MIAMI
MACHINE CORP.

MANUAL & DRAWINGS

FOX RIVER PAPER CO.
HOUSATONIC, MA.

SUCTION COUCH ROLL
#13-168

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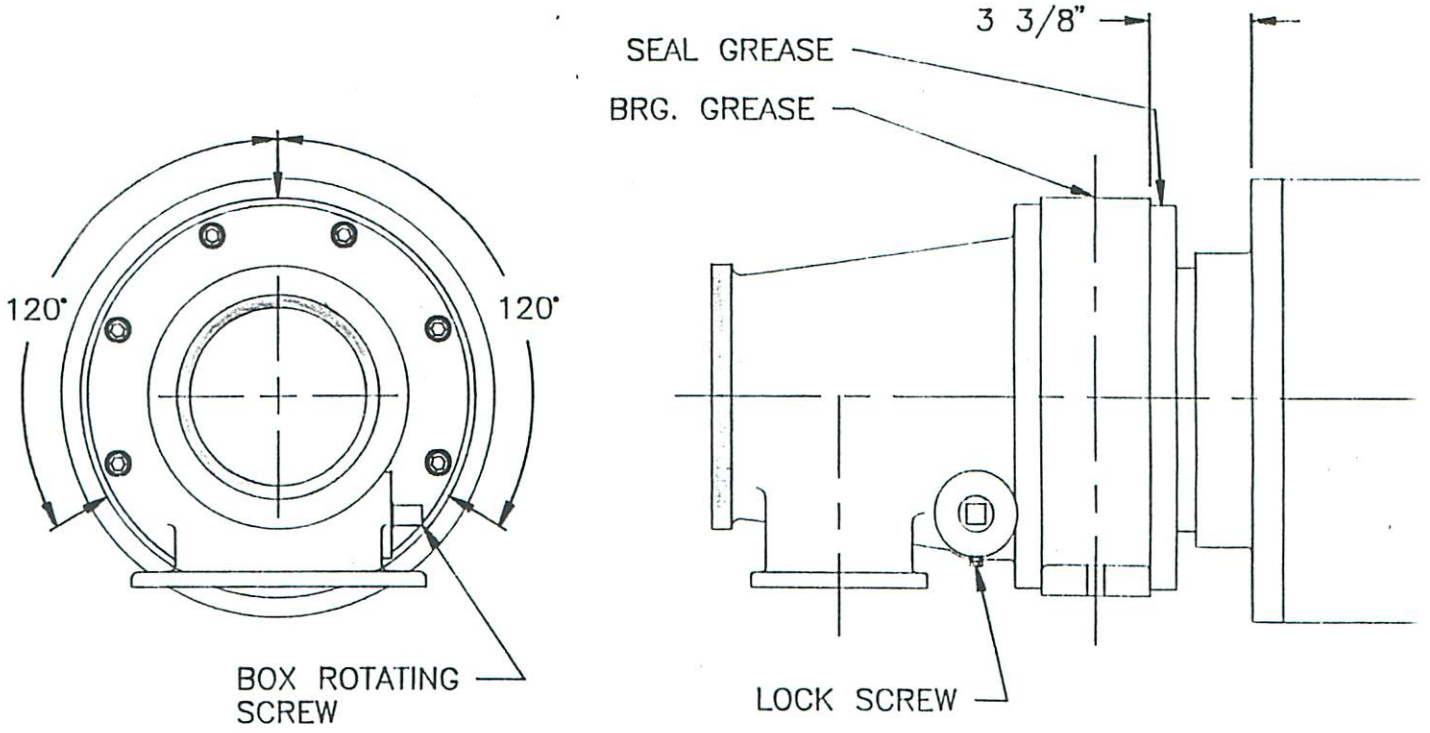
OPERATION AND SERVICE MANUAL
FOR SUCTION ROLL DWG.# C13-168-A

ROLL INSTALLATION

Since this Suction Roll is equipped with self aligning bearings it is important to have the bearings aligned perpendicular with the axis of the roll to avoid rubbing of the journals and bearing seal areas. Since the front bearing floats it must also be able to move in or out freely due to any lateral expansion or contraction to eliminate any end thrust.

As outlined in the sketch below measure the distance from the inside of the bearing housing to the head in three places 120° apart. If these are all uniform the bearings are in proper alignment. On the front bearing this dimension should be 3 3/8" in all three locations to insure that the front bearing has the proper amount of float available.

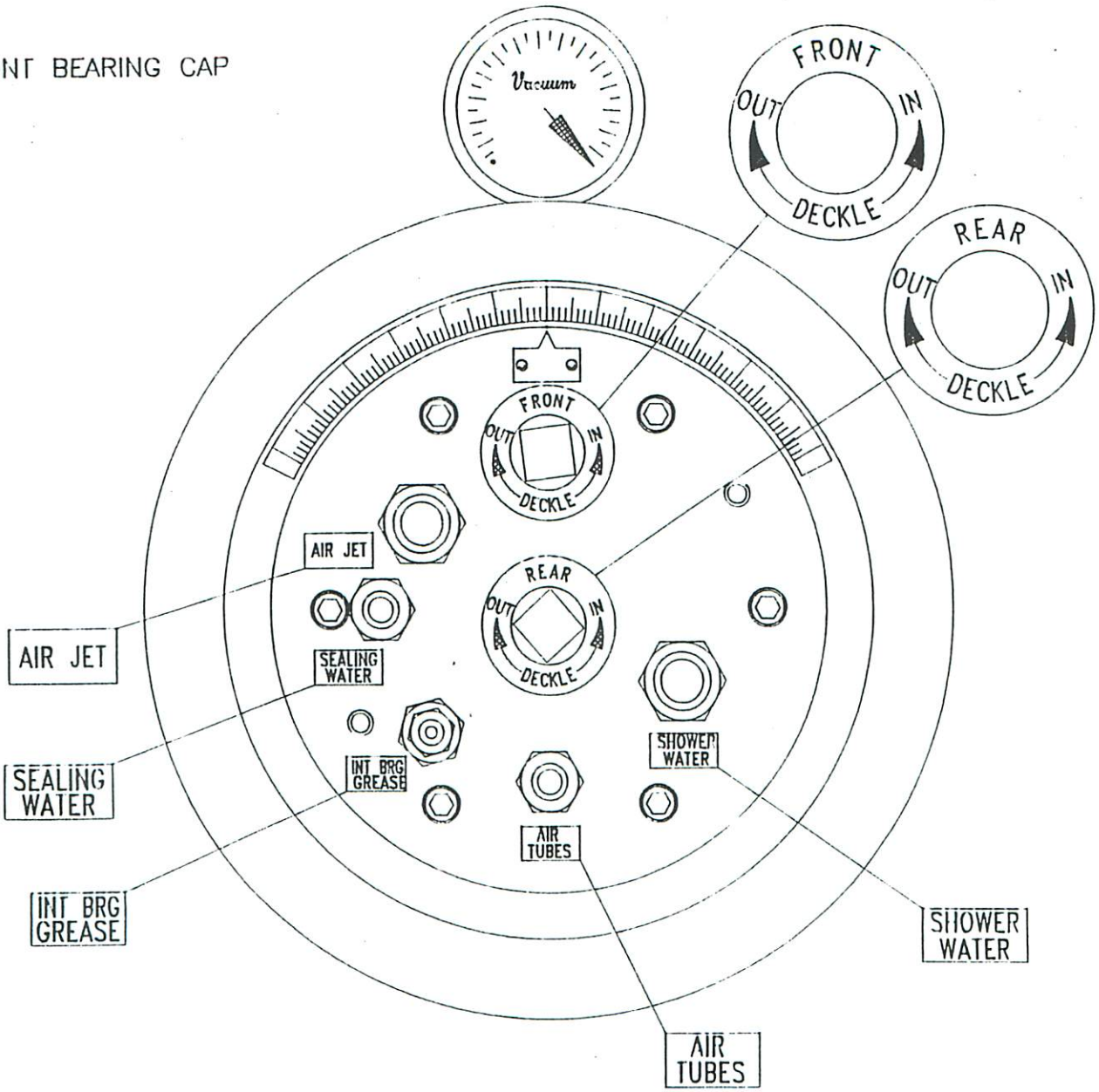


LUBRICATION

All bearings and seals should be lubricated weekly using a good lithium based grease. The initial grease used when assembling the roll in our plant was a BG which repels and does not mix with water.

The main bearings and seals are lubricated at the bearing housing area. The rear internal bearing is lubricated thru the front cap as is the watershield seal which protects the front bearing from water contamination from the inside of the roll.

FRONT BEARING CAP



All of the internal connections pass through the front cap and are labeled as follows.

GREASE

Internal Rear Bearing
Front Watershield Seal

WATER SUPPLY

SHOWER CONNECTION– Used as required to furnish water to clean the inside of the shell

SEALING WATER– A good clean water supply that flushes the area between the sealing strips and sealing strip holders to allow the strips to freely move to maintain shell contact. This should be a continuous water supply at 5 to 10 PSI.

AIR SUPPLY

Sealing Strips

This supplies air to the air tubes to load the sealing strips against the shell in order to seal the vacuum in the suction box area. The air pressure should be the minimum amount required to seal the box, usually a minimum of 7 PSI to a maximum of 20 PSI. When checking the vacuum be sure the front and rear deckles are inside the sheet width.

Air Jet

This supplies a jet of air to blow the tail off the face of the roll. Air pressure be as required up to a maximum of 80 PSI.

DECKLE ADJUSTMENT

The front and rear deckle adjustments are made at the front cap. A clockwise rotation moves the deckles out to widen the box opening, and a counter–clockwise rotation moves the deckles in to narrow the box opening. 8 Rotations are required to move each deckle 1".

BOX ROTATION

The front cap has an indicator to show the location of the center of the box.

When rotating the box first loosen the lock screw at the box adjusting square, when facing the adjustment square a clockwise rotation moves the box in a counter–clockwise direction. The movement of the box can be monitored at the front cap.

After the box is rotated to it's desired position be sure to lock the locking screw. This will prevent any possible box rotation due to vibrations.

SUCTION BOX REMOVAL AND INSERTION

REMOVAL

When servicing of the roll requires box removal the front suction box indicator should be in the vertical position so that the suction box skids are in proper position to slide out of the box.

After removing the stud nuts use the four (4) jacking screws to push the shell off the head fit. Once the shell has been moved approximately 1" the box can be easily removed.

INSERTION

After cleaning and inspecting the suction box insertion is the reverse of removal. Prior to fitting the head into the shell there will be additional resistence when the internal gudgeon shaft enters the gudgeon sleeve. This will require additional force due to the fact that the box rises when this is done.

When pulling in the shell stagger tightening the nuts around the bolt circle so that the shell pulls in uniformly. After snugging up all the nuts use a torque wrench to tighten the nuts to 1500 in. Lbs.

RECOMMENDED SPARE PARTS

DESCRIPTION	QUANTITY	PART#	DWG.#
FRONT BEARING			
Outer Seal	2	C/R# 122555	D13–168–A 56
Inner Seal	1	C/R# 105010	D13–168–A 57
Bearing	1	SKF#23048 CK C3–W33	D13–168–A 50
REAR BEARING			
Outer Seal	1	C/R# 122555	D13–168–A 56
Inner Seal	1	C/R# 105010	D13–168–A 57
Bearing	1	SKF#23048 CK C3–W33	D13–168–A 50
INTERNAL BEARING			
Inner Seal	1	C/R# 39933	D13–168–A 58
Bearing	1	SKF# 22218 CC W33 C3	D13–168–A 51
SUCTION BOX			
End Deckle	2	B13–168–23	D13–168–A 6
Sealing Strips	2	B13–168–21	D13–168–A 11
Air Tubes	20'		B13–132–B 34

NOTES/MAINTENANCE RECORDS

ROLL INSTALLED ON #2 MACH. 7-97

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