BATTERY TRAY AND CHARGER RETROFIT

In May 2021, the battery configuration and on-board charger was upgraded in all CooLift models beginning with "CTA" that have an inboard (internally installed) Soneil charger. These upgrades were designed to better protect certain electrical components and to make service and preventative maintenance easier.

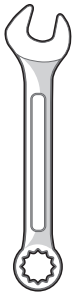
Use these instructions to replace the battery box and Soneil charger with the battery tray assembly and NOCO charger. If your CTA model DOES NOT have an inboard charger, please use kit 315511.

PARTS LIST

DESCRIPTION	QTY	PART NO.
Charger subassembly - NOCO	1	315509
Power adapter connector - IEC C14 to NEMA 5-15R	1	61209
Pan head screw - #8-32 x 1/2" long with exterior lock washer	2	80218
Nylon top lock nut - #8-32	1	80617
Washer - .180" ID x .375" OD x .086"-.116" thick	1	80733
Battery tray	1	315500
Battery tie-down strap	2	309843
Terminal block, 18 Ah battery attachment	4	315504
Wiring harness - connects upper and lower battery	1	64029
Wiring harness - negative connection between battery and unit	1	62111
Wiring harness - positive connection between battery and	1	62112
Hex head cap screw - 5/16"-18 x 5/8" long	4	80009
Washer - SAE 5/16"	4	80761
Washer - split lock 5/16"	4	80752
Pan head screw with locking patch - 1/4"-20 x 3/4"long	2	80257
Pan head machine screw - 1/4"-20 x 3/4" long	1	80256
Hex lock nut - 1/4"-20	1	80675
Phillips head truss screw - 10-32 x 5/16" long	4	80078
Washer - split lock washer for #10 screw	4	80747
Rubber tape with adhesive backing	-	92004

TOOLS REQUIRED

No. 3



3/8"

1

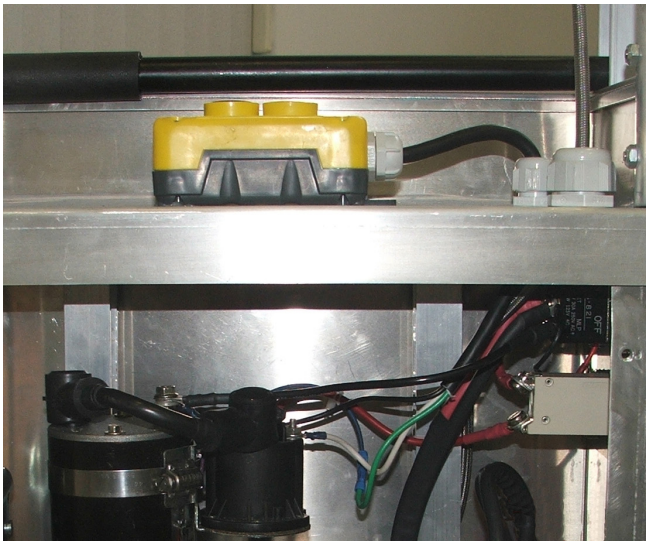
a.) Place the CooLift on a level flooring surface.
b.) Engage the holding brake.
c.) Turn off main power switch. Make sure unit is unplugged.
d.) Remove the back access panel from the cart by removing the (7) mounting screws using the #3 Phillips head screwdriver.
e.) Unplug battery box wire connector, remove the 2 mounting screws and remove the battery box from the enclosure by unfastening the mounting screws

Back panel screws (7)

Battery box mounting screws (2)

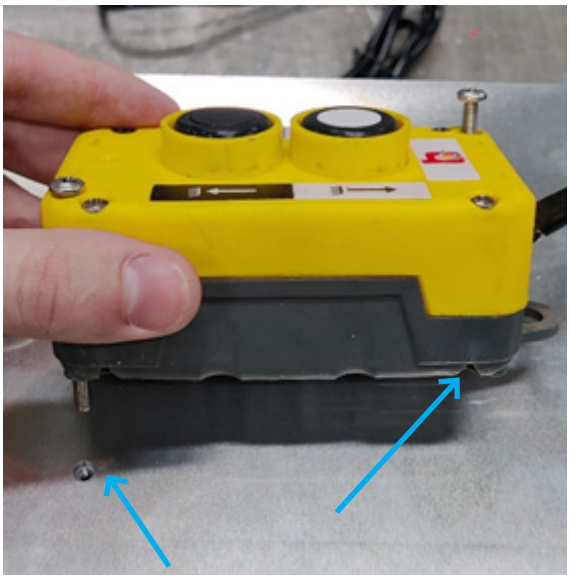
2

a.) Remove the screws from the yellow up/down switch and the charger mounting screws. Keep the screws from the up/down switch.
b.) Remove the charger from the underside of the enclosure shelf.
c.) Insert the screws back into the up/down switch.
d.) Unplug the charger input cable.
e.) Insert the 61209 connector into the cable end.
f.) Take (1) #8-32 x 1/2" screw with lock washer and insert it into the top hole on the shelf. Underneath the shelf, insert the sealing washer, rubber side up, onto the #8-32 x 1/2" screw and secure it with the #8-32 nylon top lock nut.
g.) Plug charger cable into female end of 61209 adapter.



3

a.) Insert the 315509 NOCO charger assembly underneath the enclosure shelf so that the mounting plate holes line up with shelf holes.
b.) Use 2 long yellow up/down switch screws to mount the 315509 assembly to the underside of the shelf. The up/down switch will remain on top of the shelf.
c.) Use the other 80218 screw and insert the screw into the lower hole on the shelf. Fasten it to the plate that is now underneath the shelf.
d.) Once the charger is mounted, ensure screws are tight.



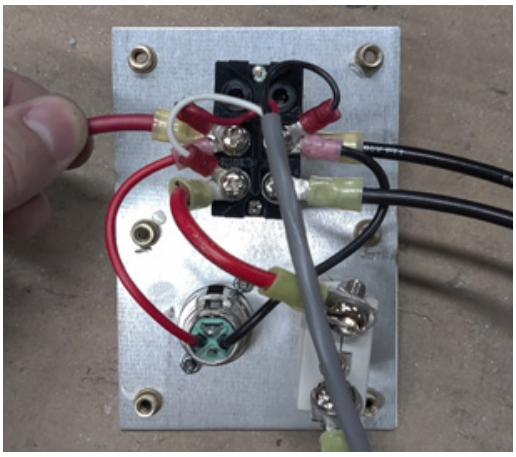
4

a.) Lay Bank 1 wire cable over internal cross plate. Feed Bank 2 wire cable behind cross plate and down through bottom. Do not attempt to connect ring terminals at this point.
b.) Plug the charger cable into the 61209 adapter and feed the charger cable back behind the cross plate.
c.) Take the old battery box and remove the battery box cover and take out both 12V AGM batteries. Remove all wire leads.
d.) Using four 315504 terminal blocks, four 80078 screws and four 80747 washers, mount the terminal blocks to the batteries. Set batteries aside once complete.

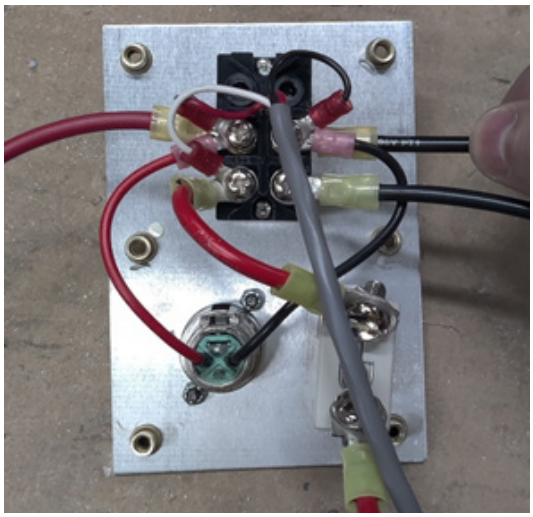
5

a.) Locate the main power switch on the side of the enclosure. Remove the six screws and gently push in on the plate to pop the plate inward so you can more easily access the wires.

b.) Once you have better access to the wire connections, first loosen the upper left screw. Remove the battery box harness red (+) wire as shown. Replace with the 62112 small diameter red ring terminal end. Keep all other wires in the same positions and connected.



c.) Loosen the upper right screw. Remove the battery box harness black (-) wire as shown. Replace with the 62111 small diameter black ring terminal end. Keep all other wires in the same positions and connected.



6

a.) Place the switch plate back against the side of the enclosure and re mount it using the same six screws. Keep all other wires connected and let the new 62111& 62112 wires hang down.

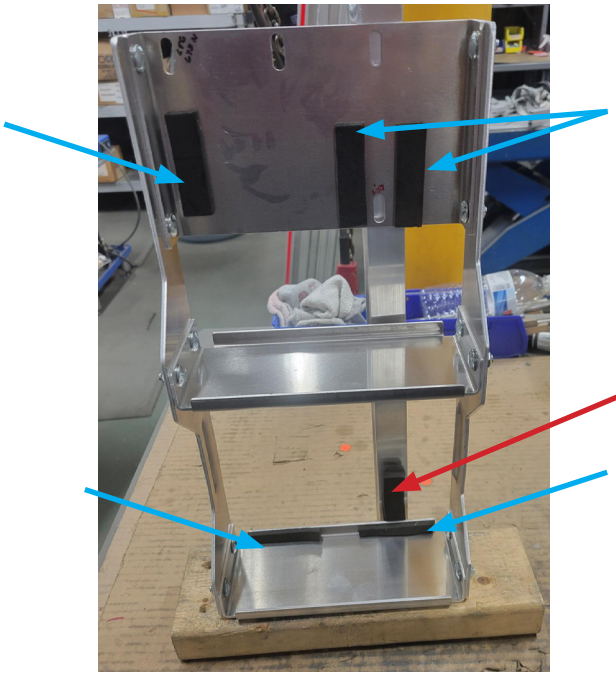
b.) Next, take 315500 battery tray and the 92004 foam strip. Cut the foam strip into 4 equal sections and cut one of those in half long ways.

c.) Place the foam strips in the locations shown. Make sure the foam strips stick. The two top strips that are close together, make sure you leave enough space for the 80257 screw.

d.) Make sure that the foam strip on the vertical slide is DOUBLED UP to keep the bottom battery secure.

e.) Place straps around the bottom shelf. Place the battery on the tray and tighten the strap to secure the battery.

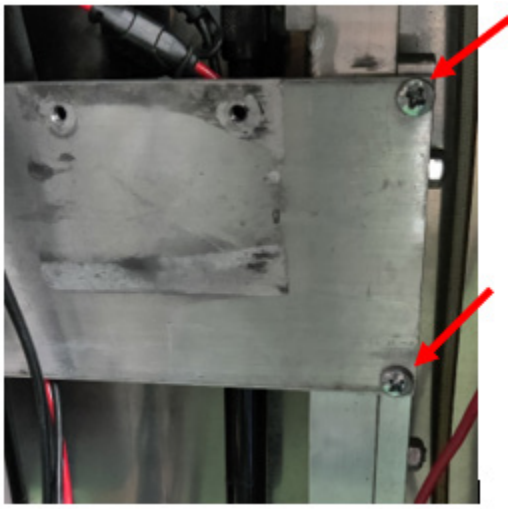
f.) Place the strap around the backside of the battery tray, and tighten it for now so that it is out of the way.



double-thickness on vertical slide

7

Remove the 2 remaining plate screws from inside the unit.

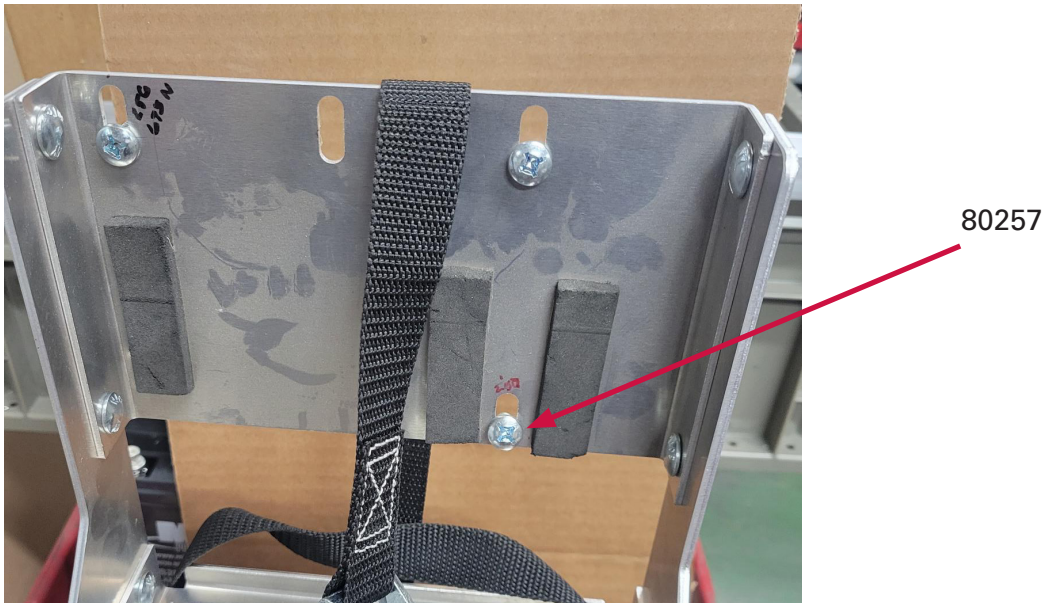


8

a.) Place the battery tray inside the enclosure. Lay the Bank 1 wires from the charger on over the top battery tray and feed the Bank 2 wires from the below through the backside space in the tray over the bottom tray.

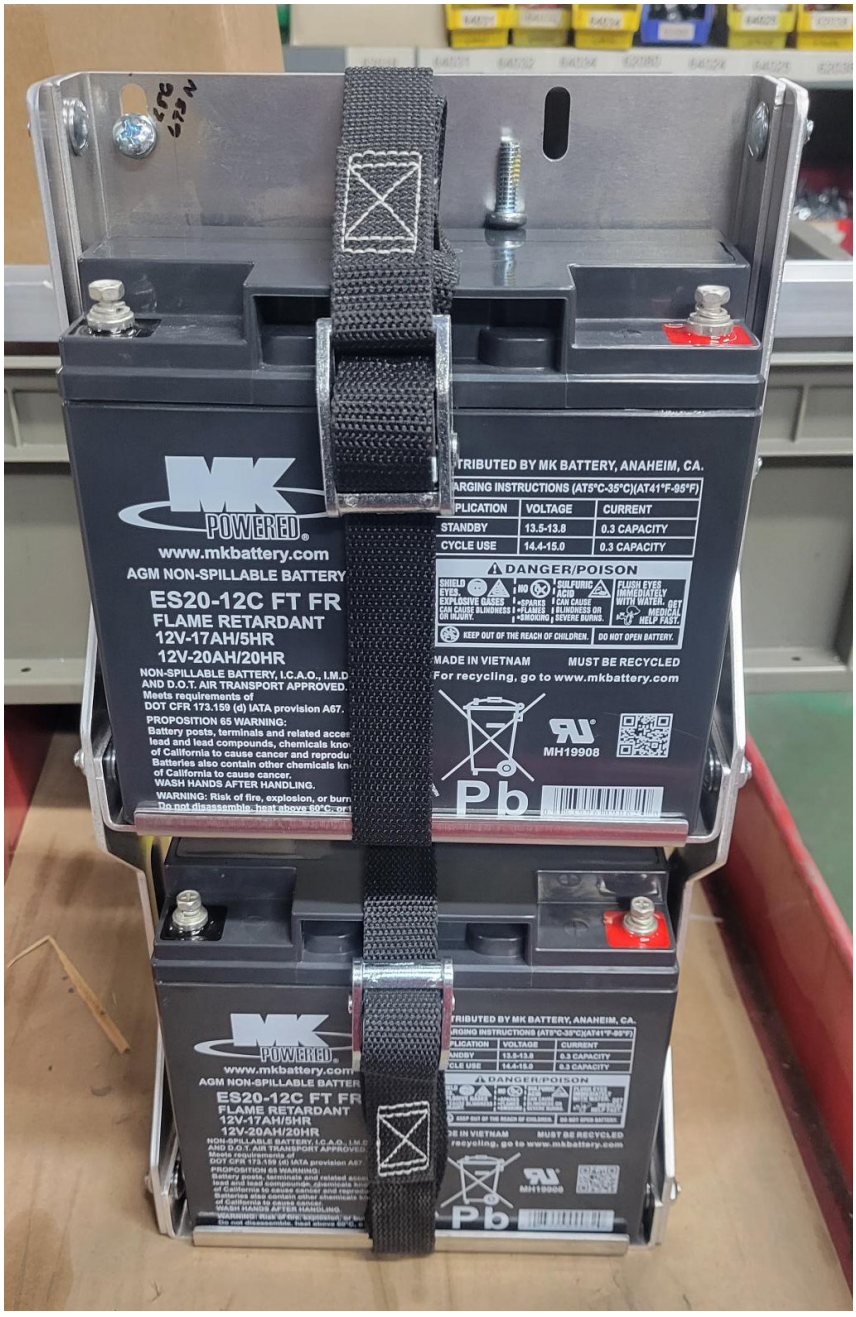
b.) Use the 80256 screw and 80675 lock nut to mount the shelf in the upper LH corner. Use one 80257 in the upper RH corner.

c.) Use the provided 80257 truss head screw for the lower aligning hole. Tighten screw, but do not over tighten.



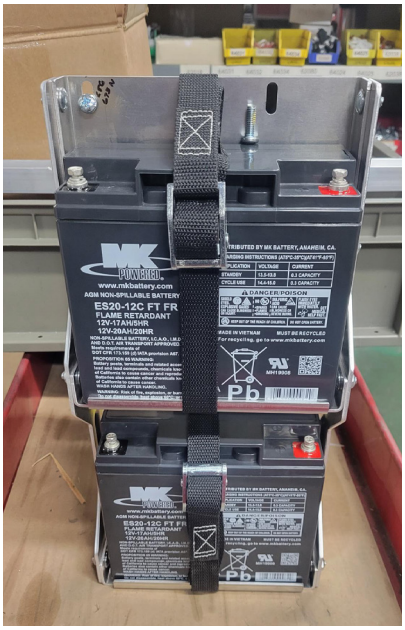
9

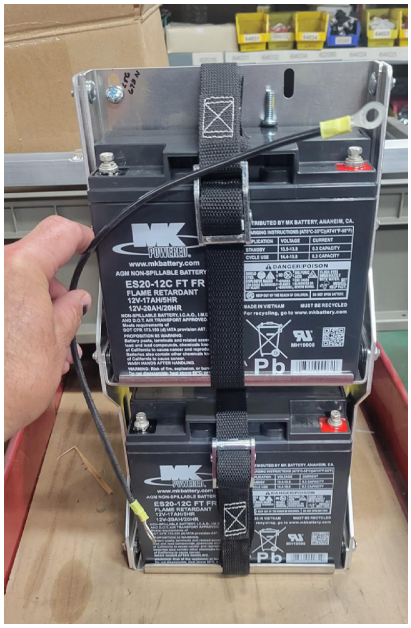
a.) With the battery tray installed inside the enclosure, loosen the stop strap.
b.) Lifting the charger wires, place the second battery on the top shelf and slightly tighten the strap to secure it to the tray. Keep straps loose for now. Lay charger wires on top of each battery.



10

a.) Take four 80009 screws, four 80761 washers and four 80752 split lock washers and insert them in the terminal blocks. Just start them, do not tighten them.
b.) Take the 64029 wire and connect the top battery positive terminal to the lower battery negative terminal. Feed the wire through the back gap to conceal wires.





c.) Take the black (-) wire terminal from the switch plate you connected earlier and connect it to top battery negative terminal.

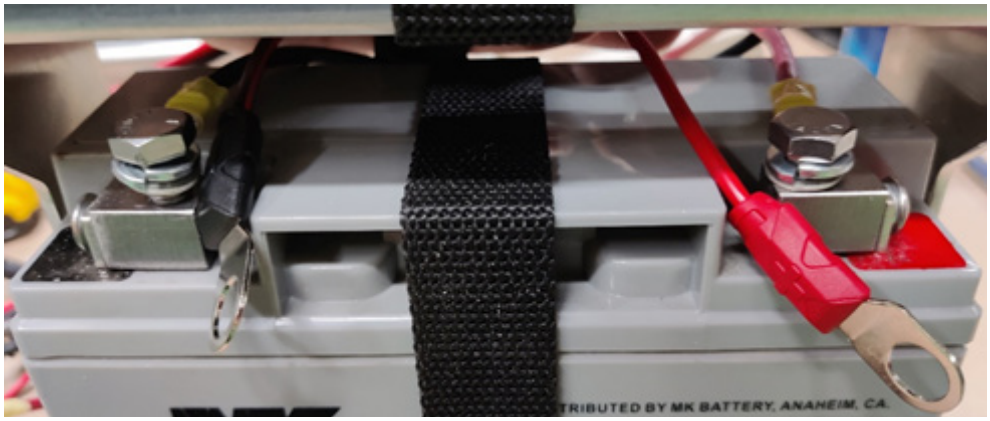
d.) Attach the 62111 wire to top battery negative terminal with the 80009 screw, do not tighten just yet.

11

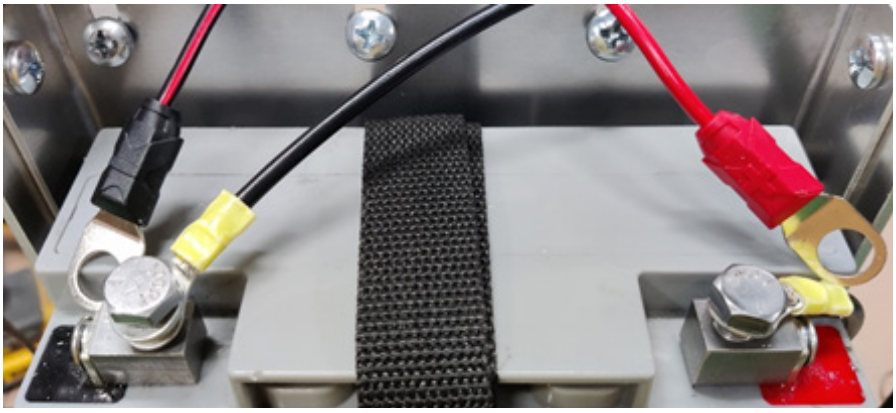
a.) Feed the 62112 wire down the back and through the tray opening for the bottom battery. Attach the 62112 wire to the bottom battery positive terminal with the 80009 screw, do not tighten just yet.

b.) The batteries should now be connected to the unit. The last thing to do is to connect the charger terminals to each battery.

c.) Take Bank 2 charger wire terminals and attach the ring terminals to the bottom battery terminal blocks using both 80009 screws.



d.) Take Bank 1 charger wire terminals and attach the ring terminals to the top battery terminal blocks using both 80009 screws.



e.) With the batteries connected to the unit, and the changer connected to the batteries. Tighten all screws at this point to make sure the connections are tight and secure.

12

a.) Plug the unit power cable end into the wall. Look underneath at the charger and you should see two orange lights. It is time to select the proper mode.

Orange lights

b.) The CTA models have AGM batteries, so press buttons 1 & 2 on the charger until the second light is illuminated for both banks. Once the mode is set, the charging light will begin to light up and cycle through its battery reading phase. This just the charger figuring out the current battery levels.

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13

a.) With the charger working correctly, and batteries plugged into the unit, unplug the charging cable. Flip the on switch on the side and make sure the unit functions correctly.
b.) Rework the internal wiring as needed, additional zip ties may be needed. Do not use the pump or springs to hold wires in place. Replace back cover once complete.

Detailed Charger Light Indicators

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.

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