

FORD · POWERTRAIN

P1108

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1108 · Ford

Dual Alternator Battery Lamp Circuit Malfunction

P1108 on Ford vehicles indicates that the Powertrain Control Module (PCM) has detected a malfunction in the dual alternator battery lamp circuit, which is the wiring that controls the charge warning light for vehicles equipped with two alternators. The PCM monitors this circuit for expected voltage changes when the key is turned on and the engine is running, and it sets the code when the signal is out of range or inconsistent with commanded states.

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

Symptoms you may notice

- The battery warning light may stay illuminated constantly or fail to come on when the ignition is switched on.
- The charge system warning message may appear in the instrument cluster information display.
- Often no symptoms besides the warning light, with the charging system still functioning normally.
- In some cases, the battery may not charge properly if the circuit fault affects alternator excitation.
- Intermittent flickering of the battery lamp while driving over bumps or around corners.

Common causes, most likely first

- Damaged or corroded wiring in the dual alternator battery lamp circuit, especially at the alternator connectors or the instrument cluster harness.
- Failed bulb or light-emitting diode (LED) in the instrument cluster battery warning lamp.
- Faulty instrument cluster printed circuit board or cluster internal fault affecting the lamp circuit.
- Open or shorted circuit between the PCM and the instrument cluster, including chafed wires or loose pins.
- Defective PCM driver for the battery lamp circuit, though this is less common.
- Poor ground connection at the instrument cluster or at the alternator mounting points.



How to diagnose and fix it

- 1 Inspect the battery warning lamp operation: turn the key on and verify the lamp illuminates; if not, check the bulb or LED and cluster function.
- 2 Check all fuses related to the instrument cluster and charging system, and replace any that are blown.
- 3 Disconnect the battery and inspect the wiring harness from the PCM to the instrument cluster and to both alternators for chafing, corrosion, or loose connectors.
- 4 Perform a voltage drop test on the ground circuits for the instrument cluster and alternators to ensure clean, tight grounds.
- 5 Use a scan tool to command the battery lamp on and off and observe whether the lamp responds, isolating the circuit from the PCM.
- 6 If the circuit tests good, substitute a known-good instrument cluster to rule out internal cluster failure.
- 7 As a last resort, test the PCM driver circuit with an oscilloscope or replace the PCM if all other components are verified good.

Dual alternator lamp circuit quirks

- Many technicians replace the alternator or battery when the real fault is a chafed wire in the lamp circuit, so always perform a thorough visual inspection of the harness first.
- On Ford vehicles with dual alternators, the battery lamp circuit often shares a connector with other instrument cluster signals, so a single corroded pin can cause multiple unrelated warning lights.
- The PCM may set P1108 even when the charging system is working perfectly, because the code only monitors the lamp circuit and not the alternator output itself.
- A faulty instrument cluster voltage regulator can cause the battery lamp to glow dimly and set this code without any charging system problem.
- Aftermarket alarm or remote start installations frequently tap into the instrument cluster wiring and can introduce faults in the battery lamp circuit.

Can I keep driving with P1108?

The vehicle is generally safe to drive because the charging system is usually unaffected, but you should avoid long trips until the circuit is repaired, as a failed warning lamp could mask a genuine charging fault later. Monitor the battery voltage with a gauge if possible and address the code promptly to avoid a no-start situation.

Tools that help

- Digital multimeter
- Scan tool with bidirectional control
- Wiring diagram for the specific Ford model
- Test light
- Socket set and trim removal tools



Reading P1108

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

Often seen with

P1105 Oxygen Sensor Heating Circuit Bank 1 Sensor 2 Short To B+ · **P1109** Oxygen Sensor Circuit Bank 2 Sensor 2 Voltage Too Low/Air Le · **P1105** MAP BARO Pressure Switch Solenoid Valve · **P1105** Fuel Pressure Solenoid · **P1105** Atmospheric Pressure Sensor In Control Module · **P1105** HO2S12 Heater Circuit High Voltage · **P1105** Secondary Vacuum Sensor Circuit · **P1109** Secondary Port Throttle System · **P1105** Dual Alternator Upper Fault · **P1109** IAT B Sensor Intermittent · **P1105** Open Or Shorted Condition Detected In The Baro Read Solenoid · **P1109** Secondary Port Throttle System · **P0620** Generator Control Circuit Malfunction · **P0625** Generator Field/F Terminal Circuit Low · **P0650** Malfunction Indicator Lamp (MIL) Control Circuit Malfunction

See it working

Watch the animated explainer [Disc Brake Trainer: How Car Brakes Stop a Wheel](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1108/>

