

VANDERCOOK MANUAL

OPERATION MAINTENANCE

PARTS LIST



Vandercook Manual

Operation — Maintenance
Parts List

MODEL NO. SP20

SERIAL NO. _____

Always be sure to give both the above Model and Serial Numbers when ordering parts or requesting information about this machine.



VANDERCOOK & SONS, INC.

Eastern Sales and Service

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Main Office, Plant and Technical Center

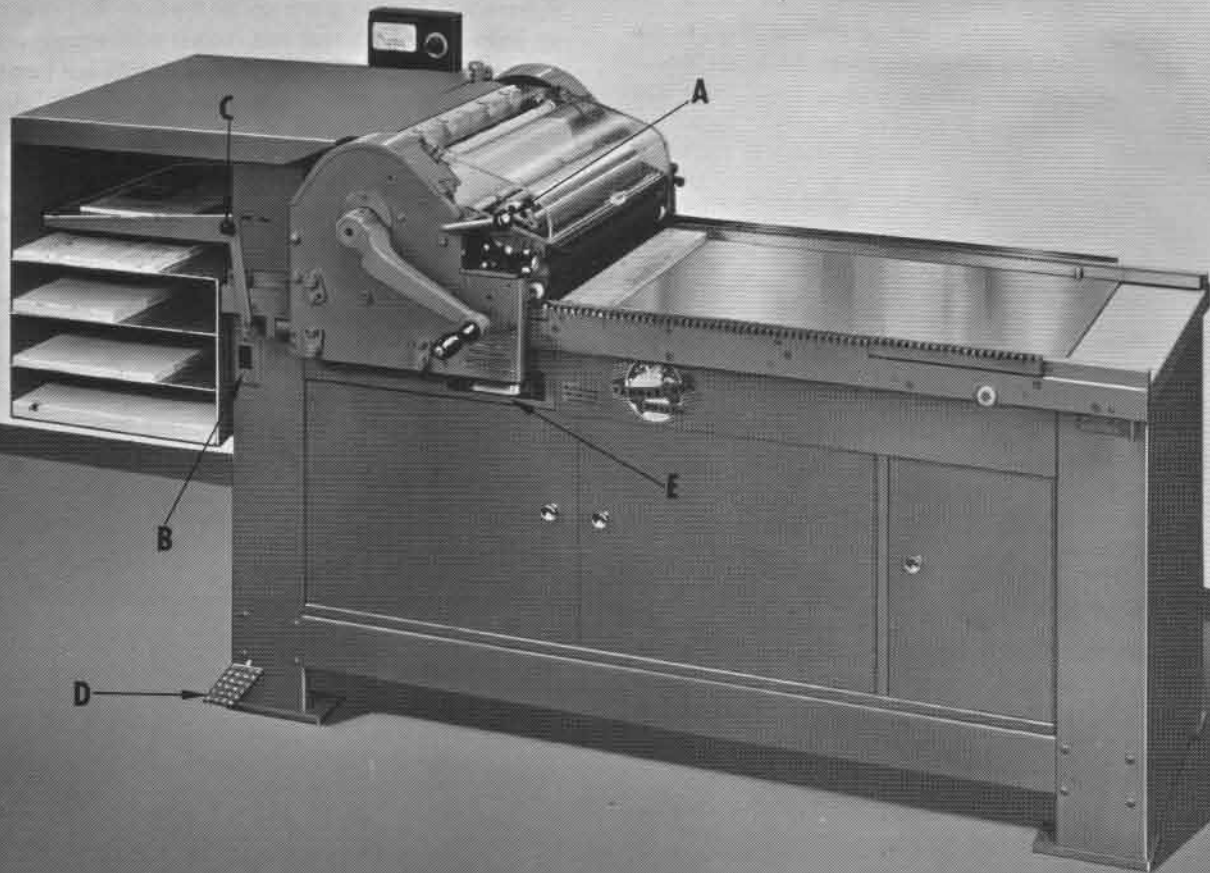
3601 West Touhy Avenue Chicago, Illinois 60645

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Vandercook SP20 Repro Press Operating and Maintenance Instructions

INSTALLATION

Uncrate the press and remove all protective paper. Leave the press on its skids until it has been moved to its approximate location. Clean thoroughly, particularly all machined surfaces, using kerosene and rags.

Remove skids and set press on synthetic rubber pads furnished—one under each leg of press. Bolt the feed board to the top of the leg, using the four hollow head cap screws and wrench furnished.

Place a precision level on the bed, and level the press by putting metal or cardboard shims under the rubber pads where necessary.

ELECTRICAL CONNECTIONS

Electrical connections should be made according to local code regulations—by an experienced electrician. Be sure that the ink drum rotates counterclockwise from the operator's side.

CONTROLS

INKING ROLLER TRIP LEVER (A)

Lever "A" lifts form rollers and separates steel vibrator and rider from form rollers.

POWER SWITCH AND PILOT LIGHT (B)

Depressing switch "B" to ON position starts ink drum motor and lights pilot.

CYLINDER TRIP (C)

Cylinder is on trip when the lever "C" is in the position shown in the illustration. Moving the lever to its forward position will cause the cylinder to print on its travel away from the feed board. The cylinder is always automatically tripped on its travel back to the feed board, providing cylinder is traveled all the way to the open end of the bed.

GRIPPER PEDAL (D)

Pedal "D" opens the grippers when the cylinder is at the feed board. Grippers also open automatically at the feed board (see tagged latch on side opposite the operator), and for removing the sheet at end of printing stroke.

AUTOMATIC WASHUP

Moving washup lever (located behind cabinet door) to the right brings doctor blade into contact with the motor driven ink drum. Doctor blade should be brought into contact with drum only when cylinder is at feed board.

LUBRICATION

All Oil Holes

At least once a week. Use Vandercook X-27607 Dripless Oil, or a good grade S.A.E. #20 machine oil.

Vibrator Worm

Keep covered with a petroleum jelly product, such as vaseline.

Vibrator Shaft

At least once a week. Use Vandercook X-27607 Dripless Oil, or a good grade S.A.E. #20 machine oil.

Bed and Cylinder Bearers

Wipe bearers daily with *slightly* oiled rag.

Cylinder Guide Plates

At least once a week. Use Vandercook X-27607 Dripless Oil, or a good grade S.A.E. #20 machine oil.

Under Rails

Under rails should be wiped clean and well oiled daily.

For further instructions on lubrication, refer to repair parts sheets.

CHANGING FORM ROLLERS

Form rollers can be changed in a few seconds by merely lifting out the assembly of rollers, ball bearings and adjusting mechanism.

For color proofs, it is an excellent idea to have at least one extra set of rollers, equipped with bearings, adjusting mechanism and driving gear.

CYLINDER PACKING

The cylinder bearers are .040" higher than the body of the cylinder. The cylinder packing, plus the stock to be printed on, should be approximately .003" over the cylinder bearers.

To change packing, move cylinder to center of bed (on trip, if there is a form or plate on the bed) so that reel rod is in up position. Unlatch reel rod ratchet with wrench provided, and loosen drawsheet from reel rod. With left hand, grasp packing and, as cylinder is returned to feed board, lay packing on feed board.

To change the drawsheet, loosen the fillister head screws in the gripper bar. Unless overlays are used, only the drawsheet is held by this bar.

When moving cylinder to center of bed to secure packing, hold packing in position by smoothing out with left hand. Secure drawsheet to reel rod. Be sure packing is tight to cylinder at both sides of gripper edge. There is sufficient side play in the reel rod to correct a small amount of unevenness in packing.

THE INKING SYSTEM

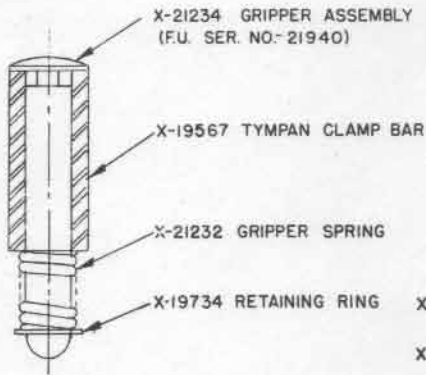
The inking system consists of two 3" form rollers, one vibrator, one rider, and an ink drum driven by a 1/12 h.p. gear motor.

ADJUSTING FORM ROLLERS

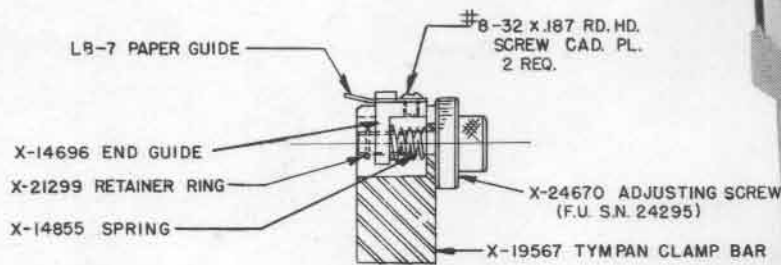
Form rollers are adjusted by turning the black knobs to the right to raise the rollers, and to the left to lower them. The adjusting knobs are provided with clamping screws on the side of the form roller bearing assembly. A wrench is supplied for these screws.

When using synthetic form rollers, they should be adjusted to leave a streak 1/16" on the Vandercook Roller Setting Gauge furnished. For glue composition rollers, a 1/8" wide streak is better to properly ink plate or form. There are no other adjustments to make in the inking system.

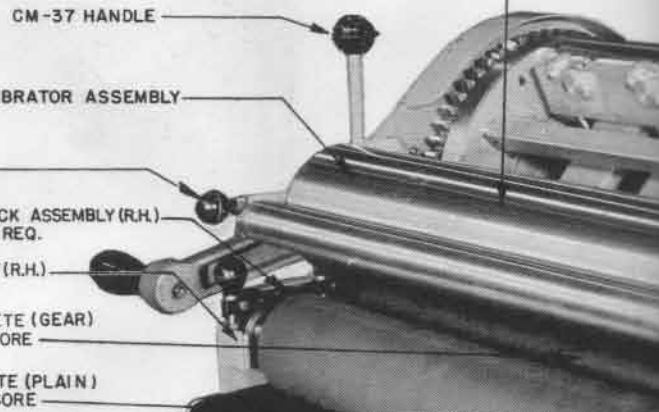
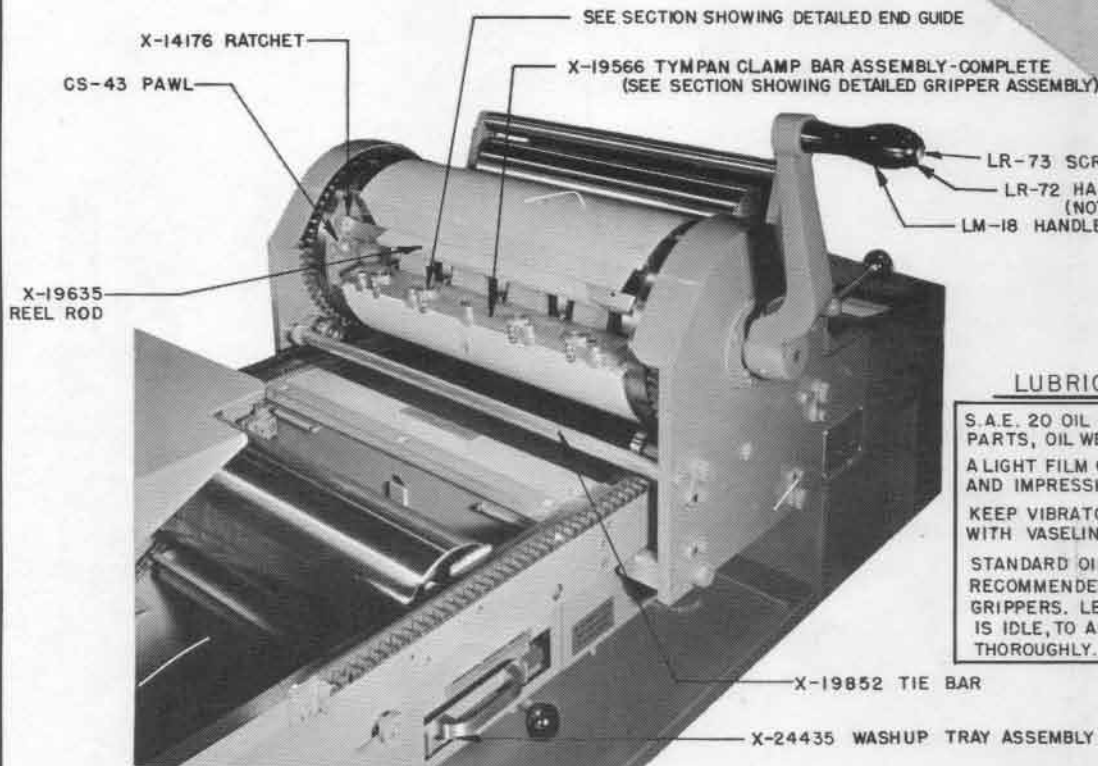




SECTION SHOWING GRIPPER ASSEMBLY
5 REQ.



SECTION SHOWING END GUIDE ASSEMBLY
4 REQ.

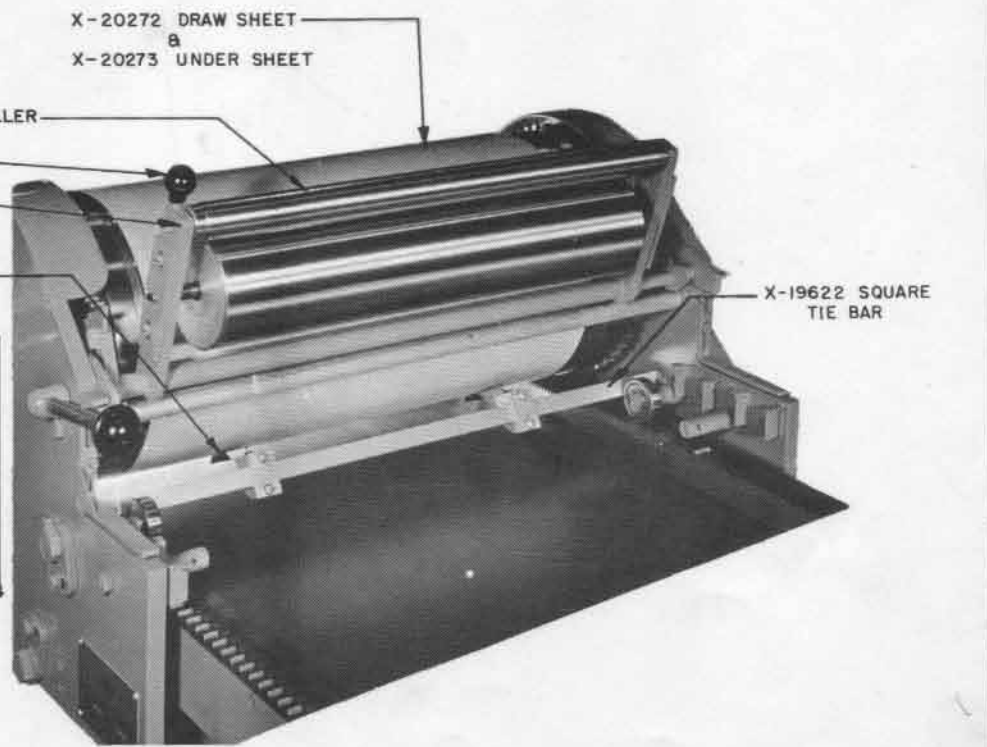
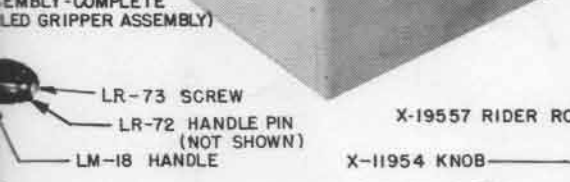
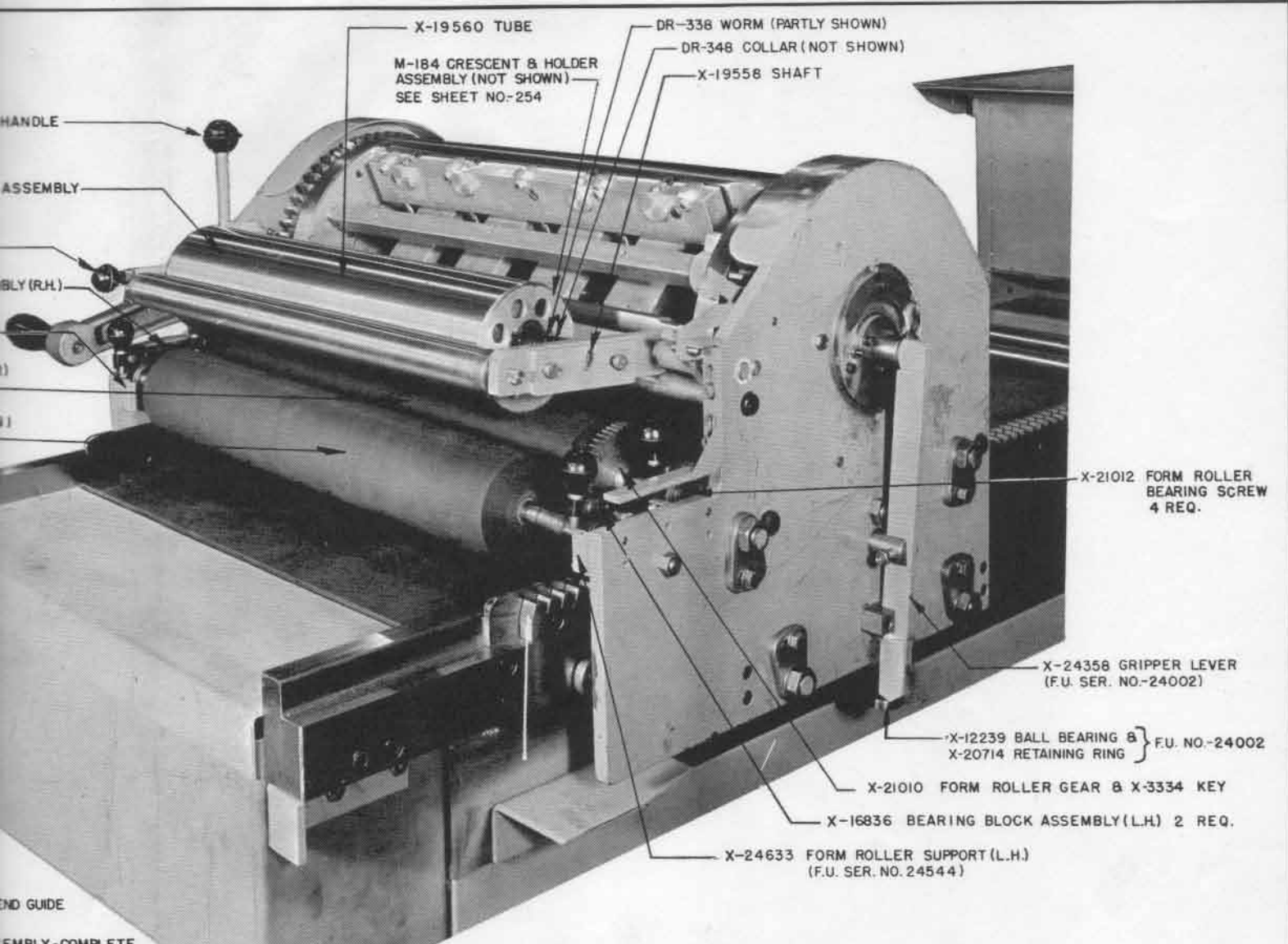


X-19566 TYMPAN CLAMP BAR ASSEMBLY (SEE SHEET)
CM-37 HANDLE
X-19566 VIBRATOR ASSEMBLY
X-11954 KNOB
X-16835 BEARING BLOCK ASSEMBLY (R.H.) 2 REQ.
X-24632 FORM ROLLER SUPPORT (R.H.) (F.U. SER. NO. 24544)
X-20932 FORM ROLLER-COMplete (GEAR) & X-20929 FORM ROLLER CORE
X-20931 FORM ROLLER-COMplete (PLAIN) & X-20928 FORM ROLLER CORE

X-14176 RATCHET
CS-43 PAWL
X-19635 REEL ROD
SEE SECTION SHOWING DETAILED END GUIDE
X-19566 TYMPAN CLAMP BAR ASSEMBLY-COMplete (SEE SECTION SHOWING DETAILED GRIPPER ASSEMBLY)
LR-73 SCREW
LR-72 HANDLE PIN (NOT SHOWN)
LM-18 HANDLE
X-19557 RIDER ROLLER
X-11954 KNOB
X-14068 NYLINER 2 REQ. (NOT SHOWN)
X-21714 FRICTION FINGER-2 REQ.
X-21715 FRICTION SPRING 2 REQ.

LUBRICATION

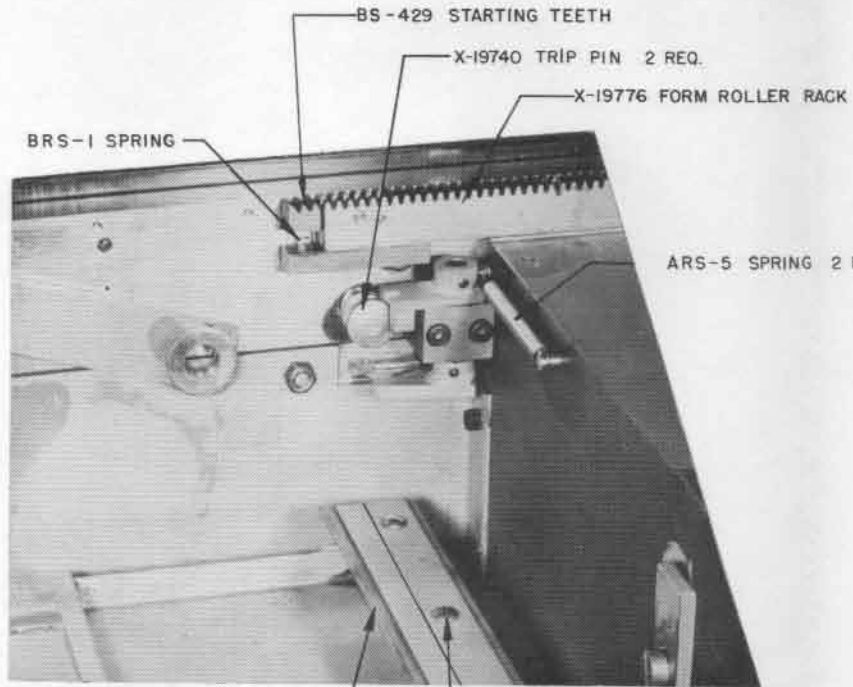
S.A.E. 20 OIL IS RECOMMENDED FOR ALL MOVING PARTS, OIL WEEKLY.
A LIGHT FILM OF OIL SHOULD BE KEPT ON CHAINS AND IMPRESSION RAILS AT ALL TIMES.
KEEP VIBRATOR WORM THOROUGHLY COVERED WITH VASELINE AT ALL TIMES.
STANDARD OIL CO.'S FINOIL OR EQUIVALENT IS RECOMMENDED FOR TYMPAN CLAMP BAR GRIPPERS. LEAVE GRIPPERS OPEN WHEN PRESS IS IDLE, TO ALLOW OIL TO COVER SHANKS THOROUGHLY.



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TIE BAR
 SHUP TRAY ASSEMBLY



BS-429 STARTING TEETH

X-19740 TRIP PIN 2 REQ.

X-19776 FORM ROLLER RACK

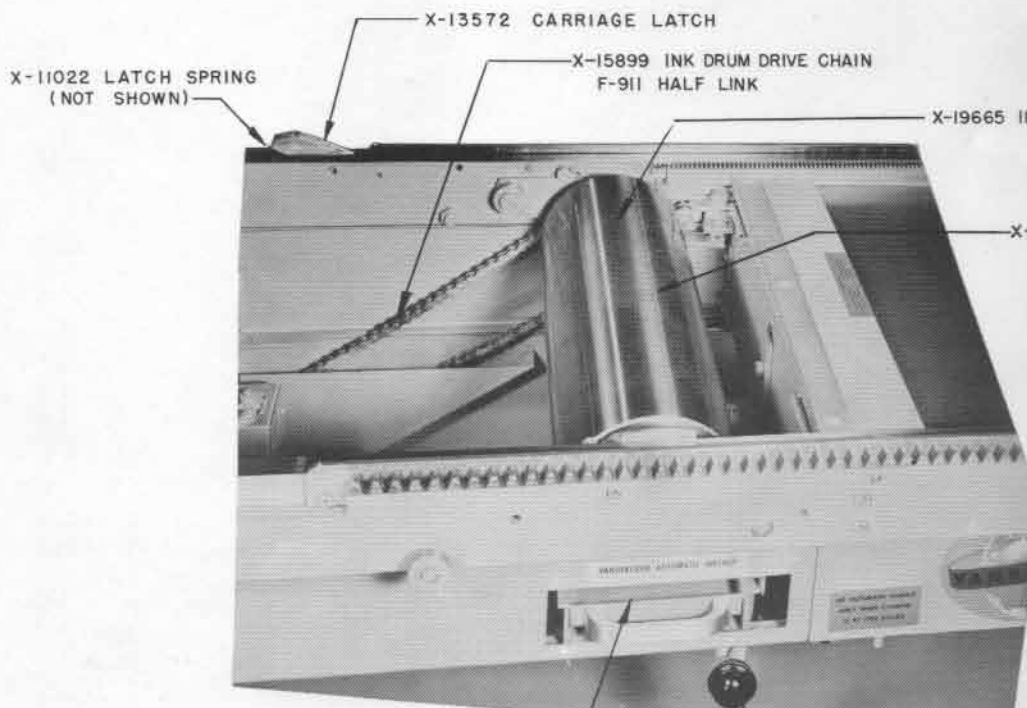
BRS-1 SPRING

ARS-5 SPRING 2 REQ.

#10-32 X .375 TRUSS HD. SCREW - 6 REQ.

X-24422 WIPER BLADE & HOLDER
(FU. SER. NO.-24156)

X-21119 ROLLER
WITH
X-14600 RETAINING RING
4 OF EACH REQ.



X-13572 CARRIAGE LATCH

X-11022 LATCH SPRING
(NOT SHOWN)

X-15899 INK DRUM DRIVE CHAIN
F-911 HALF LINK

X-19665 INK DRUM BEARING (NOT SHOWN)-2 REQ.

X-19661 INK DRUM ASSEMBLY

#10-32 X 3/8 TRUSS HD. SCREW
#10-32 INTERNAL LOCKWASHER
4 OF EACH REQ.

X-201

X-20824 SPRING
(FU. SER. NO. 24156)

CM-37 HANDLE

X-24435 WASH UP TRAY ASSEMBLY
(FU. SER. NO.-24156)

LUBRICATION

FOLLOW MOTOR MFGS.
LUBRICATION OF MOTOR

N. 2 REQ.
 9776 FORM ROLLER RACK

X-20600 1/12 H.P. GEAR MOTOR

LUBRICATION

FOLLOW MOTOR MFGS. INSTRUCTIONS FOR LUBRICATION OF MOTOR.

ARS-5 SPRING 2 REQ.

X-24277 REGISTER RACK L.H.
 X-24281 CENTER RACK L.H.
 (F.U. SER. NO.-23905)

X-15127 SCREW
 2 REQ.

X-20998 INK DRUM ARM LEFT SIDE
 (F.U. SER. NO.-20947)

X-375 TRUSS HD. SCREW - 6 REQ.

X-21119 ROLLER WITH X-14600 RETAINING RING 4 OF EACH REQ.

X-20564 INK DRUM ARM - RIGHT SIDE

X-20563 INK DRUM SPRING - (NOT SHOWN) - 2 REQ.

X-24280 REAR FLOATING RACK - 2 REQ.
 X-24278 REGISTER RACK - R.H.
 X-24282 CENTER RACK - R.H.
 X-24279 FRONT FLOATING RACK - 2 REQ.
 F.U. SER. NO.-23905

X-19665 INK DRUM BEARING (NOT SHOWN) - 2 REQ.

#10-32x.500 TRUSS HD. SCREW (NOT SHOWN) (FASTENS SUPPORT BAR TO ARM) 4 REQ.

X-19661 INK DRUM ASSEMBLY

#6-32 x .256 RD. HD. SCREW CAD. PL. & #6 LOCKWASHER 4 EA. REQ.

X-24299 SUPPORT BAR (F.U. SER. NO.-24013)

X-20753 PLUNGER

CM-37 BALL HANDLE

X-20779 STUD

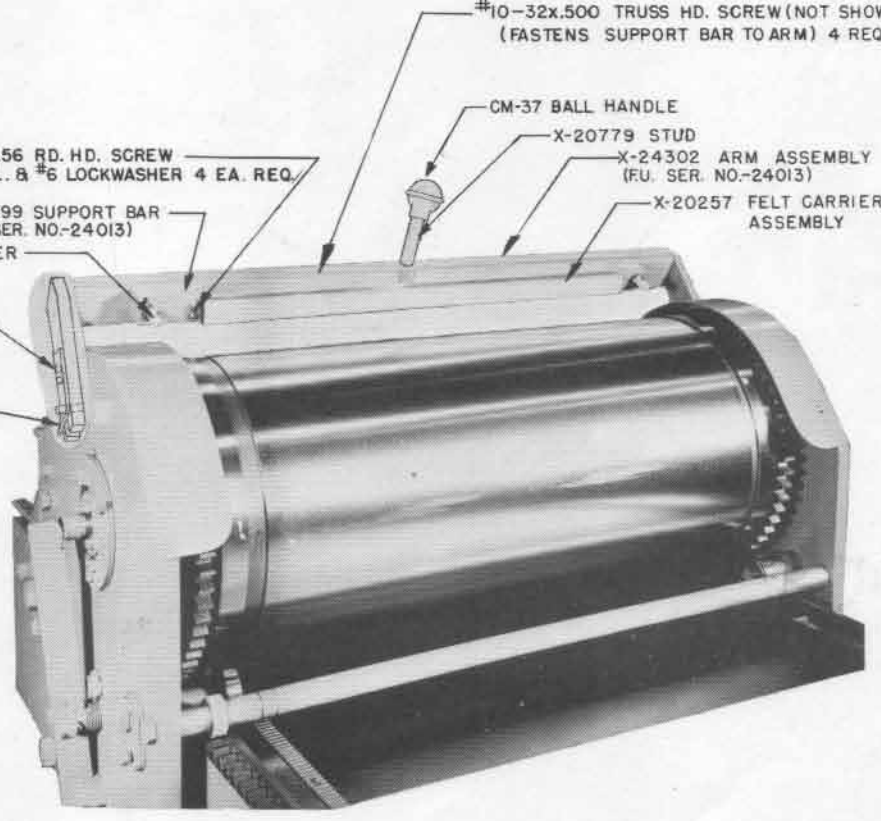
X-24302 ARM ASSEMBLY (F.U. SER. NO.-24013)

X-20257 FELT CARRIER ASSEMBLY

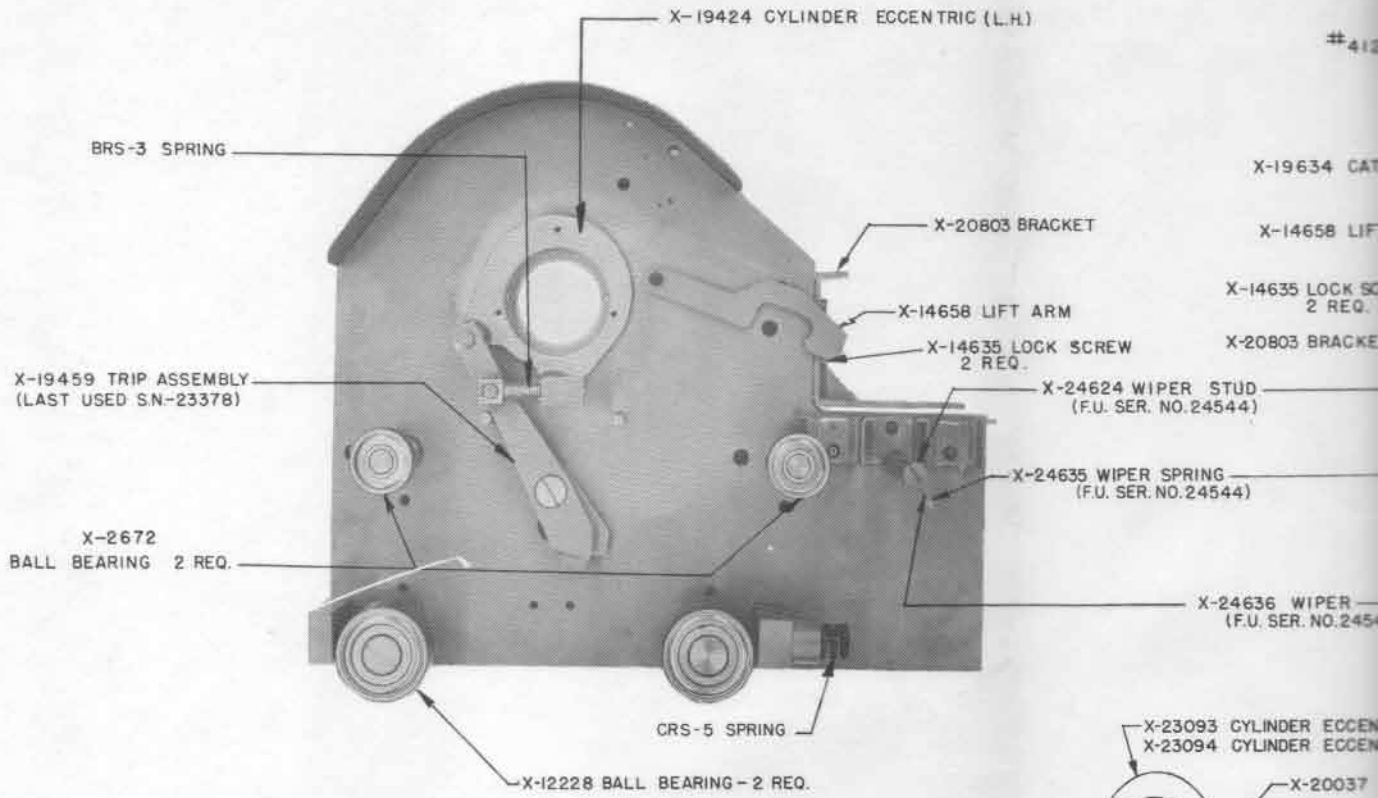
#10-32 X 3/8 TRUSS HD. SCREWS & #10-32 INTERNAL LOCKWASHER 4 OF EACH REQ.

X-20824 SPRING (F.U. SER. NO.-20950)

CM-37 HANDLE
 TRAY ASSEMBLY (156)



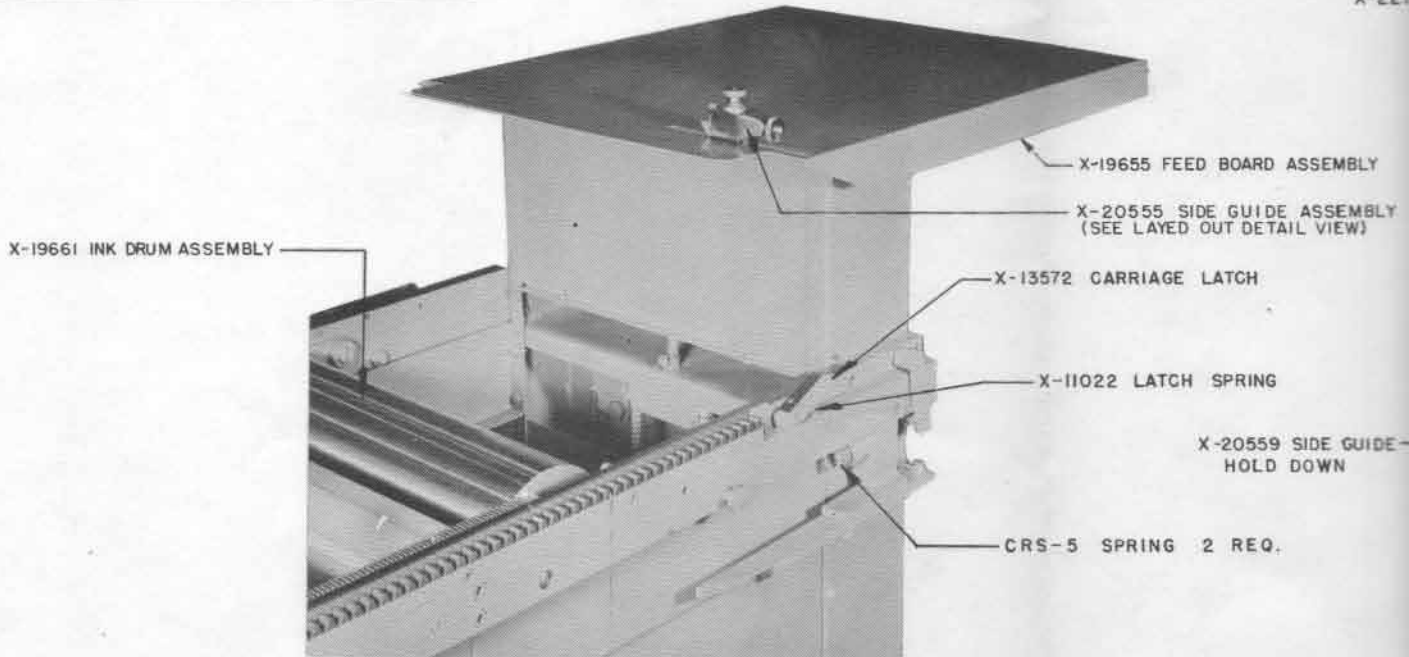
X-20950 "T" ATTACHMENT ASSEMBLY



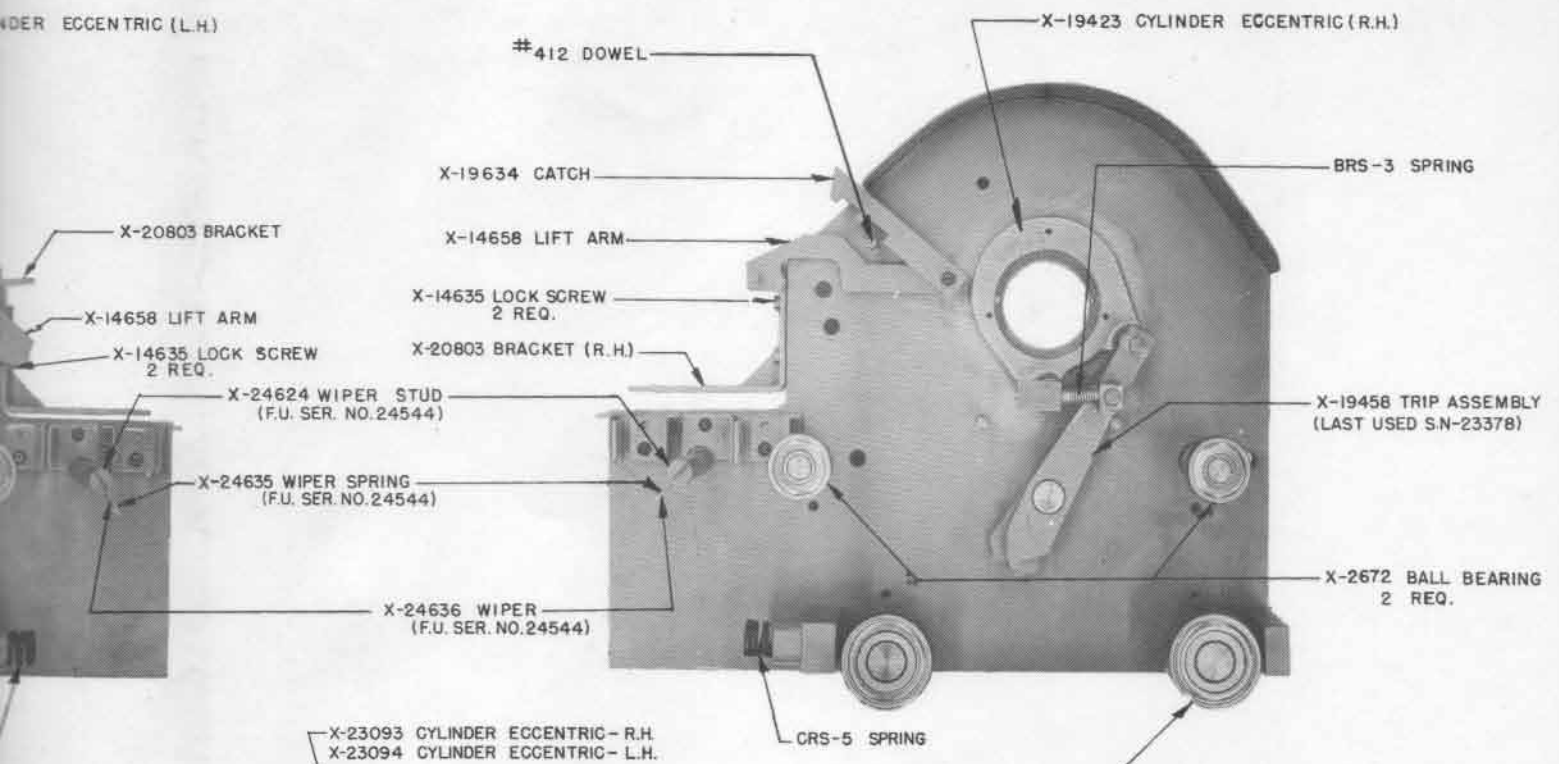
INSIDE VIEW OF CARRIAGE SIDE PLATE - LEFT SIDE

LUBRICATION

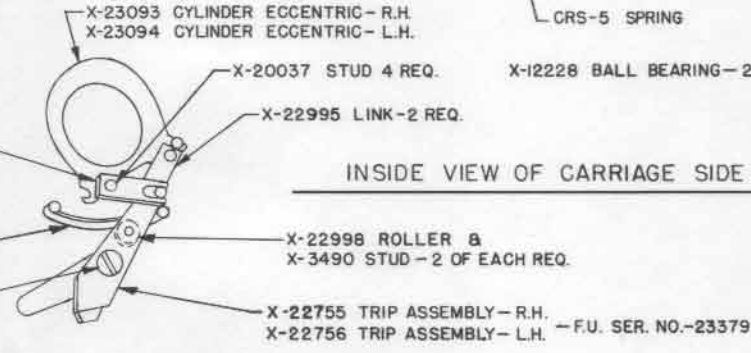
ALL BALL BEARINGS ARE PACKED IN GREASE AND REQUIRE NO FURTHER ATTENTION.



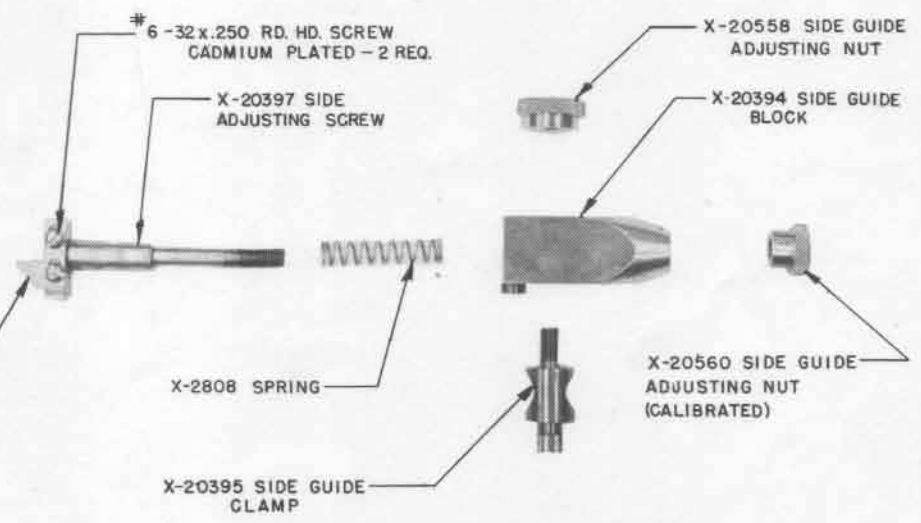
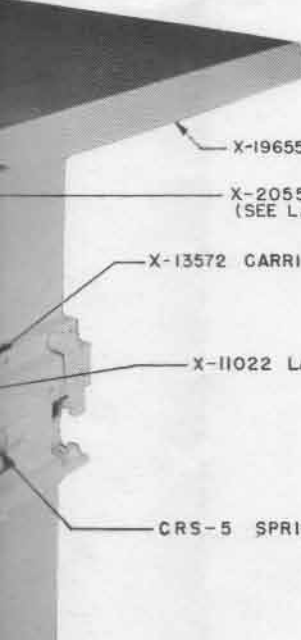
...DER ECCENTRIC (L.H.)



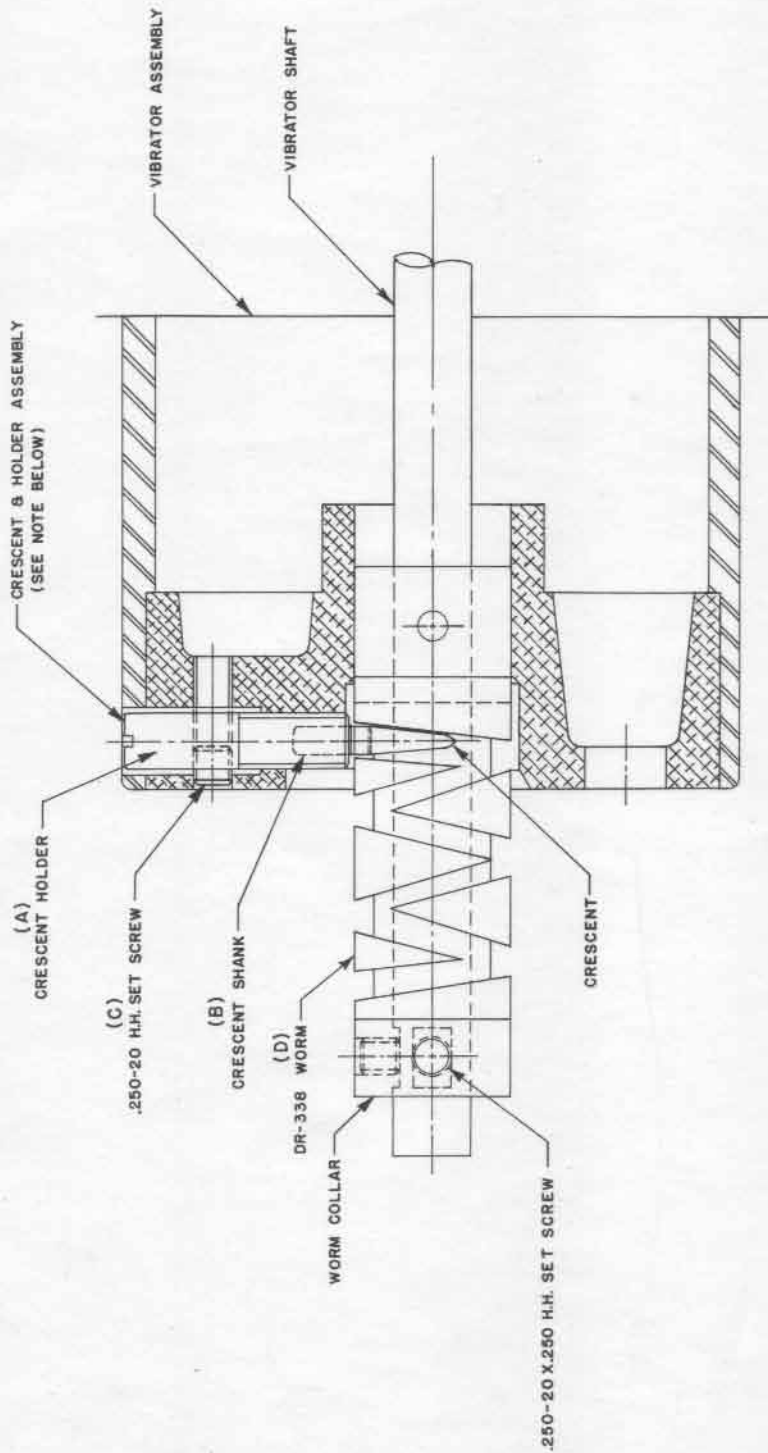
... LINK-2 REQ.
... FT SIDE



INSIDE VIEW OF CARRIAGE SIDE PLATE—RIGHT SIDE



DETAIL VIEW OF X-20555 SIDE GUIDE LAYED OUT

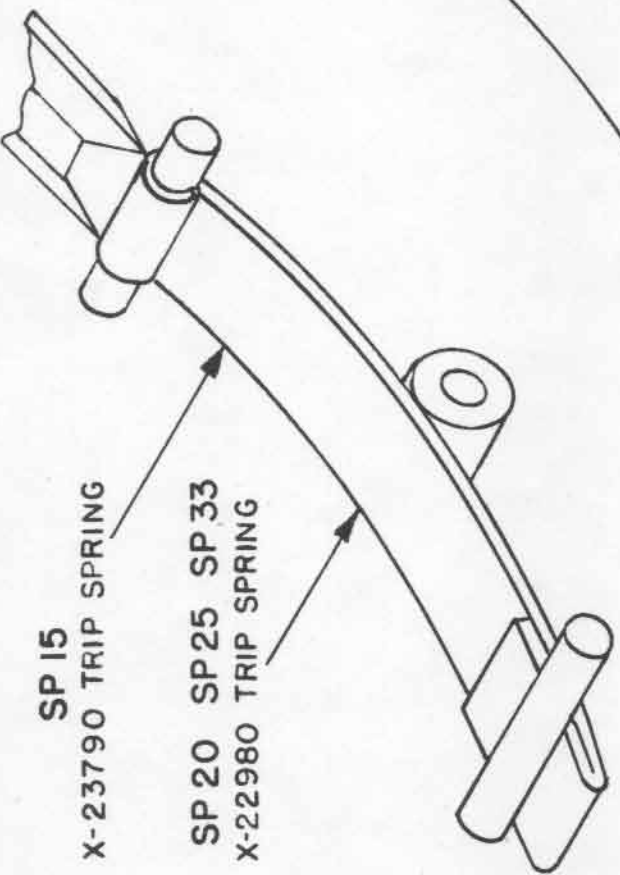


PARTIAL SECTION VIEW OF INK DRUM VIBRATOR ASSEMBLY

- ① ADJUST CRESCENT HOLDER-(A) UNTIL IT TOUCHES END OF CRESCENT SHANK-(B). THEN BACK OFF 3/4 OF A TURN AND LOCK HOLDER WITH .250-20 H.H. SET SCREW-(C). THIS SETTING MUST ALLOW WORM-(D) TO ROTATE FREE OF ANY DRAG, TRAVELING FULL LENGTH BOTH DIRECTIONS.
- ② COAT VIBRATOR WORM WITH GRAPHITE GREASE OR VASELINE.

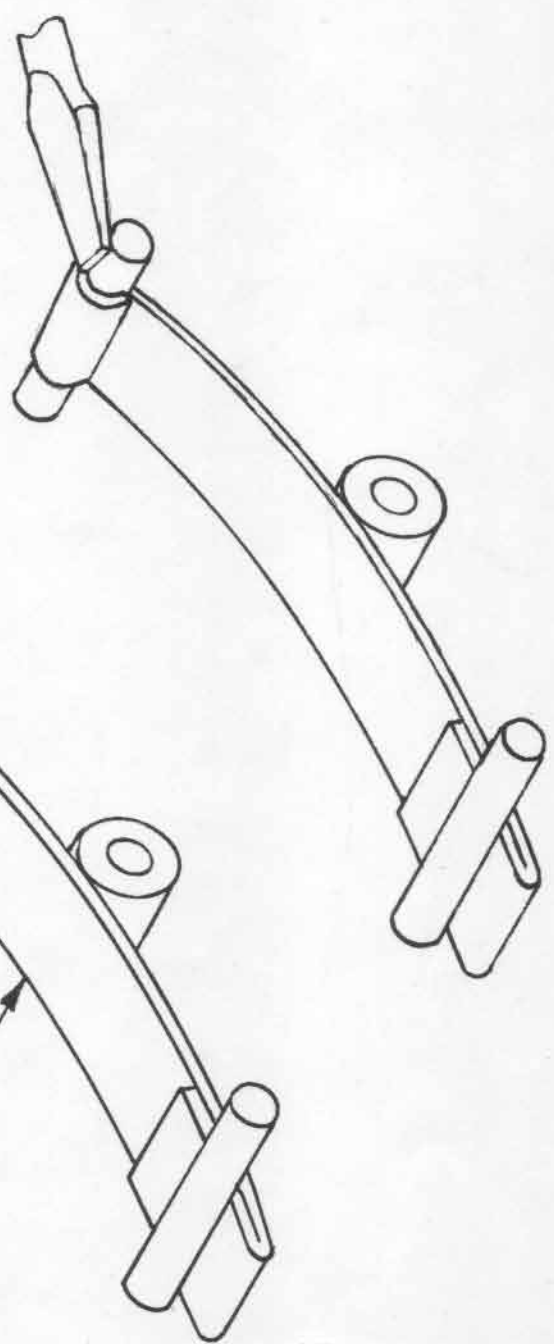
NOTE— CRESCENT AND HOLDER ASSEMBLY AS SHOWN IS PART NO. M-184. THE ABOVE INSTRUCTIONS APPLY ALSO TO X-203 CRESCENT AND HOLDER ASSEMBLY (NOT SHOWN).

CRESCENT OR WORM REPLACEMENT INSTRUCTIONS



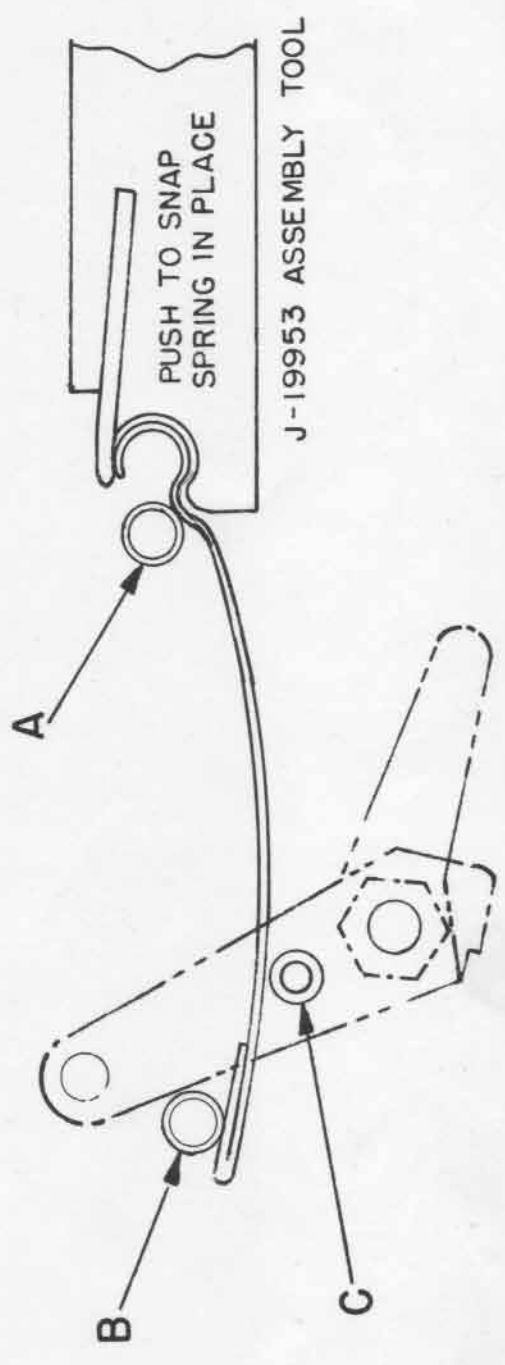
STEP 1
 USE COLD CHISEL (APPROX. 10" LONG) TO FRACTURE LOOP END OF SPRING ONLY.

STEP 2
 PRY WITH CORNER OF SCREW DRIVER UNDER LOOP. THIS WILL BREAK THE LOOPED END OF SPRING FROM DOWEL.



STEP 3
 REMOVE ALL BROKEN PARTS.

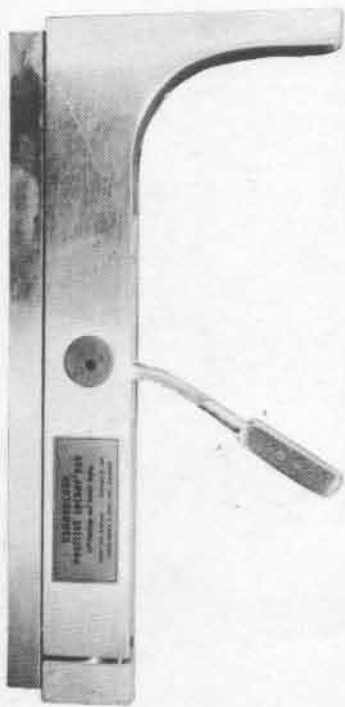
STEP 4
 LACE NEW SPRING AS SHOWN. UNDER DOWEL "A" OVER ROLLER "C" UNDER DOWEL "B" AND SNAP IN PLACE. (USE J-19953 ASSEMBLY TOOL)



SP 15
 X-23790 TRIP SPRING

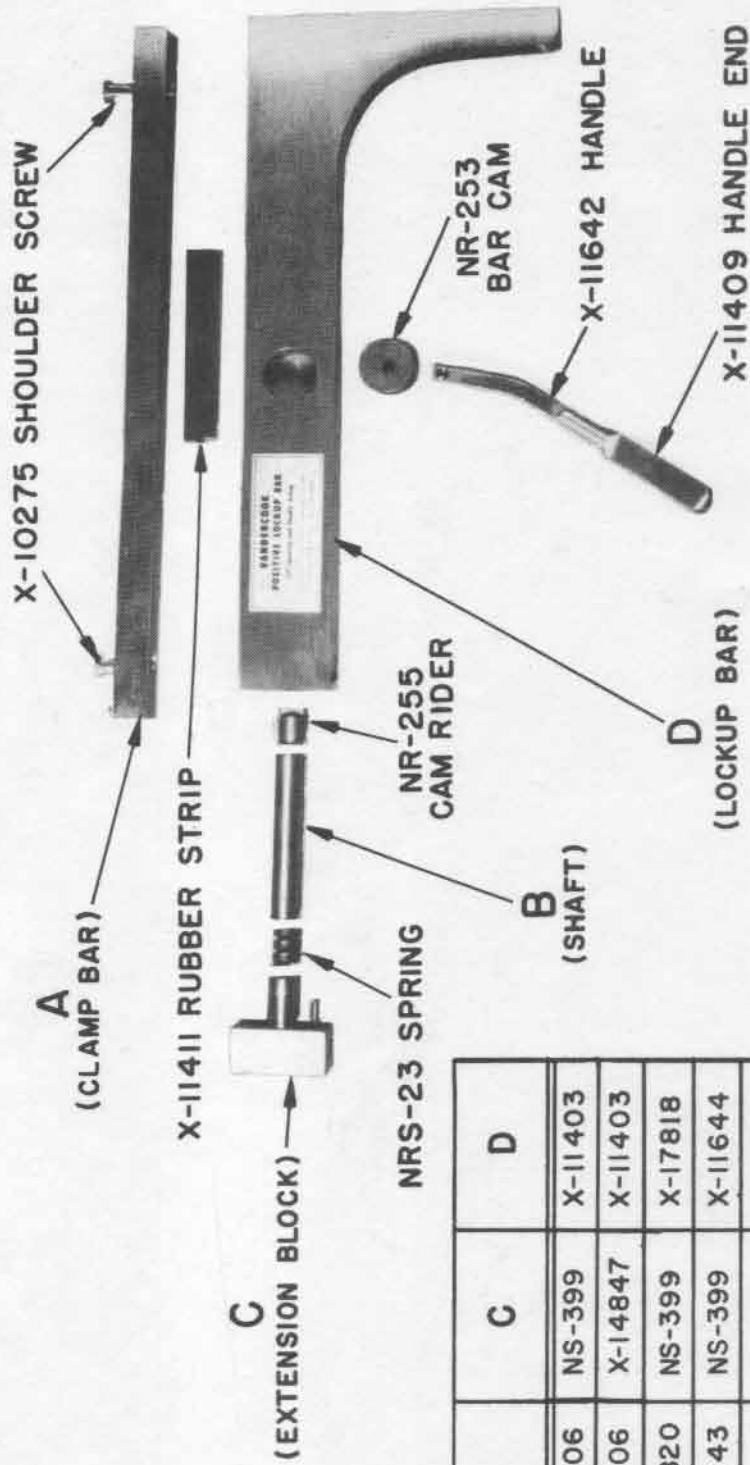
SP 20 SP25 SP33
 X-22980 TRIP SPRING

J-19953 ASSEMBLY TOOL



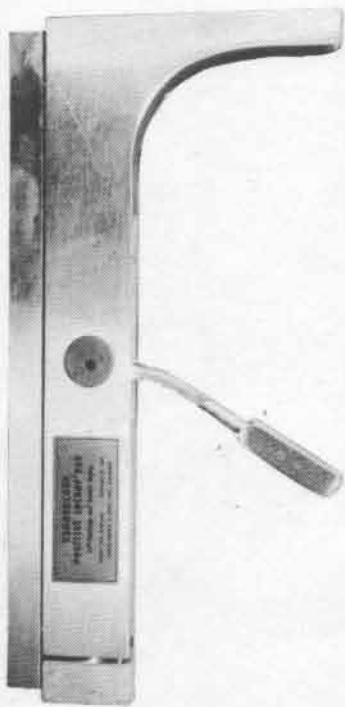
LOCKUP BAR ASSEMBLY (COMPLETE)

VANDERCOOK MODEL NO.	PART NO.	WIDTH
3, 4, SPI5, 15-20, 15-21	X-11410	15.000"
UNIVERSAL I	X-14848	15.500"
319	X-17800	18.250"
UNIVERSAL II, III, 219 (ALL)	X-11645	19.000"
SP20	X-20322	20.062"
425	X-17000	24.250"
325	X-11897	25.000"
SP25	X-23071	25.250"



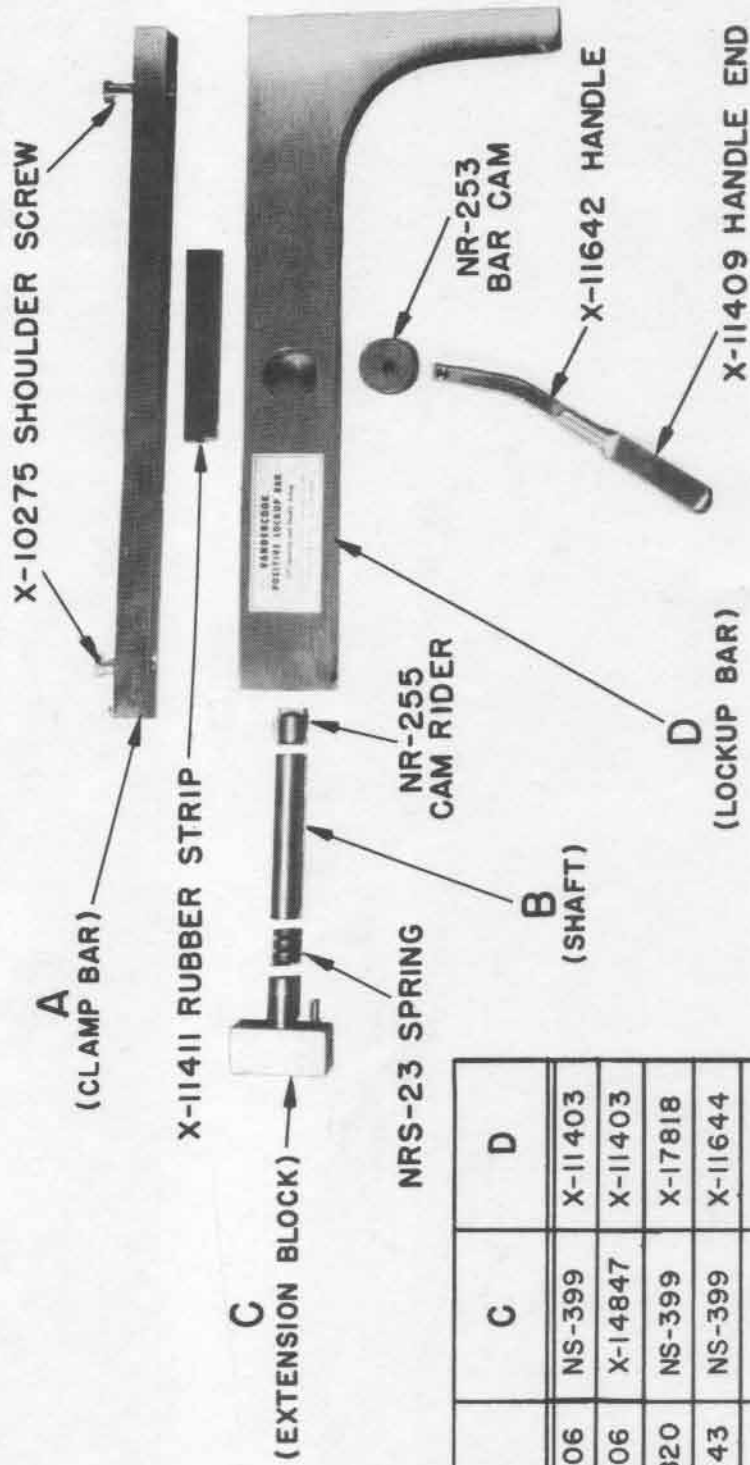
VANDERCOOK MODEL NO.	A	B	C	D
3, 4, SPI5, 15-21	X-11405	X-11406	NS-399	X-11403
UNIVERSAL I	X-11405	X-11406	X-14847	X-11403
319	X-17819	X-17820	NS-399	X-17818
UNIV. II, III, 219	X-11646	X-11643	NS-399	X-11644
SP20	X-11896	X-20323	NS-399	X-11886
425	X-17005	X-17004	NS-399	X-17003
325	X-11899	X-11898	NS-399	X-11887
SP25	X-11899	X-11898	X-23072	X-11887

VANDERCOOK POSITIVE LOCKUP BAR



LOCKUP BAR ASSEMBLY (COMPLETE)

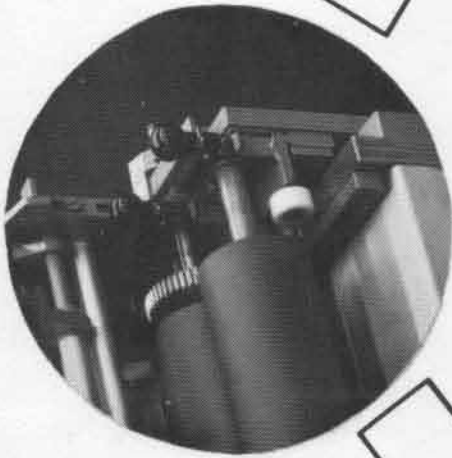
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325	X-11899	X-11898	NS-399	X-11887
SP25	X-11899	X-11898	X-23072	X-11887

VANDERCOOK POSITIVE LOCKUP BAR

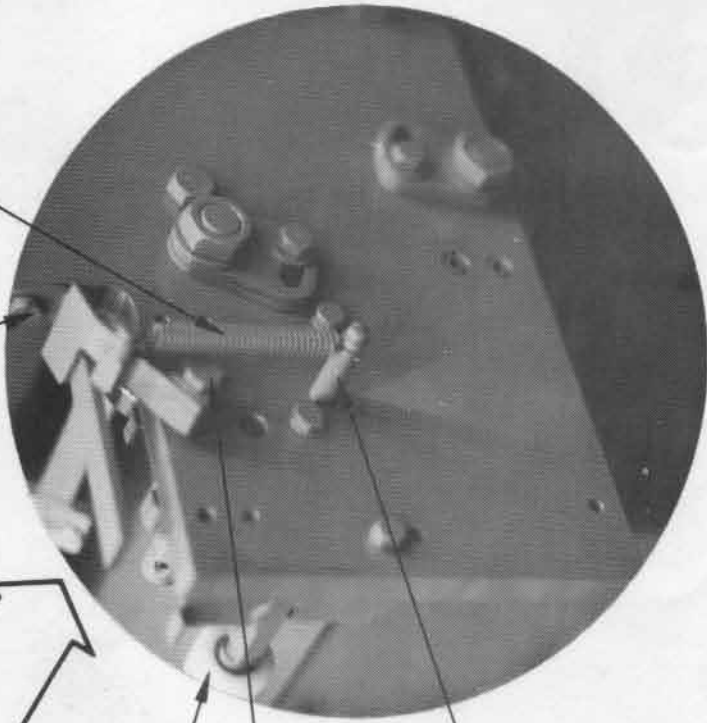
X-24630 FORM ROLLER SUPPORT ASSEMBLY—COMPLETE (OPTIONAL)



X-24654 BRACKET ASSEMBLY

X-14635 LIFT SCREW— 4 REQ.

MRS-4 SPRING



**X-24565 DELRIN ROLLER
4 REQ.**

X-24659 SHOULDER SCREW

X-24624 WIPER STUD

X-24635 WIPER

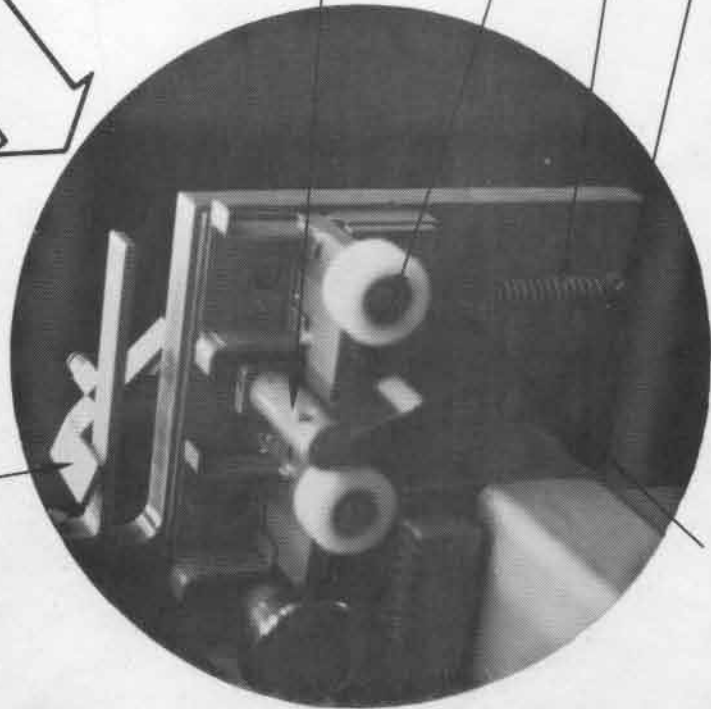
X-24636 WIPER SPRING

X-24658 SLEEVE

**X-24625 ROLLER STUD
4 REQ.**

X-13020 SPRING

X-20856 SPRING PIN— 2 REQ.



NB-18 HOOK