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Magnus VLF

Load Table Plate Angler Upgrade

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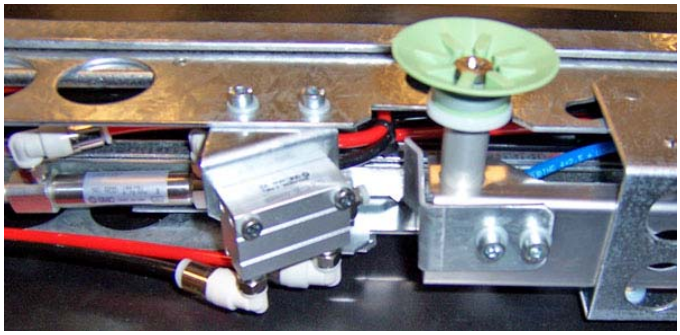
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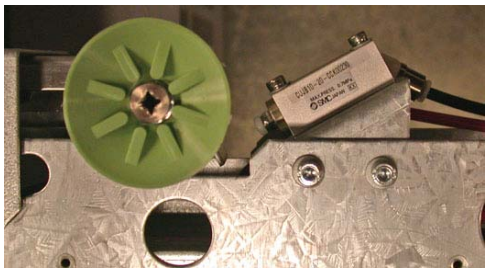
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Load Table Plate Angler Upgrade

1. OVERVIEW

This procedure will assist you in replacing the existing load table traveler on a Magnus VLF Autoloader with a new traveler that has the plate angler functionality. The plate angler functionality improves plate registration and decreases plate bubbling and buckling on dual plate configurations that use registration pins 1&3 and 4&6. The new traveler has an additional cylinder on the left and right vacuum cup assemblies that rotates, or angles, the plate during registration.





2. PARTS/TOOLS NEEDED

Load table traveler upgrade kit: 512-00429A

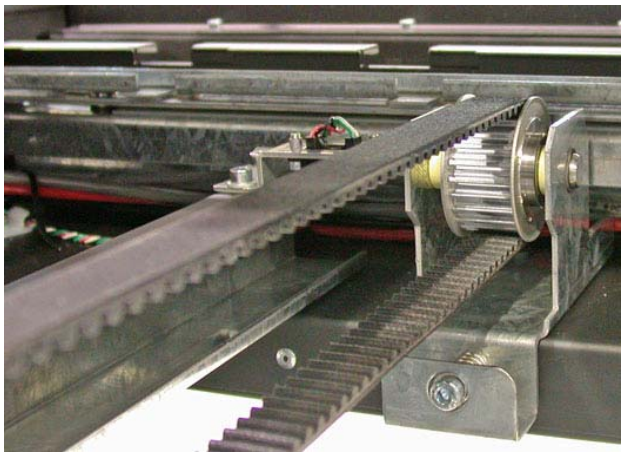
CR 4.01 plus patch 3 supporting the plate angler upgrade (see Control/settings page on TechPlanet)

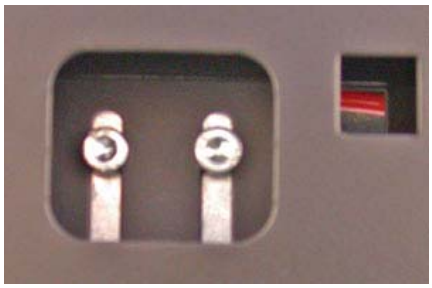
3. REPLACING THE UNLOAD TABLE TRAVELER

3.1 Removing the Existing Load Table Traveler

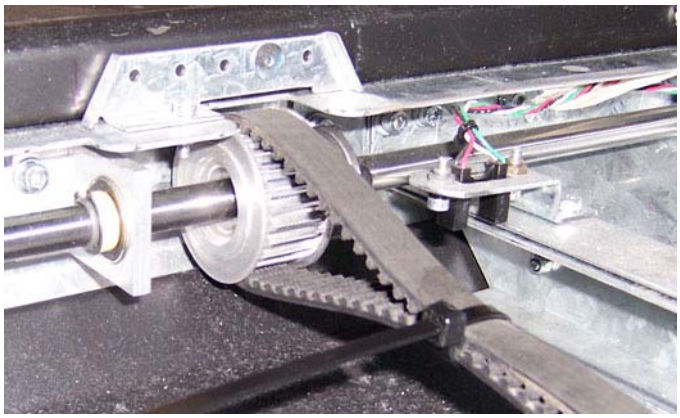
1. Unlock the doors: Type `>>door unlock`
2. Open the front hood and the rear hood.
3. Turn the power switch to OFF and close the compressed air supply to the device.
4. Remove the unload table panels.
5. Remove the load table rails.
6. Remove the power box panel to gain access to the shoulder panel screws.

7. Remove the screws and raise the away side shoulder panel and hold it up with the shoulder panel support leg.
8. For left eject devices, remove the slip sheet bin and lower the service access panel.
   For right eject devices, remove the bridge transition panel (P49), raise the bridge, and remove the side panels below the bridge.
9. Remove the lower MAB panels on the away side of the device.
10. At the front of the device, loosen the two belt tensioner screws from the underside on both belts.





11. To prevent the traveler belt from moving on the pulleys, put cable ties around the belts as close to the rear pulleys as possible. This will prevent the necessity of realigning the new load table traveler.



12. Mark the specific location of the traveler belts at the joins, and disconnect the belts from the travelers.

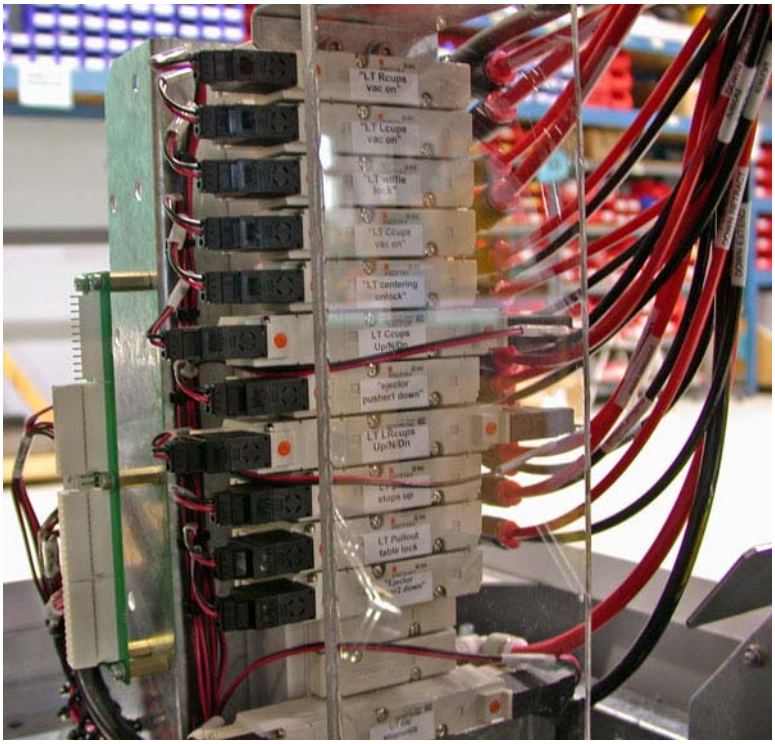
13. At the rear of the device at the load table manifold, disconnect the tubes from the following solenoids:

    LT Ccups Up/N/Dn - both the extend and retract tubes

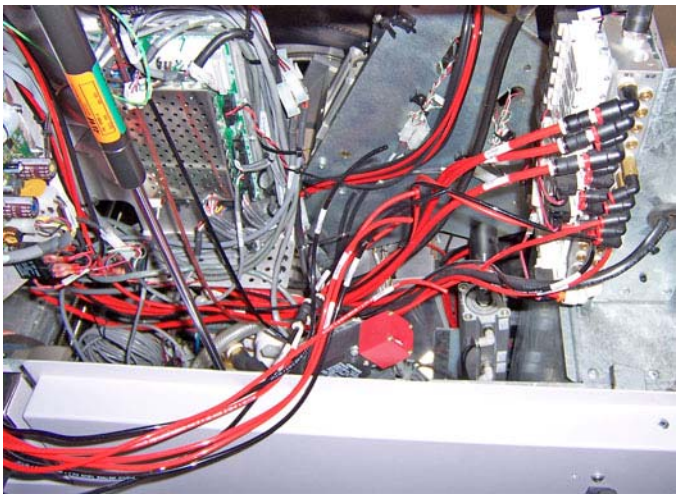
    LT LRcups Up/N/Dn - both the extend and retract tubes

    LT Centering Unlock - both the extend and retract tubes

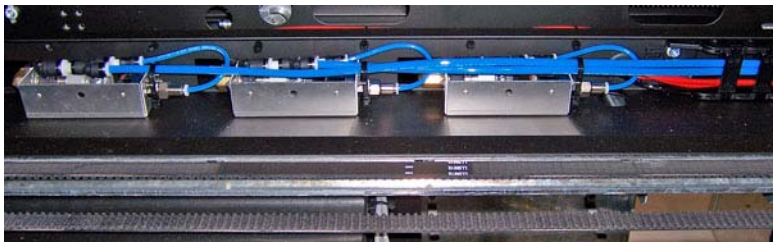
    LT Wiffle Lock



14. Cut the cable ties securing the tubes to the cable bundle all the way back to the load table traveler flex harness. Remove the tubes from the bundle as you go along.

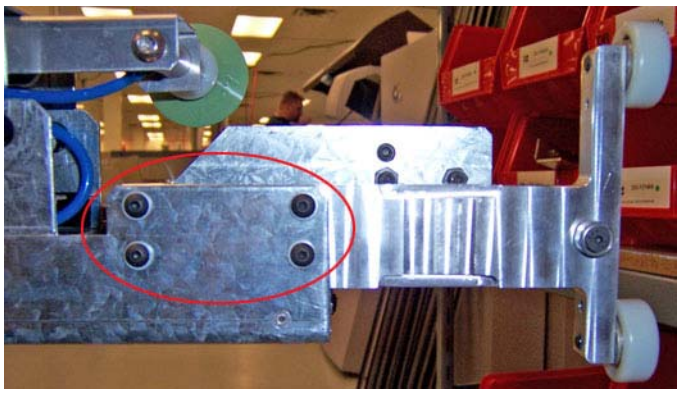


15. Disconnect the blue tubes from the three vacuum generators mounted on the flex track tray.



16. Disconnect the flex harness from the load table flex track tray. The travelers flex harness and all the tubes should now be loose and ready to be removed from the device.

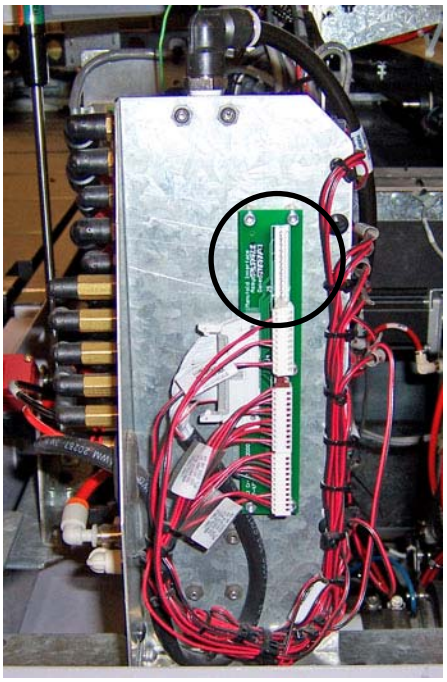
17. On one side of the traveler, the away side should have the easiest access, remove the four screws securing the travelers wheel bracket to the traveler and remove the wheel bracket. Access to the screws is from below.



18. Remove the traveler from the device. There are cutouts in the tracks on either side that will allow you to remove the traveler from the tracks without loosening the tracks.

3.2 Installing the new Load Table Traveler

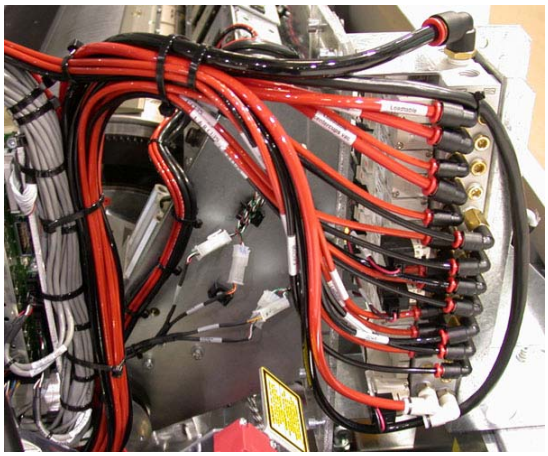
1. On the new load table traveler, remove the wheel bracket from one side of the traveler—again, the away side is the easiest.
2. Install the new load table traveler using the cutouts in the tracks to get the traveler wheels in the track. Insert the wheels of the removed wheel bracket into the track and attach the wheel bracket to the traveler with the four screws. Make sure that the new traveler moves forwards and backwards smoothly in the tracks.
3. Feed the remaining tubes through the grommeted hole in the tray to the outside of the tray so that the tubes can be routed to the manifold. Secure the flex track to the flex track tray.
4. Connect the blue tubes from the flex track to the three vacuum generators mounted on the flex track tray.
5. Route the tubes along the cable bundle along the same path as before to the load table manifold.
6. On the manifold, remove one of the blanking solenoids at the bottom of the manifold—be sure to remove the blanking gasket as well.
7. Install the new **Plate Angler** solenoid in place of the blank just removed.
8. Connect the plate angler solenoid's plug to the manifold interface board—there should be one open connector at the top. Use cable ties to secure the new solenoid's wires to the existing wiring harness.



Connector for additional solenoid

9. Connect the tubes from the load table traveler to the relevant solenoids on the manifold—there should be nine tubes (seven as before plus the two additional tubes for the plate angler).

10. Use cable ties to neatly secure the tubes to the cable bundle and make sure that they will not interfere with any moving parts in the device.



11. Back at the traveler, connect the belts to the traveler. Use the marks you made before to attach the belts in the same location.

12. Remove the cable ties securing the belts around the rear pulleys and tension the belts with the two tensioners on the front pulleys. Tighten the tensioner screws.

13. Move the traveler to the rear and check the traveler alignment using a tape measure—no adjustments should be necessary.

14. Lower the away side shoulder panel and secure it in place with its screws.

15. Install all other panels that were removed. Do not install the load table rails or the unload table panels yet. Close the rear hood and the front hood.

16. Turn the compressed air supply to the device on and turn the power switch to ON.

17. After the device has initialized, install CR 4.01 if it is not already installed. Also install the patch that supports the plate angler. See the CR 4.01 page on TechPlanet for details (http://techplanet.creo.com/output/computer_to_plate/magnus_vlf/nav/crelease40.htm#patches).

18. Type `>>hwconfig plateangler enable` to enable the plate angler.

19. Type `>>door unlock` and open the front hood.

20. Turn the Safety Interlock Override (SIO) switch to the **Interlock Override** position.

21. Update the electronic 100 label in Service Shell. If the electronic tracker is not available, make a manual note that the device has been upgraded with the plate angler.

3.3 Testing the new Load Table Traveler

1. Test the plate angler functionality using the following commands:

   a. `>>loadtable init` – check that the load table traveler moves to the home position and returns to approximately the middle of the load table.

   b. `>>loadtable centering unlock` – listen for the locks to disengage.

   c. `>>loadtable plateangler on` – check that the left and right vacuum cup assemblies rotate outward (i.e., the right assembly rotates anti-clockwise and the left assembly rotates clockwise).

   d. `>>loadtable plateangler off` – check that the vacuum cup assemblies return to approximately the centered position.

   e. `>>loadtable centering lock` – check that the vacuum cup assemblies lock in the centered position.

   f. `>>loadtable wiffle unlock` – check that the wiffle bar is free to rotate.

   g. `>>loadtable wiffle lock` – check that the wiffle bar locks in the centered position.

   h. `>>loadtable leftrightcups up` – check that the left and right vacuum cups move to the up position.

   i. `>>loadtable leftrightcups vac on` – check for vacuum at the cups.

   j. `>>loadtable leftrightcups vac off` – listen for the vacuum to stop.

   k. `>>loadtable leftrightcups down` – check that the left and right vacuum cups move to the down position.

   l. `>>loadtable centercups up` – check that the center vacuum cups move to the up position.

   m. `>>loadtable centercups vac on` – check for vacuum at the cups.

   n. `>>loadtable centercups vac off` – listen for the vacuum to stop.

   o. `>>loadtable centercups down` – check that the center vacuum cups move to the down position.

2. Install the load table rails and the unload table panels.

3. Close the front hood.
4. Turn the SIO switch to the **Normal Operation** position.