



Technical & Operational Troubleshooting Guide

Lithium Battery LiFePO₄ – 628Ah (12.8V)



Reference Manual for Fleet Operators and Technicians (V1.0)

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1. INTRODUCTION AND SYSTEM ARCHITECTURE

The 628Ah LiFePO4 lithium battery is designed to provide reliable and prolonged energy for your cabin needs (Hotel, APU, air conditioning, liftgate).

Understanding your installation: To ensure optimal performance, your system is divided into two distinct roles:

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- **The C8 Energy 628Ah Battery:** It handles prolonged loads (maximum continuous discharge of 200A). It powers cabin comfort and accessories.
- **The SkelStart Module (If Applicable):** It absorbs the massive current draw (over 1000A) required to start your engine. The C8 battery is used solely to keep this module charged.

Understanding this separation is essential for effectively diagnosing many situations encountered on the road.

2. BMS MANUAL CONTROLS (POWER BUTTON)

The heart of your battery is its BMS (Battery Management System). Most first-level resets are performed via the physical power button located on the battery.

Here are the essential command sequences to remember:

1 Click (Wake Up): Wakes the battery from deep sleep mode and reactivates the Bluetooth signal broadcasting.

Press and hold for 5 seconds (Sleep Mode): Turns off the battery for prolonged storage or to manually cut off power.

2 Quick Clicks (Emergency Reserve): Releases the 10% of energy secured by the system in the event of a deep discharge cut-off. Allows critical equipment to be restarted.

5 Quick Clicks (Hardware Reset): Restarts the internal Bluetooth module and resets the app password to its factory default state (usually blank or "666666").

3. TROUBLESHOOTING (QUICK FIXES)

3.1. Bluetooth Connection Loss or App Freeze

Metal battery boxes can sometimes act as shields and block the Bluetooth signal.

Solution 1: Perform a hardware reset by rapidly clicking the power button 5 times.

Solution 2: Bring your smartphone as close as possible to the battery box (or open the box if possible) during the initial synchronization.

Solution 3: Ensure the battery is not in sleep mode. Single-click to wake it up.

3.2. Sudden Loss of Cabin Power

If your equipment (refrigerator, inverter, auxiliary heater) stops suddenly, the BMS has likely entered protection mode (voltage below the 10V mark).

- **Immediate Action:** Perform a quick double-click on the power button to unlock the 10% emergency reserve.
- **Next Step:** As soon as power is restored, immediately start the truck's engine to restart charging via the alternator.

4. ENGINE AND CHARGING TROUBLESHOOTING

4.1. The Truck Fails to Start (Starter Clicks) If the engine does not start, the lithium battery is generally not at fault. The C8 battery is not designed to provide the 1000A required by the starter.

Check: The problem likely comes from the SkelStart module. Verify that the C8 battery is properly recharging the supercapacitor. If the starter attempts to draw its power directly from the lithium battery, the system will automatically shut down for safety.

4.2. The Battery Does Not Charge While the Engine is Running

Cold Weather Protection: If the internal temperature of the battery is below 0°C, the BMS blocks charging to protect the cells. Allow the temperature to rise (or let the internal heating pads work, if equipped) before charging resumes.

Alternator Detection: Smart alternators may not detect the low resistance of lithium. A technician will need to check the voltage at the terminals (it must exceed 13.5V with the engine running) or check the DC-DC charger.

4.3. Overheating Warnings (Mobile App)

Cause: Continuous heavy use or exposure to a strong external heat source.

Solution: Temporarily reduce cabin electrical consumption to allow the passive cooling system to lower the temperature below 45°C.

5. PHYSICAL INSPECTION AND CHECKPOINTS

If software troubleshooting does not resolve the issue, a visual inspection is required:

Power Wiring Integrity: Ensure that the main terminals are firmly tightened. Road vibrations can loosen connections, creating resistance and preventing energy transfer.

Circuit Isolation: Visually confirm that the starting circuit is exclusively connected to the SkelStart module, and that the cabin accessories are connected to the 628Ah C8 battery.

Communication Connectors: Check the connection ports to ensure no plug has become disconnected.

6. PASSWORD RESET

If the login password for the C8 Energy mobile app is lost or rejected, a physical reset is required.

Step 1 (BMS): Locate the power button on the battery's BMS and perform 5 quick, consecutive clicks + 5 more clicks to confirm. This resets the Bluetooth module and restores the password to its factory default state (usually "666666" or a blank field).

Step 2: Uninstall and reinstall the application.

Step 3 (Application): Launch the C8 Energy app, log in with the default password if prompted (enter 666666), otherwise leave it blank and confirm, then navigate to the app settings to configure a new password.

7. TECHNICAL SUPPORT

If the problem persists after following the steps in this guide, do not tamper with the internal components of the battery and contact C8 Energy technical support.

Prepare the following information before your call:

- The battery serial number.
- The truck model.
- A description of any illuminated warning lights or error codes displayed on the C8 app.

EMAIL: support@c8energy.com

TOLL FREE: 1-855-700-5490, OPTION 1

LOCAL: 514-722-0024, OPTION 1