INSTALLATION INSTRUCTIONS

PART NUMBER	**164-8252**
PART DESCRIPTION	**BODINE BUFFER MTR HARDWARE KIT WITH BRACKETS**
REV DATE	**3/10/2020**
USED WITH MOTOR #	**164-8414 KUSTODIAN ION A/B, WALKER A/B, ION & WALKER SPORT MODELS.**

1 2 **3** 4 5

DIFFICULTY LEVEL

Basic knowledge on ALL aspects of the lane machine, including mechanical, electrical and operating software

TOOLS NEEDED:

Phillips Screwdriver	Telescope Magnet	2- 7/16” Wrench
½” Wrench	½” Socket	11/32” Wrench
5/32 Allen Wrench	1/8” Allen Wrench	3/32” Allen Wrench
9/16” Socket	Long Needle nose pliers	Feeler Gauge
Gear puller (may be needed)	1” hole saw	Blue loc-tite

PARTS INCLUDED:

(1) 158-6701
ZTR MOTOR
ADJUSTMENT BLOCK

(4) 153-2968
1/4-20 X 3/4”
ALLEN BOLT
*WALKER B & SPORT
MODEL BUFFER ONLY

(1) 158-6630A
MTR BRACKET FOR
BODINE SPORT
MODEL MACHINES

(2) 158-6427A
BODINE BUFFER MTR
ADAPTERS FOR ION
A/B MODEL
MACHINES

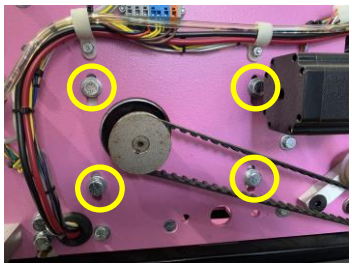
(2) 153-2935
MS FLAT
HEAD
PHILLIPS 10-
24 X 3/4

(4) 153-2968
1/4-20 X 3/4”
ALLEN BOLT
*WALKER B & SPORT
MODEL BUFFER ONLY

Kegel’s Lane Maintenance Central:
Within USA - 1-800-280-2695
Outside USA - +1 863-734-0200
via e-mail at LMC@Kegel.net
website www.kegel.net

KUSTODIAN ION SPORT MODEL LANE MACHINES – 164-8414 BUFFER MOTOR

1. Lay the machine down in the operating position and remove the screws holding the left side guard on.
2. Remove the screws that fasten down the electrical panel and tilt up to access the bottom of the center compartment.
3. Remove the battery or batteries from the machine.
4. Unplug the buffer motor assembly.
5. Loosen the idler pulley for the buffer belt and remove the belt.

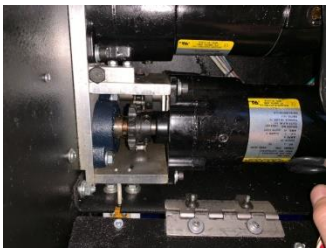


6. Remove the four bolts that mount the motor bracket assembly to the side of the machine, and remove the motor assembly and bracket from the center compartment. Save the bolts for later assembly.
7. Remove the four mounting bolts that go through the buffer motor and into the bracket.
8. Take the 158-6630A new motor bracket assembly, and using the (4) 164-2094, mount it to the buffer motor as shown.

9. Take the motor assembly and place into the center compartment. With the 4 bolts removed in stop 6, mount it to the side of the machine.
10. Reinstall the buffer belt assembly.
11. Adjust the idler pulley to the belt. The belt should have a fair amount of tension and just flex a small amount when pressed on.

KUSTODIAN WALKER SPORT MODEL LANE MACHINES – 164-8414 BUFFER MOTOR

1. Lay the machine down in the operating position and remove the screws holding the left side guard on.
2. Remove the screws that fasten down the electrical panel and tilt up to access the bottom of the center compartment.
3. Remove the battery or batteries from the machine.
4. Loosen the idler pulley for the buffer belt and remove the belt.



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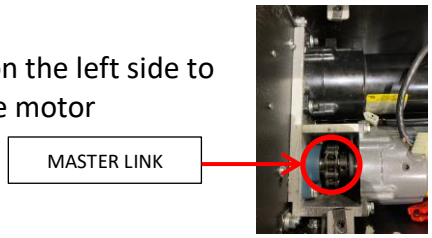
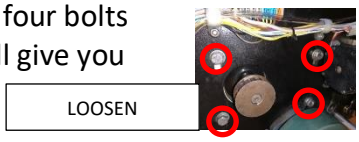
5. With the machine lying down, push or pull the machine on the left side to get the master link to the top of the sprocket on the drive motor assembly.



6. With a ½" socket and wrench, loosen, but do not remove, the four bolts that hold the buffer/drive motor assembly to the wall. This will give you enough slack in the drive chain to remove the master link.

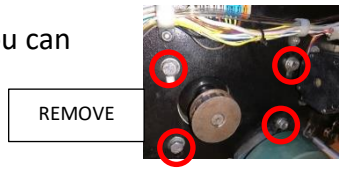


7. Remove the master link from the drive motor.

8. Unplug both the ZTR motor and the buffer motor as they will come out of the lane machine together.

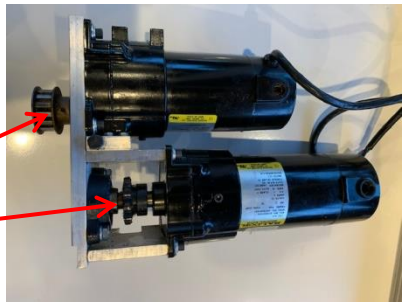
9. Remove all four mounting bolts, except the one in the upper right. You can leave it in the hole after unthreading it.

10. Lift the assembly out of the lane machine and to workbench.

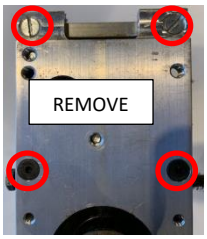


11. Loosen the 1/8" set screws in the pulley assembly. This will be placed on the new motor.

12. Loosen the set screw in the sprocket on the drive motor shaft.



13. Set the assembly up on end and remove the two flathead bolts along with the two allen bolts using a 5/32" allen wrench



14. Now that all four mounting bolts have been removed, lift the buffer motor and bracket assembly up and off the shaft of the ZTR motor assembly.

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15. With a 5/16” wrench, remove the two bolts holding the motor adjustment bolt block.

16. Locate the new block assembly, 158-6701 from the kit along with the (2) 153-2935 screws. Fasten the new block assembly into place.

17. Clean up the pulley and slide it onto the new motor assembly.

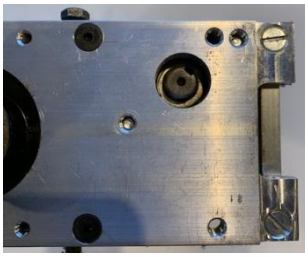
18. Remove the old buffer motor assembly from the bracket by removing the four bolts that go through the motor and into the bracket (pointing to two on top, there are two more on bottom).

19. Remove the bearing housing assembly from the bracket used for the drive shaft. Mount this onto the new bracket assembly (158-6630A), in the same place it was removed from the old one, only finger tighten for now.

20. Using the (4) 164-2094 bolts, fasten the buffer motor assembly to the 158-6630A, motor bracket assembly. As shown right.

21. Take the motor bracket assembly, with the buffer motor attached and slide the entire assembly back onto the shaft of the drive motor. Ensure the shaft slides into the bearing housing assembly and tighten down the bearing housing.

22. Take two of the 164-2094 bolts and thread them through the bracket and into the motor. Do the same with the two flathead screws.
23. Once all screws are threaded in, go ahead and fasten all the way.
24. Fasten the set screws in the bearing housing as well.
25. With the wire harness’s pulled back, and out of the way, carefully lower the motor bracket assembly into the lane machine.
26. Thread the mounting bolts into the motor assembly bracket, but do not tighten.



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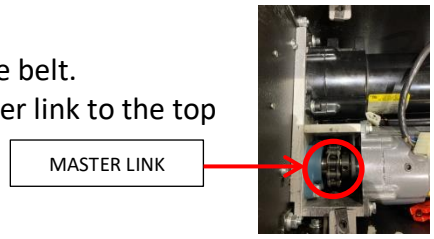
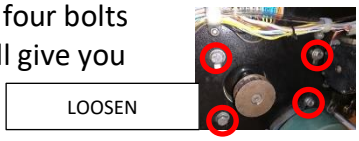
27. Stand the machine upright in the transport position.
28. Pull the chain through the bottom and around the bottom sprocket. Route the chain up to the top sprocket on the motor. (This is where a telescoping magnet, or a pair of long needle nose pliers will come handy). Wrap the chain around the sprocket, and replace the master link and clip.
29. Place the machine back down in operating position.
30. Slide the motor bracket assembly up, taking the slack out of the drive chain.
31. Tighten the adjusting bolt for the motor, all the way to the bottom of the frame
32. Go ahead and completely tighten up the mounting bolts for the motor assembly on the side of the lane machine.
33. Plug both the buffer motor and drive motor in.
34. Replace the buffer belt assembly and tighten up the idler pulley.
35. Replace the battery assembly.
36. Flip the electrical panel back over and fasten into place.
37. Replace the Lid assembly.
38. With the machine on the approach, test the walking features and the buffer motor. Additional balancing wire has been added just in case an adjustment is needed.

KUSTODIAN WALKER A/B MODEL LANE MACHINES – 164-8414 BUFFER MOTOR

1. Lay the machine down in the operating position and remove the screws holding the left side guard on.
2. Remove the screws that fasten down the electrical panel and lift up and out of the way, to access the bottom of the center compartment.
3. Remove the battery, or batteries from the machine.
4. Loosen the idler pulley for the buffer belt and remove the belt.
5. Push, or pull the machine on the left side to get the master link to the top of the sprocket on the drive motor assembly.



6. With a ½" socket and wrench, loosen, but do not remove, the four bolts that hold the buffer/drive motor assembly to the wall. This will give you enough slack in the drive chain to remove the master link.



7. Remove the master link from the drive motor.

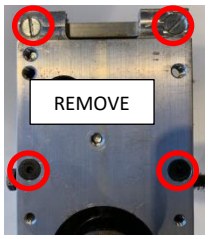
8. Unplug both the ZTR motor and the buffer motor as they will come out of the lane machine together.

9. Remove all four mounting bolts, except the one in the upper right. You can leave it in the hole after unthreading it.

10. Lift the assembly up and out of the lane machine and onto a workbench.

11. Loosen the 1/8” set screws in the pulley assembly and remove from the motor. This will be placed on the new motor.

12. Loosen the set screw in the drive motor sprocket and the two in the pillow block.



13. Set the assembly up on end and remove the two flathead bolts along with the two allen bolts using a 5/32” allen wrench

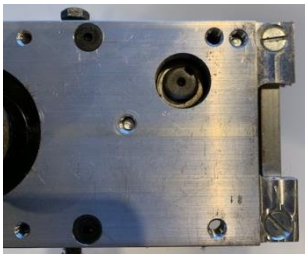
14. Now that all four mounting bolts have been removed, lift the buffer motor and bracket assembly up and off the shaft of the ZTR motor assembly.

15. Remove the old buffer motor assembly from the bracket by removing the four bolts that go through the motor and into the bracket (pointing to two on top, there are two more on bottom).

16. Remove the bearing housing assembly from the old mounting bracket used for the drive shaft. Mount this onto the new bracket assembly (158-6630A) in the same place it was removed from the old one, only finger tighten for now.

17. Using the (4) 164-2094 bolts, fasten the buffer motor assembly to the 158-6630A, motor bracket assembly. As shown right.

18. Take the motor bracket assembly, with the buffer motor attached and slide the entire assembly back onto the shaft of the drive motor. Ensure the shaft slides into the bearing housing assembly and tighten down the bearing housing.



19. Take two of the 164-2094 bolts and thread them through the bracket and into the motor. Do the same with the two flathead screws.
20. Once all screws are threaded in, go ahead and fasten all the way.
21. Fasten the set screws in the bearing housing as well.
22. With the wire harness's pulled back, and out of the way, carefully lower the motor bracket assembly into the lane machine.
23. Thread the mounting bolts into the motor assembly bracket, but do not tighten.
24. Stand the machine upright in the transport position.
25. Pull the chain through the bottom and around the bottom sprocket. Route the chain up to the top sprocket on the motor. (This is where a telescoping magnet, or a pair of long needle nose pliers will come handy). Wrap the chain around the sprocket, and replace the master link and clip.
26. Place the machine back down in operating position.
27. Slide the motor bracket assembly up, taking the slack out of the drive chain.
28. Tighten the adjusting bolt for the motor, all the way to the bottom of the frame.
29. Go ahead and completely tighten up the mounting bolts for the motor assembly on the side of the lane machine.
30. Plug both the buffer motor and drive motor in.
31. Replace the buffer belt assembly and tighten up the idler pulley.
32. Replace the battery assembly.
33. Flip the electrical panel back over and fasten into place.
34. Replace the Lid assembly.
35. With the machine on the approach, test the walking features and the buffer motor. Additional balancing wire has been added just in case an adjustment is needed.

KUSTODIAN ION A/B MODEL LANE MACHINES – 164-8414 BUFFER MOTOR

1. Lay the machine down in the operating position and remove the screws holding the left side guard on.
2. Remove the screws that fasten down the electrical panel and tilt up to access the bottom of the center compartment.
3. Remove the battery or batteries from the machine.
4. Unplug the buffer motor assembly.

5. Loosen the idler pulley for the buffer belt and remove the belt.

6. Remove the four bolts that mount the motor bracket assembly to the side of the machine, and remove the motor assembly and bracket from the center compartment. Save the bolts for later assembly.

7. Remove the four mounting bolts that go through the buffer motor and into the bracket.

8. With the (4) 164-2094 bolts, and a drop of blue loc-tite, mount the (2) 158-6427A brackets to the motor as shown right. (The threaded holes should be towards the outside of the bracket).

9. With the shaft towards the front of the machine as shown to the right, mount the motor on the side plate in the same way that it was removed.

10. Plug the motor in.
11. Reinstall the batteries if removed.
12. Reinstall the electrical panel into place and fasten.
13. Test the operation of the Buffer motor assembly.