



TINGUE
Remanufactured
HYP RO FLATWORK
IRONER

CLASS 141

INSTRUCTION & PARTS MANUAL

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Hypro 141 Instruction & Parts Manual

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WARNING

It is the responsibility of the purchaser of this machinery to train their operating personnel in the safe and proper operation of this machinery.

It is furthermore understood that Tingue assumes no responsibility for injury, disability or death resulting from improper operation of, or removal from, or bypassing thereof, any electrical or mechanical safety devices or designs of this machinery.

CAUTION

The ironer should never be started with the rolls raised. When the rolls are raised there is metal to metal contact between the gudgeons and the lifting arms (Pork Chops). Running the ironer with the rolls raised will result in severe wear to the ironer components and possible fire.

Section 1

Safety

1.1 Safety Overview

Safe operation and maintenance of the ironer must be the first priority of all supervisors, operators, and maintenance personnel. Safety begins with safe work practices

Keep hands and clothing away from the moving parts of the ironer while it is operating. Always turn off the ironer and use proper “Lock-out/Tag-out” procedures when clearing a jam.

Operate the ironer only with all guards in place and all safety features operating correctly. Never operate the ironer with any safety features bypassed.

Do not pull on the finished flatwork while it is still in the machine. Take the flatwork only after it has cleared the ironer.

1.2 Maintenance and Repair

WARNING

Always use extreme caution when performing any repairs on the ironer. Ironer surfaces can be extremely hot.

Know and utilize the proper procedure for locking out and tagging equipment during repair procedures. Failure to do so could result in serious injury.

Only qualified personnel should troubleshoot and repair this unit.

Before attempting any repair work, review these safety steps and precautions to protect yourself and the machine.

Your site should have procedures that comply with government regulations and standards for equipment lockout/tagout during maintenance and repair. Ask your supervisor for specific information. It is the users’ responsibility to make sure they comply with all safety procedures.

1.3 Safety Features

WARNING

Never bypass any of the safety devices. This could result in serious injury.

There are several categories of safety features:

- Main Disconnect Switch
- Safety Stop Buttons
- Safety Guards
- Safety Labels
- Safety Messages in this Manual

1.3.1 Main Disconnect Switch

The Main Disconnect switch is located on the outside of the inverter cabinet. When turned to OFF, this switch shuts off incoming electrical power to the unit. The Main Disconnect switch is designed to allow for locking the disconnect switch in the off position. Lock the main disconnect switch in the OFF position before performing any maintenance or repair work.

WARNING

Only a qualified electrician should open or perform any maintenance inside the inverter cabinet or motor electrical connection boxes. Read and follow all safety requirements listed in the ABB inverter operating manual provided with this ironer.

1.3.2 Safety Stop Buttons

Pressing red Emergency Stop button will immediately stop the ironer. The emergency stop button must be pulled back out in order to restart the machine. The preferred method of stopping the operation of the

unit is by pressing the red Stop button located on top slanted portion of the inverter cabinet.

1.3.3 Safety Guards

A safety finger guard runs the entire length of the unit's working area and physically restricts hands from coming into contact with ironer rolls.



Operate the ironer only with all guards in place

1.3.4 Safety Labels

WARNING and CAUTION labels are placed at locations around the ironer to keep operators and maintenance personnel alert in particular areas.

WARNING messages alert personnel that injury may result from not following recommended procedures.

CAUTION labels alert personnel the machine may be damaged if conditions, practices, or procedures are not observed.

When training operators, take the time to locate, review, and understand all areas where labels are posted.

NOTE: *Do not remove safety labels at any time. If a label needs to be replaced, contact Tingué for free replacements.*

1.3.5 Safety Messages in this Manual

WARNING and CAUTION messages also appear in this manual to highlight essential safety information.

WARNING messages alert personnel that **personal injury may result** from not following recommended procedures.

Notes, cautions and warnings are used throughout the manual to emphasize important and critical instructions.

NOTE

A note is used to emphasize a specific function or fact pertinent to the efficient operation of the ironer.

CAUTION

A caution indicates and explains that unless the procedure outlined is followed, damage to the unit may result.



Warning indicates and explains that unless the procedure outlined is followed, personal injury may result.

Section II Specifications

	4 Roll Ironer		6 Roll Ironer		8 Roll Ironer	
Mechanical Specifications						
Floor Space Requirements						
Depth	125"		175"		225"	
Height	56"		56"		56"	
Width	195"		195"		195"	
Weight	22,000 lbs.		32,900 lbs.		43,900 lbs.	
Floor Load Requirements	210 lbs./sq. in.		210 lbs./sq. in.		210 lbs./sq. in.	
Air Service						
Inlet Size	1/4" I.P.S		1/4" I.P.S		1/4" I.P.S	
Pressure	80 PSI		80 PSI		80 PSI	
Steam Service						
Inlet Size	2 ½" I.P.S		2 ½" I.P.S		3" I.P.S	
Pressure	125 PSI		125 PSI		125 PSI	
Return Size	2" I.P.S.		2" I.P.S.		2" I.P.S.	
Steam Consumption	650 lbs./hr.		1000 lbs./hr.		1350 lbs./hr.	
Boiler Horsepower	16 BPH		24 BPH		32 BPH	
Vacuum Discharge Size	6"		6"		(2) 6"	
Ironer Speed	30-80 ft./min.		30-115 ft./min.		30-140 ft./min.	
Ironing Surface	14,540 sq./in.		21,810 sq./in.		29,080 sq./in.	
Pressure Area Under Rolls	9,060 sq./in.		13,590 sq./in.		18,120 sq./in.	
Diameter of Rolls	19 5/8"		19 5/8"		19 5/8"	
Electrical Specifications						
Drive Motor	15 HP		15 HP		20 HP	
Vacuum Motor	2 HP		2 HP		(2) 2 HP	
Inverter Cabinet Full Load Amps	230 Volt	460 Volt	230 Volt	460 Volt	230 Volt	460 Volt
	82.45 FLA	58.92 FLA	82.45 FLA	58.92 FLA	97.25 FLA	66.92 FLA
Fuse Sizes						
F1 – F3	JJS-60 600 Volt 60 AMP	JJS-30 600 Volt 30 AMP	JJS-60 600 Volt 60 AMP	JJS-30 600 Volt 30 AMP	JJS-80 600 Volt 40 AMP	JJS-40 600 Volt 40 AMP
F10 – F11	FNQR-3 600 Volt 3 AMP	FNQR-3 600 Volt 3 AMP	FNQR-3 600 Volt 3 AMP	FNQR-3 600 Volt 3 AMP	FNQR-3 600 Volt 3 AMP	FNQR-3 600 Volt 3 AMP
F12 – F13	FMN-1 600 Volt 1 AMP	FMN-1 600 Volt 1 AMP	FMN-1 600 Volt 1 AMP	FMN-1 600 Volt 1 AMP	FMN-1 600 Volt 1 AMP	FMN-1 600 Volt 1 AMP
F-31 – F33	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP
F-41 – F34	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP	FNQR-20 600 Volt 20 AMP

Table 2-1 Specifications

Section III Installation

3.1 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.

3.2 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.

3.2.1 Assembling Frame See Figure 3.1

Stand the right and left four roll frames (A) on the channels. Fasten the frames together by means of the tie-rods located below chest level (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.

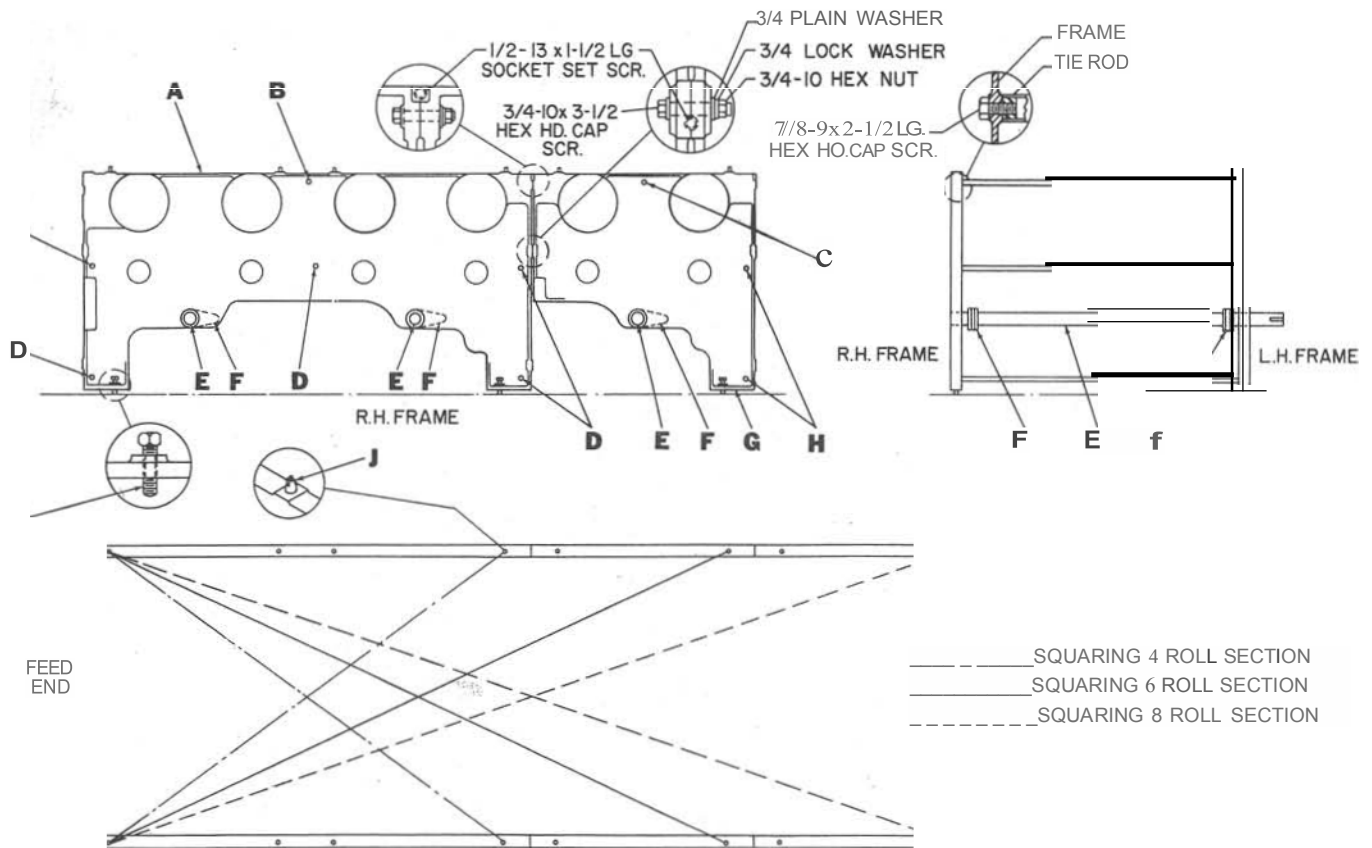


Figure 3.1 Assembling, Squaring and Leveling Ironer

3.2.2 Squaring Frame See Figure 3.1.

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 3.1. When the diagonal measurements are equal, the frames are square.

3.2.3 Leveling Frame See Figure 3.1.

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.

3.2.4 Chest Installation

Install the chests into the ironer. There are two types of chest alignment blocks. The first type is a unmovable block that is installed on each side on the outside of the chest feet. The second type is a movable block that is adjustable by use of an eccentric cam. This type of block is located on the inside of the feet. The chests are anchored in place with $\frac{3}{4}$ -10x4" bolts, washers and nuts.

To adjust the chest on an ironer with movable blocks position Chest #1 even with the alignment block on the front of the left and right frames. Once the first chest is properly positioned use a feeler gauge to adjust each of the succeeding chests to have a gap of .114" to .117".

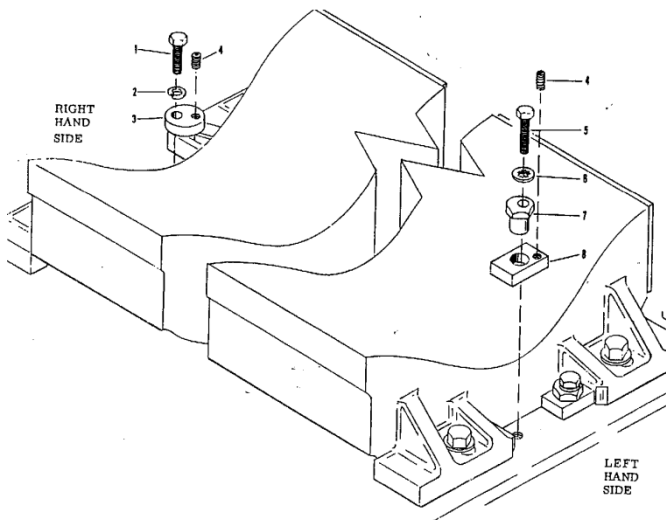


Figure 3.2 Chest Installation

3.2.5 Installing Rolls

Install the rolls with the flanged drive gudgeon on the right side, and positioned and the vacuum gudgeon on the left side. Ensure when installing the vacuum gudgeon that the drain hole on the inside portion of the gudgeon lines up with the plug on the end of the vacuum side of the roll.

Install the remaining tie-rods.

3.2.6 Installing the Universal Drive Shaft See Figure 3.2

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.

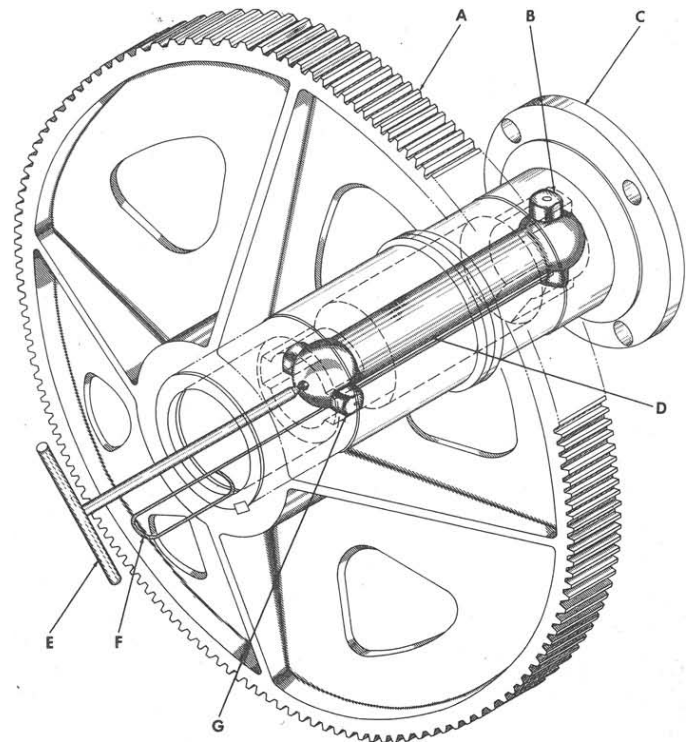


Figure 3.3 Installing Universal Drive Shaft

3.2.7 Installing the Grease Retainer in the Sleeve See Figure 3.3 on page 6

Insert the grease retainer seal (B) and the spacer (A) in the drive sleeve (C). Then insert the snap ring (D) in the drive sleeve using a pair of #7 internal snap ring pliers. Screw in the grease fittings (E).

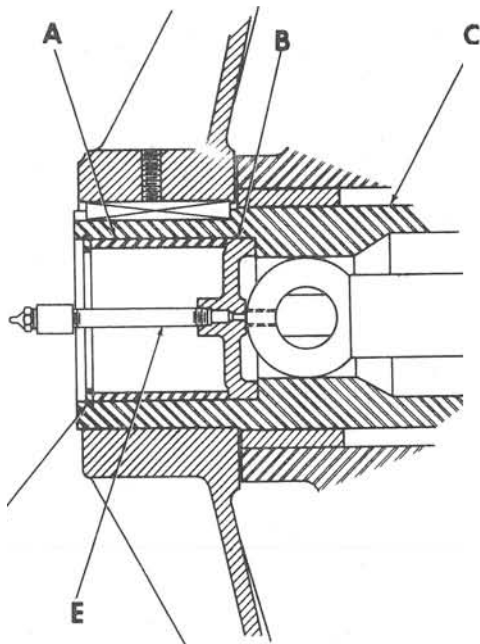


Figure 3.4 Installing Grease Retainer

3.2.8 Installing Air Cylinders See Figure 3.4

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.

3.2.9 Roll Raising Mechanism

The roll raising arm rig rods (O) and the roll raising air cylinder piston shaft clevis (N) were adjusted and locked during installation. Any further adjustment required was made by the ALM 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 extension 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 34-3/8". If the distance is not 34-3/8", loosen the clevis jam nut (H) and rotate the clevis until the distance between the two holes is 34-3/8". 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 rise 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

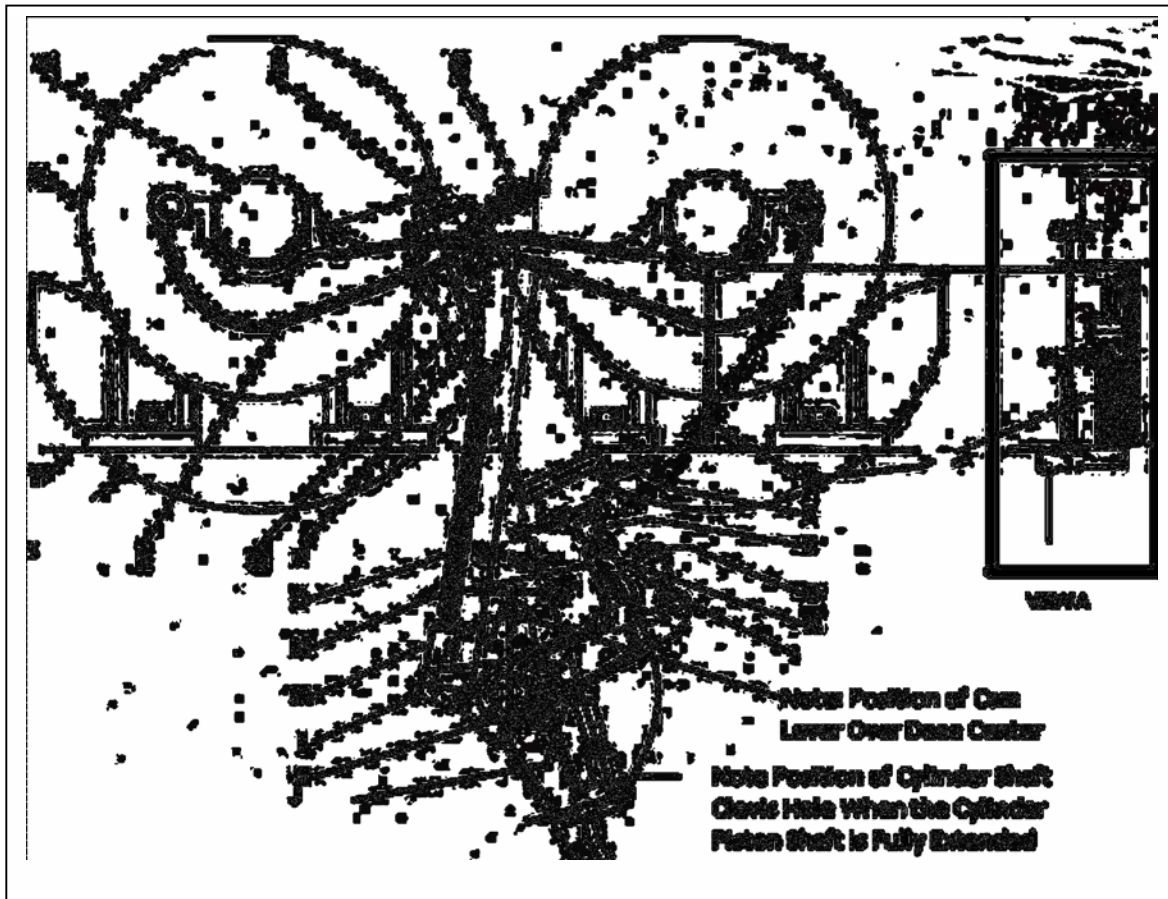
Figure 3.5 Roll Raising Mechanism

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 Counter clockwise approximately one turn. Tighten the jam nut and repeat the lifting arm socket and roll shaft clearance check. Repeat the stop adjustment if required

3.2.10 Installing Vacuum System See Figure

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 is a 6" diameter connection. It is recommended that the exhaust connection be piped outside the building, and that the piping extend about 6 f t. vertically with a rotating elbow on top to prevent back draft.



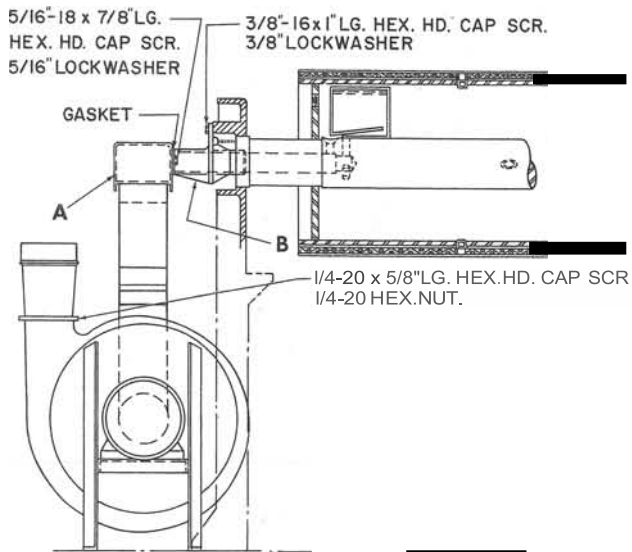


Figure 3.6 Vacuum System Installation

3.2.11 Installing Steam System See Figure 3.6

Install steam adaptors (A) making sure the steam adapter alignment mark is 45° from either centerline. This will ensure the incoming steam is directed between the internal ribs of the chest.

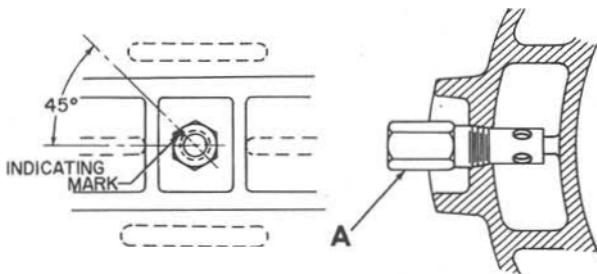


Figure 3.7 Steam Adapter Installation

3.2.12 Steam Trap Recommendation

4 Roll Ironer

- Chests 1 & 2 Armstrong 3/4" 812-LV
- Chests 3 & 4 Armstrong 3/4" 811-LV

6 Roll Ironer

- Chests 1, 2 & 3 Armstrong 3/4" 812-LV
- Chests 4, 5 & 6 Armstrong 3/4" 811-LV

8 Roll Ironer

- Chests 1, 2, 3 & 4 Armstrong 3/4" 812-LV
- Chests 5, 6, 7 & 8 Armstrong 3/4" 811-LV

All Hypros

- Crossover Armstrong 800-LV

3.2.13 Lincoln Oiling System See Figure 3.7, 3.8 & 3.9

The Lincoln Oiler is an automatic oiler for the Ironer. It lubricates the gears, sprockets and chains. The oiler requires 120 volt power which is supplied by the inverter cabinet. Power is only supplied when the inverter is running. The oiler also requires a minimum of 80 PSI air pressure.

The oiler reservoir should be filled with 10W oil at all times.

CAUTION

Allowing the oil reservoir to run dry will cause the oiler to become air bound and the system must be primed and bled for the oiler to operate properly.

The oiler is set to inject oil to the lubrication points every 20 minutes. The frequency of injection can be adjusted in the timer. When the timer energizes the solenoid valve air pressure causes the pump to stroke and inject oil through the manifolds to the points of lubrication.



Figure 3.8 Lincoln Oiler

The frequency of injection can be set by the number of tabs that are tilted inward on the timer. The timer will energize the solenoid valve each time it passes one of the tilted in tabs. The solenoid will remain energized until the timer reaches the next tab tilted outward.

CAUTION

It is not recommended to adjust the frequency at which the solenoid is energized or adjust the oil injection rate of the manifolds. Hypros are designed and are required to be oiled to the point that oils drips off the components into the drip pans. Failure to lubricate the components to the point that they drip oil will cause extreme bushing and bearing wear.



Figure 3.9 Lincoln Oiler Timer

In the event that the oiler runs dry the system must be primed. To prime the system the plug at the end of the furthest manifold from the oiler must be removed and the solenoid operated by pushing the button on top of the solenoid until all the air has exited, then reinstall the plug. The manifolds should then be checked to see if all the injector centers protrude out of the manifold when the oiler is energized.



Figure 3.10 Lincoln Oiler Injection Manifold

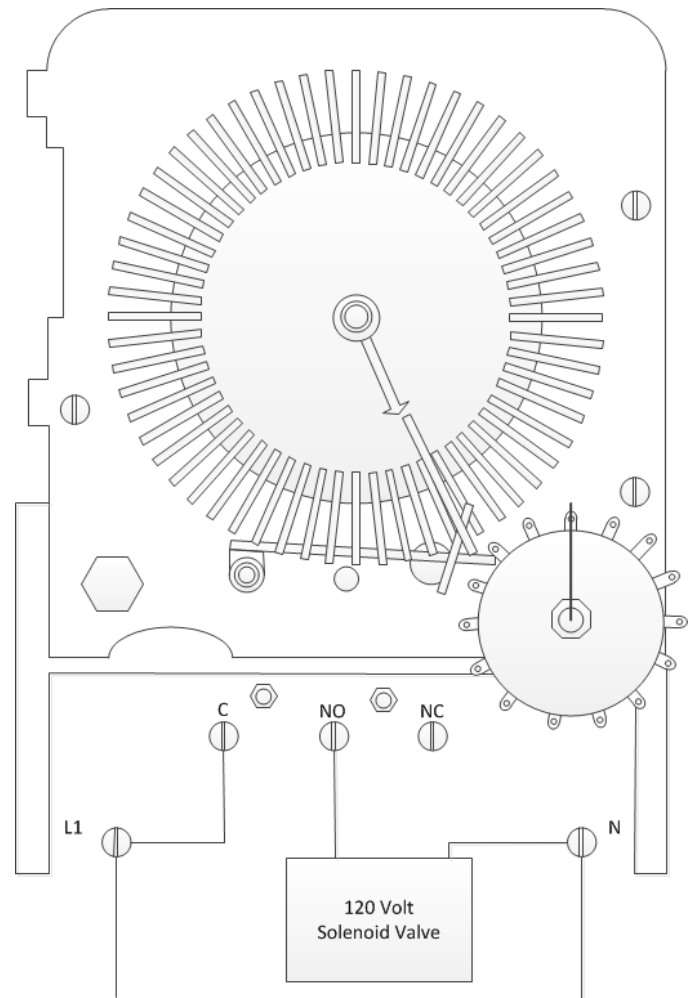


Figure 3.11 Lincoln Oiler Timer Schematic

3.2.14 Drive Chains

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.

immediately stop the ironer.

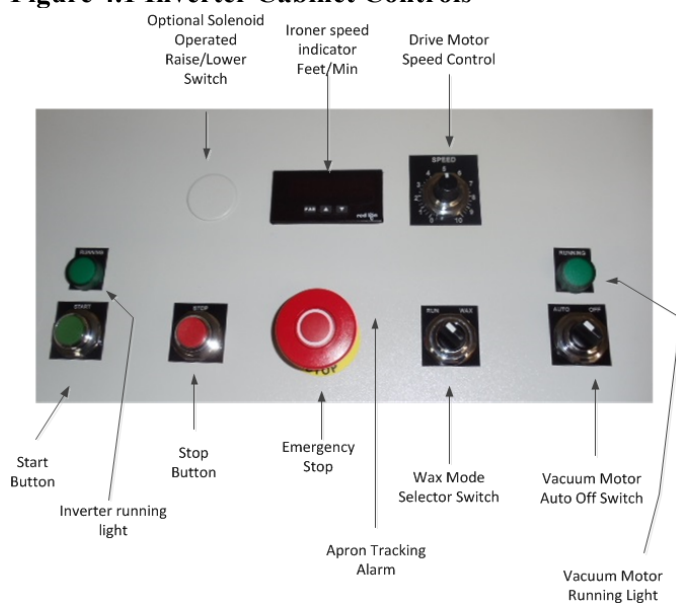
Section IV

Principles of Operation

4.1 Operating Instructions

The operational design of the HYPRO Ironer is quite simple. The drive motor is started and stopped using the controls located on the upper slanted section of the inverter cabinet. The ironer can be adjusted to the proper finishing speed for all types of flatwork. The speed is registered of the tachometer and reads out in feet per minute.

Figure 4.1 Inverter Cabinet Controls



4.2 Inverter Cabinet Operating Controls

4.2.1 Disconnect Switch

The disconnect switch is located on the front of the inverter cabinet. Turning the switch to ON energizes the cabinet. Turning the switch to OFF de-energizes the inverter cabinet and provides a place to install a Lock Out/Tag Out.

4.2.2 Emergency Stop

Pressing the Emergency Stop button will stop the machine. Once the Emergency Stop button is pushed it will remain in the Emergency Stop position and must be pulled back out to re-start the ironer. Additionally,

Pressing the Finger Guard on the ironer will also

NOTE

Inverter cabinet's Emergency Stop circuit has the ability to be connected in series with the Folder if attached. This will cause the ironer to stop if an E-Stop on the folder is activated or if the folder is turned off. When using this circuit, the folder must be started before starting the ironer.

NOTE

Inverter cabinet's circuitry also allows for connection to the Feeders Emergency Stop circuit. This will cause the Feeder to stop if the ironer is stopped.

4.2.3 Stop Button

Pressing the stop button will stop the ironer but not as rapidly as the Emergency Stop button will and should be used to normally stop the ironer.

4.2.4 Start Button

Pressing the start button will start the ironer as long as all the Emergency Stop switches are reset. Pressing the start button will illuminate the green light above the start switch. This is a visual indication the inverter is running even if the Drive Motor Speed Control is reduced to zero.

4.2.5 Wax Mode Selector Switch and Vacuum Motor Auto/Off Switch

The Wax Mode Selector Switch has two positions Run and Wax and works in conjunction with the Vacuum Motor Auto/Off Switch.

With the Wax Mode Selector Switch in Run the drive motor will operate at the speed selected by the Drive Motor Speed Control Switch.

When the Wax Mode Selector Switch is taken to Wax it will slow the ironer down to the proper waxing speed.

The Vacuum Motor Auto/Off Switch works in conjunction with the Wax Mode Selector Switch. With the Wax Mode Selector Switch in Run and the Vacuum Motor Auto/Off Switch in Auto the vacuum will run. Taking the Wax Mode Selector Switch to Wax or the Vacuum Motor Auto/Off Switch to Off will stop the vacuum motor.

When the vacuum motor is running the green indicating light above the Vacuum Motor Auto/Off Switch will illuminate.

4.2.6 Drive Motor Speed Control Switch

When the motor is running in the Run mode the ironer speed is controlled by the Drive Motor Speed Control Switch. Turning the switch clockwise will increase the speed. Turning the switch counter clockwise will decrease the speed.

4.2.7 Raising and Lowering Rolls

CAUTION

The ironer should never be started with the rolls raised. When the rolls are raised there is metal to metal contact between the gudgeons and the lifting arms (Pork Chops). Running the ironer with the rolls raised will result in severe wear to the ironer components and possible fire.

Typically rolls are raised and lowered by pulling out or pushing in the manual lever on the manual 4-way valve loaded on the right front guard of the ironer.

Optionally a Raise/Rover switch can be utilized to operate a solenoid valve to raise and lower the rolls.

4.2.8 Tachometer

The tachometer reads out in feet per minute and measures the speed of the first roll. The tachometer will not indicate at speeds below 30 feet per minute.

4.3 Daily Pre-Operating Procedure

Before each days operation of the ironer there are definite procedures that must be followed:

4.3.1 Heating the chests

The padding, chest surfaces may be damaged and the gears, sprockets and chains will be subjected to unnecessary strain if the chests are not thoroughly heated before starting the ironer. This is accomplished by the following steps:

1. Open the condensate return valve.
2. Open the bypass line, if equipped around the steam supply valve. If the steam supply valve is not equipped with a bypass valve crack the steam supply valve to gradually heat up the chests to operating temperature.
3. After 30 to 45 minutes the steam supply valve may be fully opened and the bypass valve shut.

4.3.2 Starting the ironer

WARNING

Before starting the ironer ensure that all guards are in place and that there is nothing interfering with the rolls or feed belts.

1. Energize the inverter cabinet by shutting the disconnect switch located on the front of the inverter cabinet.
2. Lower the rolls in the chests

CAUTION

The ironer should never be started with the rolls raised. When the rolls are raised there is metal to metal contact between the gudgeons and the lifting arms (Pork Chops). Running the ironer with the rolls raised will result in severe wear to the ironer components and possible fire.

CAUTION

Always check to verify proper oil level in the automatic oiling system prior to starting the ironer.

3. Place the Wax Mode Selector switch in Wax and the Vacuum motor Switch in Auto.

CAUTION

At any time during the operation of the ironer it becomes necessary to immediately stop the ironer. Press the Emergency Stop button on the inverter cabinet or push the finger guard. Either of these methods will activate the emergency stop circuit in the inverter.

Normal stopping of the ironer can be accomplished by pressing the red stop button

4. Start the ironer by pressing the Start button on the inverter cabinet.

WARNING

When the ironer is started for the first time each day test the Finger Guard Safety switch by pushing the Finger Guard and ensuring the ironer stops.

4.3.3 Cleaning the ironer chests

NOTE

It is essential that the ironer surfaces of the chests present as little impedence to the flow of flatwork as possible. This will help assure quality work quality work at the maximum production rate.

NOTE

Build up of residue on the ironer chests, especially on the leading and trailing edges and the exposed area between the first two or three rolls, contributes to poor edge to edge ironing as well as to the rolling of the flatwork on the ironer. Some causes of build-up are poor rinsing, excessive use of starch, and the use of extremely hard water.

CAUTION

If an automatic folding machine is installed behind the ironer turn off the static bar and set the folder in the bypass position before running the cleaning cloth to prevent a jam or possible fire.

CAUTION

The cleaning cloth will be extremely hot when it exist the ironer. Use insulated gloves when handling the cleaning cloth.

1. Using two people run the Tingué cleaning cloth through the ironer twice once on the left and once on the right.

NOTE

Chests should be inspected frequently for residual buildup. Any build up should be removed with a putty knife, scraper, fine abrasive paper or cloth or by use of a Tingué Continuous Cleaning Cloth.

When cleaning the chests care must be taken not to mar the chests. Cleaning must always be followed with the application of a wax.

4.3.4 Waxing the chests

CAUTION

If an automatic folding machine is installed behind the ironer turn off the static bar and set the folder in the bypass position before waxing to prevent a jam or possible fire.

1. Ensure the Wax Mode selector switch is in the wax position.

CAUTION

If an automatic folding machine is installed behind the ironer turn off the static bar and set the folder in the bypass position before running the wax cloth to prevent a jam or possible fire.

NOTE

Contact your local Tingué Representative or check the instructions on your wax to determine the proper amount of wax to use when waxing your ironer.

CAUTION

The wax cloth will be extremely hot when it exist the ironer. Use insulated gloves when handling the wax cloth.

2. Using two people run the Tingué Wax Cloth with wax flap through the ironer two times. Once from the left and once from the right.
3. When the waxing procedure is complete. Place the Wax Mode Selector Switch in the Run position and take the Drive Motor Speed Control switch to the desired ironer speed.

NOTE

The wax procedure should be repeated every two hours of operation.

4.4 Post Operating Instructions

Perform the following operations at daily shutdown or when the ironer will be idle for an extended period:

CAUTION

Make sure all the linen has exited the ironer before stopping the ironer. Linen left in the ironer can damage the linen or possibly cause fire.

1. Depress the Stop button on the inverter cabinet.
2. Rise the rolls out of the chest
3. Open the Disconnect Switch on the front of the inverter cabinet.
4. Shut the steam supply valve.

4.5 Guide Tape Control See Figure 4.1

The guide tape control assembly determines the path the guide 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 guide 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 $\frac{3}{4}$ 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 $\frac{1}{8}$ inch and slide the entire assembly to the right, stopping at the next serration. Lower the assembly at this position.
2. After the guide 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 guide tapes automatically will assume a new track on the padded roll.

4.6 Feeding Linen

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 travel of the feed ribbons causes it to rotate. The doffer roll keeps the linen stretch taut between the feed ribbon and the first padded roll. A safety bar is installed on the ironer to prevent personnel from coming in contact with the padded roll and ironer chests.

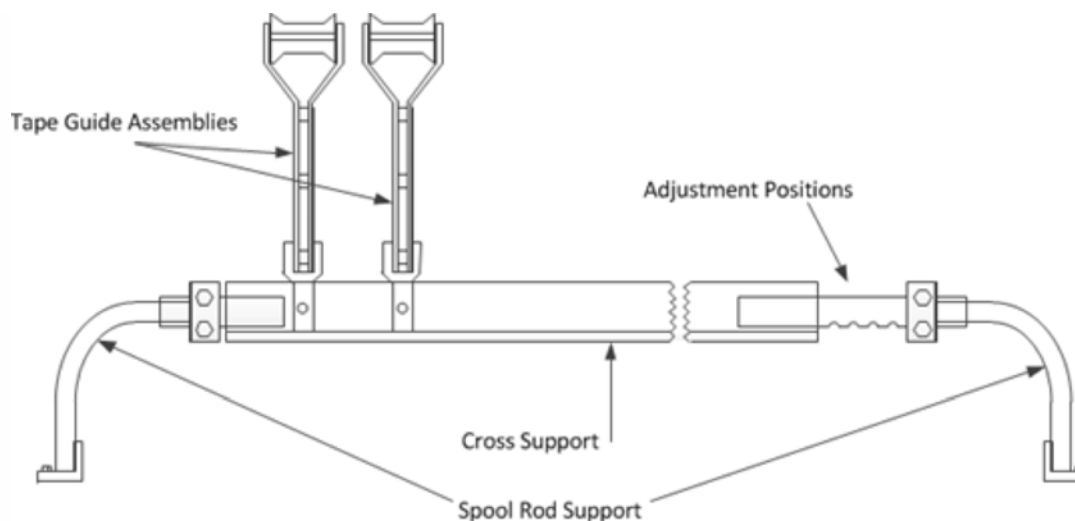


Figure 4.2 Spool Rod Assembly Adjustment

Section V Maintenance and Repair

WARNING

Always use extreme caution when performing any repairs on the ironer. Ironer surfaces can be extremely hot.

Know and utilize the proper procedure for locking out and tagging equipment during repair procedures. Failure to do so could result in serious injury.

Only qualified personnel should troubleshoot and repair this unit.

5.1 Periodic Inspections and Servicing

Daily	Heat up ironer slowly
	Check oil level in reservoir and refill as necessary
	Press safety board and verify ironer will stop within 6 inches of feed belt travel.
	Replace any missing guide tapes.
	Check for any missing feed belts.
	Ensure the rolls are always completely down before starting ironer
	Clean and wax ironer in accordance with Tingue procedures.
Weekly	Blow down the ironer to remove lint.
	Disconnect power to inverter cabinet, open cover and blow lint from inside inverter cabinet. Blow downward through inverter heat sink to remove lint form the cooling fans at the bottom of the inverter.
	Clean the oil drip trays and wipe down any residual oil.
	Lubricate all grease fittings, including bull gears, drive gudgeons and vacuum adapters
	Raise roll and place light coating of grease on lifting arm (pork chop) sockets.
	Check ironer for any steam or air leaks.
	Inspect pads and covers for wear.
	Check feed belts for proper tension and adjust as necessary.
Check vacuum for proper operation.	
Monthly	Verify proper operation of oil injectors.
	Lubricate grease fittings for feed roll bearings and apply a light coat of grease to the 120 tooth gears
	Remove side covers and clean lint from sides of machine.
	Check chain tension and adjust tension as necessary.
	Check sprocket and gear set screws for tightness.
	Check each oil point for proper lubrication.
	Check chest temperatures.
Check guide tape tensioning arms for proper operation.	
Quarterly	Clean ironer chest.
	Check steam traps for proper operation.
Semi- Annual	Check bull gears and sprockets for wear.
	Remove the feed board and clean the leading edge of the ironer.
	Check fingers for wear.
Annual	Check lifting arms and floating flanges for excessive wear
	Remove vacuum plenum and clean any buildup from inside the plenum.
	Clean the vacuum openings in the rolls.
	When changing covers run continuous belt cleaner
	Remove feed board assembly and clean front lip on #1 chest

Table 5-1 Periodic Inspections and Servicing

5.2 Lubrication Table

Daily	Automatic Lube Oil System	Wipe are around fill cap to remove dirt and lint. Open cap and fill reservoir and shut cap. Store oil in clean container with a cap to prevent dust and lint from entering container	10W oil
Weekly	Universal Drive and Vacuum Adapters	Wipe fittings clean; apply grease until pressure until fresh grease appears around bearing/bushing. Wipe grease fitting clean. Wipe up excessive grease around bearing/bushing	Tingue Grease PN: 1210-BA-CASE
Weekly	Lifting Arms	Raise roll and place light coating of grease on lifting arm (pork chop) sockets.	Tingue Grease PN: 1210-BA-CASE
Monthly	Feed Roll Bearings	Wipe fittings clean; apply grease until pressure until fresh grease appears around bearing/bushing. Wipe grease fitting clean. Wipe up excessive grease around bearing/bushing	Tingue Grease PN: 1210-BA-CASE
Monthly	120 Tooth Gears	Ensure machine is off and locked out. Remove covers and apply a light coat of grease to the 120 tooth gears	Tingue Grease PN: 1210-BA-CASE

Table 5-2 Periodic Lubrication Table

5.3 Drive Chain Adjustment

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, re- move 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.

5.4 Guide Tapes

Tension on the stripping tapes is automatically maintained by a weight attached to the spool arm assembly.

After new tapes are installed, it is recommended that the ends should never be tied or knotted together. The ends of cotton tapes should be overlapped approximately one inch and secured with staples or welded with heat gun.

5.5. Feed Ribbons

ADJUSTING - Tension on feed ribbons 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 for the feed roll chain idler sprocket.
- b. Slide idler sprockets upward.
- c. Loosen carriage bolts attaching feed roll pillow block bearings.
- d. Turn square head adjusting to maintain the pillow blocks in position for correct tension.
- e. Turn lock nut to secure the square head bolts.

NOTE

Maintain feed roll axis at right angles to feed table brackets.

- g. Tighten carriage bolts attaching the pillow block bearings.
- h. Slide idler sprockets downward to attain correct chain tension,
- i. Tighten bracket and stud assembly

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.

5.6 Guide Tape Control See Figure 5.1

The guide tape control assembly determines the path the guide 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 guide 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 $\frac{3}{4}$ inch apart. These serrations permit adjustment to seven positions. Assume the control assembly has been moved to the extreme left position.

4. Lift the right side of the control assembly about 1/8 inch and slide the entire assembly to the right, stopping at the next serration. Lower the assembly at this position.
5. After the guide 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.

(see page 19)
Start the ironer. The guide tapes automatically will assume a new track on the padded roll

Section VI Troubleshooting

Symptom	Possible Cause	Remedy
Padded Roll Cover Wrinkle	Steam chests insufficiently heated	Heat steam chests thoroughly
	Steam chests dirty or insufficiently lubricated	Clean and wax chests
	Rolls padded improperly	Ensure the pads and covers are wrinkle free when installed
Linens Sticking to Chests	Steam chests insufficiently heated	Heat steam chests thoroughly
	Steam chests dirty or insufficiently lubricated	Clean and wax chests
	Improper washroom chemistry or flatwork improperly rinsed	Check washroom chemistry and ensure proper final rinse
Ironer Not Delivering Rated Capacity	Poor quality steam (wet or low pressure)	Check steam pressure. Ironer is designed to operate on dry, saturated steam at 125 PSI.
	Steam traps not functioning correctly	Check steam traps for proper operation
	Insufficient extraction	Increase extraction time
	Ironer running too slow	Increase speed of ironer
	Flatwork improperly fed into ironer	Have workers increase feed rate to minimize the gap between flatwork pieces.
Linens Buckling or Do Not Lay Flat on Chest	Steam chests insufficiently heated	Heat steam chests thoroughly
	Steam chests dirty or insufficiently lubricated	Clean and wax chests
	Improper washroom chemistry or flatwork improperly rinsed	Check washroom chemistry and ensure proper final rinse
	Insufficient extraction	Increase extraction time
	Excessive Sour	Correct amount of Sour
	Improper roll graduation	Ensure roll size properly graduated

Table-6.1 Troubleshooting

Section VII
Illustrated Parts

Parts

To Order Parts Call
Tingue Parts
1-800-222-9954

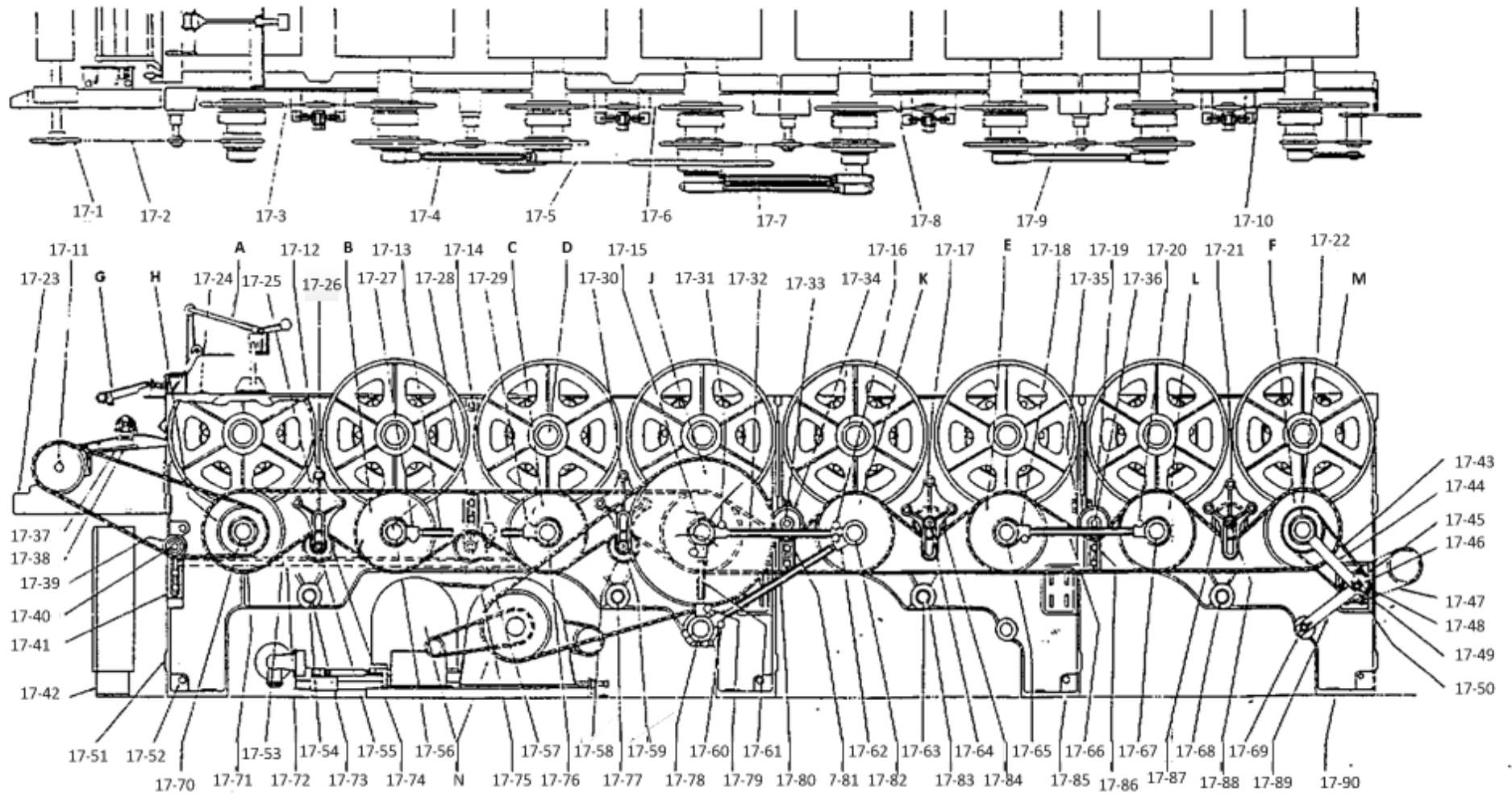


Figure 17 Right Side Outside Frame

Drawing Number	Part Number	Description	Drawing Number	Part Number	Description
17-1	HP-17-1	Feed Roll Sprocket	17-27	HP-141-106	RH Strut Clamp
17-2	50-Chain	50# chain 148 Links	17-28	HP-141-012	Bracket & Stud
17-3	80-Chain	80# chain 96 links	17-29	HP-141-107	LH Strut Clamp
17-4	80-Chain	80# chain 96 links	17-30	HP-141-1711	3 Hole Idler Bracket
17-5	100-Chain	100# chain	17-31	HP-141-01128	Collar & Strut Clamp Main Sprocket
17-6	80-Chain	80# chain 96 links	17-32	HP-141-627	Strut Medium Length
17-7	100-Chain	100# chain 78 Links	17-33	HP-141-06121	Idler Stud
17-8	80-Chain	80# chain 96 links	17-34	HP-141-045	Idler Sprocket
17-9	80-Chain	80# chain 96 links	17-35	Obsolete Part	
17-10	80-Chain	80# chain 96 links	17-36	HP-141-06121	Idler Stud
17-11	Key		17-37	Obsolete Part	
17-12	Obsolete Part		17-38	Obsolete Part	
17-13	HP-141-627	Strut Medium Length	17-39	HP-17-39	Idler Sprocket
17-14	Obsolete Part		17-40	HP-141-06121	Idler Stud
17-15	HP-141-60	Main Drive Stud 2.75" x 18"	17-41	HP-141-012	Bracket & Stud
17-16	HP-141-109	LH Strut Clamp for Main Drive	17-42	Obsolete Part	
17-17	HP-141-1711	3 Hole Idler Bracket	17-43	Obsolete Part	
17-18	HP-141-106	RH Strut Clamp	17-44	Obsolete Part	
17-19	HP-141-044	Idler Sprocket	17-45	Obsolete Part	
17-20	HP-141-107	LH Strut Clamp	17-46	Obsolete Part	
17-21	HP-141-1711	3 Hole Idler Bracket	17-47	Obsolete Part	
17-22	HP-141-110	Collar	17-48	Obsolete Part	
17-23	Obsolete Part		17-49	Obsolete Part	
17-24	HP-141-626	Side Cover Line up Pin Drive Side	17-50	Obsolete Part	
17-25	HP-141-1711	3 Hole Idler Bracket	17-51	Frame no Longer Available	
17-26	Obsolete Part		17-52	Obsolete Part Can be made Special Order	

Drawing Number	Part Number	Description	Drawing Number	Part Number	Description
17-53	Obsolete Part		17-76	HP-141-61	SHAFT 19.5' X 2.75'
17-54	1/2" Key Stock		17-77	1/2" Key Stock	
17-55	HP-141-06014	Stud Shaft for 3 hole idler bracket	17-78	HP-141-61	SHAFT 19.5' X 2.75'
17-56	HP-141-62	SHAFT, DRIVE 2.75' X 14.625'	17-79	HP-141-109	LH Strut Clamp for Main Drive
17-57	HP-141-044	Idler Sprocket	17-80	HP-141-628	Strut Long
17-58	HP-141-044	Idler Sprocket	17-81	HP-141-012	Bracket & Stud
17-59	HP-141-06014	Stud Shaft for 3 hole idler bracket	17-82	HP-141-61	SHAFT 19.5' X 2.75'
17-60	HP-141-108	RH Strut Clamp	17-83	Obsolete Part	
17-61	HP-141-629	Short Rod for Clamp Collar	17-84	HP-141-044	Idler Sprocket
17-62	HP-141-109	LH Strut Clamp for Main Drive	17-85	Frame no Longer Available	
17-63	1/2" Key Stock		17-86	HP-141-012	Bracket & Stud
17-64	HP-141-06014	Stud Shaft for 3 hole idler bracket	17-87	HP-141-044	Idler Sprocket
17-65	HP-141-62	SHAFT, DRIVE 2.75' X 14.625'	17-88	HP-141-06014	Stud Shaft for 3 hole idler bracket
17-66	HP-141-627	Strut Medium Length	17-89	Obsolete Part	
17-67	HP-141-61	SHAFT 19.5' X 2.75'	17-90	Frame no Longer Available	
17-68	1/2" Key Stock				
17-69	Obsolete Part				
17-70	HP-141-62	SHAFT, DRIVE 2.75' X 14.625'			
17-71	HP-141-110	Collar			
17-72	Obsolete Part				
17-73	Obsolete Part				
17-74	HP-141-044	Idler Sprocket			
17-75	HP-141-06121	Idler Stud			

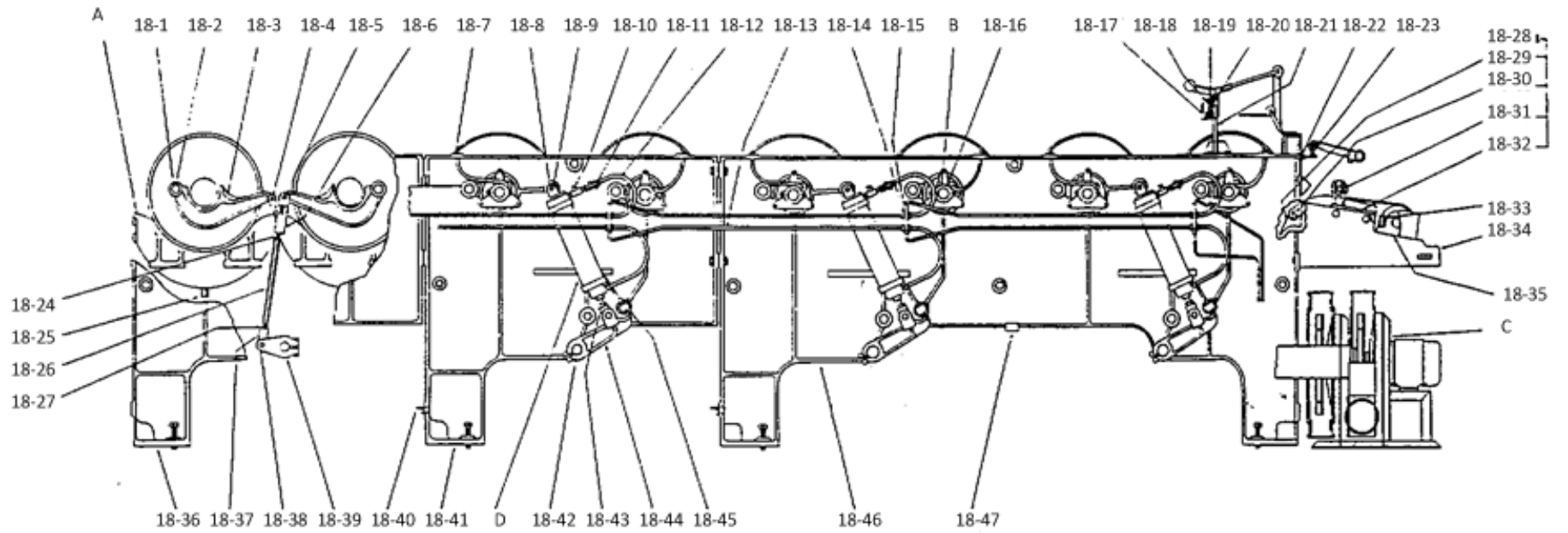


Figure 18 Left Frame Outside

Drawing Number	Part Number	Description	Drawing Number	Part Number	Description
18-1	HP-141-606	Pivot Stud for Pork Chop	18-28	HP-141-086	Feed board
18-2	Washer	3/8" Flat Washer	18-29	HP-1183755	Finger
18-3	HP-18-3	pork chop / lifting arm	18-30	HP-141-647	Ribbon Rod
18-4	AL-1007400	Connecting Link	18-31	HP-1183417	Nylon Bushing
18-5	HP-141-600	Upper Rod end pin	18-32	No Longer Available	
18-6	HP-18-6	Upper rod end	18-33	No Longer Available	
18-7	HP-141-664	Side Cover Line up Pin Vacuum Side w/fitting	18-34	No Longer Available	
18-8	No Longer Available		18-35	HP-1183169	Feed Roll Brg
18-9	#5100-75		18-36	No Longer Available	
18-10	No Longer Available		18-37	HP-141-06106	Raising Rig Rod End
18-11	AL-1155985	Brass flow control valve	18-38	HP-141-601	Pin, raising rod
18-12	No Longer Available		18-39	HP-141-0250	Lever
18-13	No Longer Available		18-40	HP-141-06122	Air Cylinder Rod End
18-14	No Longer Available				
18-15	No Longer Available				
18-16	HP-1177823	Gasket			
18-17	HP-141-0600	Cross Support			
18-18	No Longer Available				
18-19	No Longer Available				
18-20	No Longer Available				
18-21A	HP-141-06003	Spool support arm LH			
18-22B	HP-141-06002	Spool support arm RH			
18-22	HP-141-19	Cup for spring			
18-23	AL-613-639	Spring finger guard			
18-24	AL-C-48022	RH jam nut			
18-25	HP-18-25	Steam adapter			
18-26	HP-18-26	Lifting Rod			
18-27	AL-C-48268	LH Jam nut			

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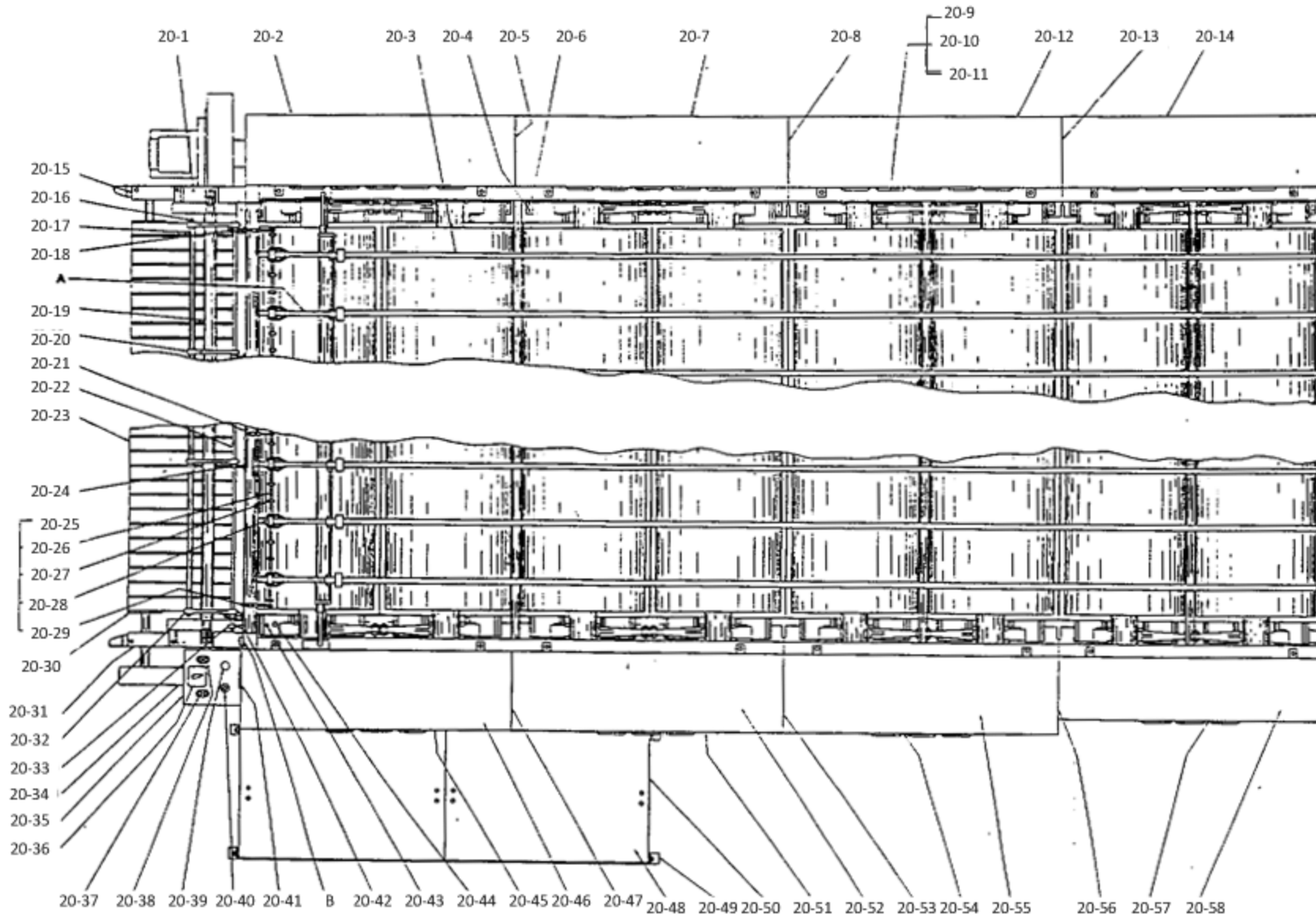
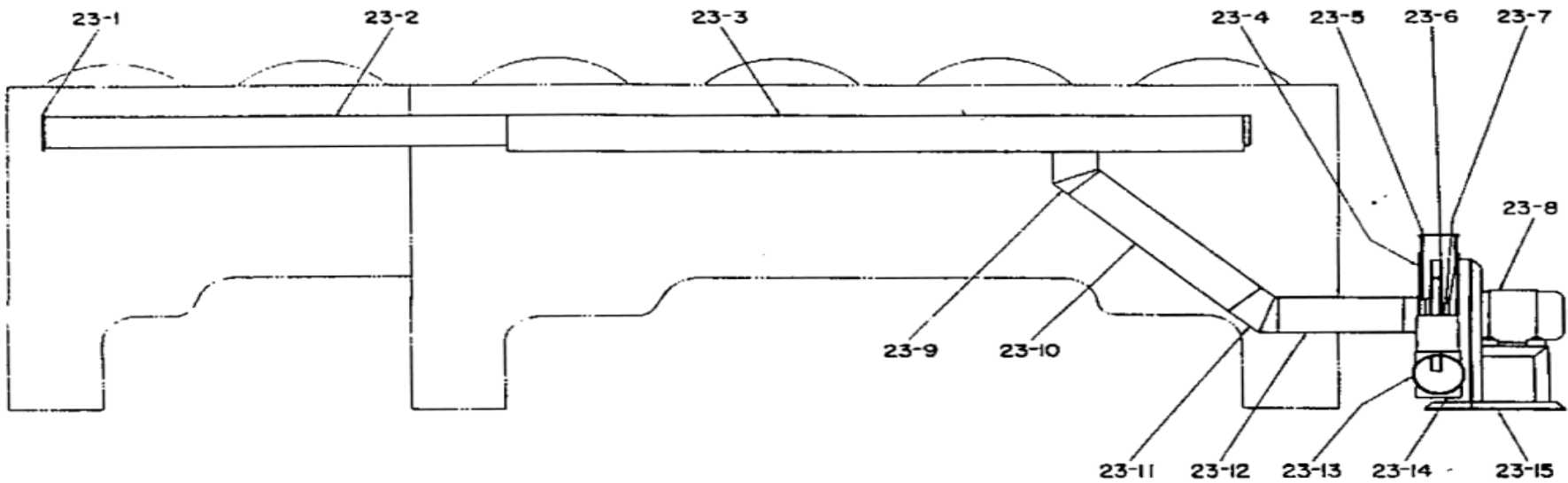


Figure 20 Top View

Drawing Number	Part Number	Description	Drawing Number	Part Number	Description
20-1	No Longer Available		20-31	No Longer Available	
20-2	No Longer Available		20-32	No Longer Available	
20-3	No Longer Available		20-33	HP-SWITCH-01	Safety Switch
20-4	No Longer Available		20-34	No Longer Available	
20-5	No Longer Available		20-35	HP-TM0005	Control Panel Cover
20-6	No Longer Available		20-36	20-30	No Longer Available
20-7	No Longer Available		20-37	20-31	No Longer Available
20-8	No Longer Available		20-38	20-32	No Longer Available
20-9	No Longer Available		20-39	No Longer Available	
20-10	No Longer Available		20-40	No Longer Available	
20-11	No Longer Available		20-41	No Longer Available	
20-12	No Longer Available		20-42	HP-VALVE-01	Manual 4-Way Valve
20-13	No Longer Available		20-42	AL-1039007	Electric 4-Way Valve
20-14	No Longer Available		20-43	No Longer Available	
20-15	No Longer Available		20-44	No Longer Available	
20-16	No Longer Available		20-45	No Longer Available	
20-17	HP-141-641	Aluminum Safety Rod Tube	20-46	Guards Sold as a set	
20-18	HP-141-1712	Pivot Bracket	20-47	Guards Sold as a set	
20-19	HP-141-0805	Doffer Roll	20-48	Guards Sold as a set	
20-20	HP-141-1039	Machined Safety Bracket	20-49	Guards Sold as a set	
20-21	No Longer Available		20-50	Guards Sold as a set	
20-22	HP-141-623	Pivot Rod	20-51	Guards Sold as a set	
20-23	No Longer Available	Spool Rod	20-52	Guards Sold as a set	
20-24	No Longer Available		20-53	Guards Sold as a set	
20-25	No Longer Available		20-54	Guards Sold as a set	
20-26	HP-141-6523	Spool Rod	20-55	Guards Sold as a set	
20-27	IR-1183235	Wood Tape Spools	20-56	Guards Sold as a set	
20-28	HP-141-121	Spool Rod Support	20-57	Guards Sold as a set	
20-29	No Longer Available	20-29	20-58	Guards Sold as a set	
20-30	No Longer Available	20-30			

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Figure 22 Intentionally Left Blank

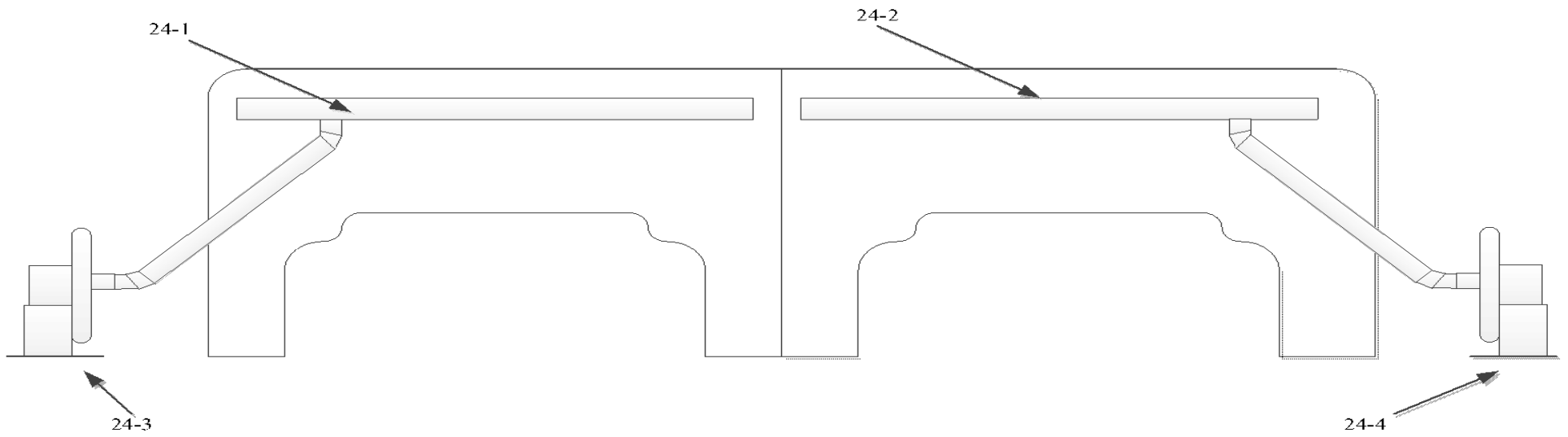


ITEM	DESCRIPTION
23-1A	Cap, rear vacuum duct, 4 roll machine
23-1B	Cap, rear vacuum duct, 6 roll machine
23-2	Vacuum duct, rolls 5 & 6 (6 roll machine only)
23-3	Vacuum duct, rolls 1, 2, 3, & 4
23-4	Housing side
23-5	Fan housing
23-6	Fan
23-7	Clamping ring

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 23 Vacuum System Assembly, 4 & 6 Roll Ironer

Drawing Number	Part Number	Description	Drawing Number	Part Number	Description
23-1A	Available in 2,3,4, 5 Roll Sections	Made to Order			
23-1B	Available in 2,3,4, 5 Roll Sections	Made to Order			
23-2	Available in 2,3,4, 5 Roll Sections	Made to Order			
23-3	Available in 2,3,4, 5 Roll Sections	Made to Order			
23-4	Obsolete				
23-5	Obsolete				
23-6	HP-Fan	Impeller			
23-7	Obsolete				
23-8	HP-Blower				
23-9	5" 45 degree Elbow				
23-10	5" Duct				
23-11	5" 45 degree Elbow				
23-12	5" Duct				
23-13	Obsolete				
23-14	Obsolete				
23-15	Obsolete				



- 24-1 Rear Vacuum Duct
- 24-2 Front Vacuum Duct
- 24-3 Rear Vacuum Blower Assembly
- 24-4 Front Vacuum Blower Assembly

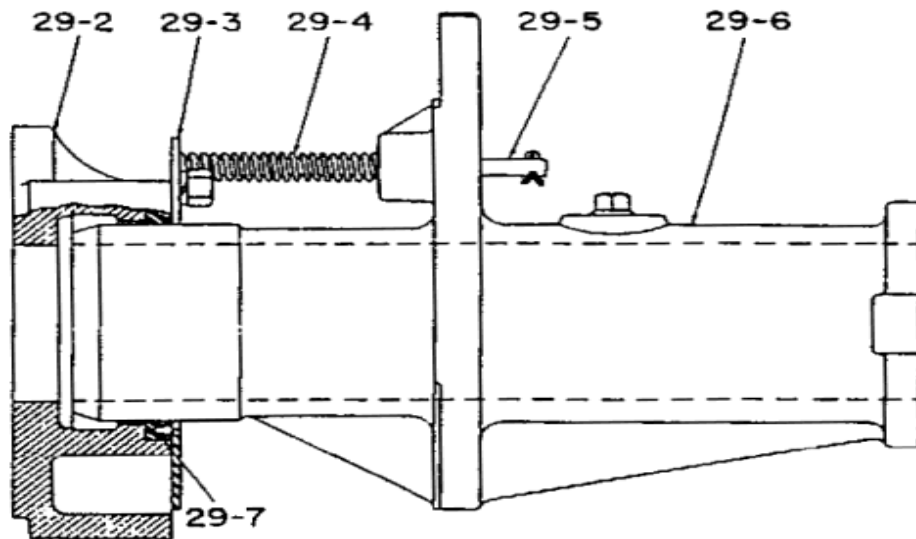
Figure 24 8 Roll Vacuum Assembly

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Figure 27 Intentionally Left Blank

Figure 28 Intentionally Left Blank



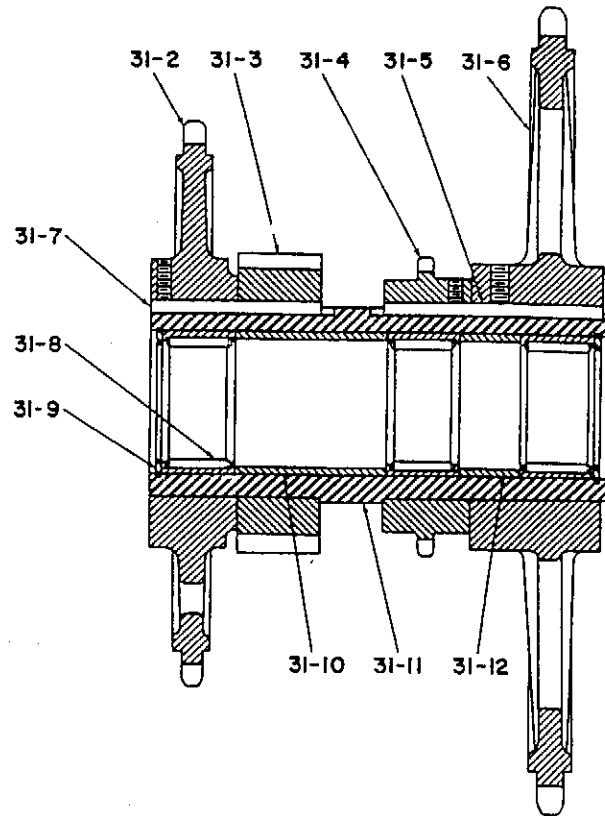
**FIGURE 29
VACUUM ADAPTOR ASSEMBLY**

ITEM	DESCRIPTION
29-1	Vacuum adaptor assembly
29-2	Floating flange
29-3	Retaining ring
29-4	Spring
29-5	Guide for spring
29-6	Vacuum adaptor
29-7	Klozure

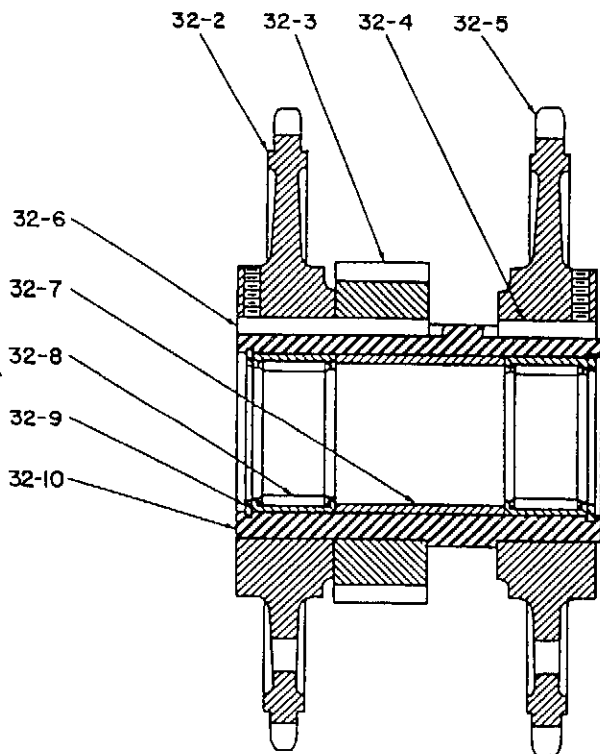
Drawing Number	Part Number	Description	Drawing Number	Part Number	Description
29-1	HP-1179050	Vacuum Adapter Complete	29-5	HP-1179068	Guide Spring Pin
29-2	HP-1179126	Flange, vacuum adaptor	29-6	HP-141-775	Vacuum adaptor
29-3	HP-1181254	Retaining Ring	29-7	HP-Seal-01	Seal
29-4	AL-1179084	spring			

**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 31
Main Drive Sprocket Assembly
ROLL 4 ON FOUR ROLL IRONER

Drawing Number	Part Number	Description
31-2	HP-141-04102	Sprocket, 42th, 80 chain
31-3	HP-141-40	Pinion
31-4A	HP-33-4	Sprocket, 35th (4 roll only)
31-5	Key	
31-6	HP-141-04109	Sprocket, 60th w/ set screws
31-7	Key	
31-8	HP-33-8	Needle bearing
31-9	HP-1181254	Retaining ring
31-10	HP-141-11	Spacer, long
31-11	HP-141-63	Long Sleeve includes (3) Hp-33-8 bearings, (1) HP-141-11 Spacer, (1) Hp-141-10 Short Spacer & (2)HP-1181254 Retaining Rings
31-12	HP-141-10	Spacer, short

Figure 31
Main Drive Sprocket Assembly
ROLL 4 ON SIX OR EIGHT ROLL IRONER

Item #	Part Number	Description
31-2	HP-141-04102	Sprocket, 42th, 80 chain
31-3	HP-141-40	Pinion
31-4B	HP-141-04101	Sprocket, 34 th 100 chain
31-5	Key	
31-6	HP-141-04109	Sprocket, 60th w/ set screws
31-7	Key	
31-8	HP-33-8	Needle bearing
31-9	HP-1181254	Retaining ring
31-10	HP-141-11	Spacer, long
31-11	HP-141-63	Long Sleeve includes (3) Hp-33-8 bearings, (1) HP-141-11 Spacer, (1) Hp-141-10 Short Spacer & (2)HP-1181254 Retaining Rings
31-12	HP-141-10	Spacer, short

**FIGURE 32
DRIVE SPROCKET ASSEMBY**

**ROLL 2 & 3 ON FOUR ROLL IRONER
ROLL 2 & 3 ON SIX ROLL IRONER
ROLL 2, 3, 6 & 7 ON EIGHT ROLL IRONER**

Item #	Part Number	Description
32-2	HP-141-04102	Sprocket, 42th, 80 chain
32-3	HP-141-40	Gear, 35th Pinion
32-4	Key	
32-5A	HP-141-04102	Sprocket, 42th, 80 chain
32-6	Key	
32-7	HP-141-11	Spacer, long
32-8	HP-33-8	Needle bearing (2 required)
32-9	HP-1181254	Retaining ring (2 required)
32-10	HP-141-611	Short Sleeve includes (2) Hp-33-8 bearings, (1) HP-141-11 Spacer & (2) HP-1181254 Retaining Rings

**FIGURE 32
DRIVE SPROCKET ASSEMBY**

ROLL 5 ON SIX AND EIGHT ROLL IRONER

Item #	Part Number	Description
32-2	HP-141-04102	Sprocket, 42th, 80 chain
32-3	HP-141-40	Gear, 35th Pinion
32-4	Key	
32-5B	HP-141-04101	Sprocket, 34th 100 chain
32-6	Key	
32-7	HP-141-11	Spacer, long
32-8	HP-33-8	Needle bearing (2 required)
32-9	HP-1181254	Retaining ring (2 required)
32-10	HP-141-611	Short Sleeve includes (2) Hp-33-8 bearings, (1) HP-141-11 Spacer & (2) HP-1181254 Retaining Rings

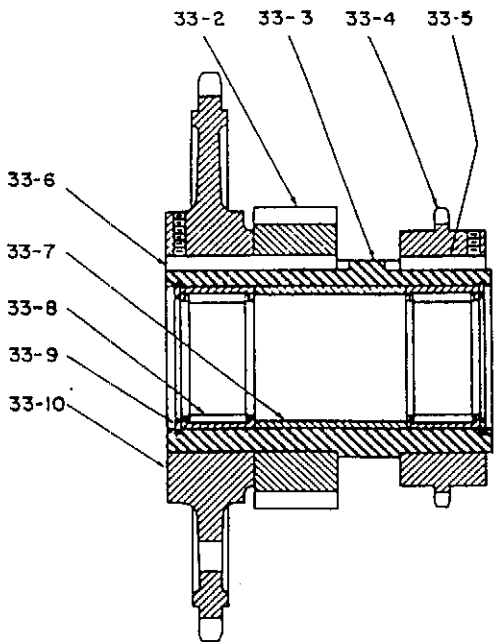


FIGURE 33
SPROCKET ASSEMBLY (WHEN IRONER IS USED WITH "HYPRO" FOLDER ONLY)

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

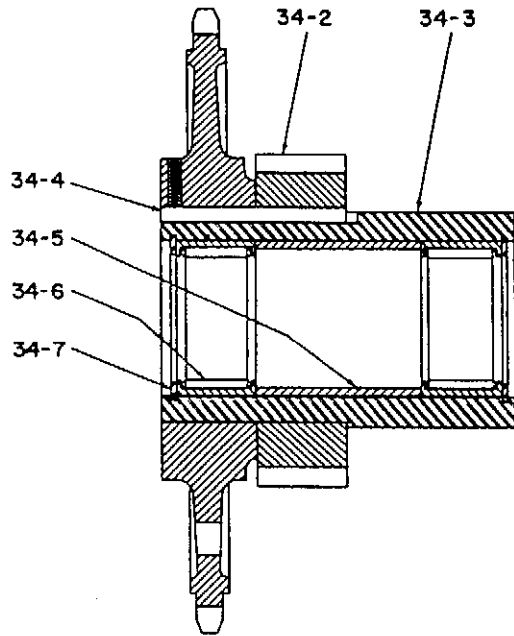
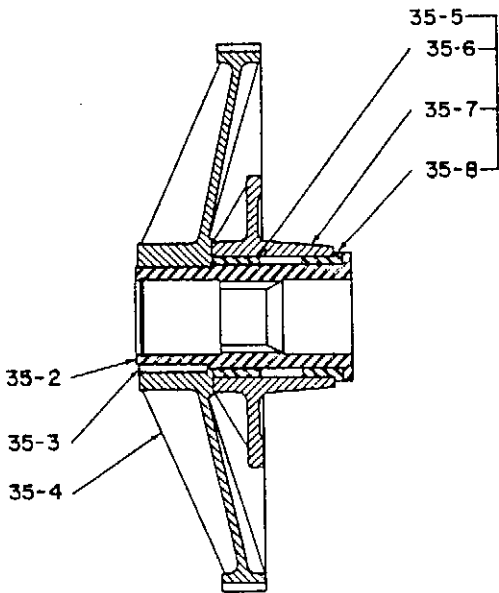


FIGURE 35
BEARING & GEAR ASSEMBLY, MAIN DRIVE

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 33
SPROCKET ASSEMBLY**

ROLL 1 ON FOUR, SIX AND EIGHT ROLL IRONER

Item #	Part Number	Description
33-2	HP-141-40	Gear, 35th Pinion
33-3	HP-141-611	Short Sleeve includes (2) Hp-33-8 bearings, (1) HP-141-11 Spacer & (2) HP-1181254 Retaining Rings
33-4	HP-33-4	Sprocket, 35th, 50#
33-5	Key	
33-6	Key	
33-7	HP-141-11	Spacer, long
33-8	HP-33-8	Needle bearing (2 required)
33-9	HP-1181254	Retaining ring (2 required)
33-10	HP-141-04102	Sprocket, 42th, 80#

**FIGURE 34
SPROCKET ASSEMBLY**

LASR ROLL ON SIX OR EIGHT ROLL IRONER

Item #	Part Number	Description
34-2	HP-141-40	Gear, 35th Pinion
34-3	HP-141-611	Short Sleeve includes (2) Hp-33-8 bearings, (1) HP-141-11 Spacer & (2) HP-1181254 Retaining Rings
34-4	Key	
34-5	HP-141-11	Needle bearing (2 required)
34-6	HP-33-8	Retaining ring (2 required)
34-7	HP-1181254	Retaining ring
34-8	HP-141-04102	Sprocket, 42th, 80#

**FIGURE 35
BULL GEAR ASSEMBLY**

Item #	Part Number	Description
35-1	HP-141-011	120th gear exchange
35-2	HP-1180199	Drive sleeve
35-3	Key	
35-4	HP-141-4100	120th Gear
35-5		
35-6	HP-1180157	Bushing no lip
35-7	HP-141-1750	Bearing housing
35-8	HP-1180132	Bushing with lip

Figure 36 Intentionally Left Blank

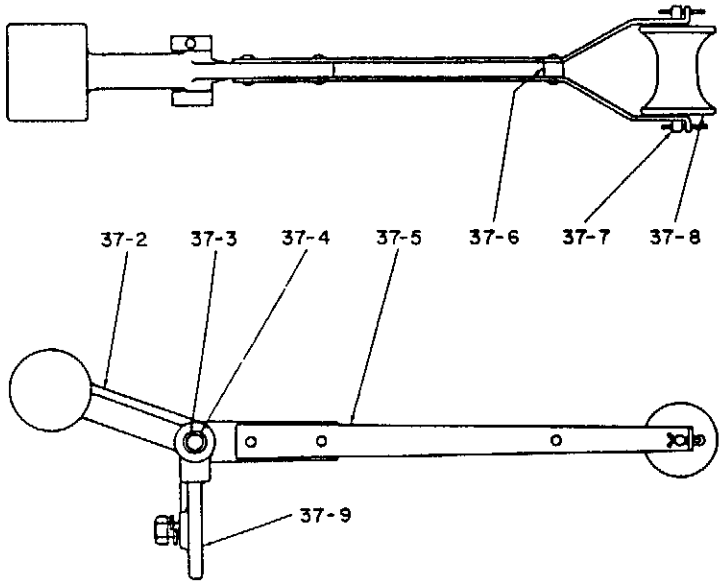


FIGURE 37
SPOOL ARM ASSEMBLY

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)

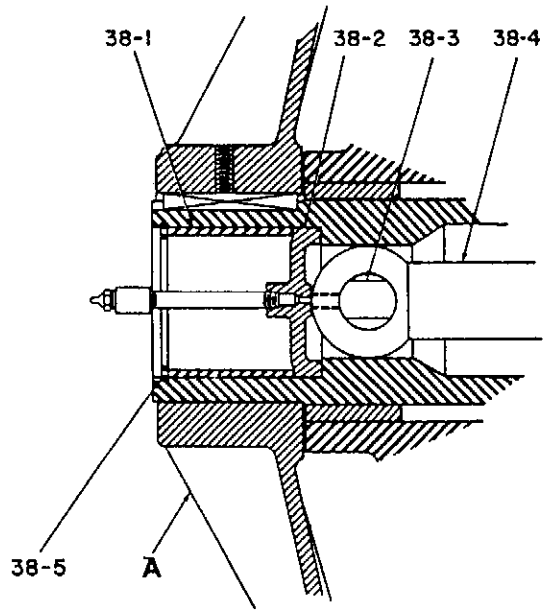


Figure 37
Spool Arm Part Numbers

Drawing Number	Part Number	Description
37-1	HP-1183995	Spool Arm Assembly
37-2	IR-126-11	Counterweight
37-3	IR-126-12	Spool Arm Support
37-4	Part of IR-126-11 not purchased separately	
37-5	IR-126-13	Strip (requires 2)
37-6	IR-609-621	Pin
37-7	IR-126-69	Stud
37-8	IR-1183235	Wool Tape Spools
37-9	IR-126-12	Spool Arm Support

FIGURE 38
UNIVERSAL DRIVE ASSEMBLY

Item #	Part Number	Description
38-1	HP-1179043	Spacer, Universal Drive Hypro
38-2	HP-141-12	Plate, Universal Drive Hypro
38-3	HP-1179167	shaft pin
38-4	HP-1179365	dog bone / universal shaft
38-5	HP-C-59014	Retaining Ring

Note

**For Information on the Inverter
please consult the Inverter Manual**

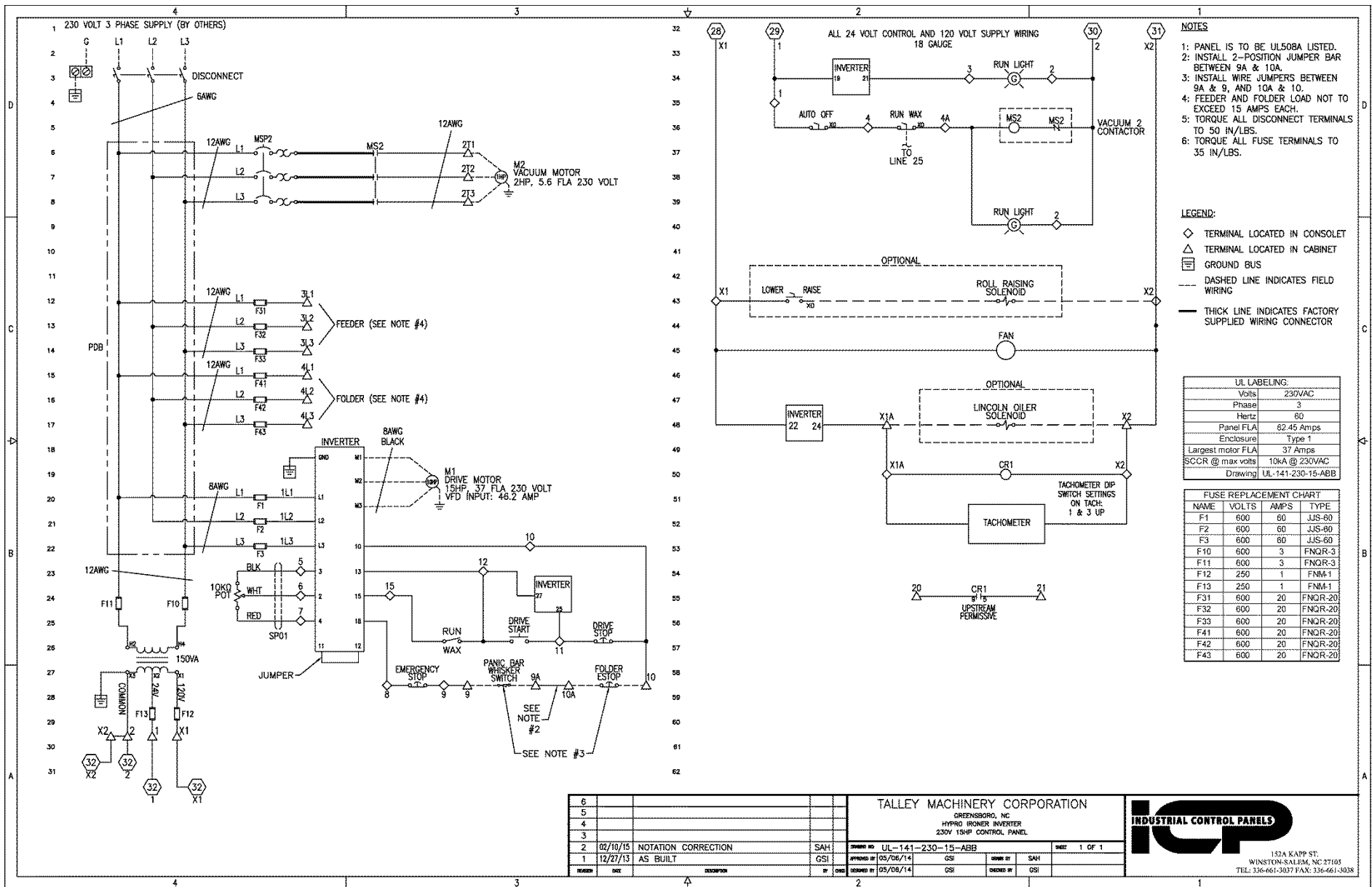


Figure 39 15HP 230 Volt Electrical Schematic for 4 & 6 Roll Hypro

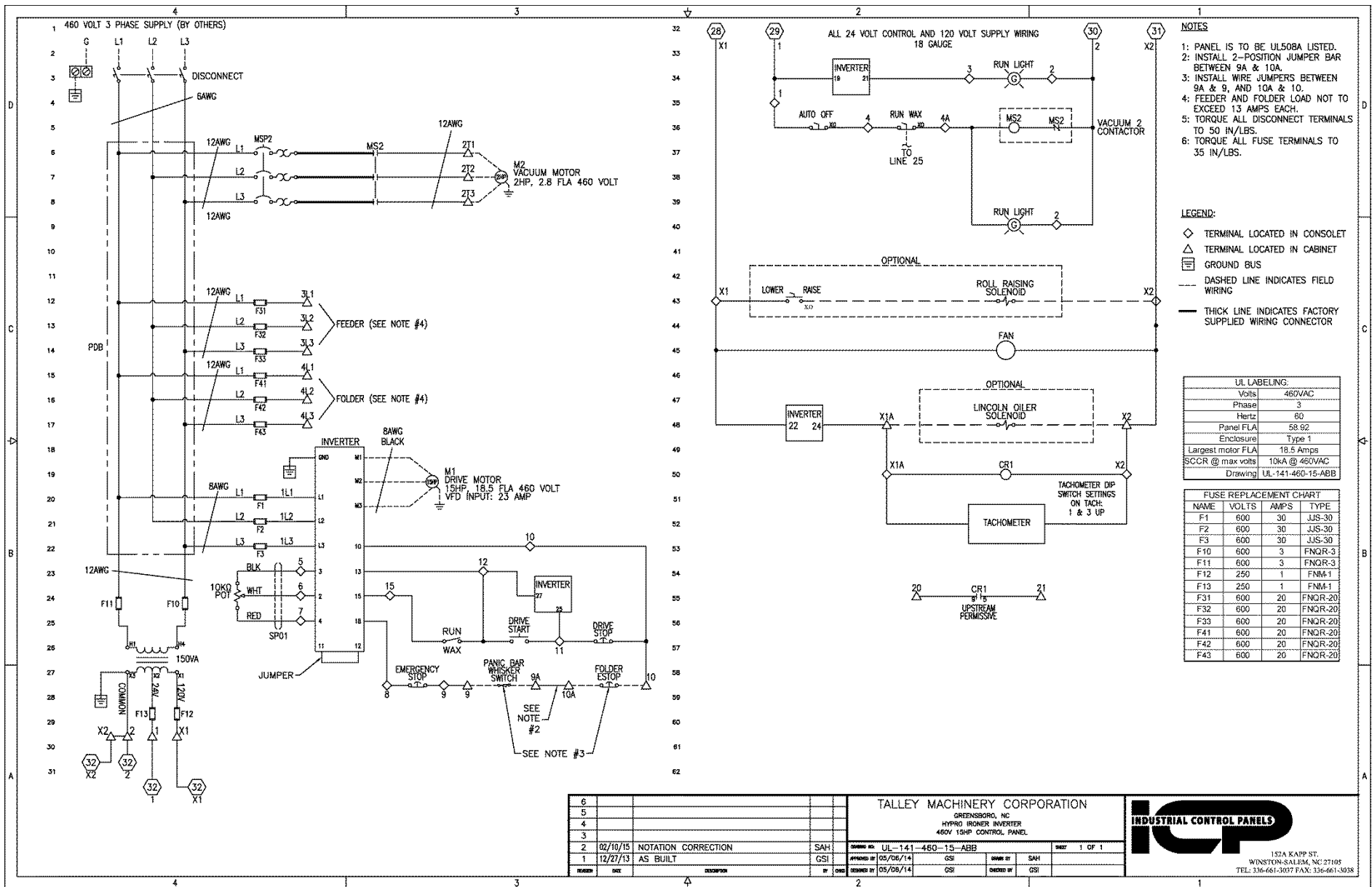


Figure 40 15HP 460 Volt Electrical Schematic for 4 & 6 Roll Hypro

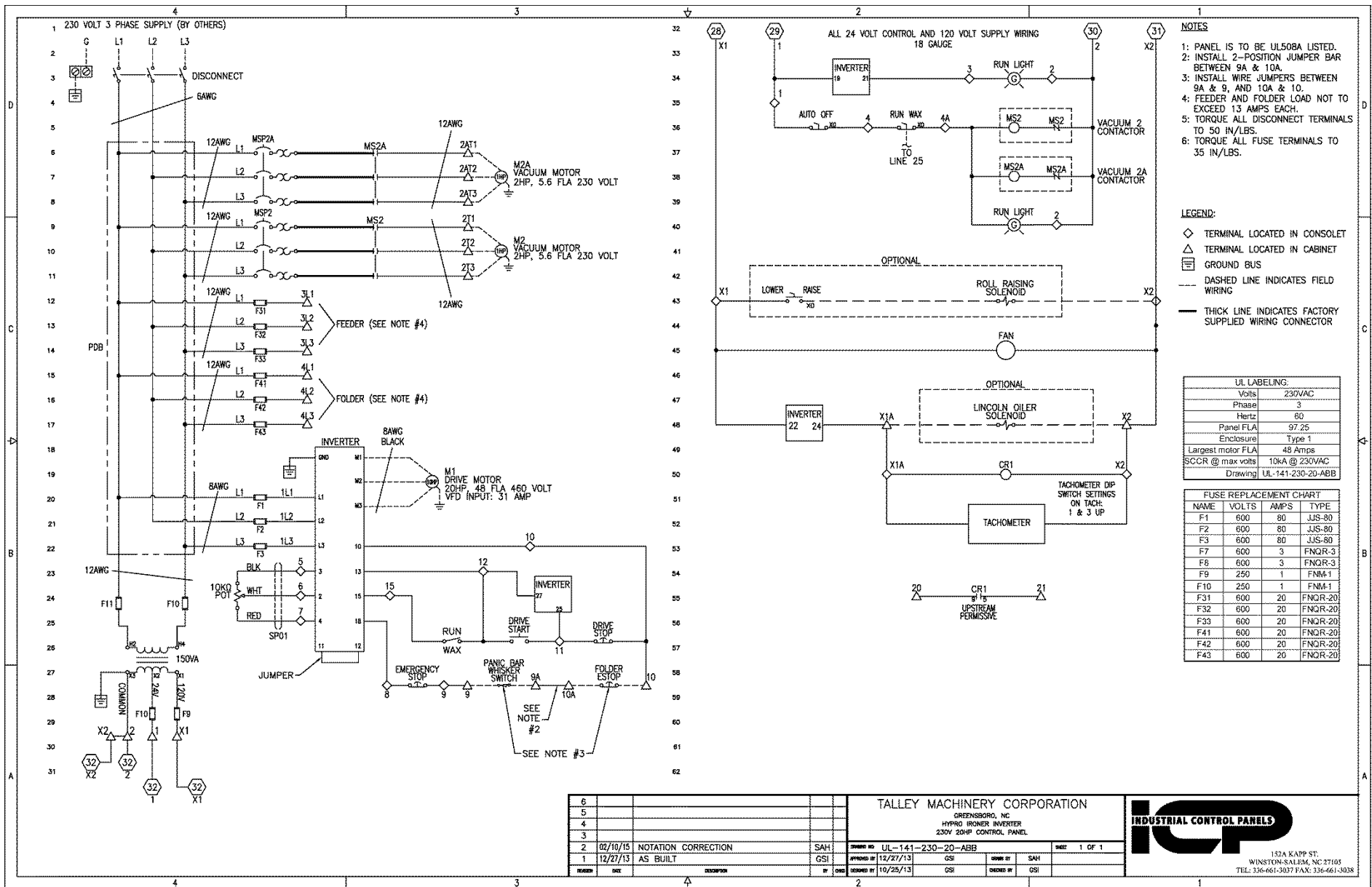


Figure 41 20HP 230 Volt Electrical Schematic for 8 Roll Hypro

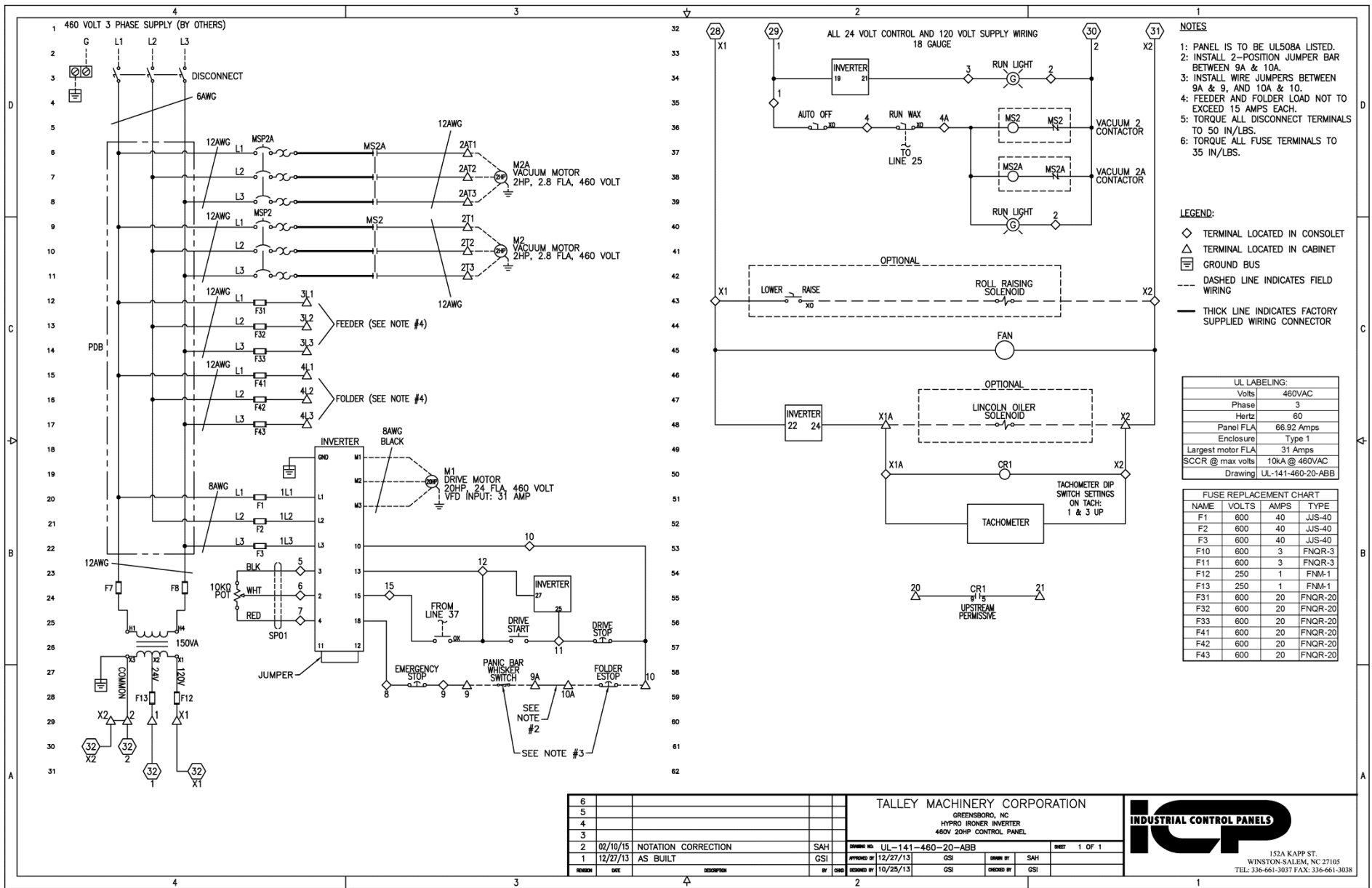


Figure 41 20HP 460 Volt Electrical Schematic for 8 Roll Hypro

Parameter Settings for ACS 550 Drive

9901 = English (Am)

9902 = ABB Standard (default)

9904 = Vector Speed (must have motor hooked up) Use Scaler Frequency if motor not available.

9905 = drive/motor dependent

Motor Nameplate Voltage

230 or 460

9906 = drive/motor dependent CHECK NAMEPLATE FOR 575 VOLT DATA

Motor Nameplate Current

HP	230 volt	460 volt
----	----------	----------

15	37	18.5
----	----	------

20	48	24
----	----	----

9907 = drive/motor dependent

Frequency All Baldor motors 60 Hz

9908 = drive/motor dependent

Motor Speed – All our motors are 1760 RPM except 20 HP which are 1765 RPM

9909 = drive/motor dependent

Motor Horsepower – Enter horsepower of motor

1001 = DI 1F,2R

1201 = DI3

1202 = 450 RPM

1401 = Run

1402 = Started

1403 = Started

2102 = Ramp

2109 = DI6 (INV)

2203 = 3 sec

Table 8-1 Inverter Parameter Settings

