

FORD · POWERTRAIN

P1246

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1246 · Ford

Alternator Load Input Failed

P1246 on Ford vehicles means the Powertrain Control Module (PCM) has lost the alternator load input signal, which is a duty-cycle message the alternator sends to report how much electrical load it is carrying. The PCM uses this signal to adjust idle speed and manage charging, so when the signal is missing or out of range the computer flags the circuit as failed.

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

Symptoms you may notice

- Illuminated battery or charging system warning light on the instrument cluster
- Dimming or flickering headlights and interior lights, especially at idle
- Battery that repeatedly goes flat or needs frequent jump starts
- Erratic or surging idle speed as the PCM loses its load compensation signal
- Accessory drive belt squeal or slipping under electrical load
- Often no symptoms besides the warning light when the signal wire is only intermittently open

Common causes, most likely first

- 1 Broken, chafed, or corroded wire in the alternator load input circuit between the alternator and PCM
- 2 Loose or contaminated connector pins at the alternator or PCM harness
- 3 Failed alternator internal regulator that no longer produces the load signal
- 4 Blown fuse or poor ground shared by the charging circuit
- 5 PCM software calibration issue or internal driver fault on the load input circuit
- 6 Aftermarket alternator that does not output the Ford-specific load signal
- 7 Water intrusion or rodent damage in the engine harness near the alternator



How to diagnose and fix it

- 1 Inspect the alternator and PCM connectors for corrosion, pushed-back pins, and loose terminals, then clean and reseal them
- 2 Check the charging system voltage at the battery with the engine running and all accessories on to confirm the alternator is actually charging
- 3 Perform a wiggle test on the alternator load input harness while watching live data for the load signal to catch intermittent opens
- 4 Check continuity and resistance of the load input wire from the alternator to the PCM, repairing any open or shorted section
- 5 Verify the alternator is a Ford-compatible unit that outputs the correct duty-cycle load signal, replacing it if it does not
- 6 Confirm the PCM sees a valid load input signal on a scan tool after repairs and clear the code to see whether it returns
- 7 If the circuit and alternator test good, check for PCM calibration updates or a faulty PCM driver before condemning the module

Why the alternator load signal fails

- Many P1246 cases are caused by a chafed signal wire near the alternator rather than a failed alternator, so a continuity test saves unnecessary parts replacement.
- An aftermarket alternator that lacks the Ford load-signal output will set this code even though charging voltage looks normal on a voltmeter.
- The PCM may set P1246 intermittently from a loose connector pin that only loses contact during engine movement or vibration.
- A weak or corroded ground on the alternator body can corrupt the load signal without blowing any fuse, which technicians often overlook.
- This code does not always mean the alternator is bad; the PCM load input driver itself can fail and mimic a wiring fault.

Can I keep driving with P1246?

You can usually drive short distances to a repair shop, but avoid long trips, heavy electrical loads, and night driving because the battery may not stay charged. If the battery light is on and voltage is dropping, stop and arrange a tow to prevent a no-start or stall.



Tools that help

- Digital multimeter
- OBD-II scan tool with live data
- Wiring diagram for the specific Ford model
- Test light or load tester
- Terminal pick and electrical contact cleaner

Reading P1246

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Ford): its meaning depends on the make.

2 Fuel and air metering (injector circuits).

46 The exact fault within that area.

Often seen with

P1247 Needle Lift Sensor Circuit Open/Short To B+ · **P1247** Accelerator Position Sensor 2 Circuit Malfunction · **P1247** Accelerator Position Sensor 2 Circuit Malfunction · **P1247** Turbo Boost Pressure Low · **P0562** System Voltage Low · **P0563** System Voltage High · **P0620** Generator Control Circuit Malfunction · **P0625** Generator Field/F Terminal Circuit Low

See it working

Watch the animated explainer [Readiness Monitors and the OBD-II Drive Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1246/>

