

GENERIC · POWERTRAIN

P0EFB

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0EFB

Battery Charger A Input Voltage Sensor B Circuit Intermittent/Erratic

P0EFB means the powertrain control module has seen the input voltage signal from battery charger A's sensor B circuit jump around erratically or drop out intermittently, rather than holding a steady, plausible value. The computer is not reporting a hard failure; it is flagging a signal that cannot be trusted because it keeps breaking continuity or changing too fast for the actual charging conditions.

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

Symptoms you may notice

- Illuminated check engine light or service vehicle soon message, often with no other noticeable symptom
- Charging system warning lamp or a message that the auxiliary battery is not charging properly
- Intermittent drop in charging voltage, seen as dimming lights or accessories behaving oddly
- Battery that slowly discharges or requires frequent jump starts when the fault is active
- Charging voltage gauge that flickers or reads differently each time the vehicle is started
- Reduced or disabled stop-start and regenerative braking functions on vehicles so equipped

Common causes, most likely first

- 1 Loose, corroded, or partially backed-out terminal pins in the charger A input voltage sensor B connector
- 2 Chafed or broken wire in the sensor B signal or return circuit, often where the harness flexes or passes near heat
- 3 Failing input voltage sensor B itself, producing an intermittent internal connection
- 4 Water intrusion or corrosion inside the sensor or connector body causing an unstable signal
- 5 Poor ground connection shared by the charger module and the voltage sensor circuit
- 6 Failing battery charger A module or its internal voltage reference, which feeds the sensor circuit
- 7 Electrical interference or a weak battery causing unstable reference voltage on the sensor circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0EFB, then clear the code and test-drive to confirm whether it returns intermittently
- 2 Inspect the charger A input voltage sensor B connector for corrosion, loose pins, and pushed-back terminals, and repair as needed
- 3 Perform a wiggle test on the sensor harness while watching live voltage data to expose an intermittent open or short
- 4 Measure resistance and voltage drop on the sensor signal and ground circuits, comparing against the manufacturer's specification
- 5 Check the shared ground points and battery condition, since a weak battery or bad ground can mimic a sensor fault
- 6 Substitute a known-good sensor or module only after circuit testing confirms the wiring is sound
- 7 After repair, clear codes and verify the input voltage reading is stable across several drive cycles before releasing the vehicle

Why this code is usually a wiring fault

- The word intermittent in the definition is the strongest clue: most P0EFB cases trace to a connector or harness problem rather than a failed sensor or charger module.
- A weak or aging 12-volt battery can create unstable reference voltages that set this code, so load-test the battery before condemning any component.
- Technicians sometimes replace the charger module only to find the fault returns because the real problem was a chafed signal wire behind the engine or near a heat shield.
- This code can be stored alongside charging system codes and may disable stop-start or regenerative braking, which owners often mistake for a separate fault.
- Freeze-frame data captured when the code set is more useful than live data alone, because the erratic signal may only appear under specific load or temperature conditions.

Can I keep driving with P0EFB?

You can usually drive the vehicle short distances to a repair shop, but avoid long trips and heavy electrical loads because an intermittent charging fault can leave you with a discharged battery. If the charging warning lamp is on or the battery voltage is dropping, stop and arrange a tow rather than risk a breakdown.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with min/max recording
- Back-probe pins and a wiring diagram for the charger circuit
- Battery load tester or conductance tester
- Contact cleaner and terminal pick tools



Reading P0EFB

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

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0EF9** Battery Charger A Input Voltage Sensor B Circuit Low · **P0EFA** Battery Charger A Input Voltage Sensor B Circuit High · **P0EFC** Battery Charger A Input Voltage Sensor C Circuit

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0efb/>

