

GENERIC · POWERTRAIN

P0EF7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0EF7

Battery Charger A Input Voltage Sensor B Circuit

P0EF7 indicates that the powertrain control module (PCM) has detected an abnormal voltage signal on the input voltage sensor circuit for battery charger A, specifically on sensor B. This sensor monitors the voltage feeding into the charger, and the PCM sets the code when the signal falls outside the expected range or is 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 service vehicle soon message
- Often no symptoms besides the warning light
- Reduced or disabled battery charging, leading to a low battery or no-start condition
- Electrical accessories behaving erratically or dimming lights
- Possible limp mode or reduced power if the fault affects high-voltage system operation
- Inability to charge the high-voltage battery in plug-in or electric vehicles

Common causes, most likely first

- 1 Faulty input voltage sensor B or its internal circuitry
- 2 Damaged, chafed, or corroded wiring in the sensor circuit
- 3 Loose or corroded connector pins at the sensor or PCM
- 4 Failed battery charger assembly causing abnormal voltage output
- 5 PCM software glitch or internal fault in the voltage sensing circuit
- 6 Poor ground connection for the charger or sensor
- 7 Aftermarket accessories or improper prior repairs interfering with the circuit



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data to confirm P0EF7 and check for related codes.
- 2 Visually inspect the input voltage sensor B, its connector, and the wiring harness for damage, corrosion, or loose pins.
- 3 Measure the sensor reference voltage and signal voltage with a digital multimeter and compare to manufacturer specifications.
- 4 Check the charger assembly output voltage and ground connections for abnormal readings.
- 5 Perform a wiggle test on the harness while monitoring sensor voltage to detect intermittent faults.
- 6 If the sensor signal is out of range, replace the input voltage sensor B and clear codes to verify the repair.
- 7 If the sensor and wiring test good, follow the manufacturer's diagnostic flow for the charger assembly or PCM, including software updates or replacement as directed.

When the sensor is not the real culprit

- A common misdiagnosis is replacing the input voltage sensor B when the actual fault is a corroded ground connection shared with the charger, which skews the voltage reading.
- The code can be set by a momentary voltage spike during charging, so intermittent faults may not reappear during a short test drive.
- On some vehicles, a weak 12-volt auxiliary battery can cause the PCM to log this code because system voltage stability affects sensor reference signals.
- Aftermarket chargers or improper jump-starting can introduce voltage transients that trigger P0EF7 without any permanent component failure.
- The PCM may set this code in conjunction with charger performance codes, so always review all stored codes before condemning the sensor circuit.

Can I keep driving with P0EF7?

If the only symptom is the warning light and the vehicle drives normally, you can drive short distances to a repair shop, but avoid long trips or heavy electrical loads. If charging is disabled or the battery is draining, stop driving and seek service immediately to prevent a no-start or high-voltage system fault.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or power probe
- Insulation piercing probes or back-probe kit
- Basic hand tools for connector and sensor access



Reading P0EF7

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- E** Hybrid propulsion.
- F7** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A1F** Battery Energy Control Module A Performance · **P0EF6** Drive Motor C Temperature Sensor Circuit Intermittent/Errati · **P0EF8** Battery Charger A Input Voltage Sensor B Circuit Range/Perfo

See it working

Watch the animated explainer [Car Won't Start? Step-by-Step No-Start Diagnosis](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0ef7/>

