



MOTIVE
POWER



Lithium Ion Industrial Battery User Manual

1 CONNECTING BATTERY

The battery is connected to the truck with a standard motive power SB 350 yellow battery connector.



NEVER ATTEMPT TO CHARGE THE BATTERY THROUGH THE YELLOW CONNECTORS UNDER THE BATTERY HOOD OF THE TRUCK DAMAGE MAY OCCUR.



2 BATTERY USE

The battery must be powered ON while in use and while charging. To power ON the battery, push the silver button near the State of Charge indicator located on the OneCharge battery, on the left hand side of the truck (see image at the bottom of page 2)

IT IS NOT NECESSARY TO TURN THE BATTERY OFF UNLESS INSTRUCTED TO DO SO BY AUTHORIZED PERSONNEL.

Charger Connector



Battery Connector

The battery is charged through a Euro connector, shown to the left. Always use the special lithium charger supplied to charge the battery. Ensure that connector is always fully engaged. During charging, power to the truck will be terminated and truck will be out of service while battery is plugged in to charger.

Lithium Ion Battery should remain plugged into the charger anytime not in use. Providing even a partial charge during breaks and lunch will help extend the life capacity of your battery.

3 STATE OF CHARGE INDICATOR, SOC

The lift operator should be mindful of the state of charge (SOC) as indicated by LED display on the side of the battery and on the remote display in the operator's compartment. When the 10% threshold is reached, ample sounds give warning that the battery will shut down to protect itself. At that time the truck will become disabled do to extremely low voltage.



In order to prevent complete truck shutdown be aware of SOC during your work day.

STATE OF CHARGE INDICATOR

The LED indicator consists of 10 bar graph each represent 10% SOC.

GREEN: 50-100% battery	SCROLLING: Charging
ORANGE: 20-49% battery	2 ORANGE bars blinking: See Battery Reset.
RED below 20% battery	2 RED bars blinking: See Battery Reset.

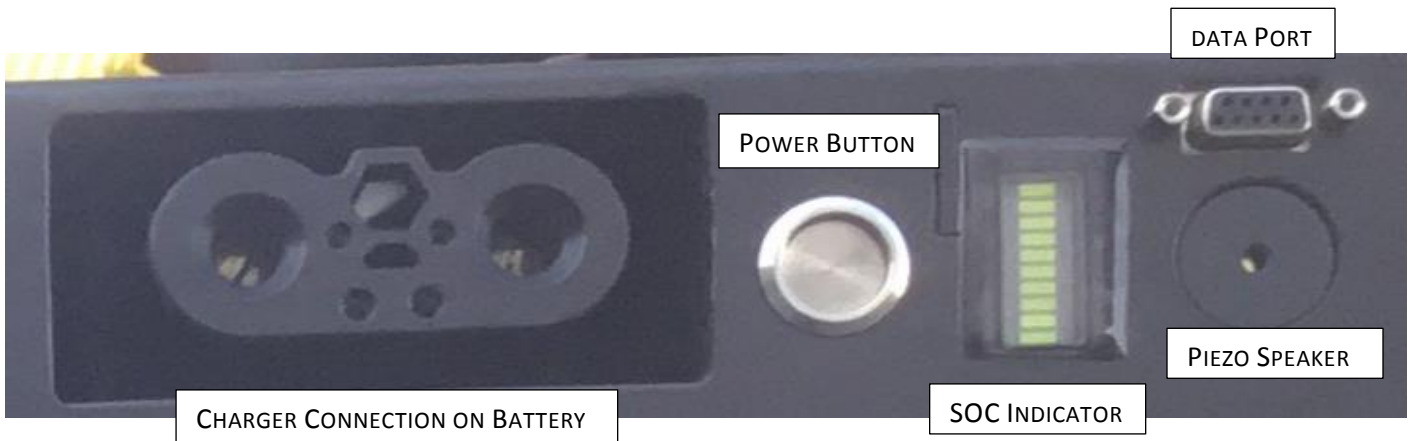
In addition to the LED indicator there is an audible alarm. When the battery has been discharged below 50%, the operator will hear a single 'beep' every 4 minutes. Once the battery is discharged below 20%, a triple 'beep' will sound every minute.

Lithium Ion Battery Reset

IN THE EVENT OF BATTERY ERROR, PLEASE FOLLOW THESE INSTRUCTIONS:



- Push power button to power battery off
- Wait 10 seconds, then push button to turn battery back on.
- At this time, the battery should go through a series of flashing lights and beeps.
- The Battery will not indicate its current state of charge until it completes its reset period.
- If SOC indicator still indicates an error, contact Pape' Material Handling Bkfld (see bottom of page 6)



BATTERY MANAGEMENT CONTROLS LOCATED ON THE LEFT SIDE OF THE LITHIUM ION BATTERY

4 SAFETY AND PRECAUTIONS

SAFETY POINT: Due to the presence of DC voltages and currents, Motive Power Batteries require special precautions and training.



REMEMBER THESE BASIC LITHIUM ION BATTERY RULES:

- ✓ Do not remove the lid covering the top of the battery
- ✓ Removing lid without prior authorization shall void all warranties
- ✓ Only trained, authorized individuals should attempt battery repairs
- ✓ Charge Lithium Ion Battery only with supplied battery charger
- ✓ Leave battery on charger while not in use
- ✓ Battery Power button is used only for resetting the battery
- ✓ Do not use the Battery Power Button as an on/off switch
- ✓ Leave battery hood closed while charging
- ✓ Always keep battery upright
- ✓ Do not pressure wash battery; wipe clean only
- ✓ Do not operate if cables are worn or damaged
- ✓ Only lift battery with approved insulated battery lifting beam
- ✓ Extinguish fires with class D, dry powder fire extinguisher
- ✓ When in doubt, ask questions before acting to avoid unfavorable results



5 NOTES ON BATTERY AND CHARGER PROCEDURES



When Charger is IDOL
Connect Battery message displays



Here is the Charger Correctly
Connected to the Battery



With Manual stop button pressed while under charge this will pause battery charge, (bottom battery icon FLASHES GREEN) or allow to disconnect battery prior to charge cycle being completed. Press ESC to continue charge.

SAFETY POINT Never unplug the charger connector while battery is under charge.
Personal Injury or Damage may result.



Here is the Battery while under charge.

NOTES: Center battery icon with upward arrow lit.

IMPORTANT POINT: Once battery terminates charge, message will be displayed "REMOTE START" which means charger is waiting for battery to give further instructions. (Which includes additional short periods of charge time) message will be displayed as "Additional" this is normal part of the charge process.

BASIC TROUBLESHOOTING



5.1 BATTERY OR TRUCK WILL NOT POWER ON

- ✓ Confirm truck key switch on dash is in ON Position
- ✓ Truck E Stop RED button is retracted
- ✓ Battery power button was pressed ON.
- ✓ SOC display on the battery and in the operator's compartment is active (see image on page 2.)
- ✓ Confirm Yellow SB jumpers connectors under the battery compartment hood are connected to the battery and the truck chassis



Hyster E60XN mounted display with "KEY ON" position truck in neutral park condition.



Hyster E60XN "E" Stop Button rotate and pull outward to power on truck.

DO NOT USE as an on/off switch!

Use truck dash display key switch to turn on/off.



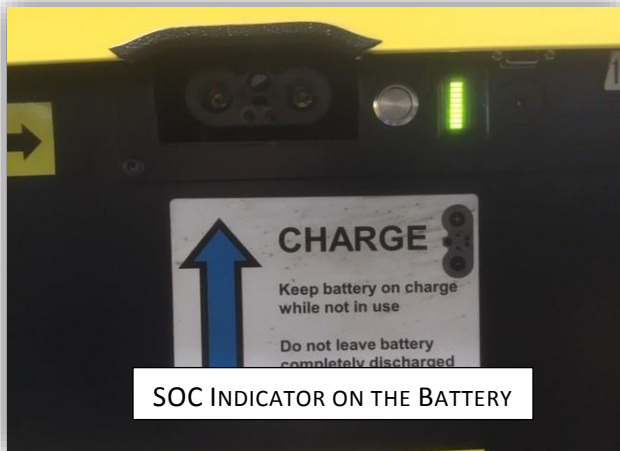
Yellow SB Jumper Connectors Shown Connected Correctly. **Do Not Disturb!**

In the event that all above conditions have been met and all the above components have been cycled. Connect the battery charger connector to the battery and charge the battery to ensure you have the minimum battery voltage required to overcome the battery self-protection circuit.

BASIC TROUBLESHOOTING CONTINUED

5.2 STATE OF CHARGE INDICATOR BLINKING ORANGE OR RED:

- ✓ Perform Lithium Battery Reset as described on page 2.



5.3 TRIANGLE ICON ON BATTERY CHARGER DISPLAY LIT UP


Fault has occurred with the charger

- ✓ Press the stop button
- ✓ Disconnect the battery connector, if connected to the truck
- ✓ Turn off AC power and wait 30 seconds
- ✓ Turn AC power back on and check if fault light is still lit.
- ✓ If major fault has occurred (2) digit fault code will appear on the charger's display. Refer to the manufactures operations manual.



Note: Battery charger settings have been made to work directly with the OneCharge Lithium Battery do not attempt to make any changes to the settings of the charger damage to the battery or charger may occur and will void any warranty.

Photo of charger during normal charge conditions for display purposes.

Please contact Pape' Material Handling Bakersfield @  661-393-3673 for help with any questions or to respond to onsite assistance.