



## INSTALLATION INSTRUCTIONS

|                  |                      |
|------------------|----------------------|
| PART NUMBER      | 158-8417 / 158-8417R |
| PART DESCRIPTION | CVR REPLACEMENT      |
| REV DATE         | 4/20/2012            |
| MACHINE MODELS   | ALL ION / KW MODELS  |



Basic knowledge of the operation of the lane machine

### TOOLS NEEDED:

Phillips Screwdriver  
Wire Strippers

11/32" Wrench  
Joint Crimpers

5/16" Wrench  
Dykes



### 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)



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via e-mail at [LMC@Kegel.net](mailto:LMC@Kegel.net)  
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## SECTION A (ALL ION & KW MODEL D MACHINES ONLY)

- 1) Disconnect power & lay machine down in the operating position.
- 2) Using the Phillips screwdriver & 5/16" wrench, remove the lid grounding strap from the inside battery charging door mounting screw. Using the screwdriver & 11/32" wrench, remove the lid mounting block on the left side (7-pin) of the machine. Carefully remove entire lid assy from machine.
- 3) Unscrew the PC Center Plate mounting screws and tilt plate up to access the electrical compartment.
- 4) Loosen & remove the two CVR mounting screws. Remove CVR from machine.
- 5) Install the new CVR on the frame panel so wires are at the bottom of the CVR towards the floor plate.

***NOTE: Complete step # 6 ONLY if existing machine harness has a WHITE CVR 3-pin connector plug. If the existing connector plug is BLACK, skip step #6***

- 6) Unplug the 154-8133C 18 AMP Pin Adapter that is plugged into the replacement CVR. Strip ½" of insulation off each adapter wire. Next, cut the machine CVR harness wires (on bottom of PC plate assy) flush to the bottom of the existing CVR harness plug. Strip ½" off each of these wires. Using the (3) 153-1037 Wire Joints supplied w/ the new CVR, crimp the adapter wires together w/ the harness wires, being careful to properly match the wire colors up.
- 7) Plug the adapter harness into the CVR plug.
- 8) Re-install the lid back onto the machine, making sure to secure the grounding strap to the left side plate. Tighten all screws completely
- 9) Apply power to the machine and test machine operation for proper operation.



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## **SECTION B (ION MODEL B MACHINES ONLY)**

- 1) Disconnect power & stand machine up in the transport position.
- 2) Remove the six bolts securing the floor plate battery access door to the frame.
- 3) Open the access door and pull the battery slide tray towards you to access the CVR.
- 4) Loosen & remove the two CVR mounting screws. Remove CVR from machine.
- 5) Install the new CVR on the slide tray. Tighten the screws completely.

***NOTE: Complete step # 6 ONLY if existing machine harness has a WHITE CVR 3-pin connector plug. If the existing connector plug is BLACK, skip step #6***

- 6) Unplug the 154-8133C 18 AMP Pin Adapter that is plugged into the replacement CVR. Strip ½” of insulation off each adapter wire. Next, cut the machine CVR harness wires (on bottom of PC plate assy) flush to the bottom of the existing CVR harness plug. Strip ½” off each of these wires. Using the (3) 153-1037 Wire Joints supplied w/ the new CVR, crimp the adapter wires together w/ the harness wires, being careful to properly match the wire colors up.
- 7) Plug the adapter harness into the CVR plug.
- 8) Push the battery tray back into the machine & secure the access door, making sure to tighten the bolts completely.
- 9) Apply power to the machine and test machine operation for proper operation.



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