



# Lester Electrical

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## LESTRONIC BATTERY CHARGER

### MODEL 16030 TYPE 72EL40

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### PLEASE SAVE THESE IMPORTANT SAFETY AND OPERATING INSTRUCTIONS

For correct operation of the equipment, it is important to read and be familiar with this entire manual before installing and operating the charger.  
DO NOT DISCARD THIS MANUAL AFTER READING.




LOOK FOR THIS SYMBOL TO POINT OUT SAFETY PRECAUTIONS. IT MEANS: *BECOME ALERT—YOUR SAFETY IS INVOLVED.* IF YOU DO NOT FOLLOW THESE SAFETY INSTRUCTIONS, INJURY OR PROPERTY DAMAGE CAN OCCUR.

#### INITIAL INSTALLATION

 **WARNING:** REMOVE FRONT PANEL TO INSPECT CHARGER FOR CORRECT INPUT VOLTAGE AND BATTERY TYPE SETTING. CONNECT JUMPER TO 208 FOR MEASURED VOLTAGE BETWEEN 192 TO 224 AND 240 FOR 225 TO 256. PERSONAL INJURY OR DAMAGE WILL OCCUR IF SETTINGS ARE INCORRECT.

Do not operate this charger with damaged cords. Do not operate this charger if it has received a sharp blow, was dropped or otherwise damaged in any manner; refer to a qualified service agent.

Provide adequate ventilation for the batteries and charger. The convection-cooled design requires an unobstructed flow of cooling air for proper operation.

 **WARNING:** HAZARD OF EXPLOSIVE GAS MIXTURE. DO NOT DISCONNECT THE OUTPUT CHARGING CONNECTOR WHILE THE CHARGER IS OPERATING. THE RESULTING ARCING AND BURNING WILL DAMAGE THE CONNECTORS AND MAY CAUSE THE BATTERY TO EXPLODE. IF THE CONNECTORS MUST BE DISCONNECTED BEFORE THE CHARGER AUTOMATICALLY SHUTS OFF, FIRST TURN THE CHARGER OFF BY MOVING THE MAIN CONTROL SWITCH TO "OFF" OR DISCONNECTING THE POWER CORD.



**WARNING:** KEEP CHARGER DRY; DO NOT EXPOSE TO RAIN.

#### NORMAL OPERATION

The instructions printed on the front panel of the charger are for daily reference.

1. With the charger DC output cord disconnected from the batteries, connect the power supply cord to a properly grounded outlet of proper voltage and frequency as specified on charger nameplate.



**CAUTION:** THIS CHARGER IS FOR USE ONLY ON 72 VOLT, 36 CELL, SERIES CONNECTED, 180-250 AMP-HR (18 HR. RATE), 2.35-2.50 VOLTS PER CELL MAXIMUM VOLTAGE BATTERY SYSTEMS. THIS CHARGER IS FOR USE ON LIQUID ELECTROLYTE LEAD ACID AND GEL CELL OR SEALED "MAINTENANCE FREE" BATTERIES. "BATTERY TYPE" SWITCH MUST BE SET TO THE PROPER TYPE OF BATTERY TO BE CHARGED. BATTERIES IMPROPERLY MATCHED WITH CHARGER MAY BURST CAUSING PERSONAL INJURY AND DAMAGE TO BATTERIES OR CHARGER.


2. With the control switch in the "AUTO" position, the charger will start automatically after a short delay if all connections and the battery voltage


test good. Move the switch to the "AUTO" position if it is not already there.

3. Connect the charger DC output connector to the battery connector. The charger will automatically turn on two to five (2-5) seconds after the DC output cord is connected.

Ammeter indicates when charger is operating. Correct initial charge rate should be around 40 amps depending upon the condition and depth of discharge of the batteries. Under normal conditions, the charge rate will taper to 10 amps at finish.

Total recharge time will vary depending on depth of discharge. Under normal conditions, recharge time will not exceed 14 hours.

** DANGER: RISK OF ELECTRIC SHOCK! DO NOT TOUCH UNINSULATED PORTIONS OF THE OUTPUT CONNECTOR OR UNINSULATED BATTERY TERMINALS.**


** CAUTION: IN THE UNLIKELY EVENT THAT THE CHARGER DOES NOT TURN OFF AUTOMATICALLY, OVERCHARGING AND POSSIBLE BATTERY DAMAGE MAY RESULT. FOR BEST BATTERY LIFE, CHECK TO BE SURE THE CHARGER HAS TURNED OFF PROPERLY AFTER EACH CHARGE CYCLE.**

## STORAGE

When the machine is not in use, charge the batteries once each week.

## PROPER CARE OF MOTIVE POWER BATTERIES

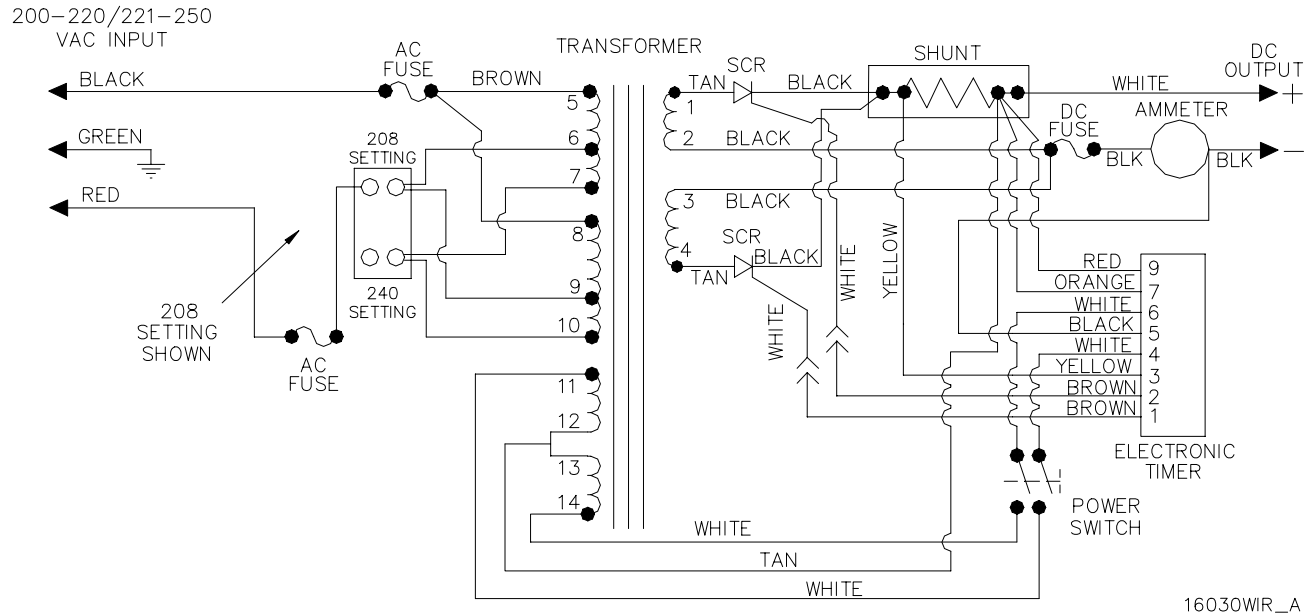
Motive power batteries are subjected to severe deep cycle duty on a daily basis. Although these batteries are designed to withstand such duty, the following precautions must be observed to obtain good performance and maximum cycle life.

** CAUTION: ALWAYS WEAR PROTECTIVE EYE SHIELDS AND CLOTHING WHEN WORKING WITH BATTERIES. BATTERIES CONTAIN ACIDS WHICH CAN CAUSE BODILY HARM. DO NOT**

## **PUT WRENCHES OR OTHER METAL OBJECTS ACROSS THE BATTERY TERMINAL OR BATTERY TOP. ARCING OR EXPLOSION OF THE BATTERY CAN RESULT.**

1. When installing new batteries, be sure the polarity of each battery and overall battery pack is correct. Due to the electrical characteristics of this charger, it is possible to improperly hook up the batteries and not blow the fuse when charging. Battery and/or charger damage can result.
2. New batteries should be given a full charge before their first use because it is difficult to know how long the batteries have been stored.
3. Limit the use of new batteries for the first five cycles. New batteries are not capable of their rated output until they have been discharged and charged a number of times.
4. Do not excessively discharge the batteries. Excessive discharge can cause polarity reversal of individual cells resulting in complete failure shortly thereafter. Limited use of new batteries will minimize the risk of cell reversals.
5. Maintain the proper electrolyte level by adding water when necessary. Never allow the electrolyte level to fall below the top of the battery plates. Electrolyte levels fall during discharge and rise during charge. Therefore, to prevent the overflow of electrolytes when charging, it is mandatory that water be added to cells AFTER they have been fully charged; do not overfill. Old batteries require more frequent additions of water than do new batteries.
6. When the temperature falls below 65°F, the batteries should be placed on charge as soon as possible.
7. The tops of the batteries and battery hold-downs must be kept clean and dry at all times to prevent excessive self-discharge and flow of current between the battery posts and frame.
8. Follow all operating instructions, cautions, and warnings as specified in this manual and on the charger case.

## WIRING DIAGRAM



16030WIR\_A

### PARTS LIST FOR MODEL 16030 TYPE 72EL40 208/240 VAC / 50-60 HZ

PART NO.	QTY.	DESCRIPTION
20289S	1	CASE ASSEMBLY
20188S	1	COVER, GRAY
20196S	1	BASE, GRAY
20191S	2	SIDE PANEL, LEFT OR RIGHT, GRAY
20193S	1	REAR PANEL, GRAY
20198S	1	HEATSINK MOUNTING BRACKET
20206S	1	REMOVABLE COVER PANEL
20201S	1	TOP FRONT PANEL
19661S	2	TRANSFORMER BASE SUPPORT RAIL
19609S	1	FUSE PANEL
20211S	1	INNER MOUNTING PANEL
20343K	1	CORD BRACKET KIT
15395S	1	TRANSFORMER ASSEMBLY
19649S	2	HEATSINK ASSEMBLY W/ SCR
19648S	2	SCR ASSEMBLY, 55 AMP, 400 VOLT
18696S	1	DC OUTPUT SHUNT
16182S	1	DC FUSE, 100 AMP, JJN-100
02367S	1	AMMETER, 0-50 AMP
16070S	1	ELECTRONIC TIMER
19647S	1	TIMER CONTROL CABLE ASSEMBLY
16222S	1	SWITCH, SLIDE, DPST
19703S	2	AC FUSE, 35 AMP, 250 VOLT, TYPE R
19702S	1	AC FUSEHOLDER, 2 POLE
04715S	1	AC TAP STRIP, 2 POLE
10410S	1	AC INPUT INSULATING BUSHING
02008S	1	DC OUTPUT INSULATING BUSHING, 8P-2
20248S	1	AC INPUT CORDSET W/ 250V, 30A, 6-30P PLUG
20249S	1	DC OUTPUT CORDSET W/ GRAY SB175 PLUG
30422S	1	DC OUTPUT CORDSET W/ BLUE SB350 PLUG

## **LIMITED WARRANTY**

Lester Electrical warrants each new Lester Battery Charger for defects in material and workmanship for a period of two (2) years from the date of manufacture of the complete unit. Repairs can be made at the Lester factory. To do so, first obtain a "Return Material Authorization" number by calling the Service Department of Lester Electrical (402 477-8988) or by e-mailing [service@lesterelectrical.com](mailto:service@lesterelectrical.com) and send the defective unit with transportation charges prepaid to:

**Lester Electrical**  
**625 West A Street**  
**Lincoln, NE 68522-1794 USA**  
**Attention: Service Department**  
**RMA # \_\_\_\_\_**

For repairs made at other than the Lester factory, Lester will provide only the replacement parts. Defective parts should be sent with transportation charges prepaid to the Lester factory at the address noted above.

If the unit or parts are found in the reasonable judgment of Lester to be defective in material or workmanship, repair or replacement will be made by Lester without charge for parts or labor. Repair or replacement will be at the discretion of Lester, with replacements being made using current models or parts performing the equivalent function. Labor charges other than those incurred at the Lester factory are not covered under this warranty. All expenses associated with delivering defective items to the Lester factory and the expense of returning repaired or replaced items from the Lester factory to the owner will be paid for by the owner. All warranty work accomplished at the Lester factory will be completed with a reasonable time after receipt of defective items.

This warranty does not cover any semiconductor parts, such as diodes, which are vulnerable to electrical overloads beyond the control of Lester. Warranty on parts not manufactured by Lester, which include, but are not limited to, timers and ammeters, is limited to the period specified in the original manufacturer's warranty.

This warranty does not cover any charger that has been subject to misuse, neglect, negligence, or accident, or operated in any way contrary to instructions specified on the charger case and in the owner's manual. No claim of breach of warranty shall be cause for cancellation of the contract of sale of any Lester charger. Lester assumes no responsibility for loss of time, inconvenience, or other damage, consequential or otherwise, resulting from a defective charger. All implied warranties (including merchantability) are limited in duration to the two years from date of manufacture warranty period.

Some states do not allow the exclusion or limitation of incidental or consequential damages; or limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Lester's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective items. Lester issues this warranty in good faith and with full confidence in the workmanship and quality of Lester products.