

GENERIC · POWERTRAIN

P0EFD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0EFD

Battery Charger A Input Voltage Sensor C Circuit Range/Performance

P0EFD indicates that the battery charger's input voltage sensor, specifically the 'C' circuit, is reporting a voltage outside the expected range or behaving erratically. The control module monitors this sensor to ensure the charger receives proper input voltage, and it sets the code when the signal is implausible or inconsistent with other voltage readings.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or battery charger warning light
- The battery charger may fail to start or may shut down unexpectedly
- Inconsistent charging performance or reduced charging rate
- Possible flickering or dimming of charger display indicators
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty input voltage sensor or its internal circuitry
- 2 Damaged or corroded wiring and connectors in the sensor 'C' circuit
- 3 Poor ground connection for the sensor or charger control module
- 4 Failed voltage regulator or power supply component within the charger
- 5 Software glitch or outdated firmware in the charger control module
- 6 Water intrusion or physical damage to the sensor or wiring harness

How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, wiring, and connectors for damage, corrosion, or loose pins
- 2 Check for technical service bulletins (TSBs) or software updates for the charger control module
- 3 Measure the sensor reference voltage and signal voltage with a digital multimeter and compare to specifications
- 4 Test the sensor 'C' circuit for continuity and shorts to ground or power
- 5 Verify the sensor ground circuit has less than 0.1 volts drop under load
- 6 Replace the input voltage sensor if testing confirms it is faulty
- 7 Clear the diagnostic trouble codes and perform a road test to verify the repair



What the voltage sensor code hides

- A weak or failing 12-volt battery can cause erratic sensor readings and set this code even when the sensor itself is healthy.
- Corroded ground connections are a frequent culprit because they introduce resistance that skews voltage signals without obvious physical damage.
- The code can be set by a momentary voltage spike during engine cranking, so always check for a history of intermittent electrical issues.
- After replacing the sensor, some vehicles require a relearn procedure or a software update to prevent the code from returning.
- This code does not always mean the charger is defective; the fault may lie in the vehicle's charging system or wiring harness.

Can I keep driving with P0EFD?

You can usually continue driving if the only symptom is the warning light, but avoid relying on the battery charger until the fault is repaired. If the charger is your primary power source, limit use to essential trips and monitor battery voltage closely.

Tools that help

- Digital multimeter (DMM)
- OBD-II scan tool
- Wiring diagram for the charger circuit
- Basic hand tools (screwdrivers, socket set)
- Contact cleaner and dielectric grease

Reading P0EFD

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
E	Hybrid propulsion.
FD	The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0A0F** Engine Failed to Start · **P0EFC** Battery Charger A Input Voltage Sensor C Circuit · **P0EFE** Battery Charger A Input Voltage Sensor C Circuit Low



See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0efd/>

