

GENERIC · POWERTRAIN

P0D3F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D3F

Battery Charger A Input Voltage Sensor A Circuit Low

P0D3F means the battery charger that manages one of the vehicle's battery packs has reported that the input voltage sensor on its 'A' circuit is reading lower than expected. The control module compares that sensor signal against the voltage it expects at the charger input, and when the signal stays below the calibrated low threshold, it stores this code and may disable or limit charging.

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

Symptoms you may notice

- Charging system warning light or service vehicle soon message illuminated
- Battery pack state of charge dropping faster than normal or failing to charge
- Reduced electric-only range or the vehicle refusing to enter charge mode
- Charger or inverter cooling fan running unusually often
- Often no symptoms besides the warning light when the fault is intermittent
- Possible no-start or reduced power if the pack is already depleted

Common causes, most likely first

- 1 Damaged, corroded or loose wiring or connector pins on the charger input voltage sensor circuit
- 2 Failed input voltage sensor internal to the battery charger assembly
- 3 Low or unstable voltage supplied to the charger input, such as a weak auxiliary battery or poor ground
- 4 Open or shorted sensor signal wire between the charger and the control module
- 5 Water intrusion or contamination in the charger connector causing a low signal
- 6 Faulty battery charger control module reporting an incorrect sensor value



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0D3F before clearing anything
- 2 Inspect the charger input voltage sensor connector and harness for corrosion, chafing and loose pins
- 3 Measure the sensor reference and signal voltages at the charger connector and compare with the scan-tool reading
- 4 Check the charger input supply voltage and grounds under load to rule out a weak auxiliary battery or bad ground
- 5 Perform a voltage drop test on the sensor signal circuit while wiggling the harness to catch intermittent faults
- 6 If the wiring and supply are good but the sensor signal stays low, replace the battery charger assembly
- 7 Clear codes and run a charging cycle to confirm the code does not return

Why charger input sensor codes get misdiagnosed

- A weak 12-volt auxiliary battery is a common hidden cause because it drags down the charger's input reference and makes the sensor read low even when the sensor itself is fine.
Technicians often replace the charger when the real problem is a corroded ground strap or a pin that has backed out of the connector, so always load-test the circuit before condemning parts.
 - This code can set intermittently from water intrusion after a car wash or heavy rain, so a fault that clears on its own still deserves a connector inspection.
 - The charger may still charge the pack at a reduced rate with this code stored, which can mask the fault until the vehicle is asked for full range.
- P0D3F is often accompanied by other charger or battery pack codes, and diagnosing those first can reveal whether the low input voltage is a symptom rather than the root cause.

Can I keep driving with P0D3F?

You can usually drive the vehicle short distances to a repair shop, but avoid long trips and do not rely on the vehicle charging normally until the fault is repaired. If the battery pack is already low or the vehicle warns about reduced power, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with hybrid/EV module access and live data
- Digital multimeter with min/max recording
- Fused jumper wires for circuit testing
- Insulated hand tools for high-voltage connector work
- Battery load tester or conductance tester



Reading P0D3F

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- 3F** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A1F** Battery Energy Control Module A Performance · **P0D3D** Battery Charger A Input Voltage Sensor A Circuit · **P0D3E** Battery Charger A Input Voltage Sensor A Circuit Range/Perfo · **P0D40** Battery Charger A Input Voltage Sensor A Circuit High

See it working

Watch the animated explainer [How an Elevator Works: Traction Lift in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0d3f/>

