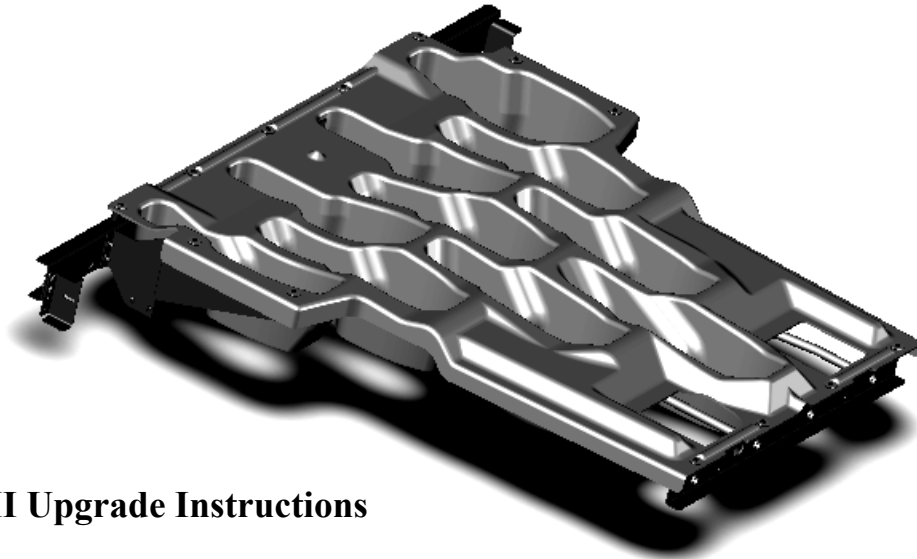




Durabin Field Upgrade

Installation of the *Durabin II* consists of removing the existing bin and installing the new Durabin assembly. The existing shuttle is reused as well as a couple of parts from the existing bin assembly. The installation is simple and does not require any drilling or special tools. You are responsible for ensuring that the existing shuttle is square and in good working order with no missing or broken parts or bent rails. The new Durabin II is designed with considerably fewer parts to break or wear out and requires less maintenance than the existing metal bin.



Durabin II Upgrade Instructions

Machine Preparation

1. Remove the pins from the bin and pin deck.
2. Lower the sweep to the first guard position for safety.
3. Lower the table approximately six inches.
4. Rotate the pin elevator wheel so that a cleat will not interfere with the removal of the distributor.
5. Turn off the chassis and disconnect power.
6. Remove the distributor. Label each distributor so that it can be reinstalled on the same lane from which it was removed. This will help to minimize readjustment later.
7. Remove the platforms (catwalks).

Removing the Existing Bin

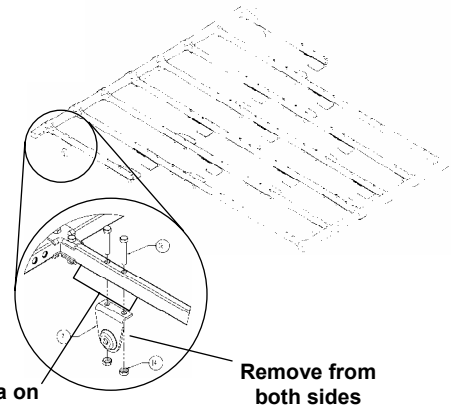
8. Disconnect the shuttle spring.
9. Remove the grease fitting (if present) from end of shuttle connecting rod to prevent damage during bin removal.
10. Disconnect the shuttle connecting rod from shuttle actuator.
11. Disconnect the shuttle actuating arms.





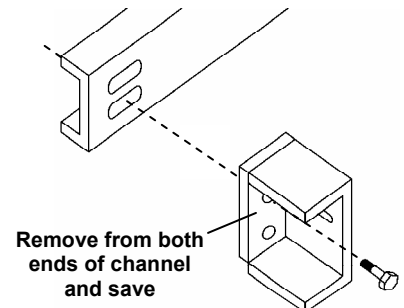
Durabin Field Upgrade

12. Disconnect the shuttle-to-bin connecting rods from the rear of the shuttle. Rest the shuttle on the spotting cups.
13. Remove the brackets that were used to connect the bin connecting rods from the rear of the shuttle (see the illustration at the right).
14. Sand the area of the rectangular tubes from which the brackets were removed to remove any burrs or rough spots from around the bolt holes and sides. Use 80 to 120 grit emery cloth. These tubes will become sliding surfaces when the new bin has been installed.
15. Disconnect the wiring from the bin switch.
16. Remove the plastic cable clamps from the rear channel of the bin. Save them for reuse.
17. Unbolt the front of the bin (4 bolts) from the castings that hang from the bin support brackets, and remove the bin from the pinspotter.
18. Remove the support brackets (see right) from the rear corners of the bin. Save the brackets and hardware for reuse.



Durabin II Installation

19. Loosely install the support brackets that were removed in the previous step onto the rear corners of the new Durabin II. Install the brackets so that they open outwards and are attached using their top two holes (install the bolts with their heads on the inside of the bracket). This will allow the bin to move upward in the event of a misfed pin without hanging up on the support beam.
20. Place the new bin in position. Slide the shuttle connecting rod through the hole in the front of the bin. Make sure the shuttle actuating arms extend down through cutouts in the bin. Support the rear of the bin by hanging the support brackets from the pinspotter side frames, and attach the front of the bin to the hanging castings using the four bolts that were removed earlier.
21. Reinstall the grease fitting on the shuttle connecting rod if one was removed earlier.
22. Center the bin over the spotting cups and slide the rear corner support brackets outward to remove side-to-side play. Tighten the bracket hardware.
23. Reconnect the front of the shuttle to the actuating arms.
24. Insert the shuttle's short outer tubes into the slide blocks on the underside of the bin at the rear. Be careful not to bend the slide block brackets excessively when inserting the tubes.
25. Reconnect the shuttle spring at the rear of the shuttle.
26. Reconnect the shuttle connecting rod to the actuator arm.
27. Test the movement of the shuttle by pushing forward against spring pressure at the back of the shuttle and allowing it to spring back. Do this several times. There should be no binding or sticking.





Durabin Field Upgrade

28. Remove the Durabin's bin switch assembly (spring & 2 bolts).
29. Run the existing bin switch cable out the grommet closest to the end of the bin's rear channel and in through the grommet near the middle of the channel. Bring the cable out the opening created by the removal of the bin switch assembly and connect the wires to the common (COM) and normally open (NO) positions on the bin switch.
30. Reinstall the bin switch assembly, and secure the cable along the bin channel with the cable clamps that were removed from the old bin.
31. Check the shuttle position with a ruler or tape measure). There should be a horizontal gap of approximately 1-1/2 to 1-5/8 inches between the back edge of the bin channel and the front edge of the shuttle's rear cross member (see the illustration at the right). If adjustment is necessary:
 - A. Place a punch or screwdriver through the hole near the shuttle end of the shuttle connecting rod's tube, and then loosen the jam nut on the end fitting. Do not rotate the connecting rod's tube, as this will loosen the connecting rod's components causing the shuttle to malfunction during operation.
 - B. Disconnect the connecting rod from the shuttle actuating lever and rotate the end fitting to lengthen or shorten the rod as needed.
 - C. Reconnect the end of the rod to the actuating lever.
 - D. With the punch or screwdriver still in the hole in the connecting rod's tube, tighten the jam nut.
32. Reinstall the distributor making sure it is centered along the centerline of the #1 pin and #5 pin bin positions.
33. Swing the distributor left and right with it in the fully retracted position and verify that the belt guard clears the screw heads and raised moldings on the bin by at least 1/8 inch. Shim the distributor support as needed.
34. Reinstall the pinspotter's platforms (catwalks). This completes the installation.
35. Reenergize the pinspotter and test the operation of the bin and shuttle. Adjust the distributor and shuttle as needed.

