

GENERIC · POWERTRAIN

P2E2C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E2C

Battery Charger A Module Supply Voltage Performance

P2E2C indicates that the powertrain control module (PCM) has detected an abnormal supply voltage condition within the battery charger A module circuit, which is part of the high-voltage charging system on electrified vehicles. The PCM monitors the voltage feed to the charger module and sets this code when the voltage falls outside the expected range for a calibrated period, signaling a fault in the power supply to that module.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	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 fault is intermittent
- Reduced or disabled high-voltage charging, leading to longer charge times or inability to charge
- The vehicle may enter a reduced power mode or fail to start if the high-voltage battery is depleted
- A warning message on the dash indicating a charging system fault or high-voltage system issue

Common causes, most likely first

- 1 Corroded, loose, or damaged wiring or connectors in the battery charger A module supply circuit
- 2 Blown fuse or faulty relay that supplies power to the charger module
- 3 Internal failure of the battery charger A module causing excessive current draw or voltage drop
- 4 Poor ground connection for the charger module or its associated components
- 5 Faulty voltage supply from the power distribution module or wiring harness
- 6 Software glitch in the PCM or charger control module requiring recalibration

How to diagnose and fix it

- 1 Perform a visual inspection of the battery charger A module harness and connectors for damage, corrosion, or looseness
- 2 Check all fuses and relays related to the charger module supply circuit and replace any that are faulty
- 3 Measure the supply voltage at the charger module connector with a multimeter and compare to specifications
- 4 Perform a voltage drop test on the power and ground circuits to identify excessive resistance
- 5 Inspect and clean ground connections, tightening them to the manufacturer's torque specification
- 6 If voltage supply is correct, test the charger module according to service information; replace if defective
- 7 Reprogram or update the PCM and charger control module software if applicable



Charger supply faults often misdiagnosed

- A common oversight is assuming the charger module itself is faulty when the real problem is a corroded connector or chafed wire in the supply circuit, so always perform voltage drop tests before replacement.
- Intermittent codes can be caused by vibration or heat affecting a marginal connection, so wiggle-test the harness while monitoring live data to reproduce the fault.
- This code does not always indicate a hard failure; a low 12-volt battery or charging system issue can cause the PCM to set false supply voltage codes for the high-voltage charger.
- Some vehicles require a specific wake-up signal or enable line to be active for the charger module to receive full voltage, so check for missing activation signals before condemning the module.
- After repairs, the code may require a drive cycle or a specific charging sequence to clear from history, so do not assume the fix failed if the light remains on immediately.

Can I keep driving with P2E2C?

You can generally drive the vehicle if the only symptom is the warning light, but avoid relying on high-voltage charging until the fault is repaired. If the vehicle shows reduced power or charging is completely disabled, limit driving to reach a safe location or service center.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light
- Wiring diagram and service information
- Socket and wrench set

Reading P2E2C

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
E	Hybrid propulsion.
2C	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
 · **P2E2D** Battery Charger A Module Supply Voltage Low · **P2E2E** Battery Charger A Module Supply Voltage High



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/p2e2c/>

