

## ***Installing Victron Smart Shunt on 25 GH1***

***Tiffin Motorhomes, Inc.***

Work Instruction Number:

**WI-008**

Effective Date: 7/17/24

Revision: 01

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**Purpose:** To provide instructions on installing the Victron Energy Smart Shunt on a 2025 GH1 so that the DC power onboard the coach may be read more accurately.

### **Tools Needed:**

- Screw Gun
- 3/8" Hex Bit
- Ratchet
- 9/16" Socket
- Phillip's Head Bit
- T30 Bit
- Wire Fish Tape/Fish Rod
- Mobile Device with Bluetooth Connectivity

### **Parts Needed:**

- SHUNT SMART VICTRON 500A/50MV (Tiffin PN: 5164315)
- CABLE VE DIRECT 5M (Tiffin PN: 5163250)
- (2 EA) 12-14 x 1" size 3/8" HEX HEAD SELF TAPPING SCREWS
- CABLE CAT6 10 FT (Tiffin PN: 5128195)

**\*Warning\***

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- If your Wakespeed WS500 regulator is the non-CAN option (does not have RJ45 ports beside the harness connection shown on step 12 of this document) this set of Work Instructions will not suit your application.

### **\*Warning\***

- Please charge the unit overnight on shore power before attempting this fix as it is required that batteries be fully charged.

### **Procedure:**

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1) Turn main disconnect to "OFF" position.



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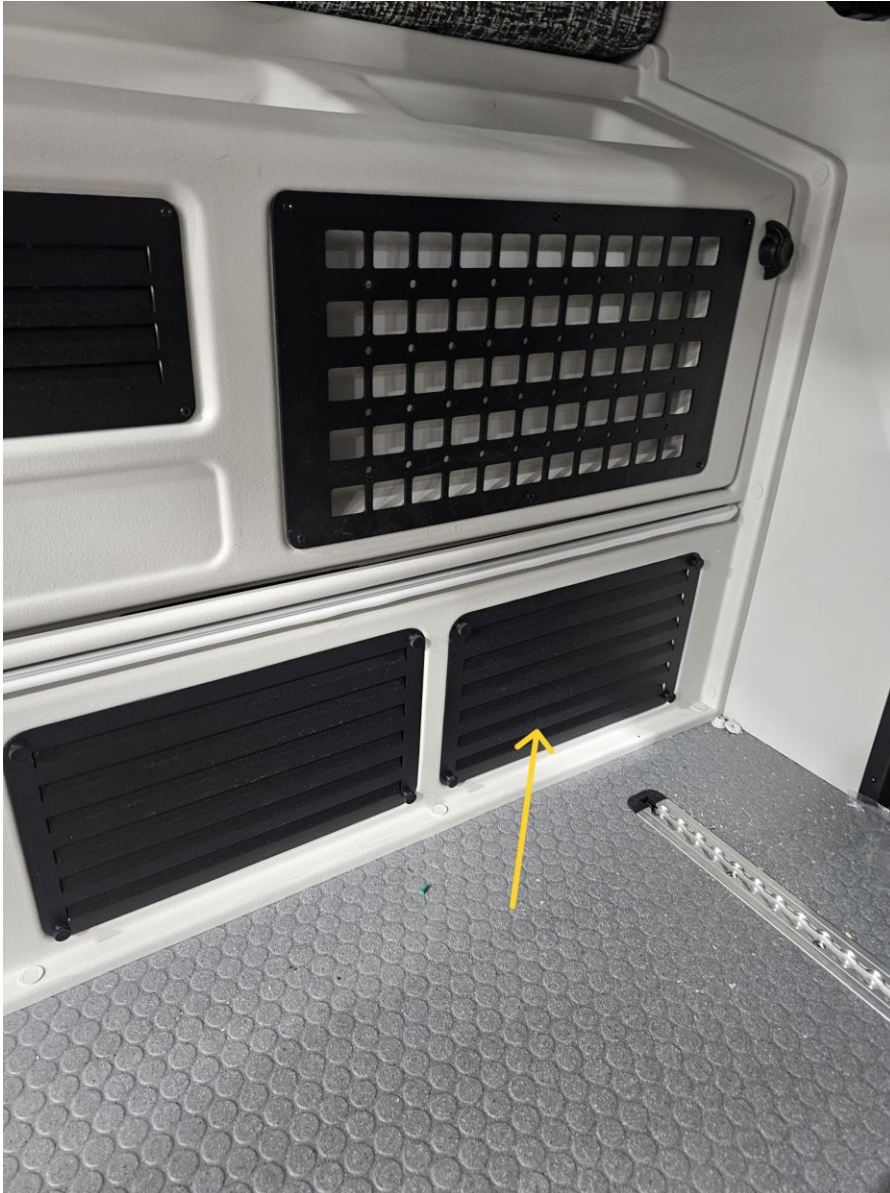
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2) Remove the lower right vent from the battery compartment to allow access to the breaker panel stowed behind it. This is done by removing all 4 thumb screws by hand. No tools should be required, as this could damage the plastic thumb screws.



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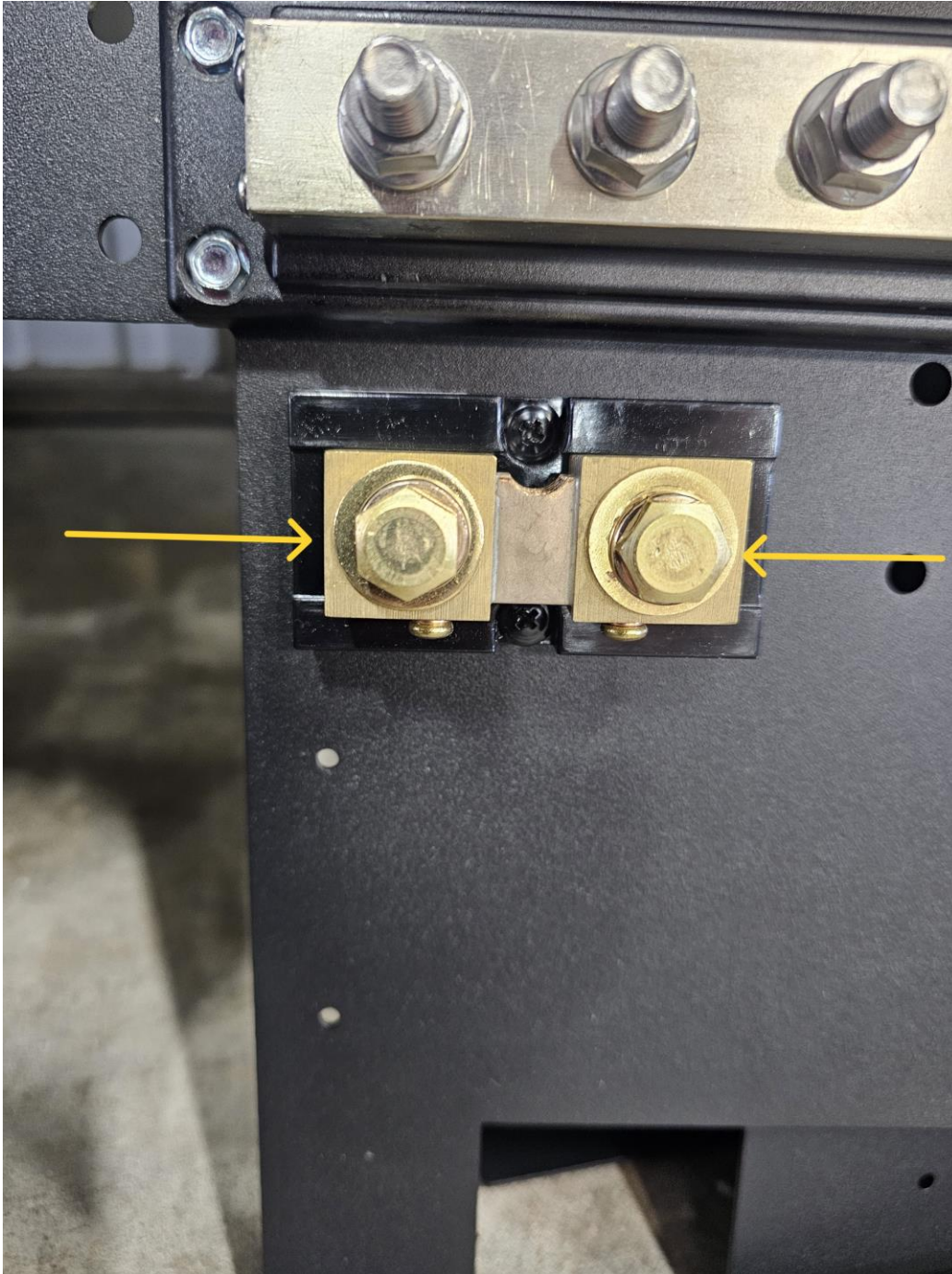
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- 3) Remove black cables, located as shown below, from both sides of the standard shunt currently installed on breaker panel.



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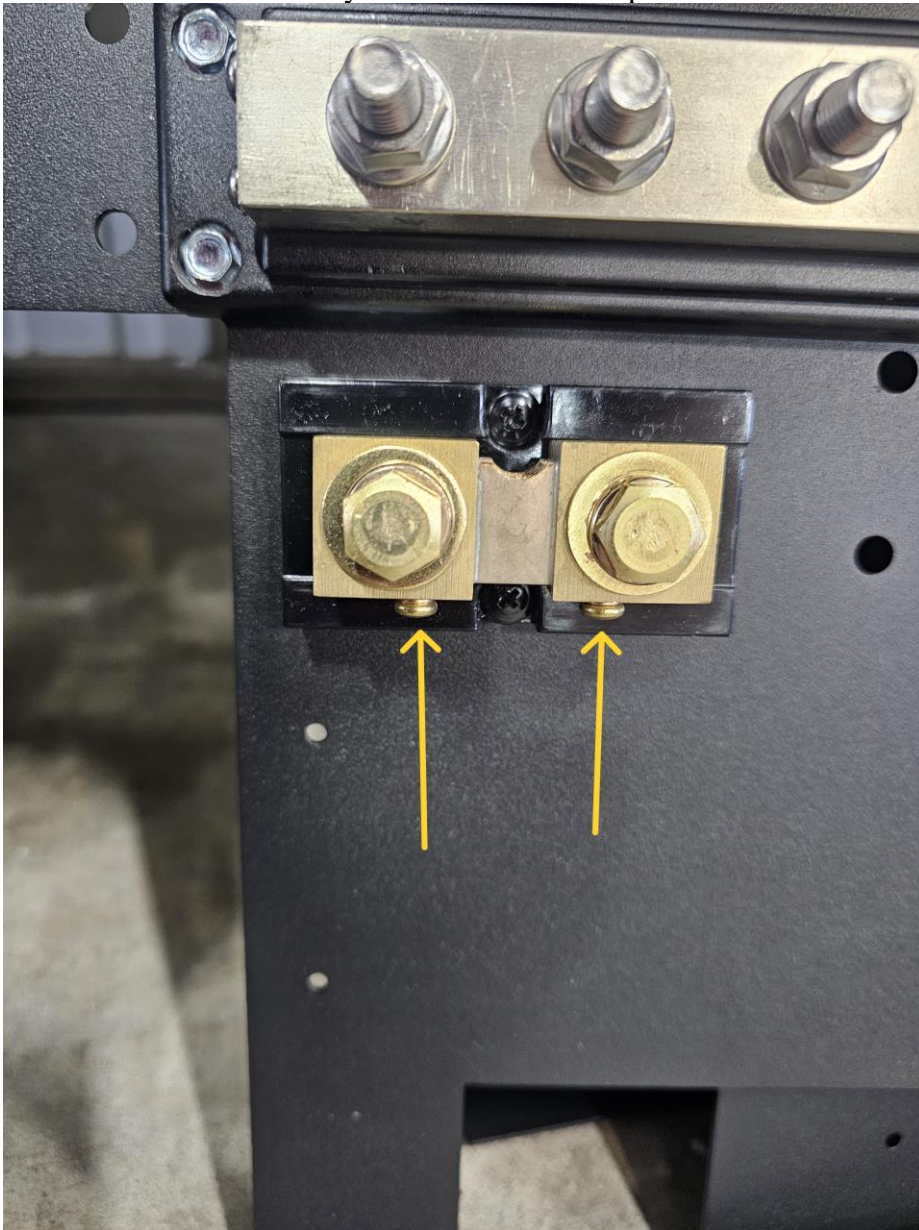
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- 4) Remove purple and gray wires, located on the small screw terminals as shown below, from the side of the standard shunt currently installed on breaker panel.



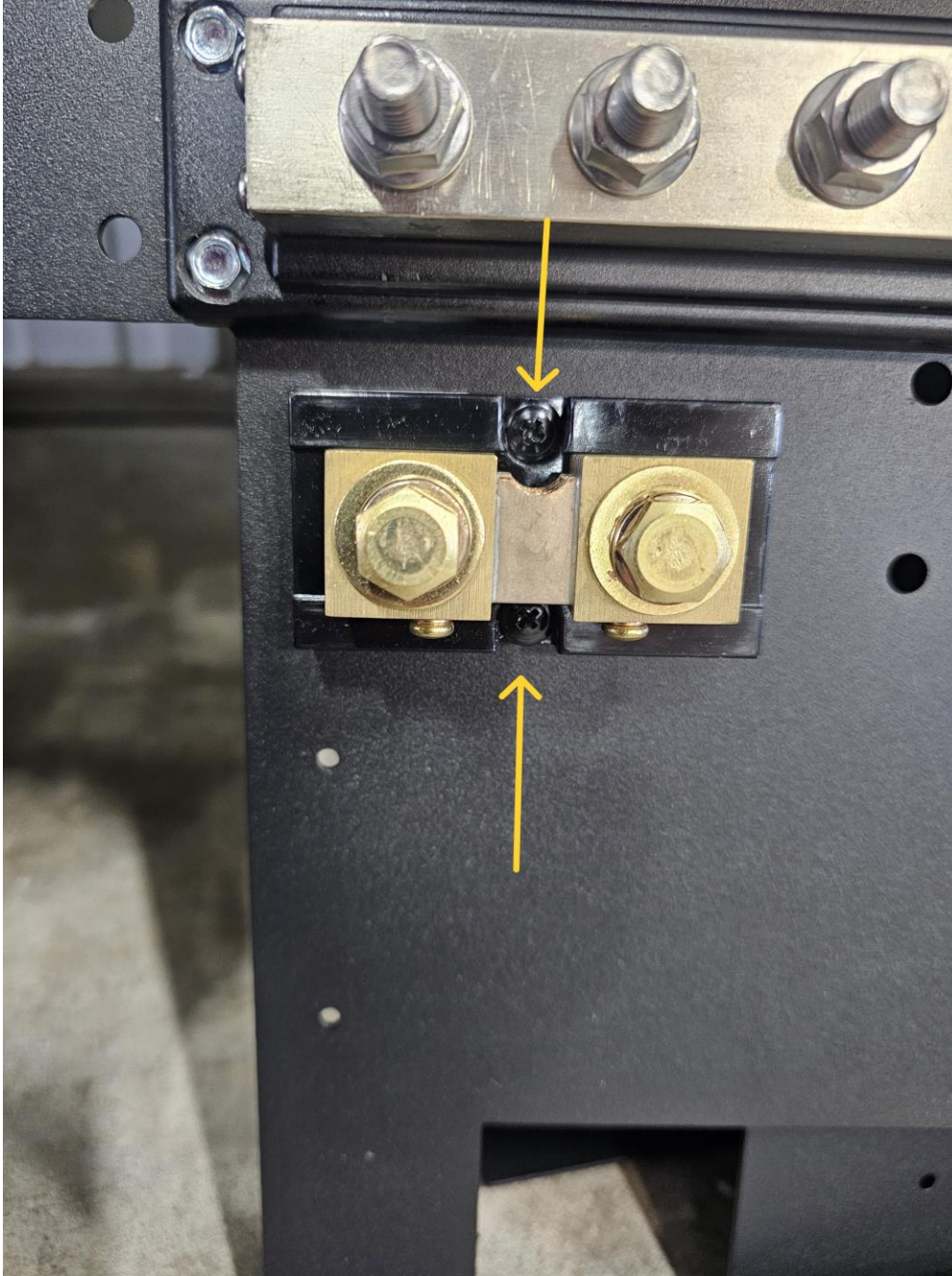
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5) Remove screws used to attach standard shunt to breaker panel.



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6) Tape V.E. Direct cable and crossover ethernet cable together near the termination points of the cables as shown below. The orientation of the crossover cable does not matter.



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7) Remove the cover, shown below, underneath the shower with a screw gun and Phillips head bit.



8) Using a flexible wire snake of some kind (we use a roughly 8-foot piece of PEX waterline in this example) run a pull snake from the battery compartment to the Jumpseat or Adventure Bar electrical area. This will be eased by guiding the snake via the access under the shower. **\*CAUTION\*** Observe path of movement via shower access panel as pull snake is pulled through to avoid damage to water lines and electrical compo

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9) Tape the cables to the pull snake and pull as shown below. Ensure all clips and protrusions of the connectors are taped down to reduce the risk of snagging. Tape cables to wire fishing tool in a manner that keeps the overall circumference to a minimum.



10) Using self-tapping sheet metal screws, attach the new Victron Energy Smart Shunt to the breaker panel in place of the original.

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11) Connect the V.E. Direct cable to the port on the front of the Smart Shunt shown below.



12) Connect the terminal of the ethernet cable to the port on the side of the Wakespeed WS500 regulator shown below.



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- 14) Connect the black cables previously removed in step 3 to the terminals of the Smart Shunt as directed on the Smart Shunt face. There are labels depicting which side is to battery and which side is to system. The short cable connected to the bus bar above the shunt should be connected to the system side.

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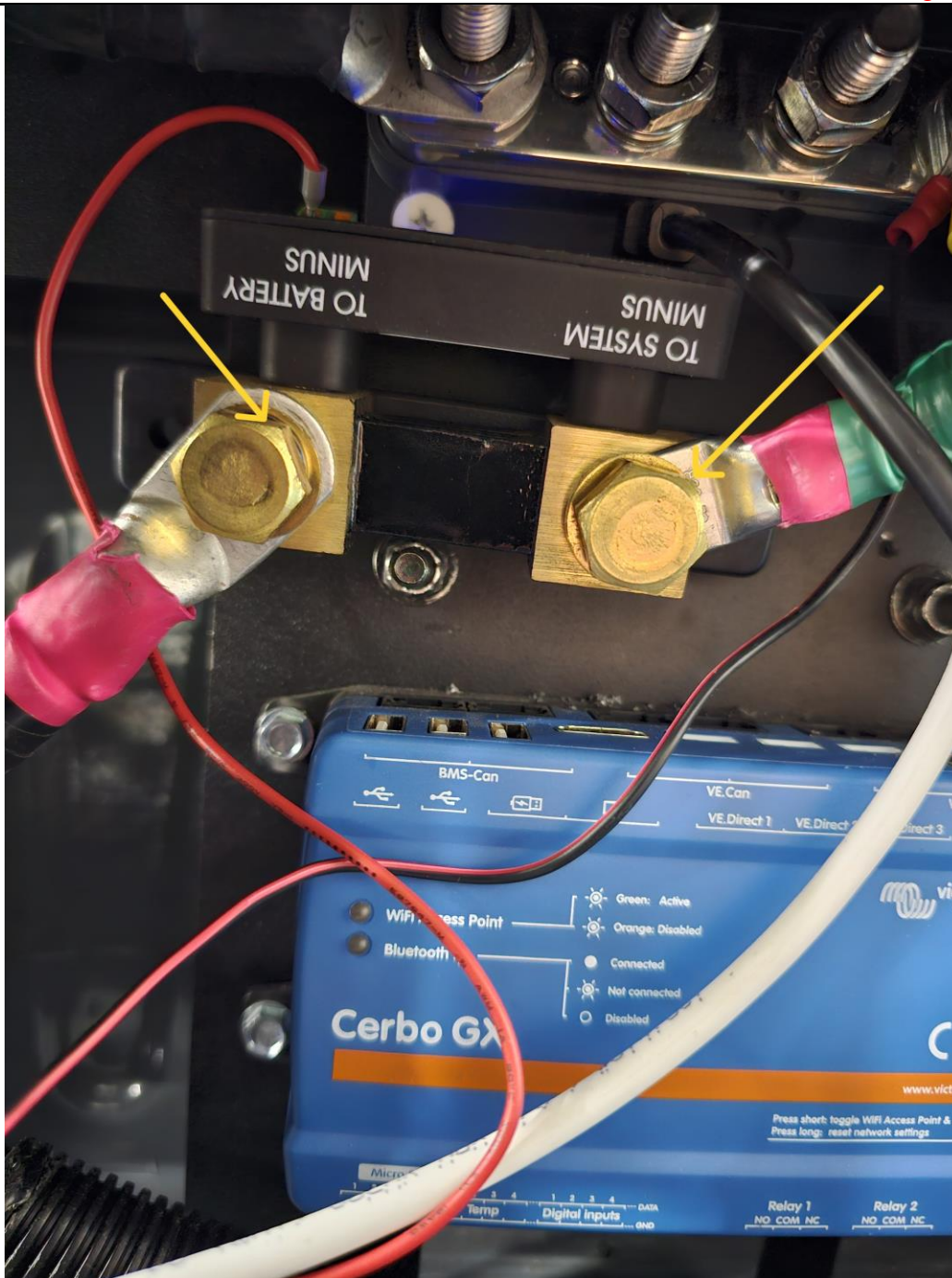
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15) Remove the battery disconnect switch from the plastic by removing screws (T30) shown below.

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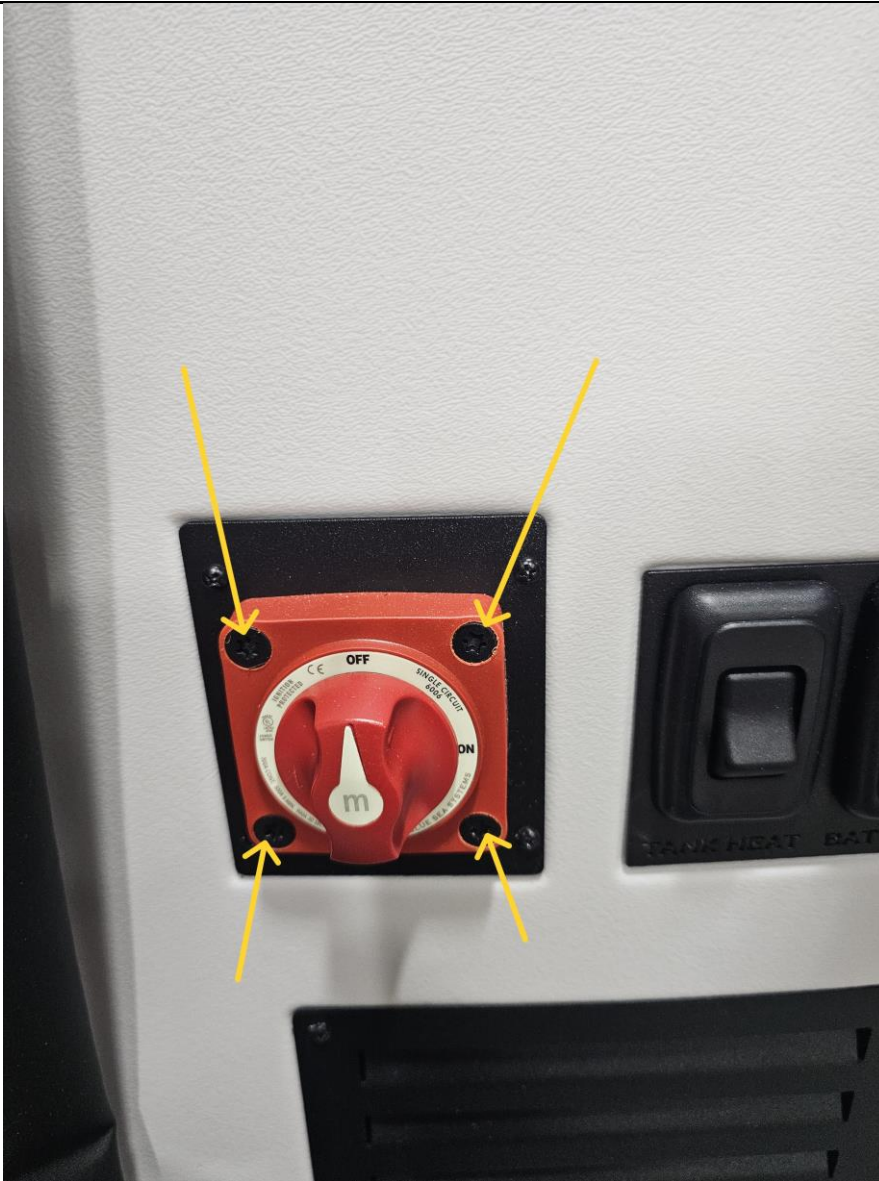
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- 16) Remove nut from "Input" side of disconnect switch and place ring terminal of shunt power wire on terminal.

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17) Tighten nut back on to “Input” side of disconnect switch.

18) Reposition disconnect switch and replace screws used to secure it to the rear plastic.

19) Insert straight terminal end of shunt power wire into port on front of shunt shown below.

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20) With Bluetooth connected device, connect to Smart Shunt through Victron Connect app.

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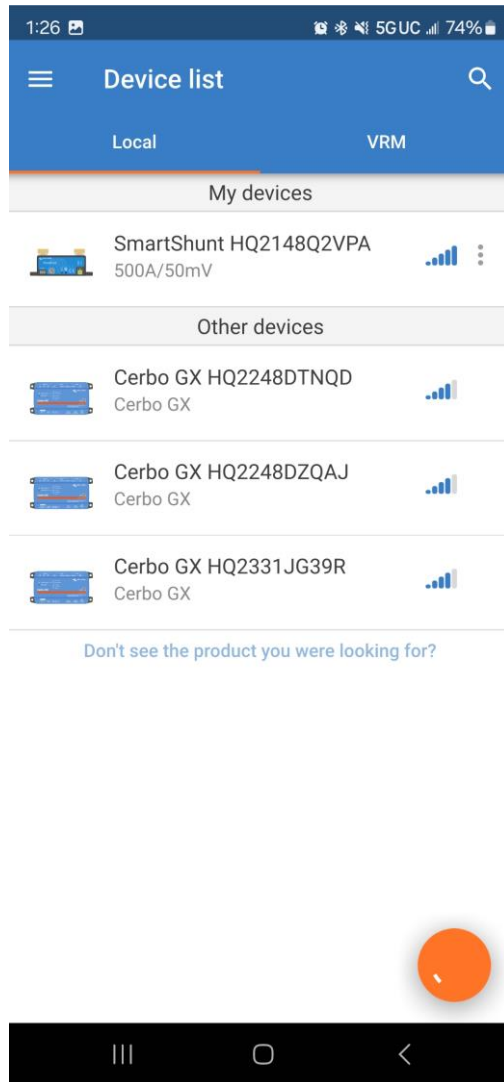
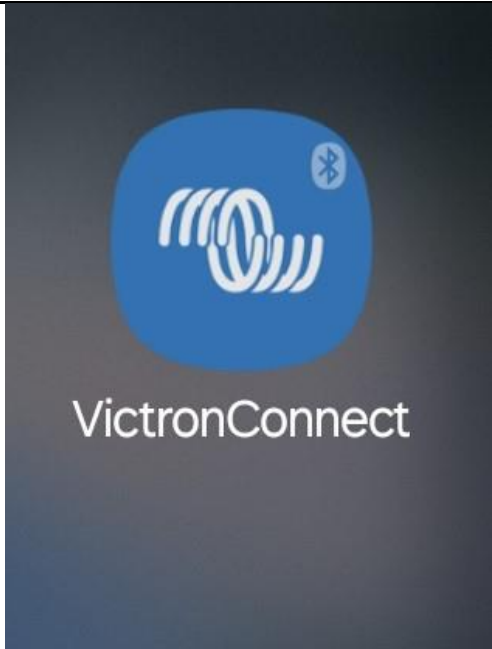
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21) Once connected, select the cog in the upper right-hand corner of your screen to access settings.

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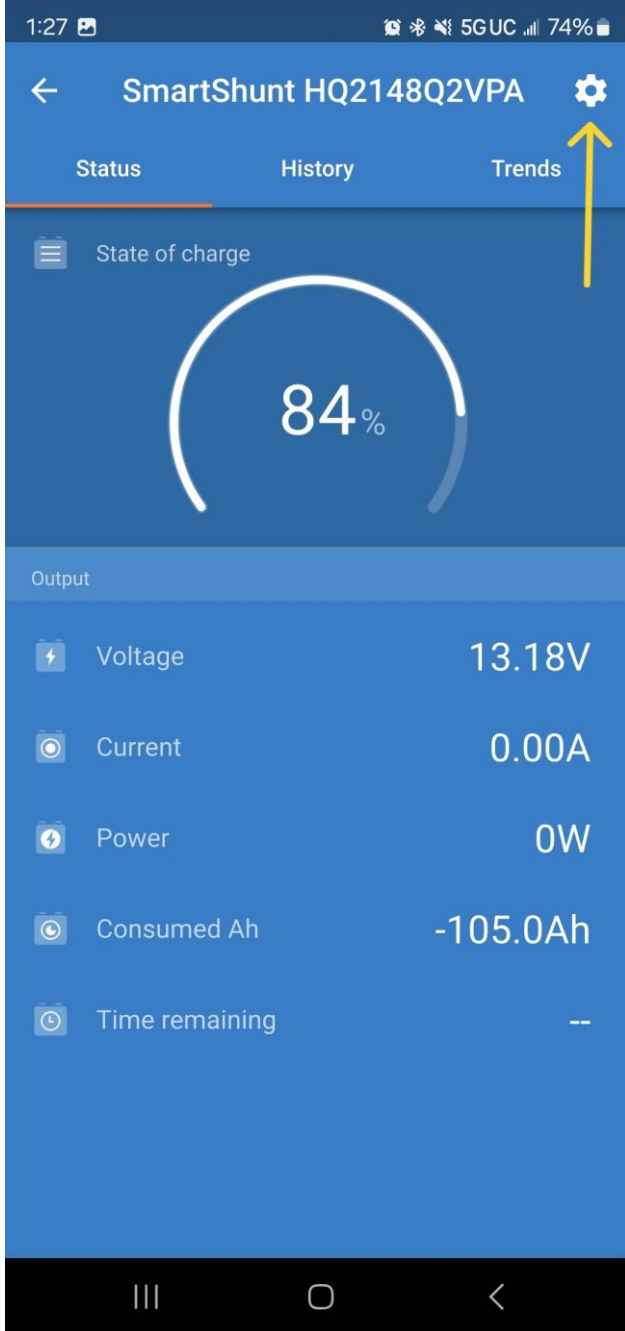
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22) Select the “Battery” option.

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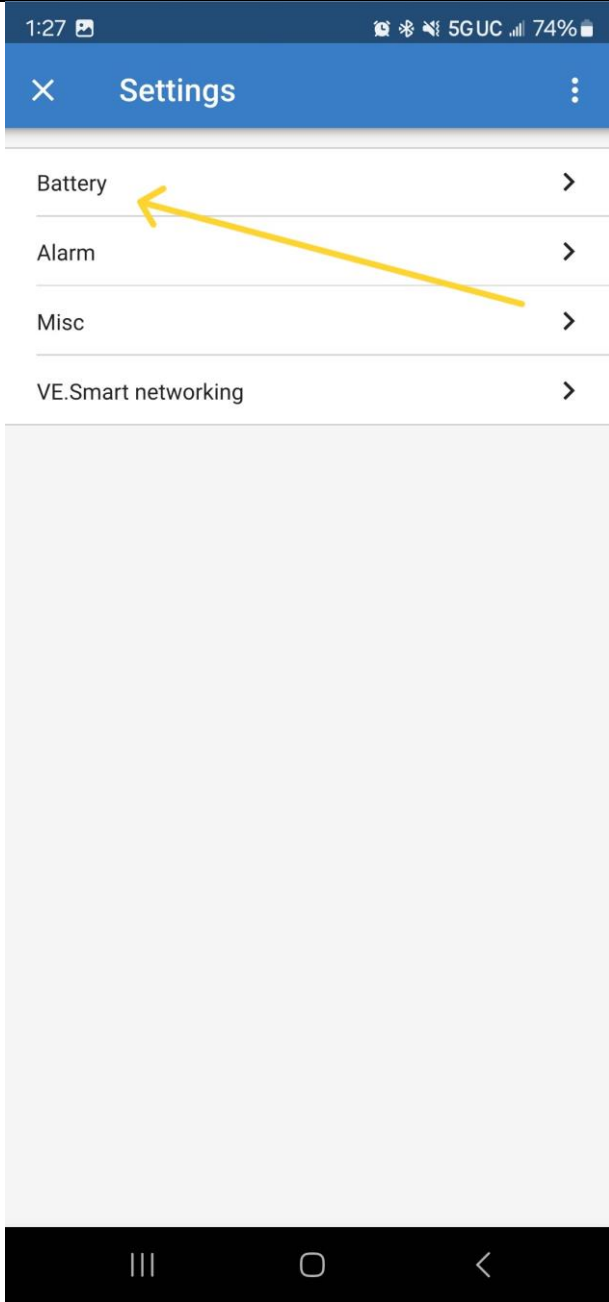
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23) Select the “Battery capacity” option and match the Ah to the Ah of the coach.

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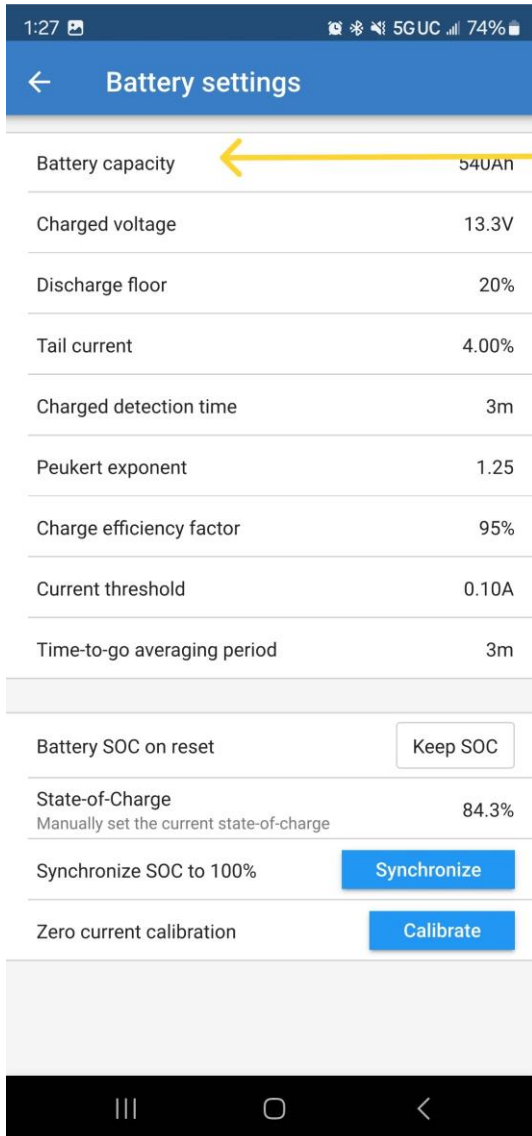
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- 540Ah for standard battery option (2 EA GameChanger 270aH batteries)
- 810Ah for the Max Power option (3 EA GameChanger 270aH batteries).



24) Once set select “OK”.

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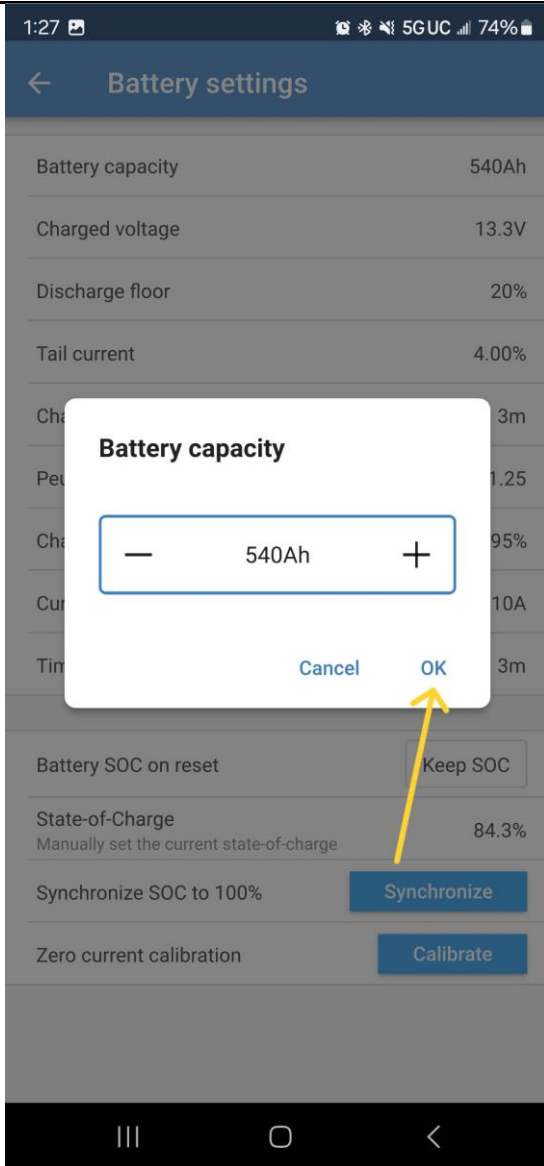
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25) Select “Battery SOC on reset” and ensure that it is set to “Keep SOC”, which is the default selection.

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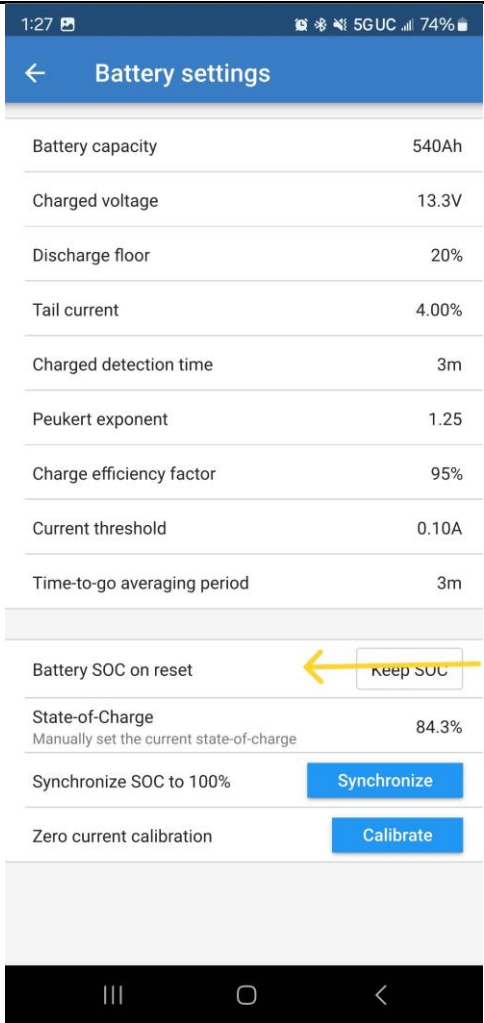
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26) Once set select “OK”.

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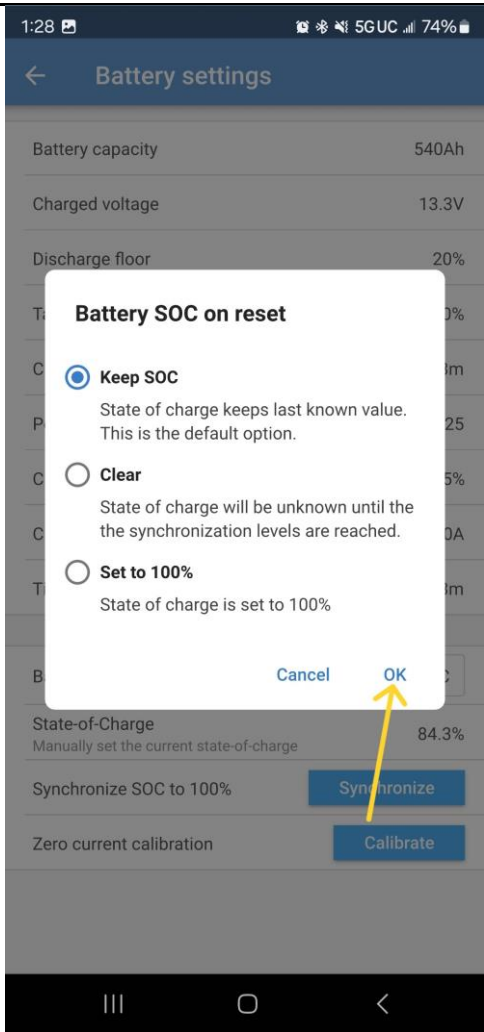
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27) Select “Synchronize” on the “Synchronize SOC to 100%”.

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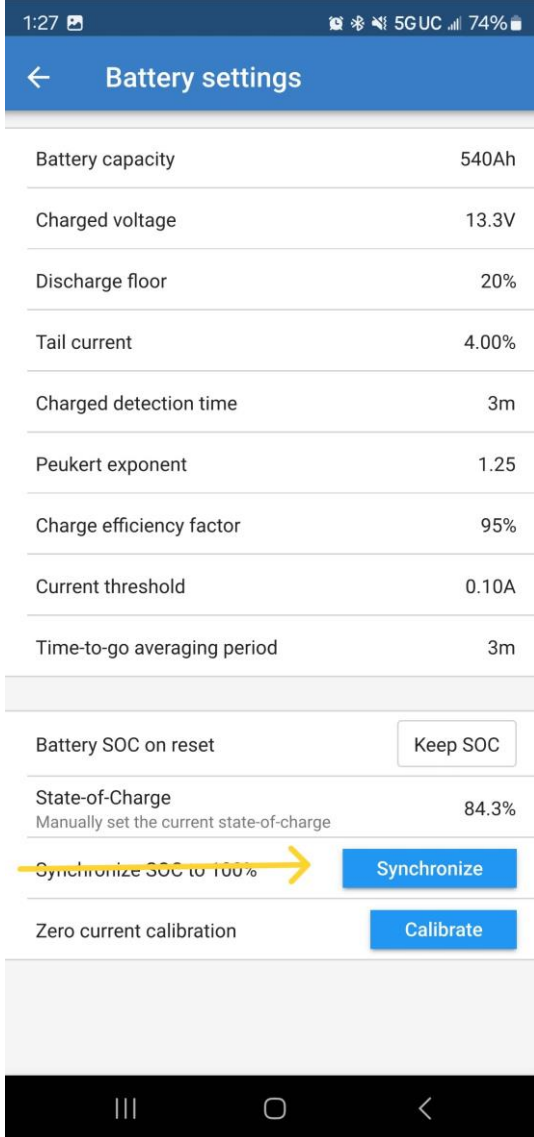
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28) If battery is charged completely, select “OK”, if not, charge fully and then select “OK”.

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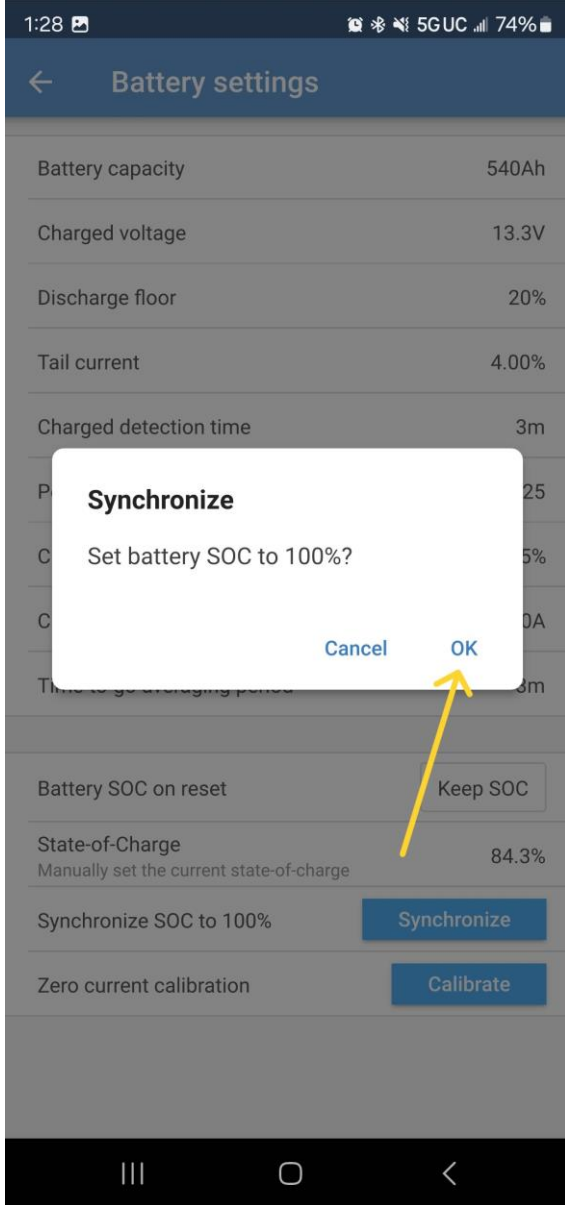
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29) Replace vent cover that stows breaker panel.

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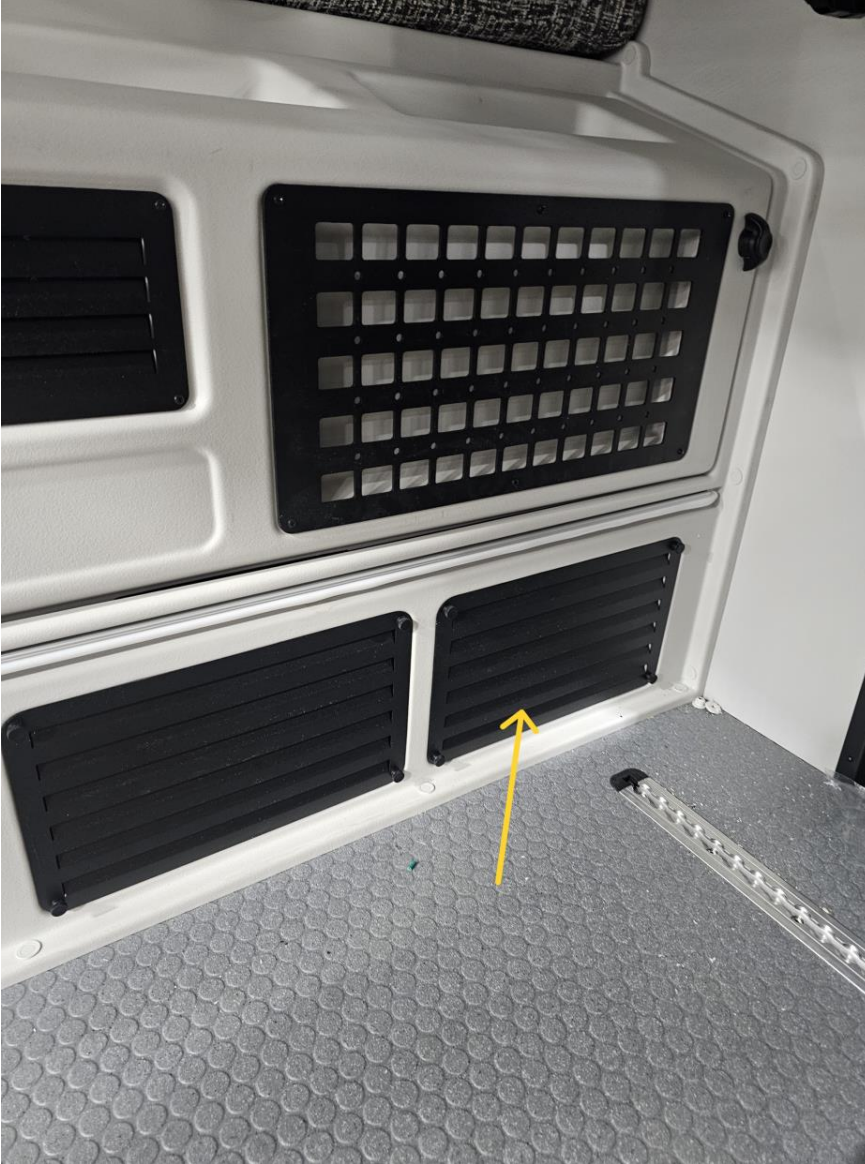
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30) Replace cover below shower.

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31) Turn power disconnect switch to “ON”.

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32) Ensure that Victron GX Touch 70 is displaying a percentage on battery tile.

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