

# Transport Wheel Shims MAINTENANCE INSTRUCTIONS

## Purpose:

- The following procedures are intended for use by qualified operator or maintenance personnel.
- Select the desired operation and follow the instructions indicated.

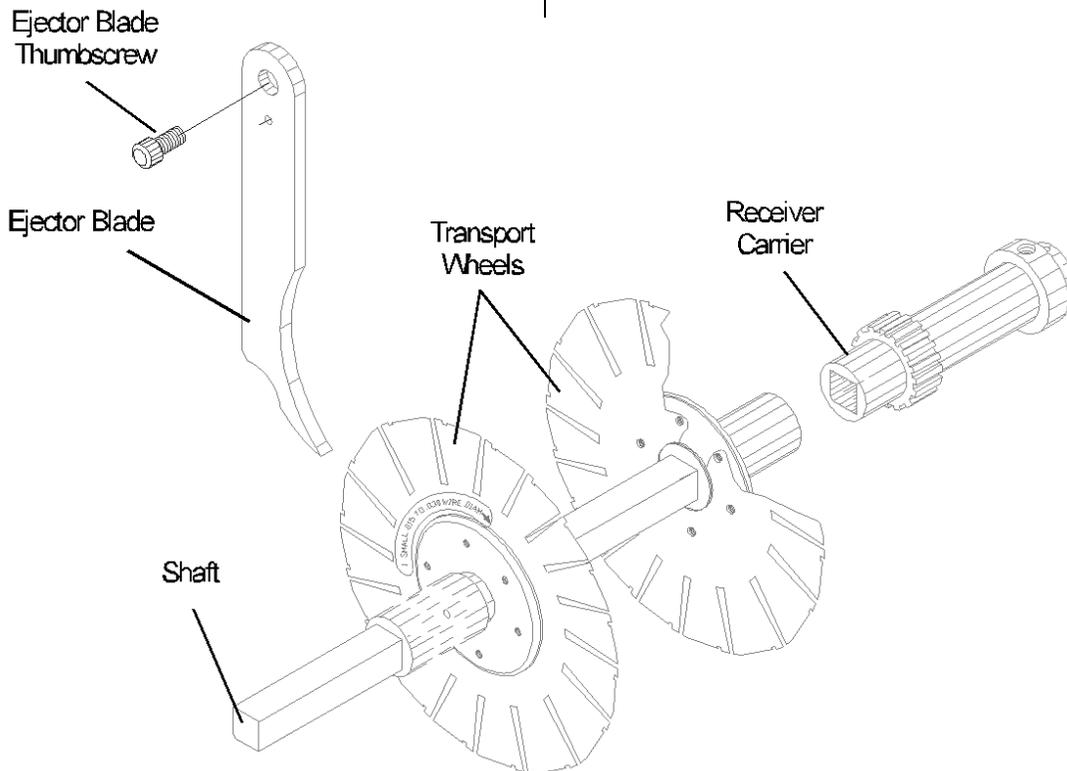
In order to:	do this:
Install rubber pads on transport wheel shims	follow all steps listed.
Replace <i>standard</i> transport wheel shims	1. Perform steps 1. through 8. 2. Skip steps 9. through 13.
Replace <i>rubber padded</i> transport wheel shims	3. Perform step 14.

## Procedure:

- 1. Remove transport wheels from machine:**
  - a. Loosen the *ejector blade thumbscrew* (see below) and remove the component *ejector blade* from between the pair of *transport wheels*.
  - b. Place a 1/8" bent hex "T" wrench (provided in tool kit) in the hole located toward the end of the transport wheel shaft and pull firmly to unlock the shaft.

**NOTE:** To access the shaft's hole, you may have to manually index the machine until it is accessible: Insert the 1/4" hex "T" wrench (provided in tool kit) in the hex cap screw located on machine's right side. Turn the wrench until you can insert a wrench in the transport wheel shaft's hole.

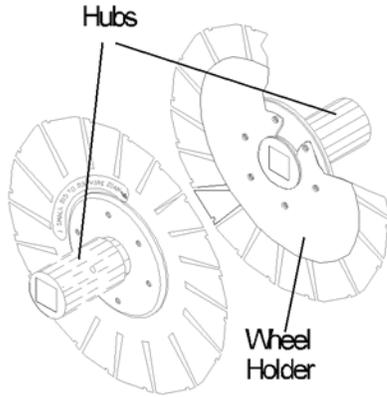
- c. Once unlocked, pull the shaft smoothly from its *receiver carrier* and then support the transport wheels while removing the shaft.



**2. Remove the hub and wheel holders.**

Remove the six (6) screws securing the hub and wheel holder in place on each transport wheel.

Clean any debris out from between the shim and wheel holder.



**3. Check hub surface for flatness.**

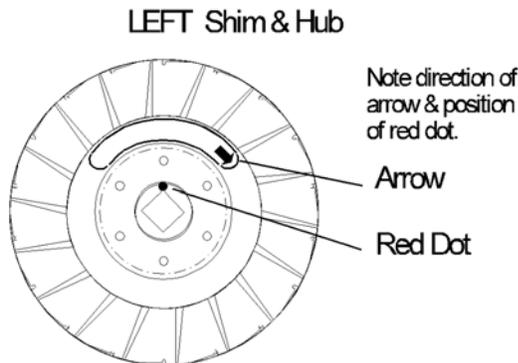
If it has a run-out variance over .003" (0.08 mm), replace the hub.

**4. Check transport wheel holder surface for flatness.**

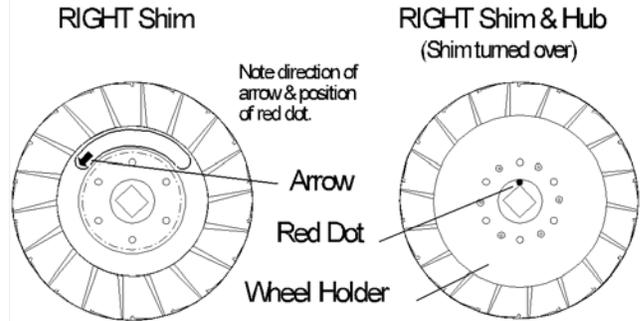
Inspect for flatness on a surface plate or with a dial indicator. If using the dial indicator, indicate the transport wheel holder's outer circumference. Factory specification is  $\pm 0.002$ " (0.05 mm) at perimeter.

**5. Reassemble transport wheel shims, hubs, and holders.**

a. Match up the left shim with the left hub.



b. Match up the right shim with the right hub.



c. Install the flat wheel holder on the each shim loosely - DO NOT tighten the screws at this time.

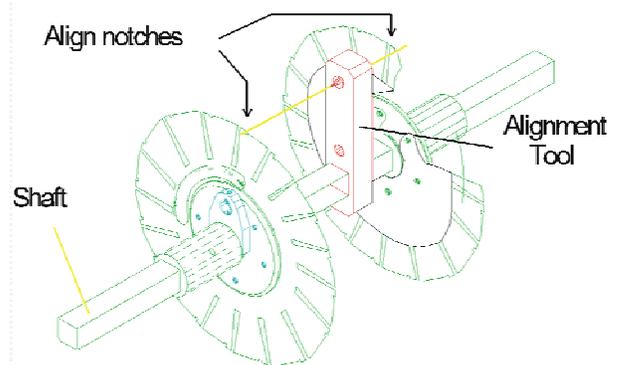
**6. Set timing.**

a. Place the right transport wheel and the alignment tool on the square shaft.

b. *Align the notches* by locating the alignment tool's pin in the transport wheel's component wire pick-up position and tighten screws to secure.

c. Repeat for left transport wheel.

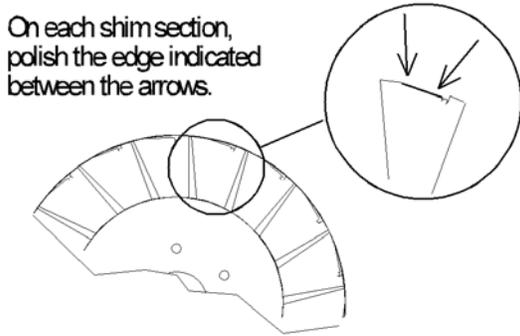
d. Check transport wheel pair timing: Slide both wheels onto the shaft as close together as possible. Check the notches of one wheel to the notches of the other for alignment. If not properly aligned, loosen screws on one wheel and adjust its notches until they are aligned.



**7. Polish the edges.**

Using a medium grit (220) sandpaper, polish outer edge of each transport wheel segment.

If possible, also demagnetize the transport wheels.

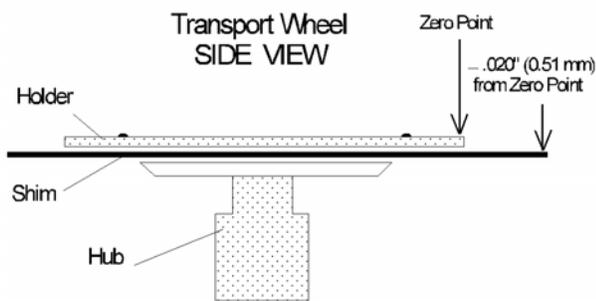


**8. Tweak transport wheel segments for consistent tension if necessary.** Transport wheels should be rechecked monthly or if inconsistent forming occurs.

- a. With a transport wheel shim mounted on the hub, measure the difference between the outer edge of the transport wheel holder and the outer edge of any segment of the transport shim (see below).

The transport wheel holder should measure .020" (0.51 mm) higher than the transport wheel shim.

Bend the transport wheel shim segment until this measurement is achieved.



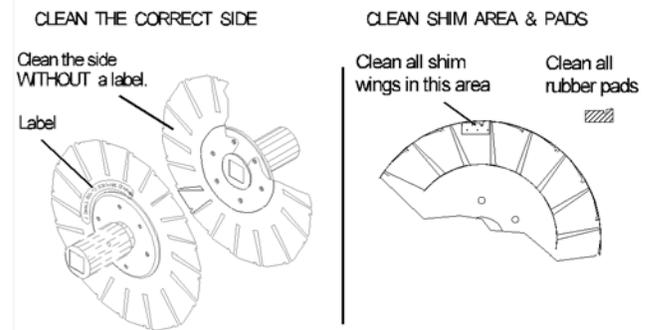
- b. Indicate the remaining transport wheel shim segments and set them to the same height as the first one you set ( $\pm 0.001$ " [0.03 mm]).
- c. Repeat steps for other transport wheel shim.

**9. Decide if the left, right, or both transport wheels require rubber pads.**

This decision is application dependant.

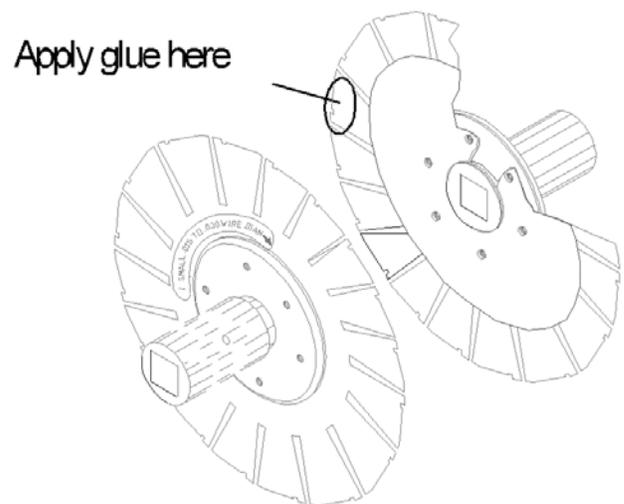
**10. Clean the surfaces.**

Swab the surfaces of the rubber pads and the transport wheels to receive pads with alcohol.



**11. Apply glue.**

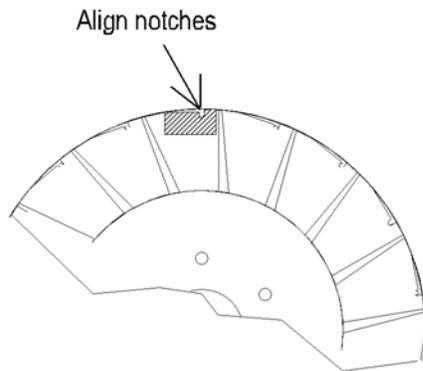
Sparingly apply Loctite's Black Max 380 or 454 Surface Adhesive to each transport wheel segment. **Use light pressure to avoid warpage.**



**12. Apply rubber pads.**

Apply a rubber pad to the transport wheel shims:

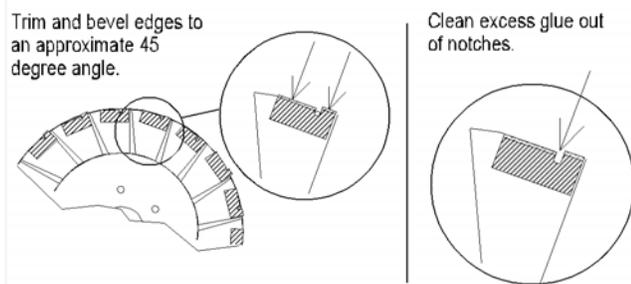
- a. Align the bottom of the rubber pad's notch to the bottom of the transport wheel's notch.
- b. Press outward from the pad's center to expel any excess glue and/or air bubbles. Hold pad in place until the glue sets (3-5 seconds).



**13. Trim and bevel rubber and clean off excess glue.**

Using a razor blade, trim any excess rubber from the top edge of the transport wheel segment where components will ride:

- Bevel cuts at an approximate 45 degrees.
- Using the razor blade, clean any excess glue out of the notch and off the top edge.



**14. Reinstall transport wheels on machine.**

Refer to the transport wheel installation instructions in *CF-8 Operating Instructions*.