Recall Inspection and Repair Instructions

NHTSA Recall #: 22V-291
Tiffin Motorhomes Recall #: TIF-123
Models Involved: 2021 & 2022 Cahaba, all floorplans with Volta and or Dragon Fly Energy systems

Tools Needed:
9/16" Wrench / Socket
11/16" Wrench / Socket
10 mm Wrench / Socket
13 mm Socket Wrench
Flat head screwdriver
Digital Multimeter
Torque Wrench (10 – 150) ft. lb.
Torque Wrench (10 – 200) in. lb.

Parts Needed:
5110422 – Solar Charger / Control
5110411 – Inverter Charger 3000W 51 Volts
5110413 – Gen 2.4 Alternator Ctrl Box
5059548 – Busmann Fuse Holder FMG
5065599 – Fuse 60A AMG
5110414 - Converter 58V Input 14V Output 40A
5110417 – Heater Control Box Outlet
5110418 – Fuse 200A – 80 Volt
5110419 – Fuse 150A – 80 Volt
5110420 – Fuse Holder / Base

FLAT RATE CODE & TIME ALLOWED FOR VISUAL INSPECTION, TERMINATION TORQUE SPECS, AND SYSTEM CHECK. *When filing the warranty claim for payment, please use the following flat rate codes and times.* For all Cahaba Floorplans, CH9861RC01 for up to 3**.00 hours**.

Note for parts: All part numbers for the system components are listed above. Not all parts may be needed for repair. In addition, certain shop supplies may be needed and should be billed back under the flat rate code for the recall.

Note on systems: Below instructions are proper procedures for system inspection, repair, and testing Depict is Volta power system. Same procedural steps should be followed for systems using Dragon Fly Energy.

INSPECTION PROCEDURE:

1. **Disconnect all power from the 30-amp shore cord.**
2. Make sure the Volta main system power button (Figure 1), found on shower wall behind driver's seat, and is pushed into the "off" position – non glowing. Also, the Volta information screen should be blank when system is off.

Figure: 1

3. Locate the service key switch on the Volta main battery pack and turn it to the “off” position. The service key switch is found on the Volta main battery pack which is below floor level outside underneath in the rear of the coach. Key will be in owner’s information bag of the coach. Only in the off position can the key be removed from the pack switch. Picture shown below of key switch found on pack. (See Figure 2 & 3)

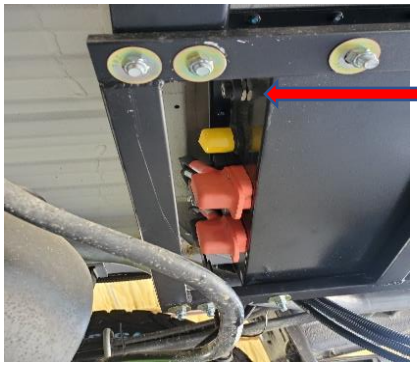

Figure: 2

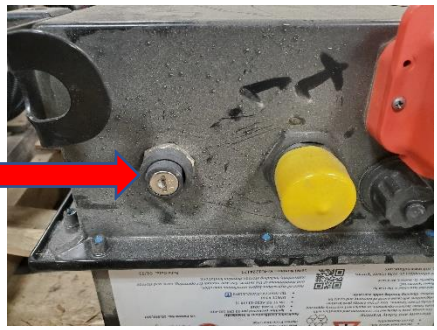

Figure: 3

4. The main electrical system is found on the passenger rear bed box and can be accessed by lifting the bed lid to expose the main electrical components. Proper securement / arrangement of the electrical system components can be seen in Figure 4

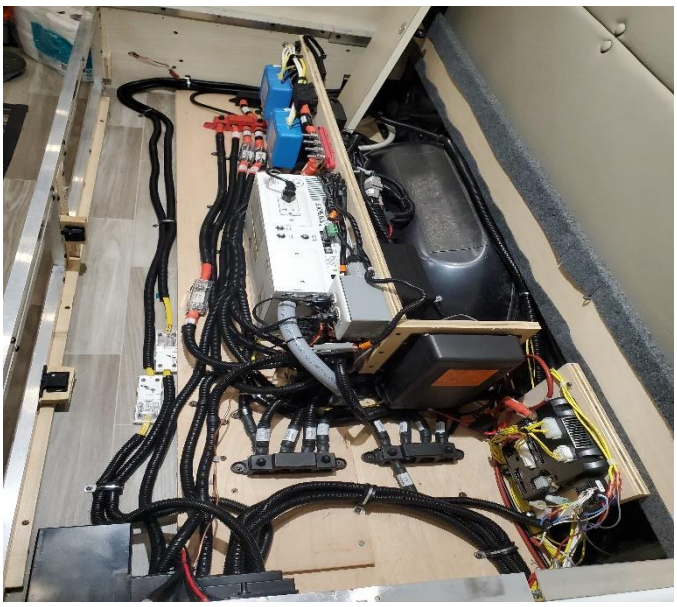

Figure: 4

Warning:

Improper installation / mounting of these components can cause life safety concern. Follow all component manufactures instructions for installation and torque specifications.

REPAIR PROCEDURES:

1. Remove transparent fuse holder covers, Qty. (3) as shown in Figure 5. Figure 6 shows the cover removed.

Figure: 5

Figure: 6

2. Remove all 5/16” 4 post power distribution bar covers (Red & Black) Figure 7 & 8 (Qty. 4)

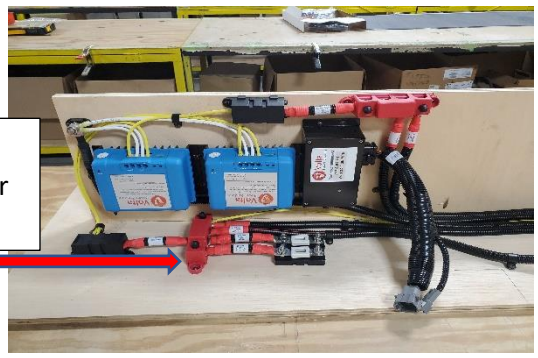

Figure: 7

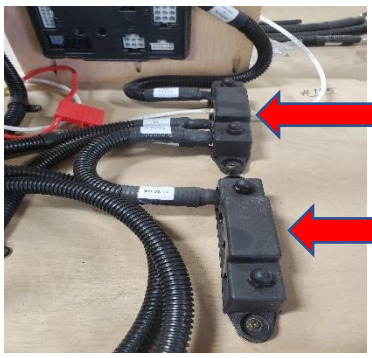

Figure: 8

3. Visually check for any damage of the 4 post distribution bars. (Figure 9 & 10) Replace any damaged items. Part numbers that may be needed include by not limit (5110420, 5110418, and 5110419). Tighten all 5/16” nuts on the 4 post distribution bars to 110 in. lbs. (Figure 11 & 12)

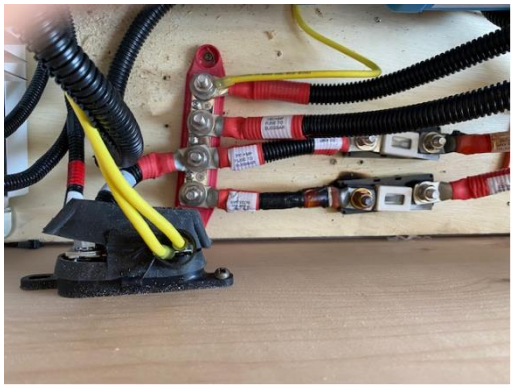

Figure: 9

Figure: 10

Figure: 11

Figure: 12

4. Visually check for damage of the fuse and fuse holders. (Figures 13, 14, 15, and 16) Replace any damaged items. Part numbers that may be needed include by not limit (5110420, 5110418, and 5110419). Tighten nuts to manufactures torque specifications of 110 in. lbs. (Figure 17)

Figure : 13

Figure : 14

Figure : 15

Figure : 16

Figure : 17

5. Remove the 120 VAC Inspection plate from Inverter. (Figure 17)

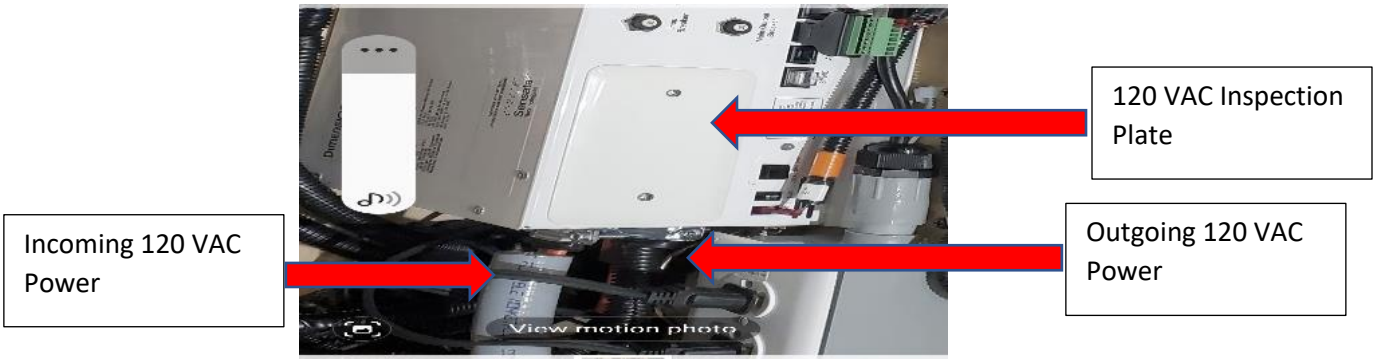

Figure: 18

Check Inverter 120 VAC incoming and outgoing 10/2 120 VAC feeder cables for proper strip length of ½" and insertion into the built in WAGO inverter connectors (If inverter model is equipped). If inverter is not equipped with WAGO connector's 10 AWG electrical grade wire nuts should be taped with electrical grade tape. Also check the clamps that secure the wiring entering and exiting the inverter. (Figure 18, and 19)

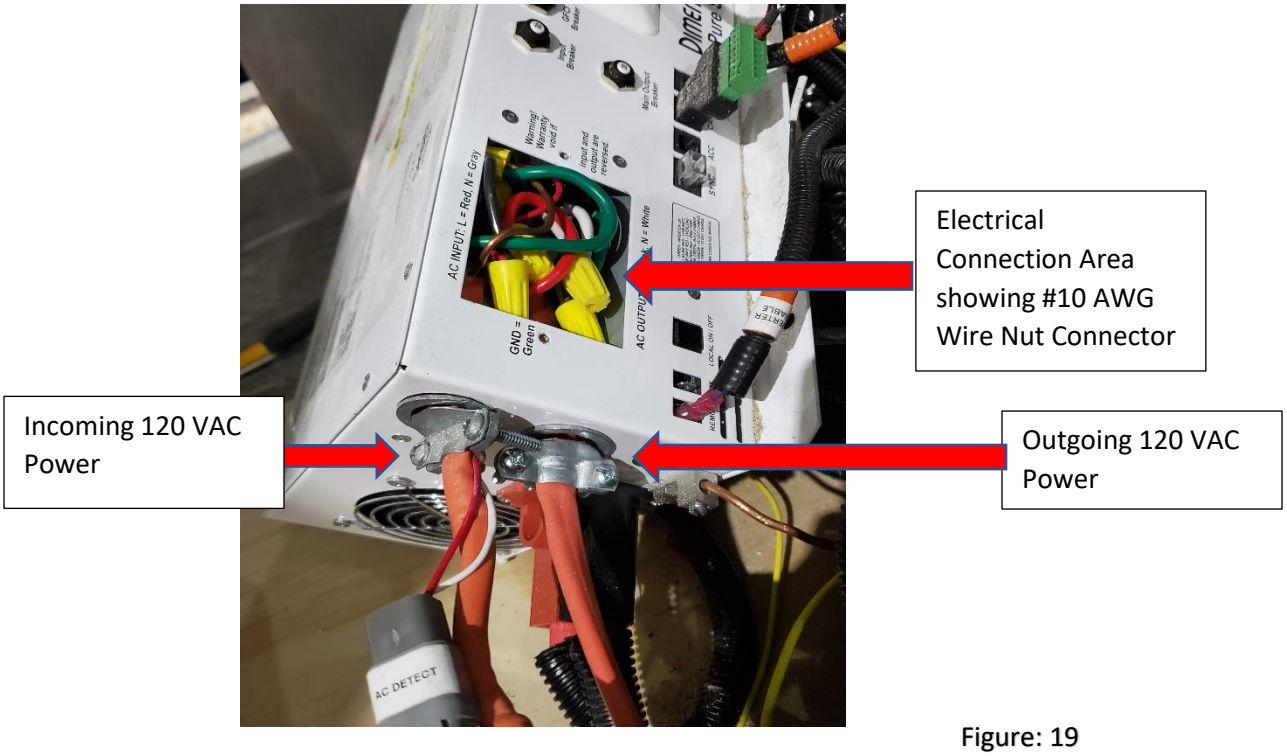

Figure: 19

6. There are 2 types of Volta Inverter / Chargers installed on the Volta System. If Type "B" Tiffin part 5130233 Inverter/charger 3200 watt 51 G2L is installed, remove the 4 x 4 square junction box cover and

inspect all wire nuts for proper AWG size for 10 AWG wire. Also inspect for any exposed wire showing from around wire nuts. Replace wire if necessary 2-#10 & #10G. See Figure 20, 21 and 22. Check and tighten any loose wire nut connections, tape nuts using electrical grade wiring tape, also install ¾" wire restraining clamps (RACO #2863 NM clamp type connector) as wiring enters and exits this junction box.

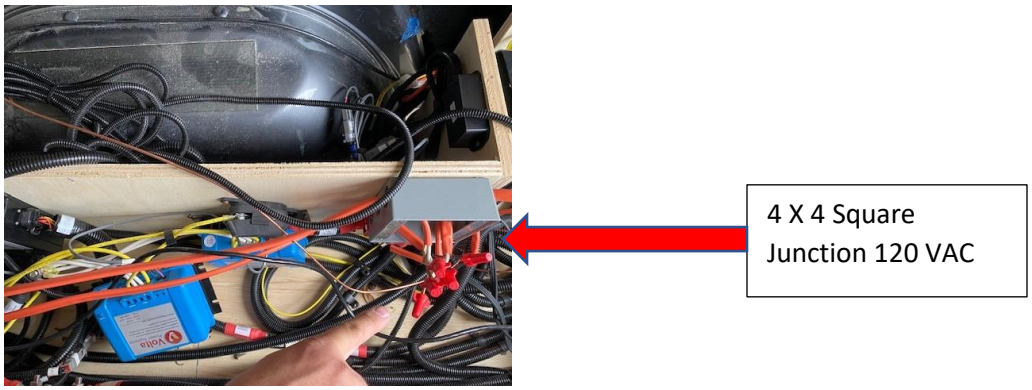

Figure: 20

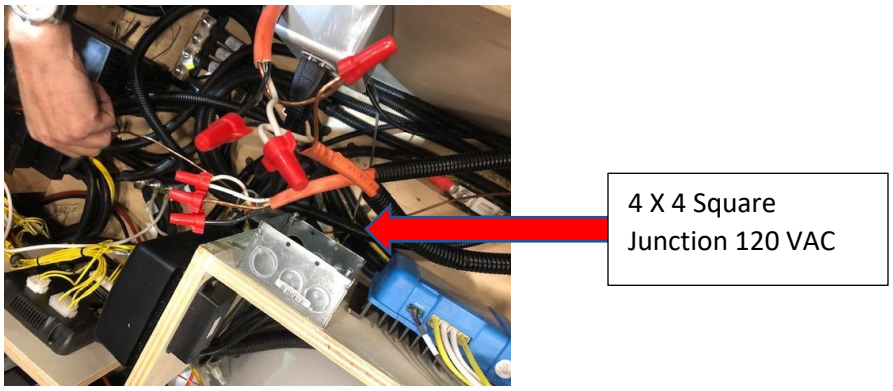

Figure: 21

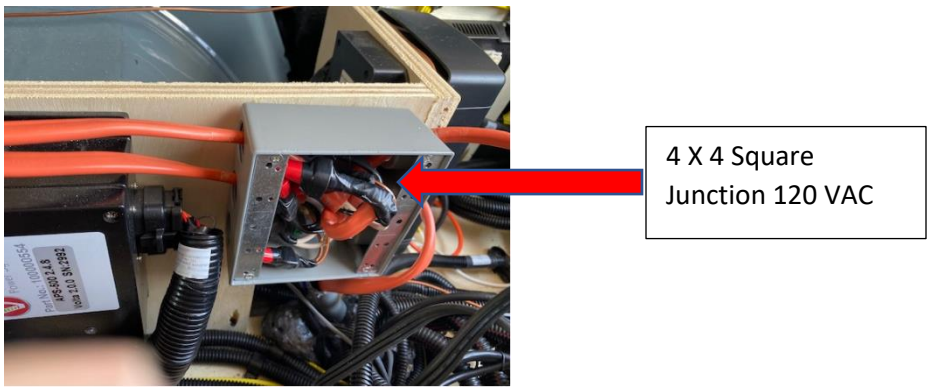

Figure: 22

7. Reinstall all electrical covers removed from system in any prior steps.

8. Visually check clamping support for alternator cabling entering below floor underneath coach into the main electrical area (Figure 23 & 24) show possible conditions). Install necessary clamping support with (Clamp, Loop Strap: 304 Stainless Steel Black, EPDM Rubber 1 1/2 “, or sized as required) to prevent cable damage. See Figure 25 & 26 for proper routing / installation and support strapping of wiring.

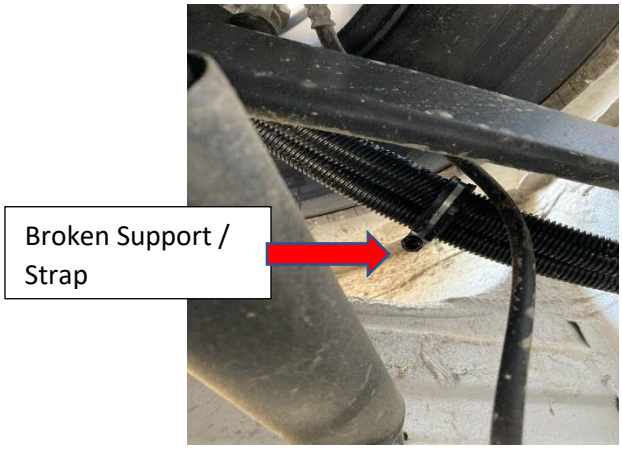

Figure: 23

Figure: 24

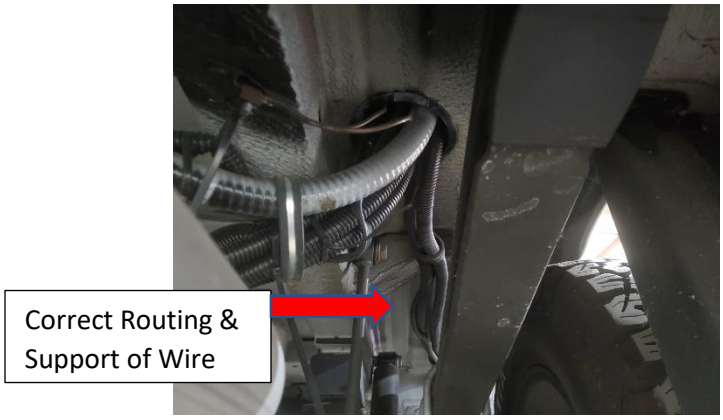

Figure: 25

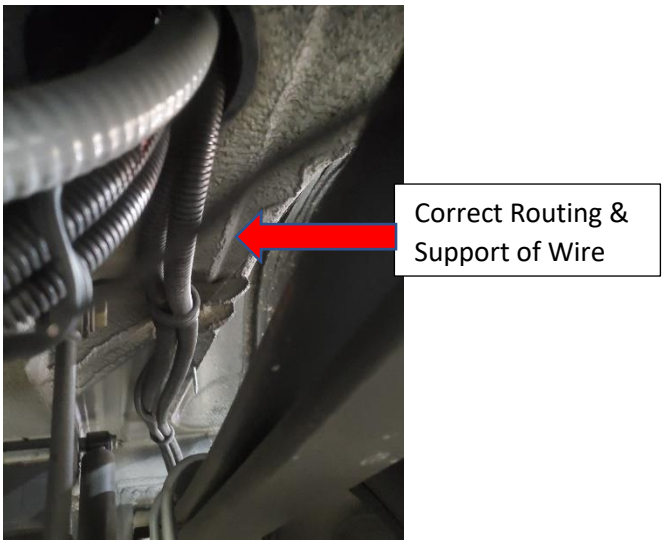

Figure: 26

9. Check DC to DC Solar controller for proper wiring configuration. (Figure 27)

Figure: 27

10. Solar controller wiring connection configuration shall be as shown in below wiring diagram Figure 28.

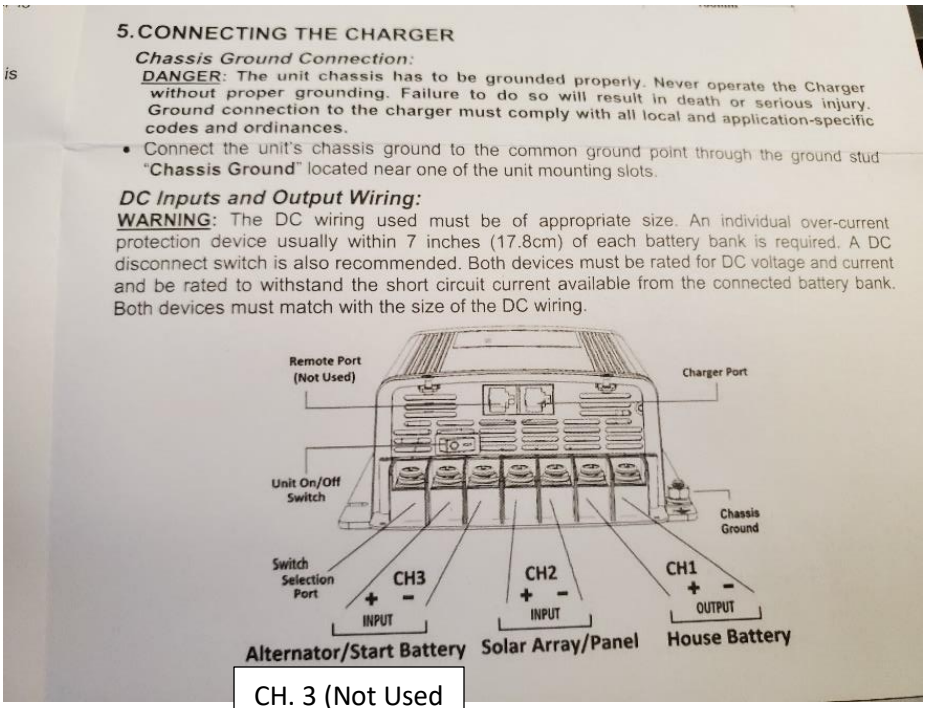

Figure: 28

11. Complete systems check as described below.

    A. Disconnect all power from the 30-amp shore cord.

    B. Turning your system on. Your inverter changes the energy storage system's power from direct current (DC) into alternating current (AC) to power your RV's 110-volt appliances similar to those used in a typical home. When your Volta system is on, you can access your inverter settings by pressing the inverter button, with lines representing DC and AC power, on the home screen. This allows you to check your inverter's status, access your inverter power switch, and select your charge rate. To get the most life out of your charge, be sure to turn the inverter off when you're not using 110-volt appliances like air conditioning or the microwave.

    C. Your Volta system can recharge in three ways: 1. driving your vehicle 2. Main Engine set to High-idle 3. Through connecting to shore power 4. From solar.
    Once your Volta system is on, the State of Charge gauge will display in the middle of the screen. Just like a fuel gauge, the SOC gauge indicates the percent of the system's total charge. You'll also see a few key numbers on your home screen: • The top-left shows how much time your system can run while supporting your current level of energy use. • The top-right displays your power pack's current temperature in either Celsius or Fahrenheit. • Finally, the bottom-right shows your system's current power flow. When your system is charging, this number will be positive, showing an influx of energy into the power pack. When you're using more power than your system is taking in, this number will be negative.

    D. To turn your Volta system off, press and release the *power button, then allow the system a few seconds to power off. After it's powered down, the touch screen and button will go dark.

    E. To turn your system on, simply press the *power button next to the LCD screen. After a few seconds, the ON/OFF button and touch screen will light up. *The power button is located near where the LCD screen is located in your RV

    F. Once your system is back online and operating, start your chassis engine and high idle at 2500 to 2800 RPM. Check the bottom-right of your home screen which shows your system's current power flow. When your system is charging, this number will be positive, showing an influx of energy into the power pack from the secondary alternator. Turn chassis engine off.

    G. Once your system is back online and operating, reconnect the 30-amp shore cord to your RV. The bottom-right of your home screen shows your system's current power flow. When your system is charging, this number will be positive, showing an influx of energy into the power pack from shore power.