



P2E3D

Battery Charger B Output Shorted

P2E3D indicates that the powertrain control module has detected a short to ground or a short to voltage on the output circuit of the auxiliary battery charger, which is often used to maintain the 12-volt system in hybrid and electric vehicles. The computer monitors the charger's output line and sets this code when the expected voltage or current does not match the commanded state, indicating a wiring or component fault.

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, especially if the auxiliary battery still holds a charge
- Auxiliary battery may not charge properly, leading to a no-start or weak electrical accessories
- Battery charger module may become hot or emit a burning smell in severe short cases
- Voltage warning light or charging system message on the dashboard
- Electrical accessories may behave erratically or shut down unexpectedly

Common causes, most likely first

- 1 Damaged or chafed wiring in the battery charger output circuit, shorting to ground or power
- 2 Failed battery charger module internal short circuit
- 3 Corroded or loose connectors at the charger, battery, or control module
- 4 Faulty auxiliary battery with an internal short that overloads the charger output
- 5 Water intrusion into the charger housing or connector causing a short
- 6 PCM or control module internal fault incorrectly interpreting the output signal

How to diagnose and fix it

- 1 Inspect the battery charger output wiring for visible damage, chafing, or corrosion and repair as needed
- 2 Disconnect the charger output connector and measure resistance to ground and to voltage to check for a short
- 3 Test the auxiliary battery condition and replace if it shows an internal short or fails a load test
- 4 Check for water intrusion or debris in the charger connector and housing, clean and dry as necessary
- 5 Substitute a known-good battery charger module to see if the code clears and stays away
- 6 Verify powers and grounds at the charger and control module before replacing any parts
- 7 Clear the code and perform a road test to confirm the repair, monitoring live data for charger output



Don't overlook the auxiliary battery

- A weak or internally shorted auxiliary battery is a frequent root cause that mimics a charger output short, so always load-test the battery before condemning the charger.
- The code can set intermittently due to a wiring harness rubbed through only when the engine moves under load, so wiggle-test the harness while watching live data.
- On some vehicles, the battery charger output is also monitored for overcurrent, and a shorted accessory on the same circuit can trigger P2E3D even if the charger itself is fine.
- Replacing the charger without repairing a chafed output wire will cause the new unit to fail in the same way, so always trace the full circuit first.
- A generic scan tool may not command the charger on for testing; a manufacturer-level tool is often needed to activate the output and confirm the short under load.

Can I keep driving with P2E3D?

If the auxiliary battery still holds a charge and the vehicle starts and runs normally, you can drive cautiously to a repair shop, but avoid long trips and heavy electrical loads. If the battery is draining or electrical functions are failing, stop driving and have the vehicle towed to prevent a no-start or safety-system shutdown.

Tools that help

- Digital multimeter
- Battery load tester
- OBD-II scan tool with live data capability
- Wiring diagram for the battery charger circuit
- Insulated hand tools and terminal pick set

Reading P2E3D

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

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0A94** DC/DC Converter A Performance · **P2E3C** Battery Charger B Output Current Performance · **P2E3E** Battery Charger B Module Forced Shutdown Voltage Performance



See it working

Watch the animated explainer [How Variable Valve Timing Works: Cam Phaser and VVT Solenoid](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e3d/>

