Checklist and Troubleshooting Guide

English

Magnus 400 MCU

731-00824A-EN Rev A

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Overview

This document provides a series of checks and troubleshooting procedures to help you resolve common problems that might occur when you work with the *Kodak Magnus* 400 platesetter with MCU and *Kodak Magnus* 400 Quantum platesetter with MCU configurations. The document includes the following sections:

- Leveling the Platesetter
- Plate Loading
- Plate Picking Positions
- Plate Skewing
- Punch Entry
- Drum Loading
- Installing Spring Spoilers
- Testing the Loading Sequence

Product

- *Magnus* 400 platesetter
- *Magnus* 400 Quantum platesetter
- *Magnus* Controller version 1.01.391

Symptoms

- Platesetter and MCU levels not uniform
- Plate loading problems
- Plate skewing
- Misregistration

Solution

Leveling the Platesetter

Leveling helps to ensure smooth plate loading.

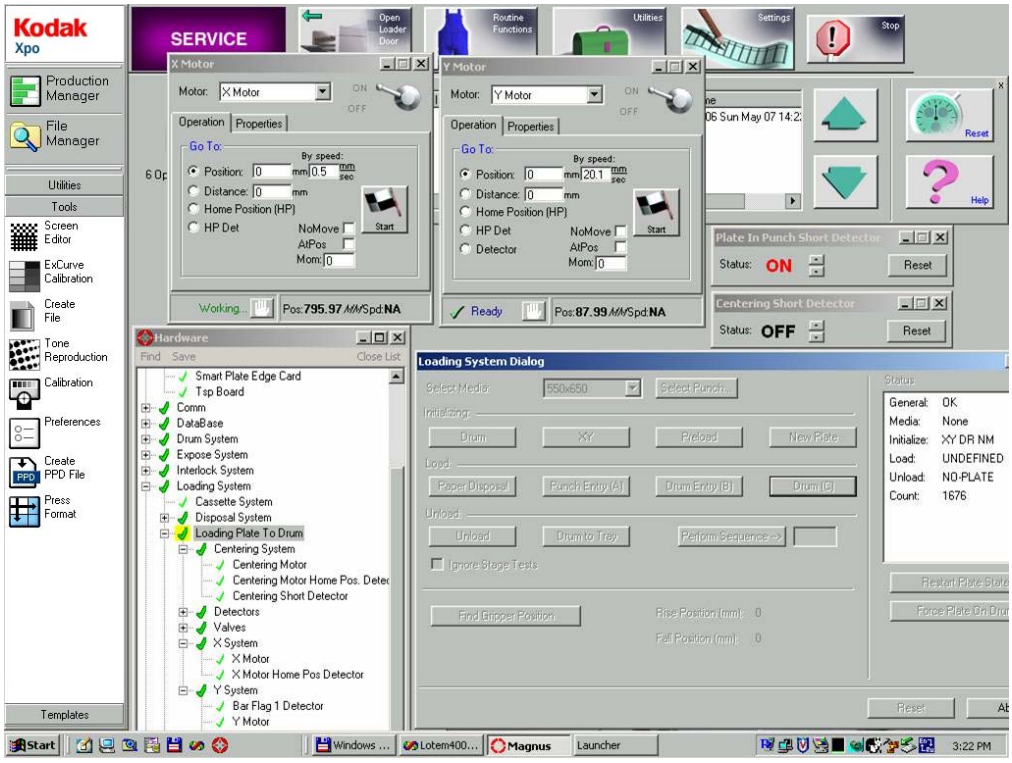
- Using a standard leveling instrument, verify that the platesetter and the MCU are positioned on a uniform horizontal plane, with all four wheels raised above the floor.
  See "Leveling the Platesetter" in the Magnus 400 Installation Guide.

Plate Loading

Before checking the loading sequence, check the room's humidity. Low humidity might cause double loading or slipsheets to attach to the plate during the loading sequence.

1. After checking the room's humidity, open the front and rear doors of the platesetter and insert the cheaters.

2. In *Magnus* Controller, open the following windows:



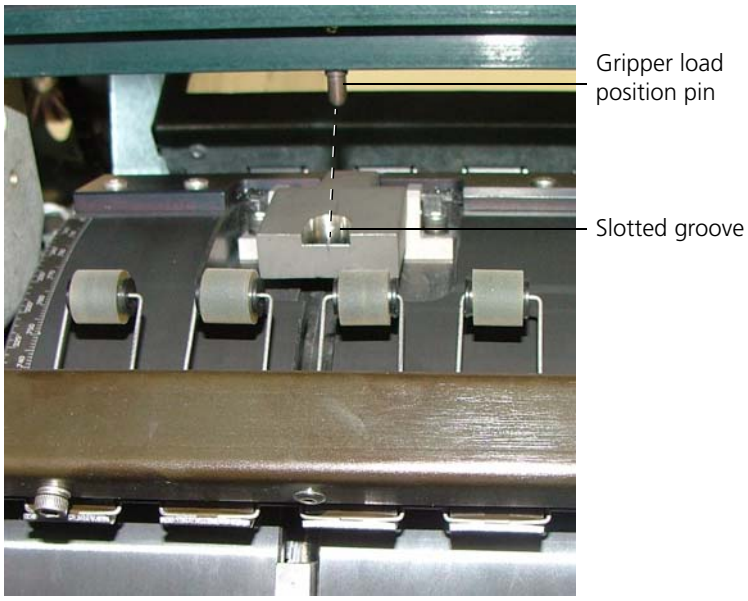
- X Motor—on the **Operations** toolbar, select **Utilities > Hardware > Loader > DC Motors > X Motor**
- Y Motor—on the **Operations** toolbar, select **Utilities > Hardware > Loader > DC Motors > Y Motor**
- Plate in Punch Short Detector—on the **Operations** toolbar, select **Utilities > Hardware > Loader > Detectors > Plate in Punch Short Detector**
- Centering Short Detector—on the **Operations** toolbar, select **Utilities > Hardware > Loader > Detectors > Centering Short Detector**

3. Perform a loading sequence and check the following:
   a. Do any of the corners of the plate bend when it is removed from the cassette? If so, identify the cause.
   b. Does the XY bar remain parallel to the drum? If it does not, manually adjust the XY bar position.
   c. Does air leak from the suction cups when the vacuum is activated and do the suction cups securely hold the plate? Check the suction cups and replace faulty cups. See Maintenance for MCU for Lotem 400.
   d. Does the plate bend when it touches the short pins? If it does bend, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Cassette To Punch Entry Stage** and change the value of the **X Extra To Short Pins (mm)** parameter to **3**.

e. Does the plate bend when you are centering it between the centering pins? If it does bend, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Cassette To Punch Entry Stage** and change the value of the **Centering Speed** parameter to **1**.

f. Does the drum remain stationary while releasing the head grippers? If it does not, check that the gripper load position pins are pressing the middle of the head gripper slotted grooves. If they are not, adjust the pins so that they do.

Note: A faulty distribution board or drum driver can cause the drum to move.



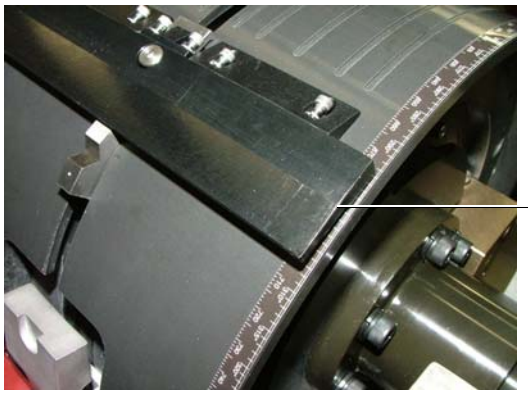
g. Run a preload command to make sure the gripper is parallel, and then check that the clearance between the tail gripper spoilers and the drum is 0.05 mm (0.002"). If it is not, use a shim and adjust accordingly. See the "Adjusting the Shim Clearance" on page 5.

Important: Only an experienced engineer should check shim clearance.

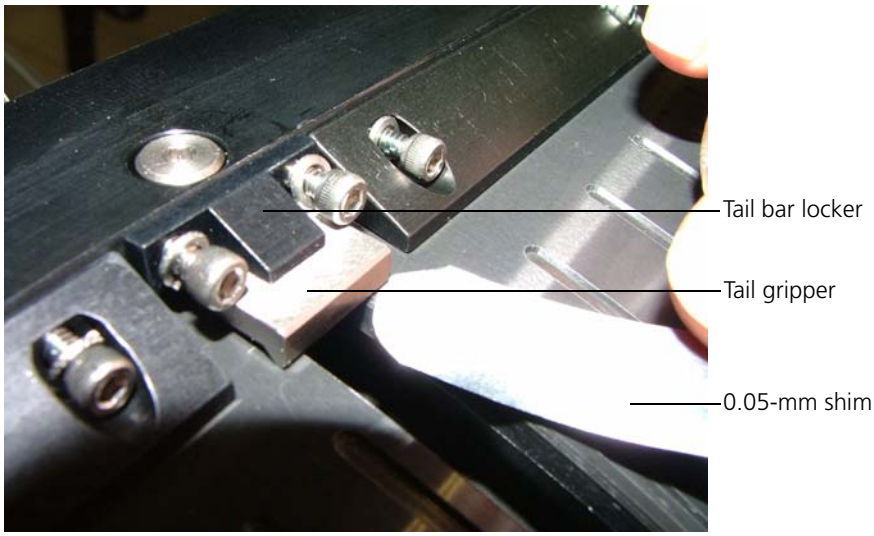
Adjusting the Shim Clearance

Important: Only experienced engineers should perform the following procedure.

1. Manually position the tail gripper assembly so that the middle of the assembly is at 300°.

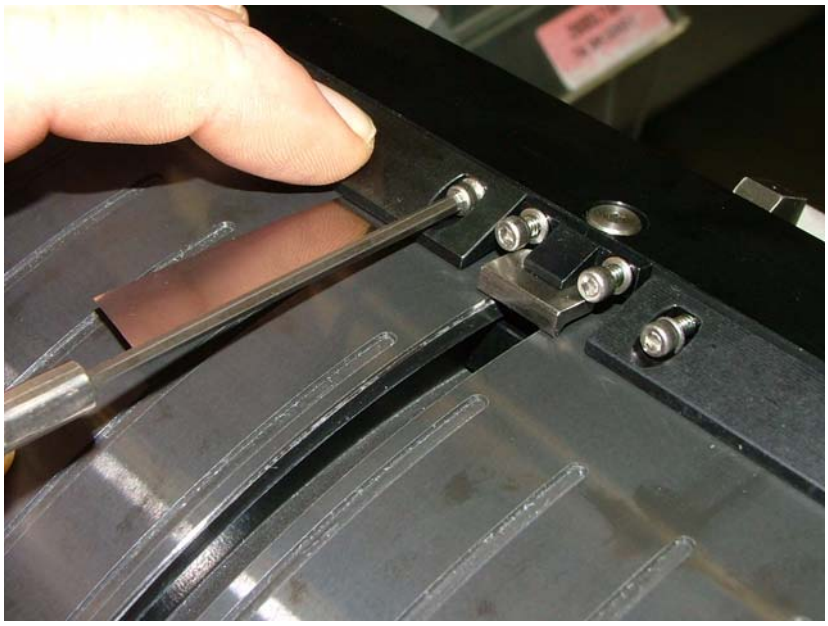


2. Verify that the four tail bar lockers are pressed down as far as possible and that a 0.05-mm (0.002") shim cannot be easily inserted under the tail gripper.



3. If you can easily insert the shim under the tail gripper, adjust the clearance.
   a. Loosen the two tail gripper screws.
   b. Press down on the tail bar locker, pushing it down as far as possible.
   c. When the tail bar locker is pressed down as far as possible, tighten the two screws.

4. Verify that the clearance between the seven tail gripper spoilers and the drum is 0.05 mm (0.002").



a. Insert the 0.05-mm (0.002") shim under first tail gripper spoiler and slide it from one side of the tail gripper spoiler to the other side. You should be able to slide the shim, but with some resistance.

b. If the shim slides easily from one side to the other, adjust the clearance.

c. Loosen the screws that secure the tail gripper spoiler to the tail gripper assembly.

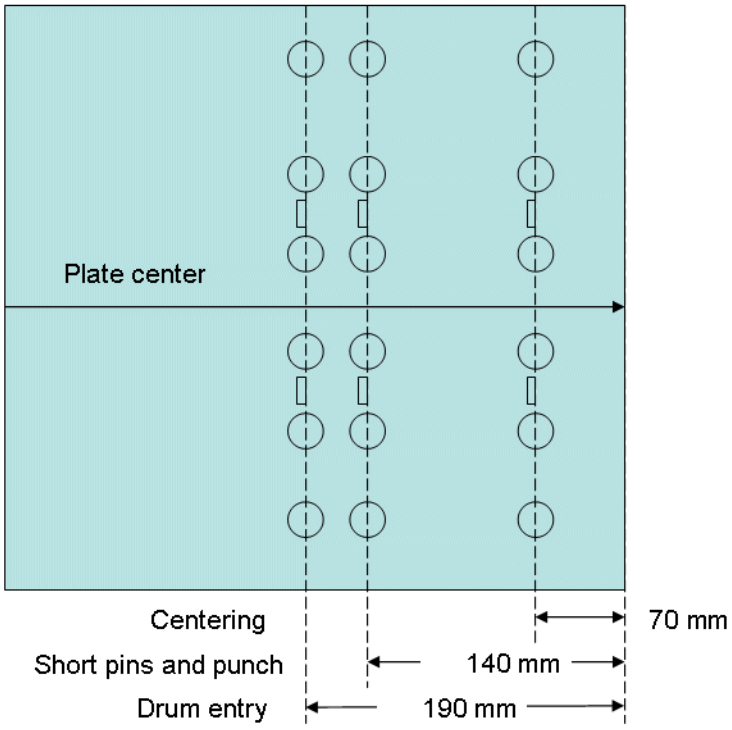
d. Next to the right tail gripper spoiler screw, press down on the front of the tail gripper spoiler and tighten the tail gripper spoiler screw. Adjust the left tail gripper spoiler screw in the same way.

Note: If there is not enough clearance, loosen the screw, press on the back of the tail gripper spoiler, and then tighten the screw.

e. Repeat steps 4a–4d for each of the remaining six tail gripper spoilers.

Plate Picking Positions

Plate-picking positions are defined in *Magnus* Controller. To check that the plates are being picked up at their defined positions, mark the underside of the plate with these positions.



1. Verify that the plate is picked up from the relevant cassette according to the defined plate-picking position—70 mm (2.76") from the leading edge of the plate. If the plate is not picked up, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Cassette To Punch Entry Stage** and change the value of the **X Position In Cassette For Cst (mm)** parameter to the value displayed when the plate-picking position reaches the correct mark. The default X position plate-picking parameters are:
   - **X Position In Cassette For Cst 1 (mm)** = 315
   - **X Position In Cassette For Cst 2 (mm)** = 167
   - **X Position In Cassette For Cst 3 (mm)** = 27
2. In *Magnus* Controller, open the following windows (see step 2 in "Plate Loading" on page 2):
   - X Motor—on the **Operations** toolbar, select **Utilities > Hardware > Loader > DC Motors > X Motor**
   - Y Motor—on the **Operations** toolbar, select **Utilities > Hardware > Loader > DC Motors > Y Motor**
   - Plate in Punch Short Detector—on the **Operations** toolbar, select **Utilities > Hardware > Loader > Detectors > Plate in Punch Short Detector**
   - Centering Short Detector—on the **Operations** toolbar, select **Utilities > Hardware > Loader > Detectors > Centering Short Detector**

3. In *Magnus* Controller, select **Utilities > Hardware > Loader > DC Motors > X Motor**, move the X motor to position **760** and verify that the suction cups are above the first row of rollers. If they are not above the rollers, adjust the X motor position accordingly.



Position 760

4. Check that the plate separates easily from the other plates in the cassette. If the plates stick together, verify that you are using Kodak plates that have been qualified for loading in the *Magnus* 400 platesetter.
5. Verify that the plate reaches centering position without touching the punch. If it does not, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Cassette To Punch Entry Stage** and adjust the relevant parameter values to match the values in the following parameters:
   - **X Half Way (mm)** = 820
   - **X In Punch (mm)** = 835
   - **X In Punch for small plate (mm)** = 835
   - **X Pre Extra To Short Pins (mm)** = 48
   - **X Pre Extra To Short Pins For 015 (mm)** = 48
   - **X Pre Extra To Short Pins For 02 (mm)** = 48

Plate Skewing

The centering system is used only to verify centering and plate width accuracy. If a plate is not centered properly in the cassette, it might become skewed during the centering process.

1. If a plate becomes skewed during the loading sequence, do the following actions:
   a. In *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Cassette To Punch Entry Stage** and change the value of the **Centring Wait Dis (mm)** parameter to **5 mm**.
   b. Verify that the plate reaches the centering pins, but does not touch them.
   c. If the plate touches the centering pins, adjust the plate centering in the cassette.
2. Check that the centering pins do not cause the plate to bend. If the plate bends, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Cassette To Punch Entry Stage** and verify that the **Centring Speed** parameter value = **1**.

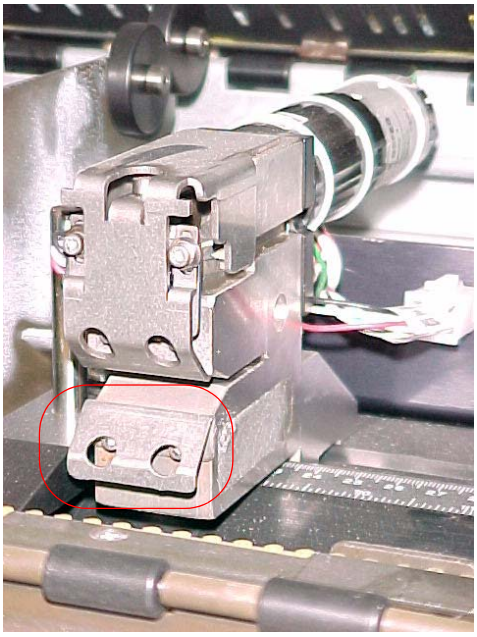


Note: Sometimes a plate might bend because the suction cups are not holding the plate properly.

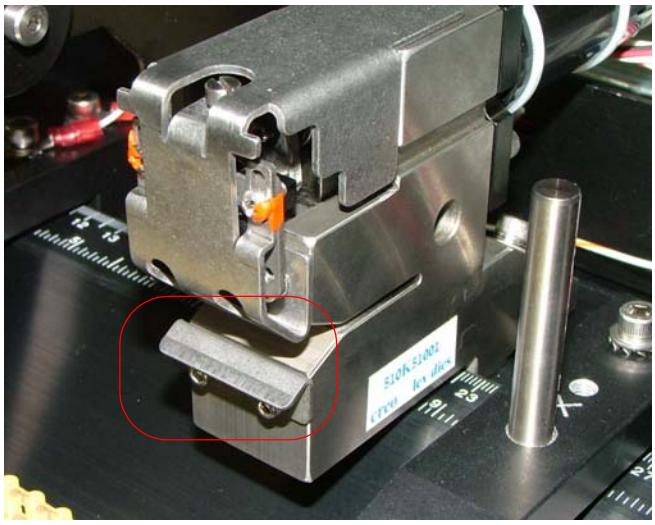
3. Verify that plate position stickers appear on the metal surface in the cassettes. If the centering pins are not working properly, use the plate position stickers as a guide to correctly position the plate in the cassette.
4. Verify that the plate is picked up for punch at the defined plate-picking position—140 mm (5.51") from the leading edge. If the plate is not picked up at the defined position, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Cassette To Punch Entry Stage** and change the value of the relevant X position parameter, accordingly. The correct X position parameter is **X Before In Punch (mm) = 760**. See the plate-picking positions diagram on page 7.
5. Visually check that the suction cups do not slide when the plate touches the short pins.
6. Verify that the suction cups remain attached to the plate and do not slide backward when the plate reaches the short pins and punch.
7. Verify that a thin plate (0.14 mm or 0.15 mm [0.005" or 0.006"]) reaches the punch entry position and slides smoothly into the punch entry. If the plate slides under the punch entry, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Punch Entry To Drum Entry Stage** and change the value of the relevant Y position parameter, accordingly. The correct Y position parameter is **Y Up After Cantring = 85**.

8. Verify that a thin plate (0.14 mm or 0.15 mm [0.005" or 0.006"]) does not reach punch entry position under the punch guides. If a thin plate reaches punch entry position under the punch guides, replace the short punch guides with long ones.

To replace punch guides, see Punch Configurator.



Long punch guide



Short punch guide

Punch guides are available in the following widths:

- 30 mm (1.18") – 290A2T777
- 50 mm (1.97") – 290A2T778
- 69 mm (2.72") – 290A6B844

Punch Entry

This section provides a series of checks and procedures to help you solve punch entry problems that might occur during a loading sequence.

1. Verify that the plate is picked up before drum entry at the defined plate-picking position—190 mm (7.48") from the leading edge. See the plate-picking positions diagram on page 7. If the plate is not picked up at the defined position, in *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Punch Entry To Drum Entry Stage** and change the relevant X position parameter, accordingly. The correct X position parameters are:

   - **X In After Punch (mm)** = 760
   - **X Move X Upto Wheels mm** = 0

   Note: Do not change the following parameters; they are not active.

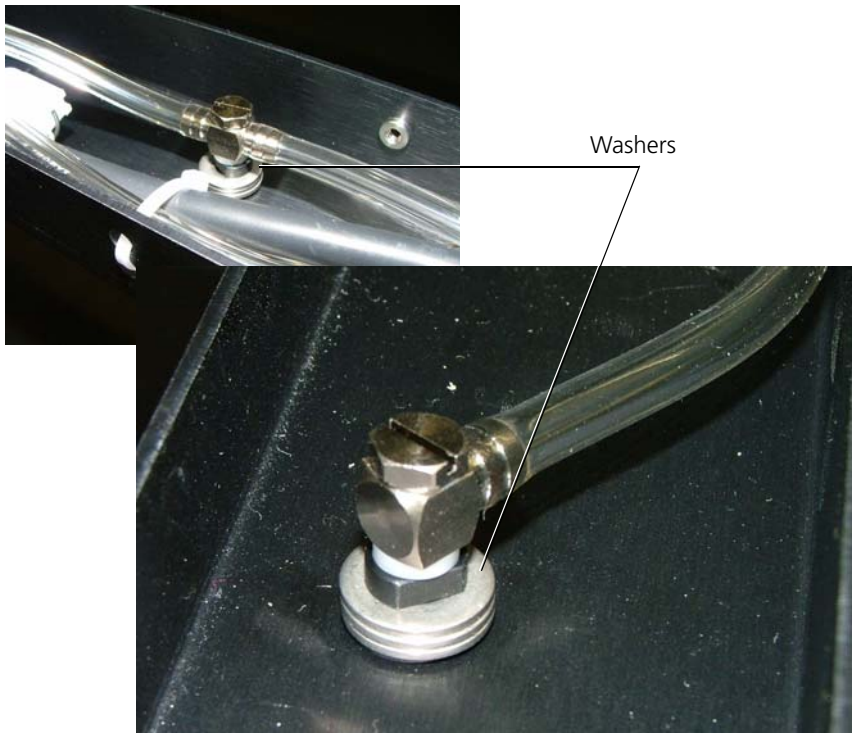
   - **X Move X Upto Wheels For 015 (mm)**
   - **X Move X Upto Wheels For 02 (mm)**

2. Verify that a thin plate (0.14 mm or 0.15 mm [0.005" or 0.006"]) does not touch the punch roller guides or the punch's top wires. If the plate is very flexible and touches the punch roller guides, tilt the XY bar to lift the leading edge of the plate.

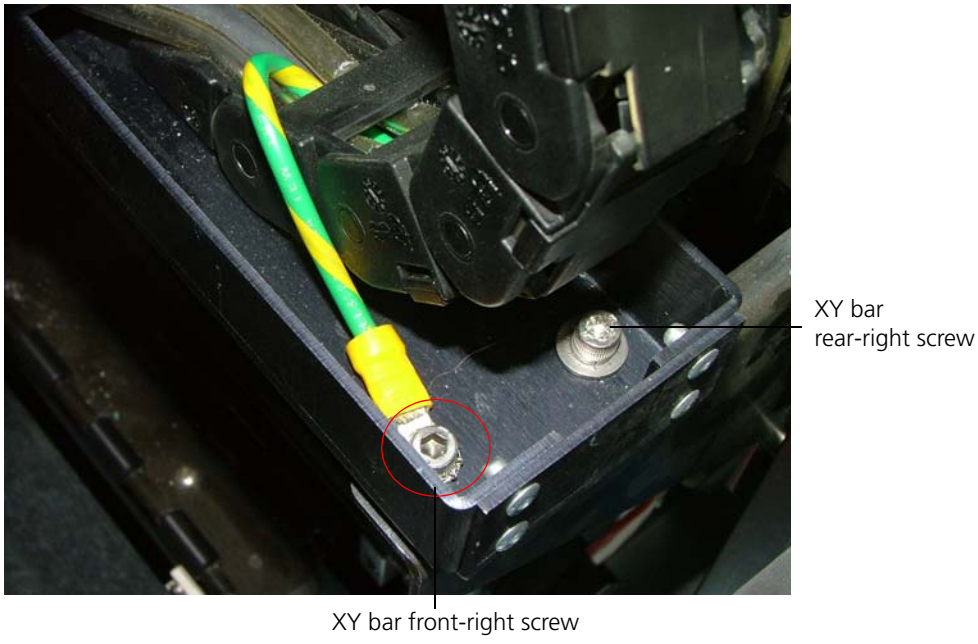
   a. Remove the three screws that secure the top cover to the XY bar, and remove the top cover.



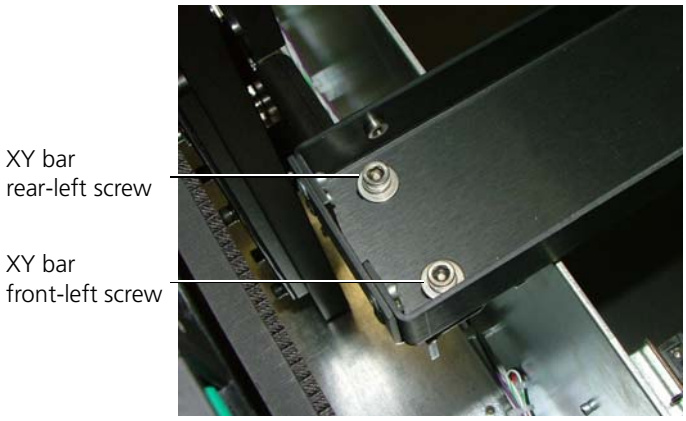
b. Remove the washers from the suction cups. The washers enable the suction cups to hold the plate horizontally while transferring it toward the drum entry. There are six suction cups on the XY bar; the two middle cups do not have washers.



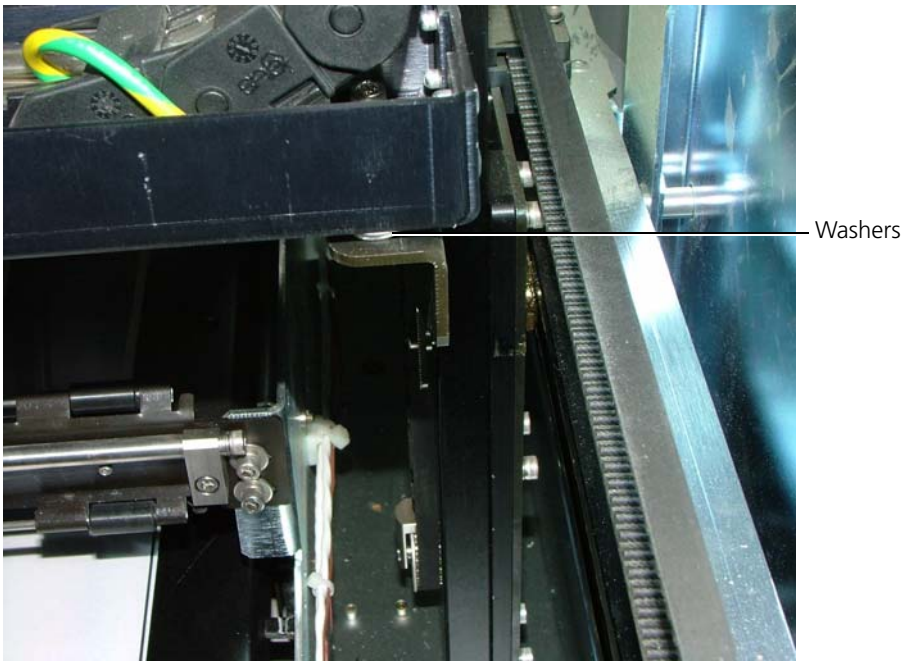
c. On the right side of the XY bar, remove the front screw that secures the XY bar to the support and loosen the rear screw.



d. On the left side of the XY bar, remove the front screw that secures the XY bar to the support and loosen the rear screw.



e. On the right side of the XY bar, insert two washers between the XY bar and the support, and then insert two washers on the left side of the XY bar, between the XY bar and the support.



f. Return the two front screws that secure the XY bar to the support and tighten, and then tighten the two rear screws.

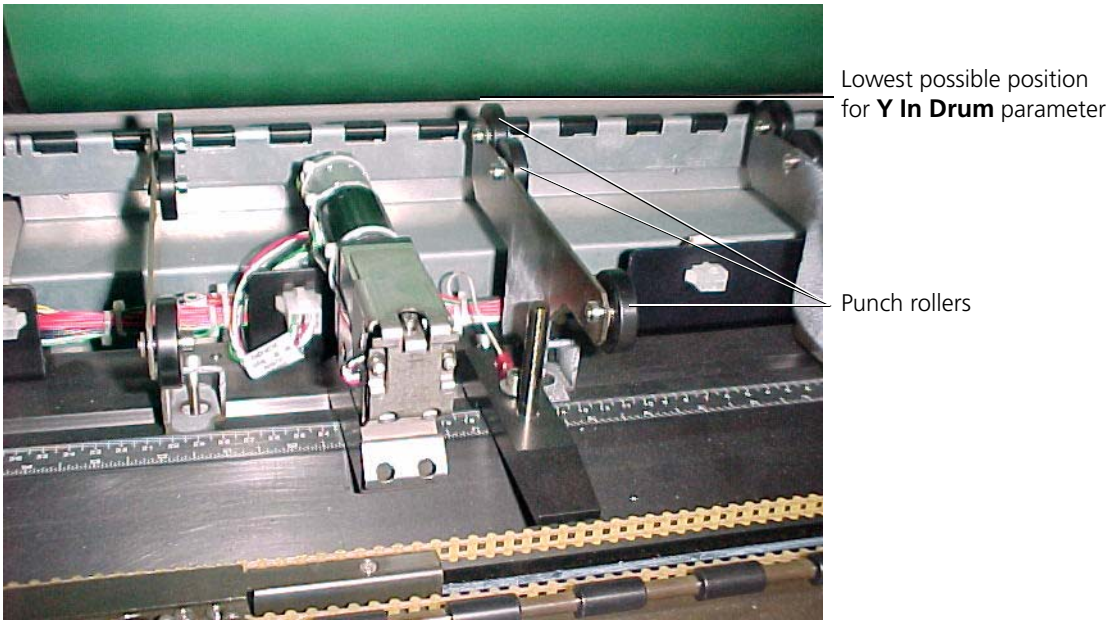
g. Verify that the suction cups are tilted toward the direction of the loading sequence.

h. Return the three screws that secure the top cover to the XY bar, and tighten.

i. In *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > From Punch Entry To Drum Entry Stage** and change the value of the **X Near To Drum (mm)** parameter to **900.**

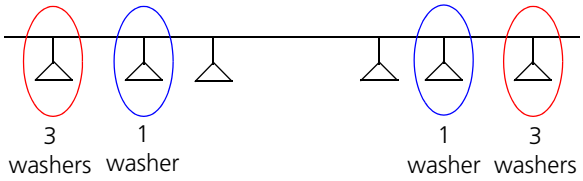
j. In *Magnus* Controller, select **Utilities > Hardware > Loading System > Load Plate > Punch Entry To Drum Entry Stage** and adjust the value of the relevant **Y In Drum** parameter to the lowest possible value.

- For 0.3-mm (0.012") plates, the lowest possible value = 35
- For other plates, the lowest possible value = 20



k. Load a thin plate (0.14 mm or 0.15 mm [0.005" or 0.006"]) and verify that it does not touch the punch rollers.

3. Visually verify that the punch entry is clear and that the plate moves smoothly in and out of the punch.
4. Verify that the plate does not collide with the paper disposal rollers when it moves backward. A long plate might get caught by the rollers. If it does, remove the row of rollers.
5. Verify that the plate does not touch the vacuum grooves. The vacuum grooves might cause the plate to become skewed. If this happens, on the XY bar, remove the single washers from the middle suction cups and the three washers from the external cups. See steps 2a–2h.



Drum Loading

Perform the following procedure to verify that the drum loads properly during the loading sequence.

1. In Magnus Controller, select **Utilities > Hardware > Loading System > Load Plate > From Punch Entry To Drum Entry Stage** and change the value of the relevant **X In Drum (mm)** parameter to **0.**
2. Load a plate and check its position in relation to the registration pin. The leading edge of the plate should be about 0.5 mm (0.02") from the registration pin.
3. If the plate is not positioned correctly, in *Magnus* Controller, select **Utilities > Hardware >Loading System > Load Plate > From Drum Entry to Drum Stage** and adjust the relevant X position parameter until you reach 0.5 mm (0.02").
   - **X In Drum (mm)** =
   - **X In Drum For 0.15 (mm)** =
   - **X In Drum For 0.2 (mm)** =
   - **X In Drum For Small Plate(mm)** =

Installing Spring Spoilers

If you still encounter loading problems after performing the series of checks and adjustment procedures, replace the front spoilers on the drum-head grippers with spring spoilers.



Spring spoilers

Testing the Loading Sequence

After you complete the above series of checks and adjustment procedures, run a loading sequence while imaging four separations to verify punch and registration accuracy.

Technical Contact(s)

Content owner: Mario Amir

Submitted by: David Nacash

See the Escalation page for escalation contacts.

Date Submitted

25 Jun 2006

Last Updated