INSTRUCTION &
PARTS MANUAL

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CLASS 141

# American

# HYPRO
# FLATWORK IRONER

**CLASS 141**

# INSTALLATION · OPERATION · MAINTENANCE INSTRUCTIONS and REPAIR PARTS

## American HYPRO Flatwork Ironer

## CONTENTS



## IMPORTANT

The purpose of this manual is to acquaint you fully with this equipment, and to tell briefly and clearly how it should be installed, operated and maintained. The machinery is built according to highest manufacturing standards and has been thoroughly inspected and tested at the factory before shipment. *It will give you years of efficient, trouble free service if the instructions herein are followed.* Therefore, this manual should always be kept available for those who may need it.

The special maintenance section includes parts illustrations with listings of individual machine parts. When ordering repair parts use the item number identification and follow the instructions for "How to Order". Some items, such as standard nuts, bolts, washers, etc., are not listed because it will be faster and more economical to obtain them locally.

READ THIS MANUAL—FOLLOW THE INSTRUCTIONS

# DESCRIPTION

The Hypro ironer is furnished with 4, 6 or 8 rolls, depending upon your requirements. The standard machine is furnished with the drive mounted outside the R. H. frame. As an optional extra, the drive can be positioned inside the R. H. frame (under the machine).

The ironer illustrated in figures 1, 2, 3 and 4 is a standard six roll machine. The purpose of these illustrations is to acquaint personnel with the names and locations of the various parts of the machine. These illustrations should also be very helpful during the initial installation.

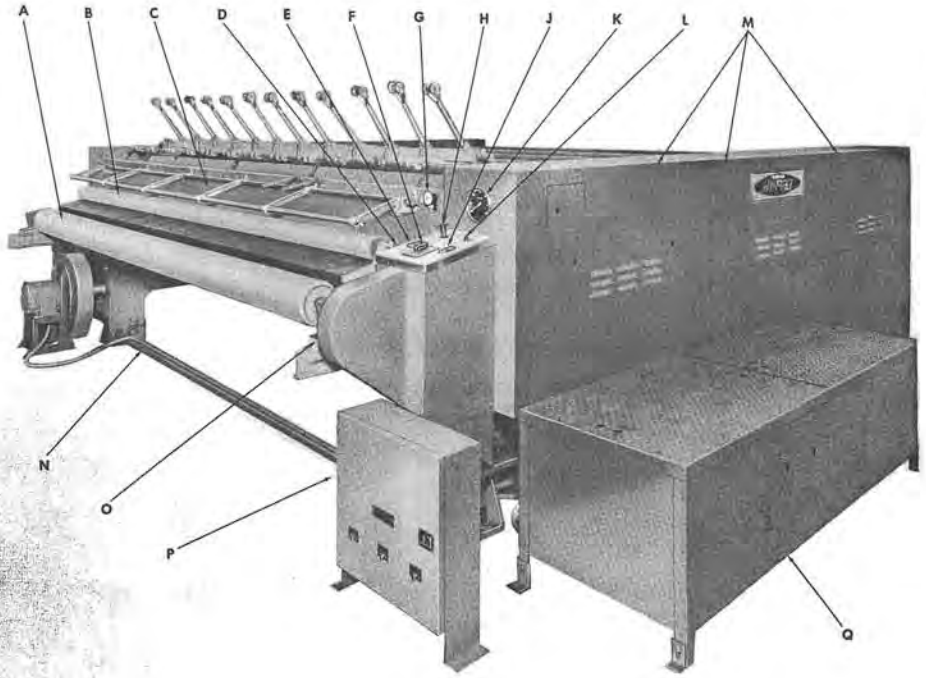



**FIGURE 1**
**R. H. VIEW OF FEED END, 6 ROLL FLATWORK IRONER**

| ITEM | DESCRIPTION |
|---|---|
| A | Ribbon feed drive roll |
| B | Doffer roll |
| C | Safety guard |
| D | Control panel |
| E | "START INCH - STOP" button |
| F | Speed control |
| G | Pressure gauge, Bijur lubrication system |
| H | Roll raising control |
| J | "OFF-ON" button |
| K | Speedometer |
| L | Emergency signal light |
| M | R. H. end guards |
| N | Tie-rod |
| O | Control support |
| P | Motor control switch |
| Q | Drive guard |

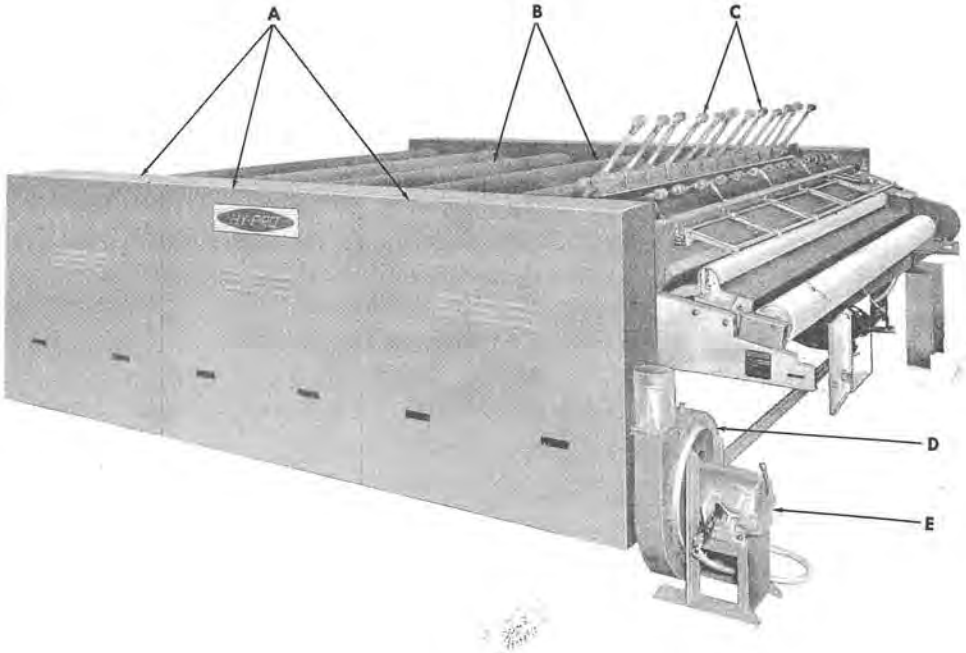
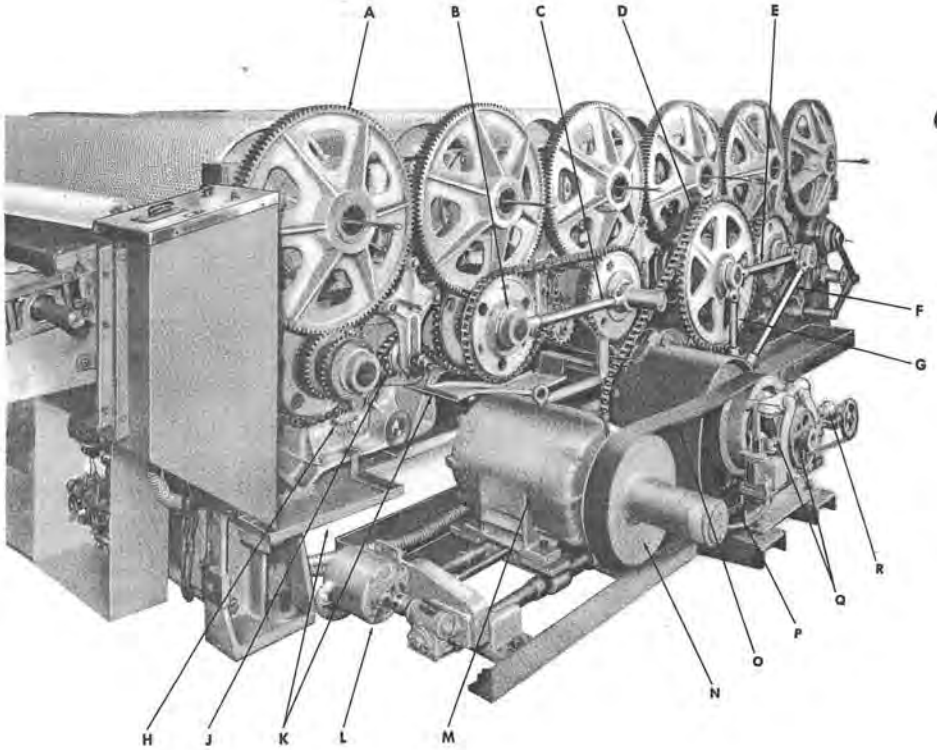



**FIGURE 2**
**L. H. VIEW OF FEED END, 6 ROLL FLATWORK IRONER**

| ITEM | DESCRIPTION |
|---|---|
| A | L.H. end guards |
| B | Ironer rolls |
| C | Spool arm assem. |
| D | Vacuum fan |
| E | Vacuum fan motor |

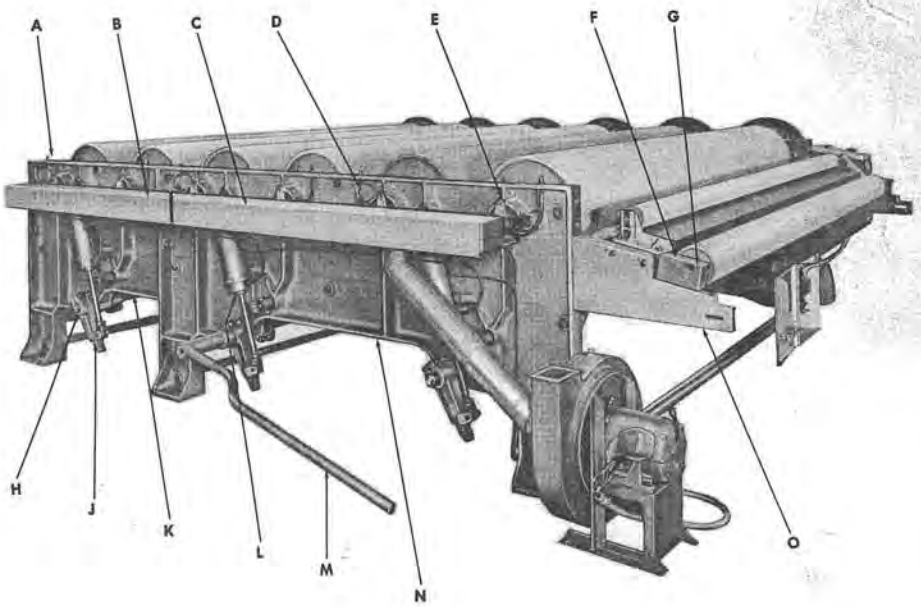



## FIGURE 3
## R. H. SIDE VIEW, 6 ROLL FLATWORK IRONER (WITHOUT GUARDS)

| ITEM | DESCRIPTION |
|---|---|
| A | Bearing & gear assem., main drive |
| B | Drive sprocket assem. |
| C | Strut |
| D | Main drive chain |
| E | Strut |
| F | Long strut |
| G | Short strut |
| H | Junction block, Bijur lubrication system |
| J | Idler sprocket |
| K | Oil drip pans |
| L | Remote control motor |
| M | Drive motor |
| N | Roto-cone pulley |
| O | Vari-speed V-belt |
| P | Gear reducer |
| Q | Brake assembly |
| R | Speedometer drive head |

## FIGURE 4
## L. H. SIDE VIEW, 6 ROLL FLATWORK IRONER (WITHOUT GUARDS)

| ITEM | DESCRIPTION |
|---|---|
| A | Stud for squaring frames and lubricating vacuum adaptor |
| B | Vacuum duct, roll 5 & 6 |
| C | Vacuum duct, rolls 1, 2, 3 & 4 |
| D | Hose assembly |
| E | Vacuum adaptor assem. |
| F | L.H. grease shield |
| G | Pillow block (Inside grease shield) |
| H | Roll raising shaft |
| J | Lever, air cylinder end, raising rig |
| K | L.H. frame, 2 roll |
| L | Air cylinder, roll raising mechanism |
| M | Hand crank, raising rig |
| N | L.H. frame, 4 roll |
| O | Feed table bracket |



# DATA and SPECIFICATIONS

## MODEL DATA

| Floor Space Requirements: | 4 Roll Ironer | 6 Roll Ironer | 8 Roll Ironer |
|---|---|---|---|
| Depth | 125" | 175" | 225" |
| Height | 56" | 56" | 56" |
| Width (With Drive Outside Machine) | 195" | 195" | 195" |
| Width (With Drive Inside Machine) | 170" | 170" | 170" |
| Shipping Weight | 26,600 lbs. | 38,200 lbs. | 53,200 lbs. |
| Machine Weight | 22,000 lbs. | 32,900 lbs. | 43,900 lbs. |
| Floor Load Requirements | 210 lbs./sq.ft. | 210 lbs./sq.ft. | 210 lbs./sq.ft. |
| Air Service: | | | |
| Inlet Size | 1/4" I.P.S. | 1/4" I.P.S. | 1/4" I.P.S. |
| Pressure | 70 PSI | 70 PSI | 70 PSI |
| Steam Service: | | | |
| Inlet Size | 2-1/2" I.P.S. | 2-1/2" I.P.S. | 3" I.P.S. |
| Pressure | 125 PSI | 125 PSI | 125 PSI |
| Return Size | 3/4" I.P.S. | 3/4" I.P.S. | 3/4" I.P.S. |
| Steam Consumption | 650 lbs./hr. (Max.) | 1000 lbs./hr. (Max.) | 1300 lbs./hr. (Max.) |
| Boiler Horsepower Requirements | 16 B.H. | 24 B.H. | 32 B.H. |
| Vacuum Size | 6" | 6" | 6" |
| Ironing Speed | 27 to 81 ft./min. | 42 to 126 ft./min. | 50 to 150 ft./min. |
| Ironing Surface (Per Chest – 3,635 sq.in.) | 14,540 sq.in. | 21,810 sq.in. | 29,080 sq.in. |
| Pressure Area Under Rolls (Per Chest – 2,265 sq.in.) | 9,060 sq.in. | 13,590 sq.in. | 18,120 sq.in. |
| Diameter of Padded Roll – Nominal | 19-5/8" | 19-5/8" | 19-5/8" |

## ELECTRICAL SPECIFICATIONS

Standard A.C. Service 208-240 440 or 550 Volts, 50 or 60 Cycles, 3 Phase

| | 4 Roll Ironer | 6 Roll Ironer | 8 Roll Ironer |
|---|---|---|---|
| Drive Motor | 15HP ~~7-1/2 H.P.~~ | 15 H.P. | 15 H.P. |
| Vacuum Motor | 3 H.P. | 3 H.P. | 3 H.P. (2 Req'd.) |
| Variable Speed Control Motor | 1/4 H.P. | 1/4 H.P. | 1/4 H.P. |
| Feed Line Wire Size (50 Ft. Max.) | ~~#8~~ | #4 | #2 |
| Circuit Breaker | 50 Amp. | 125 Amp. | 150 Amp. |
| Fuses or Disconnect Switch | 100 Amp. | 150 Amp. | 175 Amp. |
| | 100 Amp., 3 Pole 250 Volt, Single Throw Switch | 200 Amp., 3 Pole, 250 Volt, Single Throw Switch | 200 Amp., 3 Pole, 250 Volt, Single Throw Switch |

## EXTRA EQUIPMENT (OPTIONAL)

Revolite Roll Padding
Hamilton Spring Padded Roll
Drive Positioned Inside Frame of Machine

Canopy

Spare Parts Kit
6 Roll Drive on 4 Roll Ironer
Electric Heated Tape Welding Device

# INSTALLATION

## CHECKING SHIPMENT

The ironer is dismantled into large assemblies prior to shipment. These assemblies are packed into wooden crates.

As soon as the shipment is received, check the shipping papers to see that the correct number of crates have been received. If any crates are damaged, it is advisable to have the carrier make a note of the damage on the shipping papers before receipt is acknowledged.

The boxes containing the frames, reducer, shafts, small parts and motor are required on the initial part of the installation and should be moved to the erection site. Uncrate the parts carefully, and make a thorough inspection to see if any damage has occurred during transit. Claims should be filed immediately with the freight forwarding agency.

## LOCATION

If the ironer is to be applied to an existing machine in your plant, its location is predetermined. If you are purchasing a new machine to use in conjunction with this ironer, before deciding upon a location, access to steam, air and electrical supply lines should be considered. Sufficient space should be allowed on all sides for cleaning, lubrication and maintenance.

## FOUNDATION

The floor on which the ironer is mounted should be able to withstand a minimum load of 210# per square foot. Floors of lighter construction should be strengthened by suitable reinforcements.

It is suggested that structural steel channels be placed under the feet of the ironer to distribute the load and maintain the level of the ironer. These steel channels should be placed at RIGHT ANGLES to the floor joists. This means that depending on the floor in your building, the channels will run in the direction of the feed, or at 90° to the direction of the feed. Figure 5 shows these channels and the following paragraph lists the channel requirements for the 4, 6 and 8 roll machines.

NOTE: When the channels are placed in the direction of the feed, the inside flange of the channel must be partially cut out at spots for tie-rod clearance.

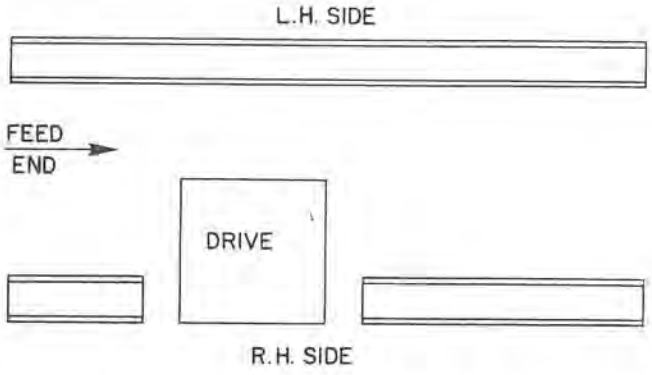



**FIGURE 5A**
**CHANNELS PLACED IN DIRECTION OF FEED**

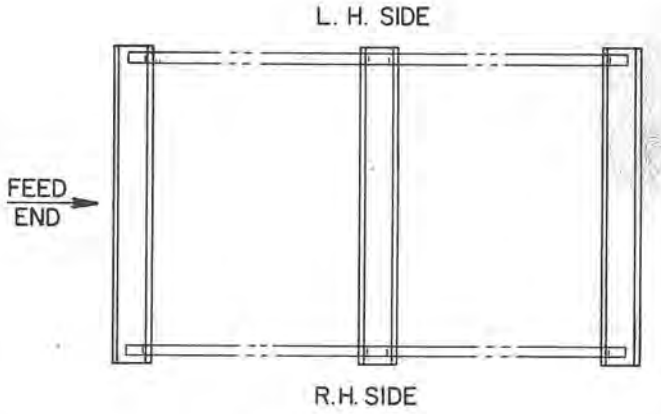



**FIGURE 5B**
**CHANNELS PLACED AT 90° TO DIRECTION OF FEED**

## CHANNEL SPECIFICATIONS

| 4 ROLL MACHINE | 6 ROLL MACHINE | 8 ROLL MACHINE |
|---|---|---|
| In direction of Feed | In direction of Feed | In direction of Feed |
| 1 Channel, 9" - 20#, 1'3" Lg. | 1 Channel, 9" - 20#, 1'3" Lg. | 1 Channel, 9" - 20#, 5'0" Lg. |
| 1 Channel, 9" - 20#, 3'0" Lg. | 1 Channel, 9" - 20#, 7'3" Lg. | 1 Channel, 9" - 20#, 4'5" Lg. |
| 1 Channel, 9" - 20#, 9'4" Lg. | 1 Channel, 9" - 20#, 13'6" Lg. | 1 Channel, 9" - 20#, 16'8" Lg. |
| 90° to direction of Feed | 90° to direction of Feed | 90° to direction of Feed |
| 2 Channels, 12"–30#, 13'4" Lg. | 3 Channels, 12"–30#, 13'4" Lg. | 4 Channels, 12"–30#, 13'4" Lg. |

## ERECTING IRONER

This instruction will cover the erection of a six roll ironer. The four roll and the eight roll ironer are assembled in the same manner. Before proceeding with the installation, study the photos and drawings in this manual in order to familiarize yourself with the machine and its components.

## ASSEMBLING FRAME

See figure 6.

Stand the right and left four roll frames (A) on the channels. Fasten the frames together by means of the five tie-rods (D). At the same time the tie-rods are inserted, the roll raising shafts (E) should be inserted into the frames. The end with the key is on the left side. The lifting levers (F) should be mounted on the shaft so they are located between the frames. The upper tie-rod (B) is put in place only after the chests and rolls are in position.

Stand the right and left two roll frames (G) on the channels. Insert the tie-rods (H) and the roll raising shaft (E) with lifting levers (F) attached in the frames, and fasten the frames together by means of the tie-rods. Fasten the two roll frame to the four roll frame.

## SQUARING FRAME

See figure 6.

Before the chests and rolls are installed, the frame must be square. Use the studs (J) on the top of the frame and measure diagonally as shown in figure 6. When the diagonal measurements are equal, the frames are square.

## LEVELING

See figure 6.

The ironer must be level in both the longitudinal and the transverse direction. Longitudinal level may be determined by placing a spirit level on the finish pad on top of the frames (A and G) and leveling by means of the jack screws (K). Transverse level may be determined by placing a spirit level on the roll raising shaft (E) and leveling by means of the jack screws.

## LOCATING DRIVE

See figures 21 and 22.

To position the drive assembly, use a straight edge and line up the drive sprocket on the reducer and the driven sprocket on the ironer. Make certain there will be enough adjustment of the reducer on the base to

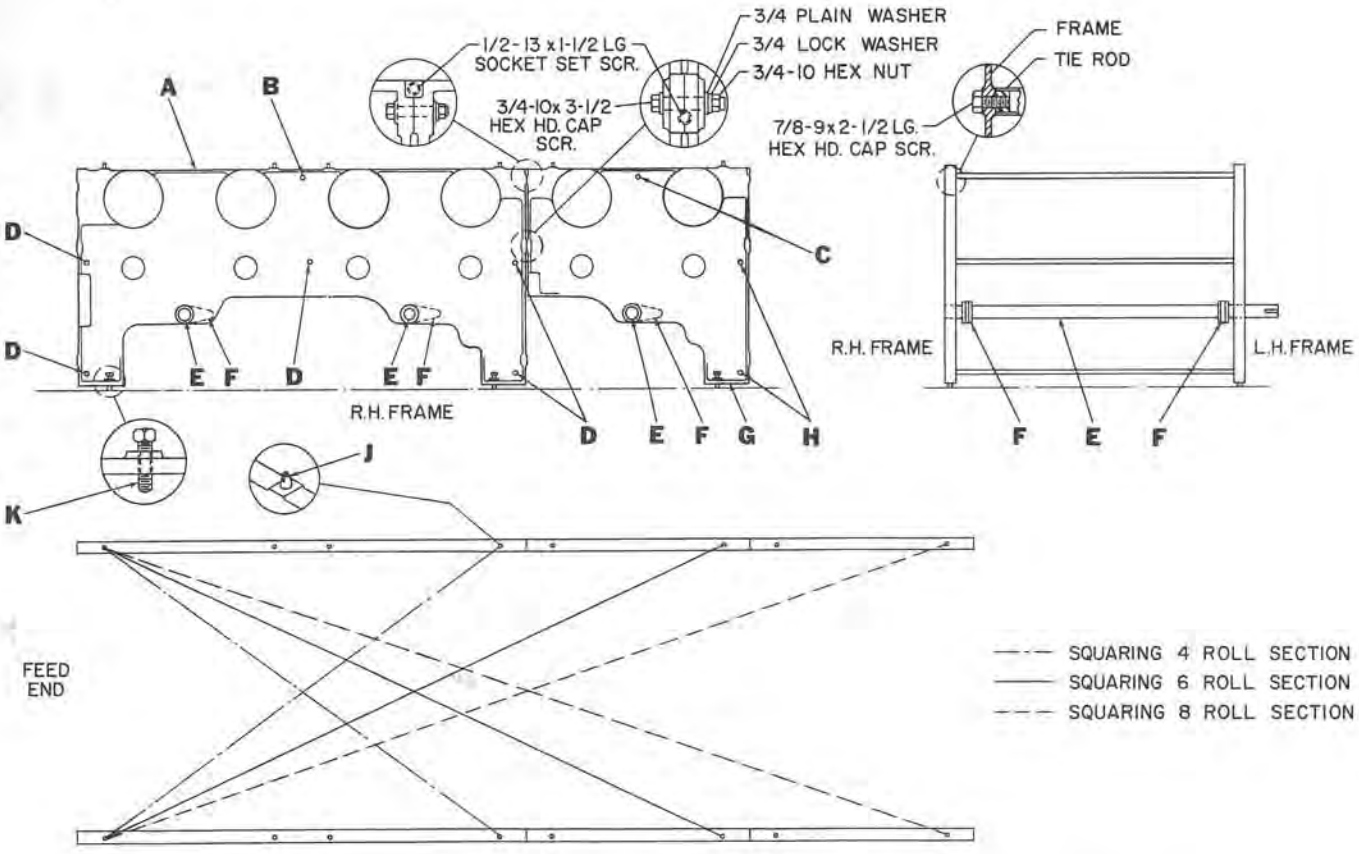



**FIGURE 6 - ASSEMBLING, SQUARING AND LEVELING FRAME**

apply and relieve tension on the drive chain. Then bolt the base to the floor and adjust the reducer to obtain the proper chain tension.

On some machines, the motor and reducer are on separate bases, while on others they are on the same base. The 8 roll ironer with the drive positioned outside the frame and all models where the drive is positioned inside the frames are mounted on separate bases.

DRIVE POSITIONED OUTSIDE FRAME – Move the motor to the forward position on the motor base and wedge open the roto-cone pulley to allow the belt sufficient space to pass easily into the pulley and on the driven sheave of the reducer. Avoid prying the belt. Adjust tension on the roto-cone belt and fasten the motor securely to the base.

ALL INSIDE DRIVE MACHINES AND 8 ROLL OUTSIDE DRIVE – Move the motor to the forward position on the motor base, and slip the roto-cone belt over the roto-cone pulley and the drive sheave. Avoid prying the belt. Then using a piece of timber, exert pressure between the reducer and the motor. This will automatically spread open the roto-cone pulley to the proper position and width.

Then while still exerting pressure on the timber, line the pulleys up with a straight edge and mark the holes for the motor base. These holes should be marked, bearing in mind that the motor must be adjusted forward and backward when the reducer is adjusted. The motor base is on slotted holes so it can be adjusted at the same time, or at any other time the belt requires adjusting. It is recommended that the holes be marked in the center of the slot, or somewhat past center toward the front of the machine.

## CONDUIT INSTALLATION

See figure 7.

Conduit going from the main junction box to the right rear leg of the ironer should be installed at this time.

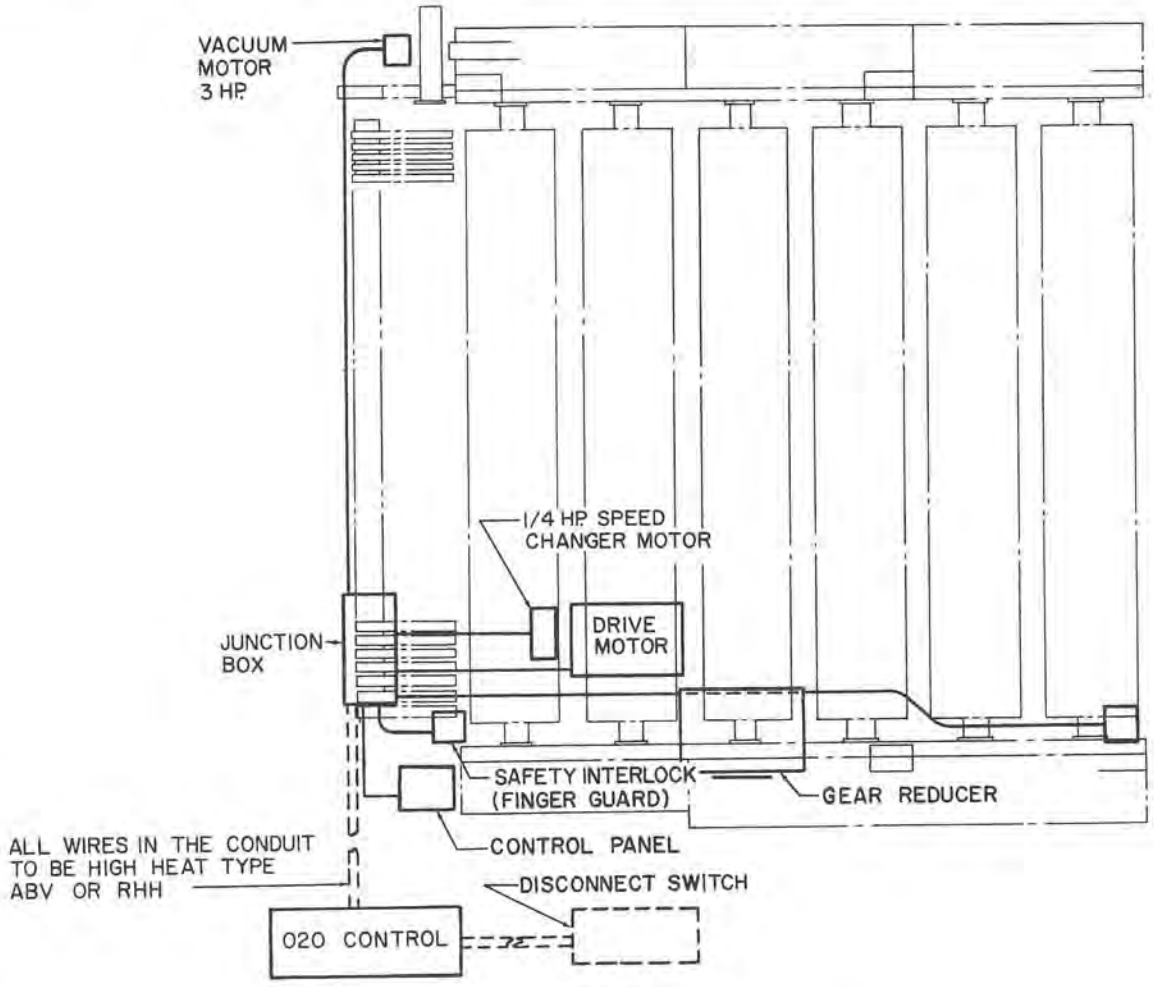



**FIGURE 7 - CONDUIT INSTALLATION**

## CHEST INSTALLATION

See figures 8 and 19.

Each chest is numbered. This number is stamped on the top of the front right hand lip. The chests are installed according to number as shown on the illustration. Doweled guide blocks on the left frame and dowel pins on the right frame are provided for positioning of the chests. The guide blocks can be removed to facilitate sliding the chests into position during erection. As each pair of chests is mounted, the raising rig rods (19-D) should be installed before mounting the next pair of chests. Each pair of chests has only one raising rig rod at each side of the machine as shown in figure 19.

After all chests have been installed, remove the protective coating from them.

At this point it is advisable to re-check the frames for being level and square as previously described. Since the drive has been located in relation to the right hand frame, any further squaring should be done on the left hand frame.

## INSTALLING ROLLS

The padded rolls are numbered 1 thru 6. They should be installed in this sequence with the flanged drive gudgeon on the right side, and positioned WITH THE PIPE PLUG ON THE LEFT END OF THE ROLL AT THE TOP OF THE VERTICAL CENTER LINE. In this way, the keyway on the right end is in the vertical position for the installation of the universal drive shaft. Install the tie-rods (Items B & C, figure 6).

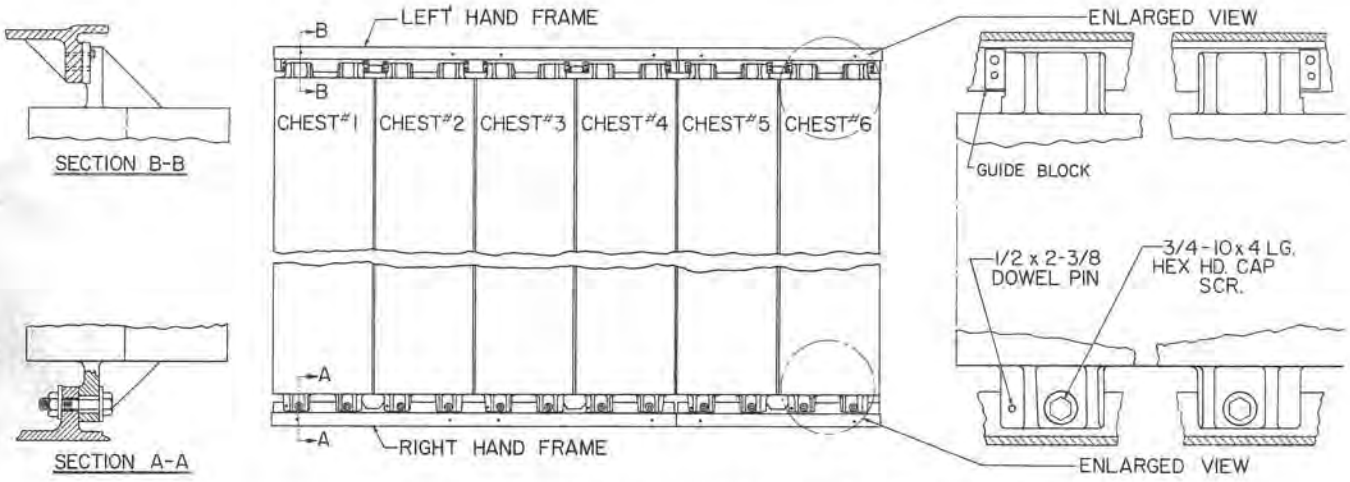



**FIGURE 8 - STEAM CHEST INSTALLATION**

## INSTALLING UNIVERSAL DRIVE SHAFT

See figure 9.

When installing the universal drive shaft (D) have the padded roll gudgeon (C) in place against drive sleeve of bearing and gear assembly (A). Have the gudgeon and drive sleeve keyways in vertical alignment.

With installation tool (E) fastened to the outside of the universal drive shaft, and guide needle (F) in inside pin (B), insert universal drive shaft thru drive sleeve and just start the drive shaft into the gudgeon keyway. Withdraw the guide needle and turn the large gear 90° manually, to line drive sleeve keyway with the outside drive shaft pin (G). Advance drive shaft to drive position and remove installation tool.

## INSTALLING GREASE RETAINER IN UNIVERSAL DRIVE

See figure 10.

Insert the grease retainer seal (B) and the spacer (A) in the drive sleeve (C). Then insert the tru-arc ring (D) in the drive sleeve using a pair of #7 tru-arc internal ring pliers. Screw in the grease retainers (E). Ironer rolls 1 and 2 use grease retainers with short nipples and rolls 3, 4, 5 and 6 use grease retainers with the longer nipples.

## INSTALLING AIR CYLINDERS AND OUTSIDE LIFTING LEVERS

See figure 19.

Install the air cylinders (P) and the outside lifting levers (J) as shown on illustration. Make sure arrow on flow control valve (C) points in direction shown.

## INSTALLING VACUUM SYSTEM

See figures 11, 23 and 24.

Fasten the vacuum adaptor assemblies (B) on the L. H. frame for each roll. Fasten the vacuum ducts (A) to the

vacuum adaptors, remembering to install the gaskets between these items. Assemble piping and fasten vacuum fan to floor.

The discharge connection on the vacuum fan is 11" from the center line of the fan. The transition adaptor furnished with the machine increases this distance to 19" and provides a 6" diameter connection. It is recommended that the exhaust connection be piped outside the building, and that the piping extend about 6 ft. vertically with a rotating elbow on top to prevent back draft.

Mount air tubing brackets on vacuum ducts as shown on figure 4, page 3.

## INSTALLING STEAM PIPING

See figures 12 and 13.

Install steam piping as shown on illustration. Install steam adaptors (A) in chests making sure they are in the position shown on illustration. The recommendations for the steam traps are listed following this

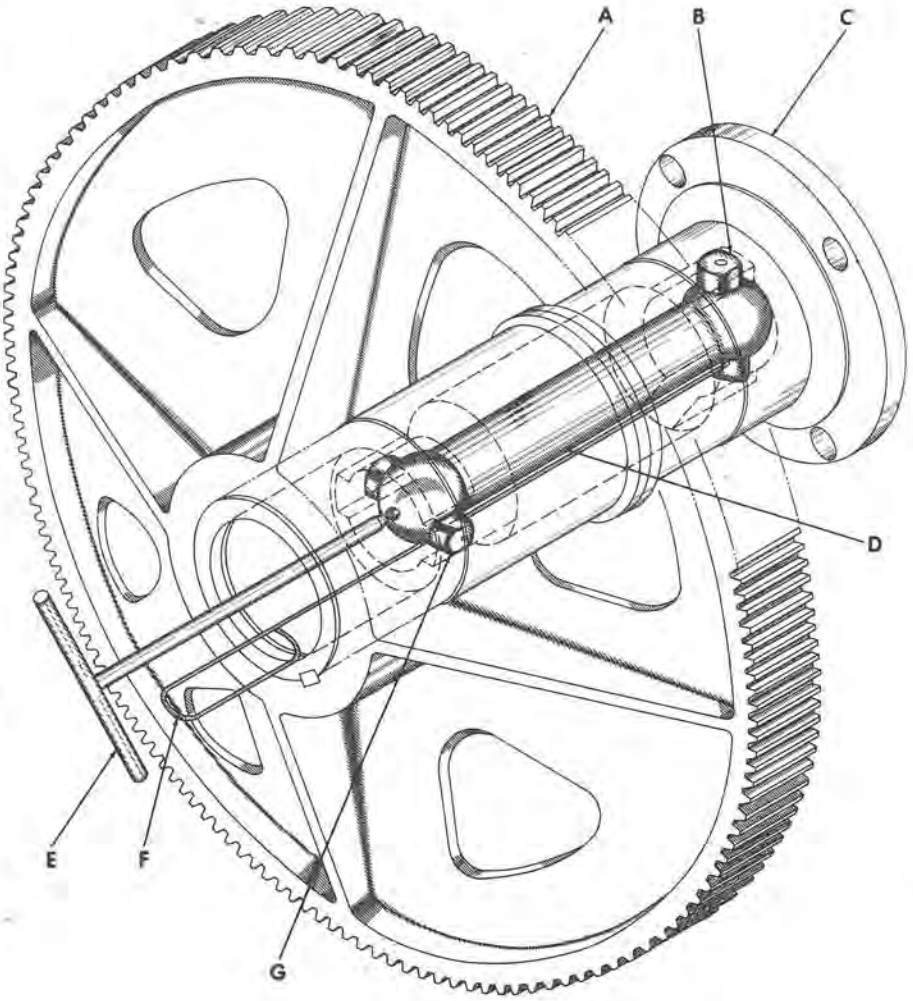



**FIGURE 9**
**INSTALLING UNIVERSAL DRIVE SHAFT**

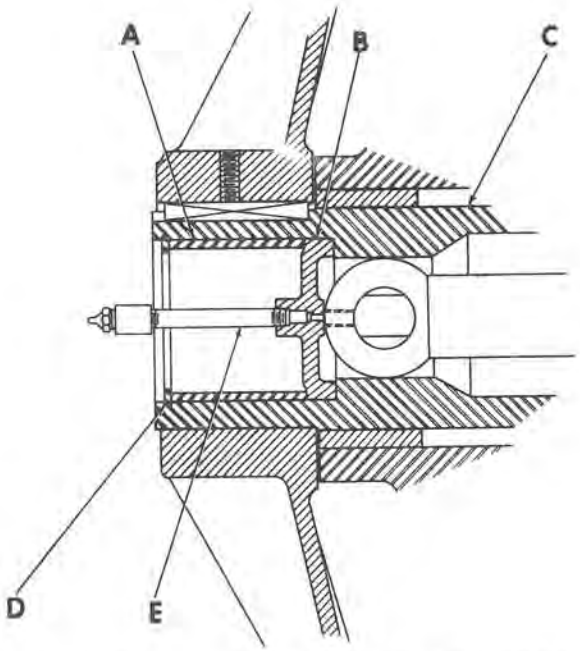



**FIGURE 10 - INSTALLING GREASE RETAINER IN UNIVERSAL DRIVE**

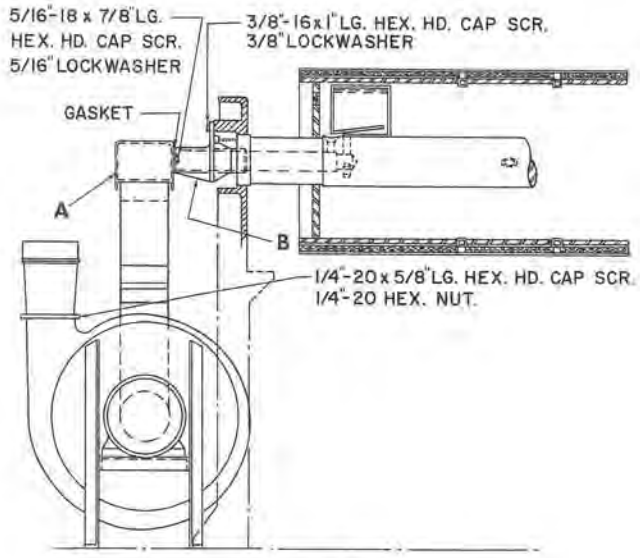
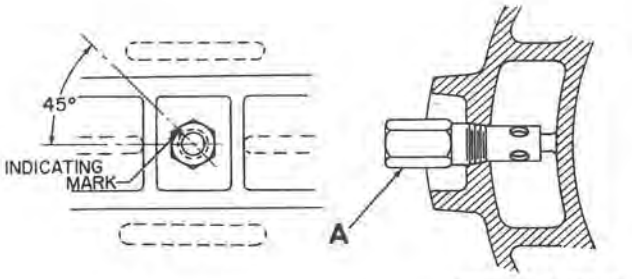



**FIGURE 11**
**VACUUM SYSTEM INSTALLATION**

paragraph. A.L.M.I. does not furnish traps with the machine, they are to be supplied by the Individual Laundry Owners.




NOTE: POSITION STEAM ADAPTOR (A) IN BOTTOM OF CHEST WITH INDICATING MARK 45° FROM EITHER CENTER LINE. THIS POSITION WILL DIRECT THE ENTERING STEAM BETWEEN THE INTERNAL RIBS OF THE CHEST.

**FIGURE 12**
**STEAM ADAPTER INSTALLATION**

## STEAM TRAP RECOMMENDATION

4 ROLL IRONER

Steam inlet (one) 1/2" #800-LV* Armstrong trap**
Steam return (two) 3/4" #812-LV* Armstrong trap**
(1 each for chests #1 & #2)
(two) 3/4" #811-LV* Armstrong trap**
(1 each for chests #3 & #4)

6 ROLL IRONER

Steam inlet (one) 1/2" #800-LV* Armstrong trap**
Steam return (three) 3/4" #812-LV* Armstrong trap**
(1 each for chests #1, #2 & #3)
(three) 3/4" #811-LV* Armstrong trap**
(1 each for chests #4, #5 & #6)

8 ROLL IRONER

Steam inlet (one) 1/2" #800-LV* Armstrong trap**
Steam return (three) 3/4" #812-LV* Armstrong trap**
(1 each for chests #1, #2 & #3)
(five) 3/4" #811-LV* Armstrong trap**
(1 each for chests #4, #5, #6, #7 & #8)

* "LV" - Indicates trap with enlarged air vent
** Or Equivalent

NO TRAPS ARE SUPPLIED BY A.L.M.I.

See figure 3.

Mount struts (C and E) on intermediate drive sprocket stud between rolls 2 and 3 and rolls 4 and 5. Mount long strut (F) and short strut (G) beneath rolls 4 and 5.

## BIJUR LUBRICATION SYSTEM

See figure 27.

Mount the Bijur pump and reservoir on the drive base. Connect the pump to the R. H. four roll frame as shown. Connect the tubing between the four roll frame and the two roll frame as shown.

## DRIVE CHAINS

See figure 3.

Install all drive chains and adjust for proper tension as described on page 19.

## FINAL ASSEMBLY

Mount control support (Item 0, figure 1) and control panel (Item D, figure 1) as shown. Install lower guard support angles.

Connect air tubing from air cylinders to control valve under control panel. See figure 4 and figure 18. Connect hose assembly (Item D, figure 4).

Make all conduit connections as shown on figure 7, and all electrical connections as shown on electrical diagram furnished with the machine.

Install all oil drip pans as shown on figure 25 or 26.

Attach speedometer head (Item R, figure 3) and connect the flexible speedometer cable (Not Shown) between the speedometer head and the speedometer (Item K, figure 1). Mount right and left hand end guards.

## SERVICE CONNECTIONS

AIR – The air line connection is for 1/4" pipe and is located at the front of the machine on the R. H. side. The air supply should be 70 psi gauge pressure. If the pressure exceeds 70 psi, an air pressure regulator should be installed in the supply line. A 1/4" globe valve should be installed in supply line, so air can be shut off when the ironer is not in use.

STEAM – The ironer is designed to use dry saturated steam at 125 psi guage pressure. The steam inlet is located at the front of the machine. For pipe size, see Data and Specifications, page 4. The steam inlet and returns should be piped as shown on figure 13.

ELECTRICAL – Connect wires in accordance with the electrical diagram attached to the machine. For wire size, etc., see Data and Specifications, page 4.

If machine is equipped for 3 phase current, when facing sprocket on reducer, it should rotate in a clockwise direction. If the direction of rotation is incorrect, it can be reversed by changing any two lead-in wires to the drive motor. DO NOT make this check until all

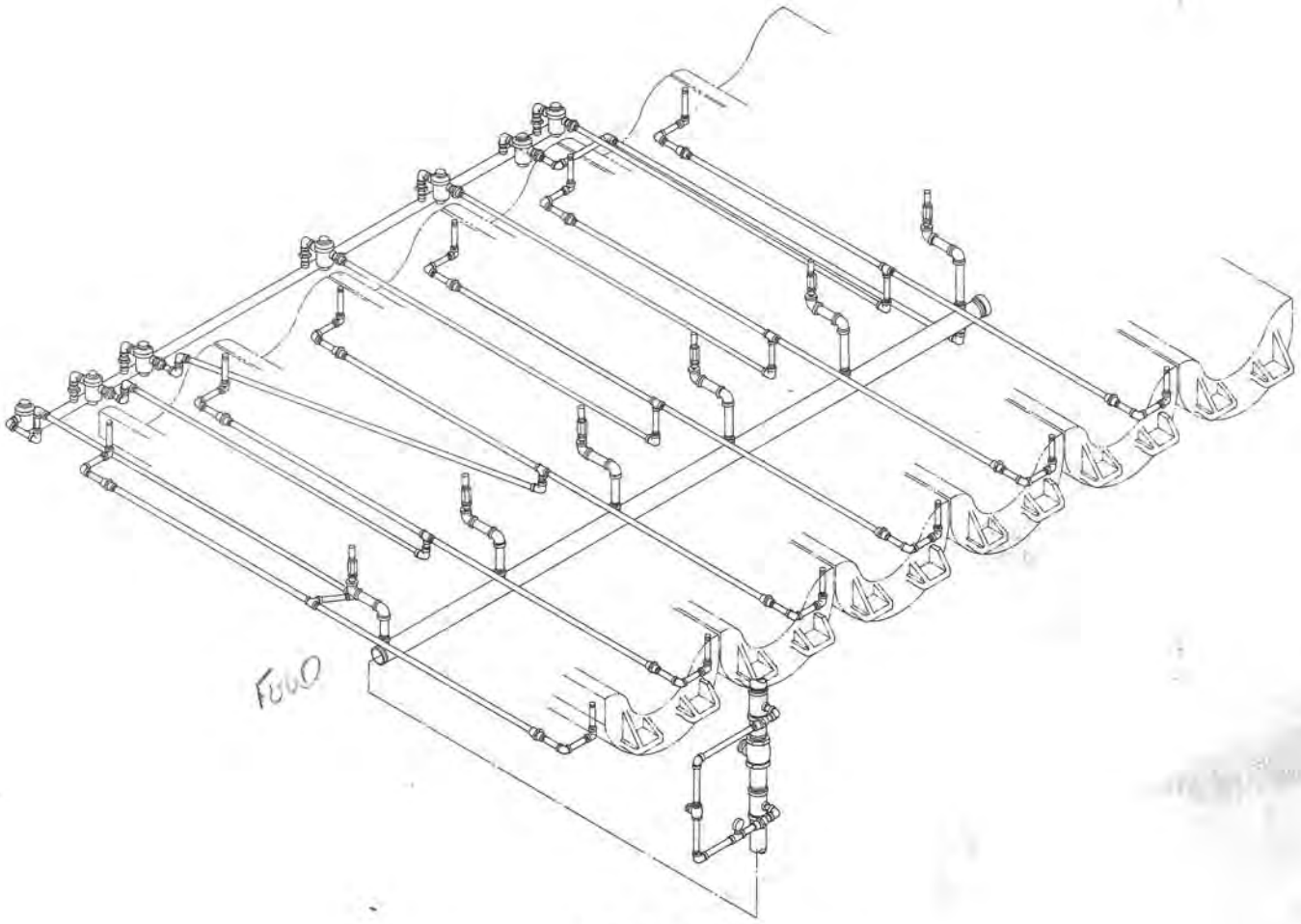


**FIGURE 13**
**STEAM PIPING INSTALLATION**

items mentioned under final preparations have been checked.

The electrical circuit diagram furnished with the machine should be filed so it will be available for electrical maintenance.

## INSTALLING FEED ASSEMBLY

See figure 14.

Bolt feed table brackets (J) to frame. Fasten feed table assembly (D) to feed table brackets. Install feed ribbons (E), pillow blocks (K) feed roll (F), doffer roll (A) and grease guards (G). Install finger guard (B) and tape device (C).

Thread stripping tapes one at a time, and fasten the ends together. As an Optional Extra, an electric heated tape welding device can be furnished.

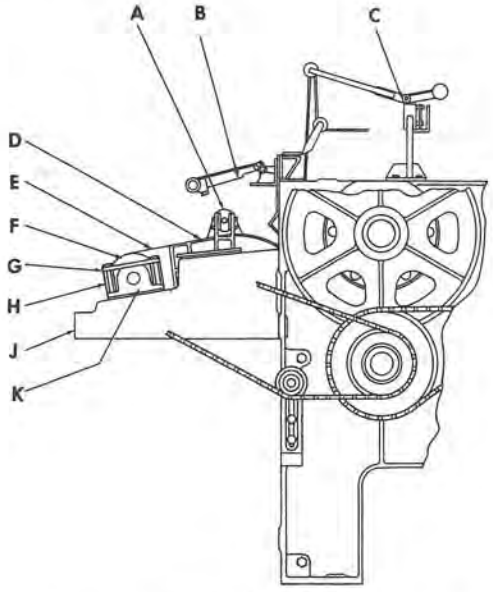



**FIGURE 14**
**INSTALLING FEED ASSEMBLY**

## FINAL PREPARATIONS

Check lubrication before starting ironer, see page 15. Fill reservoir of automatic lub. system and prime pump as described on page 31.

Inspect the following items in accordance with the instructions in the Special Maintenance Section:

Check adjustment of all roller chains as described on page 19.

Adjust cam on safety bar so any slight movement of the bar will actuate the micro-switch and stop the ironer.

Before placing the ironer rolls in the down position momentarily start the machine and check that the direction of rotation is correct. (See ELECTRICAL,, page 10.)

Using compressed air, blow off any dirt which may have accumulated on the various parts of the machine. Wipe all exposed surfaces with a damp cloth.

# OPERATION

The ironer is now ready for operation, but before putting it into production, careful attention should be given to the following features, in order to be familiar with the functions of the various attachments and methods of operation.

## FEED CONVEYOR

Flatwork is fed into the ironer by placing the leading edge on the full-width ribbon feed. A padded doffer roll rests on the ribbon feed, and the travel of the feed ribbons causes it to rotate. The doffer roll keeps work stretched taut between ribbon feed and first padded roll. Specially designed fingers are provided to guide the work into the pinch between the first roll and the chest. A panel is provided, extending close to the surface of the feed ribbons to prevent contact of operators hands with roll and chest. The doffer roll lies ahead of this panel. The panel is provided with a safety bar in accessible position over the doffer roll for stopping the ironer in case of an emergency.

## FEEDING

See your folder manual for feeding instructions.

## HEATING CHESTS

WORK SHOULD NEVER BE RUN THROUGH THE IRONER UNTIL THE CHESTS ARE THOROUGHLY HEATED.

1. Check steam pressure to be sure it is 125 psi. To heat chests, open valve in by-pass line around main steam supply valve.

2. For approximately ten minutes, open valve in condensate line, by-passing steam trap. Then close by-pass valve in condensate line. Steam trap is now operative.

3. After thirty to forty-five minutes, open the main steam supply valve and close the valve in the by-pass line. The steam should be fully turned on for at least one-half hour before work is run through the ironer.

## STARTING

AIR PRESSURE – Turn on air and check pressure, it should be 70 psi.

OIL PRESSURE – Check oil pressure of automatic lub system, it should be at least 35 psi.

STARTING IRONER ATTACHED TO HYPRO FOLDER
After the chest is hot and the ironer is ready for operation, push the roll raising knob on the control panel down to lower the rolls. The lowering requires a few seconds. The rolls do not lower all at once, but successively in pairs.

Press the "ON" button on the control panel. This sets up the electrical circuits. Then press the "START-INCH" button. This starts the ironer drive motor and the vacuum motor.

The starting operation just mentioned is subject to the following conditions. The "RUN" – "OFF – INCH" switch on the folder control panel must be in the "RUN" position. If the switch is in the "OFF – INCH" position, the ironer will run only while the "START-INCH" button on the ironer control panel is held in. This facilitates an "INCHING" operation for emergency purposes. This emergency condition established by the folder receiving operator is indicated to the ironer feed operator by a red light on the ironer control panel. As long as this red light is illuminated, the ironer feed operator can only obtain "INCHING" operation of the ironer, when pressing the "START-INCH" button. This is used to clear work

from the ironer and to correct any conditions with respect to the folder. When the lamp is extinguished, the ironer feed operator can restart the ironer for normal running by pressing the "START" button.

STARTING IRONER ATTACHED TO TRUMATIC FOLDER OR FOLESTAK FOLDER-STACKER – After the chest is hot and the ironer is ready for operation, push the roll raising knob on the control panel down to lower the rolls. The lowering requires a few seconds. The rolls do not lower all at once, but successively in pairs.

Press the "ON" button on the control panel. This sets up the electrical circuits. Then press the "START-INCH" button. This starts the ironer drive motor and the vacuum motor.

The starting operation just mentioned is subject to the following conditions. The "RUN" "OFF - INCH" selector switch located on the folder must be in the "RUN" position. If the switch is in the "OFF-INCH" position, the ironer will run only while the "START–INCH" button on the ironer control panel is held in. This facilitates an "INCHING" operation for emergency purposes. This emergency condition established by the folder receiving operator is indicated to the ironer feed operator by a red light on the ironer control panel. As long as this red light is illuminated, the ironer feed operator can only obtain "INCHING" operation of the ironer, when pressing the "START-INCH" button. This is used to clear work from the ironer and to correct any conditions with respect to the folder. When the lamp is extinguished, the ironer feed operator can restart the ironer for normal running by pressing the "START" button.

## SPEED CONTROL

Ironer speed is controlled by a drum switch on the ironer control panel. The desired speed is obtained by operating the drum switch, and observing the reading on the speedometer.

## STOPPING

NOTE

RAISE THE IRONER ROLLS WHENEVER THE IRONER IS STOPPED. TO RAISE THE IRONER ROLLS PULL THE ROLL RAISING CONTROL OUT.

NORMAL STOP – Decrease the ironer speed to a minimum with the speed control. Stop the ironer by pressing the "STOP" button. If the ironer is to be shut down for any period of time press the "OFF" button.

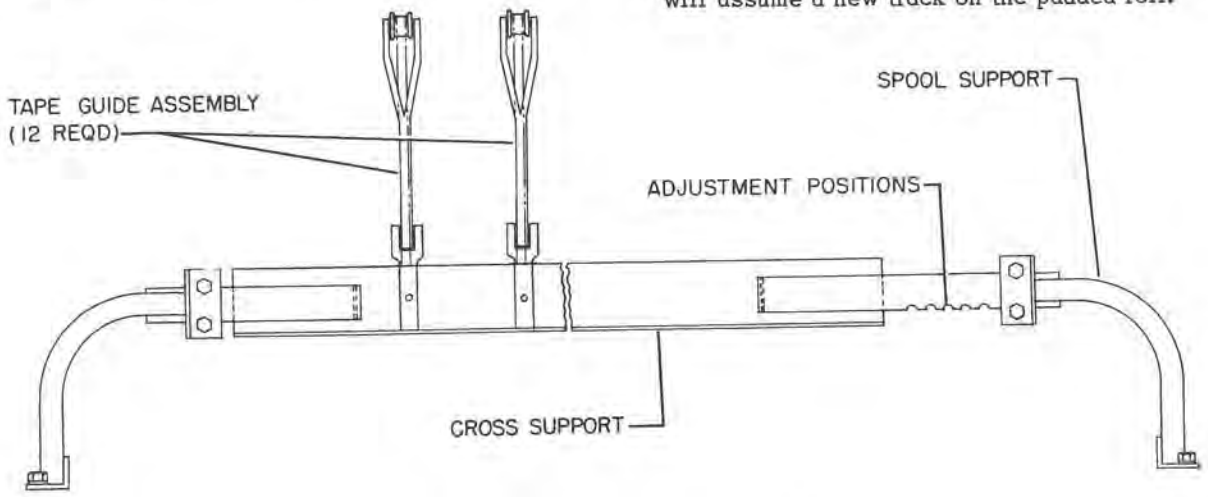
EMERGENCY STOP - In event of emergency, the ironer may be stopped regardless of the operating speed. Stop the ironer by pressing the "STOP" button or the safety guard rod located in front of and above the doffer roll. If the ironer is to be shut down for any period of time, press the "OFF" button.

## STRIPPING TAPE CONTROL

The stripping tape control assembly determines the path the stripping tapes will track on the padded rolls. To prevent the tapes from causing excessive wear at any one point on the rolls, it is recommended the assembly be repositioned daily.

The stripping tape control assembly can be easily moved either right or left. The bottom of the plate on the left side is flat, whereas the bottom of the right side plate has seven serrations ¾ inch apart. These serrations permit adjustment to seven positions. Assume the control assembly has been moved to the extreme left position.

1. Lift the right side of the control assembly about ¼ inch and slide the entire assembly to the right, stopping at the next serration. Lower the assembly at this position.
2. After the stripping tape control assembly has been moved to the extreme right, reverse the direction of movement. Make further repositioning to the left until the extreme left position has been reached. Another cycle of repositioning can then be started.
3. Start the ironer. The stripping tapes automatically will assume a new track on the padded roll.




**STRIPPING TAPE CONTROL**

# ROUTINE MAINTENANCE

This ironer is built to give many years of efficient and trouble free service. Regular cleaning, inspection and lubrication are essential for maximum life and efficiency.

## CLEANING

Wipe all exposed surfaces daily with a damp cloth.

CLEANING CHESTS – It is important that the ironer chests be kept clean and the ironing surface bright. Due to the fire hazard, kerosene or a kerosene soaked cloth should never be used to clean the chests.

Check with the padding supplier for the proper cleaner to use, the recommended time interval at which the chests should be cleaned and the method of application.

LUBRICATING CHESTS – Check with the padding supplier for the proper lubricant to use, the recommended time interval at which the chests should be lubricated and the method of application.

CLEANING ROTO-CONE PULLEY – The faces of the discs and belt should be kept clean and free from grease or other liquids.

At least every 6 months, or whenever the pulley acts sluggish, (that is, it does not close fast enough) it should be flushed out with kerosene. Make sure the ironer is cold before performing this flushing operation.

With the belt removed and the pulley mounted on the motor shaft or on an arbor press, force kerosene from a grease gun thru the grease fittings (Item H, figure 16) until the kerosene flows from the various openings in the pulley. Open and close the pulley several times to make sure the kerosene reaches all gummy or caked grease. Remove pulley from shaft and drain all kerosene. Relubricate with the proper lubricant as described on page 17.

AUTOMATIC LUBRICATION SYSTEM – Clean the oil application points of the automatic lub system every month. Make certain none of the copper tubes are clogged. Replace the filter assembly of the oil pump each year, see page 31.

## INSPECTION

Every thirty days inspect the air connections for leaks, nuts and bolts for tightness, and feed ribbons for proper tension and wear. Check all steam and drain between the fan housing and the condensate container. connections for leaks and be sure all steam traps are working properly.

Every week remove drain plug from the bottom of the vacuum system exhaust fan housing and drain the condensate into a suitable container. If constant drainage of the housing is desired, connect a suitable drain hose

## LUBRICATION

The ironer is equipped with an automatic lubrication system as shown on page 31, fig. 27. It provides automatic oil lubrication to the roll drive gear bearings, chain drive sprockets, idler sprockets and chain.

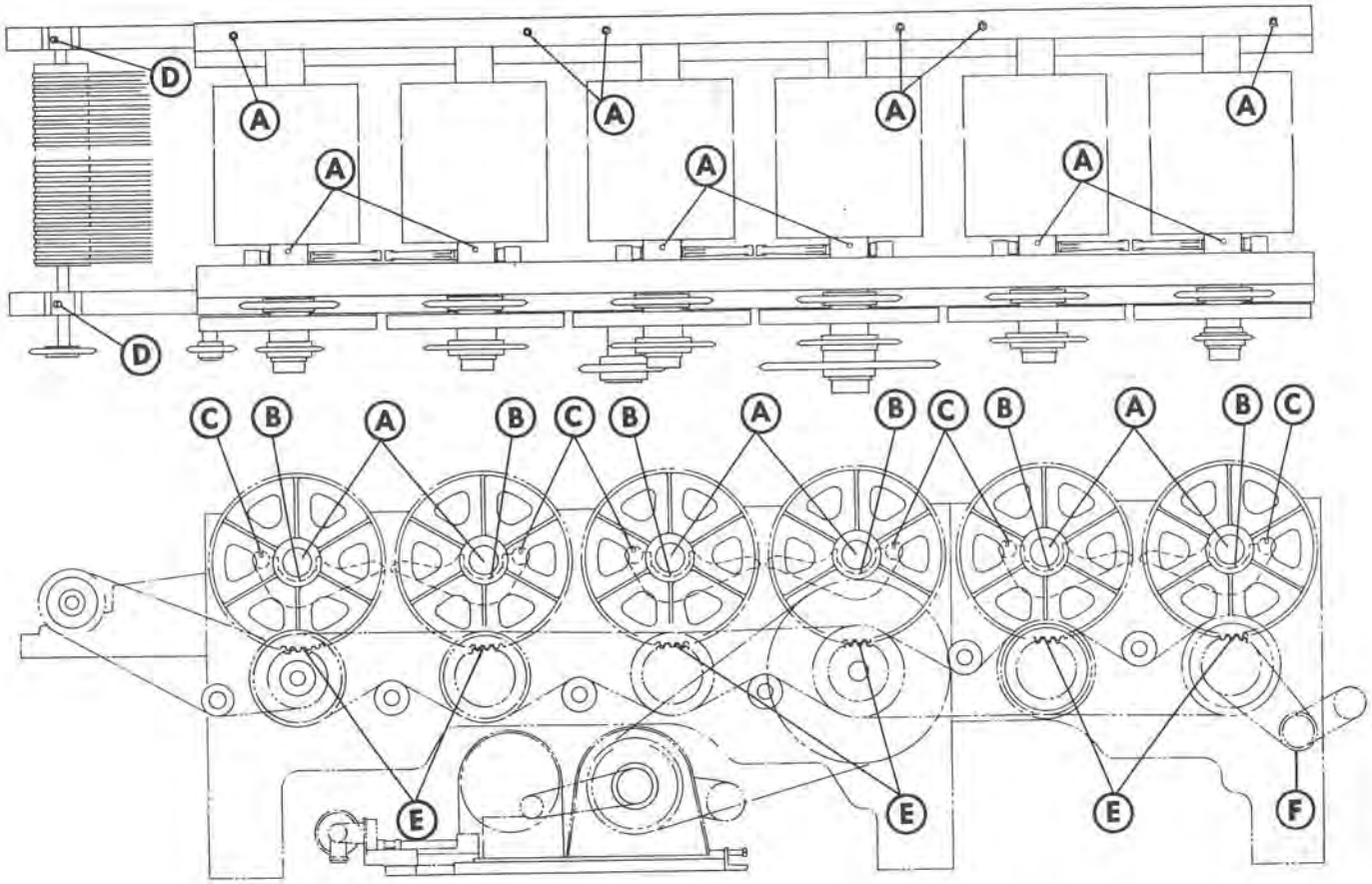
For location of the lubrication points which are not covered by the automatic lubrication system, see figures 15 and 16. Refer to lubrication chart for recommended lubricants. Be sure all oil holes and grease fittings are clean and take lubricants freely.

OIL RESERVOIR – The oil level in the reservoir of the automatic lubrication system should be checked daily, and refilled when required.

ROTO-CONE PULLEY – Whenever possible, the pulley should be run through its speed range each day in order to renew the lubricant on all working surfaces.

Once a week, position outer edge of belt flush with the outside diameter of pulley disc. Lubricate through fittings (H) until sufficient lubricant has been applied. Run belt to minimum pitch diameter and return. If sufficient lubricant has been applied, a film of grease will show on motor end of pulley shaft. If grease does not show, repeat until grease is present.

VACUUM ADAPTER – The vacuum adapter seal consists of a rotating disc attached to the roll and a stationary disc attached to the frame. Both discs are grooved, and the grooves in the two discs mate to form a sealed running connection. Lubricant provides lubrication for the discs and completes the seal between the discs. Both discs are lubricated through a single lubrication fitting. The discs should be lubricated after each 200 hour period of operation with one shot of grease from a hand operated pressure gun. Applying excessive lubricant to the adapter will result in the excess lubricant being drawn into the vacuum duct and possibly causing the duct to become clogged.

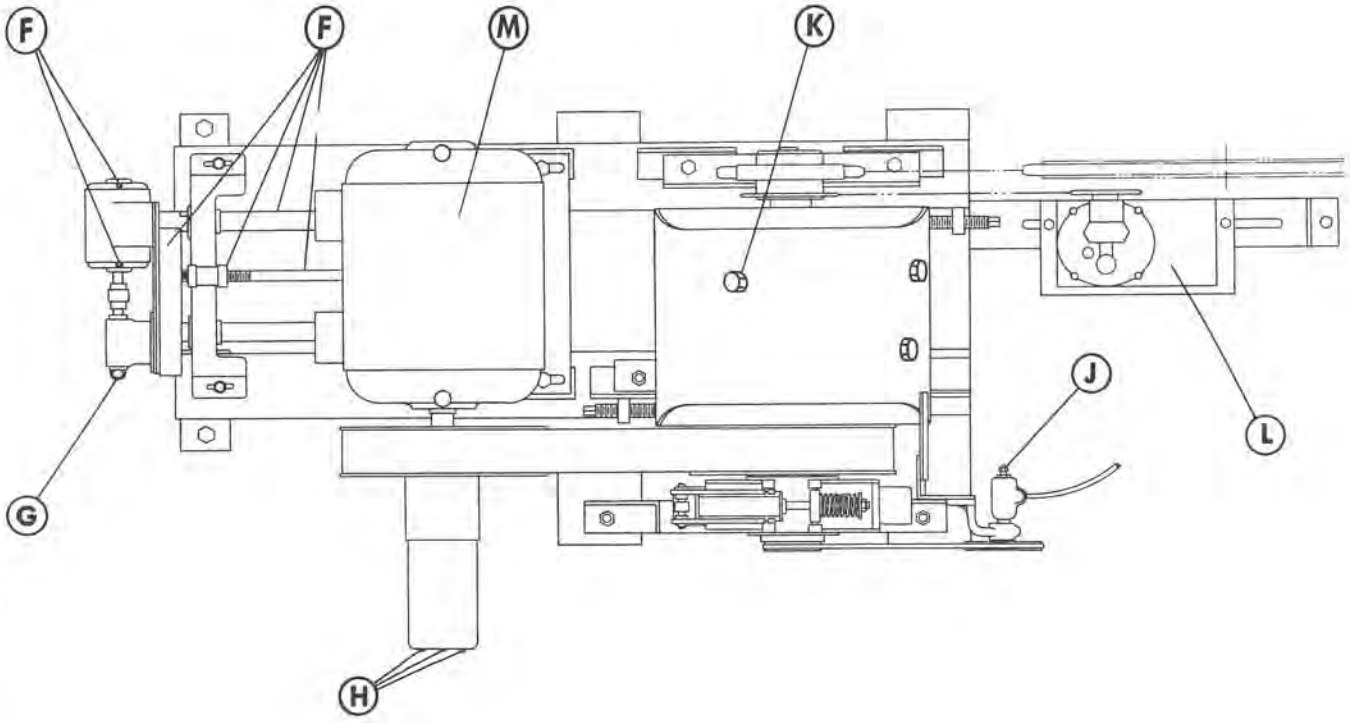



| TIME INTERVAL | LUBRICATION POINT AND APPLICATION | RECOMMENDED LUBRICANT * |
|---|---|---|
| Weekly | (A) Universal Drive & Vacuum Adaptors | (1) Mobilplex EP #1 (2) Alvania EP #2 (3) Regal Starfak P Premium #2 (4) No. 81 Light |
| Weekly | (B) Lifting arm socket - raise roll, apply light coating | (1) Mobilplex EP #1 (2) Alvania EP #2 (3) Regal Starfak Premium #2 (4) No. 81 Light |
| Weekly | (C) Raising rig lifting lever, | (1) Mobil DTE Heavy-Medium (2) Tellus Oil #33 (3) Regal PC (R&O) (4) No. 49 Light |
| Six months | (D) Bearing, Feed roll | (1) Mobilplex EP #1 (2) Alvania EP #2 (3) Regal Starfak Premium #2 (4) No. 81 Light |
| Weekly | (E) Drive gears | (1) Mobil Dorcia #150 (2) Cardium Compound D (3) Crater 2X Fluid (4) No. 29 X-Light |
| Monthly | (F) Sprocket, compound - apply 1 shot with handgun | (1) Mobilplex EP #1 (2) Alvania EP #2 (3) Regal Starfak Premium #2 (4) No. 81 Light |

*The number enclosed in parenthesis preceding the type lubricant is intended to identify the lubricant manufacturer and is not an order of recommended lubricant.

(1) Mobil Oil Company, (2) Shell Oil Company, (3) Texaco Inc., (4) Keystone Lubricating Company

**FIGURE 15 - IRONER LUBRICATION**




| TIME INTERVAL | LUBRICATION POINT AND APPLICATION | RECOMMENDED LUBRICANT * | |
|---|---|---|---|
| Weekly | (F) Oil holes, shafts, and chains | (1) Mobil DTE Oil Light<br>(3) Regal Oil A | (2) Tellus Oil 27<br>(4) No. 49 Light |
| Monthly | (G) Gear head†, check level add as required | (1) Mobil 600W<br>(3) Thuban 90 | (2) Valvata Oil J78<br>(4) WG No. 1 |
| Weekly | (H) Roto-Cone Pulley | (1) Mobilplex EP #1<br>(3) Regal Starfak Premium #2 | (2) Alvania EP #2<br>(4) No. 81 Light |
| Six months | (J) Speedometer | (1) Mobilplex EP #1<br>(3) Regal Starfak Premium #2 | (2) Alvania EP #2<br>(4) No. 81 Light |
| Monthly | (K) Gear reducer† (2-5/8 Gal. capacity), check lever, add as required | (1) Mobil DTE Oil "BB"<br>(3) Regal G (R&O) | (2) Tellus Oil 69<br>(4) WG No. 1 |
| Daily | (L) Bijur lubrication system reservoir (six pint capacity) | (1) Mobil DTE Oil "AA"<br>(3) Regal G (R&O) | (2) Shell Vitrea Oil 74<br>(4) WG No. 1 |
| Weekly | (M) Drive Motor | (1) Mobilplex EP #1<br>(3) Regal Starfak Premium #2 | (2) Alvania EP #2<br>(4) No. 81 Light |

†Drain, flush, and add fresh oil after first month's service and every six months or 2500 hours thereafter.
*The number enclosed in parenthesis preceding the type lubricant is intended to identify the lubricant manufacturer and is not an order of recommended lubricant.

(1) Mobil Oil Company, (2) Shell Oil Company, (3) Texaco Inc., (4) Keystone Lubricating Company

**FIGURE 16 - DRIVE LUBRICATION**

# SPECIAL MAINTENANCE and REPAIR PARTS

All adjustments for proper operation of this ironer have been made at the factory, or you have been instructed how to make them in this manual. Use, abuse and unpredictable causes may make readjustments or repairs necessary. To keep these to a minimum, instructions for Operation and Routine Maintenance should be followed closely.

All machine parts are identified on the illustrations by individual NUMBERS, which should be used when replacement parts are ordered. However, some standard parts, such as nuts, bolts, washers, etc., are not identified because it generally will be both faster and more economical to purchase them from a local supplier.

Parts, which through continuous service are likely to require replacement, are available in a "First Aid" kit. It is recommended that you keep such a kit on hand in order to avoid prolonged and costly shut-downs while obtaining parts.

## TROUBLE SHOOTING

Most of the difficulties encountered in operating this machine can be traced to outside causes, or minor mechanical malfunctions caused by wear or continuous use. In order to assist you, this trouble shooting section lists the most commonly encountered difficulties and their possible causes, with reference to where instructions for their remedy may be found:

| SYMPTOM | POSSIBLE CAUSE | REMEDY |
|---|---|---|
| PADDED ROLL COVERS WRINKLE | 1. Improper feeding of work to the ironer. | 1. See feeding instructions on page 13. |
| | 2. Steam chests dirty or insufficiently lubricated. | 2. Clean and lubricate chests as described on page 15. |
| | 3. Rolls padded improperly. | 3. Not enough care excercised in winding the padding and covers square. A few wrinkles allowed to remain will cause more. Also check circumference of padded rolls, it should be 61-21/32". |
| LINENS BUCKLE OR DO NOT LIE FLAT WHEN PASSING FROM ROLL TO ROLL | 1. Steam chests insufficiently heated. | 1. Heat steam chests thoroughly, see page 13. |
| | 2. Steam chests dirty or insufficiently lubricated. | 2. Clean and lubricate chests as described on page 15. |
| | 3. Flatwork improperly rinsed. | 3. Rinse work thoroughly. |
| | 4. Excessive sour used. | 4. Use correct amount of sour. |
| | 5. Insufficient extracting. | 5. Increase extracting time. It is more economical to remove excess water by extracting. |
| | 6. Rolls improperly padded. | 6. Add padding to bring rolls to proper circumference (61-21/32"). |

| SYMPTOM | POSSIBLE CAUSE | REMEDY |
|---|---|---|
| LINENS STICKING TO ROLL | 1. Steam chests insufficiently heated. | 1. Heat steam chests thoroughly, see page 13. |
| | 2. Insufficient extracting. | 2. Increase extracting time. It is more economical to remove excess water by extracting. |
| BROWN SPOTS APPEAR ON PADDED ROLL AND STAIN LINEN | 1. Poor quality steam, (Wet or low pressure). | 1. Check steam supply system. Ironer is designed to operate on dry, saturated steam at 125 pounds per square inch pressure (gage). |
| | 2. Insufficient extracting. | 2. Increase extracting time. It is more economical to remove excess water by extracting. |
| | 3. External source such as dripping of condensation or leakage from overhead pipes. | 3. Remove or cover pipes. |
| | 4. Leak in ironing surface of steam chest. | 4. Plug or replace chest. |
| | 5. Feeding goods before ironer is thoroughly heated. | 5. Instruct operator to heat steam chests thoroughly, see page 13. |
| IRONER NOT DELIVERING RATED CAPACITY | 1. Poor quality steam (Wet or low pressure). | 1. Check steam supply system. Ironer is designed to operate on dry saturated steam at 125 pounds per square inch pressure (gage). |
| | 2. Steam return system not functioning properly. | 2. Inspect return system and remedy any defects. |
| | 3. Insufficient extracting. | 3. Increase extracting time. It is more economical to remove excess water by extracting. |
| | 4. Improper shaking. | 4. Have shakers "shake out" work properly. |
| | 5. Improper feeding of work to the ironer. | 5. See feeding instructions on page 13. |

## SERVICING ELECTRICAL CIRCUIT

Trouble may be caused by split or broken conduit and loose conduit connectors at the various closures. Loose closure lids may let in dust, dirt and oil which can affect the contact points. Oil will also deterioriate the insulation.

Be sure current to the machine is on. Check for blown fuses. Push "RESET" buttons in junction box mounted on floor at the right hand side of the machine. Then push "ON" and "START-INCH" buttons at control panel. If "RESET" buttons will not stay in, check heater coils in junction box. If they are faulty, they should be replaced. Check for loose or broken wires at all terminal points. If these checks do not indicate the trouble, see the wiring diagram furnished with the machine.

## DRIVE CHAINS

See figure 17.

All roller chains on this machine are replaced and adjusted in the same manner.

REPLACING – The ends of the roller chains are held together by means of a connecting link. To replace chain, back off idler sprocket to relieve tension, remove spring clip, take out connecting link and remove the chain. If chain is worn excessively, it may be necessary to replace the sprockets as well as the chain. Remount in reverse order.

ADJUSTING – Chain tension is adjusted by means of idler sprockets. To adjust, loosen screws which hold idler sprocket bracket to frame, and move idler in or out until chain has a minimum of slack but is not taut.

## STRIPPING TAPE

Stripping tapes are available woven of cotton, nylon, or dacron material. Tension on the stripping tapes is automatically maintained by a weight attached to the spool arm assembly.

After new tapes are installed, the ends should never be tied or knotted together. The ends of cotton tapes should be overlapped approximately one inch and secured with staples. The ends of nylon or dacron tapes should be overlapped and heat fused with a suitable heating iron.

## FEED RIBBONS

ADJUSTING – Tension on feed ribbons (item 23, figure 20) should be taut, but not tight enough to stretch the ribbons. If they are too tight, strain in the lacing and deflection of the rolls may result. If they are too loose, the ribbons may slip. To adjust ribbon tension:

a. Loosen bracket and stud assembly, RH and LH, (item 41, figure 17).
b. Slide idler sprockets, RH and LH (item 39) upward.
c. Loosen carriage bolts attaching pillow blocks, RH and LH, (item K, figure 14).
d. Slide pillow blocks toward the feed end of ironer to tighten ribbons.
e. Turn square head bolt, RH and LH sides, C C W to maintain the pillow blocks in position for correct tension.
f. Turn lock nut CW to secure the square head bolts.

NOTE

MAINTAIN FEED ROLL AXIS AT RIGHT ANGLES TO FEED TABLE BRACKETS.

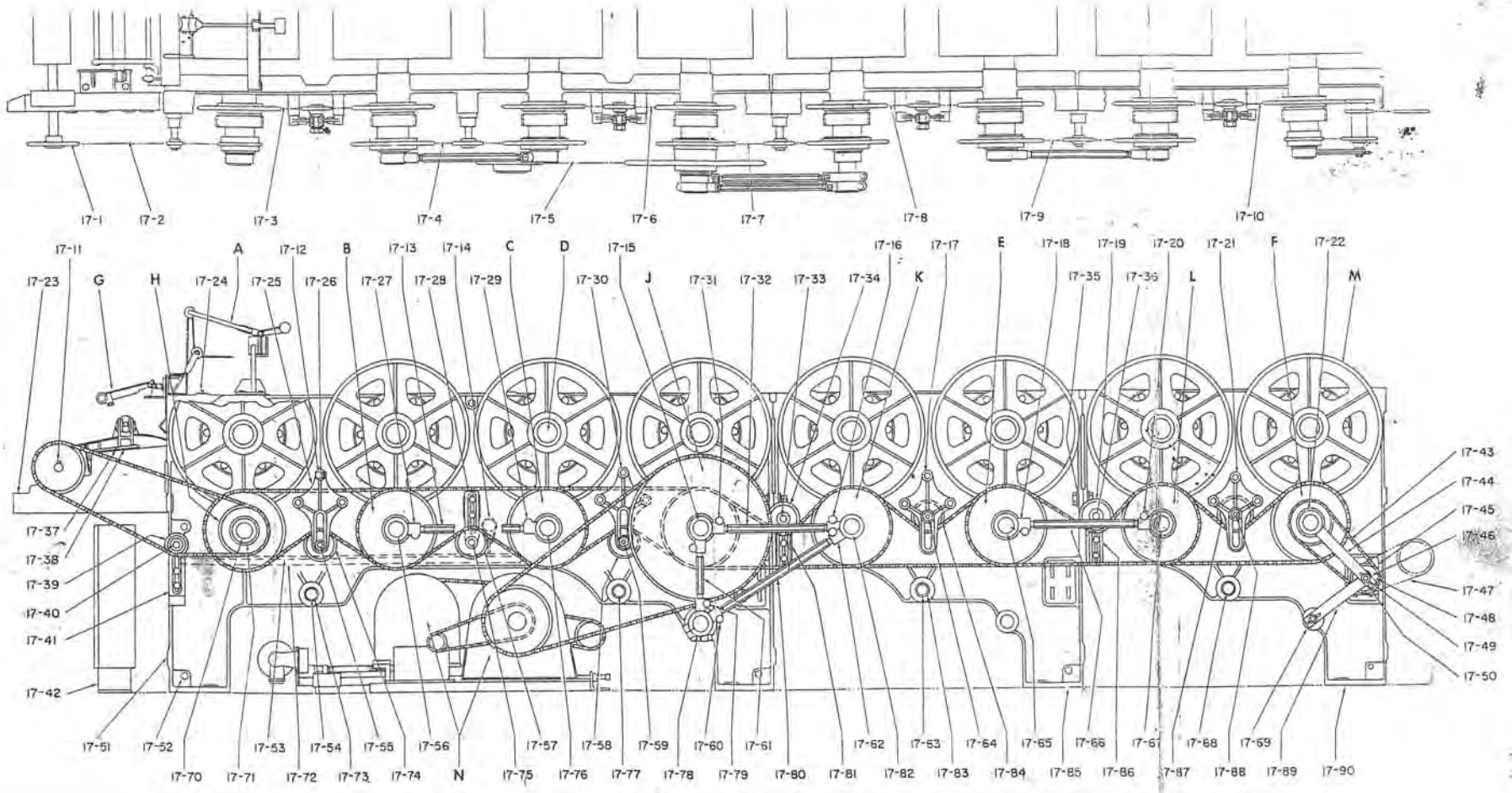
g. Tighten carriage bolts attaching pillow blocks, RH and LH, (item K, figure 14).
h. Slide idler sprockets, RH and LH, (item 39, figure 17) downward to attain correct chain tension, (see page 19).
i. Tighten bracket and stud assembly, RH and LH, (item 41, figure 17).

REPLACING – Release tension on feed ribbons. Pull ribbons around until joints are accessible. Push out rawhide pin at joining point and remove the ribbon. Replace ribbons and adjust tension as described above.

## FIGURE 17

## RIGHT SIDE VIEW WITH GUARDS REMOVED

| ITEM | DESCRIPTION |
|---|---|
| 17-1 | Sprocket |
| 17-2 | 50-Chain 148 |
| 17-3 | 50 Chain 96 |
| 17-4 | 80 Chain 96 |
| 17-5A | 100 Chain (Motor mounted outside frame) |
| 17-5B | Chain (Motor mounted inside frame) |
| 17-6 | 50 Chain 96 |
| 17-7 | 100 Chain (6&8 roll only) 78 |
| 17-8 | 80 Chain 96 |
| 17-9 | 80 Chain 96 |
| 17-10 | 80 Chain 96 |
| 17-11 | Key |
| 17-12 | Bracket, speedometer cable |
| 17-13 | Strut |
| 17-14 | Band hanger |
| 17-15 | Stud, main drive, roll 4 |
| 17-16 | L. H. strut clamp |
| 17-17 | Bracket for chain idler |
| 17-18 | Collar for R. H. strut clamp |
| 17-19 | Idler sprocket |
| 17-19A | Bearing, Oilite #A-1156-1 |
| 17-20 | Collar for L. H. strut clamp |
| 17-21 | Bracket for chain idler |
| 17-22 | Collar |
| 17-23 | R. H. ribbon feed bracket |
| 17-24 | Pin |
| 17-25 | Bracket for chain idler |
| 17-26 | Jiffy clip #115 |
| 17-27 | Collar for R. H. strut clamp |
| 17-28 | Bracket & stud assembly |
| 17-29 | Collar for L. H. strut clamp |
| 17-30 | Bracket for chain idler |
| 17-31 | Collar & strut clamp, main sprocket |
| 17-32 | Strut |
| 17-33 | Stud |
| 17-34 | Idler sprocket |
| 17-34A | Bearing, Oilite #A-1156-1 |
| 17-35 | Washer |
| 17-36 | Stud |
| 17-37 | Support angle |
| 17-38 | Dowel pin (Not shown) |
| 17-39 | Idler sprocket |
| 17-40 | Stud |
| 17-41 | Bracket & stud assembly |
| 17-42 | Leg for electrical control box |
| 17-43 | *Roller chain |
| 17-44A | *Upper strut (6 & 8 roll ironer) |
| 17-44B | *Upper strut (4 roll ironer) |
| 17-45 | *Support bracket |
| 17-46 | Sprocket |
| 17-47 | *Roller chain |
| 17-48 | *Needle bearing, Torrington #GB2020 (Not shown) |
| 17-49A | *Stud (6 & 8 roll ironer) (Not shown) |
| 17-49B | *Stud (4 roll ironer) (Not shown) |
| 17-50A | Washer, compound sprocket (Used on 4 roll ironer only) |
| 17-50B | Set collar, 1-1/4" stud (Used on 6 & 8 roll ironer only) |
| 17-51 | R. H. frame, 4 roll |
| 17-52 | Tie-rod |
| 17-53 | Motor insulation |
| 17-54 | Cross shaft |
| 17-54A | Key, 1/2" x 1/2" x 4-1/2" |
| 17-54B | Key, 1/2" x 1/2" x 2" |
| 17-55 | Shaft for inter-drive idler support |
| 17-56 | Stud, main drive, roll 2 |
| 17-57 | Idler sprocket |
| 17-57A | Bearing, Oilite #A-1156-1 |
| 17-58 | Idler sprocket |
| 17-58A | Bearing, Oilite #A-1156-1 |
| 17-59 | Shaft for inter-drive idler support |
| 17-60 | R. H. strut clamp |
| 17-61 | Short strut for clamp collar |
| 17-62 | L. H. strut clamp |
| 17-63 | Cross shaft |
| 17-63A | Key, 1/2" x 1/2" x 4-1/2" |
| 17-63B | Key, 1/2" x 1/2" x 2" |
| 17-64 | Shaft for inter-drive support |
| 17-65 | Stud, main drive, roll 6 |
| 17-66 | Strut |
| 17-67 | Stud, main drive, roll 7 |
| 17-68 | Cross shaft |
| 17-68A | Key, 1/2" x 1/2" x 4-1/2" |
| 17-68B | Key, 1/2" x 1/2" x 2" |
| 17-69 | *Stud for lower strut (6 & 8 roll ironer only) |
| 17-70 | Stud, main drive, roll 1 |
| 17-71 | Collar |
| 17-72 | Frame for motor insulation |
| 17-73 | Bearing, Oilite #AA-2306 |
| 17-74 | Idler sprocket |
| 17-74A | Bearing, Oilite #A-1156-1 |
| 17-75 | Stud |




| ITEM | DESCRIPTION |
|---|---|
| 17-76 | Stud, main drive, roll 3 |
| 17-77 | Cross shaft |
| 17-77A | Key, 1/2" x 1/2" x 4-1/2" |
| 17-77B | Key, 1/2" x 1/2" x 2" |
| 17-78 | Stud for strut, roll 4 |
| 17-79 | L. H. strut clamp |
| 17-80 | Long strut for clamp collar |
| 17-81 | Bracket & stud assembly |
| 17-82 | Stud, main drive, roll 5 |
| 17-83 | Bearing, Oilite #AA-2306 |

| ITEM | DESCRIPTION |
|---|---|
| 17-84 | Idler sprocket |
| 17-84A | Bearing, Oilite #A-1156-1 |
| 17-85 | R. H. frame, 2 roll |
| 17-86 | Bracket & stud assembly |
| 17-87 | Idler sprocket |
| 17-87A | Bearing, Oilite #A-1156-1 |
| 17-88 | Shaft for inter-drive idler support |
| 17-89A | *Lower strut (6 & 8 roll ironer) |

| ITEM | DESCRIPTION |
|---|---|
| 17-89B | *Lower strut (4 roll ironer only) |
| 17-90 | R. H. frame, 2 roll |
| 17-91 | Chain connecting link (Not shown) |
| 17-92 | Guide needle (Not shown) |
| 17-93 | Installation tool, universal drive shaft (Not shown) |
| 17-94 | Hand crank (Not shown) |

* — These parts required only when ironer is applied to Hypro Folder.

REFERENCE ONLY

| | |
|---|---|
| A | Spool arm assembly (See figure 37) |
| B | Drive sprocket assembly (See figure 32) |
| C | Drive sprocket assembly (See figure 32) |
| D | Universal drive assembly (See figure 38) |
| E | Drive sprocket assembly (See figure 32) |
| F1 | Sprocket assembly (When ironer is used with "Hypro" Folder, see figure 33) |
| F2 | Sprocket assembly (When ironer is used with "Trumatic" Folder or "Folestak" Folder-Stacker, see figure 34) |
| G | Safety guard (See figure 20) |
| H | Sprocket assembly (See figure 33) |
| J | Main drive sprocket assembly (See figure 31) |
| K | Drive sprocket assembly (See figure 32) |
| L | Drive sprocket assembly (See figure 32) |
| M | Bearing and gear assembly, main drive (See figure 35) |
| N1 | Drive assembly, outside drive (See figure 21) |
| N2 | Drive assembly, inside drive (See figure 22) |

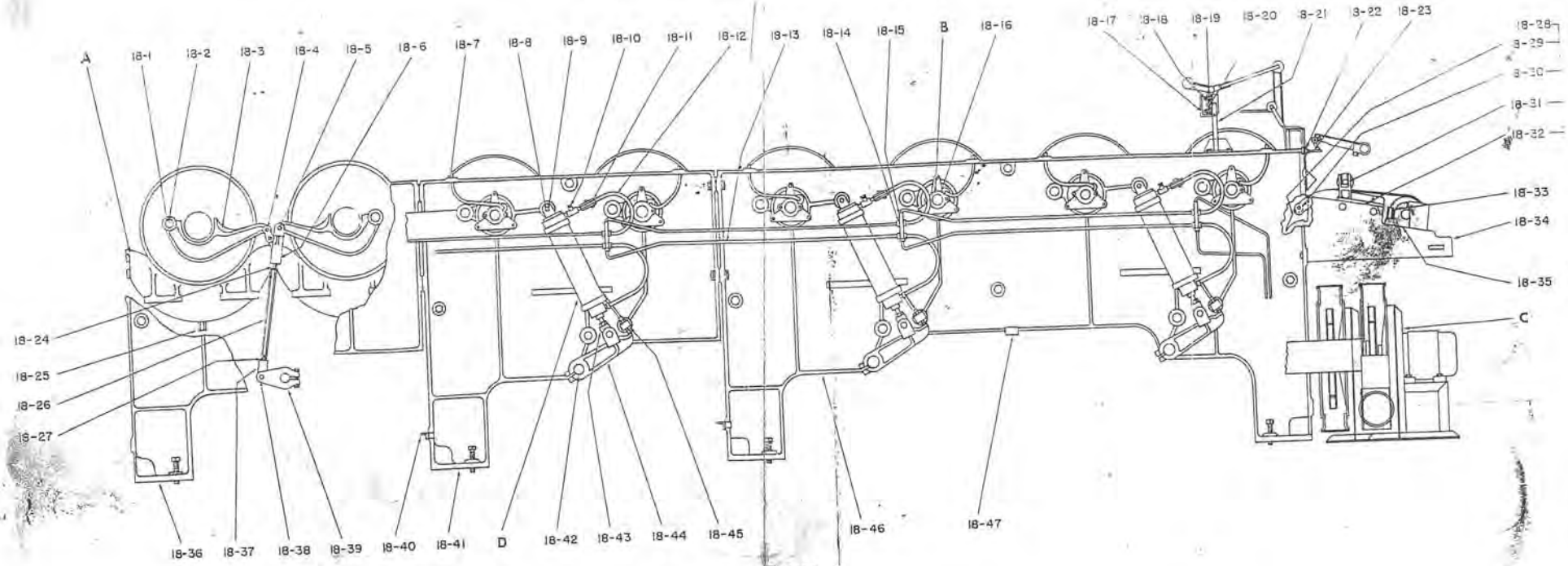



**FIGURE 18**
**LEFT SIDE VIEW WITH GUARDS REMOVED**

| ITEM | DESCRIPTION |
|---|---|
| 18-1 | Pivot stud |
| 18-2 | Washer, pivot stud (Not shown) |
| 18-3 | Lifting lever, raising rig |
| 18-4 | Connecting link, bearing arm assembly |
| 18-5 | Pin, upper rod end, raising rig |
| 18-6 | Upper rod end |
| 18-7 | Pin, to line up frame |
| 18-8 | Cylinder pivot stud |
| 18-9 | Tru-arc ring #5100-75 (Not shown) |
| 18-10 | Lubricator, Gits #543, style "RS" |
| 18-11 | Flow control valve |
| 18-12 | Fauver hose assembly |
| 18-13 | Imperial hose, #44FN |
| 18-14 | Tee assembly |
| 18-15 | Hanger strap |
| 18-16 | Gasket, vacuum adapter to duct (Not shown) |
| 18-17 | Cross support |
| 18-18 | Flex-loc nut, 5/16"-18 |
| 18-19 | Spacer |
| 18-20 | Clamp plate |

| ITEM | DESCRIPTION |
|---|---|
| 18-21A | Support, spool arm, L. H. |
| 18-21B | Support, spool arm, R. H. |
| 18-22 | Cup for spring |
| 18-23 | Spring, finger guard |
| 18-24 | Hex jam nut, 3/4" - 10 |
| 18-25 | Adapter, steam inlet on chest |
| 18-26 | Rod, raising rig |
| 18-27 | Hex jam nut, 3/4" - 10, L. H. thread |
| 18-28 | Feed table assembly |
| 18-29 | Finger |
| 18-30 | Ribbon rod |
| 18-31 | Bearing pad |
| 18-32A | L. H. table support |
| 18-32B | R. H. table support (Not shown) |
| 18-33 | Extended nut |
| 18-34 | L. H. ribbon feed bracket |
| 18-35 | Pillow block, SKF #SY-107 |
| 18-36 | L. H. frame, 2 roll |
| 18-37 | Rod end, raising rig |
| 18-37A | Bearing, Oilite #AA-1043 |

| ITEM | DESCRIPTION |
|---|---|
| 18-38 | Pin, raising rig |
| 18-39 | Lever, raising rig |
| 18-40 | L. H. guard support |
| 18-41 | L. H. frame, 2 roll |
| 18-42 | Bearing, Oilite #AA-2306 |
| 18-43 | Rod end, air cylinder end, raising rig |
| 18-43A | Bearing, Oilite #AA-1043 |
| 18-44 | Lever, air cylinder end, raising rig |
| 18-45 | Stop stud, raising rig |
| 18-46 | L. H. frame, 4 roll |
| 18-47 | Guard support, R. H. & L. H. |

REFERENCE ONLY

| | |
|---|---|
| A | Steam chest assembly (See figure 30) |
| B | Vacuum adapter assembly (See figure 29) |
| C | Vacuum system assembly<br>4 & 5 roll ironer (See figure 23)<br>8 roll ironer (See figure 24) |
| D | Air cylinder assembly (See figure 36) |

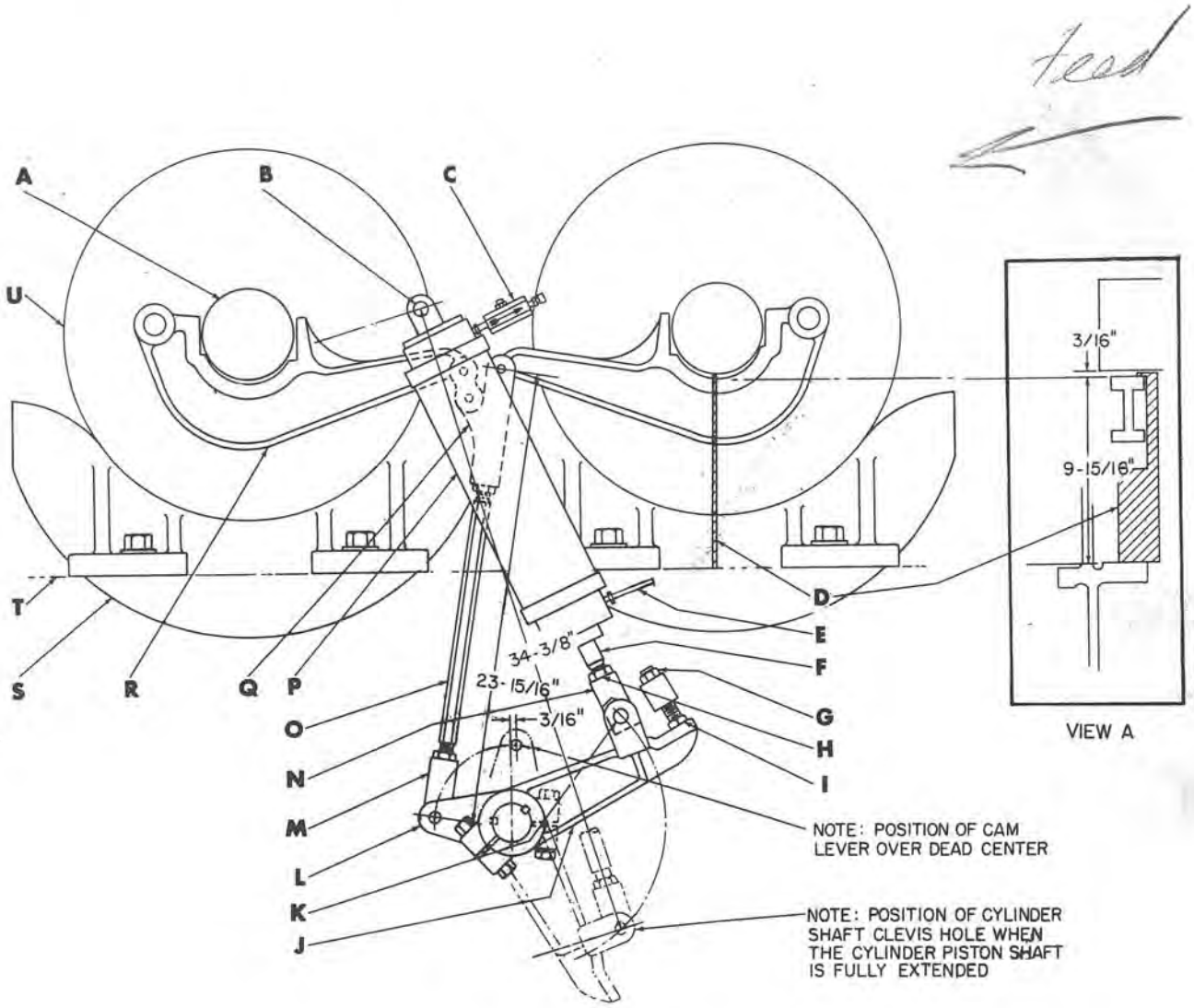



**FIGURE 19**
**ROLL RAISING MECHANISM**

## ADJUSTING THE ROLL RAISING MECHANISM

See figure 19.

ROLL LOWERING SPEED CONTROL – Flow control valve (A) regulates the air leaving cylinder (H) as indicated by the arrow on the valve. This valve controls the speed of lowering the rolls. To adjust, loosen the lock-nut on the stem and turn the stem clockwise to reduce the speed and counter-clockwise to increase the speed.

ROLL RAISING MECHANISM – The roll raising arm rig rods (O) and the roll raising air cylinder piston shaft clevis (N) were adjusted and locked by the manufacturer prior to shipment. The adjustment was again checked after the unit was installed and operationally checked at the using activity by an ALMI service representative. Any further adjustment required was made by the ALMI representative at that time. Further adjustment of the operating mechanism is not normally required.

In event packing in the roll raising air cylinder needs replacing, the cylinder can be removed, disassembled, repaired, and reinstalled without readjusting the piston shaft clevis and rig rod.

If the air cylinder is required to be replaced, the position of the piston shaft clevis on the piston shaft (F) must be carefully adjusted before the cylinder is installed, and the clearance between the roll shaft (A) and the lifting arm (R) sockets checked and adjusted

before the unit is used for production work. If the clearance between the roll shaft and lifting arm sockets is insufficient, the roll shaft will ride in the lifting arm socket and damage to the arm sockets will result. If the piston clevis is not adjusted properly, damage to the chests will possibly result.

The following steps outline the procedure for adjusting and checking the length of the roll raising cylinder piston shaft clevis before installing a new cylinder, and checking and adjusting the clearance between the roll shaft and the lifting arm socket after a cylinder or other components in the roll raising mechanism are installed.

1. Fully extend the cylinder piston shaft (F) by applying normal operating air pressure at the piston entension port flow control valve (C).
2. Check the distance between the center of the cylinder bolt attaching hole (B) and the center of the cylinder shaft clevis hole (K). The distance should be 34-3/16". If the distance is not 34-3/16", loosen the clevis jam nut (H) and rotate the clevis until the distance between the two holes is 34-3/16". Securely lock the jam nut against the clevis.
3. Attach the cylinder (P) to the frame and attach the piston shaft clevis to the cam lever (J). Connect the operating air lines to the cylinder.
4. Raise the padded rolls (U). The rolls should raise approximately one inch above the steam chest (S). With the rolls in this position, the piston should be fully extended and cam lever (L) should be approximately 3/16" over dead center. The position of the cam lever can be checked by shutting off the air supply with the rolls in the raised position. If the cam lever is not over dead center, the roll will slowly fall until it rests on the chest. In event this occurs, remove the bolt attaching the piston shaft clevis and cam lever, loosen the jam nut, and rotate the clevis one-half turn counterclockwise. Securely tighten the clevis jam nut and reinstall the piston shaft clevis and cam lever attaching bolt. Raise the rolls and repeat the check of the cam lever position. Repeat adjustments if required.

NOTE

CARE SHOULD BE EXERCISED THAT THE ADJUSTMENT OF THE CLEVIS DOES NOT PERMIT THE POSITION OF THE CAM LEVER TO EXCEED BEING 3/16" OVER DEAD CENTER.

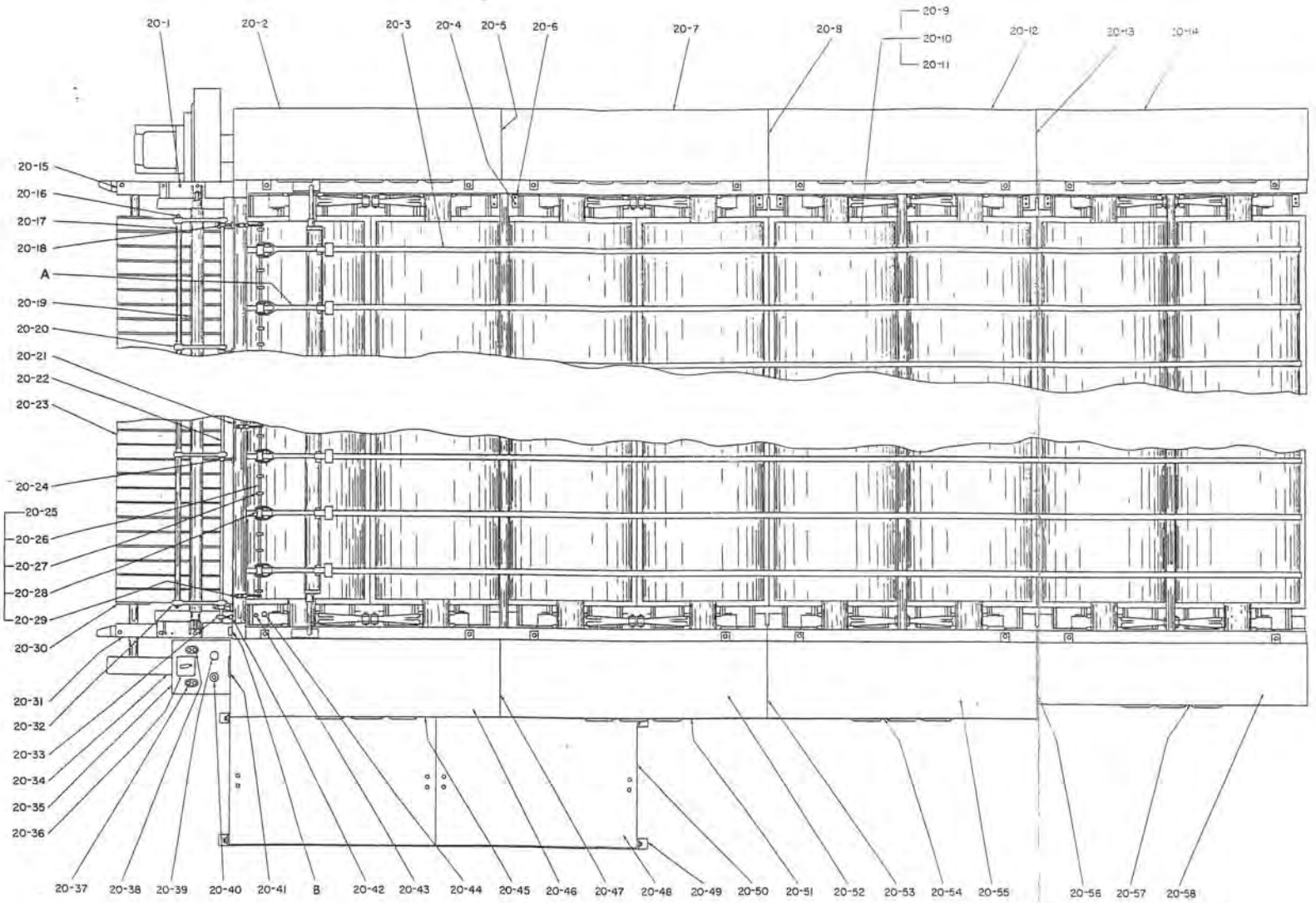
5. After the cam lever over dead center setting has been checked the roll should be lowered and the clearance between the lifting arm socket and the roll shaft checked. This clearance should be approximately 3/16". Check this clearance by placing the padded roll adjusting gage (Special Tool No. 141-173*) as shown in the insert of figure 19. With the bottom of the gage on the shelf line (T), the upper lip should fit snugly over the lowest point of the lifting arm socket surface. This will assure a minimum clearance of 3/16" between the shaft roll and the lifting arm. If the gage lip cannot be inserted between the socket and the roll shaft, the cam stop (I) must be adjusted. Adjust this stop by loosening the stop jam nut (G) and turning the stop counterclockwise approximately one turn. Tighten the jam nut and repeat the lifting arm socket and roll shaft clearance check. Repeat the stop adjustment if required.

*Shipped with unit.

## FIGURE 20 TOP VIEW

| ITEM | DESCRIPTION |
|---|---|
| 20-1 | Dowel pin |
| 20-2 | L. H. guard assembly, rolls 1 & 2 |
| 20-3 | 3/4" wide Tingue-Brown dacron heat set tape, 100 yd. roll |
| 20-4 | Dowel pin |
| 20-5 | Grommet (Not shown) |
| 20-6 | Guide block |
| 20-7A | L. H. guard assembly, rolls 3 & 4, 4 roll ironer |
| 20-7B | L. H. guard assembly, rolls 3 & 4, 6 & 8 roll ironer |
| 20-8 | Grommet (Not shown) |
| 20-9 | Wire mesh padded roll assembly (Standard) |
| 20-9A | Wire mesh padding, 30" wide (3 req'd.) |
| 20-9B | Wire mesh padding, 36" wide (1 req'd.) |
| 20-9C | Spring clip for fastening cover on roll |
| 20-10 | Hamilton spring padded roll assembly (Optional) |
| 20-10A | Spring pad, L. H. end (5 req'd.) |
| 20-10B | Spring pad, R. H. end (1 req'd.) |
| 20-10C | Pad clip (Binder holder) |
| 20-11A | Padding, Tingue-Brown, for use in 1 & 2 lane operations (Standard) |
| 20-11B | Padding, Tingue-Brown, for use in multiple lane operations (Standard) |
| 20-11C | Revolite padding (Optional) |
| 20-11D | Cover for roll |
| 20-12A | L. H. guard assembly, rolls 5 & 6, 6 roll ironer |
| 20-12B | L. H. guard assembly, rolls 5 & 6, 8 roll ironer |
| 20-13 | Grommet (Not shown) |
| 20-14 | L. H. guard assembly, rolls 7 & 8 |
| 20-15 | Grease shield for pillow block, L. H. |
| 20-16 | Plug |
| 20-17 | Tube, safety rod |
| 20-18 | Pivot bracket with stop |
| 20-19 | Doffer roll |
| 20-19A | Muslin covering, 36" wide x 126-1/4" long |
| 20-19B | D.F.C. flannel, 54" wide x 126-1/4" long |
| 20-19C | 1/4 pt. apron cement |
| 20-20 | Center safety guard bracket |
| 20-21 | Safety finger guard |
| 20-22 | Pivot rod, safety guard |
| 20-23 | Feed ribbon |
| 20-24 | Pivot bracket without stop |
| 20-25 | Tape guide assembly |
| 20-26 | Aluminum bar |
| 20-27 | Spool stop |
| 20-28 | Wood spool |
| 20-29 | Support brace |
| 20-30 | Ribbon feed drive roll |

| ITEM | DESCRIPTION |
|---|---|
| 20-30A | #12 duck, 21" wide x 128" long |
| 20-30B | 1/2 pt. apron cement |
| 20-31 | Grease shield for pillow block, R. H. |
| 20-32 | End safety guard bracket |
| 20-33 | Cam, safety guard limit switch |
| 20-34 | Control panel |
| 20-35 | Control panel top |
| 20-36 | Speed control, C.H. reverse drum, #9441-H40 |
| 20-37 | "OFF-ON" button, C.H. #10250-H 2747-A |
| 20-38 | "START INCH-STOP" button, C. H. #9115-H83 |
| 20-39 | Roll raising control, 1/4" Valvair neutral valve, model #92-38-3-13 |
| 20-40 | Emergency signal light (911308-931 dial light) |
| 20-41 | Tachometer |
| 20-42 | Finger guard limit switch, C.H. #10316-H10D, N.C. & N.O. |
| 20-43 | Dowel pin |
| 20-44 | Washer |
| 20-45 | Door |
| 20-46A | R.H. guard assembly, rolls 1 & 2 (Drive mounted inside frame) |
| 20-46B | R.H. guard assembly, rolls 1 & 2 (Drive mounted outside frame) |
| 20-47 | Grommet (Not shown) |
| 20-48 | Drive cover (Machine with outside motor drive only) |
| 20-49 | Foot, drive guard (Not shown) |
| 20-50 | Drive guard (Machine with outside motor drive only) |
| 20-51 | Door |
| 20-52A | R. H. guard assembly, rolls 3 & 4, 4 roll ironer (Drive mounted inside frame) |
| 20-52B | R. H. guard assembly, rolls 3 & 4, 6 & 8 roll ironer (Drive mounted inside frame) |
| 20-52C | R. H. guard assembly, rolls 3 & 4, 4 roll ironer (Drive mounted inside frame). When ironer is used with "Trumatic" Folder or "Trustak" Folder-Stacker |
| 20-52D | R. H. guard assembly, rolls 3 & 4, 4 roll ironer (Drive mounted outside frame) |
| 20-52E | R. H. guard assembly, rolls 3 & 4, 6 & 8 roll ironer (Drive mounted outside frame) |
| 20-52F | R. H. guard assembly, rolls 3 & 4, 4 roll ironer (Drive mounted outside frame). When ironer is used with "Trumatic" Folder or "Trustak" Folder-Stacker |
| 20-53 | Grommet (Not shown) |
| 20-54 | Door |
| 20-55A | R. H. guard assembly, rolls 5 & 6, 6 & 8 roll ironer |



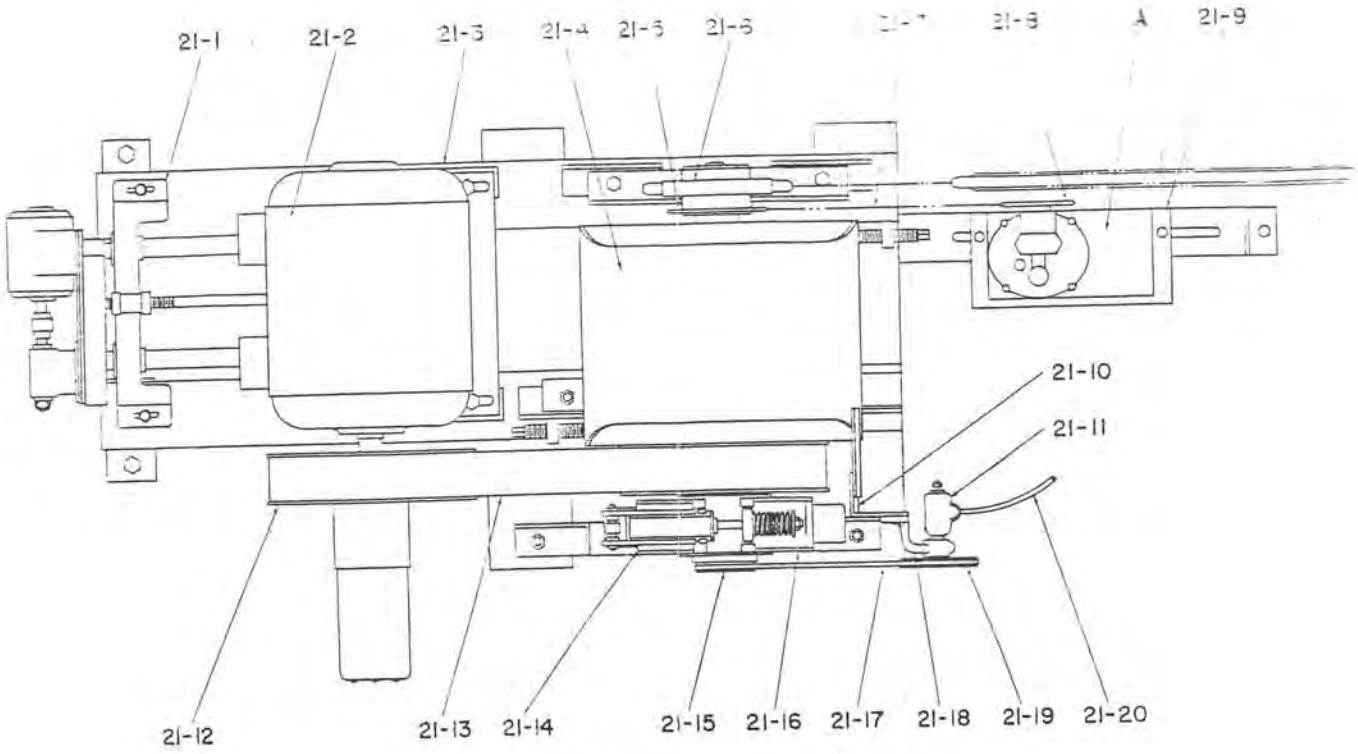

| ITEM | DESCRIPTION |
|---|---|
| 20-55B | R. H. guard assembly, rolls 5 & 6, 5 roll ironer. When ironer is used with "Trumatic" Folder or "Trustak" Folder-Stacker |

| ITEM | DESCRIPTION |
|---|---|
| 20-56 | Grommet (Not shown) |
| 20-57 | Door |
| 20-58A | R. H. guard assembly, rolls 7 & 8 |

| ITEM | DESCRIPTION |
|---|---|
| 20-58B | R. H. guard assembly, rolls 7 & 8, When used with "Trumatic" Folder or "Trustak" Folder-Stacker |

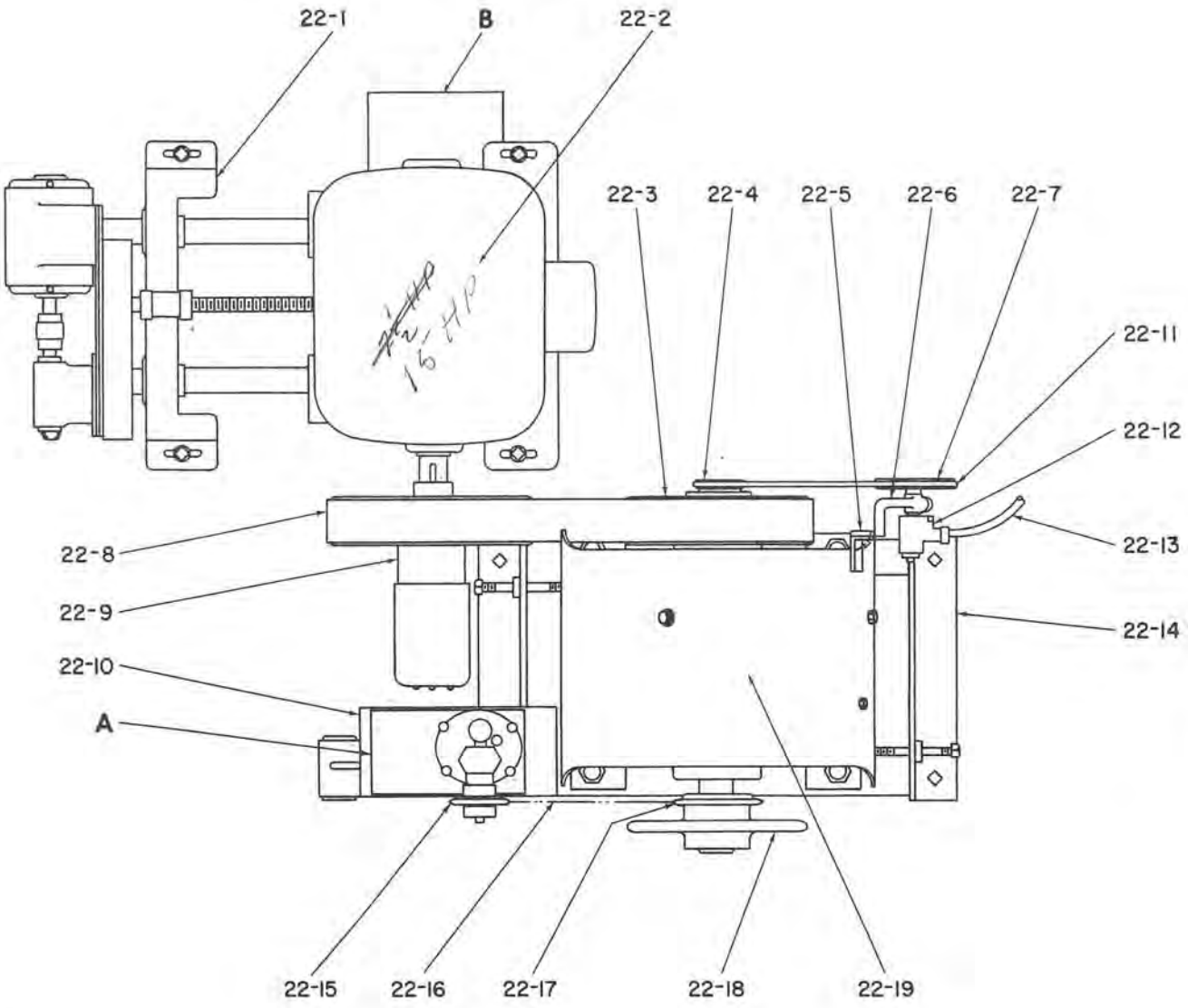
REFERENCE ONLY

| ITEM | DESCRIPTION |
|---|---|
| A | Spool arm assembly (See figure 37) |
| B | Bijur lubrication system (See figure 27) |




## FIGURE 21
## STANDARD MOTOR DRIVE
## (OUTSIDE FRAME)

| ITEM | DESCRIPTION |
|---|---|
| 21-1 | Motor base with electric remote control |
| 21-2 | Drive motor |
| 21-3 | Base, motor & reducer |
| 21-4 | Speed reducer |
| 21-5 | Drive sprocket, Bijur drive |
| 21-6 | Sprocket for speed reducer |
| 21-7 | Chain, Bijur pump |
| 21-8 | Driven sprocket, Bijur drive |
| 21-9 | Mounting plate, Bijur pump |
| 21-10 | Bracket assembly, speedometer |
| 21-11 | Speedometer drive head |
| 21-12 | Variable pitch pulley |
| 21-13 | Gerbing roto-cone vari-speed V-belt |
| 21-14 | Bracket assembly, brake |
| 21-15 | Drive sheave for speedometer |
| 21-16 | Brake assembly |
| 21-17 | Gilmer V-belt, model #8825, 1/4" x 39-9/16" cir. |
| 21-18 | Speed indicator bracket |
| 21-19 | Sheave, speedometer drive head |
| 21-20 | Flexible shaft for speedometer |
| | REFERENCE ONLY |
| A | Bijur lubrication system (See figure 27) |



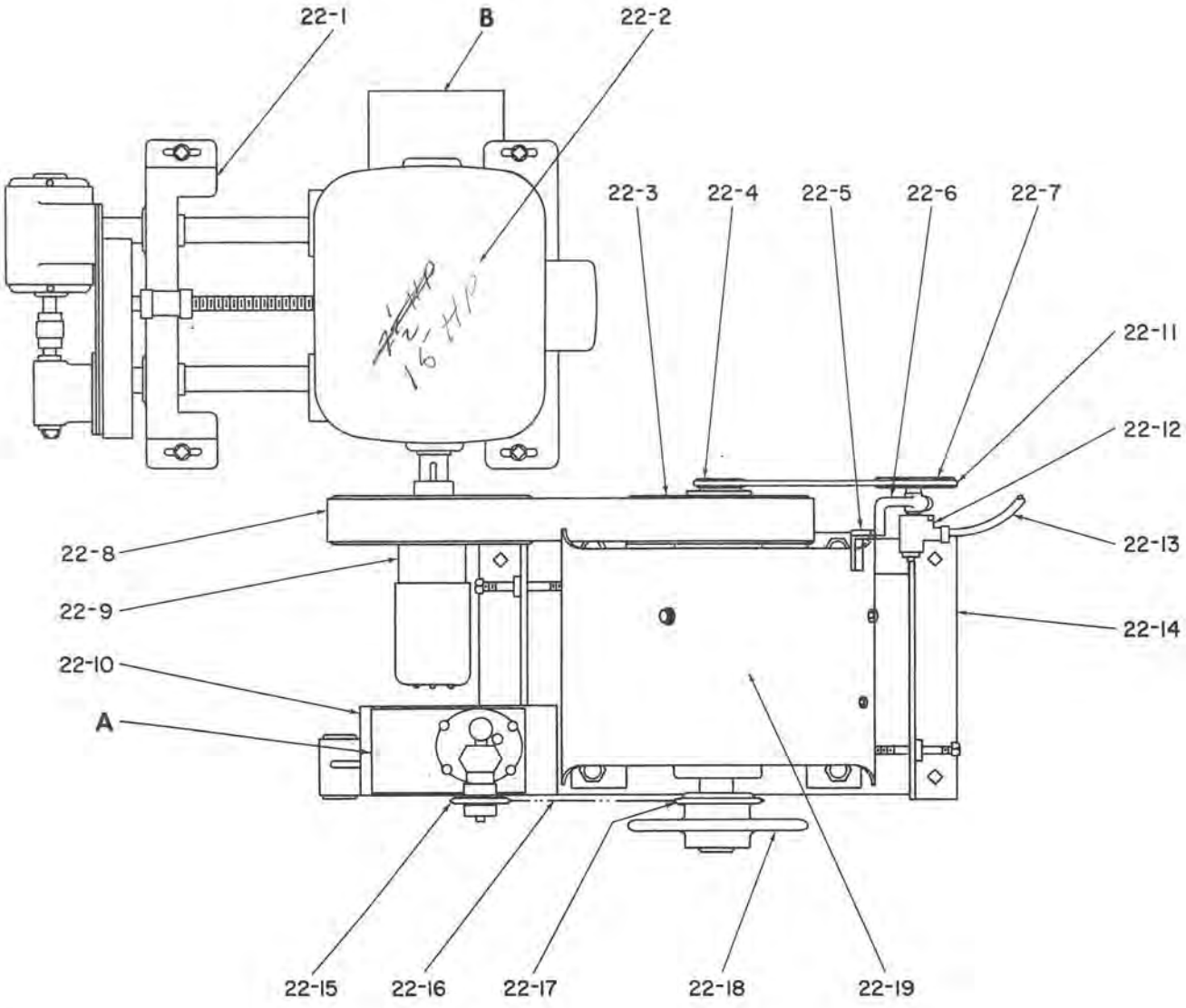

## FIGURE 22
## OPTIONAL MOTOR DRIVE
## (INSIDE FRAME)

| ITEM | DESCRIPTION |
|---|---|
| 22-1 | Motor base with electric remote control |
| 22-2 | Drive motor |
| 22-3 | Bracket assembly, brake |
| 22-4 | Drive sheave, speedometer |
| 22-5 | Bracket assembly, speedometer |
| 22-6 | Speed indicator bracket |
| 22-7 | Sheave, speedometer drive head |
| 22-8 | Gerbing roto-cone vari-speed V-belt #472 |
| 22-9 | Variable pitch pulley (Specify bore size) |
| 22-10 | Mounting plate, Bijur pump |
| 22-11 | Gilmer V-belt, model #8825, 1/4" x 39-9/16" cir. |

| ITEM | DESCRIPTION |
|---|---|
| 22-12 | Speedometer drive head |
| 22-13 | Flexible shaft for speedometer |
| 22-14 | Base, motor & speed reducer |
| 22-15 | Driven sprocket, Bijur drive |
| 22-16 | Chain, Bijur pump |
| 22-17 | Drive sprocket, Bijur drive |
| 22-18 | Sprocket for speed reducer |
| 22-19 | Speed reducer |

REFERENCE ONLY

| | |
|---|---|
| A | Bijur lubrication system (See figure 27) |
| B | Motor Magnetic Brake |



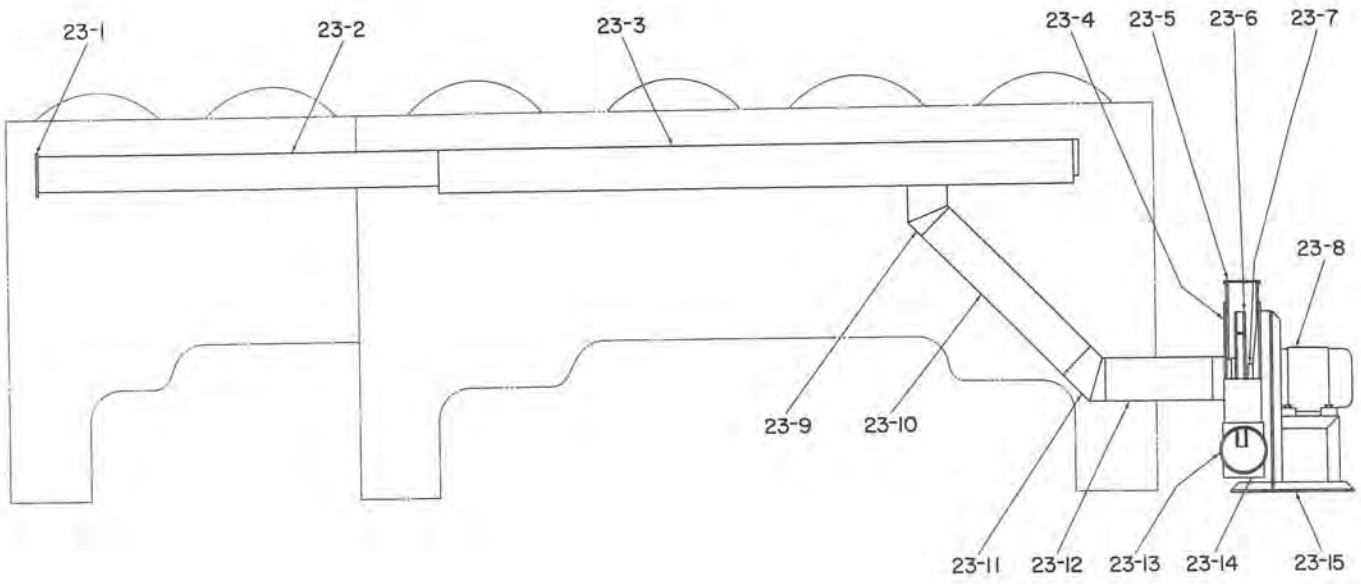

## FIGURE 22
## OPTIONAL MOTOR DRIVE
## (INSIDE FRAME)

| ITEM | DESCRIPTION |
|---|---|
| 22-1 | Motor base with electric remote control |
| 22-2 | Drive motor |
| 22-3 | Bracket assembly, brake |
| 22-4 | Drive sheave, speedometer |
| 22-5 | Bracket assembly, speedometer |
| 22-6 | Speed indicator bracket |
| 22-7 | Sheave, speedometer drive head |
| 22-8 | Gerbing roto-cone vari-speed V-belt #472 |
| 22-9 | Variable pitch pulley (Specify bore size) |
| 22-10 | Mounting plate, Bijur pump |
| 22-11 | Gilmer V-belt, model #8825, 1/4" x 39-9/16" cir. |

| ITEM | DESCRIPTION |
|---|---|
| 22-12 | Speedometer drive head |
| 22-13 | Flexible shaft for speedometer |
| 22-14 | Base, motor & speed reducer |
| 22-15 | Driven sprocket, Bijur drive |
| 22-16 | Chain, Bijur pump |
| 22-17 | Drive sprocket, Bijur drive |
| 22-18 | Sprocket for speed reducer |
| 22-19 | Speed reducer |

REFERENCE ONLY

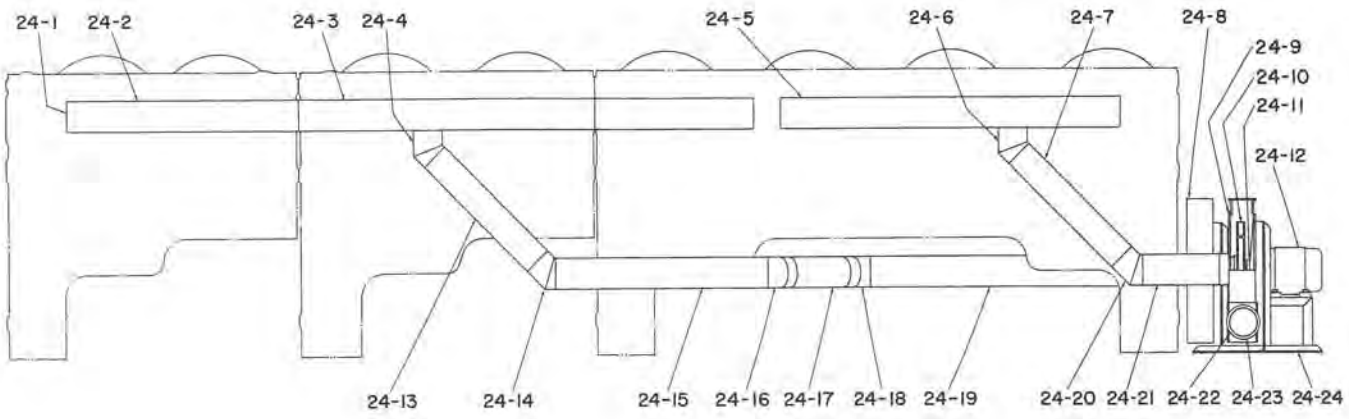
| | |
|---|---|
| A | Bijur lubrication system (See figure 27) |
| B | Motor Magnetic Brake |




## FIGURE 23
## VACUUM SYSTEM ASSEMBLY, 4 & 6 ROLL IRONER

| ITEM | DESCRIPTION |
|---|---|
| 23-1A | Cap, rear vacuum duct, 4 roll machine |
| 23-1B | Cap, rear vacuum duct, 6 roll machine |
| 23-2 | Vacuum duct, rolls 5 & 6 (6 roll machine only) |
| 23-3 | Vacuum duct, rolls 1, 2, 3, & 4 |
| 23-4 | Housing side |
| 23-5 | Fan housing |
| 23-6 | Fan |
| 23-7 | Clamping ring |

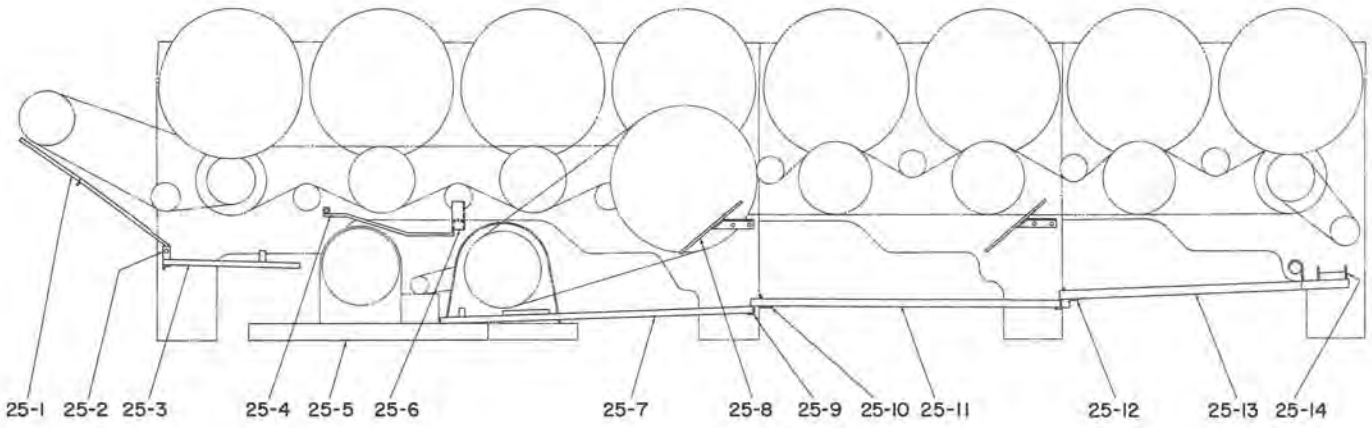
| ITEM | DESCRIPTION |
|---|---|
| 23-8 | Vacuum motor |
| 23-9 | Elbow, 45° |
| 23-10 | Pipe, 5" dia. x 26-1/2" long |
| 23-11 | Elbow, 45° |
| 23-12 | Pipe, 5" dia. x 13-1/2" long |
| 23-13 | Transition, vacuum fan, exhaust end |
| 23-14 | Gasket, transition to fan |
| 23-15 | Motor bracket and base for fan |




## FIGURE 24
## VACUUM SYSTEM ASSEMBLY, 8 ROLL IRONER

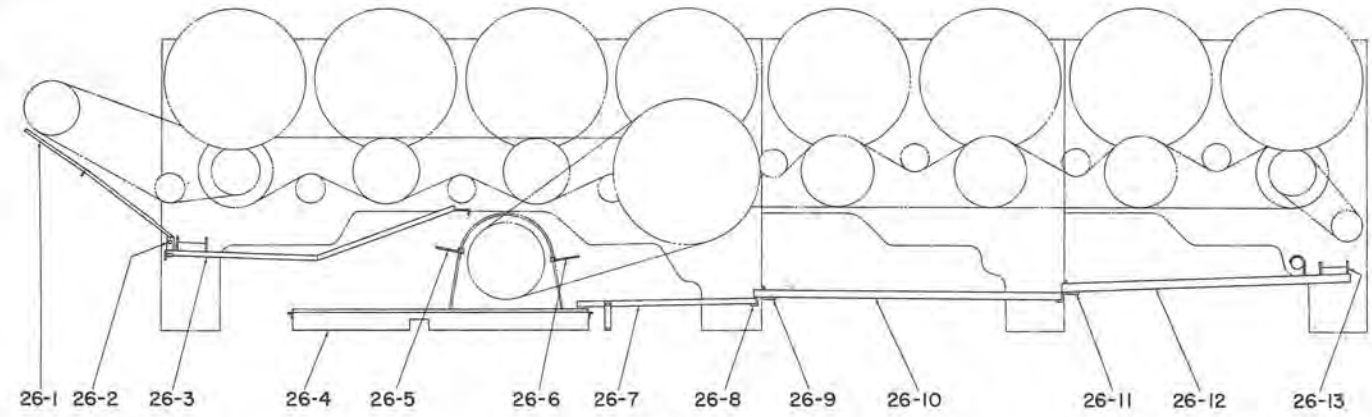
| ITEM | DESCRIPTION |
|---|---|
| 24-1 | Cap, 8 roll rear vacuum duct |
| 24-2 | Vacuum duct, rolls 7 & 8 |
| 24-3 | Vacuum duct, rolls 4 5 & 6 |
| 24-4 | Elbow,45° |
| 24-5 | Vacuum duct, rolls 1, 2, & 3 |
| 24-6 | Elbow,45° |
| 24-7 | Pipe, 5" dia. x 26-1/2" long |
| 24-8 | Fan housing |
| 24-9 | Housing side |
| 24-10 | Fan |
| 24-11 | .Clamping ring |
| 24-12 | Vacuum motor |

| ITEM | DESCRIPTION |
|---|---|
| 24-13 | Pipe, 5" dia. x 30" long |
| 24-14 | Elbow,45° |
| 24-15 | Pipe |
| 24-16 | Elbow,45° |
| 24-17 | Pipe |
| 24-18 | Elbow,45° |
| 24-19 | Pipe |
| 24-20 | Elbow,45° |
| 24-21 | Pipe |
| 24-22 | Transition, vacuum fan, exhaust end |
| 24-23 | Gasket, transition to fan |
| 24-24 | Motor bracket and base for fan |



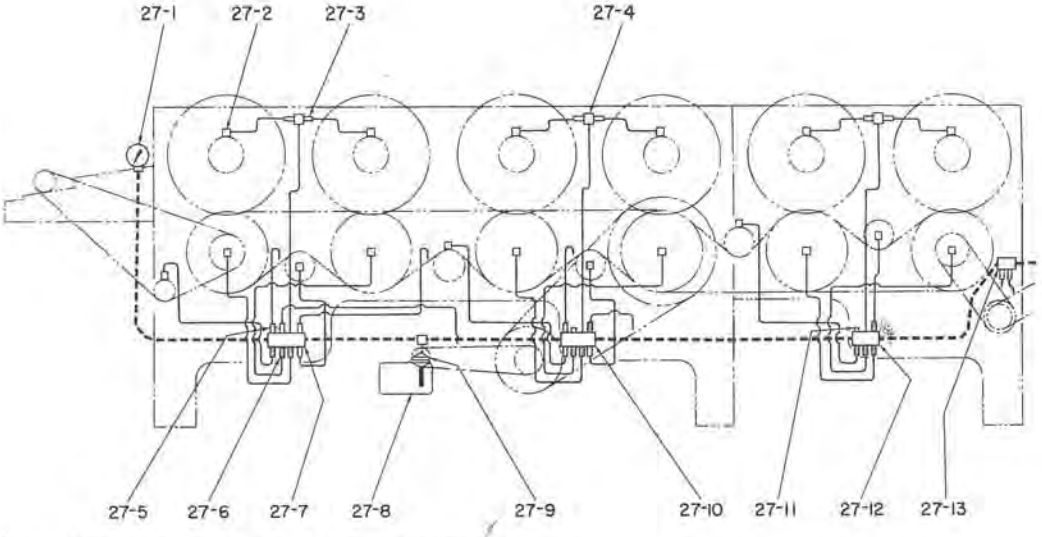

## FIGURE 25
## OIL PAN APPLICATION FOR 4, 6 & 8 ROLL IRONER (MOTOR OUTSIDE)

| ITEM | DESCRIPTION |
|---|---|
| 25-1 | Oil drip pan (Under control panel) |
| 25-2 | Support bracket |
| 25-3 | Oil deflector (Under roll 1) |
| 25-4 | Oil pan (Over motor) |
| 25-5 | Oil pan (Under rolls 2 & 3) |
| 25-6 | Guard support (Between rolls 2 & 3) |
| 25-7 | Oil pan (Under roll 4 & reducer) |
| 25-8 | Oil deflector (6 or 8 roll ironer only) |
| 25-9 | Guard support (6 or 8 roll ironer only) |
| 25-10 | Oil pan support (6 or 8 roll ironer only) |
| 25-11 | Oil drip pan (Under rolls 5 & 6) |
| 25-12 | Oil pan support (8 roll ironer only) |
| 25-13 | Oil drip pan (Under rolls 7 & 8) (8 roll ironer only) |
| 25-14 | Oil deflector (8 roll ironer only) |




## FIGURE 26
## OIL PAN APPLICATION FOR 4, 6 & 8 ROLL IRONER (MOTOR INSIDE)

| ITEM | DESCRIPTION |
|---|---|
| 26-1 | Oil drip pan (Under control panel) |
| 26-2 | Support bracket |
| 26-3 | Oil drip pan (Under rolls 1 & 2) |
| 26-4 | Oil drip pan (Drive assembly) |
| 26-5 | L. H. oil drip gutter (Over Falk reducer) |
| 26-6 | R. H. oil drip gutter (Over Falk reducer) |
| 26-7 | Oil drip pan (Under roll 4) |
| 26-8 | Guard support |
| 26-9 | Oil pan support (6 or 8 roll ironer only) |
| 26-10 | Oil drip pan (Under roll 5 & 6) |
| 26-11 | Oil pan support (8 roll ironer only) |
| 26-12 | Oil drip pan (Under rolls 7 & 8) (8 roll ironer only) |
| 26-13 | Oil deflector |




NOTE: Main Bijur oil pressure lines — 5/32 O.D. x .025 wall brass tubing. Other lines 5/32 O.D. x .055 wall.

**FIGURE 27 BIJUR LUBRICATION SYSTEM, 6 ROLL IRONER**
(SIMILAR APPLICATION ON 4 & 8 ROLL IRONER)

| ITEM | DESCRIPTION |
|---|---|
| 27-1 | Pressure gauge, 200#, type SF, Bijur #B-4582 |
| 27-2 | Elbow adaptor, Bijur #A-3080 (At all bearings) |
| 27-3 | Meter unit #HJB-2, Bijur #B-6114 |
| 27-4 | Junction, 3 way, Bijur #B-3065 |
| 27-5 | Meter unit #HJB-O, Bijur #B-6048 |
| 27-6 | Meter unit #HJB-1, Bijur #B-6113 |
| 27-7 | Junction, 10 way, double, Bijur #B-3254 |
| 27-8A | Reservoir, 6 pint, R. H., Bijur #D-2250 (Inside drive) |
| 27-8B | Reservoir, 6 pint, L. H., Bijur #D-2249 (Outside drive) |
| 27-9A | Lubricator unit, #AAB-R3, Bijur #D-2221 (Inside drive) |
| 27-9B | Lubricator unit, #AAB-L3, Bijur #D-2232 (Outside drive) |
| 27-10 | Junction, 10 way, double, Bijur #B-3254 |
| 27-11 | Closure plug, Bijur #B-2488 |
| 27-12 | Junction, 8 way, double, Bijur #B-3253 |
| 27-13 | Junction, 5 way, single, Bijur #B-3263 |
| 27-14 | Tubing clip, single, Bijur #A-2764 (Not shown) |
| 27-15 | Tubing clip, double, Bijur #B-3567 (Not shown) |
| 27-16 | Compression nut, Bijur #B-1095 (Not shown) |
| 27-17 | Compression bushing, Bijur #B-1371 (Not shown) |
| 27-18 | Compression sleeve, Bijur #B-1061 (Not shown) |

## BIJUR PUMP

See Figure 28.

Disconnect copper tubing and remove pump from the reservoir. The timing cam (B) is a two piece unit, in which one half of the cam may be rotated in relation to the other. The cam should be set by pulling out the knurled knob and rotating the cam until the #1 index hole is over the pin.

To prime the pump, start the ironer, and hold down the "INSTANT FEED" button (A) until oil shows freely at all points.

The filter disc (C) in the pump should be replaced yearly.

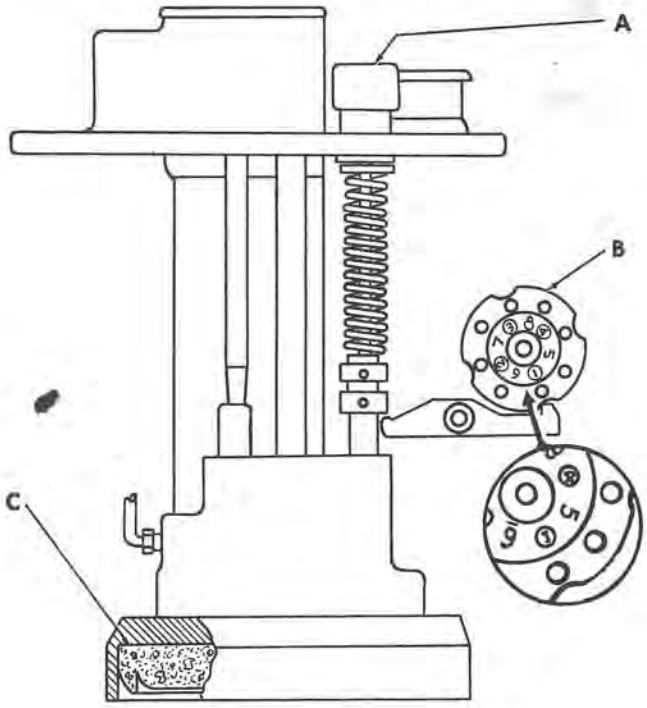
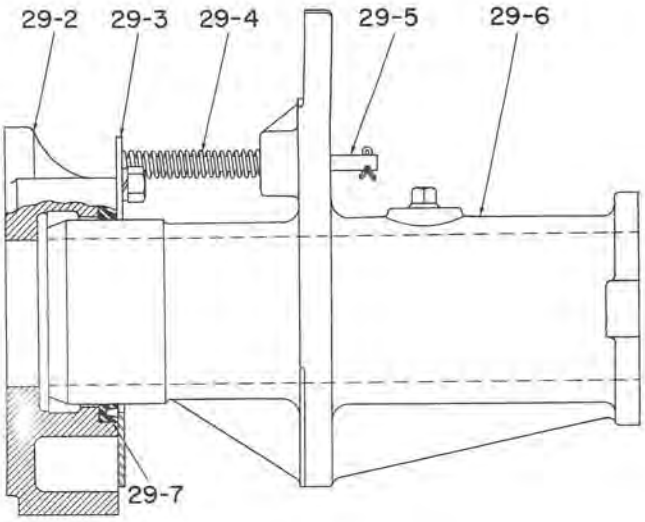
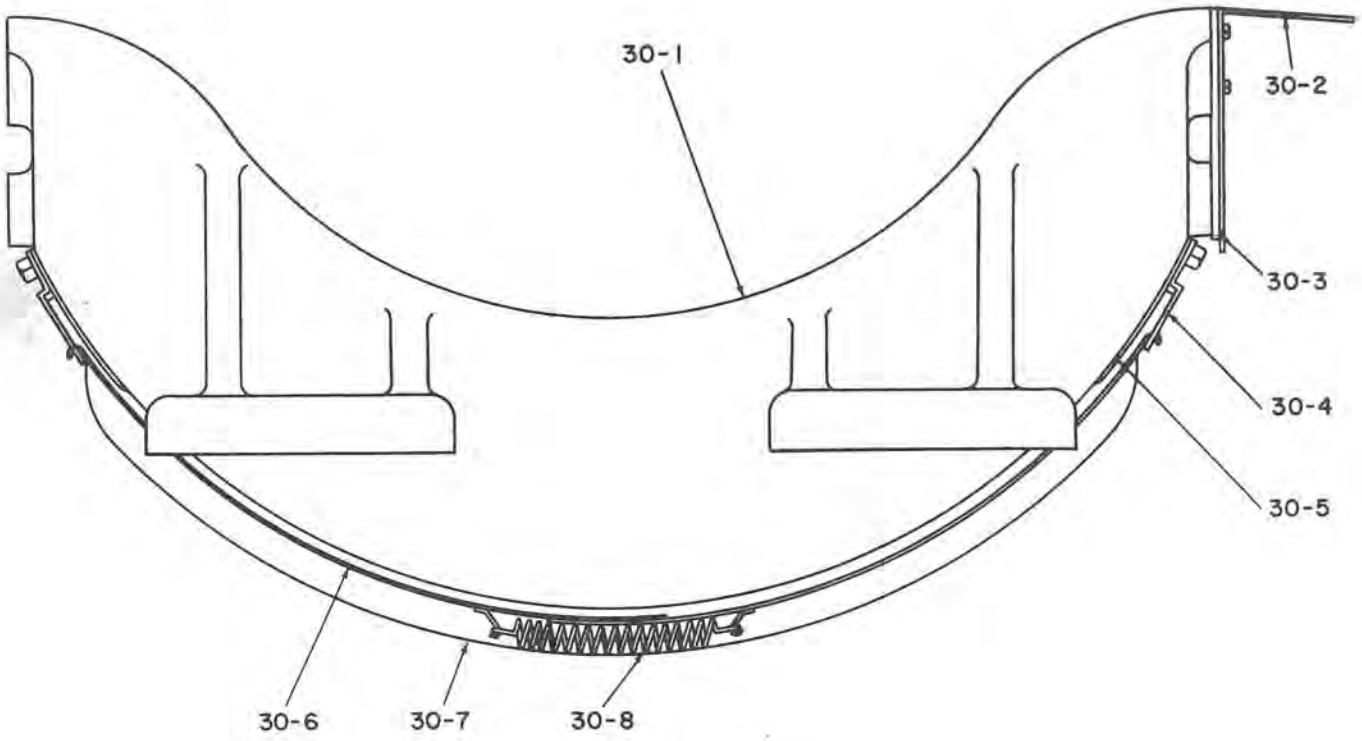



**FIGURE 28 - BIJUR PUMP**




## FIGURE 29
## VACUUM ADAPTOR ASSEMBLY

| ITEM | DESCRIPTION |
|---|---|
| 29-1 | Vacuum adapter assembly |
| 29-2 | Floating flange |
| 29-3 | Retaining ring |
| 29-4 | Spring |
| 29-5 | Guide for spring |
| 29-6 | Vacuum adapter |
| 29-7 | Klozure National Seal 40555 |



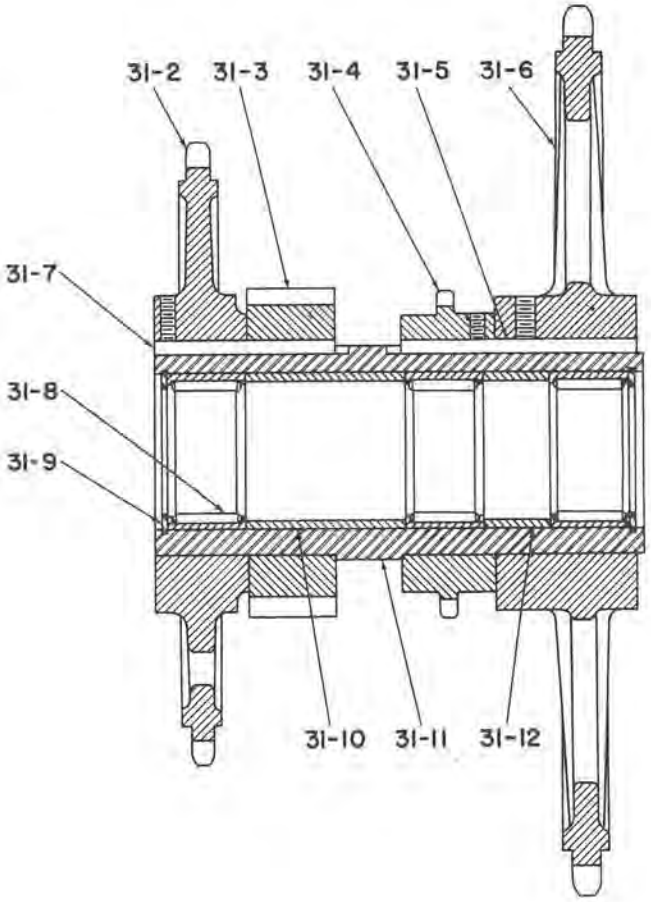

## FIGURE 30
## STEAM CHEST ASSEMBLY

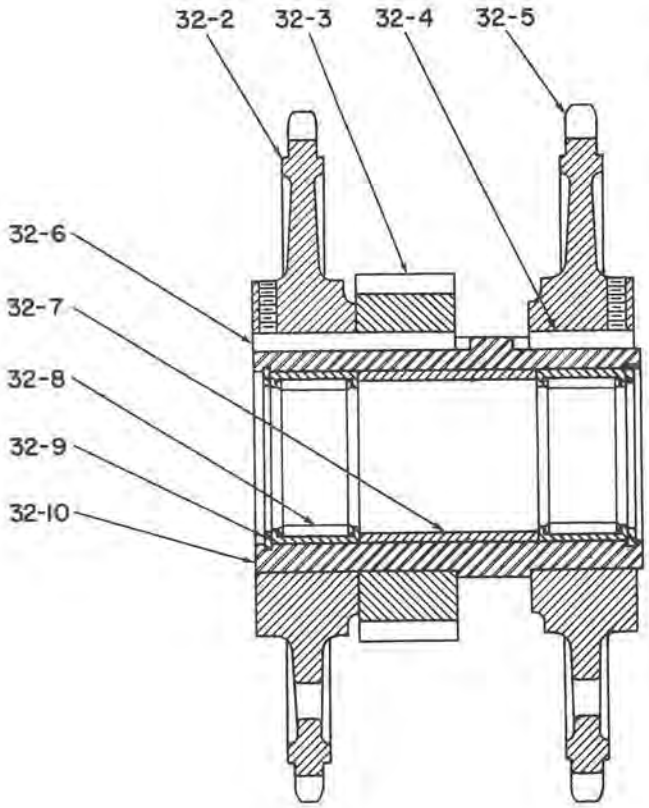
| ITEM | DESCRIPTION |
|---|---|
| 30-1A | Steam chest |
| 30-1B | *Steam chest (Drilled for bridging strip) |
| 30-1C | Special insulated steam chest |
| 30-1D | *Special insulated steam chest (Drilled for bridging strip) |
| 30-2 | *Bridging strip |
| 30-3 | *Insulation, bridging strip |
| 30-4 | Clamp bar (Used on special insulated steam chest only) |
| 30-5 | Back-up plate (Used on special insulated steam chest only) |
| 30-6 | Strap assembly (Used on special insulated steam chest only) |
| 30-7 | Insulation (Used on special insulated steam chest only) |
| 30-8 | Spring (Used on special insulated steam chest only) |

* Rear chest only when ironer is applied to "Trumatic" Folder or "Folestak" Folder-Stacker.

## FIGURE 31
## MAIN DRIVE SPROCKET ASSEMBLY

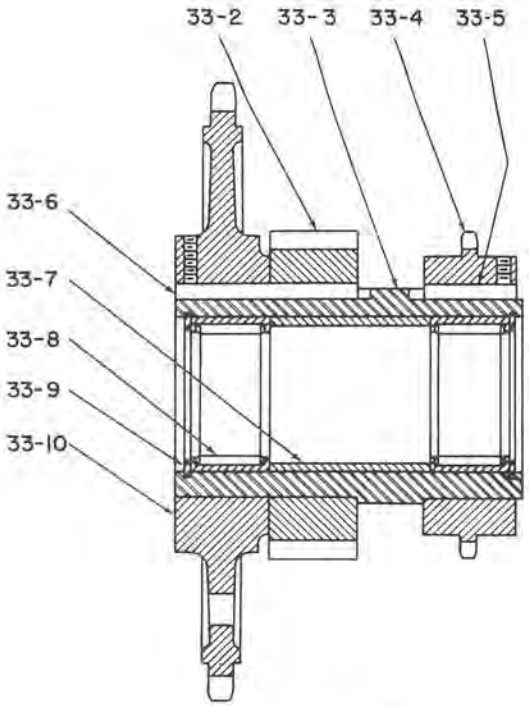
| ITEM | DESCRIPTION |
|---|---|
| 31-1A | Main drive sprocket assembly (4 roll ironer only) |
| 31-1B | Main drive sprocket assembly (6 & 8 roll ironer only) |
| 31-2 | Sprocket |
| 31-3 | Pinion |
| 31-4A | Sprocket, 5/8 pitch, 35 teeth (4 roll ironer only) |
| 31-4B | Sprocket, 1-1/4 pitch, 34 teeth (6 & 8 roll ironer only) |
| 31-5 | Key |
| 31-6 | Sprocket |
| 31-7 | Key |
| 31-8 | Needle bearing, Torrington #445628 |
| 31-9 | Retaining ring, Tru-Arc #5000-350 |
| 31-10 | Spacer, long |
| 31-11 | Sleeve |
| 31-12 | Spacer, short |



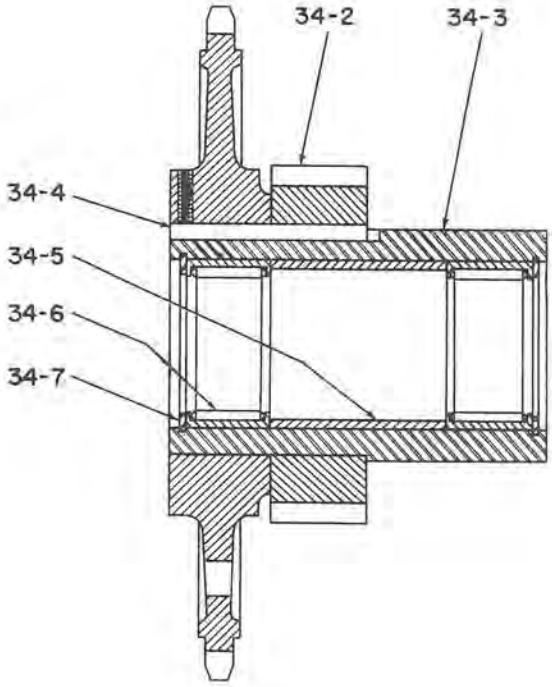

## FIGURE 32
## DRIVE SPROCKET ASSEMBLY

| ITEM | DESCRIPTION |
|---|---|
| 32-1A | Drive sprocket assembly (Roll 2 & 3 on 4 roll ironer) (Roll 2 & 3 on 6 roll ironer) (Roll 2, 3, 6 & 7 on 8 roll ironer) |
| 32-1B | Drive sprocket assembly (Roll 5 on 6 & 8 roll ironer) |
| 32-2 | Sprocket |
| 32-3 | Pinion |
| 32-4 | Key |
| 32-5A | Sprocket (Roll 2 & 3 on 4 roll ironer) (Roll 2 & 3 on 6 roll ironer) (Roll 2, 3, 6 & 7 on 8 roll ironer) |
| 32-5B | Sprocket (Roll 5 on 6 & 8 roll ironer) |
| 32-6 | Key |
| 32-7 | Spacer |
| 32-8 | Needle bearing, Torrington #445628 |
| 32-9 | Retaining ring, Tru-Arc #5000-350 |
| 32-10 | Sleeve |



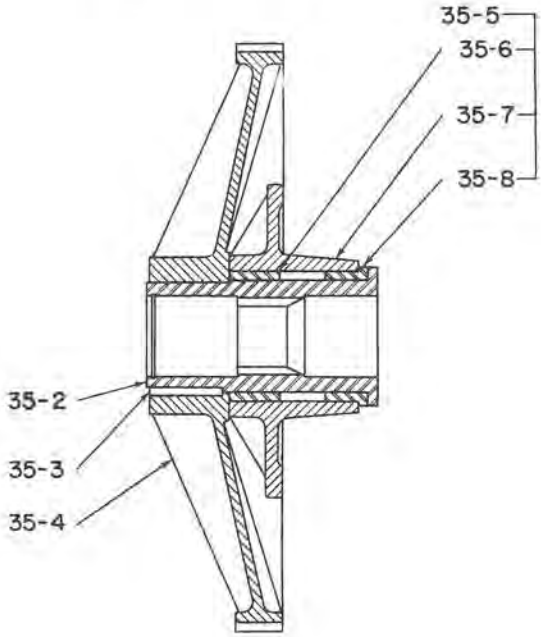

## FIGURE 33
## SPROCKET ASSEMBLY (WHEN IRONER IS USED WITH "HYPRO" FOLDER ONLY)

| ITEM | DESCRIPTION |
|---|---|
| 33-1 | Sprocket assembly |
| 33-2 | Pinion |
| 33-3 | Sleeve |
| 33-4 | Sprocket |
| 33-5 | Key |
| 33-6 | Key |
| 33-7 | Spacer |
| 33-8 | Needle bearing, Torrington #445628 |
| 33-9 | Retaining ring, Tru-Arc #5000-350 |
| 33-10 | Sprocket |




## FIGURE 34
## SPROCKET ASSEMBLY (WHEN IRONER IS USED WITH "TRUMATIC" FOLDER OR "TRUSTAK" STACKER ONLY)

| ITEM | DESCRIPTION |
|---|---|
| 34-1 | Sprocket assembly |
| 34-2 | Pinion |
| 34-3 | Sleeve |
| 34-4 | Key |
| 34-5 | Spacer |
| 34-6 | Needle bearing, Torrington #445628 |
| 34-7 | Retaining ring, Tru-Arc #5000-350 |

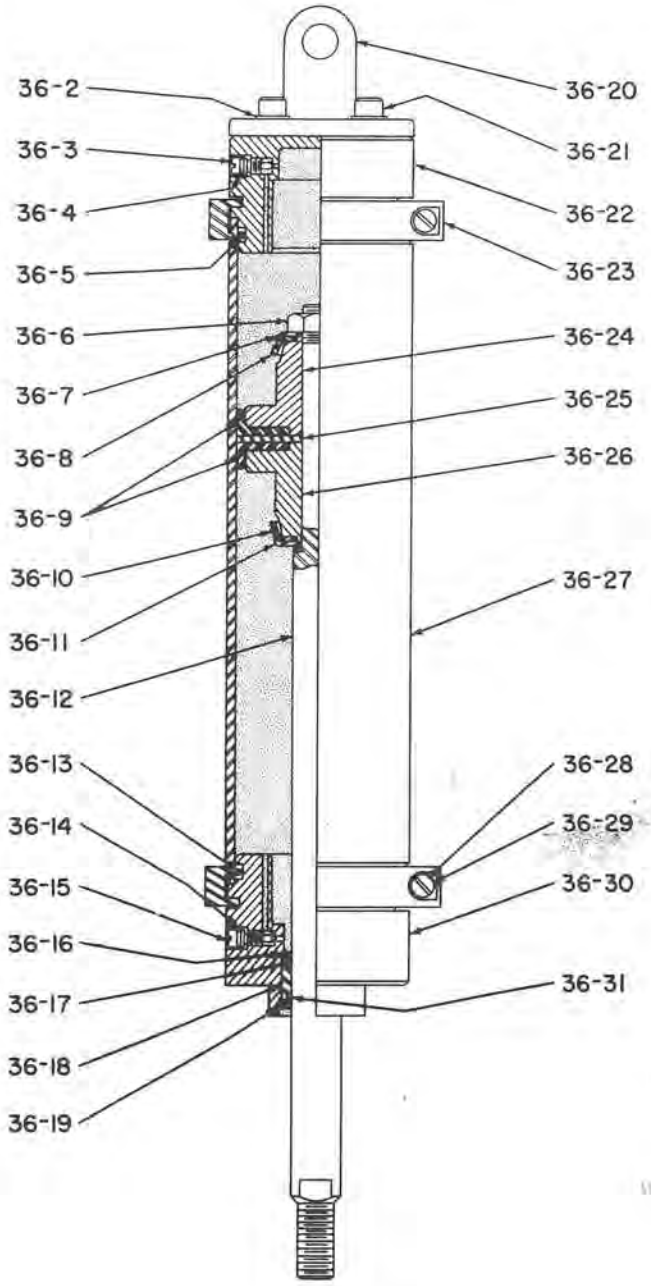



## FIGURE 35
## BEARING & GEAR ASSEMBLY, MAIN DRIVE

| ITEM | DESCRIPTION |
|---|---|
| 35-1 | Bearing and gear assembly |
| 35-2 | Drive sleeve |
| 35-3 | Key |
| 35-4 | Gear |
| 35-5 | Bearing housing assembly |
| 35-6 | Outside bushing |
| 35-7 | Bearing housing |
| 35-8 | Inside bushing |

## FIGURE 39 ⟶
## AIR CYLINDERS ASSEMBLY

| ITEM | DESCRIPTION |
|---|---|
| 36-1 | Air cylinder assembly, Westinghouse Air Brake model #A-3-A Double acting air cylinder, 4" dia. x 11" stroke, with DC-4 kit |
| 36-2 | Lock washer, Westinghouse Air Brake #514276 |
| 36-3 | Cushioning adjusting screw, Westinghouse Air Brake #850672 |
| 36-4 | Packing Ring, Westinghouse Air Brake #533134 |
| 36-5 | Packing ring, Westinghouse Air Brake #536587 |
| 36-6 | Flex-loc nut, Westinghouse Air Brake #P49819-1 |
| 36-7 | Small piston follower, Westinghouse Air Brake #850669 |
| 36-8 | Cushion packing cup, Westinghouse Air Brake #850653 |
| 36-9 | Piston packing cup, Westinghouse Air Brake #535161 |
| 36-10 | Cushion packing cup, Westinghouse Air Brake #850653 |
| 36-11 | Small piston follower, Westinghouse Air Brake #850669 |
| 36-12 | Piston rod (When ordering, give bore, stroke and model of cylinder which is found on nameplate. Also specify whether rod is C.R.S. or stainless steel.) |
| 36-13 | Packing ring, Westinghouse Air Brake #536587 |
| 36-14 | Packing ring, Westinghouse Air Brake #533134 |
| 36-15 | Cushioning adjusting screw, Westinghouse Air Brake #850672 |
| 36-16 | "V" ring retainer, Westinghouse Air Brake #850675 |
| 36-17 | "U" packing ring, Westinghouse Air Brake #851080 |
| 36-18 | Piston rod guide, Westinghouse Air Brake #850676 |
| 36-19 | Internal retaining ring, Westinghouse Air Brake #540570 |
| 36-20 | Swivel bracket, Westinghouse Air Brake #P50346 |
| 36-21 | Screw, Westinghouse Air Brake #523363 |
| 36-22 | Head (Blind end), (Incl. 3, 4 and 5) Westinghouse Air Brake #850977 |
| 36-23 | Locking clamp, (Incl. screws & washers) Westinghouse Air Brake #850982 |
| 36-24 | Piston follower, Westinghouse Air Brake #850967 |




| | |
|---|---|
| 36-25 | Piston, Westinghouse Air Brake #850968 |
| 36-26 | Piston follower, Westinghouse Air Brake #850967 |
| 36-27 | Cylinder body (When ordering, give bore, stroke and model of cylinder which is found on nameplate. Also specify carbon steel body.) |
| 36-28 | Screw, Westinghouse Air Brake #544187 |
| 36-29 | Lock washer, Westinghouse Air Brake #544188 |
| 36-30 | Head (Rod end), (Incl. 13, 14 & 15) Westinghouse Air Brake #851114 |
| 36-31 | Packing ring, Westinghouse Air Brake #524719 |

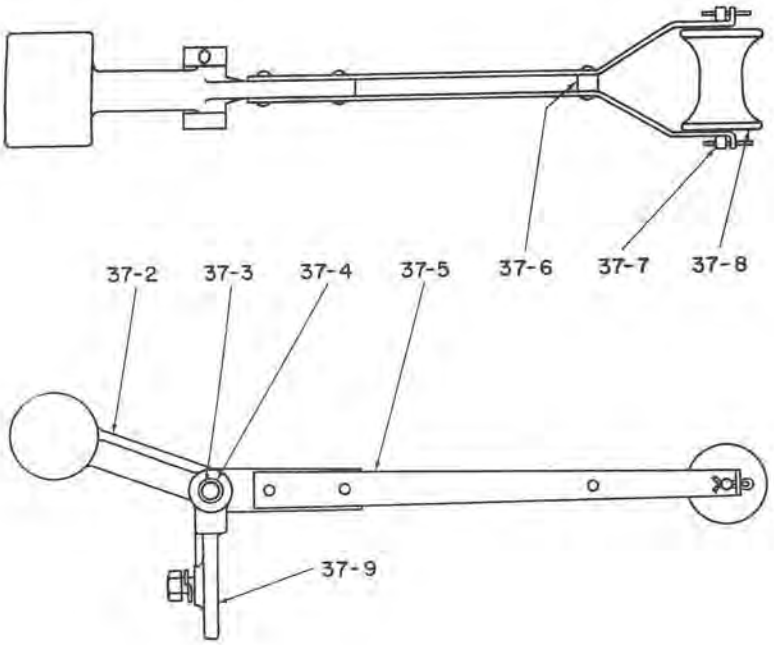
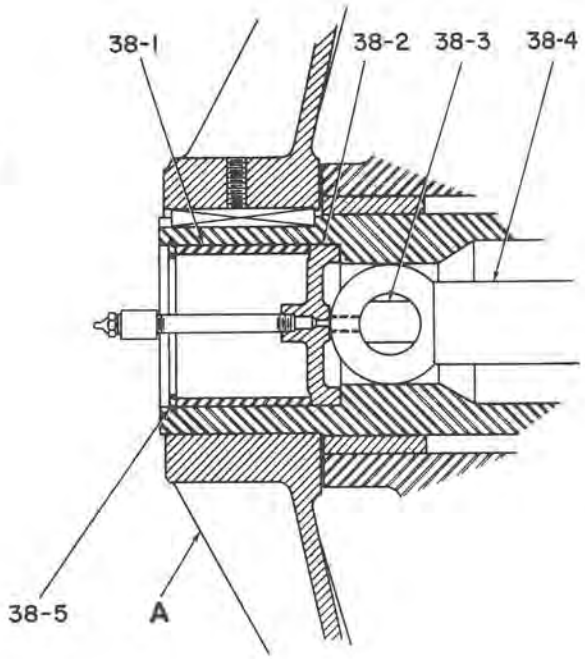



**FIGURE 37**
**SPOOL ARM ASSEMBLY**

| ITEM | DESCRIPTION |
|---|---|
| 37-1 | Spool arm assembly |
| 37-2 | Counterweight |
| 37-3 | Pin |
| 37-4 | Bushing, Oilite #AAB-502-2 |
| 37-5 | Strip |
| 37-6 | Spacer |
| 37-7 | Stud |
| 37-8 | Spool |
| 37-9 | Holder |

**FIGURE 38**
**UNIVERSAL DRIVE ASSEMBLY**

| ITEM | DESCRIPTION |
|---|---|
| 38-1 | Spacer, universal drive plate |
| 38-2 | Plate, universal drive |
| 38-3 | Pin, universal joint shaft |
| 38-4 | Universal drive shaft |
| 38-5 | Tru-arc ring #5000-334 |
| | REFERENCE ONLY |
| A | Bearing and gear assembly, main drive (See figure 35) |




## PADDING RIBBON FEED ROLL

To repad the ribbon feed roll, first remove all the feed ribbons as described on page 20. Then remove all old padding and cement. Thoroughly clean roll and cover with a piece of #12 duck, 21" wide and 128" long. Cement the duck to the roll using apron cement.

## PADDING DOFFER ROLL

To repad the doffer roll, remove all old padding and cement. Thoroughly clean roll To cover the roll a piece of D.F.C. flannel 54" wide by 126-1/4" long and a piece of muslin 36" wide x 126-1/4" long is required. Cement the first 5" of the D.F.C. flannel to the roll. Lap 18" of the muslin cover under the end of the D.F.C. flannel and wrap until all of the muslin is used. Leave end hang loose.

## PADDING IRONER ROLLS

Before replacing padding on the ironer rolls, contact the nearest office of the Revolite Corp., or the Tingue-Brown Corp. to obtain the necessary technical assistance required to complete this job.

# SUPPLEMENT A

## SUPPLEMENTAL DATA
## and
## PARTS LIST

## HYPRO
### Flatwork Ironer

CLASS 141

TABLE OF CONTENTS

This supplement covers the installation, operation, and maintenance of recently developed optional equipment and includes a parts list for the Class 141 "HYPRO" Flat Work Ironer (F. W. I. ) supplement. The optional equipment comprises a finger guard, rear tape bar and bridging strip, bibb bar, and relocation of the doffer roll. A brief explanation is included covering a new spring clip used in the application of padding to ironer rolls with a different perforation pattern. An additional cutout on the RH guard and a change in a channel specification are also discussed.

## GENERAL

FINGER GUARD. An optional finger guard can be added as an additional safety measure to the standard safety guard assembly of the F. W. I. Operating as part of the standard safety guard assembly, the finger guard will automatically stop the ironer if the necessity arises.

REAR TAPE BAR AND BRIDGING STRIP. The addition of the optional rear tape bar together with the bridging strip gives assurance that flat work delivered from the ironer will follow onto the attached folder for the next operation. The receiving end of the following folders have, as standard equipment, the tape bar attached, Classes 137, 138, and 140 (HYPRO).

BIBB BAR. The bibb bar assembly is used for holding small pieces or separate batches of flat work. Time is saved, with this optional equipment, in that identifying marks do not require checking on every piece when work is processed in batches.

DOFFER ROLL RELOCATION. When a Feedmaster spreader is used with the "HYPRO" ironer, the doffer roll should be relocated nearer the feed end of the ironer within the reach of the operators stationed along side. Brackets for such relocation are offered as optional equipment.

SPRING CLIP. The new spring clip will be effected for applying padding on ironer rolls with a different perforation pattern beginning serial number 141M3176 through serial number 141M3179 and serial number 141M3181 on.

CHEST ECCENTRIC STOPS. An instruction card has been issued to cover the installation of the new eccentric stops. The following 141 "HYPRO" Flat Work Ironers will be equipped with eccentric stops serial numbers 141M3176, 141M3177, 141M3178 and serial number 141M3184 on.

## INSTALLATION

FINGER GUARD. Refer to Figure 40. The optional finger guard for field application is easily installed and does not require any drilling operation. Separate the blocks (3) by removing the 5/16-inch hex hd. capscrews (5) holding the 6 split clamp assemblies together. Back out the 5/16-inch setscrews (6) until they clear the pivot shaft area. Place the guard assembly (2) so that the finger guard is between the doffer roll and the safety fence with guard rivet heads toward the doffer roll. Move the guard assembly upwards until the lower half of the clamp assembly fits onto the pivot shaft. Center the guard assembly over the feed ribbon table, crosswise, and install the upper block of the 6 clamp assemblies. Insert the 5/16-inch hex hd. capscrews (5), 2 to each clamp assembly, and a lockwasher (4) under each capscrew head. Tighten all capscrews until the clamp assemblies fit snug against the pivot shaft, yet permits the assembly to turn on the shaft. Depress fully the safety bar and hold at this position. Position the guard assembly so that the rear of the lower edge of the finger guard will clear the projection of the safety fence about 1/2 inch. Tighten all 5/16-inch hex hd. capscrews and then, tighten the 5/16-inch setscrews (6) so that the guard assembly will not turn on the pivot shaft. Release the safety bar and move the assembled guard, up and down, to determine if further adjustment is required. The microswitch for stopping the ironer is regulated by the standard safety bar.

REAR TAPE BAR AND BRIDGING STRIP. Refer to Figure 41. NOTE: DO NOT INSTALL REAR TAPE BAR WHEN CLASSES 137, 138, or 140 (HYPRO) FOLDERS ARE USED.

Rear Tape Bar. To install the rear tape bar no drilling is required. Mount a bracket (1) at the delivery end of either RH or LH frames using the slotted holes normally used for bolting the frame sections together. Install a 1/2-inch washer (2) under the head of a 1/2-inch hex hd. capscrew (3) and insert this assembly through the slotted hole in the bracket and frame. Place a 1/2-inch washer (3) against the frame and thread a 1/2 inch nut (4) on the capscrew. Align the bracket perpendicularly and finger-tighten the capscrew. Similarly install the other bracket. Insert the 3/4-inch pipe-bar (5) through the 1-1/16-inch bracket holes, moving brackets, up and down, as required to install the bar level. When tape bar is level, tighten the 1/2-inch capscrews. Insert cotter pins (6) through ends of pipe bar. Be sure that bar turns freely in the brackets. If present stripping tapes are of sufficient length to extend around tape bar, separate tape ends and thread around bar, then fasten ends together. If new stripping tapes are required, separate ends of present tapes and fasten new tapes to end of old tapes. Start the ironer and using the "START-INCH" button, thread the tapes onto the ironer. Be sure that tapes are snug as slack may permit tapes to pile up and thread around ironer rolls. When the new stripping tapes are threaded onto ironer, remove old tapes, fasten ends of new tapes together using the electric heated tape welding device, if available.

Bridging Strip. To install the bridging strip no drilling is required. The steam chest located at the delivery end (last chest) of "HYPRO" ironers has 13 holes tapped for 1/4-20 threads. Place the bridging strip (7) against the chest and aline the center holes. Install a 1/4-inch lockwasher (8) against the head of a 1/4-inch

hex hd. capscrew (9) and a 5/16-inch plain washer (10) against the lockwasher. Insert this assembly into the center hole of the bridging strip, then thread into the center hole of chest. Continue the installation of all capscrew assemblies. Tighten capscrews alternately using the proper size wrench until all are firmly seated. After bridging strip is installed place insulation (11) within the bridging strip. Make sure the foil on the insulation is to the outside and the edges of the insulation are underneath the edges of the strip.

BIBB BAR. Refer to Figure 42. No drilling is required for installation of the optional bibb bar. Mount the RH and LH bibb bar brackets (1 and 2) onto the feed table brackets using one 1/2-inch carriage bolt (3) in each. Install the head of the bolt towards the outside of the ironer and a 1/2-inch washer (4) under the 1/2-inch nut (3) at the inside of the feed table brackets. Thread a bibb bar (5) through the 4-3/4-inch hem on each end of the bibb (6). Place the bibb bar assembly on the ironer, one bar below and to the rear of the doffer roll and the other bar in the channels of the bibb bar brackets. Adjust the brackets outward according to the type of work to be performed and tighten the 1/2-inch nuts. When the Feedmaster spreader device is used, slide the brackets inwards towards the ironer and mount the bibb bar next to the one under the doffer roll.

DOFFER ROLL RELOCATION. Refer to Figure 43. To install brackets for relocating the doffer roll when the Feedmaster spreader is used with the F. W. I., it is necessary to drill 2 holes at the RH and LH sides of the ribbon feed table. Place bracket at side of feed table 5 inches, center to center, forward of the installed doffer roll bracket and 1-1/16 inches outward from the edge of the feed table board. Scribe holes using the bracket as a template, and center punch. Drill 2 holes for 5/16-18-inch capscrews. Similarily drill holes for the other bracket. Install RH and LH brackets (1) on feed table in similar manner to the regularly installed doffer roll brackets. Place a 5/16-inch lockwasher (3) under the head of each 5/16-18-inch socket hex hd. capscrew (2). Install this capscrew assembly from bottom of feed table threading into the brackets. Using proper size Allen wrench, tighten as required.

SPRING CLIP. To install the new spring clips when applying padding to the rolls, insert the 7/16-inch joggled end of the spring clip into the roll. Producing a slight bow in the clip, insert the 7/32-inch joggled end through the padding and into a hole in the perforated roll. BE SURE THE 7/16-INCH END POINTS IN THE DIRECTION OF ROTATION AND THE 7/32-INCH END IS CIRCUMFERENTIALLY ALIGNED.

## OPERATION

FINGER GUARD. The finger guard is operated connective through the pivot shaft with the safety bar. When pressure is applied moving the guard towards the heated chest, the micro-switch attached to the safety bar is energized causing the ironer to stop. To restart the ironer, press the "START" button.

REAR TAPE BAR AND BRIDGING STRIP. The stripping tapes, extending around the rear tape bar, move whenever the ironer is in operation but the bridging strip is stationary. The tape bar should not bind in the brackets.

BIBB BAR. The bibb bar can be used when the Feedmaster spreader is not used. Loosen the adjusting capscrews and move the brackets outward as required to produce the necessary depth. When the bibb bar is not used, the forward bibb bar can be placed next to the rearward bibb bar beneath the doffer roll.

DOFFER ROLL RELOCATION. The doffer roll is relocated by lifting the roll from one set of brackets and placing the roll into the other set of brackets accordingly whether the Feedmaster spreader is used or not used.

## MAINTENANCE

FINGER GUARD. The only maintenance required on the finger guard is checking for loose fasteners and that the movement of the guard will activate the micro-switch, stopping the ironer.

REAR TAPE BAR AND BRIDGING STRIP. The only maintenance required on the rear tape bar and bridging strip is checking for loose fasteners and free movement of the tape bar.

BIBB BAR. The only maintenance required on the bibb bar is checking for loose fasteners on bracket installation.

DOFFER ROLL RELOCATION. The only maintenance required on the doffer roll relocation is checking for loose fasteners attaching the brackets.

CHANNEL SPECIFICATION. Refer to Figure 5A of Instruction and Parts Manual AD 568-006, 6-Roll Ironer with 8-Roll Drive. The channel on the RH side at delivery end of ironer should be 6' 3" instead of 7' 3", because of the longer length of the drive assembly.

RIGHT HAND GUARD. Refer to Figure 39. If the drive chain rubs against the guard on the "HYPRO" ironer, or if it becomes necessary to provide an opening in a replaced guard, the RH guard at delivery end should be cut out as shown in the area indicated.

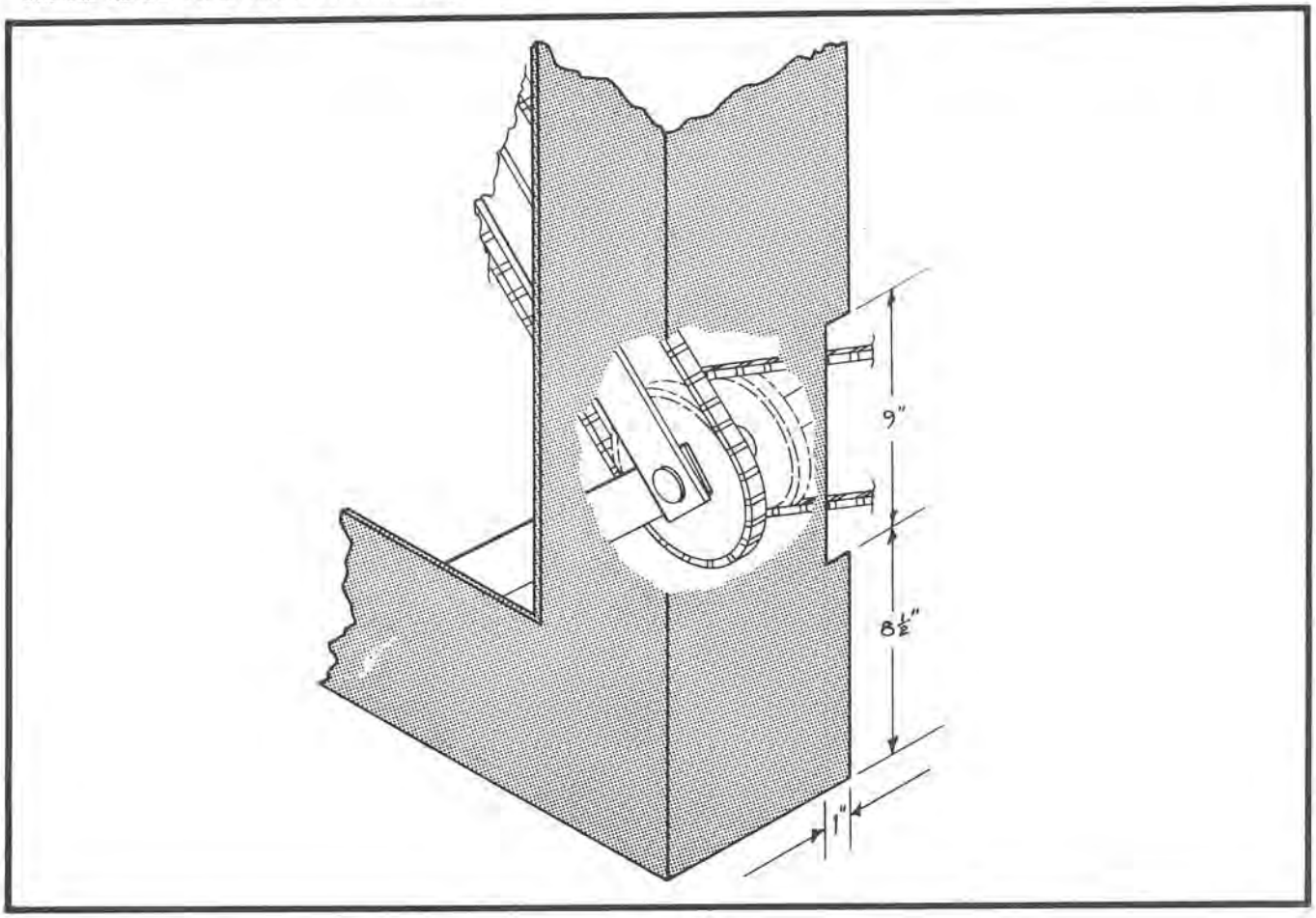



FIGURE 39

RIGHT HAND GUARD CUTOUT

## PARTS LIST

GENERAL. The following pages contain an illustrated parts breakdown of the components. Assemblies are listed and illustrated for repair part purposes.

CONTENTS. Parts listings are provided with descriptions of assemblies used on the machine. For cross reference purposes the item numbers on the illustrations are the same as those assigned to the parts listing.

PURPOSE. The illustrated parts breakdown is designed to be used for repair part identification. The illustrations are intended to be used for ordering, storing, issuing, identifying, and for illustrating the assembly relationship.

ITEM NUMBER. The item number is listed in the ITEM NO. column of the parts list and is a composite of the illustration number and the index number assigned to the component on the illustration.

DESCRIPTION. The description of the assembly or component appears in this column opposite the item number assigned to it. The relationship of assemblies and components is shown by the level of indentation under the numbers 1 through 7 in the DESCRIPTION column heading. The top assembly is the complete unit which has an indent level 1. All other sub-assemblies and components are listed under indent levels 2 through 7 as applicable.

UNITS PER ASSEMBLY. The number appearing in the UNITS PER ASSEMBLY column is the quantity required of the listed part in its immediate assembly. The abbreviation REF indicates that the item listed should be consulted for additional information as required.

REPAIR PARTS ORDERING. Refer to the last page of the manual for instructions on "How To Order Repair Parts".

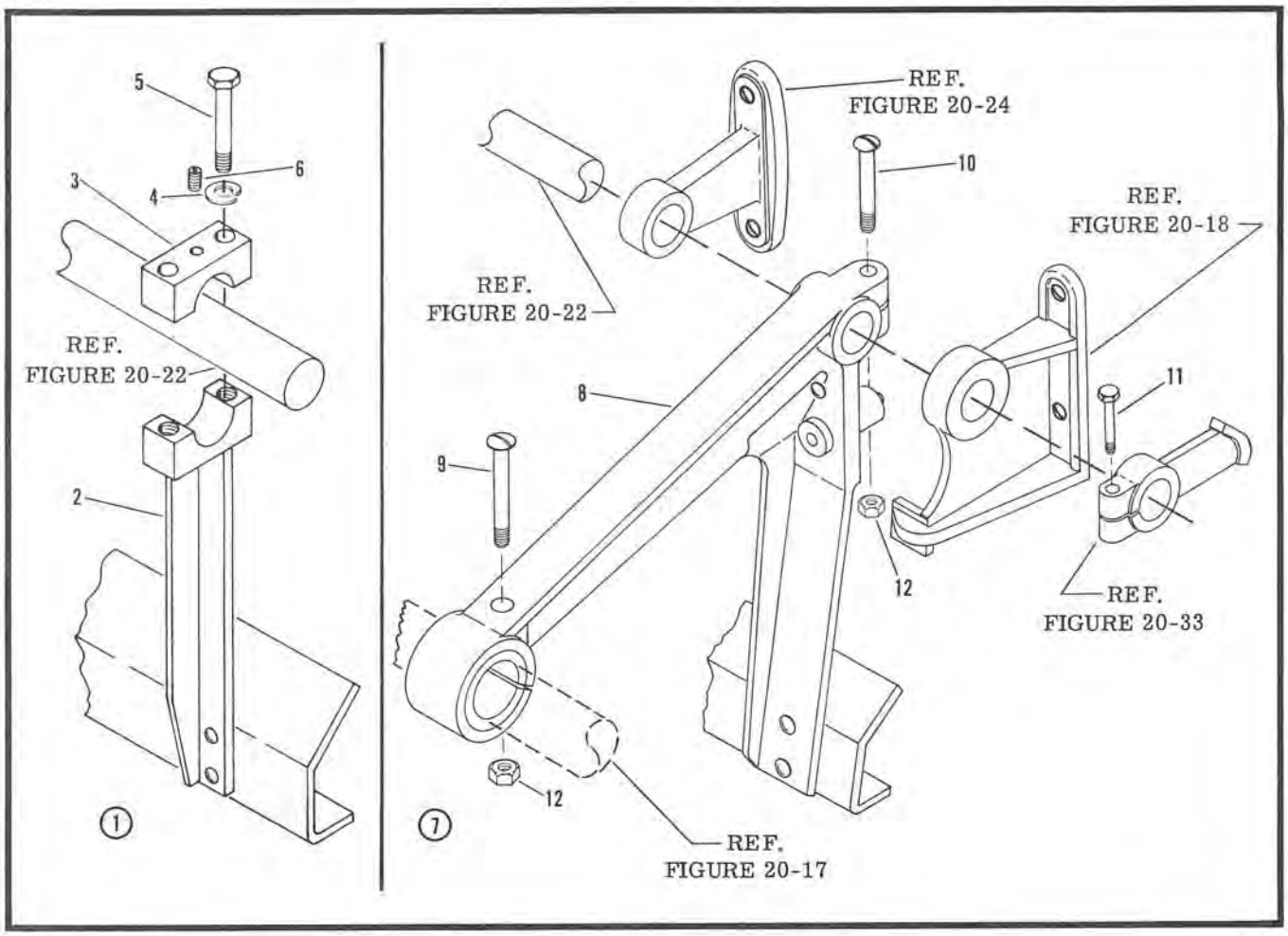



Figure 40. Finger Guard Installation

| FIGURE & INDEX NUMBER | DESCRIPTION<br>1 2 3 4 5 6 7 | MFR'S CODE | QTY PER ASSY | MODEL CODE |
|---|---|---|---|---|
| 40-0 | FINGER GUARD INSTALLATION | | 1 | |
| 40-1 | GUARD, Finger Assy. (field application) | | 1 | |
| 40-2 | . ANGLE AND CLAMP BAR ASSY. | | 1 | |
| 40-3 | . BLOCK | | 6 | |
| 40-4 | . . LOCKWASHER, 5/16 | | 12 | |
| 40-5 | . . CAPSCREW, Hex Hd. 5/16-18 x 1-1/4 | | 12 | |
| 40-6 | . SETSCREW, 5/16-18 x 3/8 | | 6 | |
| 40-7 | GUARD, Finger Assy. (factory application) | | 1 | |
| 40-8 | . BAR, Finger Assy. | | 1 | |
| 40-9 | . SCREW, Machine Oval Hd. 5/16-18 x 1-3/4 | | 6 | |
| 40-10 | . SCREW, Machine Oval Hd. 5/16-18 x 1-1/4 | | 6 | |
| 40-11 | . CAPSCREW, Hex Hd. 5/16-18 x 1 | | 1 | |
| 40-12 | . NUT, Hex 5/16-18 | | 12 | |

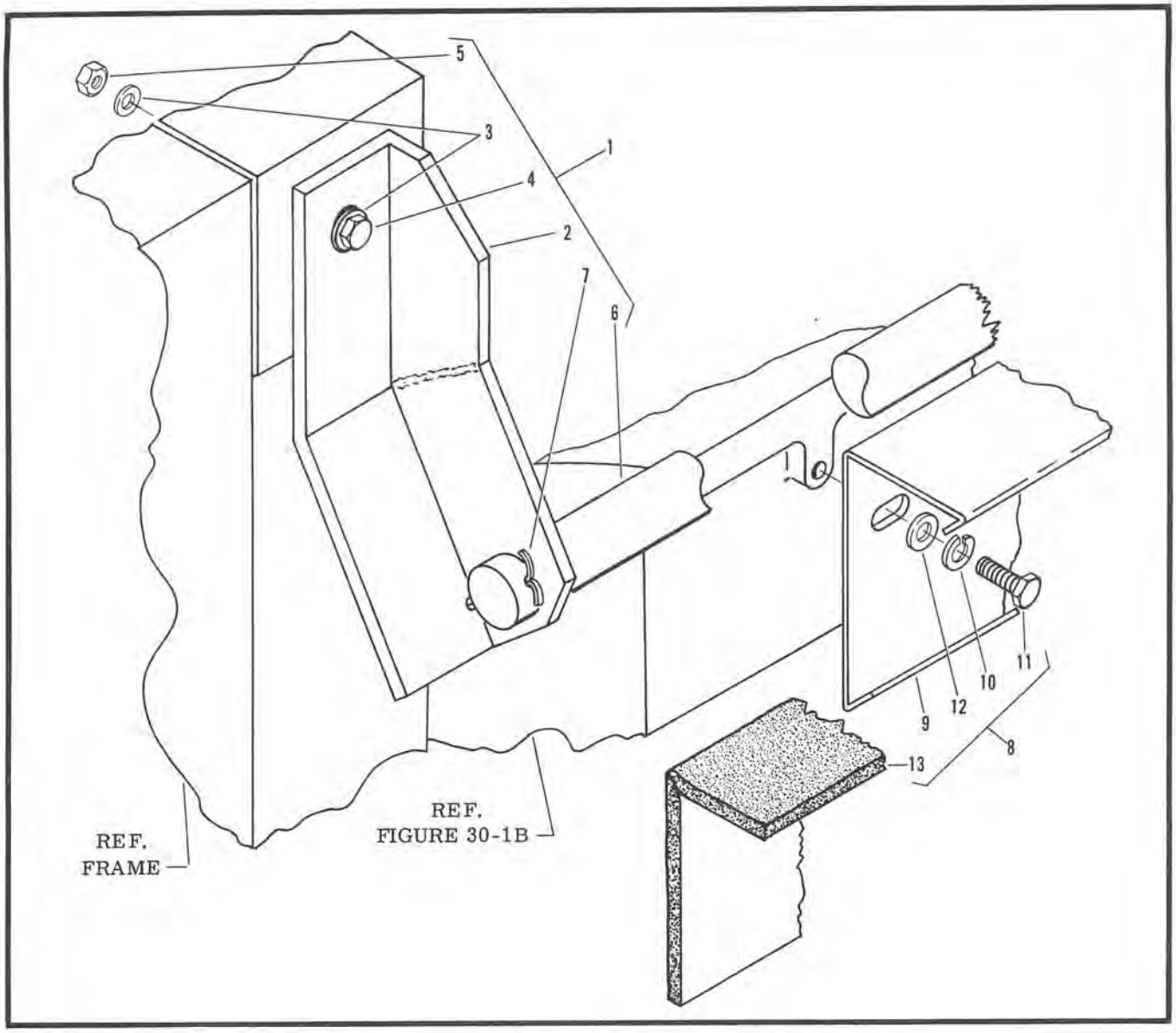



Figure 41. Rear Tape Bar And Bridging Strip Installation

| FIGURE & INDEX NUMBER | DESCRIPTION<br>1 2 3 4 5 6 7 | MFR'S CODE | QTY PER ASSY | MODEL CODE |
|---|---|---|---|---|
| 41-0 | REAR TAPE BAR AND BRIDGING STRIP INSTALLATION | | 1 | |
| 41-1 | . BAR, REAR TAPE | | 1 | |
| 41-2 | . . BRACKET | | 2 | |
| 41-3 | . . WASHER 9/16 ID x 1-3/8 OD | | 4 | |
| 41-4 | . . CAPSCREW, Hex Hd. 1/2-13 x 2-1/4 | | 2 | |
| 41-5 | . . NUT Hex 1/2-13 | | 2 | |
| 41-6 | . . BAR, Tape | | 1 | |
| 41-7 | . . PIN, Cotter 1/8 dia x 2 | | 2 | |
| 41-8 | . BRIDGING STRIP | | 1 | |
| 41-9 | . . STRIP, Bridging | | 1 | |
| 41-10 | . . LOCKWASHER 1/4 | | 13 | |
| 41-11 | . . CAPSCREW Hex Hd. 1/4-20 x 1/2 | | 13 | |
| 41-12 | . . WASHER 5/16 ID x 3/4 OD | | 13 | |
| 41-13 | . . INSULATION | | 1 | |

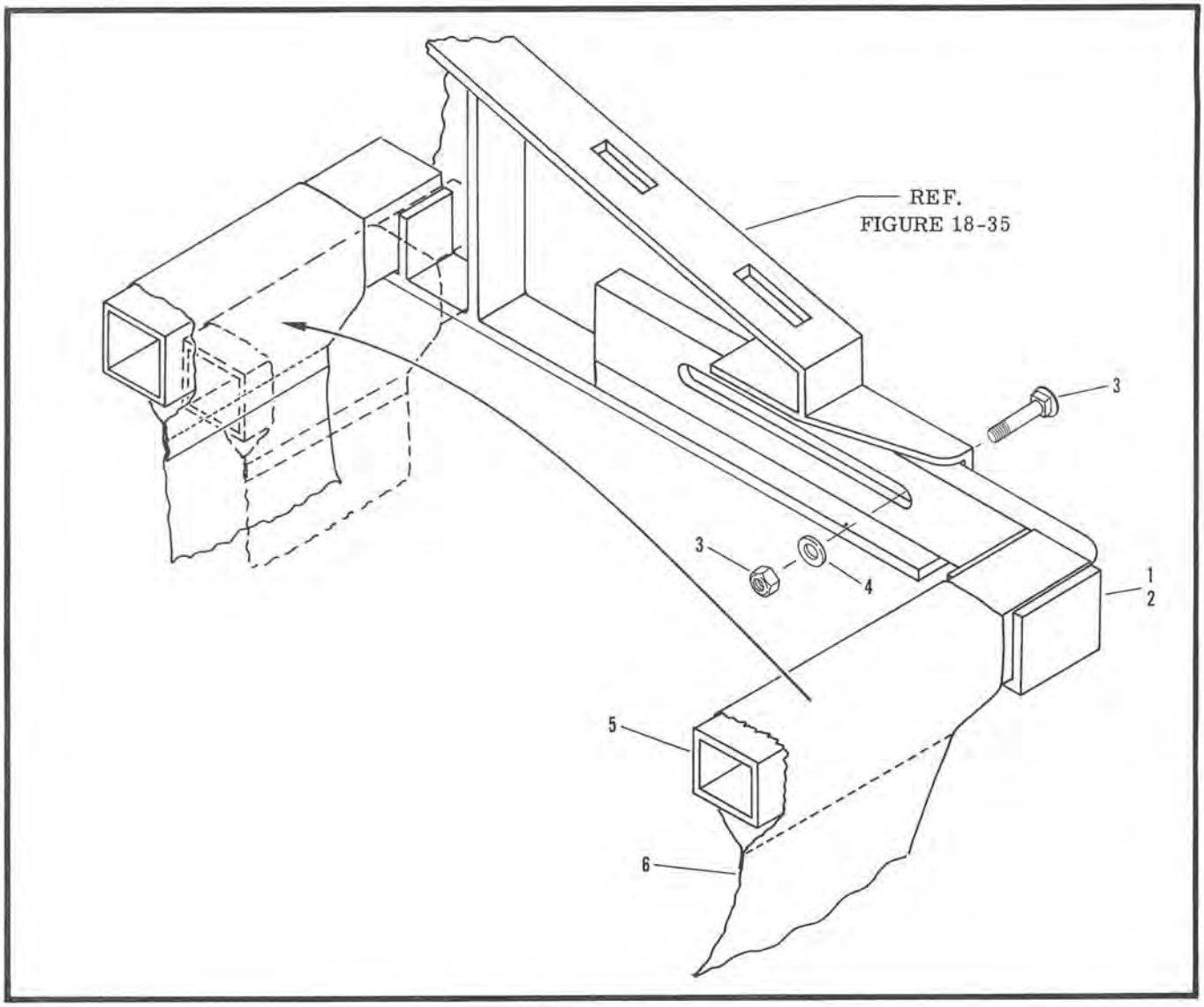



Figure 42. Bibb Bar Installation

| FIGURE & INDEX NUMBER | DESCRIPTION<br>1 2 3 4 5 6 7 | MFR'S CODE | QTY PER ASSY | MODEL CODE |
|---|---|---|---|---|
| 42-0 | BIBB BAR INSTALLATION | | REF | |
| 42-1 | . BRACKET, LH | | 1 | |
| 42-2 | . BRACKET, RH | | 1 | |
| 42-3 | . BOLT, carriage 1/2-13 x 2-1/4 w/nut | | 2 | |
| 42-4 | . WASHER 9/16 ID x 3/4 OD | | 2 | |
| 42-5 | . BAR, Bibb | | 2 | |
| 42-6 | . BIBB | | 1 | |

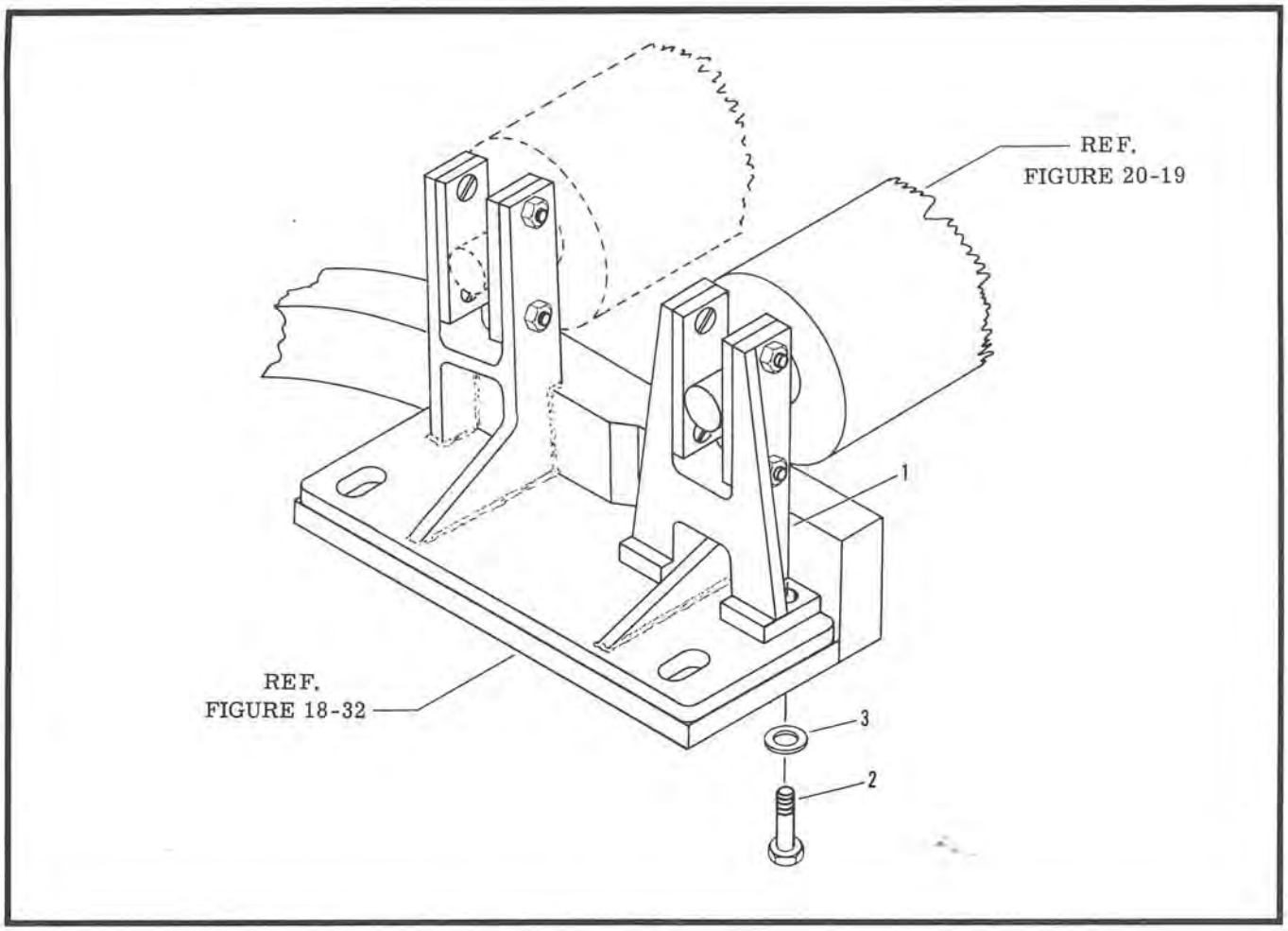



Figure 43. Doffer Roll Relocation

| FIGURE & INDEX NUMBER | DESCRIPTION<br>1 2 3 4 5 6 7 | MFR'S CODE | QTY PER ASSY | MODEL CODE |
|---|---|---|---|---|
| 43-0 | DOFFER ROLL RELOCATION | | REF | |
| 43-1 | . BRACKET, Doffer Roll | | 2 | |
| 43-2 | . CAPSCREW, Hex Hd. 5/16-18 x 1 | | 4 | |
| 43-3 | . LOCKWASHER 5/16 | | 4 | |

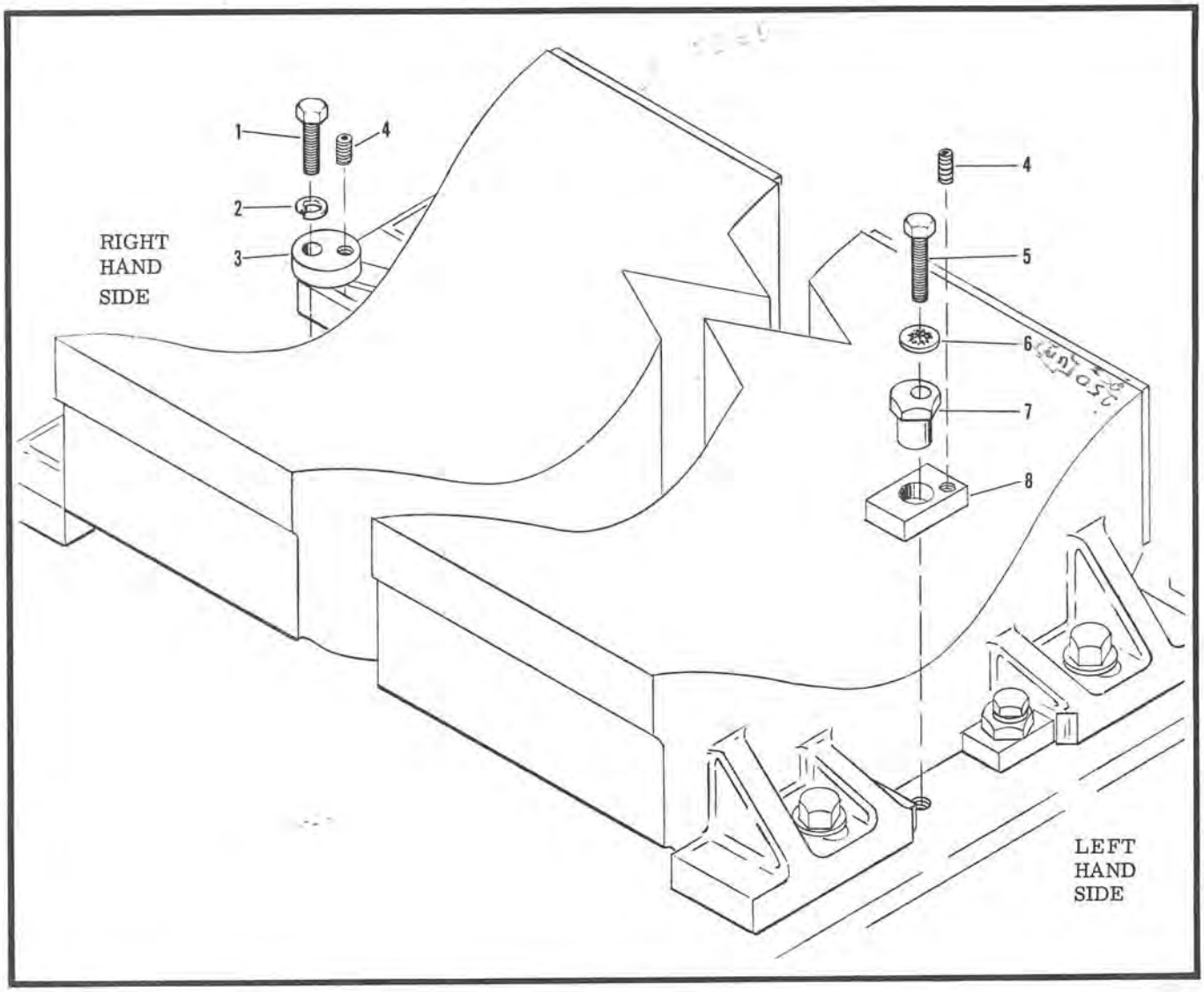



Figure 44. Chest Locking

| FIGURE & INDEX NUMBER | DESCRIPTION<br>1 2 3 4 5 6 7 | MFR'S CODE | QTY PER ASSY | MODEL CODE |
|---|---|---|---|---|
| 44-0 | CHEST LOCKING | | 1 | |
| 44-1 | . CAPSCREW, Hex Hd., 1/2-13 x 1-1/4 | | 2 | |
| 44-2 | . LOCKWASHER, 1/2 dia. | | 2 | |
| 44-3 | . BLOCK ECCENTRIC | | 2 | |
| 44-4 | . SETSCREW, cup, 3/8-16 x 1/2 | | 4 | |
| 44-5 | . CAPSCREW, cad., 1/2-13 x 1-3/4 | | 2 | |
| 44-6 | . WASHER, Internal Lock, 1/2 dia. | | 2 | |
| 44-7 | . NUT, Eccentric | | 2 | |
| 44-8 | . BLOCK, Locating | | 2 | |