
MiTek[®]

SERVICE BULLETIN

Document ID:
SB274

Title:
High Slope Ejector Retrofit

Affected machinery: *RoofTracker III™* Roller Press

Distribution: Customers upon order

Applies to: Customers replacing high slope ejectors

CAUTION:

MiTek recommends printing this document in high resolution using color ink. Many of the graphics may be unclear and may create an unsafe condition if this recommendation is not followed.

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Purpose and Scope

This service bulletin instructs how to install the updated high slope ejectors used in the equipment referenced on the title page.

Overview

Parts Included

The parts included in this kit are shown in [Table 1](#). Please make sure all parts and supplies are present before starting the procedure.

Table 1: Parts in SB274KIT

Quantity	Description	Part #
1	High Slope Ejector Assembly	31120-501
1	Service Bulletin Document	SB274

If you have any questions, call MiTek Automation Support at 1-800-523-3380.





Supplies Needed

- 3/4" deep socket 1/2" drive
- 3/4" short socket 1/2" drive
- 1/2" extensions and ratchet.
- Needle nose pliers
- 7/16" deep socket 3/8" drive
- 7/16" wrench
- 3/4" wrench
- Flashlight
- 3/16" hex wrench

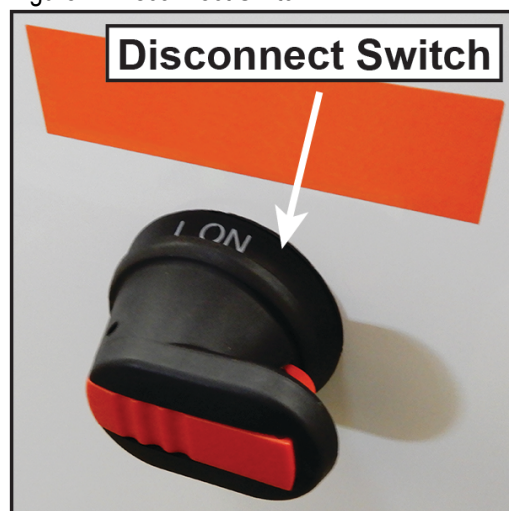
Procedure

Working on a Machine Outside the Machine's Main Electrical Enclosure



 WARNING	
	<p>ELECTROCUTION HAZARD.</p> <p>All electrical work must be performed by a qualified electrician.</p> <p>Verify that all power to the machine has been turned off and follow approved lockout/tagout safety procedures before performing any maintenance.</p> <p>If it is absolutely necessary to troubleshoot an energized machine, follow NFPA 70E for proper procedures and personal protective equipment.</p> <p>When the disconnect switch is off, there is still live power within the disconnect switch's enclosure. Always turn off the power at the building's power source to the equipment before opening this electrical enclosure.</p>

1. Engage an E-stop on the machine.
2. Turn the gantry's main electrical enclosure's disconnect switch handle to the Off position. See [Figure 1](#).
3. Attach a lock and tag that meet OSHA requirements for lockout/tagout to the electrical service entry panel.
4. Open the door to the enclosure to which you need access. Using a multimeter, verify that the power is off.

Figure 1: Disconnect Switch

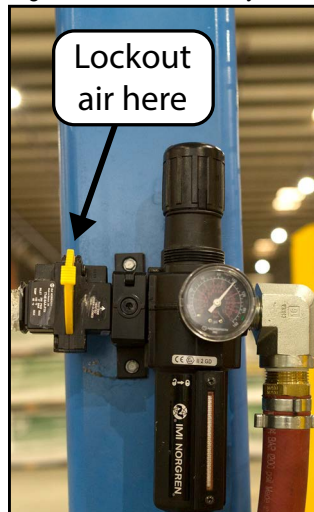


Pneumatic System Lockout/Tagout Procedure

	 WARNING
	<p>HIGH PRESSURE HAZARD.</p> <p>Bleed pneumatic lines before performing any maintenance on the system.</p> <p>Working on pressurized lines may cause injury.</p>

1. Turn off or close the system's air shut-off valve and attach a lock and tag. See [Figure 2](#).

Figure 2: Pneumatic System Shut-Off Valve



Longer tables may have multiple air shut-off valves. Ensure all pneumatic lines are locked out and tagged out.



2. With pneumatics locked out as previously described, drain the air from the system by stepping on the foot pedal.

Figure 3: Pneumatics Foot Pedal



Removing Old Ejectors



 WARNING	
	<p>MOVING PARTS CAN CRUSH AND CUT.</p> <p>Always verify that power to the machine has been turned off and follow approved lockout/tagout procedures.</p>

1. Once pneumatics system has fully drained, prepare a wood block at least 4" tall.
2. Have two people stand on the table, one at each end of the ejector to be replaced.
3. Have each person grab the ends of the skate wheel assembly and pull up. Place the wood block under the skate wheel assembly. Release the ends of the skate wheel assembly.
4. Locate the 3 frame bolts on the base of the ejector arm. See [Figure 4](#).

Figure 4: Frame Bolts



5. Have one person stay on top of the table with a 3/4" socket wrench.
6. The other person will slide under the table with a 3/4" socket wrench, a 7/16" socket wrench, and a 3/16" hex wrench.
7. Ensure both people are at the same frame bolt, and remove with the 3/4" socket wrenches.
8. Have the person under the table slide to the pneumatic cylinder.

9. Remove the following bolts connecting the ejector frame to the pneumatic system. Save the bolts for the new ejector.

Figure 5: Pneumatic Cylinder Connection Base



10. Remove the clip and pin from the clevis of the pneumatic cylinder.
 - a) Inspect the pin and clevis for wear, and replace as needed.

Figure 6: Pneumatic Cylinder Connection - Clevis



11. With both people on top of the table again, lift the high slope ejector up and out of the table.

You may dispose of the ejector at your discretion.
12. Repeat steps 3 through 11 for the remaining ejectors, if applicable.

Installing the New Ejectors

1. Inspect the assembly for any damage that may have occurred during shipping. Bowing is the most likely to happen.
2. Keeping the frame hold-down bolts in, remove the three nuts from the bottom of the assembly.
3. Prepare the wooden block that was used to brace the old ejectors in [Step 1](#) on [page 5](#).
4. Have two people carry the ejector to its slot on the table.
Be sure to check the direction the ejector will eject to.
5. Line up the ejector so that the frame bolts fall into their holes in the table frame.
6. Place the wooden block under the middle of the skate wheel assembly, then set the ejector down.
7. Have one person get off the table and check to ensure the skate wheel assembly is centered in its slot on the table.
8. Equip the person on the top of the table with a 3/4" socket wrench.
9. The other person will slide under the table, equipped with a 3/4" socket wrench, a 7/16" socket wrench, and a 3/16" hex wrench.
10. Under the table, replace the clevis pin then connect the pneumatic cylinder to the ejector using the bolts that connected the cylinder to the previous ejector. Replace hardware as necessary.
11. Ensure both people are at the same frame bolt, then install the frame hold-down nuts.
12. Repeat for the remaining frame bolts.
13. Repeat this section for the remaining assemblies, if applicable.

Testing the Functionality of the Ejectors

1. Remove lockout/tagout devices, and wait for the pneumatics system to fill with air.
2. Test the ejectors, without load, using the foot pedal.
3. If the skate wheel assembly or any hardware contacts the table, loosen the frame bolts and shift the assembly away from the interfering side. Retighten the frame bolts and test the ejectors again.
4. Adjust the flow valves and cushion valves (shown in [Figure 7](#) and [Figure 8](#)) of the pneumatic cylinders as needed.

Figure 7: Table Cylinder Valve Locations

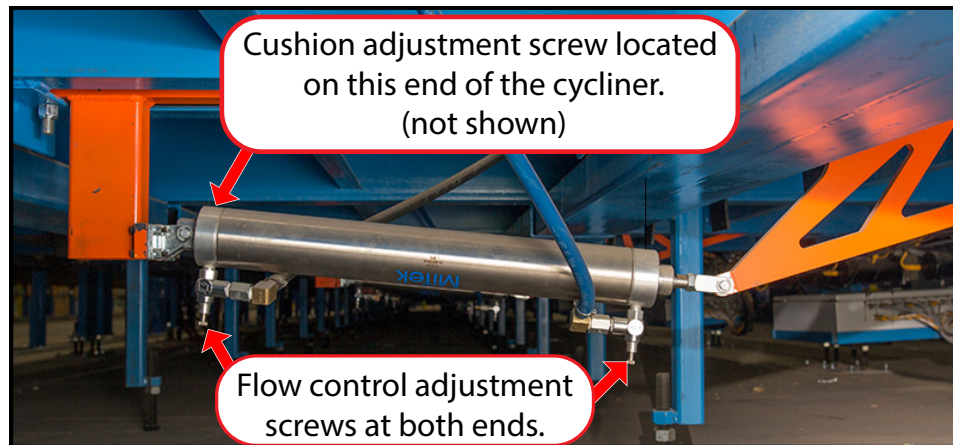


Figure 8: Cushion Adjustment Screw Location

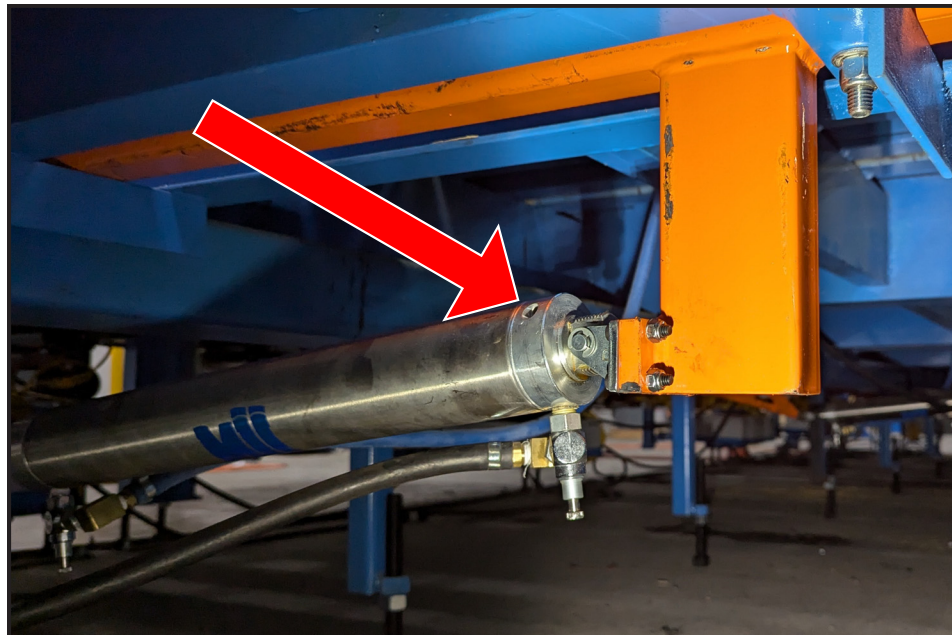


Table 2: Adjusting Flow Control Valves

Stroke	Valve Location	Increase Speed	Decrease Speed
Extend	Rod end of cylinder	Turn the adjusting screw counterclockwise	Turn the adjusting screw clockwise
Retract	Cap end of cylinder	Turn the adjusting screw counterclockwise	Turn the adjusting screw clockwise

To adjust the cushion valve, use the following steps.

1. Lockout/tagout the pneumatic system and drain the lines of air.
2. Slide underneath the table.
3. Turn the adjusting screw counterclockwise for 1/2 of a turn.
4. Slide out from under the table and re-pressurize the system.
5. Actuate the cylinder using a normal load at normal speed.
6. Repeat steps 1-5 until the cylinder decelerates the load without the abrupt slowness of a completely closed cushion valve, and without the jarring end impact of a completely open cushion valve.
 - You may need to fine-tune the cylinder by using 1/8 turns when approaching ideal cushioning.
 - An incorrectly set cushion may result in an ejector that won't fully retract.
 - Failure to properly maintain and calibrate the cushion valves may shorten the lifespan of the cylinders.

END OF SERVICE BULLETIN