



P2E2E

Battery Charger A Module Supply Voltage High

P2E2E indicates that the powertrain control module has detected a supply voltage to the battery charger A module that is higher than the expected range for the current operating conditions. The module monitors its input voltage and sets this code when the voltage exceeds a calibrated threshold, typically due to a charging system fault or wiring issue.

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
- Possible electrical accessories behaving erratically, such as flickering lights or slow operation
- Battery warning light may also be illuminated if the charging system is overcharging
- In some cases, the vehicle may enter a reduced power mode or disable the battery charger function
- No noticeable performance change in many instances

Common causes, most likely first

- 1 Faulty voltage regulator inside the alternator or battery charger module, causing overcharging
- 2 Corroded, damaged, or loose wiring in the battery charger A module supply circuit
- 3 High resistance in the ground circuit for the battery charger module
- 4 Failed battery charger A module itself, misreporting voltage
- 5 Poor connection at the battery terminals or main power junction
- 6 Engine control module software issue or internal fault causing incorrect voltage interpretation



How to diagnose and fix it

- 1 Perform a visual inspection of the battery, alternator, and battery charger A module wiring for obvious damage or corrosion
- 2 Use a digital multimeter to measure battery voltage at rest and while running; compare to specifications
- 3 Check the supply voltage and ground circuits at the battery charger A module connector with a multimeter and load test
- 4 Inspect and clean battery terminals and ground connections, then retest
- 5 Test the alternator or charging system output for overvoltage condition
- 6 If voltage is within range at the module, suspect the module itself; follow manufacturer diagnostic procedures before replacement
- 7 Repair any wiring faults, replace faulty components as needed, clear codes, and verify the repair

Overvoltage Codes Often Misdiagnosed

- A high voltage code can be set by a simple loose battery terminal that causes voltage spikes, so always check connections before condemning the alternator.
- The battery charger A module may be part of a hybrid or electric vehicle charging system, and its supply voltage can be affected by the main battery pack state of charge.
- Some vehicles use a smart charging system that intentionally raises voltage during deceleration; ensure the code is not set during normal operation by checking freeze frame data.
- A weak or failing battery can cause the charging system to overcharge intermittently, so load test the battery before replacing expensive modules.
- Corrosion inside a wire can increase resistance and cause the module to see higher voltage than actual, so perform a voltage drop test on both power and ground circuits.

Can I keep driving with P2E2E?

If the only symptom is the warning light and the vehicle runs normally, you can drive cautiously to a repair shop, but avoid long trips and heavy electrical loads. If the battery warning light is also on or you notice dimming lights, stop driving and have the charging system checked immediately to prevent battery damage or electrical failure.

Tools that help

- Digital multimeter
- OBD-II scanner
- Battery load tester
- Test light
- Wiring diagram for the specific vehicle



Reading P2E2E

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

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0A94** DC/DC Converter A Performance · **P2E2F** Battery Charger B Module Supply Voltage Performance

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e2e/>

