

LMQ II Service Manual



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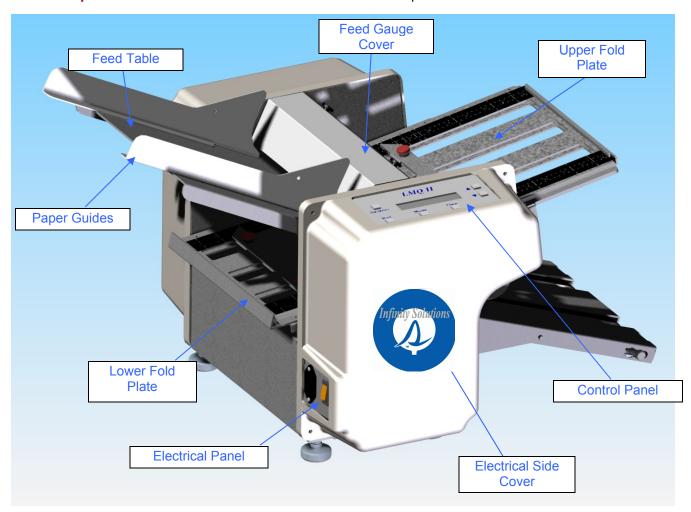
Tools Needed

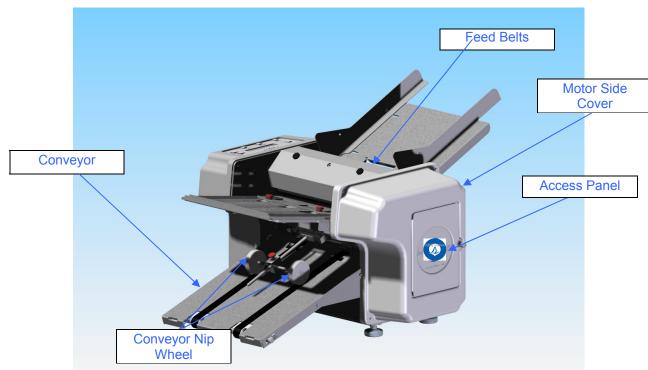
- Set of U.S.A. standard Inch Allen Wrenches (3/32", 5/64", 1/8", 5/32", 3/16", 1/4")
- 7/16" Deep Socket & Driver
- 1/2" Open end wrench
- Needle nose Pliers
- Flat Head Screwdriver
- Continuity Tester

<u>Marning:</u> Before servicing the machine, disconnect the power cord from the machine.

Machine Overview

△ Read the *Operators Manual* to become familiar with the machine operation.





Chassis

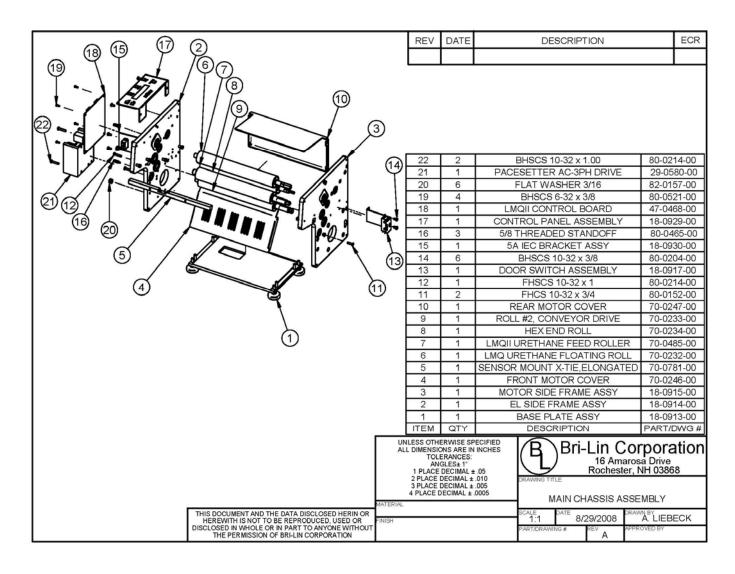


Figure 1: Chassis Assembly View

Removing the Side Covers

- ▲ Unplug the power cord from the machine before continuing.
- 1. Remove the four *Cover Mount Screws* at the corners of the side cover [Figure 2].

Removing the Motor Side Frame

- ▲ Unplug the power cord from the machine before continuing.
- 1. Remove both Fold Plates.
- 2. Remove the Motor Side Cover [Figure 2].
- 3. Remove the *Feed Gauge Cover* by removing both black thumb screws.
- 4. Turn the machine on its side (Electrical Side face



down),resting it on the *Electrical Side Cover* so that the side *Electrical Side Frame* is seated properly in the side cover.

- 5. Remove the **Conveyor Drive O-Ring** [Figure 6].
- 6. Remove the Feed Drive Belt [Figure 6].
- 7. Remove the *Plastic Roll Gears* [Figure 6].
 - a. Remove the *E-clips* from the shafts.
 - b. Slide the Plastic Gears off of the shafts
- 8. Remove the *Roll Gears* [Figure 6].
 - a. Loosen both set screws 2-3 turns.
 - b. Pull the gear off of the roll.
 - c. Remove the key from the roll.
- 9. Remove the *Motor Gear* [Figure 6].
 - a. Loosen both set screws 2-3 turns.
 - b. Pull the gear off of the motor shaft.
 - c. Remove the key from the motor shaft.
- 10. Remove the *Idler Gear* by removing the shoulder-bolt on which it is mounted [Figure 6].
- 11. Remove the Feed Drive Pulleys [Figure 6]
 - a. Loosen the set screws 2-3 turns.
 - b. Pull the pulleys off of the shaft.
- 12. Remove the **Conveyor Drive Pulley** [Figure 6].
- 13. Disconnect both leads from the **Door Switch** [Figure 6].
- 14. Remove the screws which attach the *Feed Table*, *Feed Idlers*, *Feed Gauge*, *Base Plate*, *Conveyor* and *Motor Covers* [Figure 3].
- 15. Remove the two *Feet* on the motor side of the machine.
- 16. Remove the two **Base Plate Screws** from the motor side of the machine.
- 17. Remove the *Motor Mount Screws*. Be careful to catch the *Motor* before it drops. Gently let it rest on the *Electrical Side Frame*.
- 18. Slowly pull up on the *Motor Side Frame*. As you pull the frame off of the rolls, reach under and push the *Slide Block* [Figure 3] up against the *Motor Side Frame* so that it stays with the frame as you remove it.

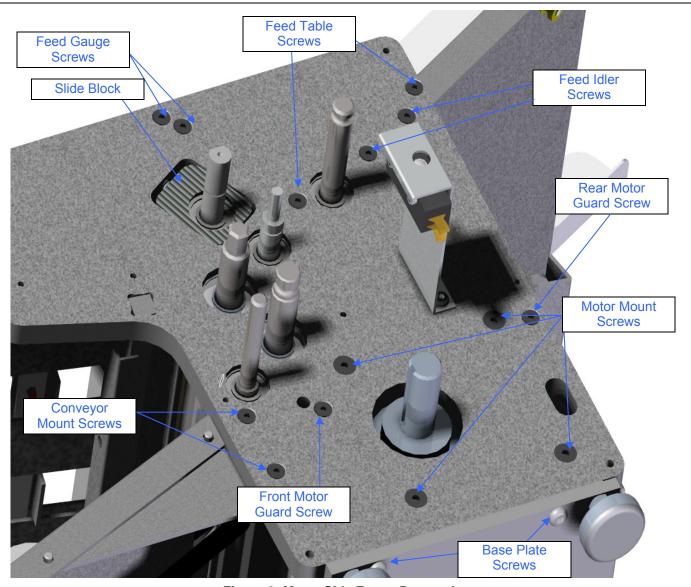


Figure 3: Motor Side Frame Removal

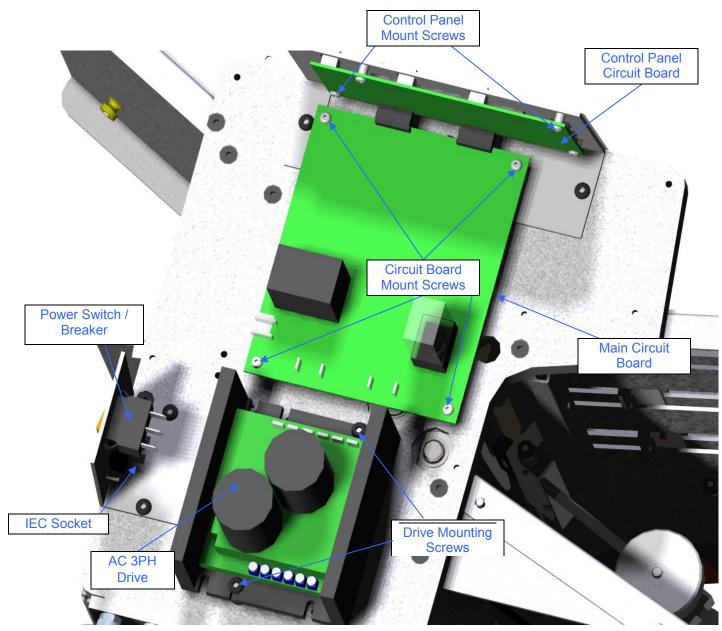


Figure 4: Electrical Side Frame

Servicing the Rolls

- 1. Remove the *Motor Side Frame* [see section above].
- 2. You will now be able to remove any roll that you need service [Figure 5].

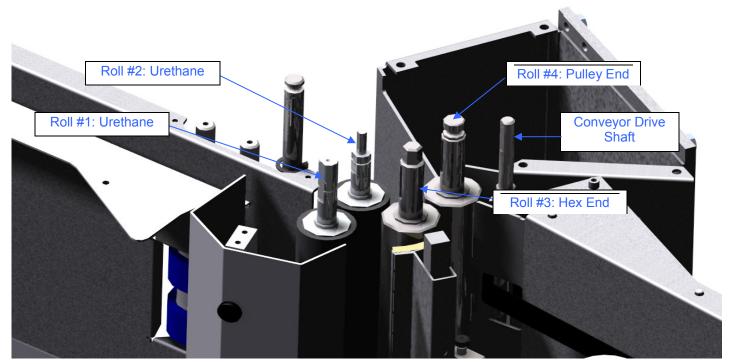


Figure 5: Servicing the Rolls

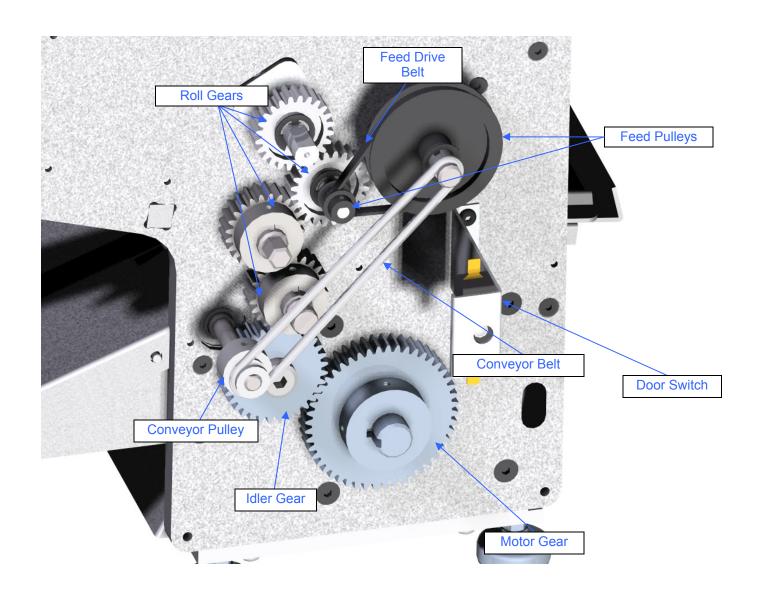


Figure 6: Drive Train

Removing the Drive Train Components

- Unplug the power cord from the machine before continuing.
- 1. Remove the Conveyor Drive O-Ring [Figure 6].
- 2. Remove the Conveyor Pulley [Figure 6].
 - a. Loosen both set screws 2-3 turns.
 - b. Pull the pulley off of the shaft.
- 3. Remove the Feed Drive Belt, and Pulleys [Figure 6].
- 4. Remove the Plastic Roll Gears [Figure 6].
 - a. Remove the *E-clips* from the shafts.
 - b. Slide the Plastic Gears off of the shafts
- 5. Remove the Roll Gears [Figure 6].
 - a. Loosen both set screws 2-3 turns.
 - b. Pull the gear off of the roll.
 - c. Remove the key from the roll.
- 6. Remove the *Motor Gear* [Figure 6].
 - a. Loosen both set screws 2-3 turns.
 - b. Pull the gear off of the motor shaft.
 - c. Remove the key from the motor shaft.
- 7. Remove the *Idler Gear* by removing the shoulder-bolt on which it is mounted [Figure 6].
- 8. Remove the **Feed Pulley** [Figure 6]
 - a. Loosen the set screw 2-3 turns.
 - b. Pull the pulley off of the shaft.

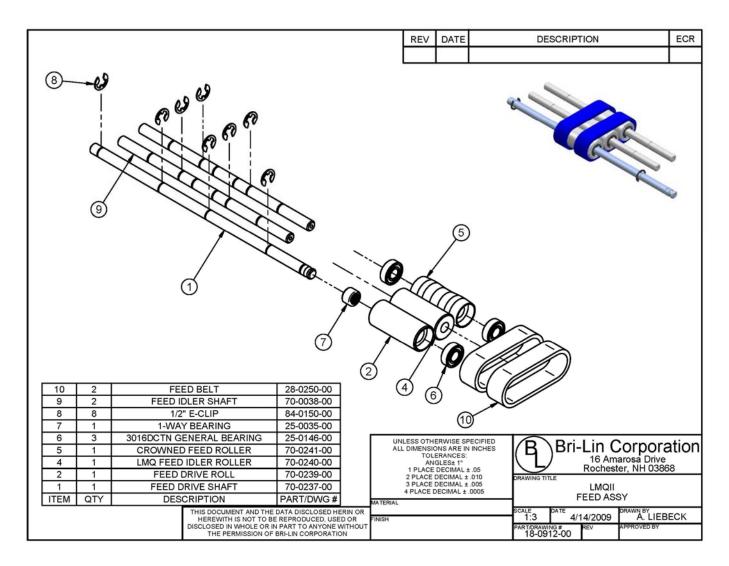


Figure 7: Feed Assembly

Servicing the Feed Drive System and Replacing the Feed Belts

- 1. Remove the *Electrical Side Cover* [Figure 2].
- 2. Remove the **Feed Idler Screws** from the **Electrical Side** [Figure 3].
- 3. Remove the **Feed Idler Screws** from the **Motor Side** [Figure 3].
- 4. Remove the **Retaining E-clips** from the **Feed Drive Shaft** [Figure 3]
- 5. Remove the Feed Drive Pulley from the Feed Drive Shaft.
- 6. The Feed Drive Shaft may now be slid out of the machine from the motor side of the machine.
- 7. Remove the Feed Drive Roller, Feed Idler Shafts and Feed Belts from the machine.
- 8. The **Feed Drive Roller** contains a **1-Way Bearing**, which should always face the **Electrical Side Frame** when reassembled [Figure 8].
- 9. Place the new Feed Belts over the Feed Drive Shaft and Feed Idler Shafts [Figure 8].
- 10. Slide the *Feed Belts* over the *Feed Drive Roller* and *Crowned Feed Idler* so that the belts each straddle a crown on the *Crowned Feed Idler*.
- 11. While holding the *Feed Idler Shafts* in place, screw in the screw which mounts them to the *Electrical Side Frame*.
- 12. Now attach the screw which mounts the shafts to the *Motor Side Frame*.

- 13. Slide the *Feed Drive Shaft* back into the machine through the *Motor Side Frame*, and through the *Feed Drive Roller*.
- 14. Replace the *E-Clips* on the *Feed Drive Shaft*.
- 15. Replace the *Feed Drive Pulley*.

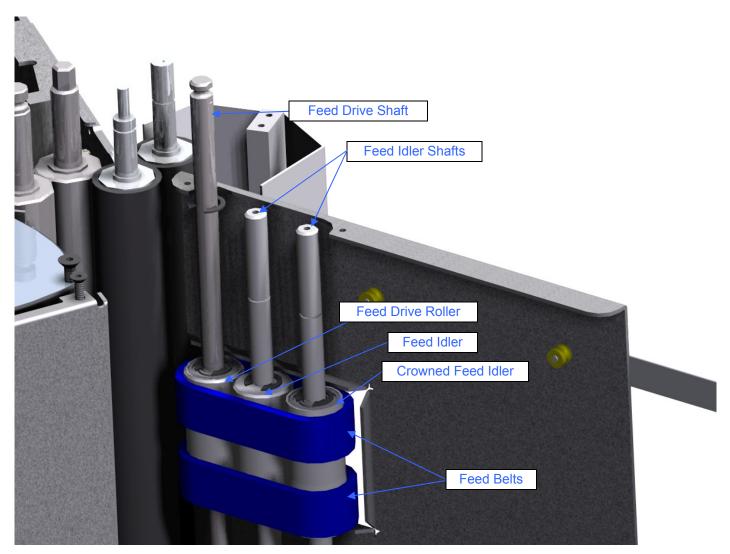


Figure 8: Feed Table Removed

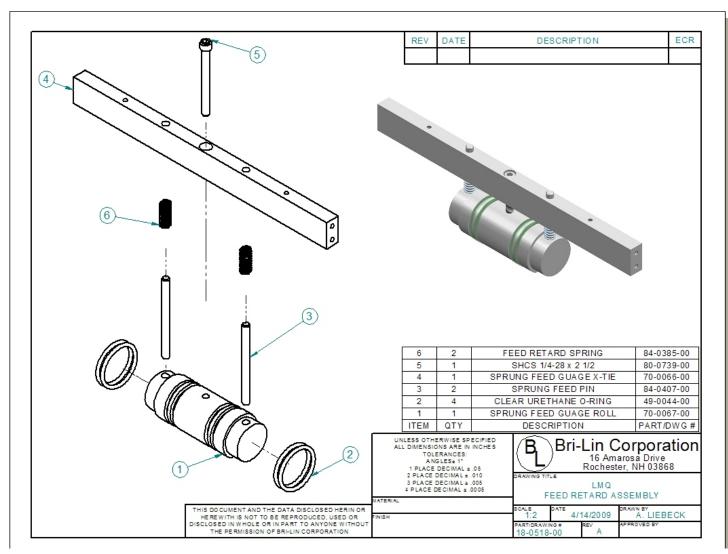


Figure 9: Feed Gauge Assembly

Removing the Feed Gauge System and replacing O-Rings

- ▲ It is not necessary to remove either Side Frame to remove the Feed Gauge System.
- 1. Remove both Side Covers [Figure 2].
- 2. Remove the Feed Gauge Cover [Page 1]
- 3. Loosen by 2 turns the *Feed Table*, *Feed Idler*, *Conveyor*, and *Front & Rear Motor Guard Screws* on the *Motor Side Frame* [Figure 3].
- Remove the Feed Gauge Screws from both sides [Figure 3].
- 5. Pull the *Feed Gauge Assembly* up and out of the machine.
- 6. Remove the **Feed Adjusting Screw** from the **Feed Gauge Assembly**.
- 7. Remove the **Feed gauge roll** from the assembly.
- 8. Remove the old *O-Rings*.
- 9. Place new *O-Rings* onto roll and ensure that the weld seams on the *O-Rings* will not make contact with the paper.

Electrical

▲ Warning: Disconnect *Power Cord* from machine before servicing machine.

Replacing the Motor

- 1. Remove both Side Covers [Figure 2].
- 2. Disconnect the *Motor* from the *Drive*.
- 3. Remove the *Drive Mounting Screws* and move the *Drive* out of the way [Figure 4].
- 4. Remove the Ground Screw.
- 5. Remove the *rear motor guard*.
- 6. Remove the *Motor Gear* from the *Motor*.
- 7. Remove the *Motor Mounting Screws* from the machine.
- 8. Remove the *Motor*.
- 9. Insert the new *Motor* and feed the wires through the *Electrical Side Frame*.
- 10. Slip the Motor Ground Wire over the Ground Screw and re-attach it [Figure 4].
- 11. Mount the Drive using the Drive Mount Screws.
- 12. Connect the *Motor* to the *Drive*.
- 13. Replace the *Rear Motor Guard*.
- 14. Re-attach the Side Covers [Figure 2].

Replacing the Breaker

- If the breaker will not reset, then it may need to be replaced.
- 1. Remove the *Electrical Side Cover*.
- 2. Disconnect the three leads from the rear of the Breaker.
- 3. Depress the two spring arms which hold the **Breaker** in the **IEC Bracket** and remove the **Breaker**.
- 4. Insert the new Breaker.
- 5. Attach the three leads to the rear of the new **Breaker**.
- 6. Re-attach the Electrical Side Cover.

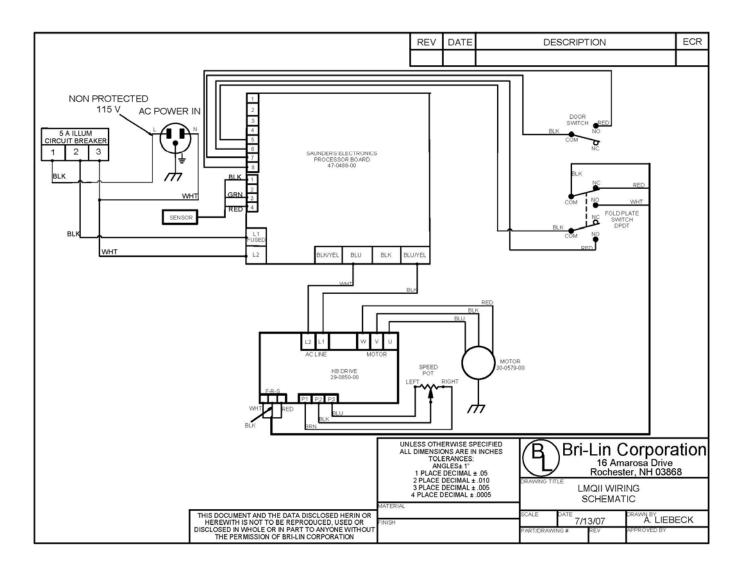


Figure 10: Wiring Schematic

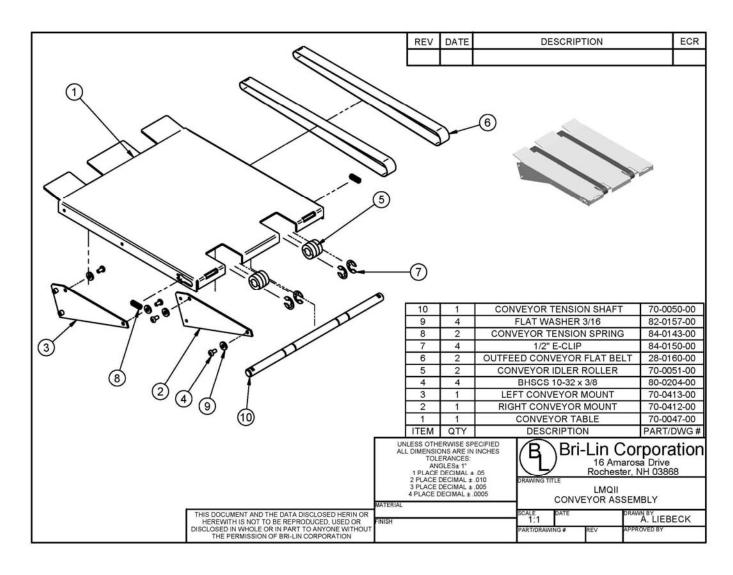
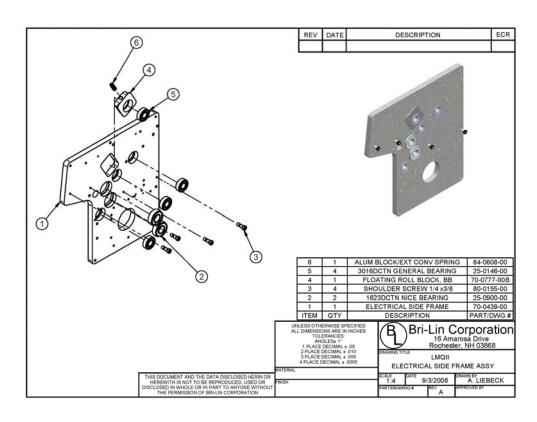
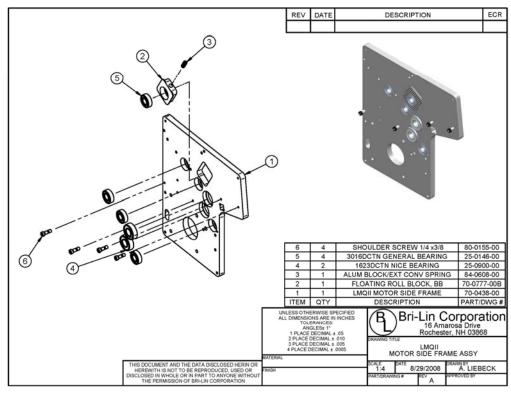


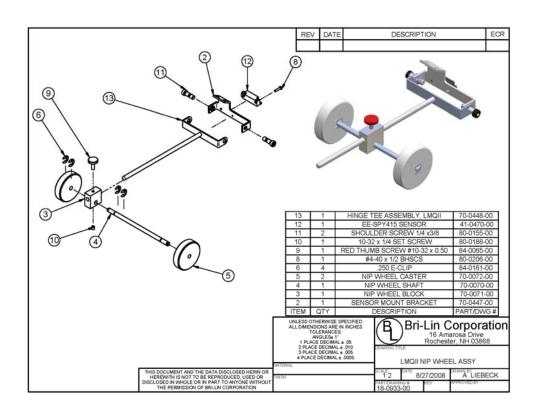
Figure 1: Conveyor Assembly

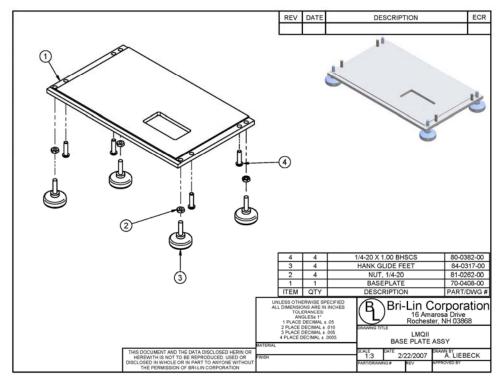
Servicing the Conveyor

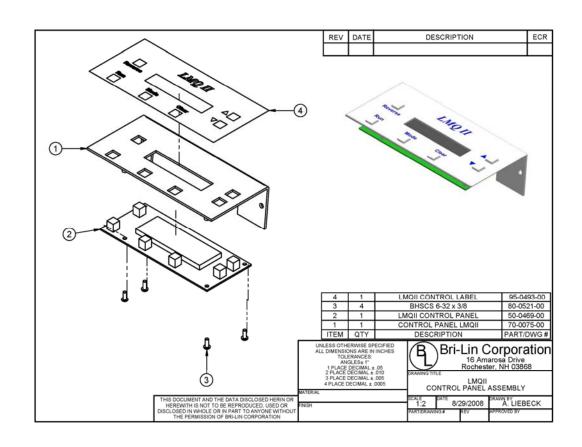
- Disconnect the power cord from the machine before continuing.
- 1. Remove both **Side Covers** from the machine [Figure 2].
- 2. Remove the **Conveyor Mount Screws** from both side frames [Figure 3].
- 3. Remove the *Motor Side Frame* [see procedure above].
- 4. Remove the Conveyor Drive Shaft [Figure 5].
- 5. Slide the **Conveyor Assembly** out of the machine.
- 6. Assemble in reverse order.

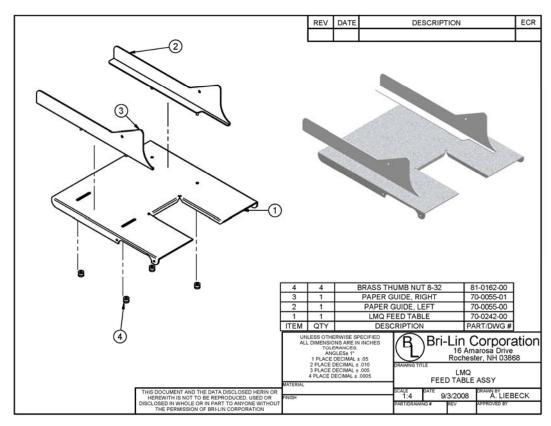


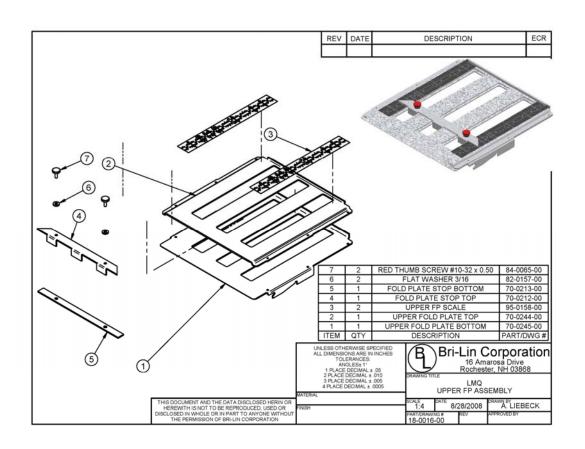


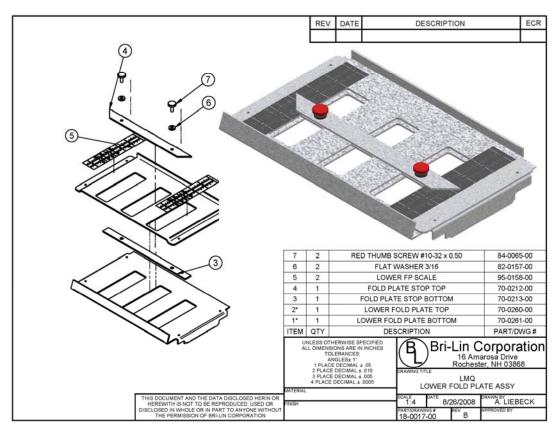


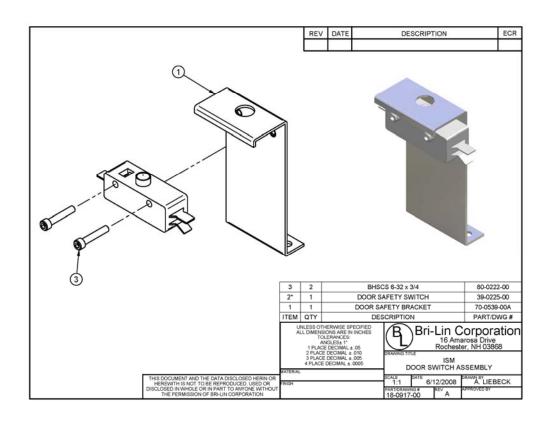


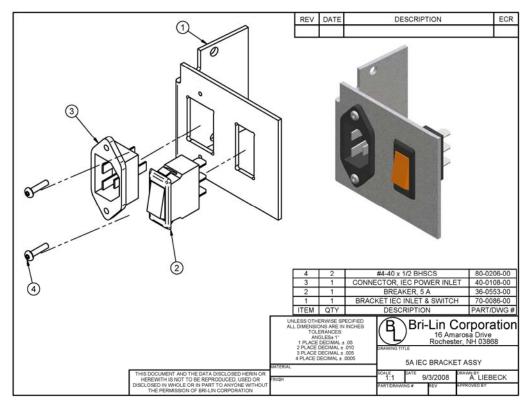


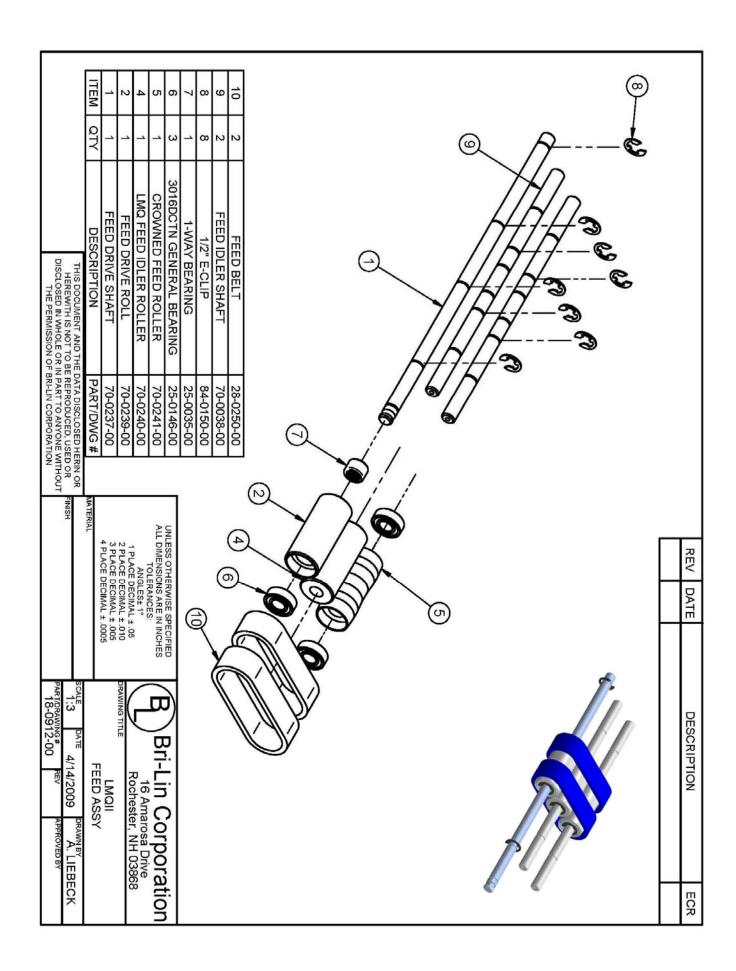


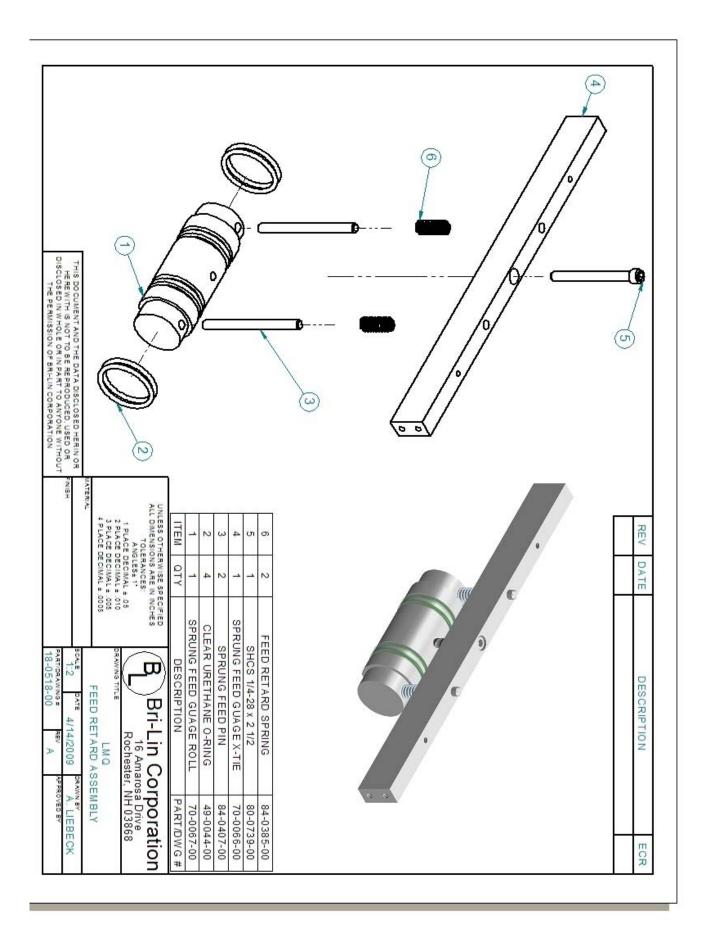


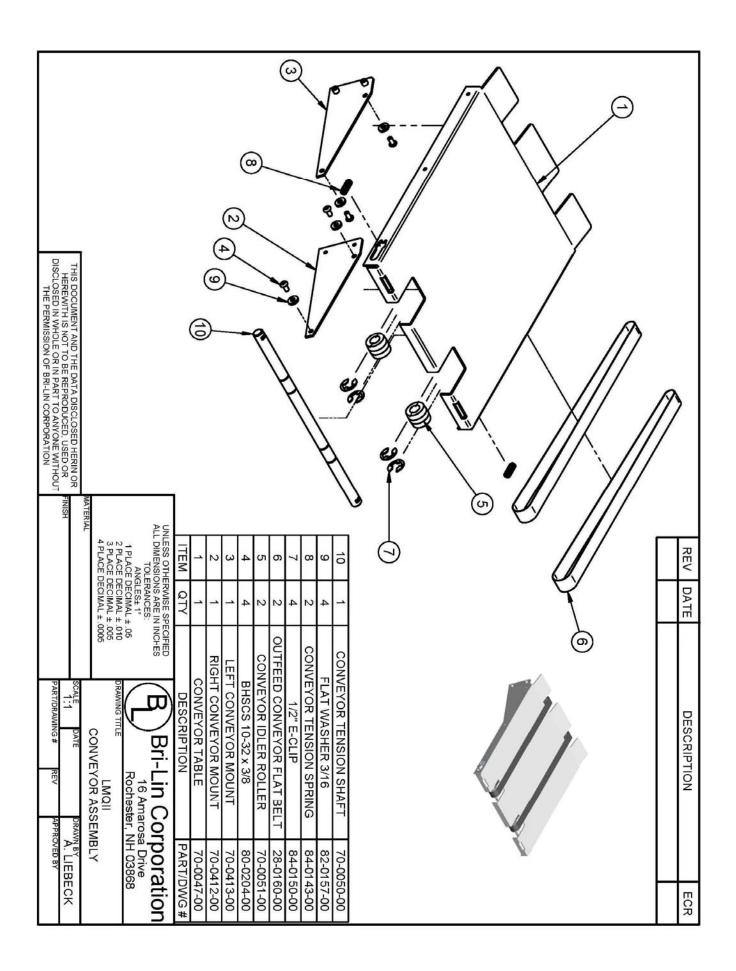


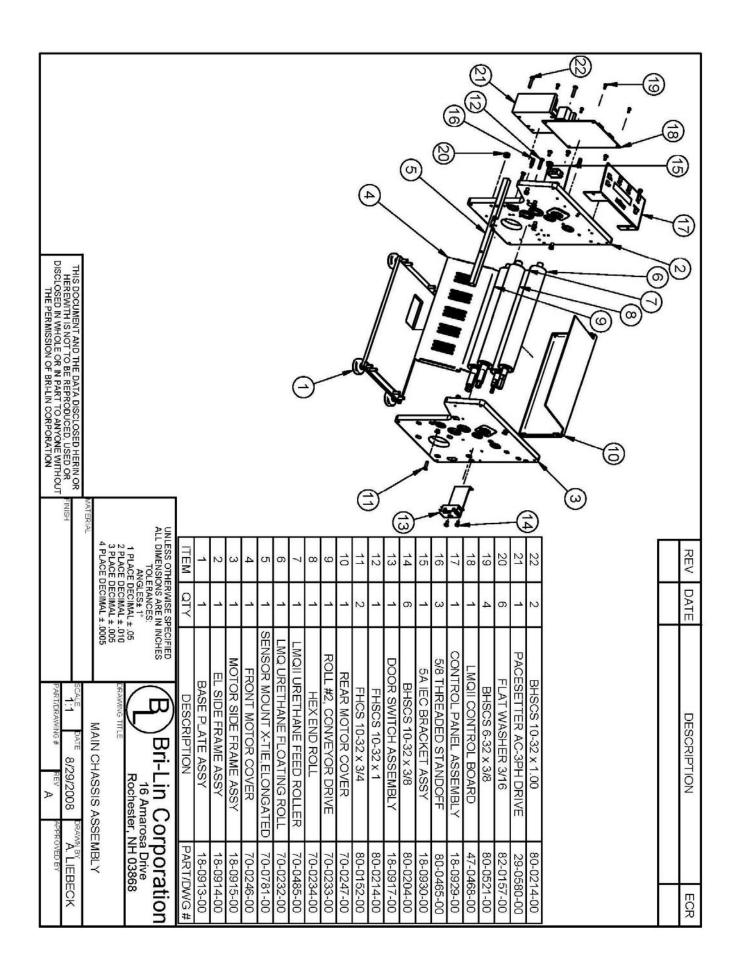


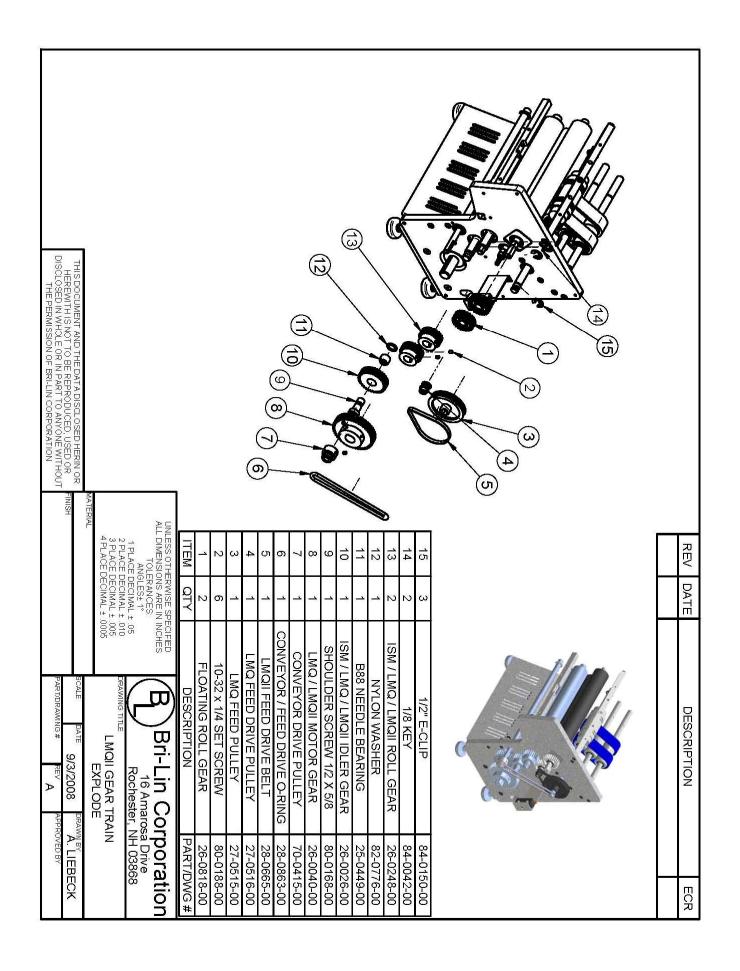


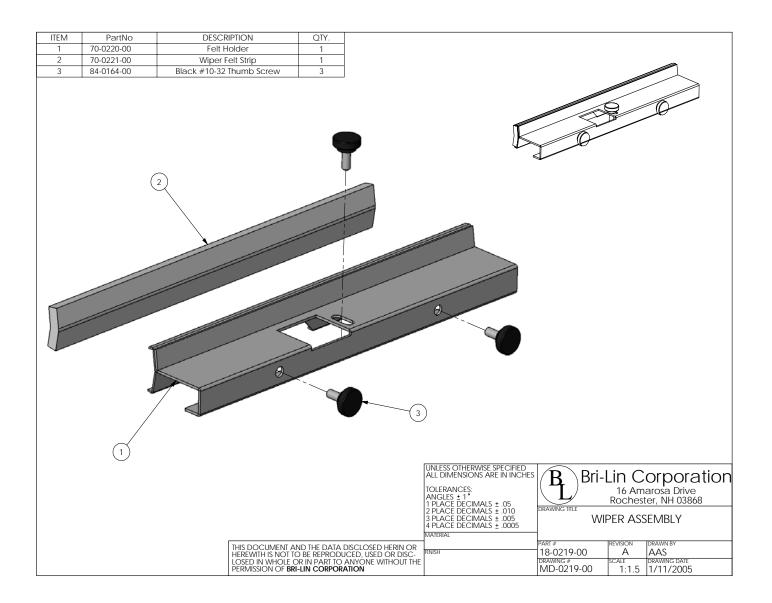














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