

SERVICE INSTRUCTION

PAPER MACHINERY CORPORATION

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MANDREL TURRET

No. 106.1

RE-ALIGNMENT PROCEDURE PMC-1002

DIS-ASSEMBLING MANDREL TURRET COMPONENTS

- 1) Label and remove all Shut-Off Valves and Pipe Nipples as shown in Figure 1.
- 2) Remove all Seam Clamp Holders and replace them with tubing the same length as the Seam Clamp Holder, as shown in Figure 2.

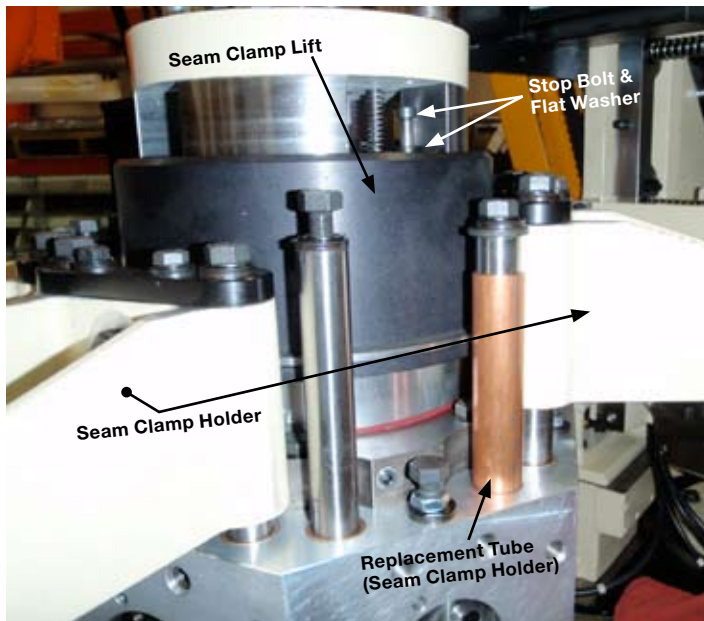


Figure 2

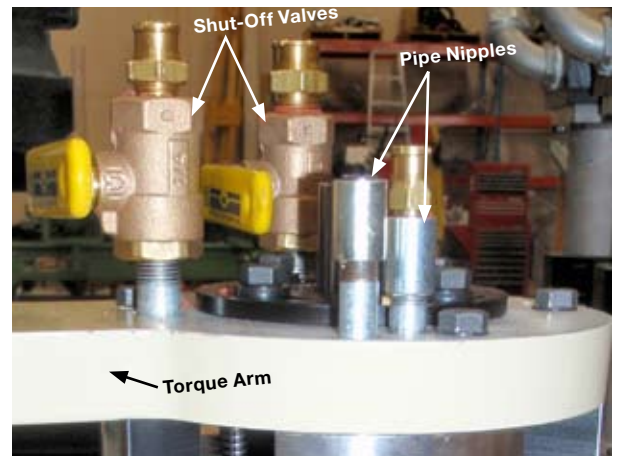


Figure 1

- 3) Remove all Mandrels, Torque Arm and the Stem Actuator from the Turret.
NOTE: Undo (4) four Bolts on the Torque Arm Tie Plate for the Mandrel Turret as shown in Figure 3.
- 4) Use a Slide Hammer to remove the existing Pins and check to see if they are bent.
NOTE: These Pins will not be re-used for re-pinning as you will need to go to one size bigger (e.g. if the Pins removed 1/2" you will need to use 9/16" to re-pin).
- 5) Remove all the tooling from the Bottom Maker, exposing the full length of the Draw Punch Shaft as shown in Figure 4.

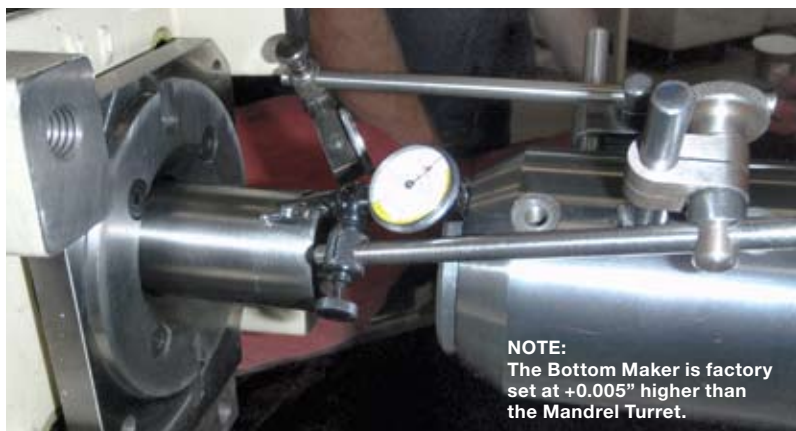


Figure 4: Using a Dial Indicator to verify Height, Concentricity and Parallelism.

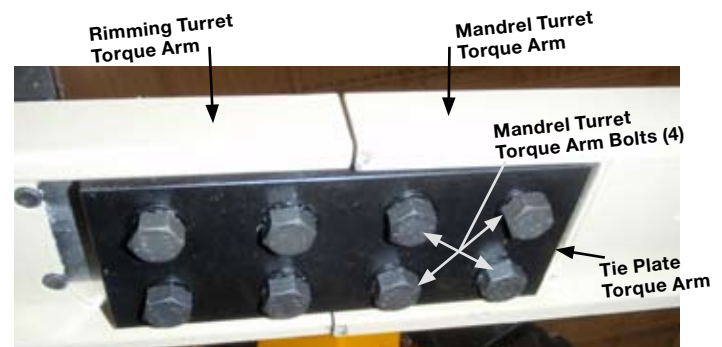


Figure 3



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IMPORTANT: The Bottom Maker and Bottom Finish Station are set 0.005" above the center. (The center is 10.500" from the Upper Base.)

RE-ALIGNING THE MANDREL TURRET & BOTTOM MAKER

- 1) Position the #1 face of the Mandrel Turret toward the Bottom Disc Heater. This places the Turret Assembly on the tightest set of Cam Followers in the Lower Drive, as set at PMC.
NOTE: If followers were replaced, tight set position may have changed — Locate set and position at Bottom Disc Heater Station.
- 2) Mount the Test Mandrel to the face that is in front of the Bottom Maker and install (2) two Dial Indicators as shown in Figure 5 and Figure 6.
- 3) Loosen the Bolts in the Mandrel Turret and loosen the Bolts on the Bottom Maker Mounting Base.
NOTE: It may be necessary to loosen the Drive Chain on the Bottom Maker in the Lower Drive to allow the unit to move freely.
- 4) Using a soft-face-heavy-hammer, tap both the Mandrel Turret and the Bottom Maker on their sides until "0" is achieved side-to-side, +0.005 high top-to-bottom on the Bottom Maker, and "0" along the entire length of the Draw Punch Shaft on Dial Indicator #2.
NOTE: The other Dial Indicator is used (at the same time) to achieve "0" across the (2) two Upper Mounting Surfaces for the Die Block. See Figure 6.
- 5) When all the required Dial Indicator readings are obtained, the Mandrel Turret and Bottom Maker must be lock-down tight. Torque all (5) five 1/2-13 Bolts on the Bottom Maker Mount base to 75 ft-lb, and the (4) four 1/2-20 Bolts on the Mandrel Turret to 90 ft-lb.
- 6) Recheck the Dial Indicators to make sure that both units are still at their required settings. Then drill and ream the existing holes to "one size larger" and fit the appropriate Pins. Coat the Pins with Anti-Seize Compound before installing them.
- 7) Re-assemble all items that were removed in steps 1–5 of the Disassembly Procedure.
NOTE: Replace all O-Rings, Seals and any Fasteners that are questionable.

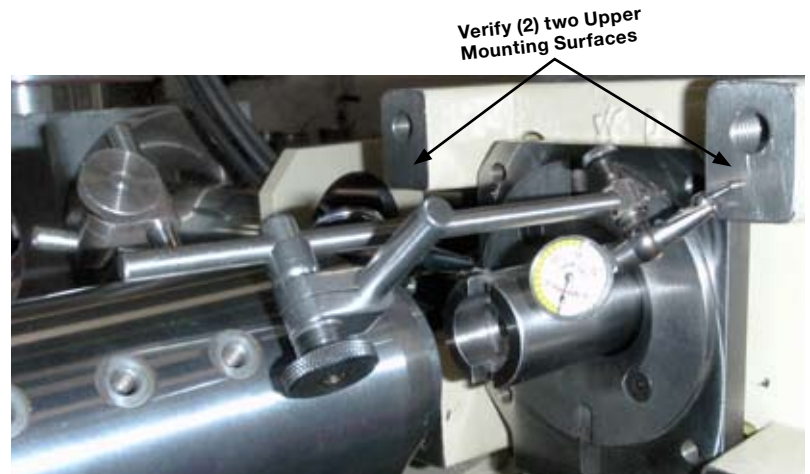


Figure 5: Using a Dial Indicator to verify the Bottom Maker is squared to the Mandrel Turret

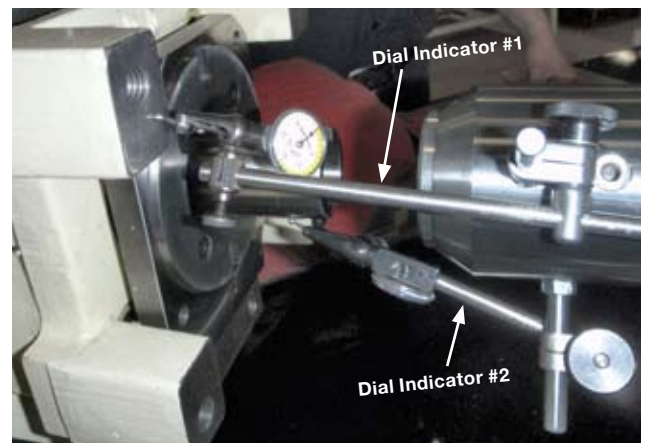


Figure 6: Aligning Bottom Maker to Mandrel Turret, using Test Mandrel & (2) two Dial Indicators.