

GENERIC · POWERTRAIN

P2C44

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2C44

Battery Isolation/Voltage Stabilization Control Circuit Performance

P2C44 indicates that the powertrain control module (PCM) has detected a performance fault in the battery isolation or voltage stabilization control circuit, which manages how the vehicle's electrical system isolates and stabilizes voltage during events like engine start or high electrical load. The PCM monitors the circuit's response and sets this code when the voltage or current feedback does not match the commanded state within the expected time or range.

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
- Intermittent electrical glitches such as flickering interior lights or radio resets
- Battery warning light or charging system message on the dashboard
- Voltage gauge fluctuating or reading outside normal range
- Hard starting or electrical accessories behaving erratically

Common causes, most likely first

- 1 Faulty battery isolation or voltage stabilization control module
- 2 Damaged or corroded wiring and connectors in the control circuit
- 3 Failed voltage stabilization relay or solenoid
- 4 Poor ground connection for the control module or battery
- 5 Weak or failing vehicle battery causing voltage instability
- 6 PCM software calibration issue or internal fault



How to diagnose and fix it

- 1 Perform a thorough visual inspection of the battery, terminals, and all related wiring for corrosion, looseness, or damage
- 2 Test the battery state of charge and load capacity; replace if it fails a load test
- 3 Check all ground connections for the battery, engine, and control module; clean and tighten as needed
- 4 Use a scan tool to command the battery isolation/voltage stabilization circuit on and off while monitoring voltage and current feedback
- 5 Backprobe the control module connectors to measure resistance and voltage drop across the circuit under load
- 6 If the circuit responds correctly but the code persists, check for technical service bulletins (TSBs) or PCM software updates
- 7 Replace the battery isolation/voltage stabilization control module only after confirming all wiring and power supplies are good

Don't overlook the simple electrical basics

- A weak battery is a common culprit for this code because voltage dips during cranking can mimic a stabilization circuit fault, so always load-test the battery first.
- Corroded or loose ground connections often cause intermittent performance faults that do not set every drive cycle, making them easy to miss during a quick inspection.
- The code can be set by a failing voltage stabilization relay even when the module itself is healthy, so test the relay before condemning the module.
- Some vehicles use the same circuit for both battery isolation and voltage stabilization, and a fault in either function can trigger P2C44, so verify which function your vehicle uses.
- After repairs, the PCM may require a relearn or drive cycle before the code clears permanently, so do not assume the fix failed if the light stays on immediately.

Can I keep driving with P2C44?

If the only symptom is the warning light and the vehicle runs normally, you can drive short distances to a repair shop, but avoid heavy electrical loads and long trips. If you notice charging system warnings, dimming lights, or starting problems, stop driving and have the vehicle towed to prevent being stranded.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter (DMM)
- Battery load tester
- Test light
- Wiring diagram for the specific vehicle



Reading P2C44

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

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P2C45** Battery Isolation/Voltage Stabilization Control Circuit Low · **P2C46** Battery Isolation/Voltage Stabilization Control Circuit High · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2c44/>

