



## INSTALLATION INSTRUCTIONS

PART NUMBER	154-8641
PART DESCRIPTION	BUFFER BRUSH REPLACEMENT
REV DATE	5/26/2009
MACHINE MODELS	ALL PAINTED MACHINES EXCEPT FLEX/FLEX WALKER



Basic knowledge of the lane machine including mechanical and electrical

### TOOLS NEEDED:

¼" Allen Wrench  
Regular Screwdriver

1/8" Allen Wrench  
9/16 wrench

3/16" Allen Wrench  
Red Loctite

### PARTS INCLUDED:

1 - 154-8641 Buffer Brush assembly



### 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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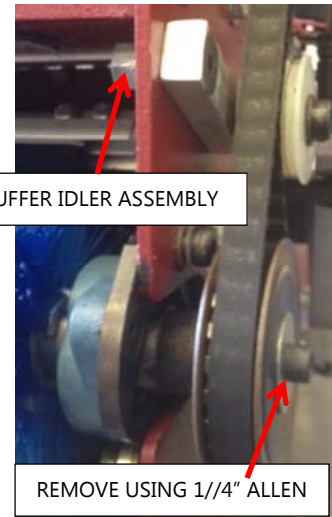
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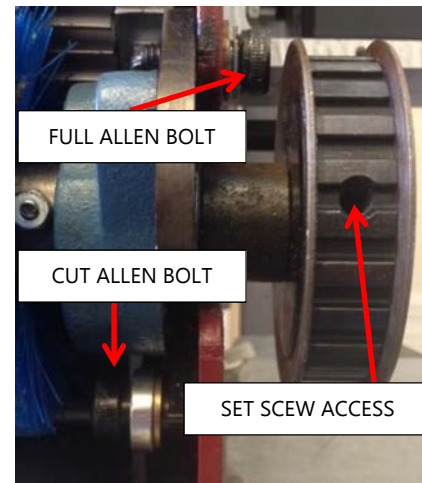
## ALL LANE MACHINES

### Buffer Brush removal

1. With the machine in the up-right transport position, remove the aluminum side cover on the 7 pin side of the machine.
2. Remove the buffer belt by removing the Buffer Idler pulley assembly as shown to the right.
3. Remove the belt and keep for a spare or save to install.
4. Remove the allen bolt for the buffer brush pulley assembly.

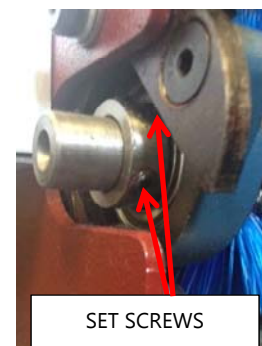


5. Now that the belt has been removed from the buffer pulley assembly, loosen the set screw inside the access hole in the pulley.
6. Slide the pulley off the shaft and save the washers that are acting as spacers and key for reassembling.
7. Now that the pulley is off, you can remove the lower cut allen bolt that holds the lowering link to the buffer bearing assembly.



### **IF INSTALLING ON A ONE-PIECE TRANSFER BRUSH MACHINE, SKIP TO THE SECTION FOR ONE-PIECE SYSTEMS**

8. On the 10 pin side, or left side as you look at it, loosen the two small set screws located in buffer bearing assembly.
9. The buffer brush assembly is now being held in with the one upper allen bolt. Remove the 7 pin side upper allen bolt. The assembly should now slide out of the opposite bearing assembly. It may take a little force to remove.



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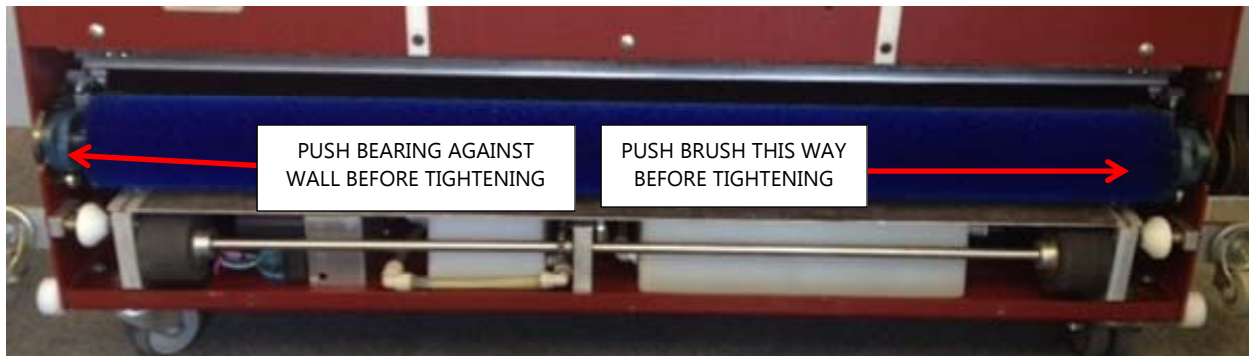
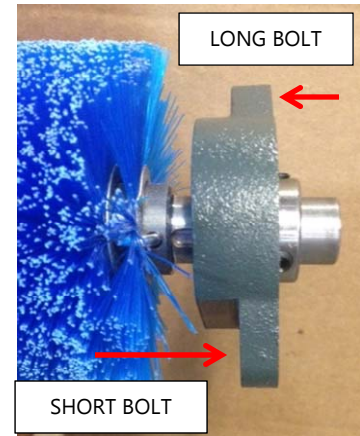
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## Buffer Brush Installation

1. Now that the old brush has been removed, loosen the two set-screws on the collar of the bearing assembly and slide it off.
2. With the bearing collar, and set-screws, facing away from the brush bristles, slide the bearing assembly on to the new buffer brush assembly, but do not fasten the set screws yet.
3. Take the buffer brush assembly and slide the left side into the buffer bearing, that is still mounted on the frame, as far as it will go.
4. Take the long threaded shoulder bolt and insert it through the outside of the frame and hand tighten it to the buffer bearing assembly. Make certain that the milled portion of the bearing is facing down. The bearing is milled so that the lowering link can pivot freely.
5. Take the shorter cut shoulder bolt and insert it through the lowering link into the bottom of the milled portion of the buffer bearing assembly. Tighten both the upper and lower shoulder bolts to the bearing assembly.
6. Before tightening all of the set screws, slide the entire buffer brush assembly to the right side of the lane machine and flush against the right buffer bearing.
7. Tighten the right bearing assembly.
8. Take the left buffer bearing assembly and push it flush against the side of the frame. Tighten the set screws. When properly installed there should be no side to side play.



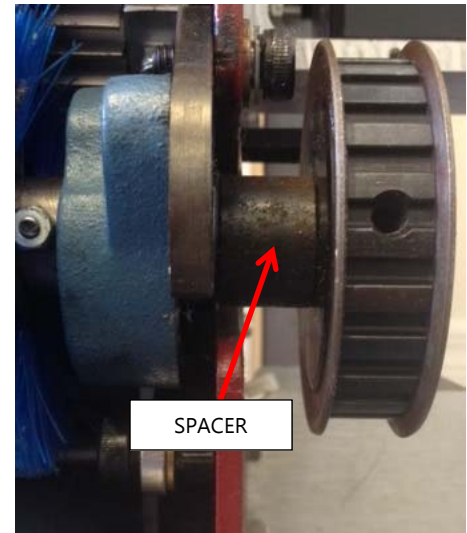
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9. Slide the spacer so that it is held against the bearing.
10. Place the  $\frac{3}{4}$ " key in keyway against the spacer so that it is held against the bearing.
11. Push buffer pulley onto the shaft, line key in shaft up with keyway in pulley, and then push pulley in until it hits the spacer. Tighten pulley set screw to secure.
12. Secure the 5/16-24 x  $\frac{3}{4}$ " SHCS bolt and washers back on the end of the shaft and tighten.
13. Place the buffer belt back around the buffer motor and buffer brush pulleys.
14. Bolt the buffer belt idler pulley back into place as shown in the figure on the previous page. Tighten the pulley assembly with the belt tight.
15. Set the machine down in the operating position and check the movement of the buffer brush up and down using the Test Output function.
16. Plug in the power cord and press the TEST OUTPUT key until BUFFER UP/DN appears in the TEST I/O menu.
17. Lift the brush up and down a few times. The bearings should move freely against side panels without scraping.
18. Put the brush down in lowered position.
19. Slide the buffer belt idler down against the belt so that the belt is taught and re-tighten idler.
20. Place the buffer/head guard back on machine and secure.
21. The brush crush must be adjusted when installing a new brush. The typical amount of crush on lane should range from  $\frac{5}{32}$ " to  $\frac{1}{8}$ ".



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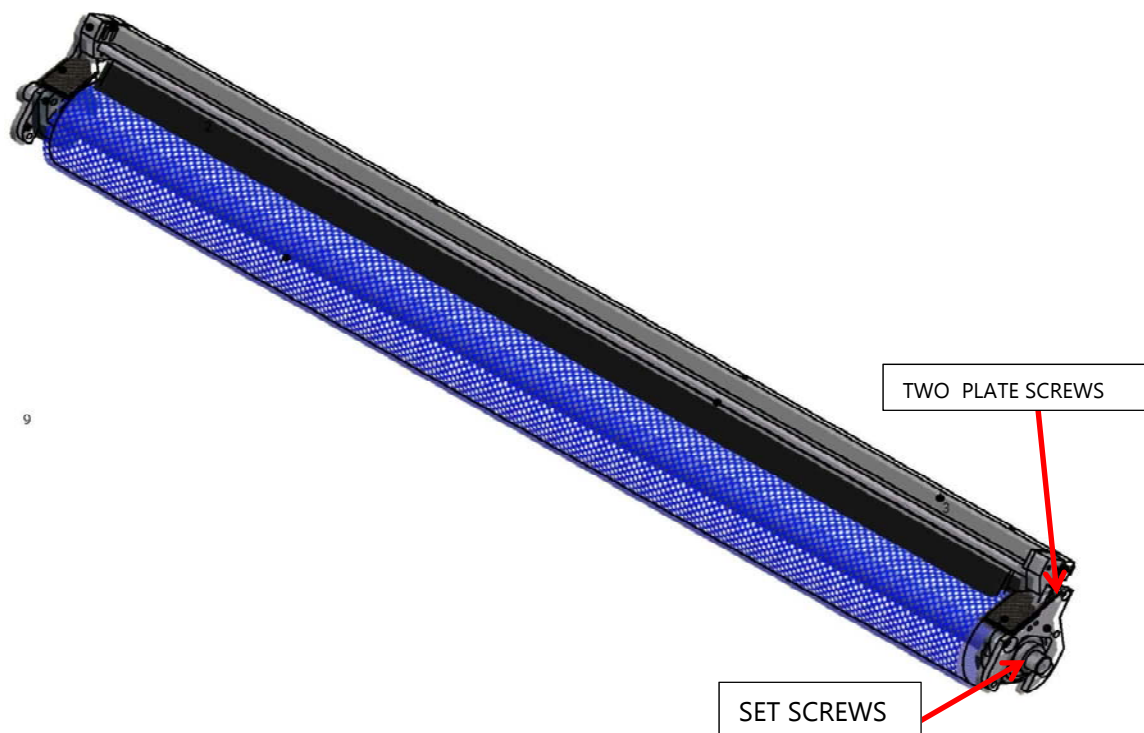
## Adjustment of the Two-piece Transfer Brush system

When adjusted properly, there should be a 3/16" of crush evenly across the front side of the brush and approximately 1/16" across the backside. If crush needs to be adjusted:

22. Loosen the four phillip screws that mount the Transfer brush to the left and right side of the frame.
23. Position the transfer brush so it has 3/16" of crush evenly across the front side of the brush and approximately 1/16" across the backside.
24. Once you have this adjustment, tighten the phillip screws completely down to secure your adjustment.

## **ONE-PIECE TRANSFER BRUSH SYSTEM**

1. Move to the 10-pin side, or left side as you look at it, and remove the bottom shoulder bolt in the lowering link.
2. Loosen, but do not remove, the upper shoulder bolt that mounts through the frame and into the buffer bearing assembly. Do this to both sides.
3. Carefully remove both of the upper shoulder bolts and remove the assembly from the machine.



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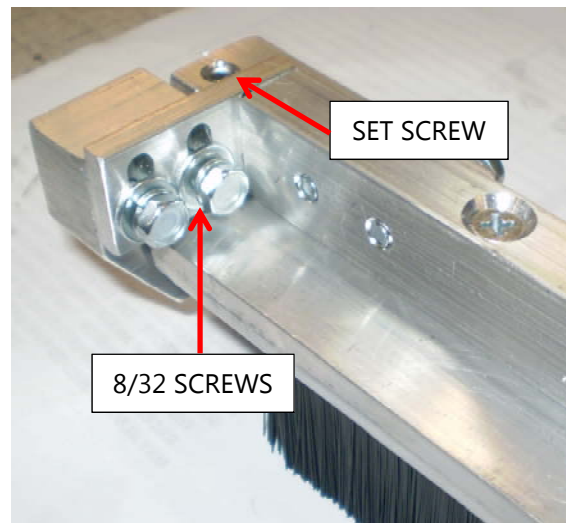
## Changing out the Buffer Brush

4. With the Buffer and Transfer Brush assembly sitting on a bench, loosen the set screws that are located on both of the collars on the bearing assembly.
5. Remove the two screws securing the side plate assembly to the Transfer Brush assembly on one end only.
6. Slide the plate assembly off of the shaft of the Buffer Brush assembly.
7. Remove the buffer brush from the opposite bearing assembly and dispose of the old buffer brush assembly.
8. Before putting the new buffer brush assembly, take this opportunity to clean the Transfer Brush assembly.
9. Take the new buffer brush assembly and slide it into the bearing assembly.
10. Slide the bearing and plate assembly back onto the shaft of the new Buffer Brush assembly.
11. Secure the plate assembly back onto Transfer brush by placing a drop of blue Loctite on the two screws and tighten firmly and inspect the Transfer/Buffer brush adjustment following the below steps.

## Adjusting the One-piece Transfer/Buffer Brush assembly

When adjusted properly, there should be a 3/16" of crush evenly across the front side of the brush and approximately 1/16" across the backside. If crush needs to be adjusted:

1. Loosen the four 8/32 screws on the right and left that secure the adjustment blocks to the bar but keep them snug.
2. Using a 1/8 inch allen wrench, turn the setscrews clockwise to raise the transfer brush or counter clockwise to lower the transfer brush.
3. Position the transfer brush so it is just touching the buffer brush then turn it counter clockwise to lower the transfer brush into the buffer brush so you have approx. 3/16" of crush evenly across the front side of the brush and approximately 1/16" across the backside. Once you have this adjustment, tighten the 8-32" screws completely down to secure your adjustment.



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