

COOLIFT PROPULSION UNIT BATTERY CHARGER INSTALLATION

Description	Qty.	Part No.
Battery Charger Installation Kit <i>contains the items below</i>		309878
Connector adapter	1	61209
Pan head thread forming screw - #10-32 x 3/8" long	2	80331
Cable tie	1	61052
Charger mounting plate assembly (includes):	1	309881
NOCO battery charger	1	63084
Mounting plate	1	309879
Pan head machine screw - #8-32 x 3/4" long	4	80228

TOOLS REQUIRED

- (1) #3 PHILLIPS SCREWDRIVER
- (1) 7/16" COMBINATION WRENCH OR SOCKET
- SCISSORS
- ADHESIVE REMOVER
- BLUE THREAD LOCKER (OPTIONAL)

1



Release Levers

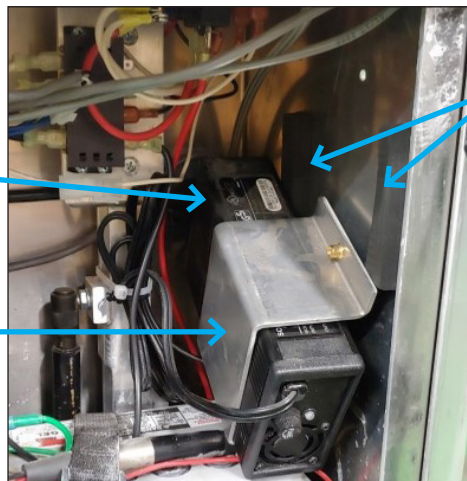
- Disconnect external charging cable and turn off unit.
- Push release levers and remove back cover

2



Using the screwdriver, remove the two side screws and discard; hold charger mount from other side.

3



Step 3a

Step 3b

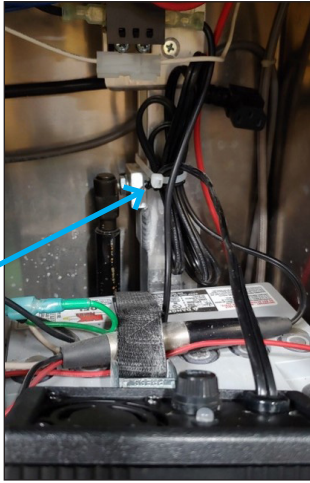
Step 3c



Input IEC Cable

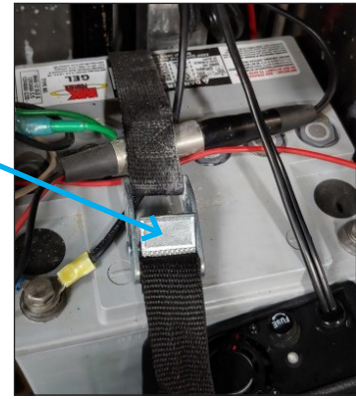
- With charger mount free, disconnect input IEC cable from charger (located on back side of charger)
- With charger mount disconnected, slide sleeve mount off of charger; move charger out of the way to better access side wall, batteries and cables
- Remove the two foam pads from side wall; use adhesive remover to remove stickiness from enclosure wall

4



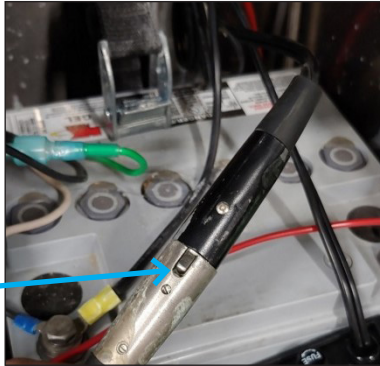
Use scissors to cut the zip tie holding charging cable.

5



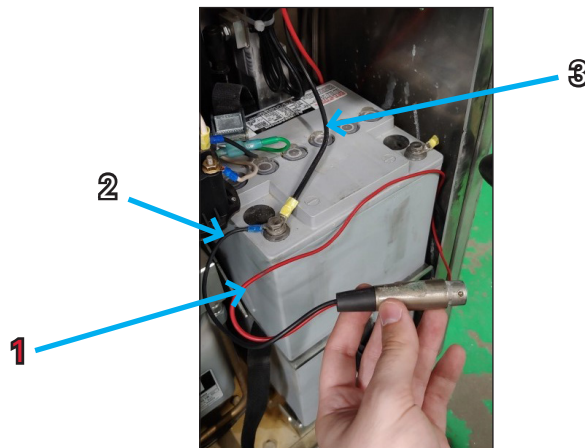
Unfasten upper and lower battery straps.

6



With the cables loosened and free, press the release for the 3-pin XLR connector and pull apart to disconnect. Remove the old charger.

7



- a. Remaining on the batteries are the two wires coming from the 3-pin XLR connector. Note that the red is the positive wire (1) and the black is the negative wire (2). The black goes to the negative terminal on the top battery and the red goes to the positive terminal on the bottom battery.
- b. Using the 7/16" wrench, undo the negative terminal bolt on the TOP battery and remove the ring attached to wire (2) from the terminal. Keep other black wire (3) attached.
- c. Keep all other wires attached to battery terminals.

8

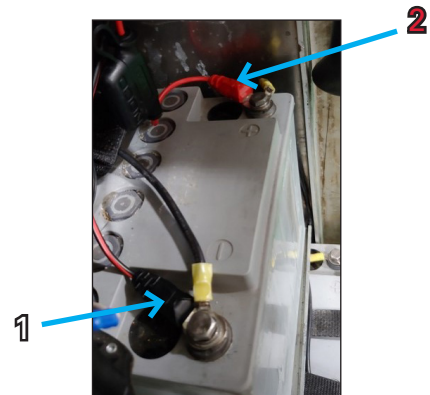


- Pull the lower battery out enough to access the lower terminals.
- Using the 7/16" wrench, undo the positive terminal on the LOWER battery and remove the ring attached to wire (1) from the terminal. Keep other red wire (2) attached.
- Keep all other wires attached to battery terminals.

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Bank 1

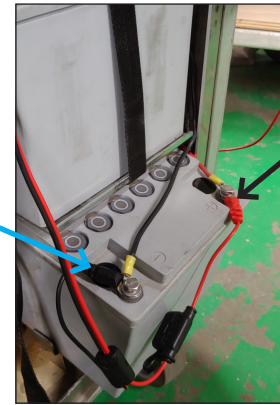


- Using the 7/16" wrench undo both positive and negative terminal bolts on the TOP battery (leave all currently attached cables, connected after following steps).
- Take the black wire from the bank 1 cable (leave the cable tie on) and feed the bolt (1) from the negative battery terminal through the cable ring terminal. Insert bolt/ring into the negative battery terminal.
- Take the red wire from bank 1 cable and feed bolt (2) from the positive battery terminal through the cable ring terminal. Insert bolt/ring into positive battery terminal.
- Using the 7/16" wrench, tighten both TOP battery terminal bolts. Note that the red and black wire leads should be positioned as the image shows, and then tighten the top terminal bolts.

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Bank 2



- Using the 7/16" wrench undo both positive and negative terminal bolts on the LOWER battery (leave all currently attached cables, connected after following steps).
- Take the black wire from the bank 2 cable (leave the cable tie on) and feed the bolt (1) from the negative battery terminal through the cable ring terminal. Insert bolt/ring into the negative battery terminal.
- Take the red wire from bank 2 cable and feed bolt (2) from the positive battery terminal through the cable ring terminal. Insert bolt/ring into positive battery terminal.
- Using the 7/16" wrench, tighten both LOWER battery terminal bolts. Note that the red and black wire leads should be positioned as the image shows, and then tighten the top terminal bolts.

11



Insert the IEC end of the 61209 connector adapter into the input cable, which was disconnected in Step 3. Press firmly to make sure it is secure.

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Charger
Input Cable



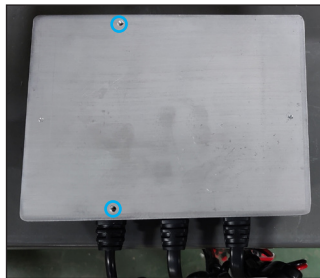
Leaving the cable tie on, insert the 63082 NOCO charger input cable into the connector. Press firmly to make sure it is secure.

13



Insert the 309881 charger assembly into the enclosure, against the side wall and above the batteries as shown, making sure the cable/connector and wires do not get pinched.

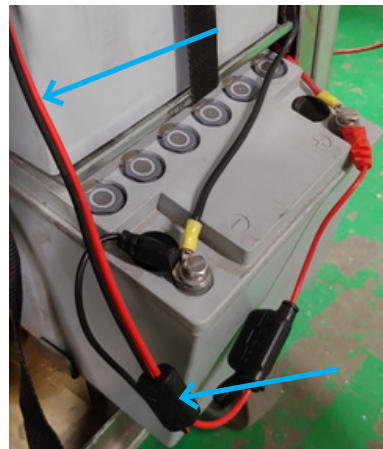
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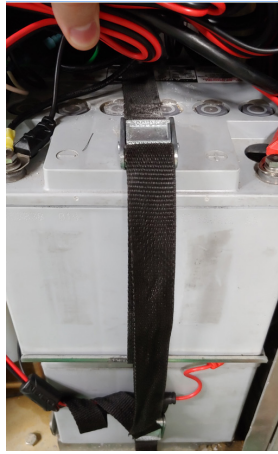
Enclosure

- Line up the two mounting holes in the plate with the two holes on the side of the enclosure. It will be a tight fit but finesse the holes to line up correctly.
- Insert the two shorter 80331 screws provided in the kit. Blue thread locker may be used to lock the screws in place, but is not required. Begin by tightening the screws by hand, then finish tightening using the screwdriver.

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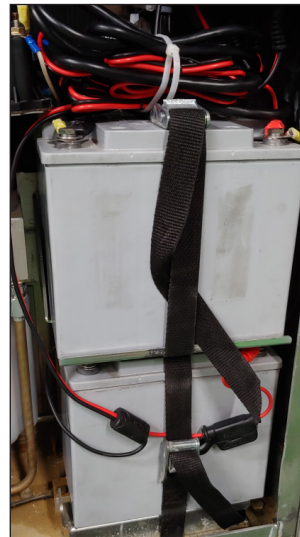
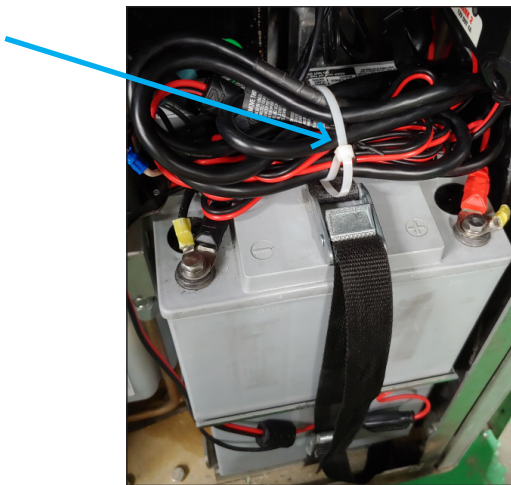
- Before securing battery straps, take the bank 2 cable connected to the lower battery and loosen the cable tie.
- Let out about 2 ft of cable between the bundle and the lower battery terminals. Let the cable hang down on the left side of the batteries.



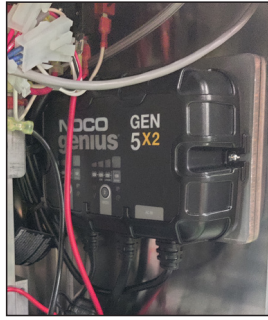
- c. Pull top battery strap around top battery as shown to secure it. Leave cable bundles outside of strap.



- d. Push the lower battery back into its shelf position.
 e. With the extra slack to the left side of the batteries, pull the bank 2 cable and use the lower battery strap to secure the cable as shown. Keep the bank 2 cable to the left side of the batteries after this is done. Adjusting the cable slack may be necessary.








- f. Collect the cable bundles resting on the top battery and secure them together as shown using the 61052 cable tie. Make sure the 61209 connector adaptor does not get pulled loose.
 g. The bundles should be secured on top of the upper battery using the cable tie. The bank 2 cable should be hanging to left of the batteries to avoid pinching/snagging on the middle shelf, but taut enough to prevent too much slack.








With everything connected plug the charging cable on the outside of the CooLift to begin charging. Use the chart below to understand charger status.

Understanding Charge LEDs.

LED	Explanation
25% Red LED 	The 25% Charge LED will slowly pulse "on" and "off" when the battery is less than 25% charged. When the battery is 25% charged, the 25% LED will go solid and the next LED will begin to pulse.
50% Red LED 	The 50% Charge LED will slowly pulse "on" and "off" when the battery is 25% - 50% charged. When the battery is 50% charged, the 50% LED will go solid and the next LED will begin to pulse.
75% Orange LED 	The 75% Charge LED will slowly pulse "on" and "off" when the battery is 50% - 75% charged. When the battery is 75% charged, the 75% LED will go solid and the next LED will begin to pulse.
100% Green LED 	The 100% Charge LED will slowly pulse "on" and "off", when the battery is less than 100% fully charged. When the battery is fully charged, the Green LED will be solid, and the 25%, 50% and 75% Charge LEDs will turn "off".
Maintenance Green LED 	During Optimization, the 100% Charge LED will pulse "on" and "off" slowly. Once the battery is fully optimized the 100% Charge LED will turn solid green. The charger can be left connected to the battery indefinitely.

Understanding Error LEDs.

Error Conditions will be indicated by the following LEDs.

LED	Reason/Solution
 Solid	Charger is in Standby mode or Battery voltage is too low for charger to detect.
 Solid	Battery voltage is too high for the selected charge mode. Check the battery and charge mode.
 Solid	Possible battery short / Battery will not hold a charge. Have battery checked by a professional.
 Solid	Reverse polarity. Reverse the battery connections.
 Flashing	Charger internal temperature too high / Charger will resume function once the Charger internal temperature drops. Charger ambient temperature too cold / Charger will resume function once the Charger ambient temperature rises.

Magline, Inc.

1205 W. Cedar Street • Standish, MI 48658 USA
 1-800-MAGLINE (624-5463) • (989) 512-1000 (outside U.S. & Canada)
www.magliner.com