



## INSTALLATION INSTRUCTIONS

PART NUMBER	158-8476 / 158-8476E
PART DESCRIPTION	CHARGER ASSEMBLY – INTERNAL REPLACEMENT
REV DATE	4/20/2020
MACHINE MODELS	ION A/B



Basic knowledge of the operation of the lane machine including mechanical and electrical

### TOOLS NEEDED:

Phillip Screwdriver  
wire cutters

Drill

3/16 Drill bit



### TECHNICAL NOTE

Please thoroughly read the instructions prior to performing the installation of this assembly.

To avoid any potential problems, if at any time during the process you have a question, stop and contact our Tech Support department at the numbers listed below.

Please visit our growing library of videos to see if these instructions are available!



[www.youtube.com/user/KegelBowling81](http://www.youtube.com/user/KegelBowling81)

### KEGEL TECH SUPPORT:

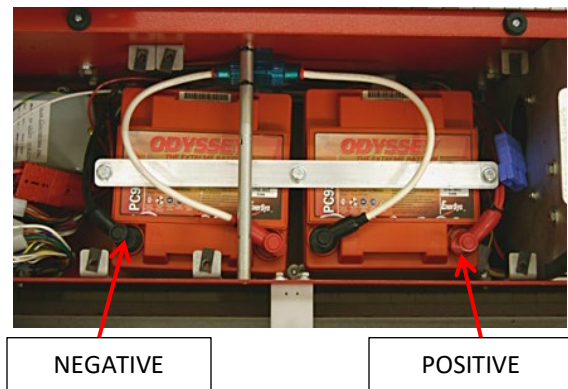
Within USA - 1-800-280-2695  
Outside USA - +1 863-734-0200  
via e-mail at [LMC@Kegel.net](mailto:LMC@Kegel.net)  
website [www.kegel.net](http://www.kegel.net)



## Removal of old hardware

1. With the machine in the upright position, remove the three screws that mount the 7-pin side cover to the lane machine.
2. Set the machine down in the operating position and remove the screws on the front and rear side of the cover as well as the one on the top of the cover and remove.
3. Remove the lid assembly by loosening one side of the lid hinge and lift up and out of the lane machine and set aside.
4. Remove the incoming power (Red and Black wires) to the charger. Depending on the charger used, it will be either located on the left or right side of the charging unit.
5. Remove the wires going out to the batteries. Unscrew the charger from the plate and remove the charger from the machine.
6. Remove the screws holding the charging plate to the lane machine and lift up. Remove the screws holding the relay plate on the left and lift up to gain access to the wiring on the underside.

7. Remove the two screws holding the black and red wires coming from the charger. This will be the Positive and Negative located on the outside two post of the batteries as shown to the right. Remove the wiring from the machine.

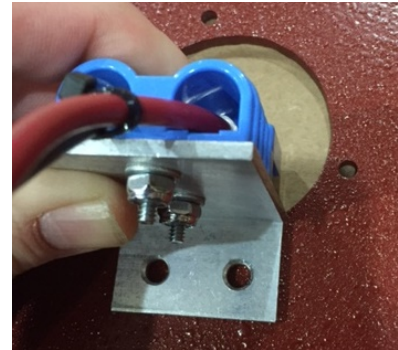


8. Locate the incoming power wiring that was removed from the charger. This will route back to the receptical located on the 7-pin side panel in the cleaning compartment. Remove the wiring from the machine by carefully cutting any wire ties that may be holding it in place.
9. Remove the three screws that mount the receptical to the side plate and remove from the machine as this along with the wiring will no longer be used.

## Installation of new hardware

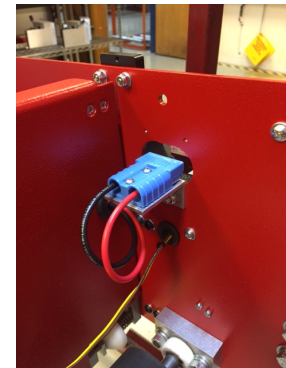
1. Remove the black and red wire assembly that has the blue charging plug mounted to the bracket. You will be using this as a template to drill the mounting holes.

2. Simply align the mounting bracket under the receptacle hole in the side plate as shown, and scribe your will drill your holes.



3. Using a 3/16 drill bit, drill your mounting holes.

4. Using the supplied hardware, mount the plug assembly to the inside of the frame as shown to the right.



5. Route the wires through the center wall, and down behind the buffer motor assembly and to the battery.
6. Take the Terminal boots from the kit and slide over the correct color terminal and attach the Black to the Negative and the Red to the Positive post and tighten.
7. Use the wire ties supplied in the kit to neatly fasten the wires to the existing bundles.
8. Carefully reinstall both the relay plate assembly and the charger plate assembly.
9. Reassemble the machine in reverse order starting with the lid assembly followed by the side guards.

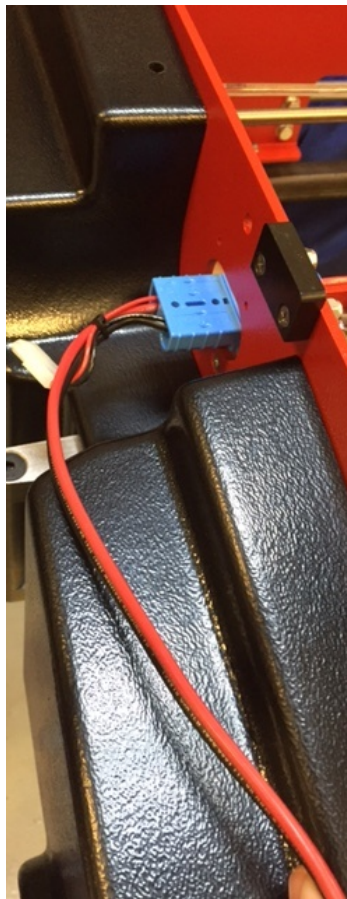


### **TECHNICAL NOTE**

*Now that the charger has been removed, the plate can now be used to mount the speed control board assembly, as well as the CVR located in the floor plate!*

## Using the new Charger assembly

1. Inside of the kit you will find instructions to program the 164-8471. Follow these setup instructions and continue.
2. The charger will hang on the rear of the machine as shown to the right and the wires will route to the left side of the machine.
3. Inside of the kit you will find a female receptacle to change on your existing power cord to match the lane machine receptical. Once you change this, your machine will now operate on a power cord.



This replacement ProNautic<sup>®</sup> battery charger is Kegel factory pre-set for **Calcium/Custom** for the K2 Lithium Battery.

If the charger is being used with AGM batteries, it must be re-programmed as follows:

- Press and hold the SET UP / ENTER button on the charger for 5-10 seconds
- Press the UP or DOWN arrow until the LED lights up @ PRE-SET 2 for AGM
- Press the SET UP / ENTER button to confirm selection

Using a voltmeter, check the DC voltage at both the disconnect housing and the two-pin plug and verify against the voltmeter on the charger. Voltage should be between 27V – 29V

**For proper charging:** It is necessary to plug the charger into the machine first then power the charger. When the charger is being unplugged, it is necessary to remove power from the charger, allow the charger to shut down then unplug the charger from the machine.

DO NOT leave the charger plugged into power when the charger is not in use. The charger will have the appearance of working properly when actually it could shut down the DC output voltage.

If the ProNautic Charger does not recognize a connection to batteries or the lane machine, or if it detects a bad ground or connection on the AC power side the charger will NOT charge properly.

