinder 2 Misfire Detected · **P0315** Crankshaft Position System Variation Not Learned · **P0335** Crankshaft Position Sensor A Circuit Malfunction

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1309/>

