

GENERIC · POWERTRAIN

P2E39

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E39

Battery Charger B Fuse

P2E39 is a generic powertrain code indicating that the powertrain control module (PCM) has detected a fault in the control circuit for the battery charger B fuse, which is typically part of a high-voltage battery charging system on electrified vehicles. The PCM monitors the fuse's circuit for expected voltage or continuity and sets this code when the signal falls outside the manufacturer's specified range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the fuse is only intermittently detected
- Failure of the high-voltage battery to charge, leading to reduced electric range
- A warning message on the instrument cluster indicating a charging system fault
- The vehicle may enter a reduced power mode or refuse to start in some cases
- Possible inability to initiate a charging session when plugged in

Common causes, most likely first

- 1 Blown or open battery charger B fuse
- 2 Corroded, loose, or damaged fuse holder terminals
- 3 Open or shorted wiring in the fuse control circuit
- 4 Faulty battery charger assembly internal failure
- 5 PCM software error or internal driver fault
- 6 Water intrusion or physical damage to the charger fuse box

How to diagnose and fix it

- 1 Inspect the battery charger B fuse for continuity and replace if blown
- 2 Check the fuse holder and terminals for corrosion, tightness, and damage
- 3 Perform a voltage drop test on the fuse circuit to identify excessive resistance
- 4 Inspect the wiring harness between the fuse and the charger for chafing or breaks
- 5 Verify power and ground signals at the battery charger connector
- 6 Reprogram or update the PCM if a software issue is suspected
- 7 Replace the battery charger assembly if internal failure is confirmed



Charger fuse faults often misdiagnosed

- A blown battery charger B fuse is frequently caused by a shorted charger assembly, so replacing only the fuse may lead to a repeat failure.
- The PCM may set P2E39 even when the fuse is intact if the circuit's voltage signal is erratic due to a poor connection.
- Some vehicles use a pyrotechnic fuse for high-voltage safety, which can open without visible damage and requires special testing.
- This code is often accompanied by other charging system codes, so a full system scan is essential before condemning the fuse.
- Incorrectly sized replacement fuses can cause intermittent faults that mimic a failed charger.

Can I keep driving with P2E39?

If the vehicle is a plug-in hybrid or electric model and the code is present, avoid long trips that rely on battery power and do not attempt to charge until the fault is repaired. Driving with a charging system fault may lead to a depleted high-voltage battery and a no-start condition.

Tools that help

- Digital multimeter
- Fuse puller
- Test light
- OBD-II scanner
- Wiring diagram

Reading P2E39

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AA6** Hybrid/EV Battery Voltage System Isolation Fault
 · **P2E38** Battery Charger B Enable Circuit Range/Performance · **P2E3A** Battery Charger B Output Voltage Performance



See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e39/>

