

Club Car® Vanguard - Lithium Conversion

Installation Guide – *Applies to: Bolt Lithium Conversion Units – Club Car® Vanguard*

DOCUMENT NO.

IG-2026-CCV

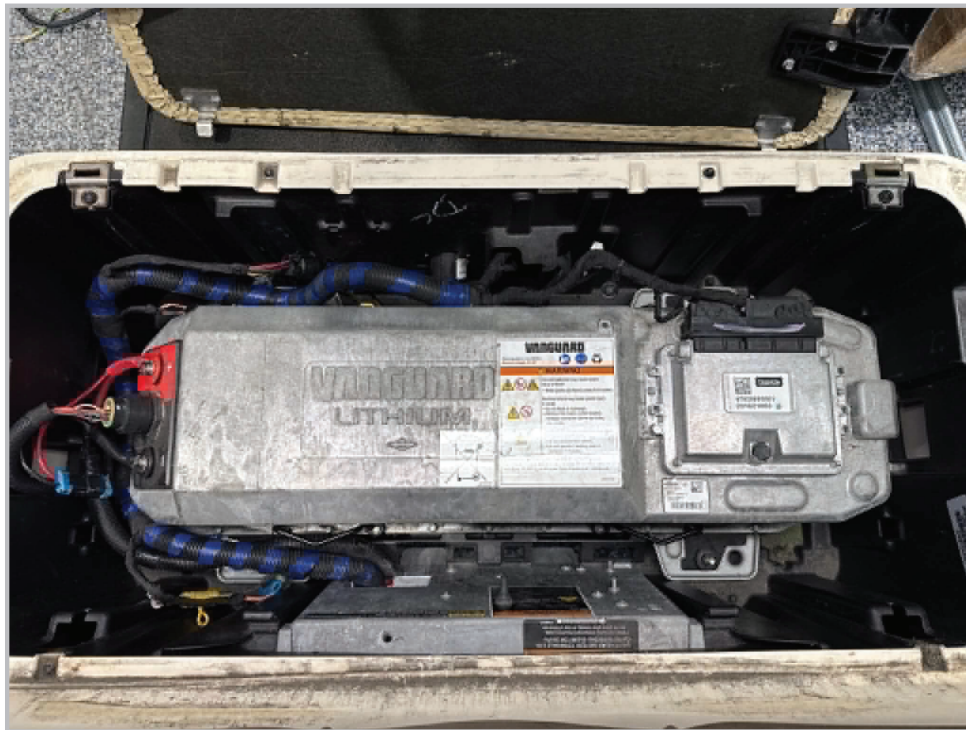
DOCUMENT TYPE

Installation Instructions

PRIORITY

INFO

Purpose: This guide walks through the complete installation of a Bolt Lithium conversion on a Club Car® Vanguard cart, from start to finish. Follow each step in order. Photos accompany each step for reference.



Bolt lithium unit installed under the seat – Club Car® Vanguard

! SAFETY – READ BEFORE STARTING

Wear protective safety glasses and insulated gloves before beginning. Battery terminals can short and cause serious injury. Set the cart to the TOW position before disconnecting any cables.

Step 1

SET THE CART TO THE TOW POSITION



Before removing any cables, move the RUN / TOW switch to the **TOW** position. This de-energizes the system and is required before servicing. Confirm the switch is fully in TOW before proceeding.

NOTE: Do not disconnect any cables while the cart is in RUN.

Step 2

REMOVE THE POSITIVE AND NEGATIVE CABLES



Disconnect the main battery cables. Remove the **negative (-)** cable first, then the **positive (+)** cable. Keep the removed cable ends clear of the terminals and any metal surfaces to prevent shorting.

NOTE: Negative first, positive second — this reduces short-circuit risk.

Step 3 REMOVE THE CAN CONNECTOR FROM THE BATTERY

Disconnect the CAN communication connector from the battery. Turn the connector's threaded base **counter-clockwise** to loosen it, then pull the connector straight out. Do not pull directly on the wires — grip the connector body.

NOTE: Grip the connector body, not the wires, when pulling it free.



Step 4 REMOVE THE VCM (VEHICLE CONTROL MODULE)

Carefully unbolt the VCM from the top of the factory lithium battery. Use an impact or socket to back out the mounting hardware, then lift the VCM off and set it aside on a clean surface. Leave any harnesses attached unless they need to come off to gain clearance.

NOTE: Set the VCM somewhere safe — it's a sensitive electronic module.



Step 5

REMOVE THE FACTORY BATTERY MOUNTING BOLTS

Remove and retain the **four (4) mounting bolts** that hold the factory lithium battery in place. They secure the battery's hold-down brackets to the frame. Once all four are out, the battery is free to be lifted from the compartment.

NOTE: Make sure to retain the hardware and keep track of all four bolts and brackets for reassembly.



Step 6

LIFT THE FACTORY BATTERY OUT

With the cables, CAN connector, VCM, and mounting bolts removed, the battery can be lifted out of the compartment. Fold out the built-in **lift handles** on each end of the battery and use them to raise it straight up and out.

NOTE: The battery is heavy – use two people to lift it out safely.

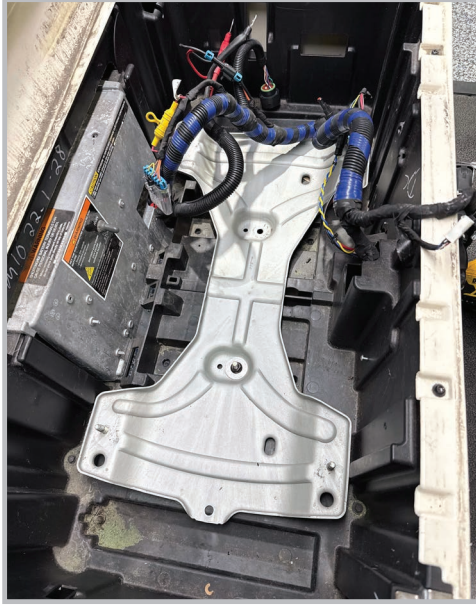


Step 7

REMOVE THE BATTERY BRACKET (J-HOOK BOLTS)

Remove the **two (2) J-hook bolts** that secure the metal battery bracket / support tray in place. With both J-hooks out, the bracket can be removed, leaving the compartment ready for the Bolt Lithium unit.

NOTE: Set the J-hook bolts and bracket aside — they're reused to secure the new unit.



Step 8

REMOVE THE SIDE PANEL

Remove the **two (2) Torx screws** securing the side panel, then lift the panel away. This opens up access to the body hold-down hardware.

NOTE: Use the correct Torx bit to avoid stripping the screws.



Step 9 REMOVE THE BODY HOLD-DOWN SCREWS

Remove the **four (4) Torx screws** that hold the body down. Once all four are out, the body can be lifted for access to the battery compartment and wiring.

NOTE: Keep the body screws separated from the side panel screws if they differ in size.



Step 10 REMOVE THE KICK PLATE SCREWS



Remove the **three (3) Torx screws** securing the kick plate. Leave the plate in position for now — the charge port cover comes out next.

NOTE: Use the correct Torx bit to avoid stripping the screws.

Step 11 REMOVE THE CHARGE PORT COVER

Carefully use a **pick** to work the charge port cover (the “22A MAX” ring) out of the kick plate. Ease it out evenly so the tabs release without breaking.

NOTE: Work gently with the pick – the cover tabs can snap if forced.



Step 12 REMOVE THE KICK PANEL



With the three Torx screws and the charge port cover removed, the kick panel is now loose and can be removed. Set it aside and retain for reassembly.

NOTE: Keep the kick panel and its hardware together for reinstallation.

Step 13

DISCONNECT THE CHARGE PORT CONNECTORS



Locate the charge port wiring connectors and disconnect them. Press the locking tab on each connector and pull the halves apart — don't pull on the wires themselves.

NOTE: Note how the connectors are routed so the new port wiring can follow the same path.

Step 14

REMOVE THE FACTORY CHARGE PORT

Remove the charge port mounting screws, then pull the factory charge port out of the panel. Set the port and screws aside.

NOTE: The factory port is not reused — the Bolt AC port replaces it.



Step 15

MOUNT THE BOLT DECO PLATE AND AC PORT

Install the Club Car deco plate and the Bolt AC charge port onto the kick panel. Seat the port through the panel opening, align the deco plate, and secure it with the provided hardware. Make sure the weather cap and its tether sit correctly.

NOTE: Confirm the deco plate is seated flush before tightening so the cap closes cleanly.



Step 16

REMOVE THE DASH PANEL TO ACCESS THE SOC METER

Remove the Torx screws securing the dash panel, then take the panel off to access the SOC meter for replacement. Work around the key switch and gauge area carefully so nothing is scratched.

NOTE: See the SOC Meter Identification bulletin (SB-2026-002) to confirm which meter version this unit uses before ordering a replacement.



Step 17 REMOVE THE FACTORY SOC METER

Disconnect the SOC meter wiring and release the meter from the panel. Note how the terminals are connected before removing them so the replacement meter is wired the same way.

NOTE: Photograph or label the wiring before disconnecting so the new meter goes back the same way.



Step 18 INSTALL THE BOLT SOC METER

Seat the Bolt SOC meter into the panel opening from the front. From behind, fit the mounting bracket over the meter body and tighten the back housing to lock the meter in place. Make sure the meter sits square in the opening before final tightening.

NOTE: Peel the "REMOVE PLASTIC" protective film off the meter face once it's mounted.



Step 19

ROUTE THE SOC METER WIRE ALONG THE FLOOR PAN



Run the SOC meter wire through the channel molded into the floor pan, following it back toward the battery compartment. Tuck the wire fully into the channel and hold it in place with tape as you go so it stays clear of the pedals and foot area.

NOTE: Keep the wire seated in the channel so it isn't pinched when the body and panels go back on.

Step 20

REASSEMBLE THE BODY



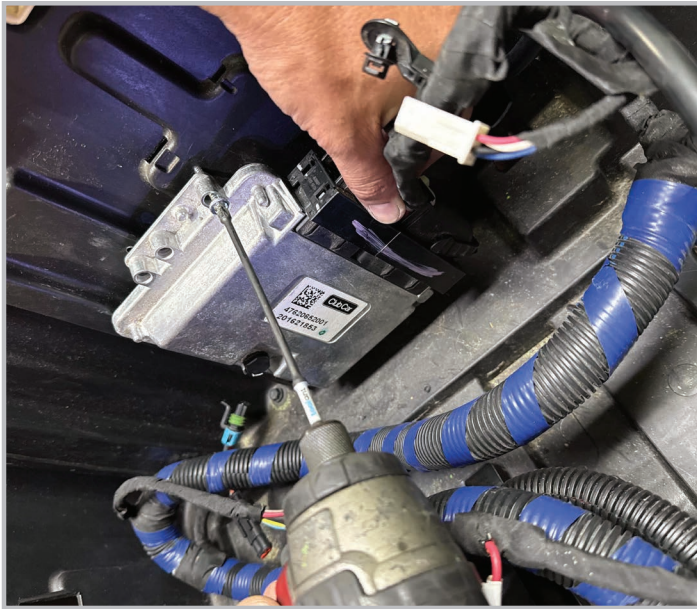
Reinstall the body and reverse the earlier disassembly: set the body back down, reinstall the body hold-down screws and side panel, and refit the kick panel. Route wiring clear of the fasteners as you go so nothing is pinched.

NOTE: Double-check that the SOC wire and charge port wiring are clear before driving the screws.

MOUNT THE VCM IN THE BATTERY COMPARTMENT

Reconnect the VCM harness connectors and mount the VCM in the battery compartment in a secure location of your choosing. Keep it clear of moving parts and away from where the battery sits, and make sure the connectors are fully latched.

NOTE: Confirm each VCM connector clicks fully home — a loose connector can cause intermittent faults.



Step 22

INSTALL THE EZ BRACKET



Set the Bolt **EZ Bracket** into the battery compartment and align it to the mounting slots. Using the supplied **J-hook**, hook it around the battery hold-down bar, then tighten the hardware to draw the bracket down and lock it in place.

NOTE: Make sure the J-hook is fully seated around the hold-down bar before tightening.

Step 23

SET THE BATTERY ON THE BRACKET AND SECURE IT

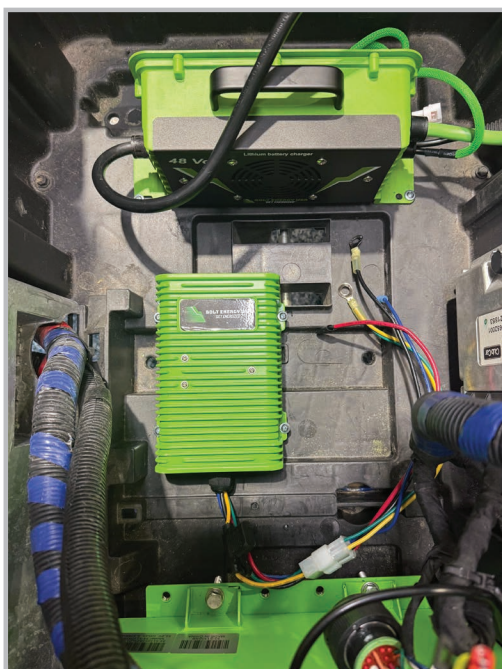


Lower the Bolt Lithium battery onto the EZ Bracket and align the battery feet with the bracket slots. Secure the battery using the **supplied hardware**, tightening evenly so the battery sits flat and cannot shift.

NOTE: The battery is heavy — use two people to lower it into place.

Step 24

INSTALL AND WIRE THE VOLTAGE REDUCER



Mount the Bolt voltage reducer in the battery compartment and wire it as follows:

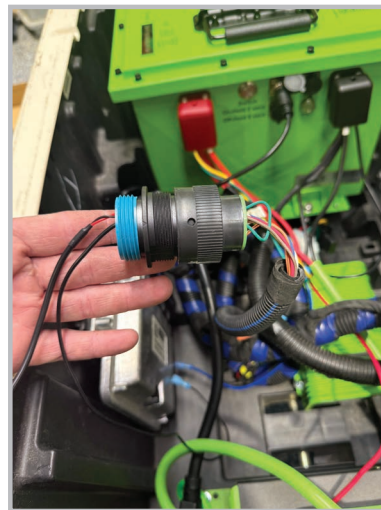
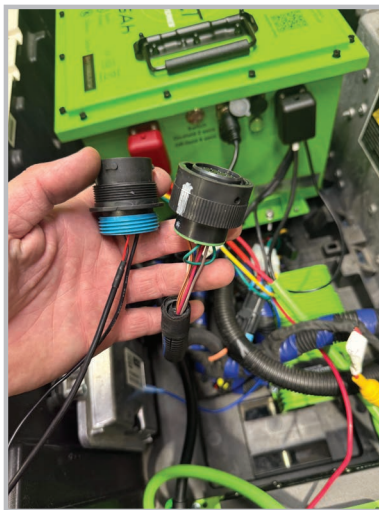
- **Yellow wire** → 48V **positive**
- **Black wire** → 48V **negative**
- **Blue wire** → connects to the FactorySync harness (See next steps)

NOTE: Leave the blue wire free for now — it will be connected to the FactorySync harness spade in Step 26.

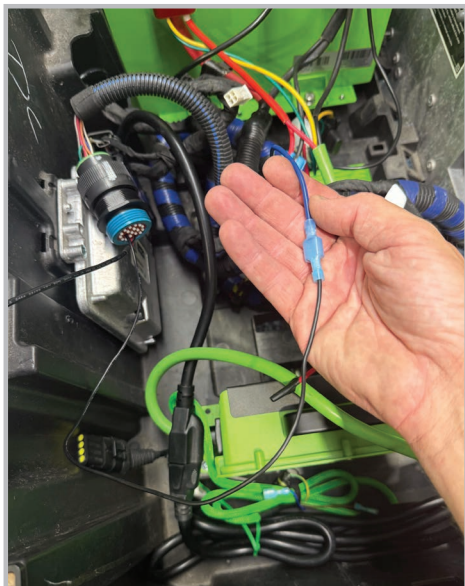
Step 25 INSTALL THE FACTORYSYNC HARNESS

Install the **FactorySync** harness. Line the harness connector up with the cart's factory CAN connector, seat the two together, and thread the collar down until it is fully tight.

NOTE: Check that the connector is fully threaded and seated – a partial connection can cause CAN communication faults.



Step 26 CONNECT THE FACTORYSYNC SPADE TO CONSTANT 12V



Connect the spade connector from the FactorySync harness to the **constant 12V** terminal on the voltage reducer — the **blue wire**. Push the spade on completely until it is firmly seated.

NOTE: Confirm the connection is to constant 12V, not a switched source.

Step 27

CONNECT THE SOC AND CAN CABLES TO THE BATTERY

Connect the SOC meter cable and the FactorySync CAN harness to the battery's labeled ports on the battery face. Line up the pins, push the connector in squarely, then thread the knurled collar down until it is snug. Refit the rubber caps on any unused ports.

NOTE: Line up the pins before threading the collar – forcing a misaligned connector can bend a pin.



Step 28

CONNECT THE MAIN POSITIVE AND NEGATIVE LEADS

Land the main cables on the battery terminals. All three sets of leads — the **main cart cables**, the **charger**, and the **voltage reducer** — share the same two posts:

- **P+ (BAT+)** — red post: main positive, charger positive, and the reducer's yellow 48V positive lead.
- **P- (BAT-)** — black post: main negative, charger negative, and the reducer's black 48V negative lead.

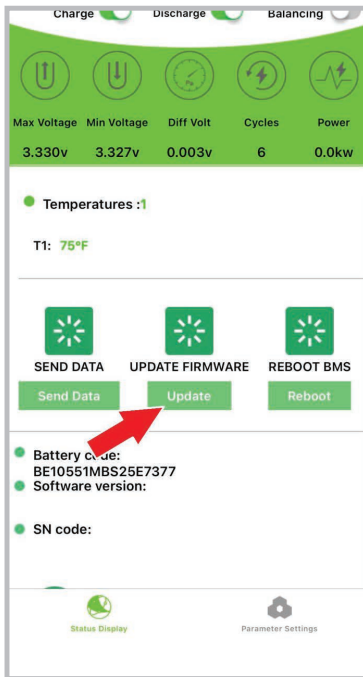
Connect the **positive first**, then the negative. Tighten each post evenly and confirm every ring terminal is fully seated under the hardware.

NOTE: Make sure to connect positive first and negative last (the reverse of the removal order in Step 2.) Keep tools clear of both posts while tightening.



Step 29

POWER ON THE BATTERY AND CONNECT THE BOLT USA APP

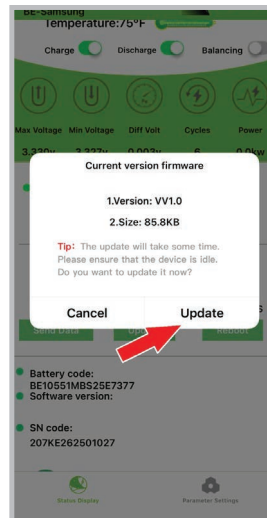
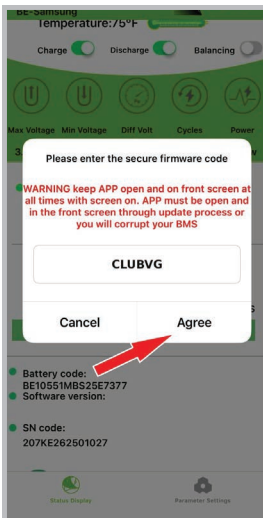


Turn the battery on by pressing and **holding the power switch for 2 seconds**. Once the SOC meter is active, download the **Bolt USA App** from the App Store (Apple) or Google Play (Android), open it, and connect to the battery via Bluetooth. Scroll to the bottom of the Status Display screen and tap the **Update** button under UPDATE FIRMWARE.

NOTE: Do not power off the battery or close the app during the firmware update process.

Step 30

ENTER FIRMWARE CODE CLUBVG AND CONFIRM THE UPDATE



The app will prompt for the secure firmware code. Type **CLUBVG** in the field and tap **Agree**. The app then displays the current firmware version — tap **Update** to begin. The update takes roughly 2 minutes. Keep the app open and on the front screen the entire time — do not let the screen lock or switch apps, as this could damage the battery management system.

NOTE: Once the update is complete the battery will restart automatically.

Step 31

INSTALLATION COMPLETE

After the firmware update finishes, the battery restarts on its own. The Club Car Vanguard will now communicate with the Bolt battery over the CAN bus and the cart is fully operational. Return the RUN / TOW-STOW switch to RUN before testing.

NOTE: If the cart display does not respond, verify all connections and confirm firmware CLUBVG was installed correctly.