



INSTALLATION INSTRUCTIONS

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|------------------|---------------------------|
| PART NUMBER | 158-8654 |
| PART DESCRIPTION | K2 BATTERY CONVERSION KIT |
| REV DATE | 4/17/2020 |
| MACHINE MODELS | ION MODEL A/B |



Basic knowledge on ALL aspects of the lane machine

TOOLS NEEDED:

| | | |
|----------------------|----------------------|---------------|
| Phillips Screwdriver | Flathead Screwdriver | 11/32" Wrench |
| Pliers / Vise Grips | Wire Cutters | 7/16" Socket |
| 10 mm Socket | Voltmeter | 7/16" Wrench |

PARTS INCLUDED:

| | | |
|-----------------------------------|-----------------------------------|---------------------------------------|
| (1) E-Stop Wiring Harness | (4) 154-0006B Rubber Bumper Guard | (20) 153-1047 4" Wire Tie |
| (1) 158-6698 Battery Strap | (2) 154-6874 Spacer | (2) 153-2004 ¼" Flat Washer |
| (2) 153-2053 ¼-20 x 1" HHCS | (2) 153-2014 ¼" Lock Washer | (2) 153-2705 ¼-20 x 7/8" Carriage |
| (2) 153-2086 8-32 x 5/8" MS | (3) 153-2019 8-32 Lock Nut | (4) 153-2002 #8 Flat Washer |
| (1) 153-2806 8-32 x 5/8" FHMS | (2) 154-0242L Velcro – 2" Loop | (2) 154-0242K Velcro – 2" w/ Adhesive |
| (15") 153-0036 Lid Vibration Foam | (1) Kegel K2 Battery | |



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

KEGEL TECH SUPPORT:
Within USA - 1-800-280-2695
Outside USA - +1 863-734-0200
via e-mail at LMC@Kegel.net
website www.kegel.net

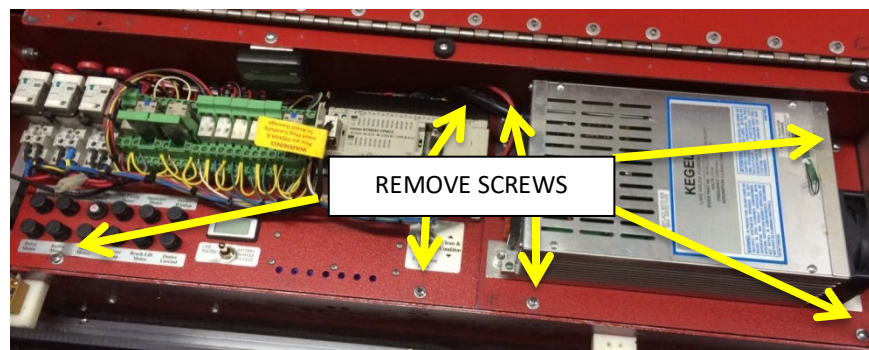


To obtain optimum life and performance out of your battery, it is best to charge after EVERY use using an OEM 20 Amp KEGEL approved charger. The 158-1634 (RED Battery) cannot be charged with a 40 Amp charger (Iota or Zivan) and doing so will void the warranty and cause potential battery issues.

This replacement battery is shipped with only a 30% charge. After installing into the lane machine, the battery MUST be fully charged to 100% prior to first usage.

INSTALLATION INSTRUCTIONS FOR ION MODEL A OR VALANCE BATTERY EQUIPPED MODEL A AND B CONVERSION

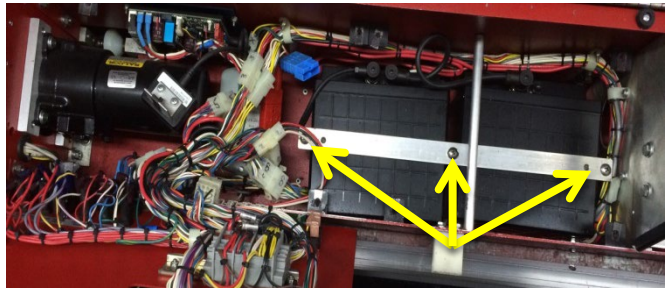
1. Ensure that all parts are included in the kit before beginning.
2. With power off at the E-Stop, lay the machine down in the operating position.
3. Remove the three screws holding the PLC Plate assembly and the four screws holding the Charger Plate assembly. Keep hardware for later use.



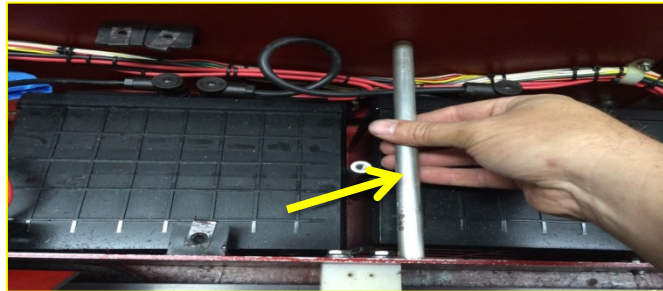
4. Move the PLC Plate assembly out of the way so the wiring is accessible.



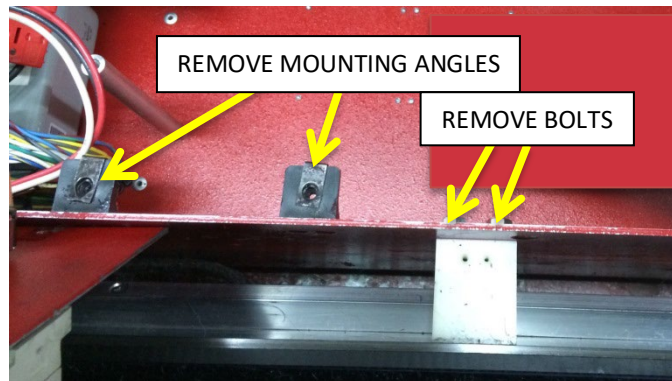
5. Remove the three screws or bolts for the battery strap. Discard strap but keep hardware for later use.



6. Remove both screws holding Center Support Post. This can be discarded, as it is not needed.

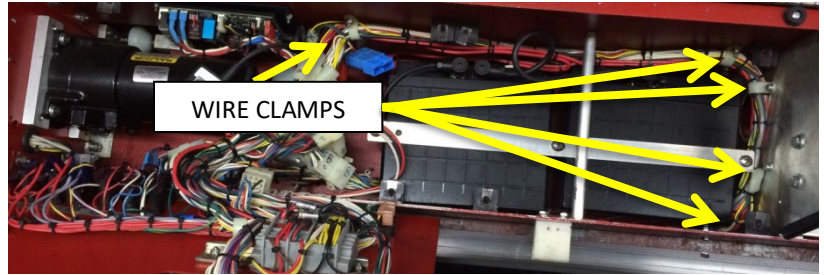


7. Remove Mounting Angles next to the center UHMW Head Bar Block and remove both bolts for the center UHMW Head Bar Block. Keep Angles and Hardware for later use.



8. Disconnect and remove the Batteries. You may need to remove some Cable Ties to access the Battery connections. Note: Your batteries may be different then what is shown in the picture.
9. If you have a model B you will need to remove everything to do with the battery tray but you will reuse 2 out of the 3 post on tray and keep the floor plate door secured to the machine at all times. The door will NO longer be usable after this upgrade.

10. Remove the five wire clamps securing the Battery and Charger plugs. Remove the wire ties holding the Charger cables onto the harness. Keep the Clamps and hardware for later use. Clamps and location can vary depending on machine model.



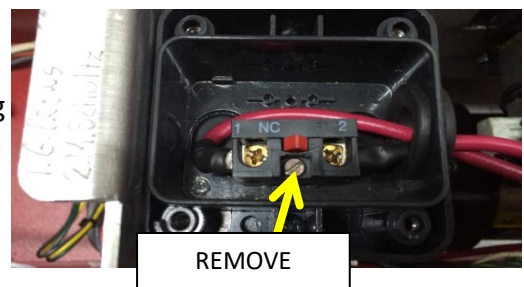
11. If you have a model A, remove the center Battery Clamp Post. The Post is attached to the bottom of the machine with a Carriage Bolt, so pull towards you as the turn the Post. These items can be discarded, as they are no longer needed. If you have a model B, you will secure the 2 outside post to the floor plate as shown in the picture.



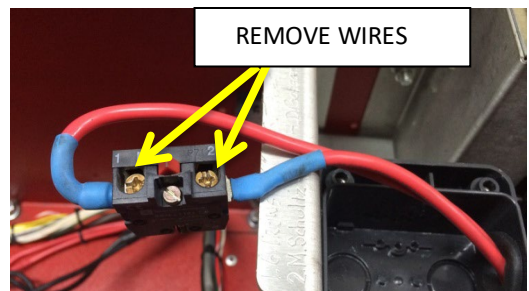
Note: It may be necessary to drill 2 new holes in the floor plate so that the battery will fit between the posts. The distance between the 2 posts center point will need to be at least 15.5-inches. Use existing hardware to secure post to floor plate.

12. Remove the four screws securing the cover on the E-Stop. Based on the lane machine type, it may only have 2 screws.

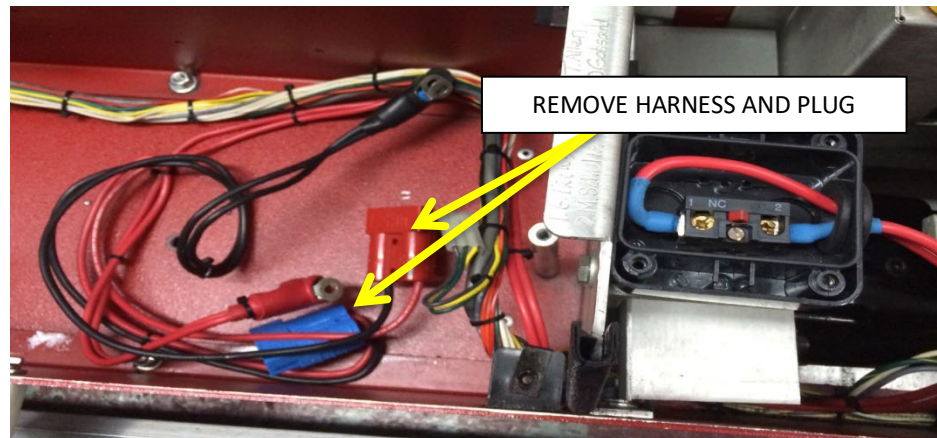
13. Remove the breaker from the box. Again, depending down with a screw (shown right) or clamped in.



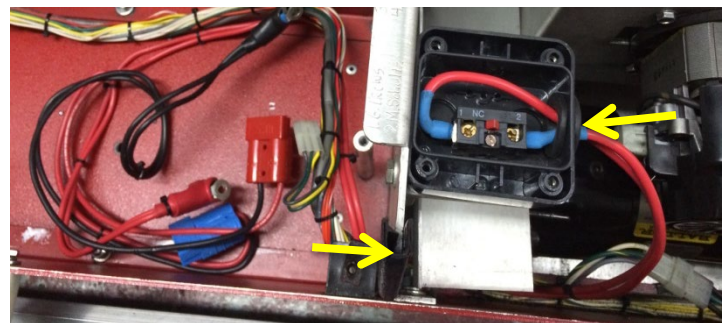
14. Remove both wires from the E-Stop breaker.



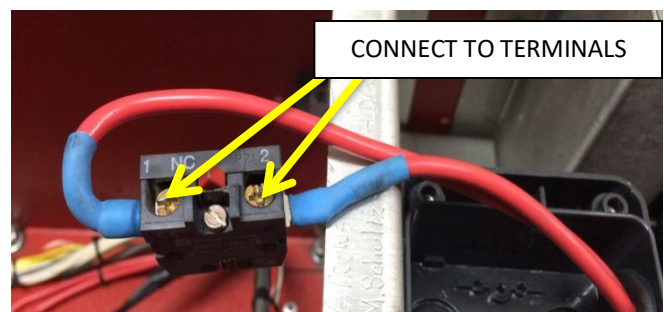
15. You will now be able to remove the red and blue Plugs from the center compartment. Discard the harness and plugs.



16. Locate the new Plug and Harness assembly in the kit. Feed both red wires with the Fork Terminals through the bottom cutout from the electrical compartment into the vacuum compartment. Then feed the same wires into the E-Stop Housing.



17. Connect the Forked Terminals to each side of the E-Stop Switch.



18. Reinstall the E-Stop Switch into the E-Stop Housing.
19. Reinstall the E-Stop Cover onto the E-Stop Housing.
20. Using the supplied wire ties, attach the new battery and charger harness to the existing wiring harness. Reinstall the three Cable Clamps attaching the wire harnesses to the Signature Plate (using existing hardware).

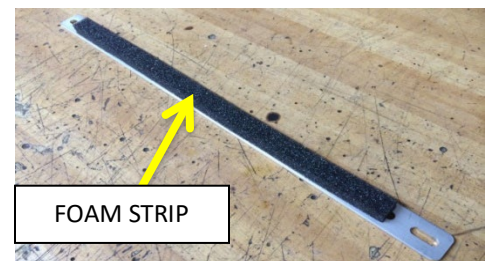
21. Locate the four rubber bumpers from the kit and attach them to the floor plate where the battery will sit. This is to space the battery up for clearance from the mounting hardware for floor plate.

22. Install the new Battery Assembly.
Slide the Battery Assembly into position.

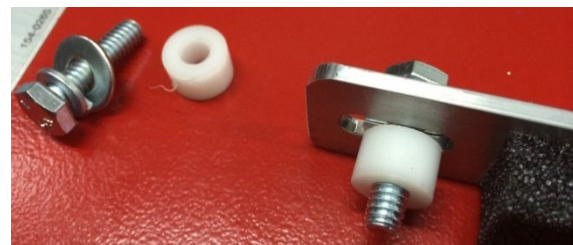


23. Reinstall the UHMW Head Bar Block, Angle Mounts, and Wire Harness Clamps.

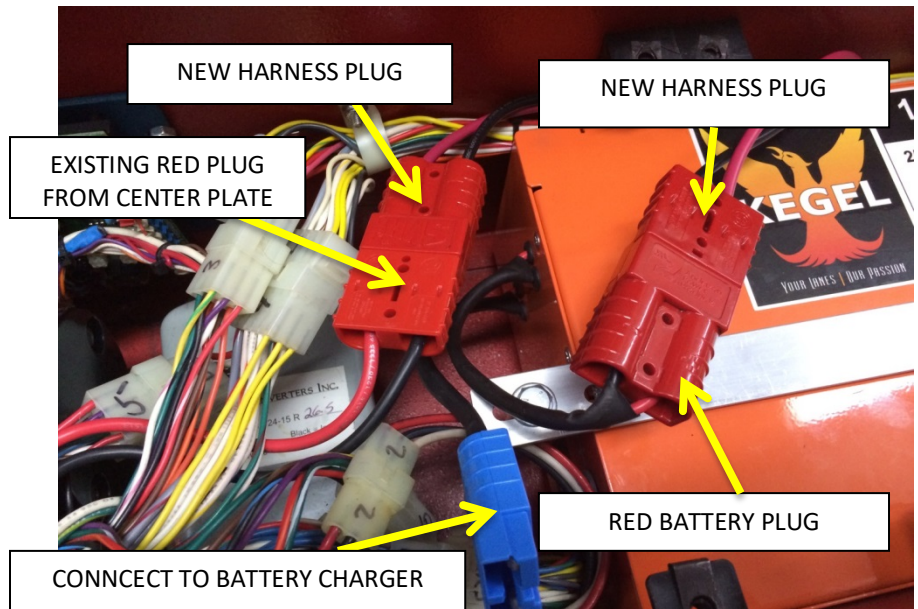
24. Locate the Foam strip and strap in the kit and attach the foam as shown.



25. Secure the Battery Assembly in the machine by installing the new Battery strap using (2) ¼-20 x 1" Bolts, (2) ¼" Flat Washers, (2) ¼" Lock Washers, and (2) Nylon Spacers.



26. Connect one RED Plug from new Wire Harness to the existing RED Plug from the machine center plate.
27. Connect the remaining RED Plug from the new Wire Harness to the RED Plug on the new Battery Assembly.
28. Install the Charger Plate using existing hardware. Do not fully tighten hardware at this time.
29. Connect the BLUE Plug from the Battery Charger to the BLUE Plug on the new Battery Assembly.



30. Carefully place the wiring in the space under the PLC Plate. Ensure that all wiring is routed and plugged in properly.
31. Install the PLC Plate using existing hardware and fasten down.
32. Tighten the four screws for the Battery Charger Plate.
33. With the Machine plugged in and the E-stop turned off, check charging voltage at the 2-Pin Molex Plug on the Battery Charger. Voltage should read 26-29 Volts DC. It is possible to adjust voltage on the Iota charger. If needed contact Tech Support to do so.
34. With the power off, charge the Battery Assembly for 3-4 hours.
35. After the Battery Assembly has had time to fully charge, unplug the machine. With power ON and the power cord unplugged from the machine, check battery voltage at the 2-Pin Molex Plug on the Battery Charger. Voltage should read 26-28 Volts DC.
36. Test all Outputs for proper function.
37. Calibrate all speeds, Oil Output, and Cleaner Output.