THE MANCHESTER MACHINE COMPANY

MIDDLETOWN, OHIO

INSTRUCTIONS FOR OPERATION AND SERVICING OF MANCHESTER SUCTION ROLLS

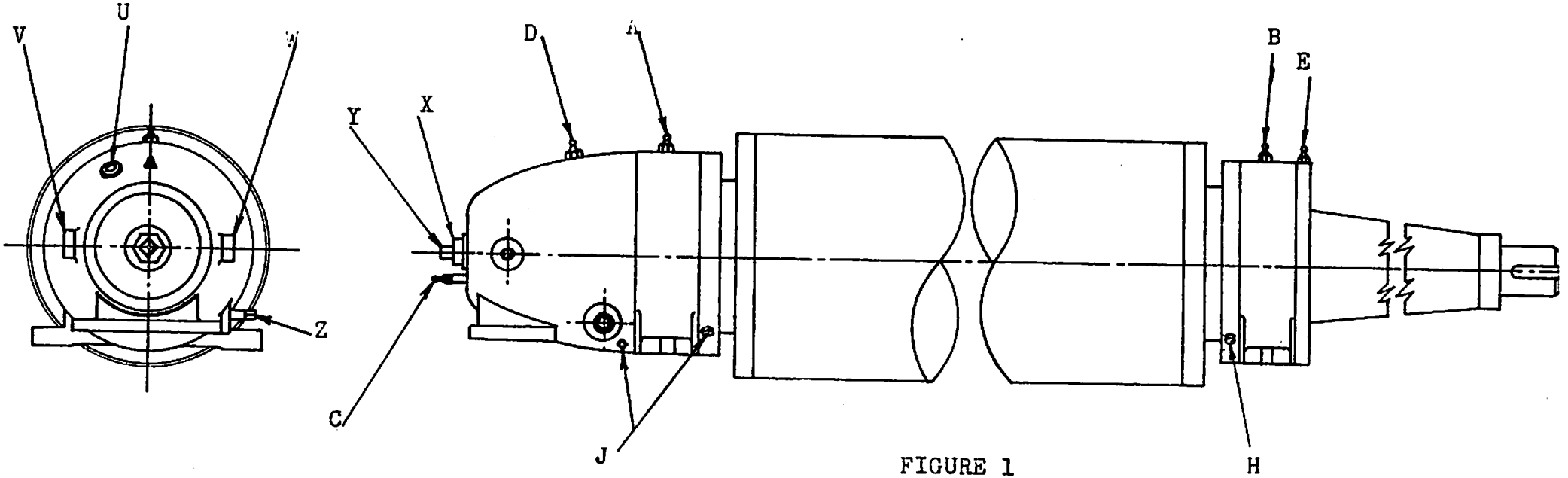


FIGURE 1

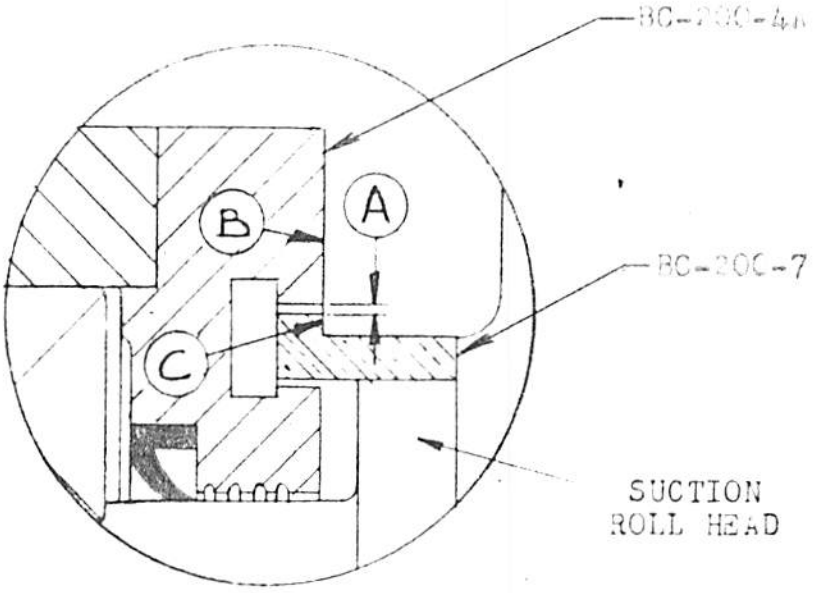
A-GREASE FITTING - FRONT MAIN BEARING
B-GREASE FITTING - REAR MAIN BEARING
C-GREASE FITTING - INTERNAL BEARING
D-GREASE FITTING - SUCTION BOX SEAL
E-GREASE FITTING - REAR OUTER CAP SEAL

H-GREASE RELIEF FITTING - REAR MAIN BEARING
J-GREASE RELIEF FITTING - FRONT MAIN BEARING

U-AIR JET CONNECTION
V-SEALING WATER CONNECTION
W-SHOWER WATER CONNECTION
X-FRONT DECKLE ADJUSTMENT (HEX)
Y-REAR DECKLE ADJUSTMENT (SQUARE)
Z-SUCTION BOX ADJUSTMENT

THE MANCHESTER MACHINE COMPANY

INSTALLATION AND ALIGNMENT OF MANCHESTER SUCTION ROLLS



INITIAL INSTALLATION

Since all Manchester Suction Rolls are equipped with self-aligning bearings, it is important to align the bearing housings properly with the center line of the roll. This will avoid rubbing at the labyrinth seals and will keep the front suction box support in its correct position for necessary adjustments.

FRONT BEARING

After the roll is located on the machine, and prior to bolting the roll in place, the front bearing housing assembly should be moved, if necessary, so that surfaces "B" and "C" line up. This positions the front bearing with the proper float and eliminates any possibility of end thrust due to improper positioning.

Gap "A" should be checked with a feeler gauge so that when measuring the gap in four (4) places - 90° apart - there is a uniform clearance. If necessary, the bearing base should be shimmed to arrive at the uniform clearance.

REAR BEARING

The same procedure for obtaining a uniform Gap "A" as outlined for the front bearing.

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INSTALLATION AND ALIGNMENT
OF MANCHESTER SUCTION ROLLS
(CONTINUED)

SUBSEQUENT INSPECTION

Having established a uniform Gap "A" when making the original installation, a possible bearing failure can usually be determined by checking the gap. If, on a normally loaded bottom press roll, the gap at the bottom has decreased compared to the gap 180° away, the bearing should be replaced. A periodic inspection of the clearances should be made to insure continuity of operation.

LUBRICATION

BEARINGS: - All bearings should be lubricated weekly with one of the following grades of grease or their equivalent.

(a) Socony Vacuum - Sovarex #1
(b) Standard Oil of Indiana - Superlo #39
(c) Standard Oil of Ohio - Sohio #555

Before adding new grease, make sure that the grease fitting is clean. Clean out any grease which may have caked in the relief fitting so that the old grease may be easily expelled.

When adding grease to main bearings and internal bearings, force in new grease through the grease fittings (Figure I), while the roll is rotating. Continue forcing new grease until it starts to come out of relief fittings (Figure I). The roll should then be allowed to rotate for about ten minutes to assure a fresh supply of lubricant has been applied to bearings. Then wipe off excess grease from relief fittings.

In all cases of grease lubrication, it is good practice to remove all of the old grease about once every six months, regardless of whether or not grease has been added in meantime.

Observe cleanliness at all times, whatever method is used, and be sure the new lubricant is clean. Contaminated lubricant will reduce the life of the movable parts.

SEALS: - All seals should be lubricated weekly with same lubricant as used in main bearings. Continue forcing new grease through grease fittings (Figure I) until sure that seals are full of grease. This will be noticed by a back-pressure built up in the seal. It is important that these seals be well lubricated at all times so as to maintain top performance of seal.

MANCHESTER SUCTION ROLL
SEAL AND SHOWER WATER PIPING

SEALING WATER

A fresh clean water supply should be piped to the 1/2" sealing water tap with a suitable flexible connection. Water should be supplied continuously while roll is operating and maintained at a pressure of 5 to 10 pounds per square inch.

SHOWER WATER

A clean water supply should be piped to the 1/2" Shower Water Tap. Provide suitable flexible connection and shut-off valve. Use shower water only as needed to clean up roll and wash out drilled holes of shell.

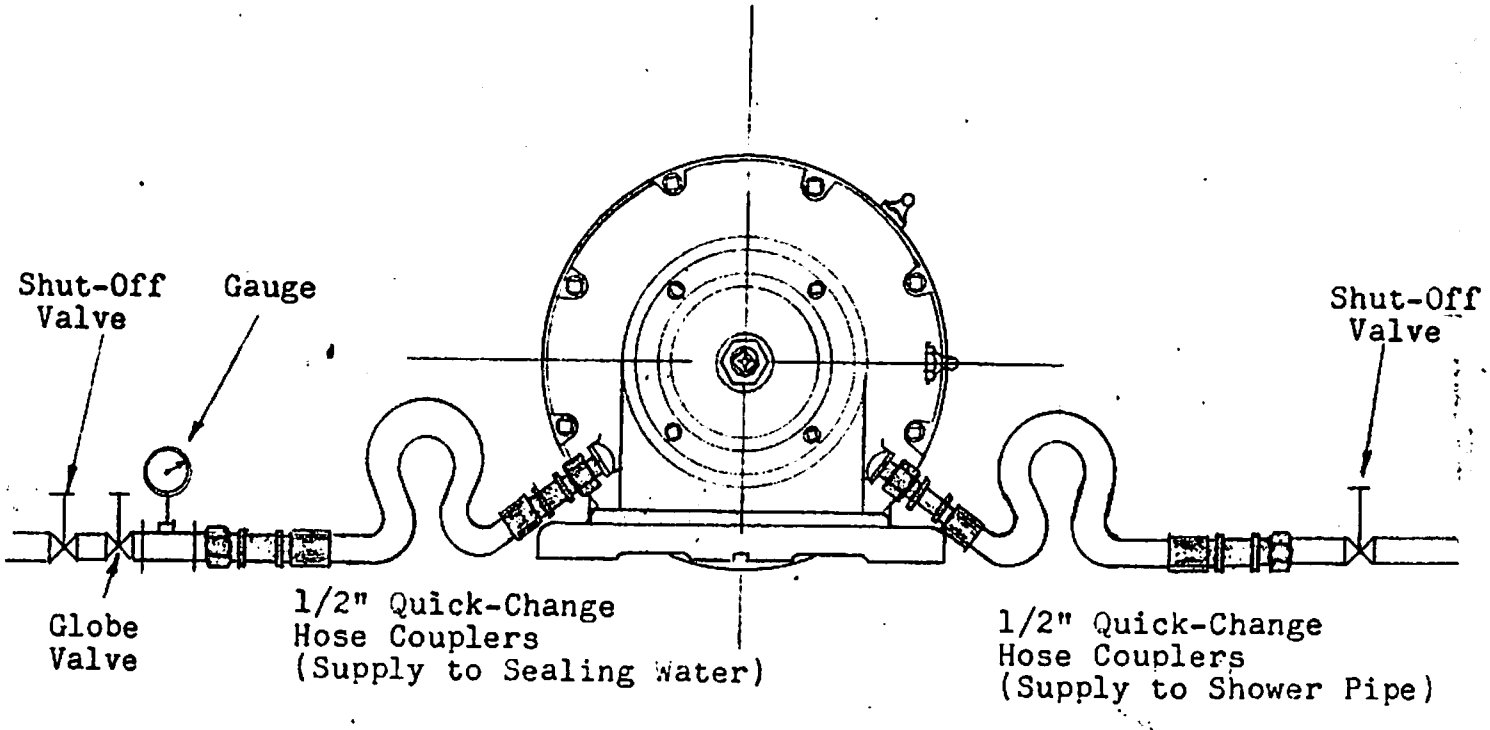

FIGURE 2

(Shaded parts only supplied by Manchester Machine Company. All other piping and hose furnished by customer.)

THE MANCHESTER MACHINE COMPANY

SUCTION BOX REMOVAL AND REPLACEMENT AND DECKLE ADJUSTMENT

(COUCH OR DRUM)

To remove suction box from roll, the procedure is as follows:

(a) Disconnect suction, sealing water, air and shower water connections.

(b) On couch or drum rolls, suction box must be rotated to upright position by turning adjusting screw "Z" (Figure I) clockwise, counterclockwise until it reaches its limit of travel. This places suction box wheels (Reference: - "Parts Assembly Dwg.") in bottom position, ready for removal.

(c) From the standpoint of safety and convenience, disengage drive coupling and move complete roll from machine to convenient location for servicing.

(d) Suspend shell free from front head and bearing.

(e) Remove bolt guard ring from front roll head.

(f) Remove (4) socket head set screws in front head and replace with (4) square head set screws - 3/4" - 10 x 4" lg. Alternately tighten these set screws so as to give uniform pressure in releasing front head.

(g) Remove roll head and pull suction box from shell. Use utmost care in removing box that interior of shell is not damaged.

To place suction box in roll, the procedure is as follows:

(a) Remove 4" jack-screws.

(b) With suction box wheels in bottom position, enter box in shell and roll slowly to rear. Use care when internal journal starts to enter gudgeon sleeve (Reference:- "Parts Assembly Dwg."). Continue to roll box until front head starts to enter shell.

(c) Remove (4) existing head studs, equally spaced, and replace with 5" studs. Use these studs to pull head into shell. When existing studs protrude far enough to start nuts, then finish pulling head into place by alternately tightening nuts, equally spaced. It is important that head is tightened uniformly, to assure proper fit. Remove 5" studs and replace with regular head studs.

(d) Replace bolt guard ring.

(e) Return roll to machine and connect drive coupling, suction, air, sealing water, and shower water connections.

(f) Rotate box to running position by turning adjustment screw "Z" (Figure I).

(g) Roll is now ready to operate.

To adjust deckles, the procedure is as follows:

(a) A clockwise rotation of either the hex "X" for the front deckle or the square "Y" for the rear deckle (Figure I) will move the end deckles out, lengthening the box opening along the face of the roll. A counterclockwise rotation will move the end deckles in, shortening the box opening along the face of the roll.

Eight (8) revolutions of "X" or "Y" will move the end deckles a distance of one (1) inch.

HYDRAULIC JACKSTAND INSTALLATION
CANTILEVER COUCH ROLLS

The jackstand should be installed after the cantilever couch roll is in position. Care should be taken when installing the jackstand to insure the proper positioning of the front bearing housing to the aluminum removal block. The aluminum block has a permanently attached key which fits the keyway in the bottom of the front bearing housing of the roll. Some minor adjustments may be necessary in positioning the jackstand prior to grouting the jackstand to the floor.

Due to the construction of the arm in the jackstand, the front end of the roll will move slightly to the left as it is raised when facing the roll. It is important that when the roll is lowered on to the aluminum block that the key lines up with the keyway.

The jackstand installation is best accomplished as follows:

1. Operate the hand pump so that the jack will move the arm a sufficient amount to insert the lock-up pin. Then release the hydraulic pressure.

2. With the arm in the locked up position, hang the complete jack assembly on the cantilever journal in its normal position with the six 1-1/4" anchor bolts projecting through the base.

3. Tighten the six 1-1/4" nuts on the anchor bolts, keeping the base level.

4. Apply hydraulic pressure with the pump until the jack begins to lift the roll.

5. Release the hydraulic pressure so that the arm bears on the lock-up pin. Should the six anchor nuts be loose, they should be tightened up.

6. Raise the roll with the hydraulic unit and lower it onto the aluminum block. When lowering, if the key and keyway do not line up, bump the base of the jackstand so that the key and keyway line up. Repeat this procedure another time if necessary so that the front bearing housing seats properly on the aluminum block.

7. After completing item (6) above, grout the jackstand in place.

SPARE PARTS LIST

ENG. FILE: C-560 SHEET 1 OF 2

18" DIA. x 96" D.F. CANT. SUCTION COUCH ROLL

CUSTOMER: SANDY HILL CORP. - HUDSON FALLS, NEW YORK

BILL NO.	DESCRIPTION	CAT. OR PART NO.	QTY. COMP. SECT.	RECOM. STOCK	DRAWING NO.	ITEM
	FRONT MAIN BEARING				BC-200-BH	
2-1	OIL SEAL "GARLOCK KLOZURE"	53 x 4012	2	2	BC-200-BH	5
2-1	ROLLER BEARING "SKF"	23048W33	1	1	BC-200-BH	8
	REAR MAIN BEARING				BC-200-AJ	
3-1	OIL SEAL "GARLOCK KLOZURE"	53 x 4012	1	1	BC-200-AJ	4
3-1	ROLLER BEARING "SKF"	23048W33	1	1	BC-200-AJ	7
	INTERNAL BEARING				BC-200-BK	
6-1	OIL SEAL "GARLOCK KLOZURE"	71A7096	1	1	BC-200-BK	4
6-1	ROLLER BEARING "SKF"	22216	1	1	BC-200-BK	1
6-1	GUDGEON SLEEVE WITH LOCKNUT AN-26 & LOCKWASHER W-26	CC-200-30A	1	1	BC-200-BK	5
	SUCTION BOX				AC-560-B	
8-3	SEALING STRIP	BC-1000-3	2	2	AC-560-B	35
8-3	SEALING STRIP SPRINGS	CC-100-17B	22	12	AC-560-B	36
8-5	DECKLE HEAD PACKING	BC-1000-14	2	2	AC-560-B	11
8-6	DECKLE HEAD PACKING SPRING	CC-100-17B	2	2	AC-560-B	12
8	SPRING PIN - INTERNAL JOURNAL	CC-200-83	1	1	AC-560-B	26
8-8	SPRING - INTERNAL JOURNAL	CC-200-84	1	1	AC-560-B	27

SPARE PARTS LIST

ENG. FILE: C-560 SHEET 2 OF 2

BILL NO.	DESCRIPTION	CAT. OR PART NO.	QUAN. COMP. SECT.	RECOMM. STOCK	DRAWING NO.	ITEM
	SHOWER & SEALING WATER				BC-560-D	
16-2	"P.C. PROD" QUICK CHANGE ASSEMBLY		4	1	BC-560-D	20, & 22