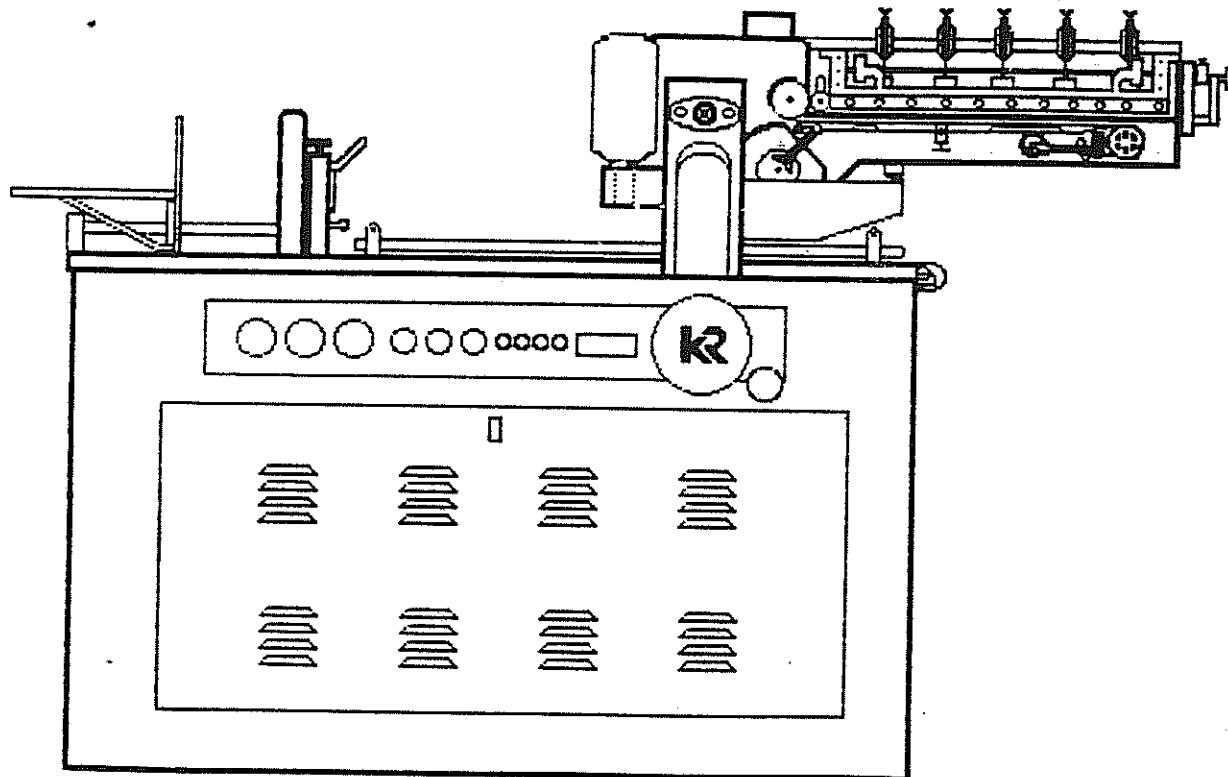


KIRK-RUDY  
KR211/215  
OPERATORS MANUAL



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This manual is written to aid the operator in set-up, operation, maintenance and trouble shooting the KIRK-RUDY Model KR211 labeling head and Model 215 labeling base.

The drawings in this manual are for reference only and are not drawn to scale nor intended for any other purpose.

Part numbers have been intentionally omitted from this manual, for parts identification refer to the parts manuals supplied with the equipment.

This manual is made up of 7 sections:

SECTION 215 LABELING BASE

SECTION 211 LABELING HEAD

SECTION TS TROUBLE SHOOTING

SECTION VS VACUUM SYSTEM

SECTION GK GUILLOTINE KNIVES

LABEL FORMATS

ATTACHMENTS

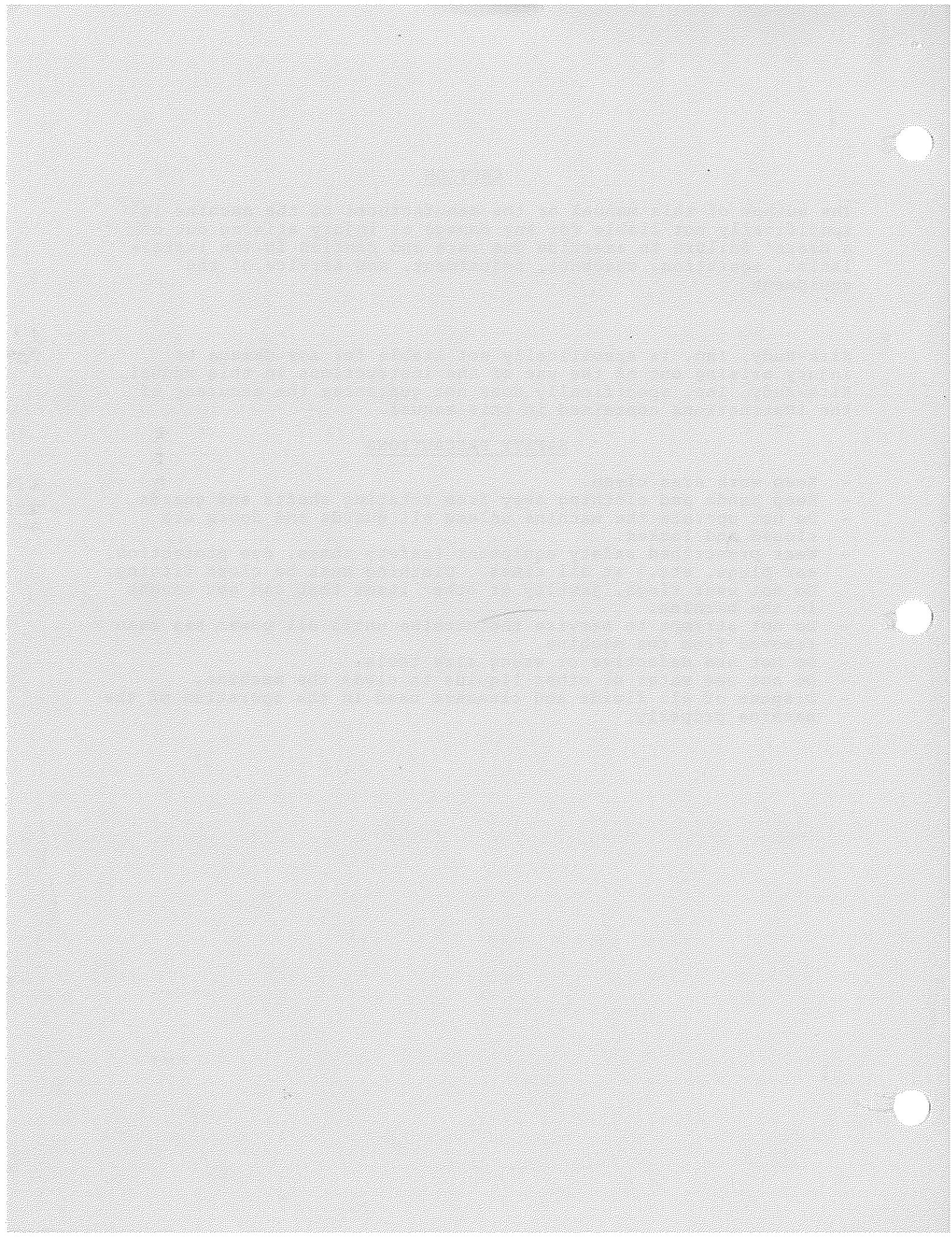
### CAUTION

The author of this manual or the manufacturer of the machine is specifically not liable for any damage or injury arising out of a users' failure to exercise due care and caution in the installation, operation, checkout, adjustment, and service of the equipment.

Kirk-Rudy, Inc. is specifically not liable for any damage or injury arising out of the use of the instructions in this manual. Kirk-Rudy, Inc. specifically does not guarantee the accuracy of the instructions contained in this manual.

### SAFETY PRECAUTIONS

- Keep work area clean.
- Keep hands and clothing away from rotating shafts and guards.
- Do not operate the machine unless all guards and doors are closed and locked.
- Wear prescribed safety equipment (safety shoes, eye protection, ear plugs, etc.) at all times. Clothing must be close fitting. Do not wear rings, jewelry or other items that can get caught in the machine.
- Do not attempt to service the machine until all power has been removed from the machine.
- Do not use defective or wrong size tools.
- Do not use water or other liquids to clean the machine.
- Dispose of all fluids and cleaners used in the operation of the machine properly.



## **HOW TO USE THIS MANUAL**

Listed on the next page is a step by step list to check for each set-up. It will not be necessary to make every adjustment in this manual each time you change jobs or mailing list. However, if you have difficulty with the operation of the machine check the trouble shooting guide or the appropriate section of the manual.

This manual was not written to take the place of training by a qualified Kirk-Rudy representative, but to help the operator in maintaining and operating the equipment.

There may be more than one way to accomplish the same results in adjusting this or any machine. The procedures outlined in this manual were written so that people with different talents and levels of experience can operate the equipment. After becoming efficient in the operation and set-up of the KR211/215, an operator may find short-cuts to gain the same results.

If you have a problem with the equipment or its operation contact Kirk-Rudy direct at (404) 427-4203 or call your authorized Kirk-Rudy dealer:

## SET-UP CHECK LIST

KR215 BASE	SEE SECTION
1. SET UP FEEDER (SIDE GUIDES, BACK STOP, PUSHERS, LIFTERS, ETC.)	215.70
2. SET VACUUM AND INSTALL PROPER VACUUM PLATE	215.70
3. SET GATE	215.80
4. SET FEED ROLLERS	215.90
5. POSITION TABLE TOP SIDE GUIDES AND BELTS	215.130/215.140
6. POSITION AND SET SKID BAR(S) AND JAM SWITCH	215.150
KR211 HEAD	
7. DETERMINE AND INSTALL CORRECT CHANGE GEARS	211.50
8. DETERMINE LABEL LENGTH	211.60
9. SET BELT STROKE	211.70
10. POSITION SLITTER KNIVES/ANVILS	211.80
11. POSITION LIST AND PIN WHEELS	211.80
12. SET SLITTER KNIVES/LIST TRANSFER	211.110/211.120
13. TIME LABEL TRANSFER	211.150
14. SET LABEL POSITION ON MAILING PIECE	211.150
KR215 BASE	
15. POSITION IMPRESSION ROLLERS	215.160
16. SET CHAIN STOPS	215.170
KR211 HEAD	
17. ADJUST HEAD PRESSURE	215.180
18. TIME HEAD AND BASE	215.190

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## KR 215 BASE MACHINE

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215.40	3	CONTROLS
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215.80	1	GATE SET-UP
215.90	4	VACUUM TIMING AND UPPER FEED ROLLER SET UP
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215.120	1	TABLE TOP COMPONENT LOCATION
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215.140	1	TABLE TOP BELTS
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215.170	1	SPACING CHAIN
215.180	1	HEAD HEIGHT ADJUSTMENT & HEAD DRIVE SHAFT
215.190	2	TIMING HEAD AND BASE
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215.220	1	OPTIONS AND RECOMMENDED SPARE PARTS

## SPECIFICATIONS

LENGTH: 60" WIDTH: 34" HEIGHT: 48" WEIGHT: 830lbs.

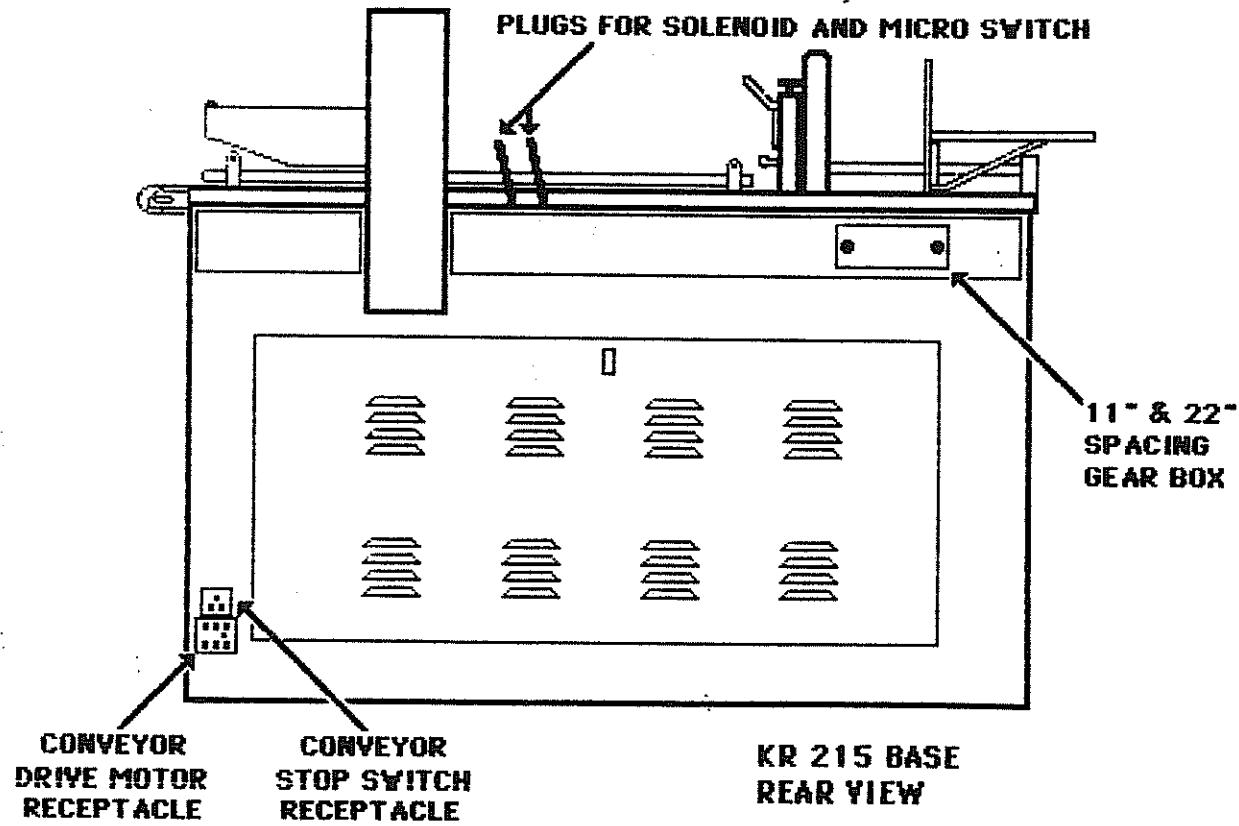
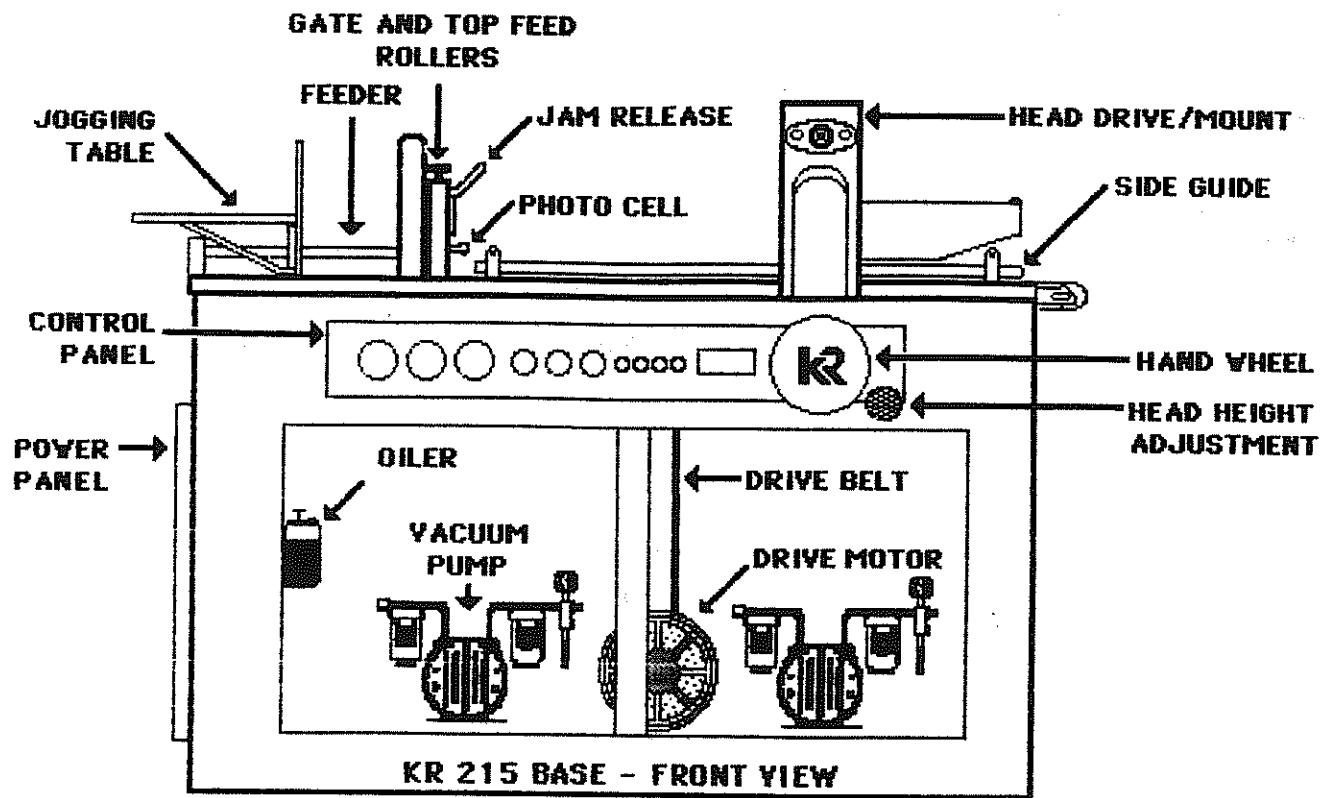
POWER REQUIREMENTS: 220 Volts, 30 Amp. 50/60 Hz. Single Phase

MINIMUM MATERIAL SIZE 3" x 5" SINGLE SHEET

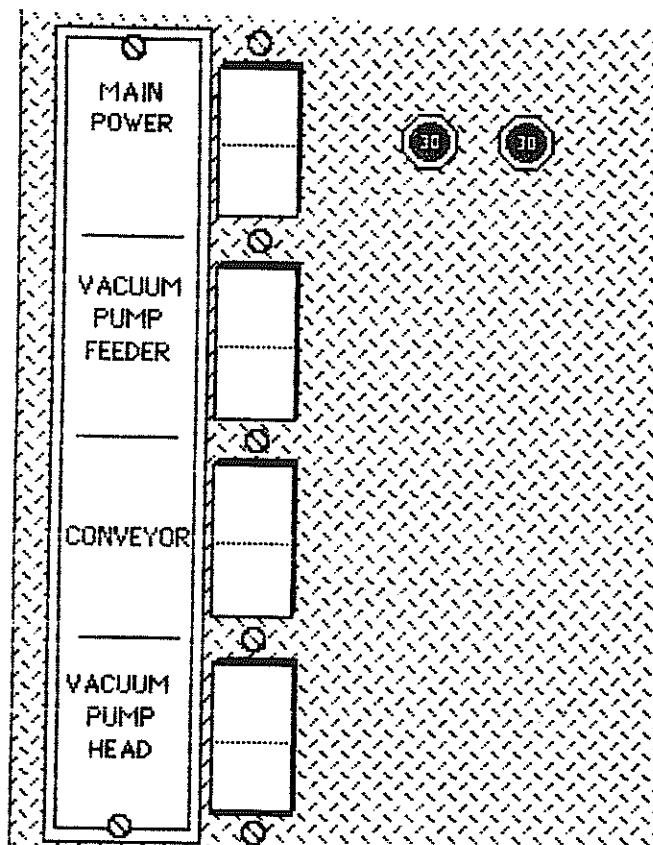
MAXIMUM MATERIAL SIZE 17" x 17", 5/8" THICK

These specifications are for the standard machine - specifications will change with options and modifications. See section 215.220 for a list of options and modifications.

## COMPONENT LOCATION



## CONTROLS



Four switches and two circuit breakers are located on the power panel.

The top switch is a two position switch that turns the power on and off. This switch also turns power on and off to the remaining switches on the control panel. (CAUTION: with the main power switch off, Voltage is still present inside the Power Panel. Disconnect the machine from the Power Source before opening the Power Panel.)

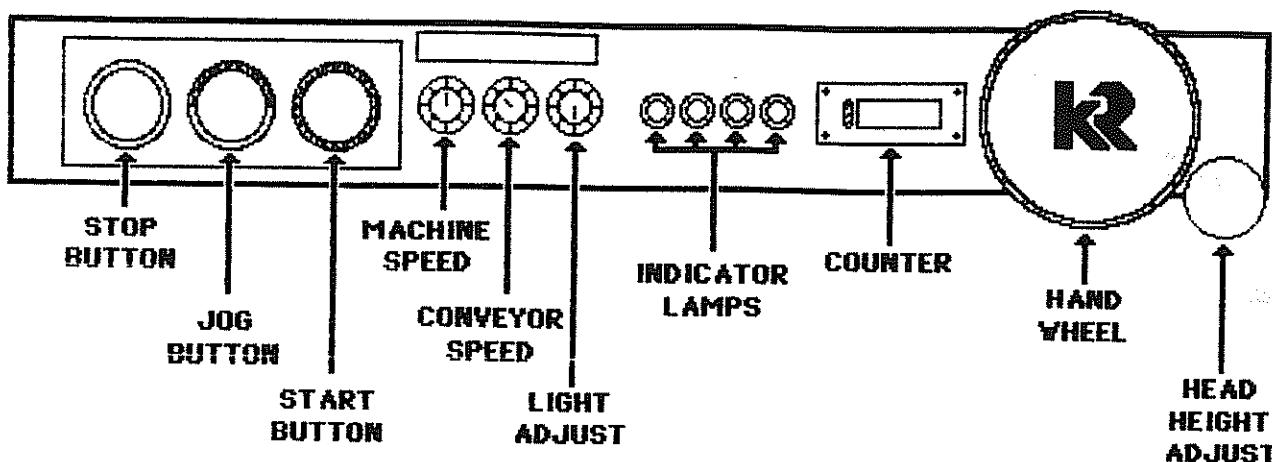
The second switch down is a two position switch that turns power on and off to the Feeder Vacuum Pump.

The third switch down is a three position switch for the conveyor. One position allows the conveyor to run continuously while the main power switch is on. The middle position turns the conveyor off. The last position allows the conveyor to run automatically when the Base runs.

The fourth switch is a two position switch that turns the Head Vacuum Pump on and off.

The two circuit breakers are for protection of the two vacuum pumps. If they should trip, wait 3 minutes depress and hold for a few seconds. If the circuit breakers continue to trip, contact a qualified service representative.

## CONTROLS



The control panel has, from left to right, Stop Button, Jog Button, Start Button, Machine Speed Control, Conveyor Speed Control, Light Adjust, Indicator Lamps, Counter, Hand Wheel and Head Height Adjust Knob.

**STOP BUTTON** - Stops the machine (a more detailed description of the stop circuit is explained on page 3 of this section as well as outlined in the schematics section).

**JOG BUTTON** - The machine will run as long as this switch is depressed. This switch is designed as an aid for set-up and will also stop the machine when pressed.

**START BUTTON** - Starts the machine.

**MACHINE SPEED CONTROL** - "0" is minimum speed - "10" is maximum.

**CONVEYOR SPEED CONTROL** - "0" is minimum speed - "10" is maximum.

**LIGHT ADJUST** - Adjust the intensity of the light bulb that is used for the detection of product. "0" indicates light is off - "10" is maximum brightness.

**INDICATOR LAMPS** - Indicate Machine Start, Conveyor Run, Vacuum Pump On and Solenoid Energized

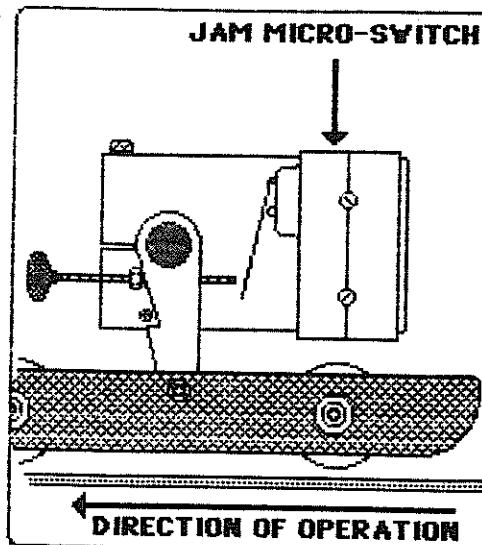
**COUNTER** - Counts only when product is fed and is resetable.

**HAND WHEEL** - The hand wheel is used to manually cycle the machine when turned clockwise, do not turn the hand wheel counter-clockwise.

**HEAD HEIGHT ADJUST** - Raises and lowers the applicator head.

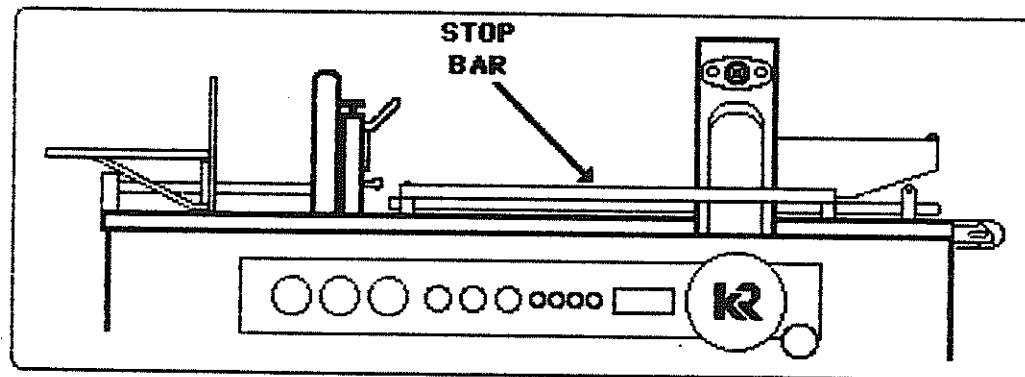
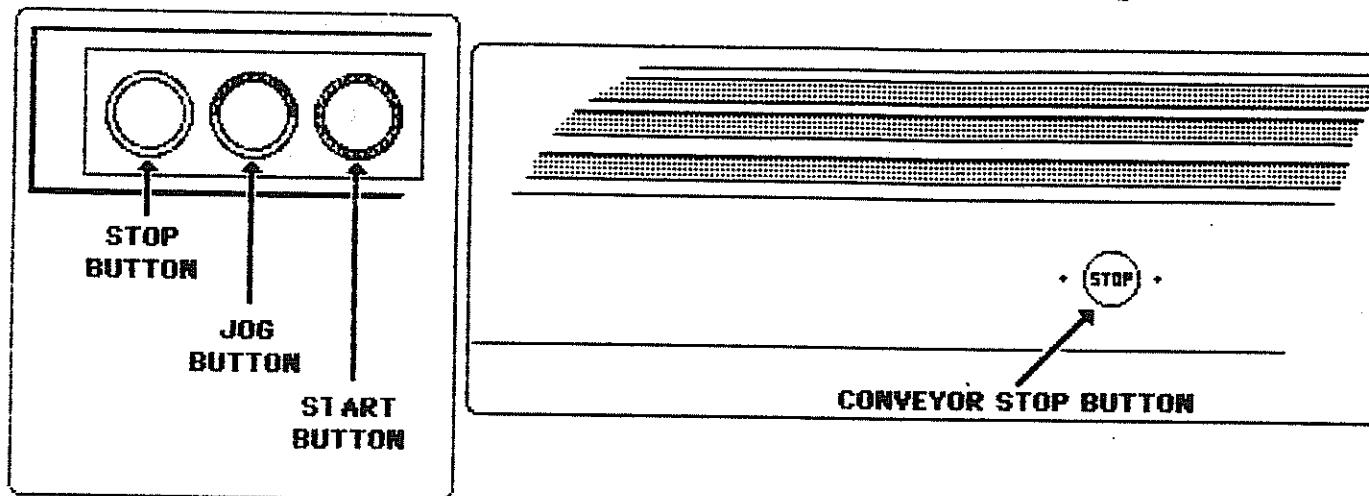
## CONTROLS

**STOP CIRCUIT** - The stop circuit is wired in series, this means that if one of the stop switches or buttons is open, the machine will not run. There are four stop switches on the KR215 base.



The switch that is open most often is the "Jam Micro Switch" located on the skid bar (see section 215.150 for adjustment).

The second switch that is most often open is the conveyor stop button.. This button is usually open because of improper seating of the plug that goes into the back of the machine. If neither the machine nor the conveyor will run (conveyor power switch in "automatic" position) when the start button is depressed, first check all of the stop switches. If the machine will still not run, the the problem must be isolated with a volt/ohm meter using the schematics.



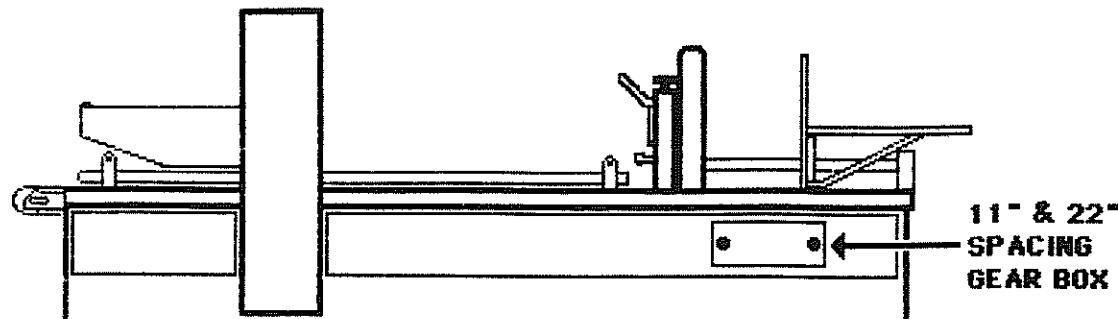
## DESCRIPTION AND SEQUENCE OF SET-UP

The KR215 Base is a top load bottom feed transport designed to separate and feed product one at a time in a consistent manner. The Sequence of Set-up is as follows:

1. Determine Spacing requirement.
2. Adjust Feed Hopper product guides and Back-Stop.
3. Engage Needle Blocks, Lifters and/or Pusher Blocks.
4. Select and install proper Vacuum Plate.
5. Adjust Gate.
6. Adjust Vacuum.
7. Set Upper Feed Rollers.
8. Position Table Top Side Guides.
9. Adjust Table Top Belts.
10. Position Impression Roller.
11. Set Timing Chain.
12. Position Skid Bar(s).
13. Time Base to Head.

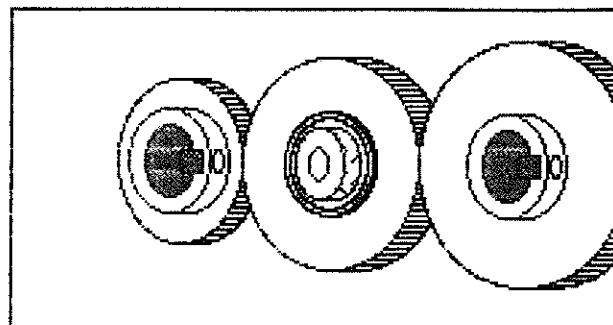
## 11" - 22" SPACING

Located on the back of the KR215 Base is the 11" & 22" spacing gear box. Remove the two knobs and the cover plate.



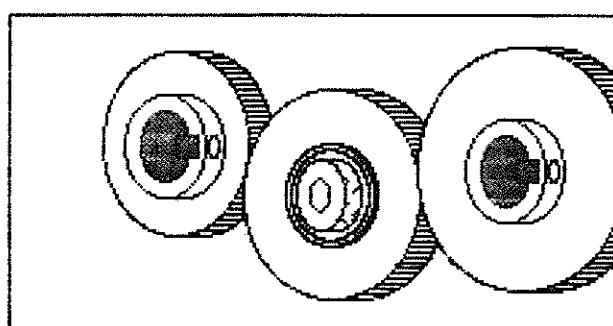
Inside you will find three spur gears in either of two combinations.

22" SPACING



-OR-

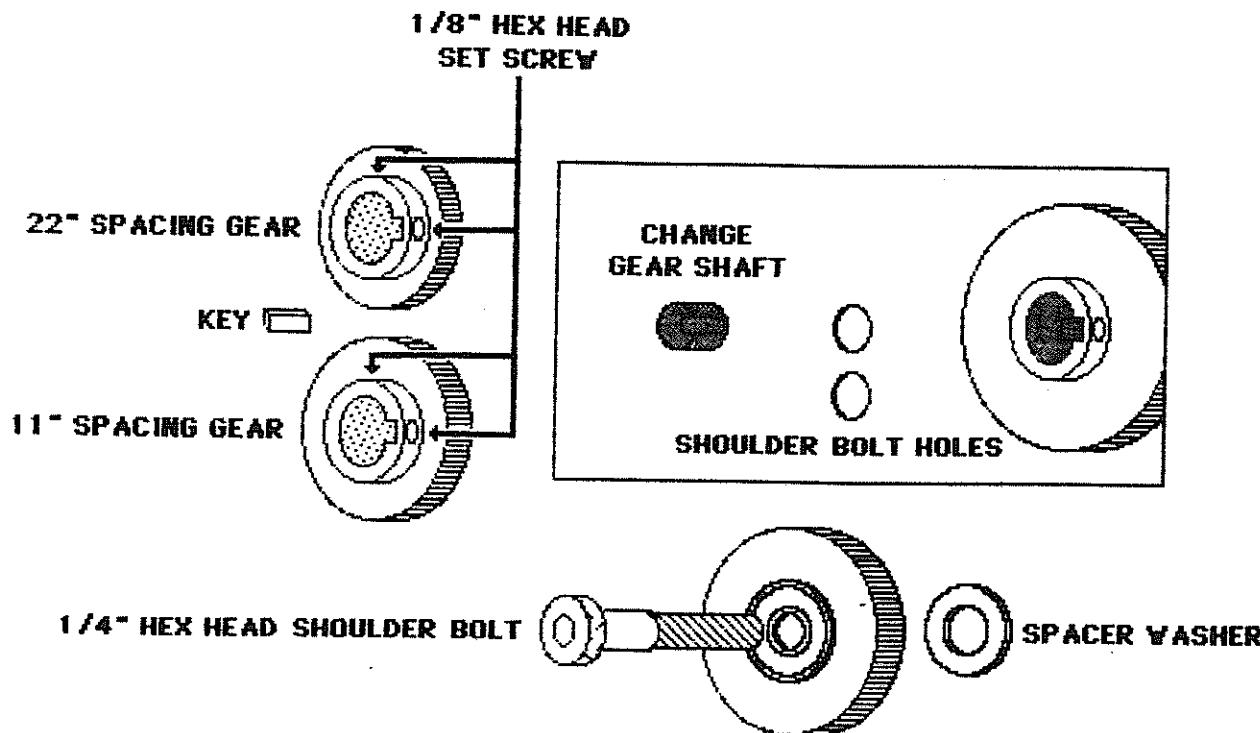
11" SPACING



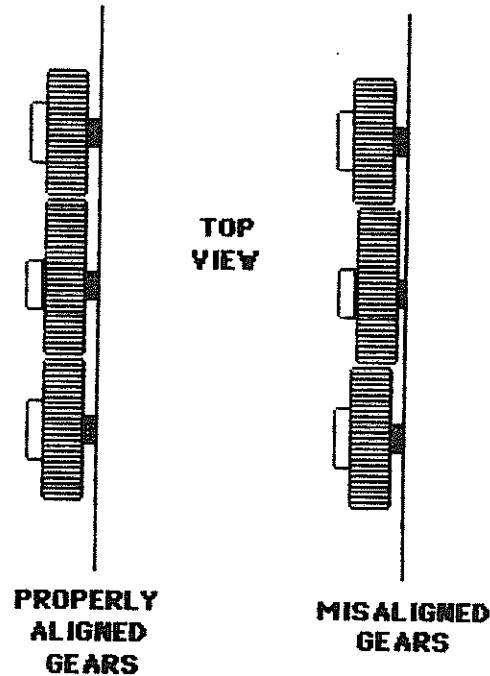
The gear on the left is the spacing gear, the middle gear is the transfer gear and the gear on the right is the drive gear. The spacing gear is held onto the shaft with two 1/8" hex head set-screws. The transfer gear is held in place with a 1/4" hex head shoulder bolt.

To change spacing gears, first remove the transfer gear and then the spacing gear. Be careful not to turn either the drive gear or the spacing gear shaft.

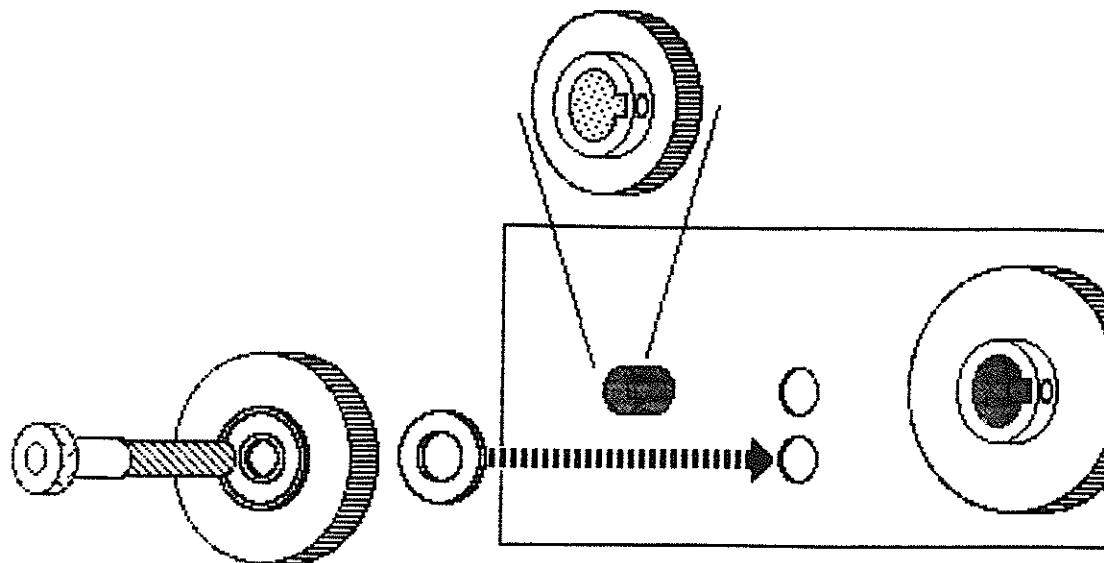
Select the spacing gear needed and install on the spacing gear shaft, insert the key and tighten the two set screws. Now the transfer gear can be installed in the proper hole, make sure to install the spacer washer behind the transfer gear, and replace the cover.



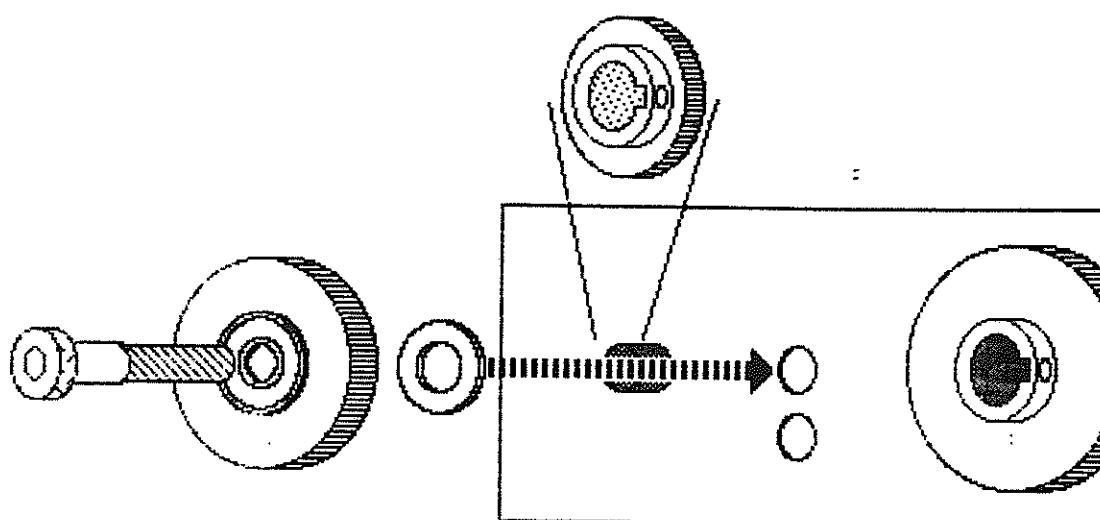
When properly installed, the three gears should line up. If gears do not line up, check to ensure that all gears are seated properly and spacer washers are correctly installed.



## 11" - 22" SPACING

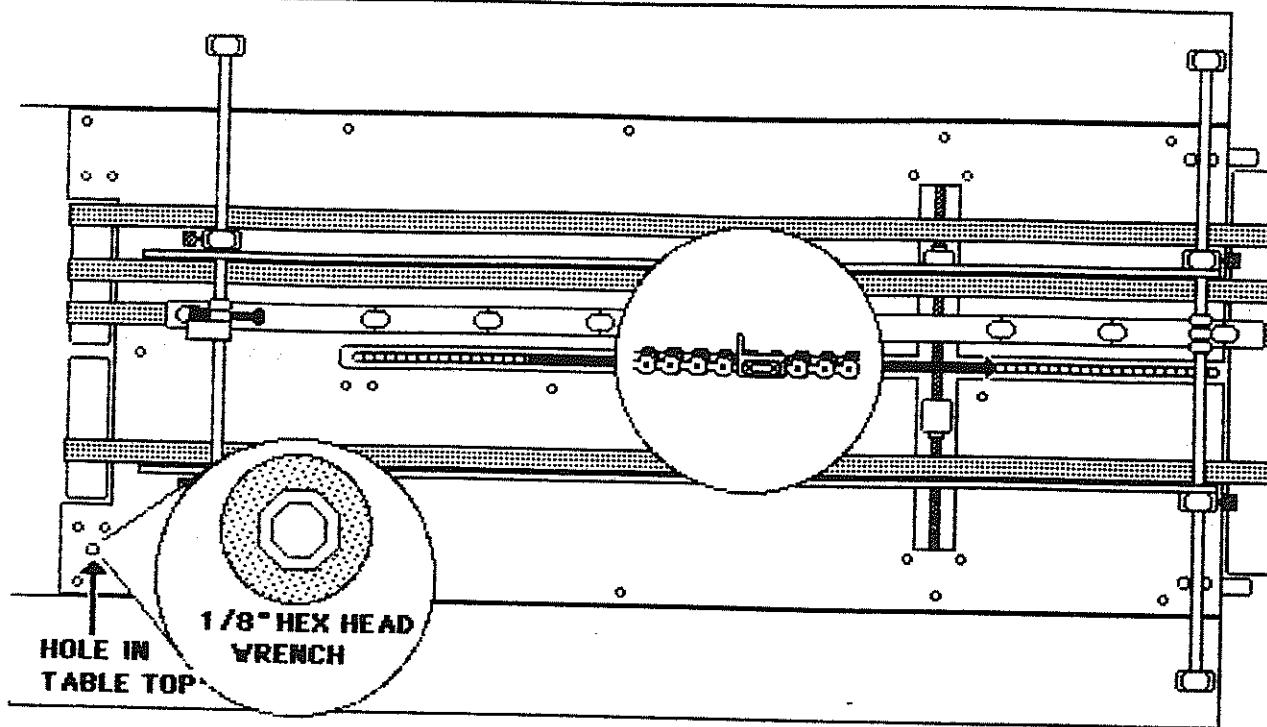


11" Spacing Gear Installation



22" Spacing Gear Installation

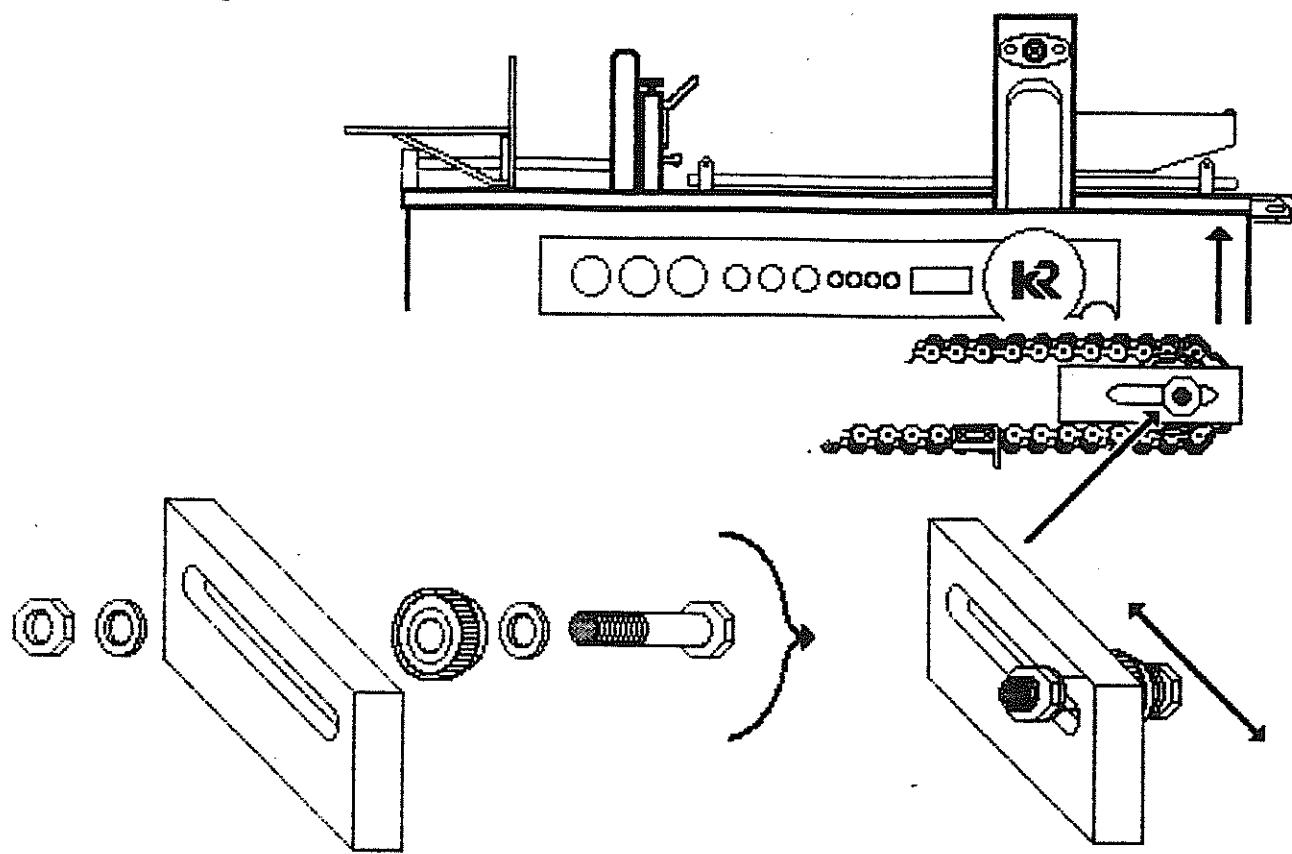
When you change spacing format, you may also need to change the spacing chain. To do this, rotate the machine using the hand wheel until the set screw in the timing chain sprocket is visible through the hole in the table top. Loosen the set screw.



This allows the chain to move freely.

## 11" - 22" SPACING

Next, locate the timing chain sprocket underneath the table top at the right hand side of the timing chain.

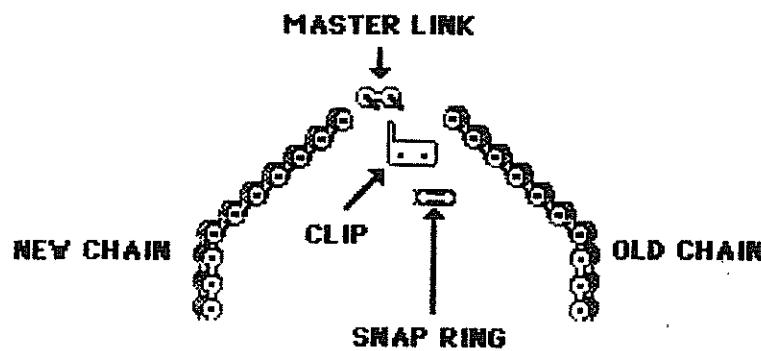


Loosen the bolt and nut and slide the sprocket toward the left hand side of the machine.

Rotate the chain until one of the clips is accessable, remove the snap ring, clip and master link being careful not to let the chain fall through the machine.

Using the master link, insert the new chain onto the old chain and pull the new chain through the machine onto the two sprockets.

Remove the old chain and re-install the master link, clip and snap ring onto the new chain.

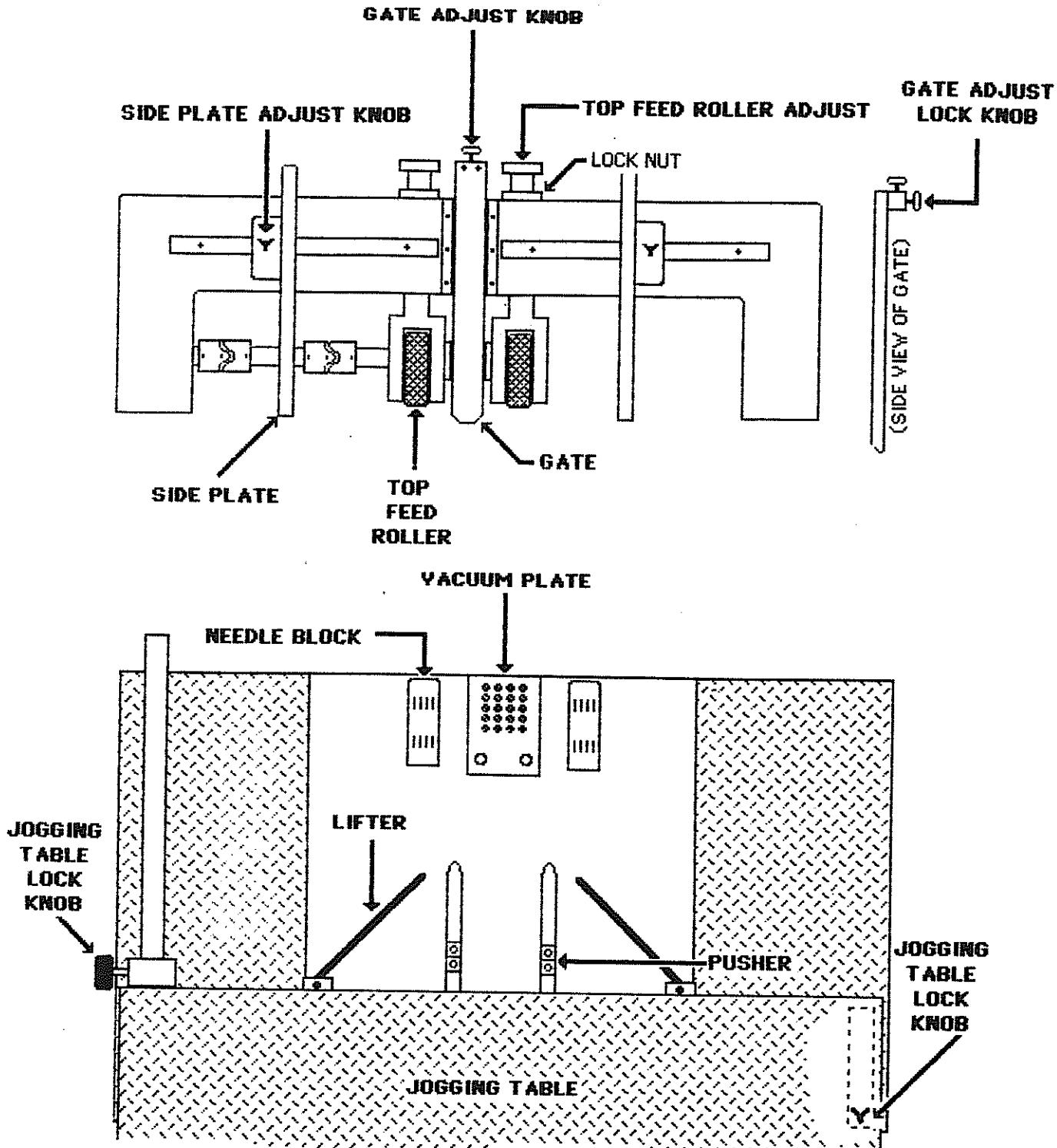


Tighten the sprocket on the right hand side of the machine and lock in place with the nut and bolt. There should be approximately 1/2" of play in the middle of the chain when the tension is properly set.

Re-time the spacing chain, see section 215.170.

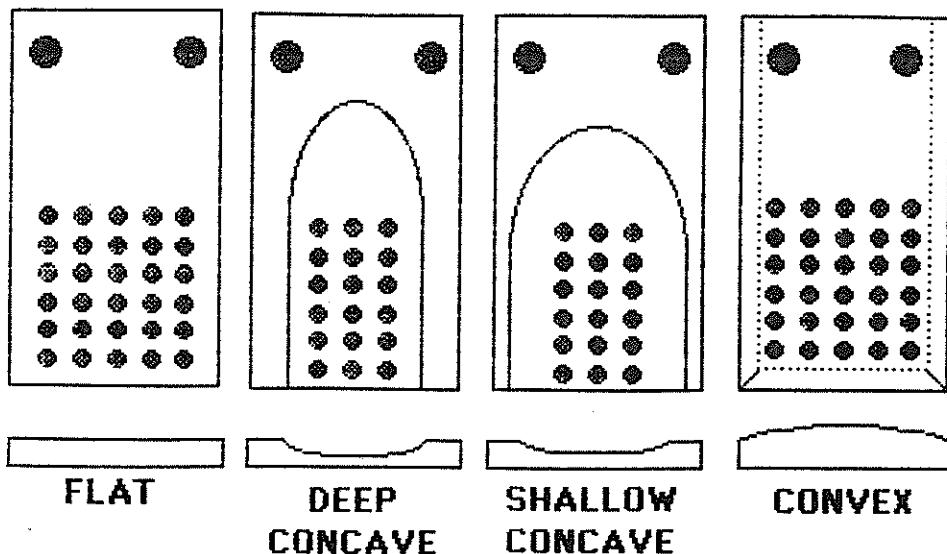
The labeling head may also require a spacing change - see Section 211.180

## FEEDER SET UP



Before setting up the feeder, the correct vacuum plate should be selected and installed. There are four vacuum plates available for the KR-215 Base.

## VACUUM PLATES



The Flat Plate is for thick product such as magazines and newspapers, any product that does not give or have bend to it.

The Deep Plate is for thin product such as single sheets or flimsy product.

The Shallow Plate is for thicker product that has some flexibility.

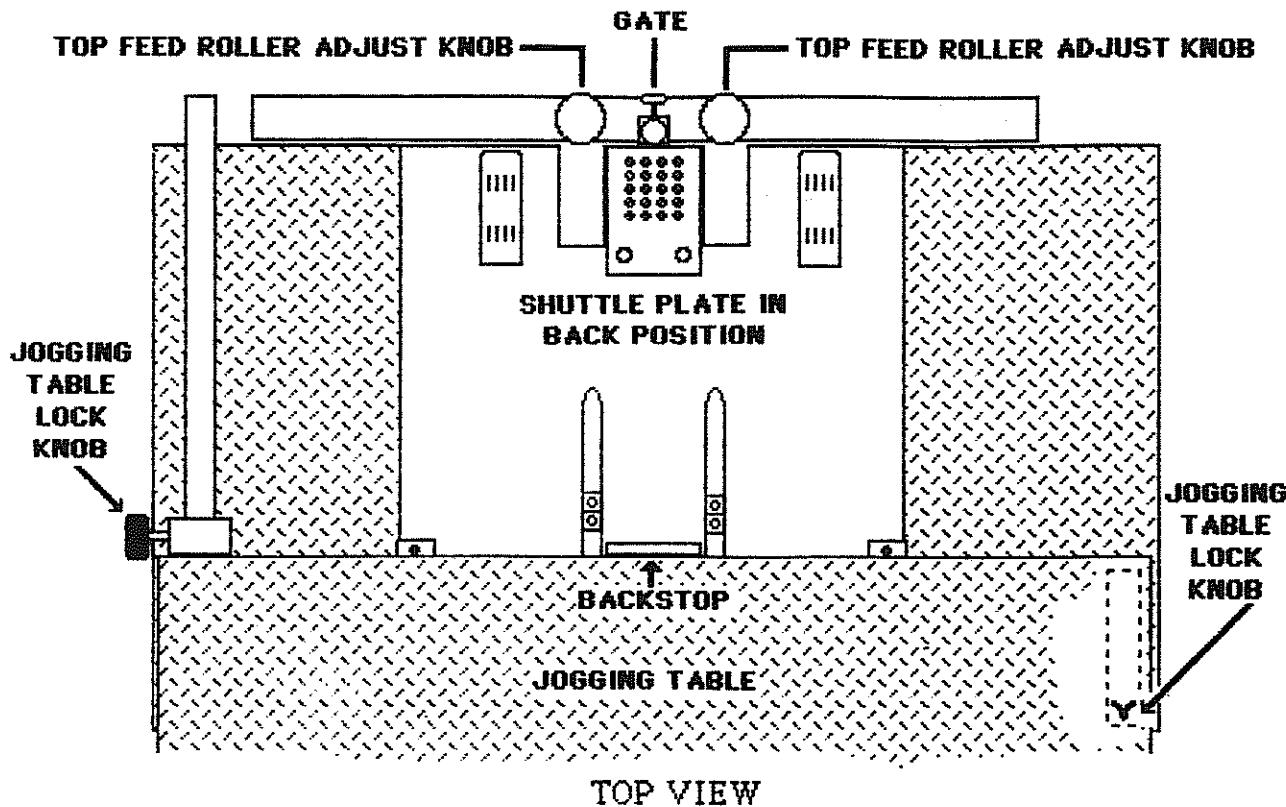
The Convex Plate is for tri-folded or self mailers and can also be used for product that has a warp or bend.

To change vacuum plates, remove the two 5/32" hex head screws in the rear of the plate and lift the plate out from the shuttle on the feeder. Insert the selected plate and reinstall the two screws.

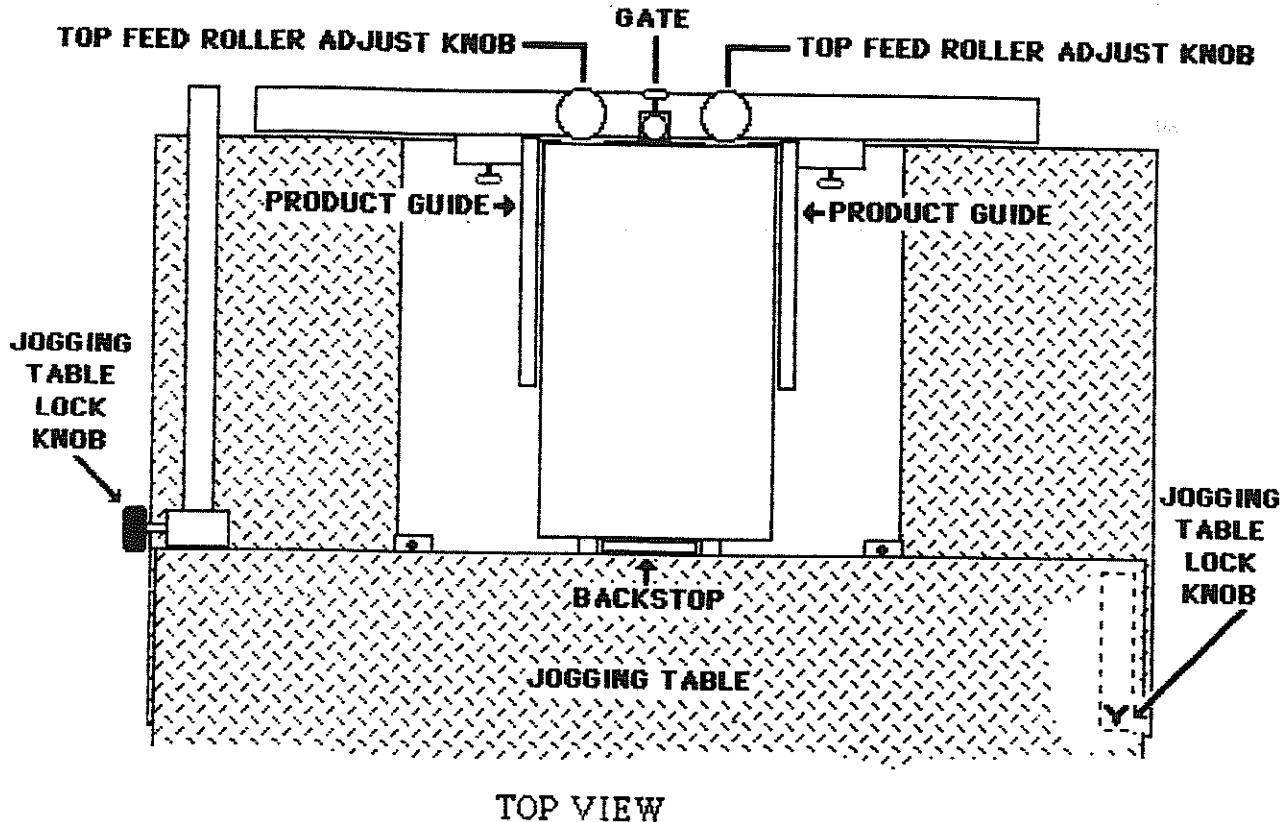
**FEEDER SET UP**

To set up the feeder, loosen the back stop/jogging table and slide back. Loosen the two product guides and slid out from the center of the feeder.

Rotate the machine by hand until the shuttle plate is in the extreme back position.



Place the product on the shuttle plate up against the gate. Bring the back stop up against the product and lock in place. Bring both product guides in to the product allowing approximately  $1/8$ " play between guides, lock in place.

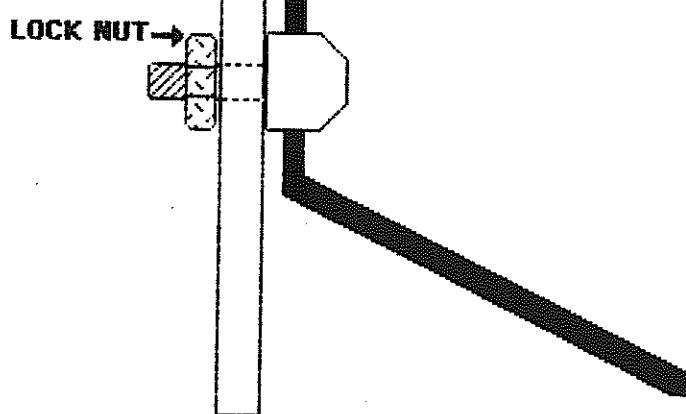


TOP VIEW

**BACK STOP PLATE**

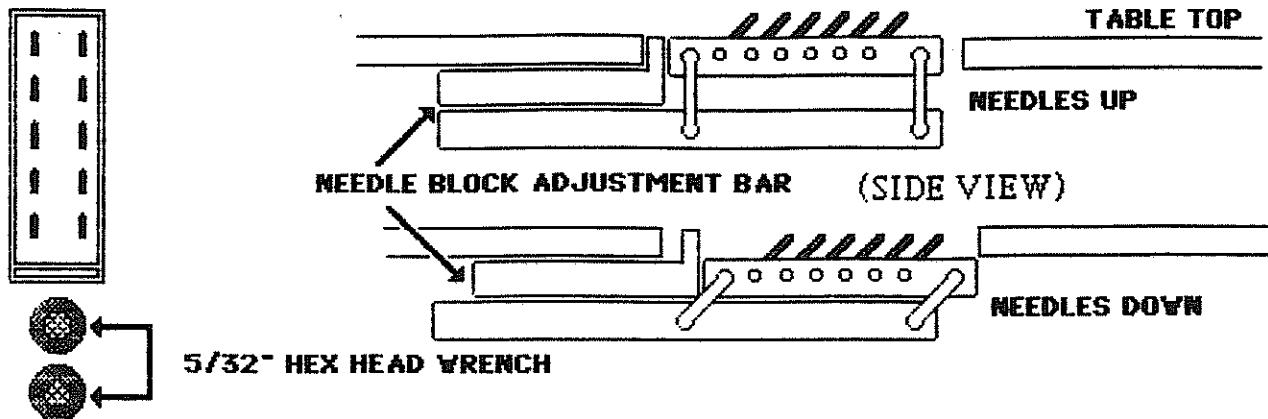
The feeder is equipped with Lifters, Needle Blocks, and pushers to aid in the feed of various products.

The Lifters are designed to lift up the back of the product and angle the front edge toward the gate to aid in feeding. These are most commonly used for large products such as newspapers, etc.



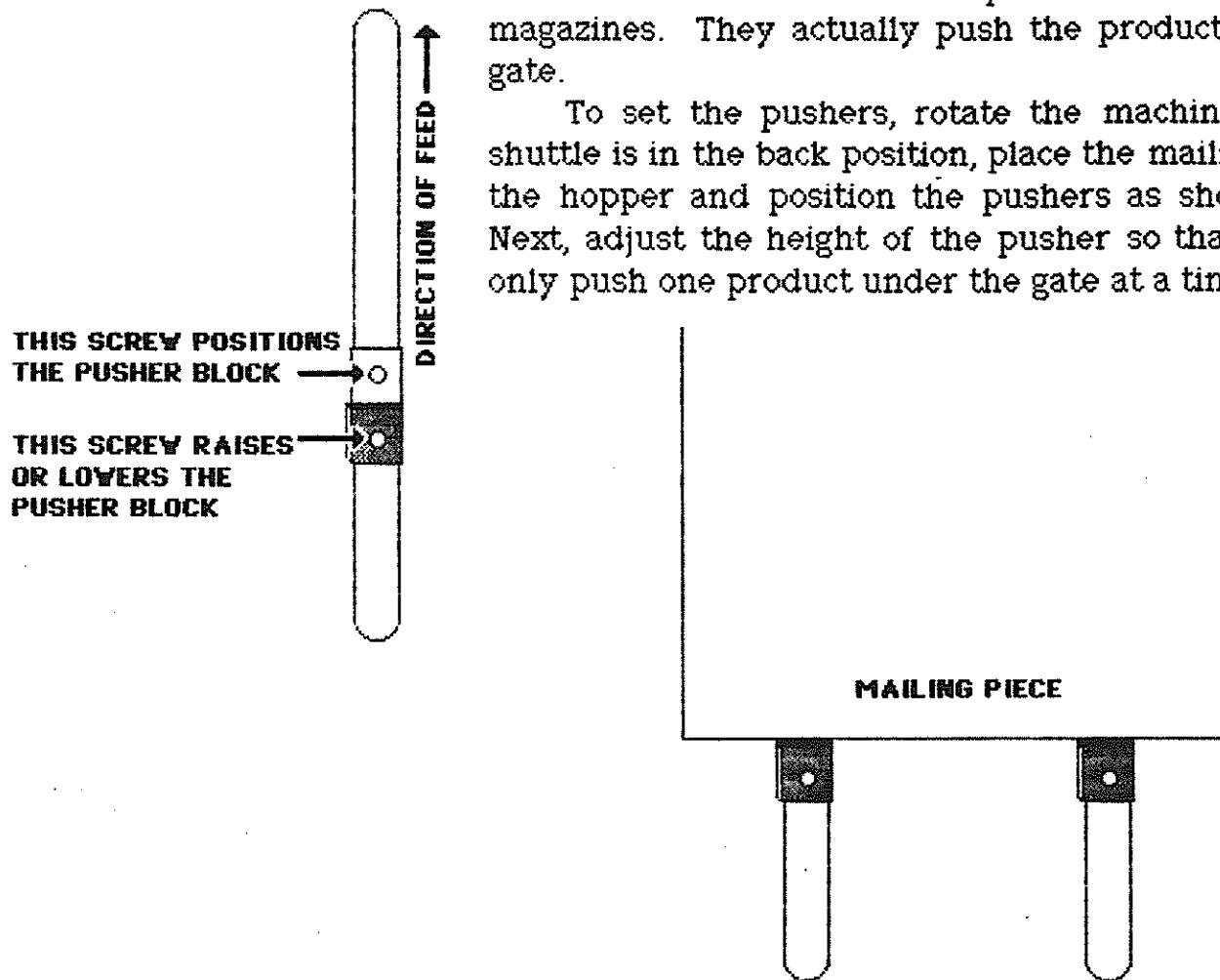
## FEEDER SET UP

The Needle Blocks are designed to grab the product and help in the feed under the gate. The needle blocks can damage the product and are almost always used for newspapers. The Needle Blocks are often used in conjunction with the Lifters.



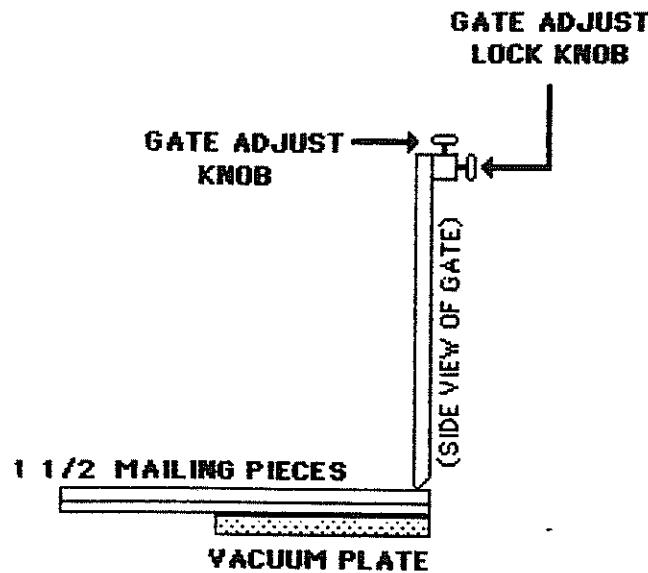
The Pushers are for thick product such as books or magazines. They actually push the product under the gate.

To set the pushers, rotate the machine until the shuttle is in the back position, place the mailing piece in the hopper and position the pushers as shown below. Next, adjust the height of the pusher so that they will only push one product under the gate at a time.



**GATE SET UP**

To set the gate, loosen the gate lock knob and turn gate adjust knob counter clockwise to raise the gate. Turn the main power switch and the feeder vacuum pump switch on. Rotate the machine by hand until the mailing piece is just underneath the gate. Rotate the gate adjust knob clockwise until the gate is snug against the mailing piece. (When setting up on a mailing piece that is two or more pages, the gate should be set snug to 1 & 1/2 times the thickness of the mailing piece. Simply take 1 and 1/2 pieces and place underneath the gate). After the gate is set, lock in place with the gate lock knob.

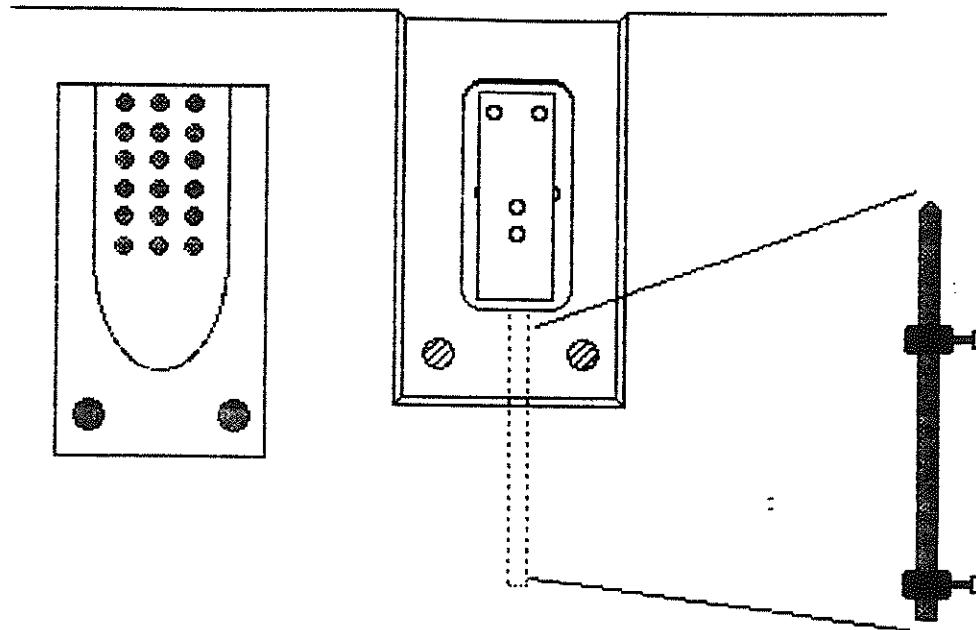


This should allow one piece to feed smoothly but keep two pieces from going under the gate at the same time. If two pieces are fed and the gate is set properly, the piece on top should jam or tear. If this happens, the problem is either the mailing pieces are stuck together or too much vacuum is being applied to the vacuum plate. To adjust the amount of vacuum being applied to the plate see section 215.90.

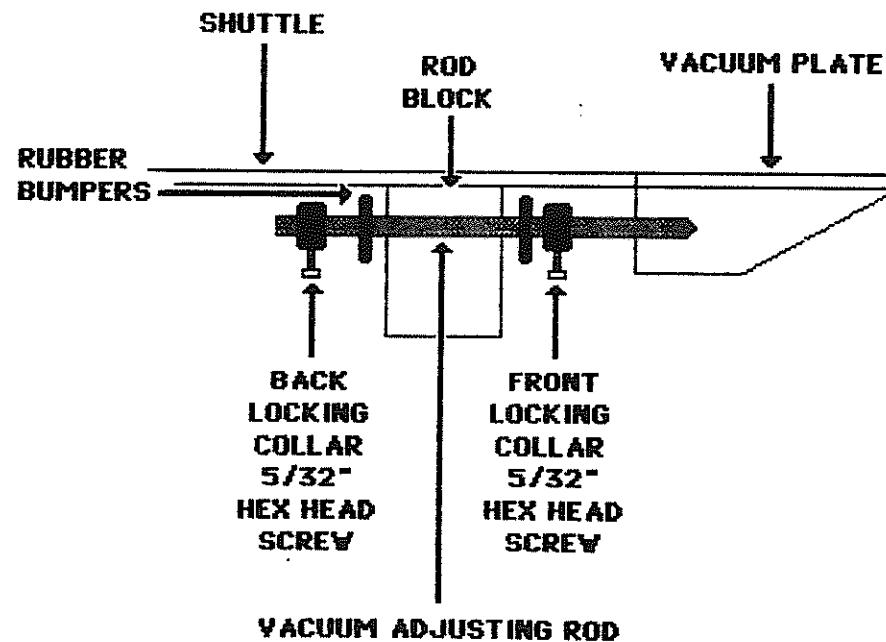
## VACUUM TIMING AND UPPER FEED ROLLER SET UP

The vacuum to the vacuum plate is designed to come on  $1/8"$  before the shuttle plate reaches the maximum back stroke. The vacuum to the vacuum plate should go off after the vacuum plate has transported the product underneath the gate and between the feed rollers and the bottom feed rollers have come up.

The vacuum is turned on and off by two lock collars set-screwed to a rod that rides underneath the vacuum plate. When this rod is pushed in it turns the vacuum on and when it is pulled out the vacuum is turned off.



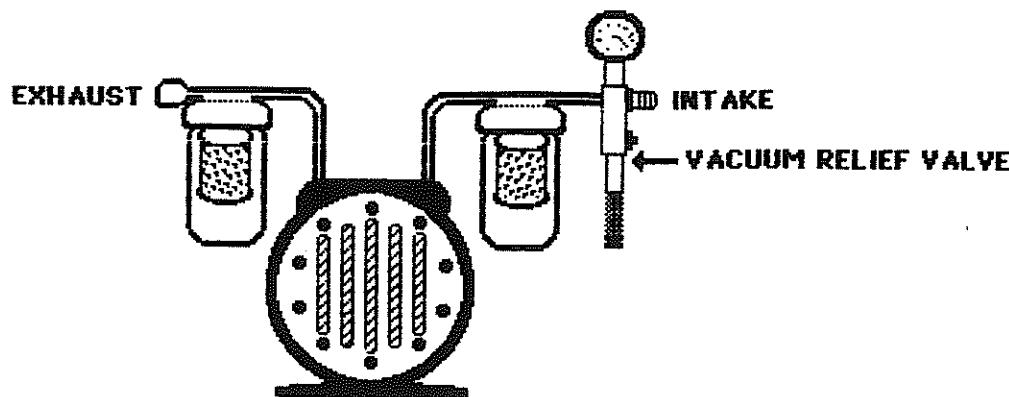
To adjust the vacuum on, turn the main power switch and the feeder vacuum pump switch on and rotate the machine by hand until the shuttle plate is  $1/8"$  from its maximum back stroke. Locate the front lock collar on the rod underneath the feeder and loosen. Hold the lock collar against the rod block. Push the rod into the vacuum plate housing until the vacuum comes on to the vacuum plate. Tighten the lock collar in this position.



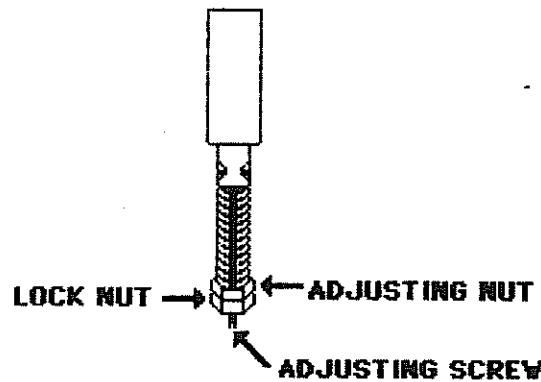
SIDE VIEW

## VACUUM TIMING AND UPPER FEED ROLLER SET UP

Vacuum to the plate can be adjusted by changing the pressure on the spring located on the Vacuum Pump relief valve.

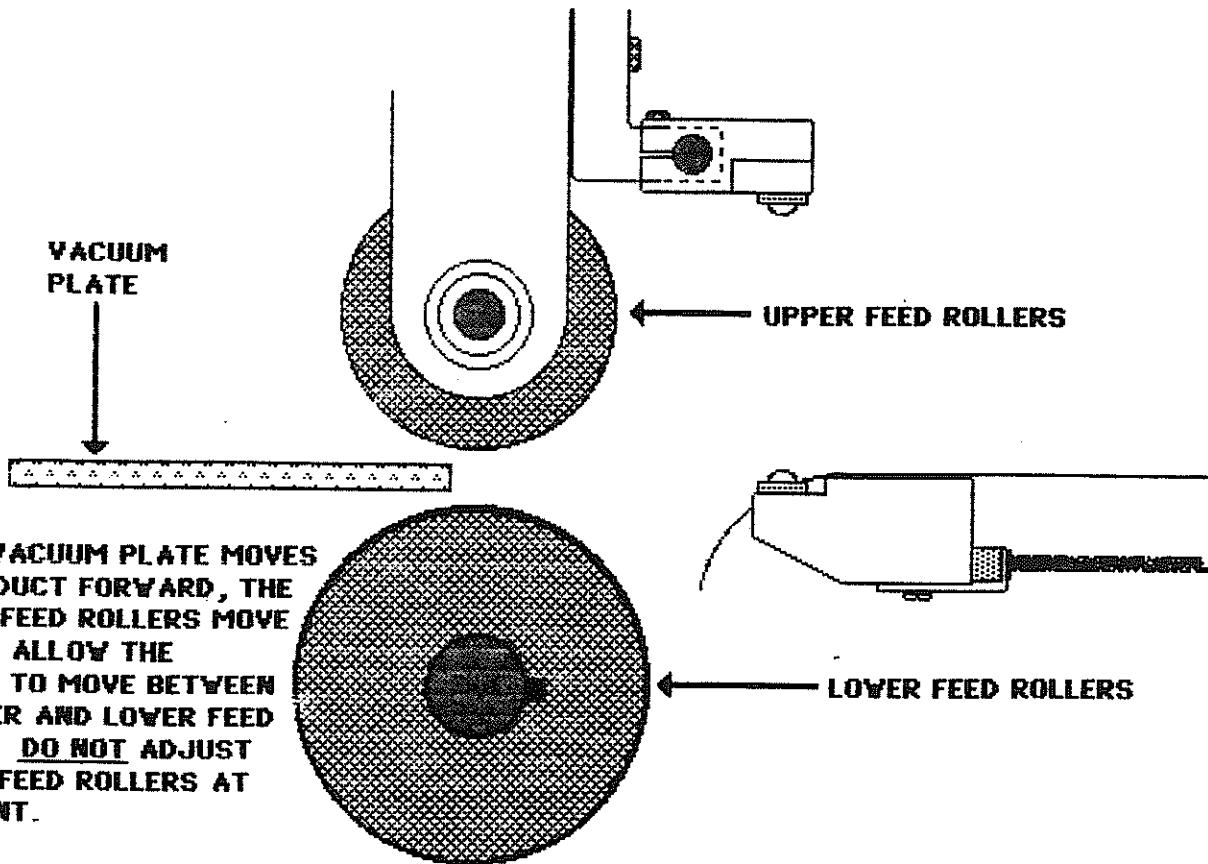


Locate the vacuum relief valve on the feeder vacuum pump (located on the left of the machine) and loosen the lock nut, now the vacuum can be adjusted by holding the adjustment screw and turning the adjustment nut. As the spring is compressed, the vacuum increases. Loosening the compression spring decreases vacuum.



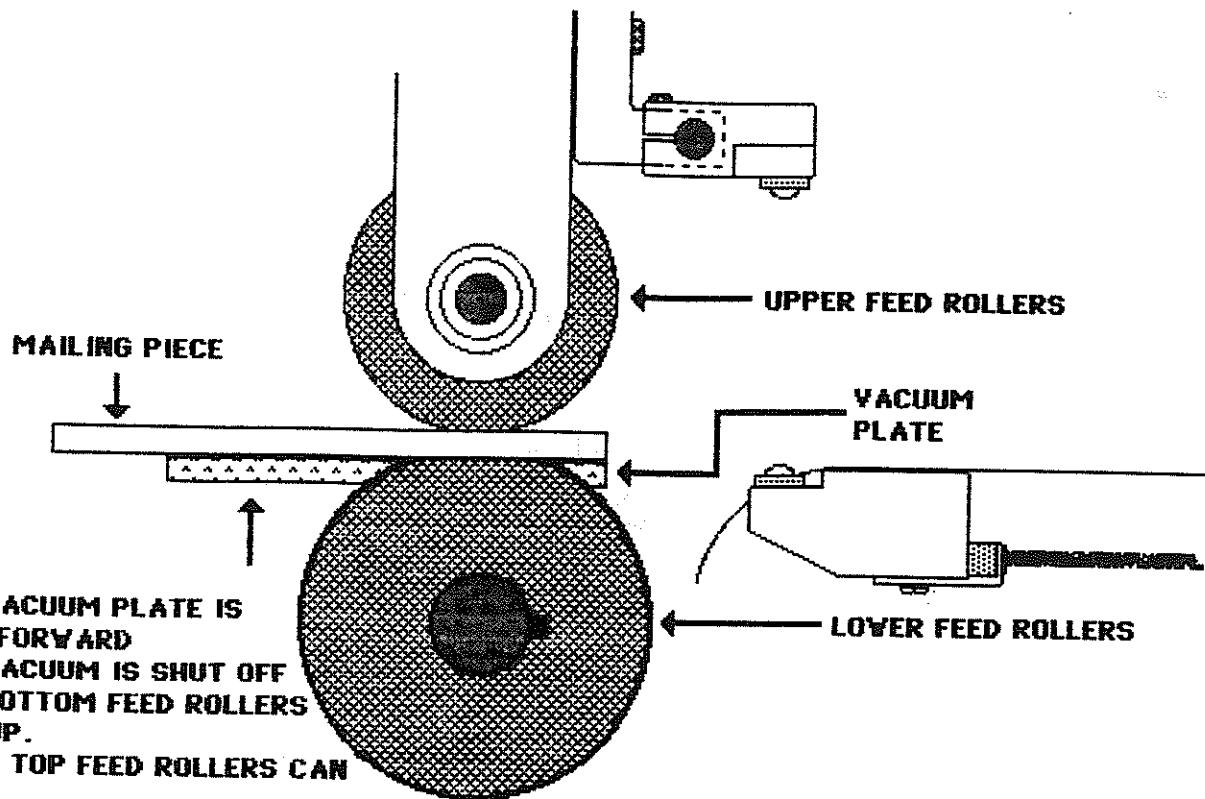
## VACUUM TIMING AND UPPER FEED ROLLER SET UP

Rotate the machine with the hand wheel and move the shuttle forward until the bottom feed rollers come up. At this point the vacuum should go off. To adjust the vacuum off, loosen the back lock collar and hold against the rod block, pull the rod out of the vacuum plate housing until the vacuum goes off. Tighten in this position.



## VACUUM TIMING AND UPPER FEED ROLLER SET UP

At this position the upper feed rollers can be set.



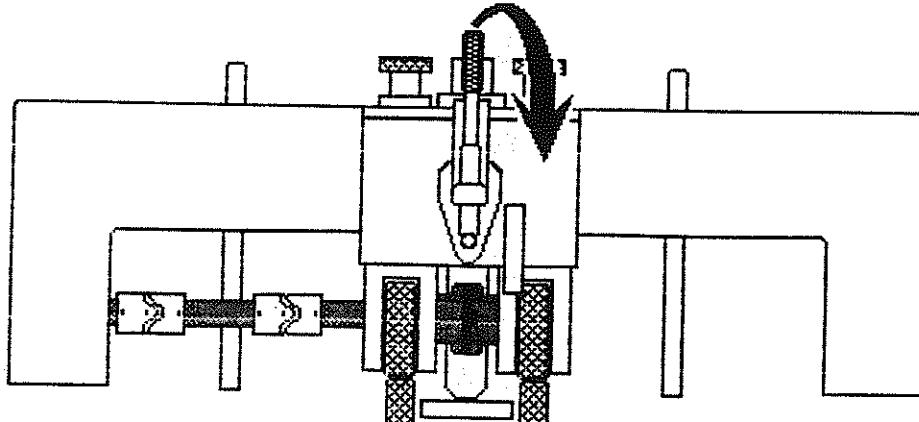
To set the upper feed rollers, place a mailing piece in the shuttle feeder, turn on the main power and feeder vacuum pump, rotate the machine by hand until the piece is fed underneath the gate, between the upper and lower feed rollers and the bottom feed rollers have come up. Adjust the top feed rollers up and down until there is enough pressure on the mailing piece to be able to pull the piece back out without tearing it.

After setting the upper feed rollers, lock them in place with the locking nuts.

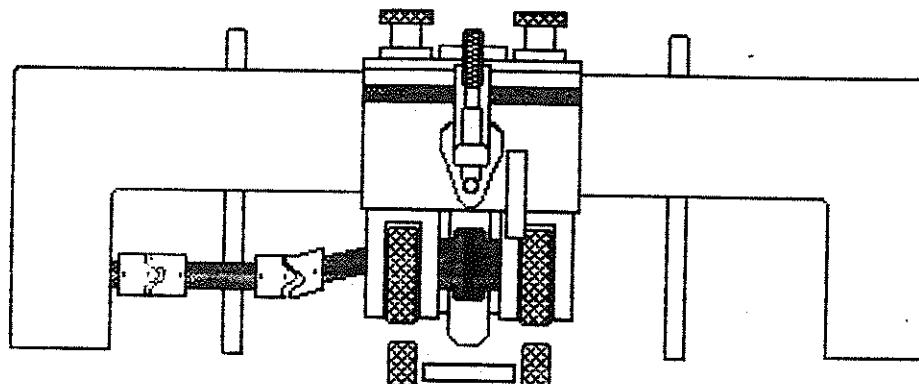
Place several pieces in the feeder and run the machine using the run or jog button. If the piece pulls to one side as it leaves the feed rollers, the upper feed rollers are not set properly. Adjust until the mailing piece is fed smoothly by raising or lowering one of the upper feed rollers.

## JAM RELEASE

The feeder bridge contains a "Jam Release" that allows the gate and upper feed rollers to be raised in case of a double feed or jam. To engage the jam release simply pull down on the handle. Be sure and push up the handle and lower the gate and feed rollers after the jam has been cleared and before continuing operation.

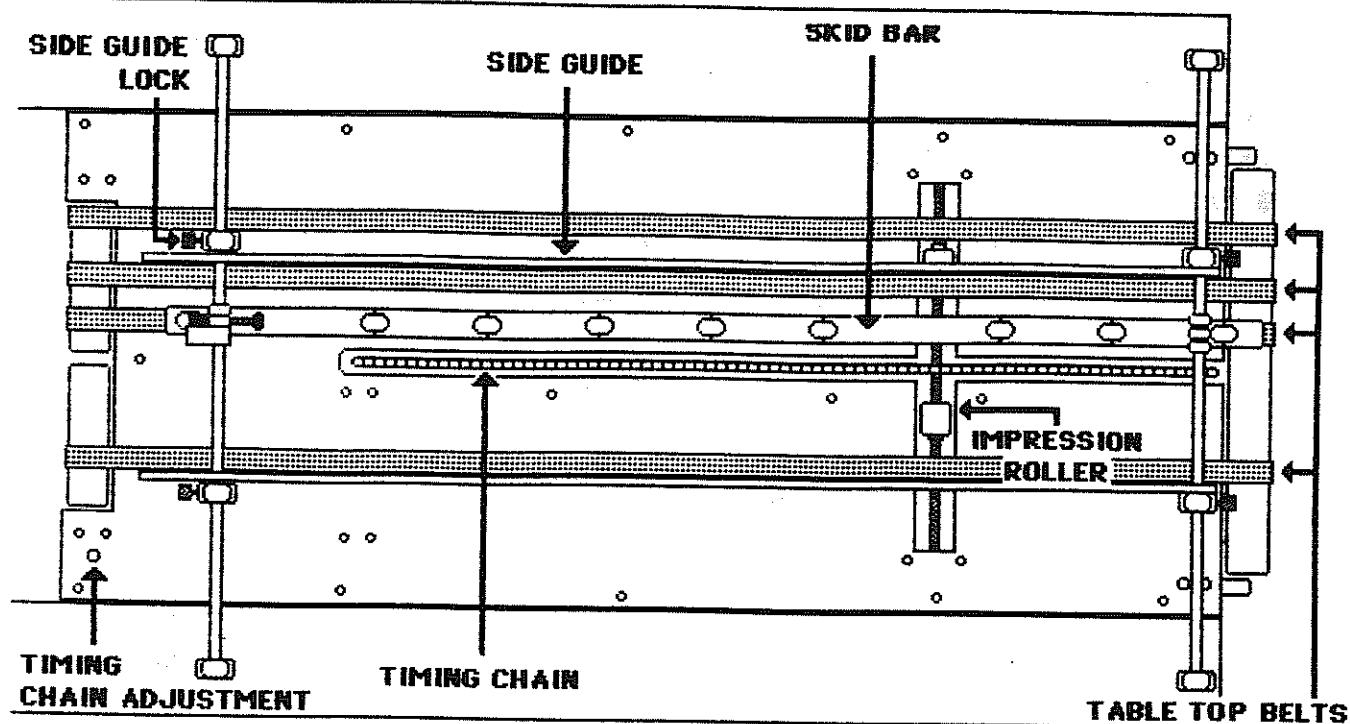


Jam release in up position with gate and feed rollers down.



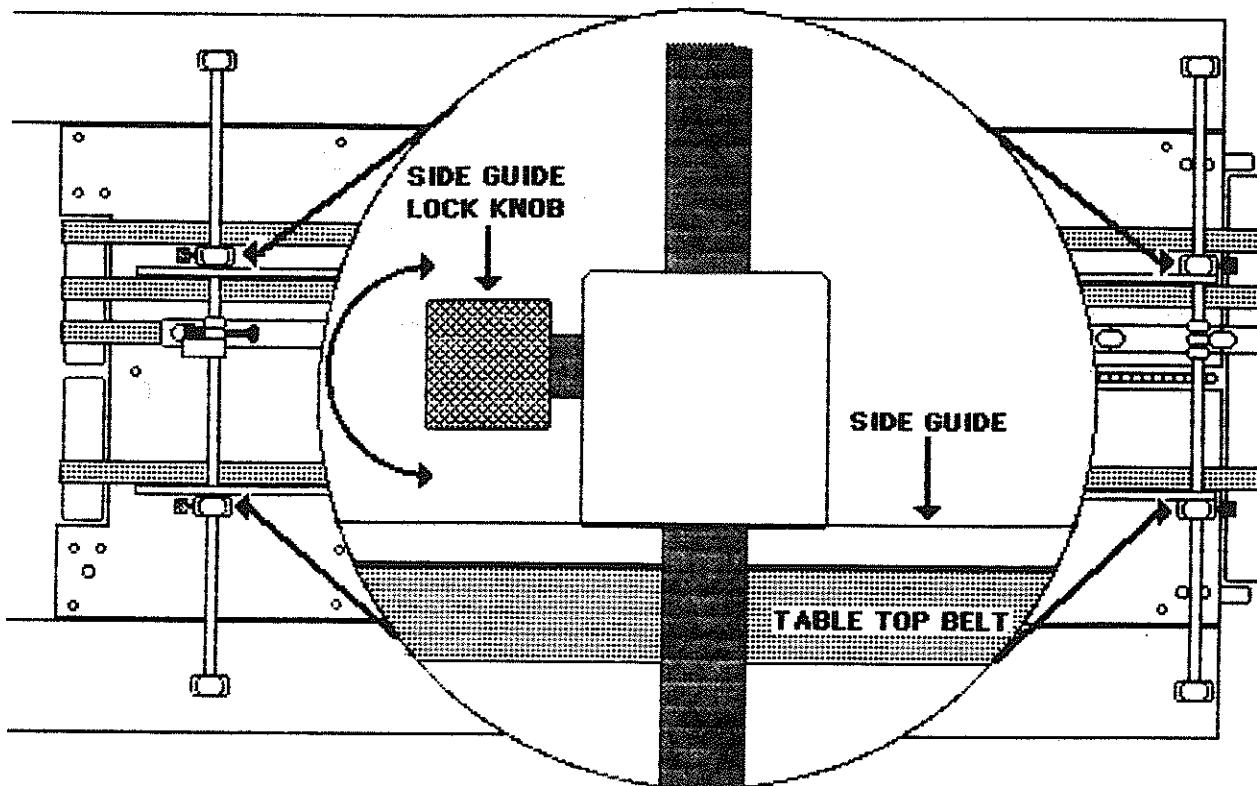
Jam release pulled down raising gate and feed rollers.

## TABLE TOP COMPONENT LOCATION



## SIDE GUIDES

Once the product has been fed out through the feed rollers the table top can be set. The first item to set up is the side guides. With the main power and feeder vacuum pump on, load the hopper and feed a piece out past the feed rollers. At this point, the two side guides can be brought in to either side of the piece with approximately  $1/8$ " play on either side. The side guides are held in place with lock knobs that can be turned either way to lock the guides in place.

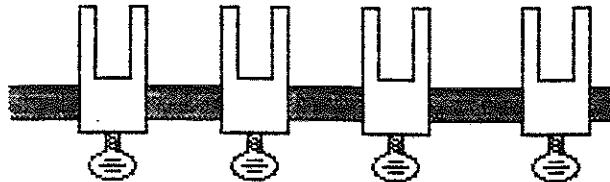


If the side guides are too tight, the mailing piece will not move across the table top, if they are too loose the mailing piece may skew and the label will be placed on crooked.

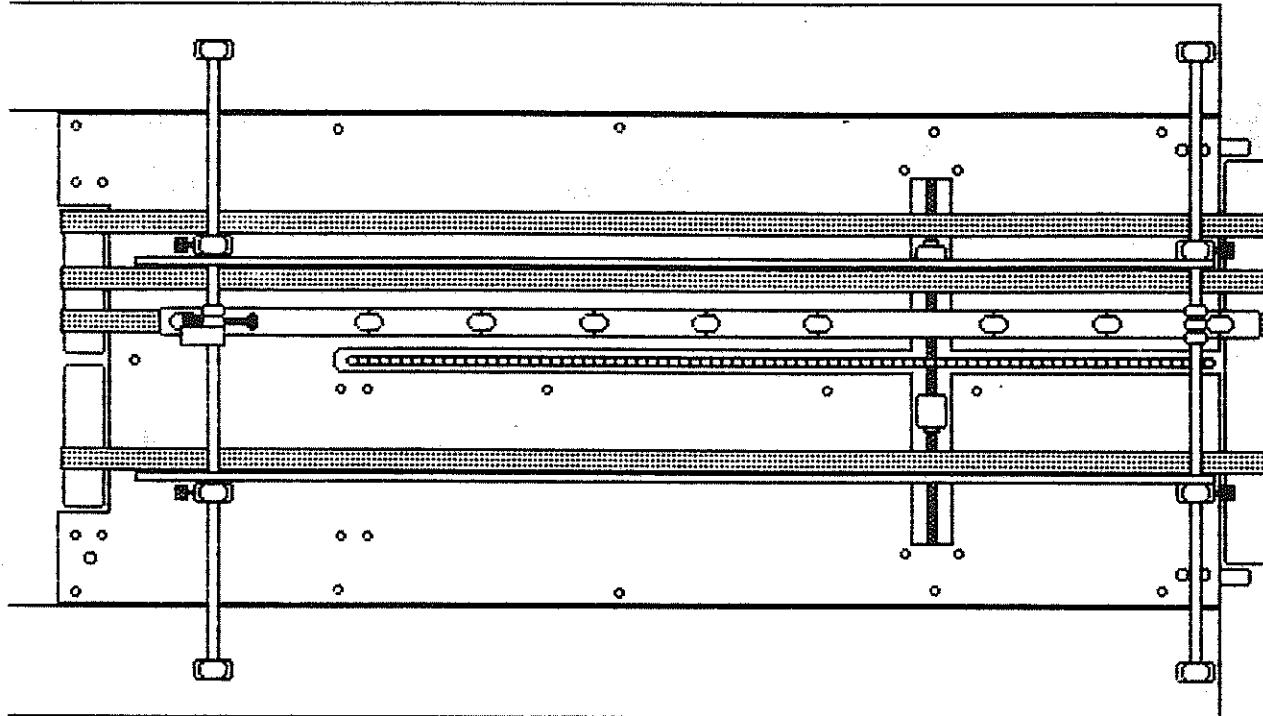
## TABLE TOP BELTS

The table top belts are designed to transport the product from the feed rollers, under the labeling head and onto the conveyor. There are four table top belts on the KR215 base however, not all of them are needed for every product. You may run the belts that are not needed outside of the side guides.

Underneath the table top are located guides for the table top belts. Each belt has its own guide. To move the belts, simply loosen the thumb screw on the bottom of the guide and slide the guide on the shaft to the desired position, and then tighten the thumb screw.



The belts should be positioned so that there is a belt riding next to each side guide and one underneath the skid bar.

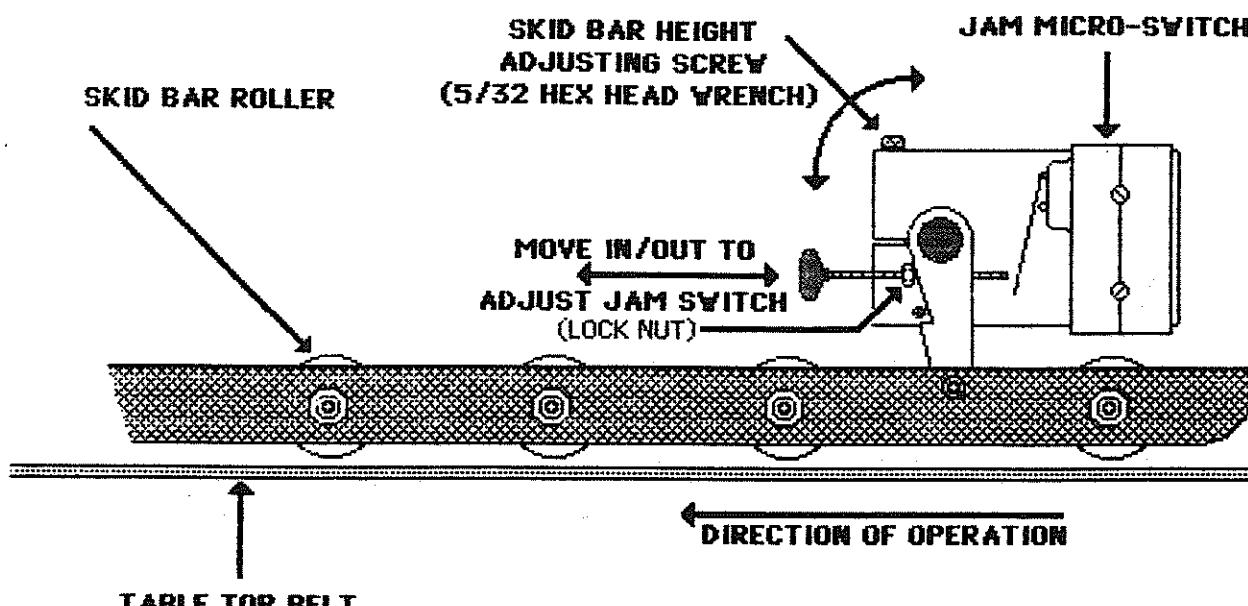


The fourth belt is normally used when running large product such as newspapers or heavy product such as magazines.

**SKID BAR**

The skid bar(s) rides on top of the product to help transport the mailing piece across the table top. THE SKID BARS should be placed over one of the table top belts for best results. To move the skid bars locate and loosen the 1/8" hex head set screws in the lock collars on the right hand side of the machine, the left hand side of the machine has a lock collar and a skid bar block that is held in place with a 5/32" hex head screw. The KR215 base is furnished with two skid bars, one should be removed when running small pieces such as cards or envelopes, and reinstalled when running large or heavy product.

Attached to one of the skid bars is a "jam detector switch". This switch, when properly set, will stop the machine when a jam or double feed occurs.

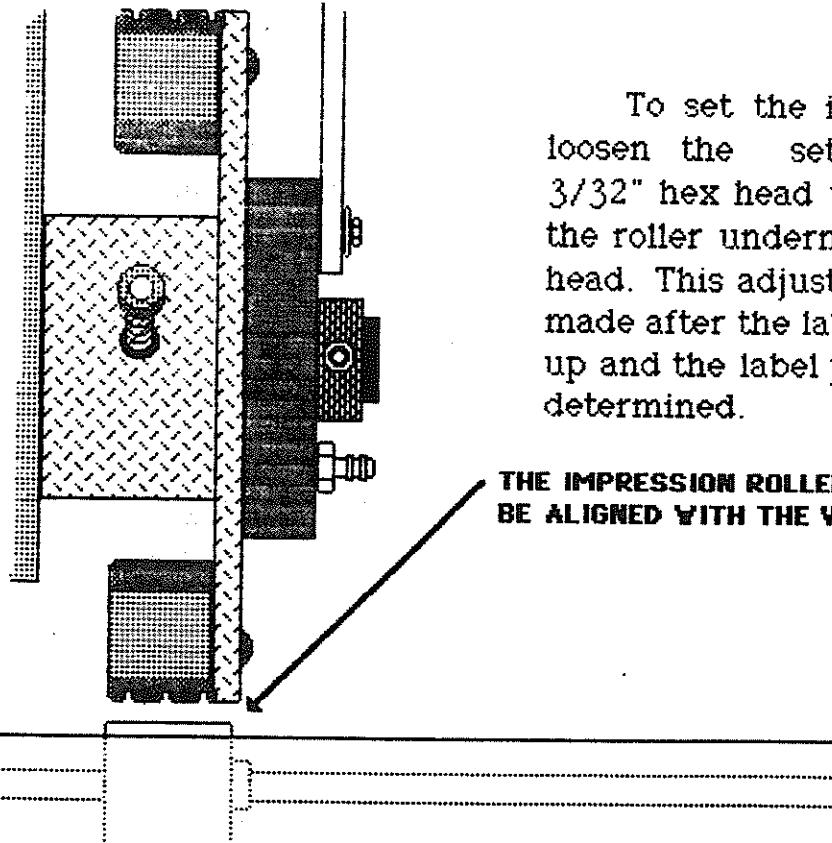
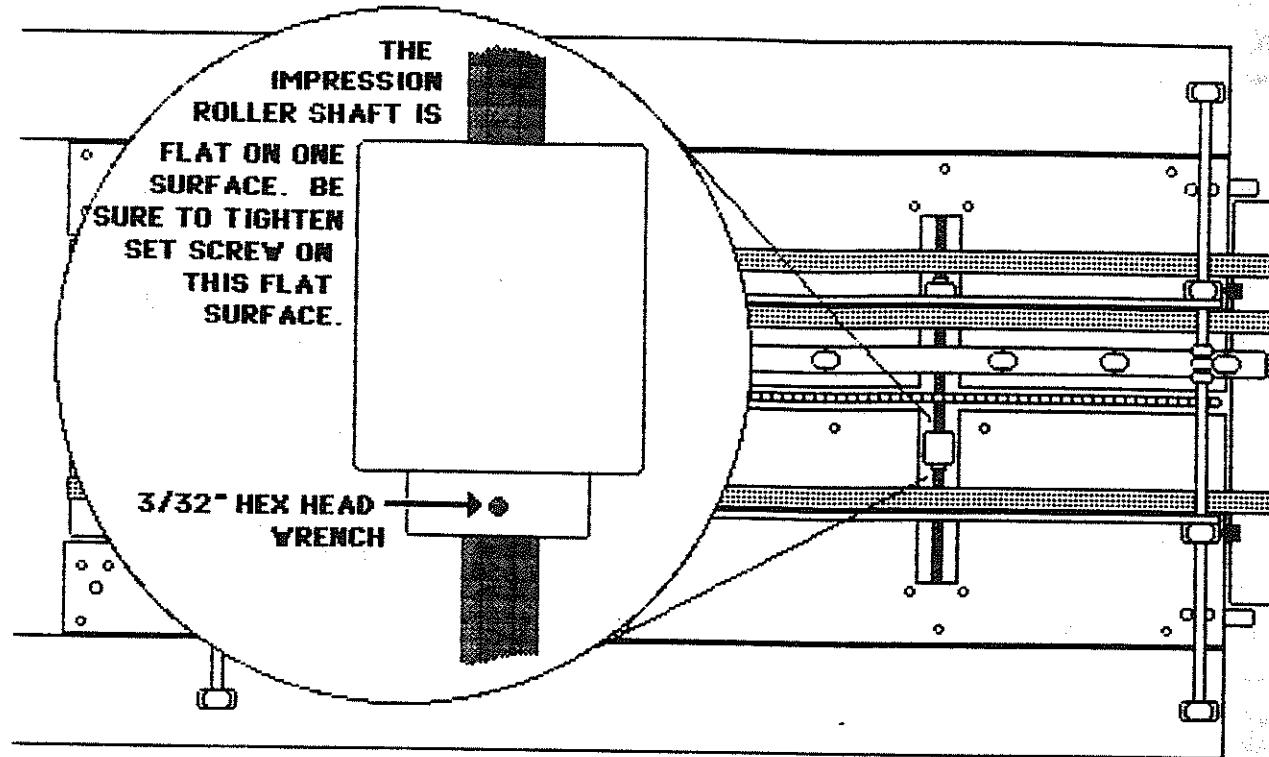


To set the skid bar, rotate the machine until a mailing piece is under the skid bar. Loosen the 5/32" hex head screw on the skid bar block and adjust until the skid bar is resting on the mailing piece and the skid bar rollers rotate as the product is transported. Lock in place with the 5/32" hex head screw.

The Jam switch is adjusted by loosening the lock nut, moving the adjustment knob in or out and tightening the lock nut. The micro switch should disengage and stop the machine when a jam or double feed occurs. NOTE the machine will not run if the jam switch is not set properly, see section 215.40.

## IMPRESSION ROLLERS

The table top is furnished with two impression rollers, one on either side of the timing chain. The purpose of these rollers is to give the labeling head a press point when the labels are applied, allowing a positive adherence of the label.

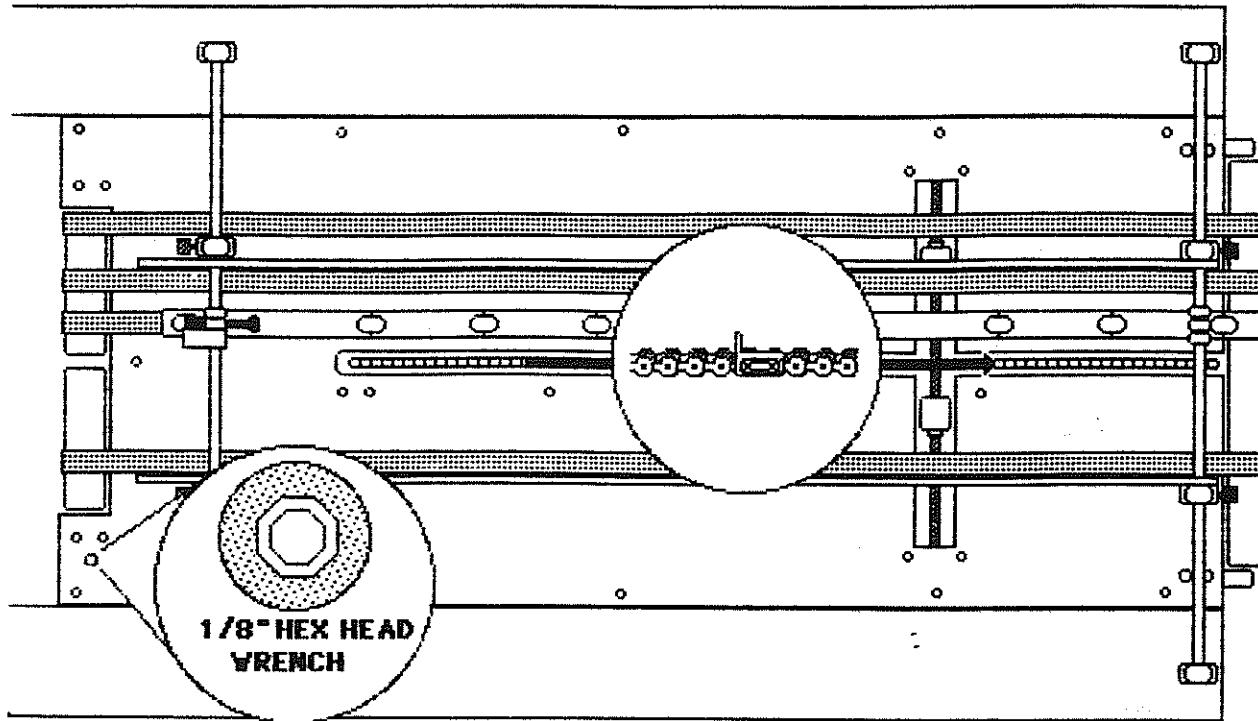


To set the impression roller, loosen the set screw using a  $3/32"$  hex head wrench and slide the roller underneath the labeling head. This adjustment is normally made after the labeling head is set up and the label position has been determined.

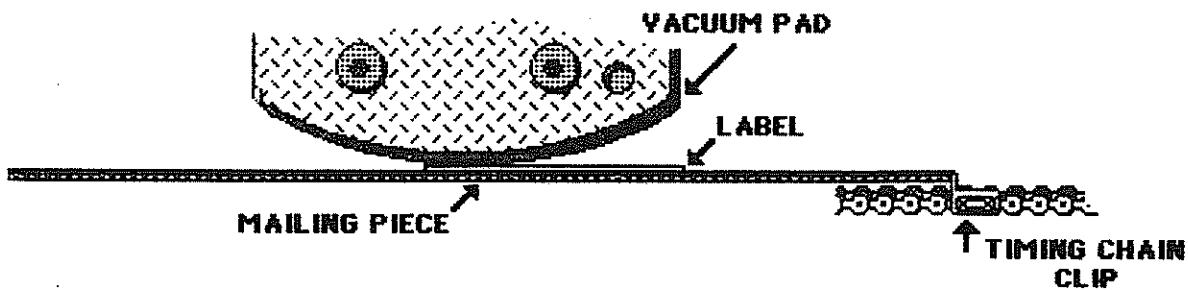
THE IMPRESSION ROLLER SHOULD  
BE ALIGNED WITH THE VACUUM PAD.

## SPACING CHAIN

The spacing chain is designed to hold the mailing piece back as it is being labeled so that a consistent placement can be maintained. This is very important when labeling product that must be inserted into a windowed envelope. To set the spacing chain, locate and loosen the  $1/8"$  hex head wrench set screw located through the hole in the table top.



This set screw, when loosened, allows the spacing chain to be moved by hand into the proper position. The spacing chain is correctly set when the mailing piece catches up to the lug on the chain just as the label is being applied.



Once the chain is set, tighten the set screw ( $1/8"$  hex head wrench) through the hole in the base.

If the mailing piece is marked or deformed by the lug as the label is being applied, the problem may be with the spacing chain timing.

## HEAD HEIGHT ADJUSTMENT SETTING HEAD PRESSURE

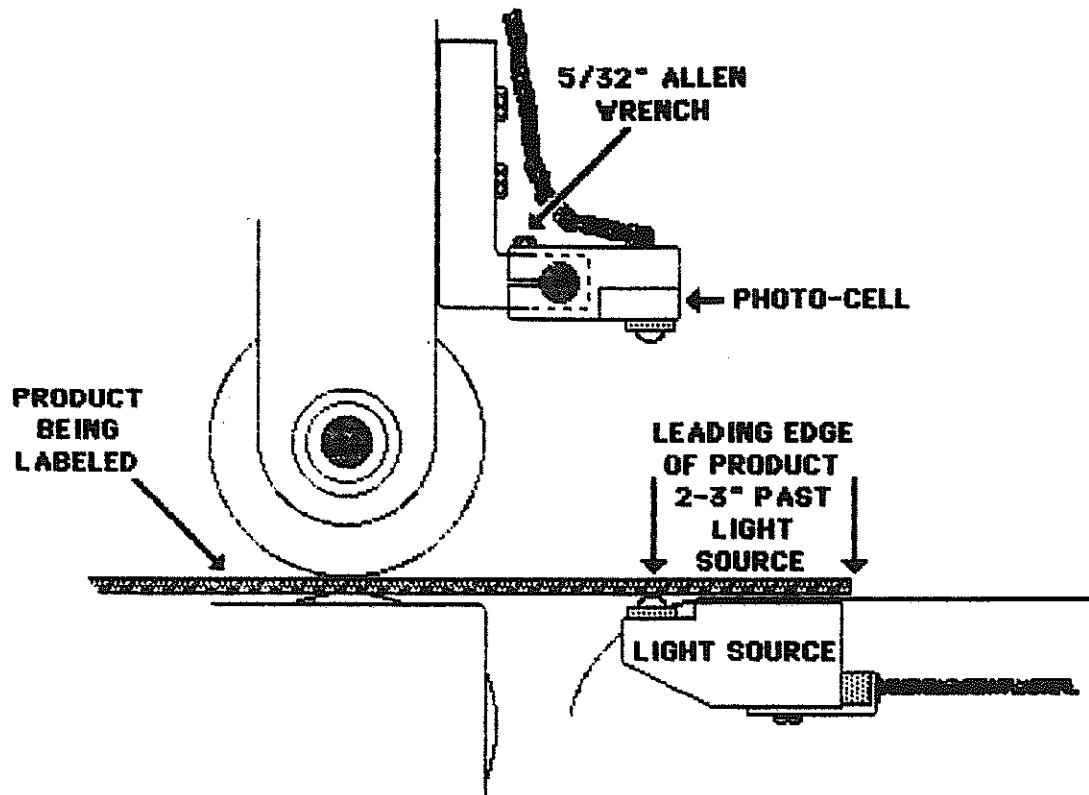
The head height adjustment knob moves the labeling head drive up and down so the proper pressure can be applied to the mailing piece. Rotating the knob clockwise raises the head and counter clockwise lowers the head.

There should only be enough pressure to ensure the label adheres to the mailing piece properly. If there is too much pressure, the product will be deformed, if there is not enough pressure, the labels may not adhere.

To set the pressure, slowly run the base with product and note the impression roller shaft. The shaft should turn only when a mailing piece is present. When the machine is stopped with the labeling pad on the mailing piece, you should be able to pull the piece out with slight resistance.

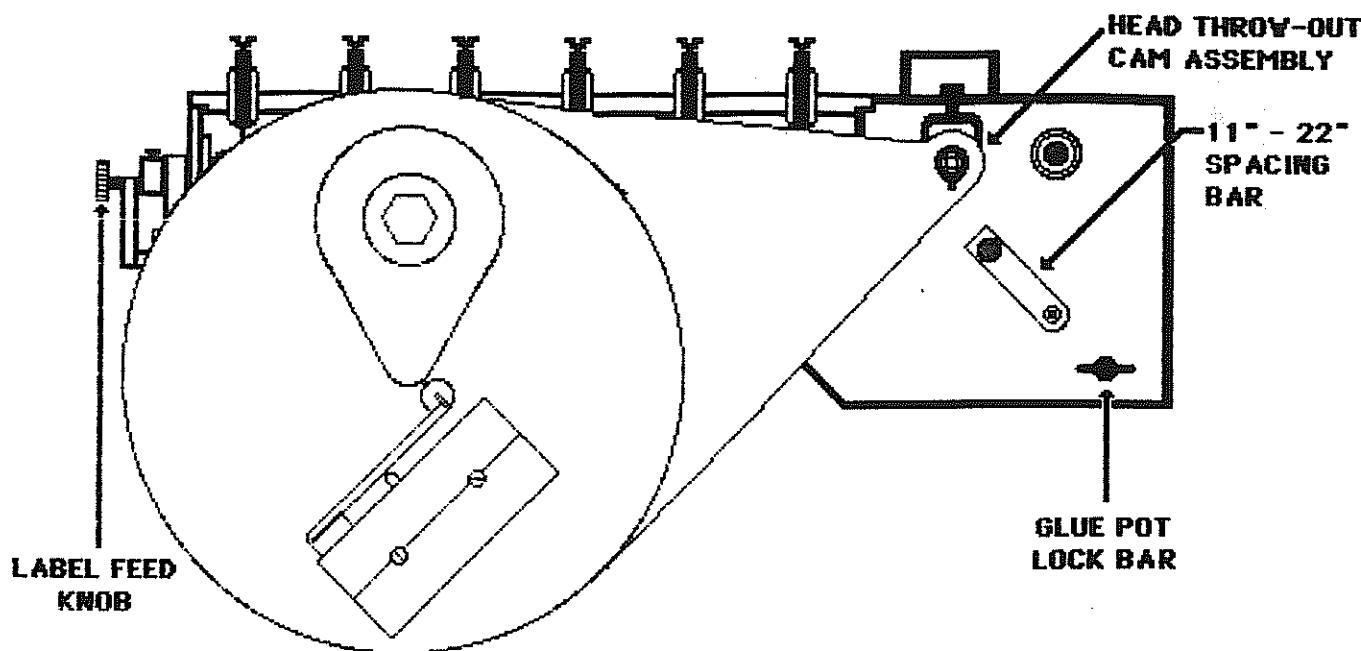
## TIMING THE BASE AND HEAD

The KR215 base is designed to signal the labeling head of the presence or absence of product, so that labels will not be fed when no mailing piece is presented. The base is equipped with a light source and photo-cell that, in conjunction with a cam and micro-switch on the labeling head, operate a solenoid on the labeling head to control the feeding of labels. The photo-cell and light source must be aligned and the density of the light must not penetrate the mailing piece. The light adjust knob on the control panel controls the brightness of the light. For thin product, turn this knob counter-clockwise to the lowest setting that allows the mis-feed detection system to work.

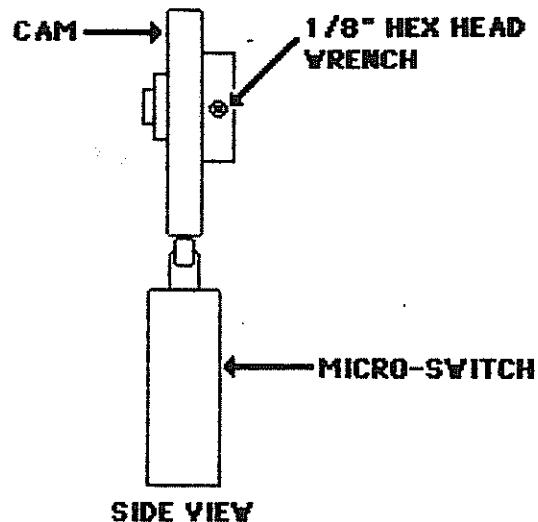


To set the mis-feed detection, with power and vacuum on, turn the density on light adjust knob to zero and run several pieces through the machine. Rotate the machine by hand until a mailing piece has fed and its leading edge is 2-3" past the light/photo cell.

## TIMING THE BASE AND HEAD

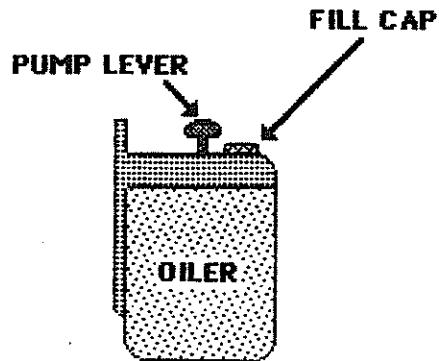


Locate and loosen the set screw (1/8" hex head wrench) that holds the micro-switch cam on the labeling head. With the mailing piece positioned 2-3" past the photo-cell, rotate this cam counter clockwise (as you stand behind the machine) until the micro-switch is engaged. Tighten the set-screw and turn the light intensity up. Run the machine and hand feed several pieces one at a time to check for proper mis-feed detection.

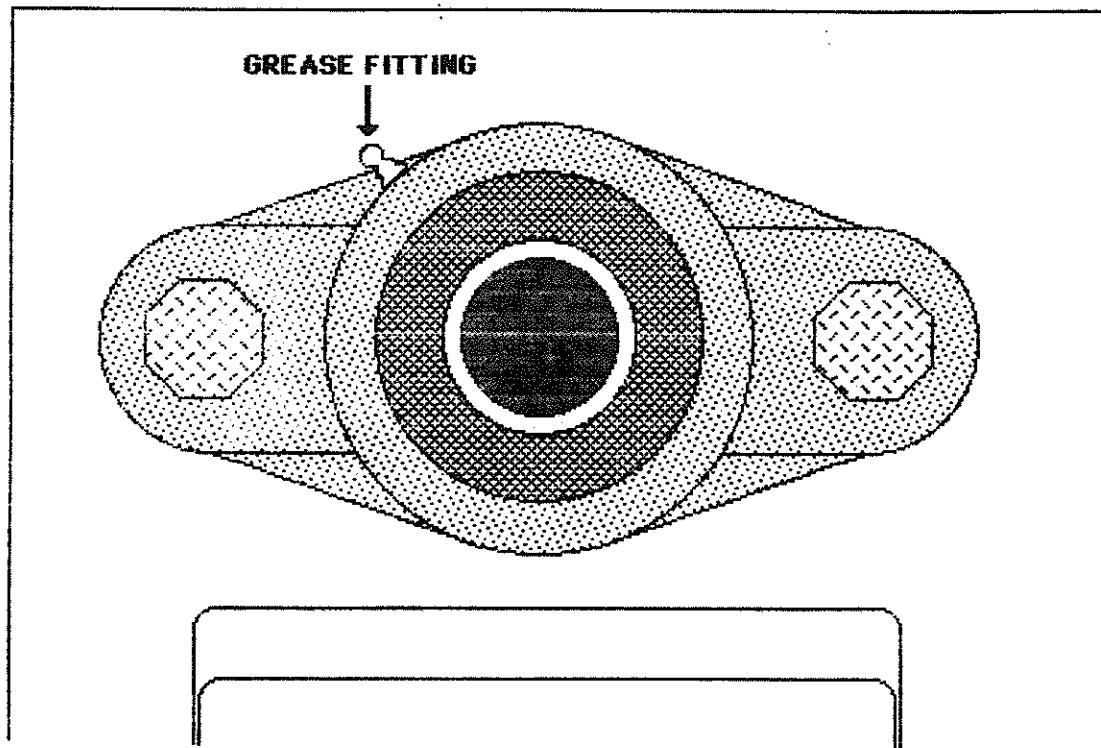


## MAINTENANCE AND LUBRICATION

The operator should keep the KR215 base clean and lubricated on a daily basis. The base has a central oiling system that only requires the operator to pull the pump lever on the oiler. This should be done every two hours of operation. The oil recommended is a 20 weight SAE machine oil.



The only other requirement for lubrication is a grease fitting located on the head drive pillow block. This fitting should be routinely greased every month or so depending on usage of the equipment.

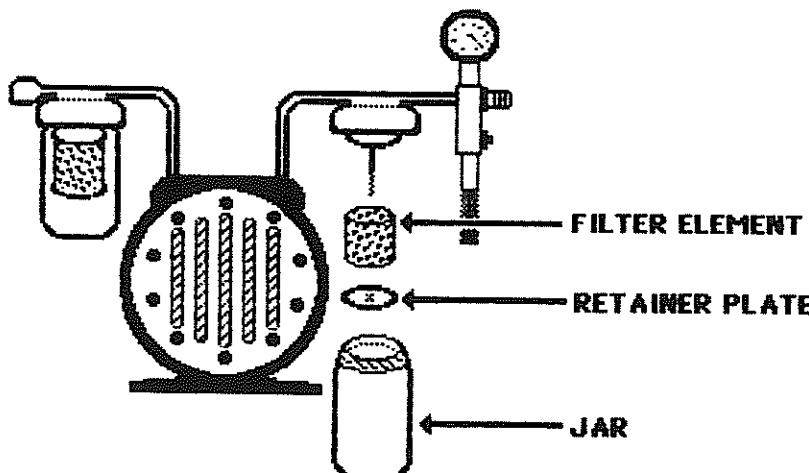


## MAINTENANCE AND LUBRICATION

## Daily Functions of Key Operator

## LABELING BASE

<u>Item</u>	<u>Function</u>	<u>Remarks</u>
Upper & Lower Feed Rollers	Remove glazing and all other foreign materials from feed surfaces.	Use alcohol
Base (General)	Remove excessive paper dust, ink, glue and all other foreign materials from the table top and inside of base.	Use clean soft rag. (Dampen with water if necessary.)
Photocell & Light	Remove paper dust or any other foreign material	Use clean soft rag. (Dampen with water if necessary.)
Vacuum Pump Filters	Remove paper dust.	Rap edge of filter against a hard surface or vacuum. If unable to clean replace with new filter.
Vacuum Pump Filter Jars	Clean jars thoroughly.	Use warm water and dry thoroughly. CAUTION: Improper replacement or cracked rims of jars can result in a loss of vacuum. Insure jar are installed correctly and have a proper seal.



## OPTIONS AND RECOMMENDED SPARE PARTS

The KR215 base can be modified to handle a variety of applications, contact your KIRK-RUDY dealer or call KIRK-RUDY direct to discuss your specific application.

Here is a list of some of the options offered for the KR215 Base.

- Rubber Tip Feeder Gate
- In-Line Label Base for Second Application Head
- Predetermining Counter with either Kicker or Speed up conveyor (Not required when TS500 Town Sort is used)
- Ink Jet Configuration Package
- Modifications to increase thickness limits
- Auto Load Conveyor (Designed for ease of loading of thick product, automatically maintains pre-determined level in feeder)
- Production Monitor
- Shuttle "Low Product" Detector (stops machine)
- Differential Label Control (allows label adjustment -left to right- while machine is running)

The following spare parts should be kept on hand and replaced as used:

QTY	PART #	DESCRIPTION
3	190244	BULB
2	500746	BOTTOM FEED ROLLER
1	190100	MICRO SWITCH
1	108901	TIMING BELT
1	190229-A	PHOTOCELL-WIRE ASSY
2	500745-A	TOP FEED ROLLER ASSY
1	190101	MICRO SWITCH
2	500737	BUMPER WASHER
3	500738	VALVE SPRING
4	208001	FUSE 4 AMP
4	208002	FUSE 5 AMP
4	208005	FUSE 10 AMP
1	202102	AMPLIFIER
1	202100	RELAY
4	200100-2	VACUUM FILTER

## TABLE OF CONTENTS

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211.90	1	ALIGNING THE MAILING LIST
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211.210	2	OPTIONS, ATTACHMENTS AND RECOMMENDED SPARE PARTS

**SPECIFICATIONS**

**POWER REQUIREMENTS:** 220 Volts supplied by Labeling Base

**MINIMUM LABEL PAPER:** 3" CENTER HOLE PUNCH  
**MAXIMUM LABEL PAPER:** 14 7/8" STANDARD COMPUTER PAPER\*

**LABEL FORMATS:** 1,2,3,4,5 AND 6 ACROSS

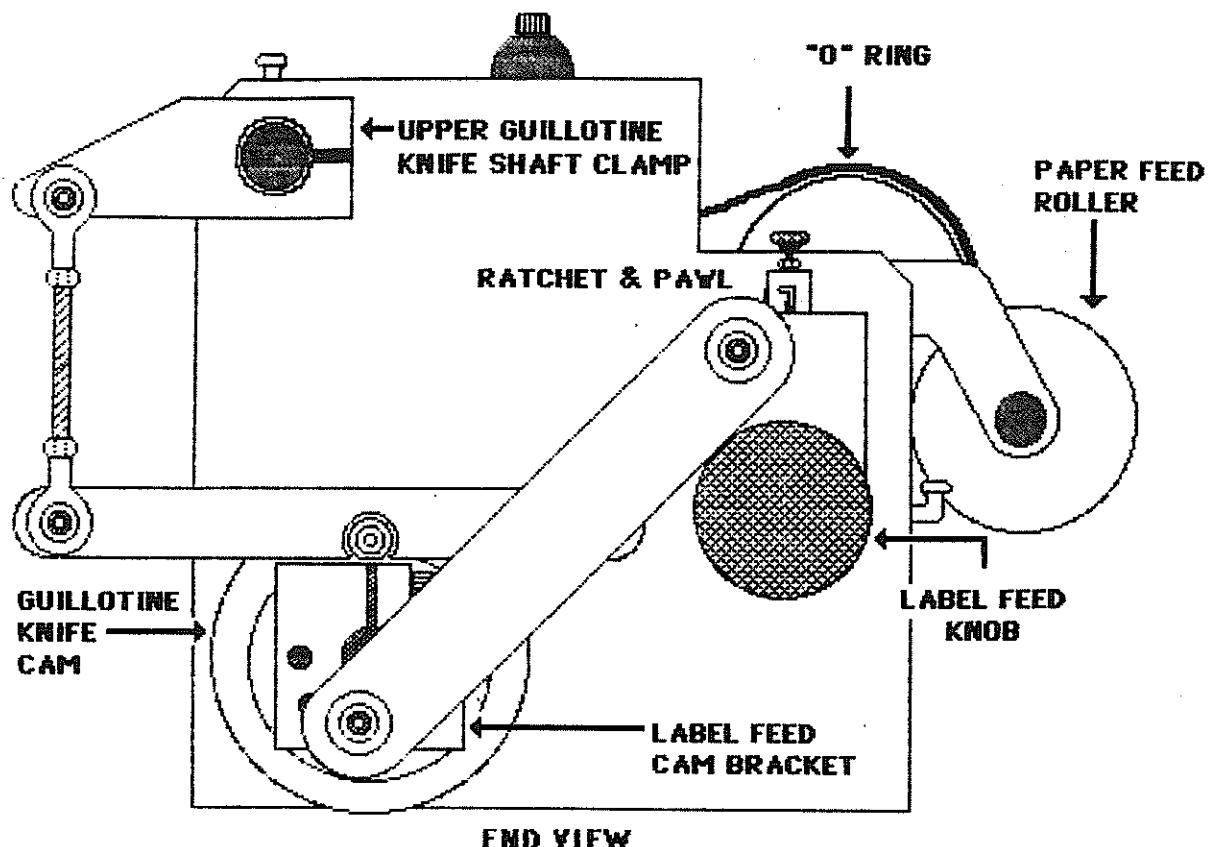
**LABEL LENGTH:** 2" TO 4.5"

**LABEL HEIGHT:** 1/2" TO 2"

**LABEL STYLES:** GLUE (PLAIN PAPER AND PIGGY BACK) AND HEAT ACTIVATED

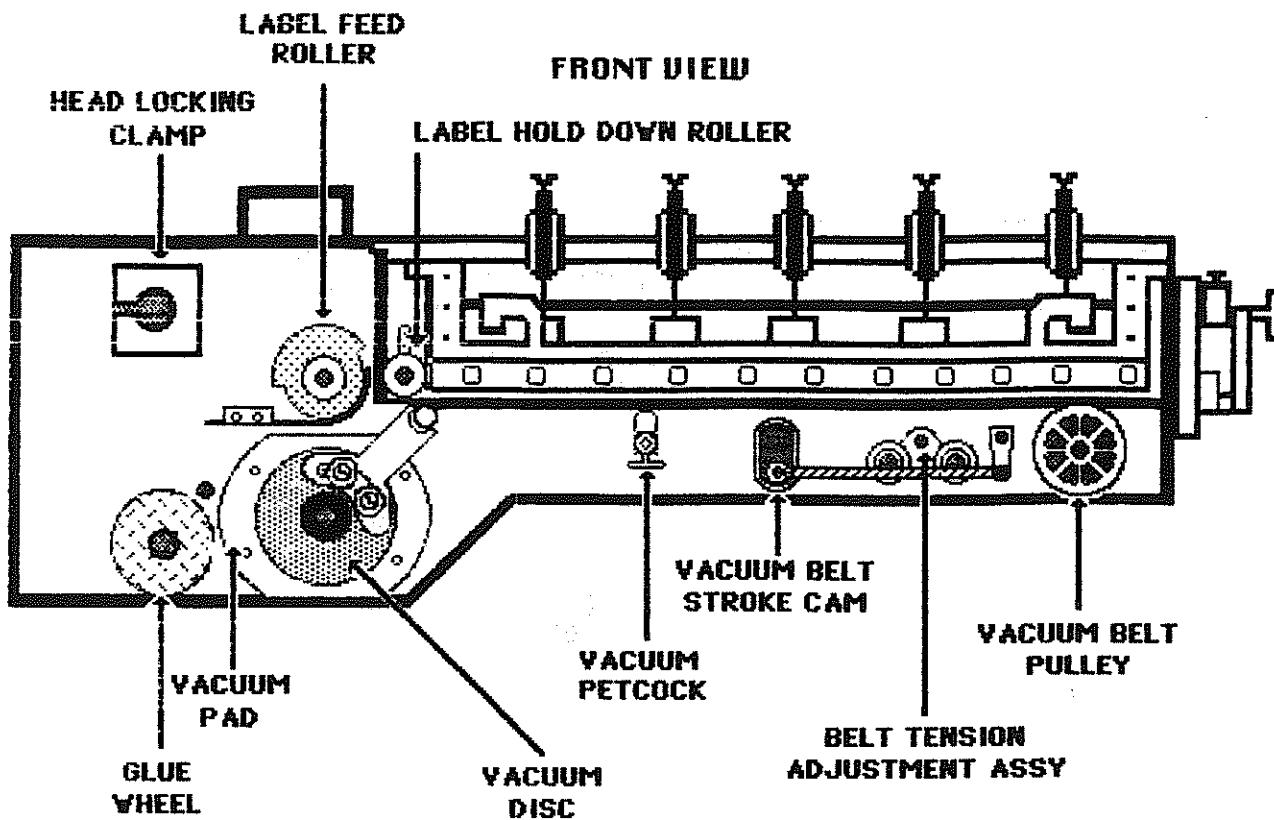
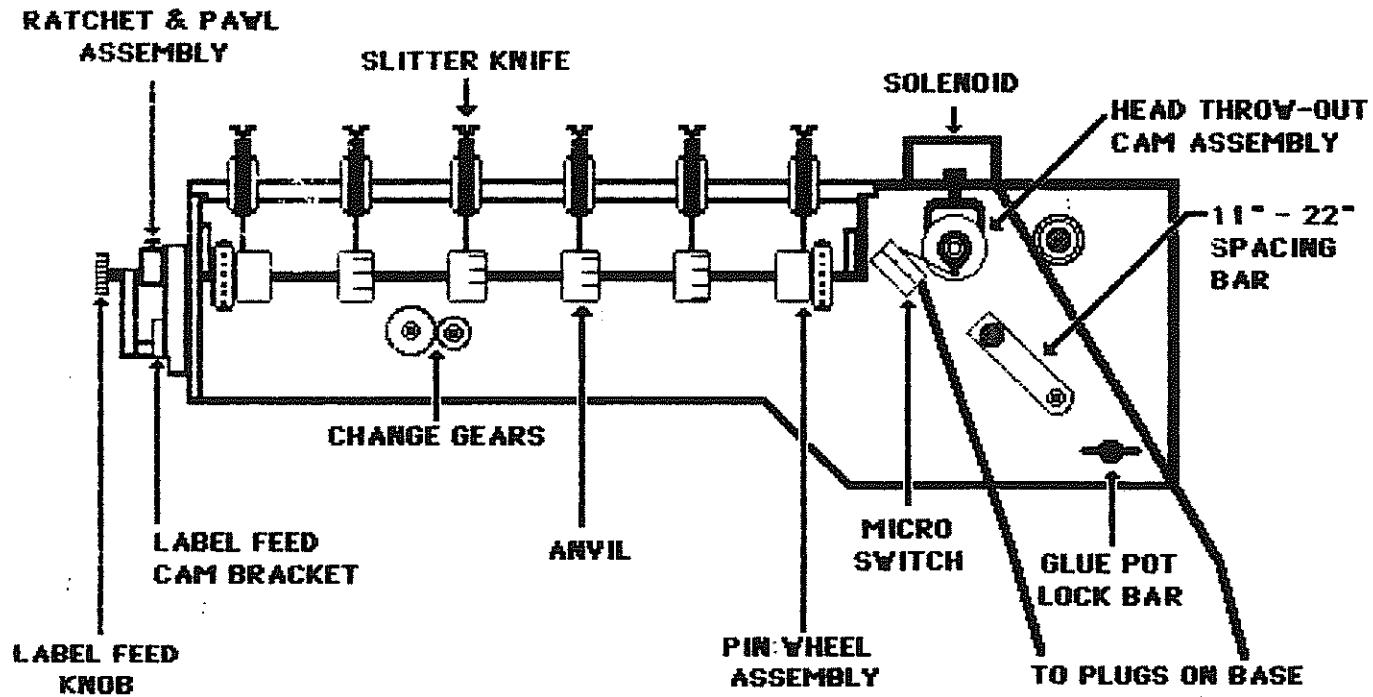
\*See options/attachments section for additional information

## COMPONENT LOCATION



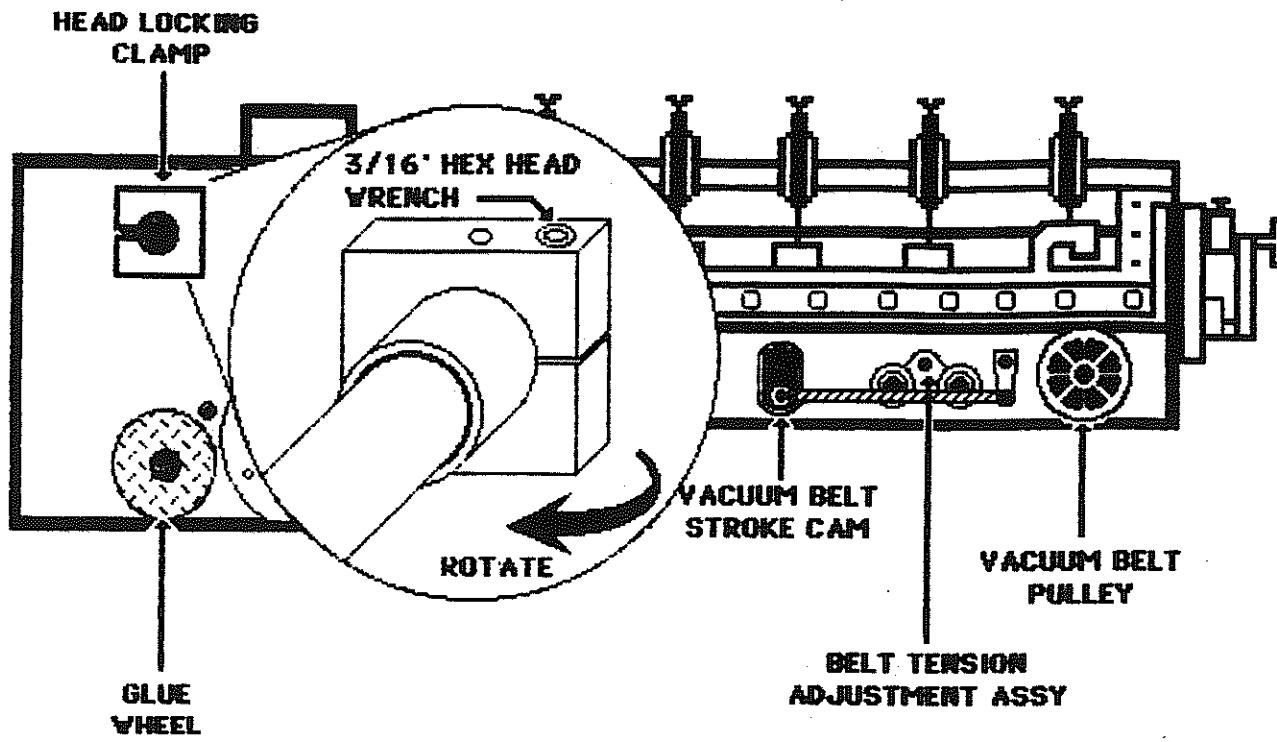
END VIEW

## COMPONENT LOCATION

**REAR VIEW**

## DESCRIPTION, SEQUENCE OF SET UP AND MOUNTING HEAD TO BASE

The labeling head is clamped to this shaft. To adjust the position of the labeling head, loosen the clamp and slide the head back or forth for front to back label position. To position the label left to right loosen the clamp and turn clockwise or hold the clamp and rotate the base by hand. Be sure to plug head into base.



## Sequence of set up

1. Determine label format and label length.
2. Set belt stroke.
3. Position slitter knives and set anvils.
4. Align mailing list and pin wheels.
5. Set slitter knives.
6. List transfer through "O" ring drive and stripper plate.
7. Adjust ratchet and pawl.
8. Check guillotine knife and label feed timing
9. Set transfer of labels to vacuum belt
10. Install glue pot, wheel and scrapper.
11. Set label position and time labeling head to base.

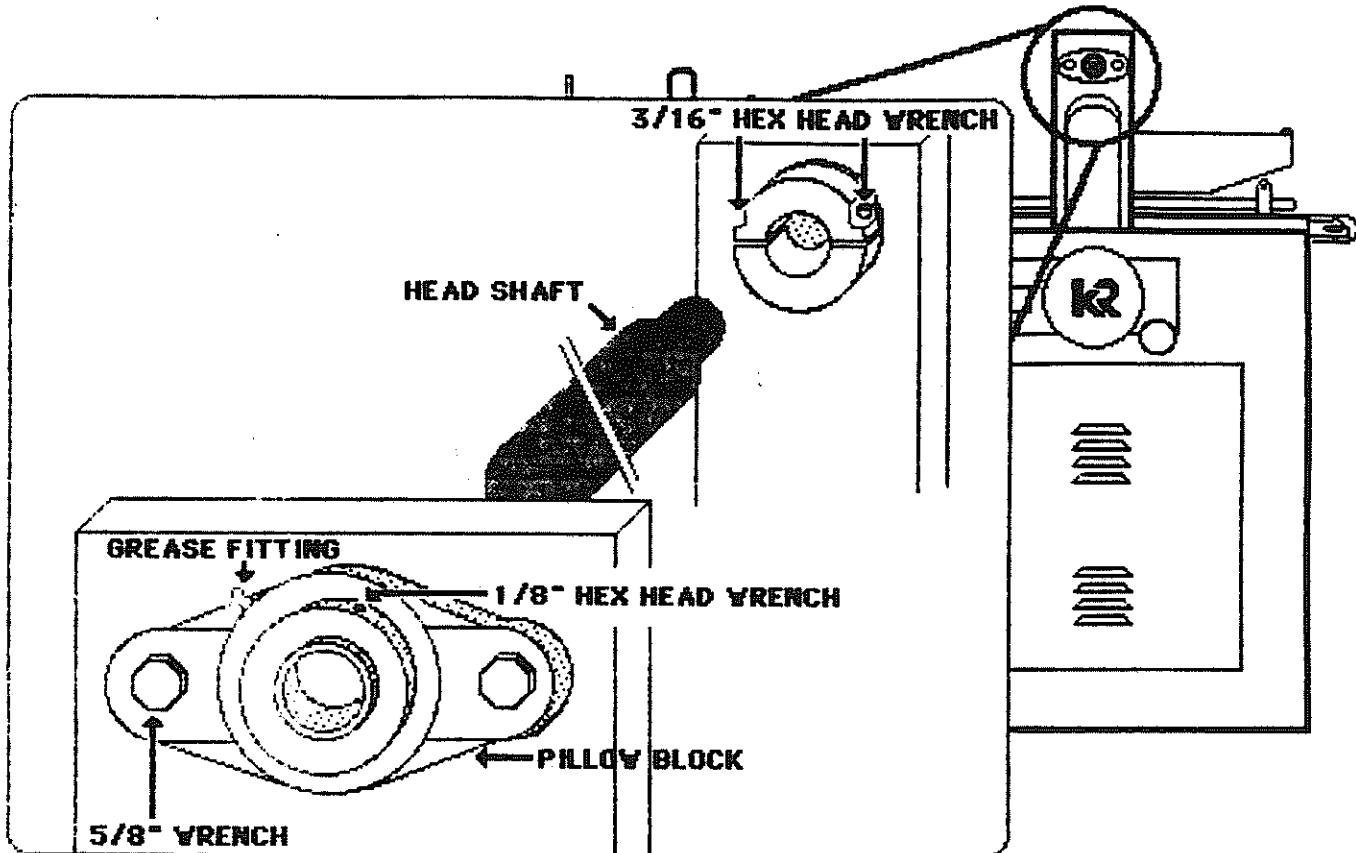
Not all of these adjustments will need to be made every time the machine is set up for a new job. However this check list should be followed and the trouble shooting section referred to if problems arise after a new job has been started.

\* time the labeling head and base see section 215.190

## DESCRIPTION, SEQUENCE OF SET UP AND MOUNTING HEAD TO BASE

The KR211 labeling head is designed to take labels printed in a continuous pin-fed format, separate them into individual labels and apply them to a product with either glue or heat.

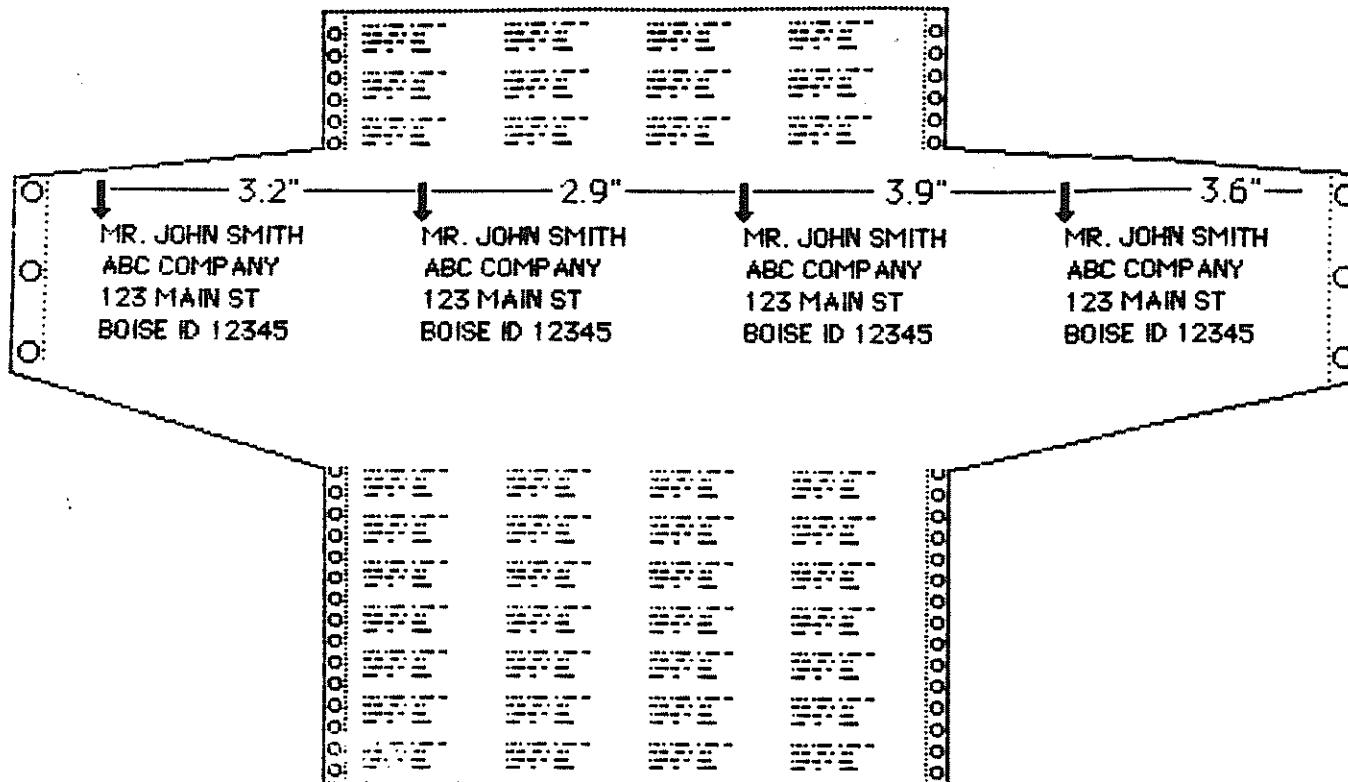
The computer form is fed in the labeling head, the pin-feed holes are trimmed off and the label width is scored. The scored labels are fed through a guillotine knife and cut into strips at a determined height. This strip is transported via a vacuum belt to a roller where individual labels are burst and transferred onto a vacuum pad past a glue wheel, or onto a heat wheel, and applied to the product.



The labeling head is mounted to the KR215 base machine with a drive shaft. The drive shaft is secured to the base with a pillow block on the front of the machine and a clamp on the rear of the base. The clamp on the rear is driven and is what drives the head.

## DETERMINING LABEL LENGTH

Determine label length by measuring from the first print position of the first label to the first print position of the second label. From the first print position of the second label the first print position of the third label, etc.

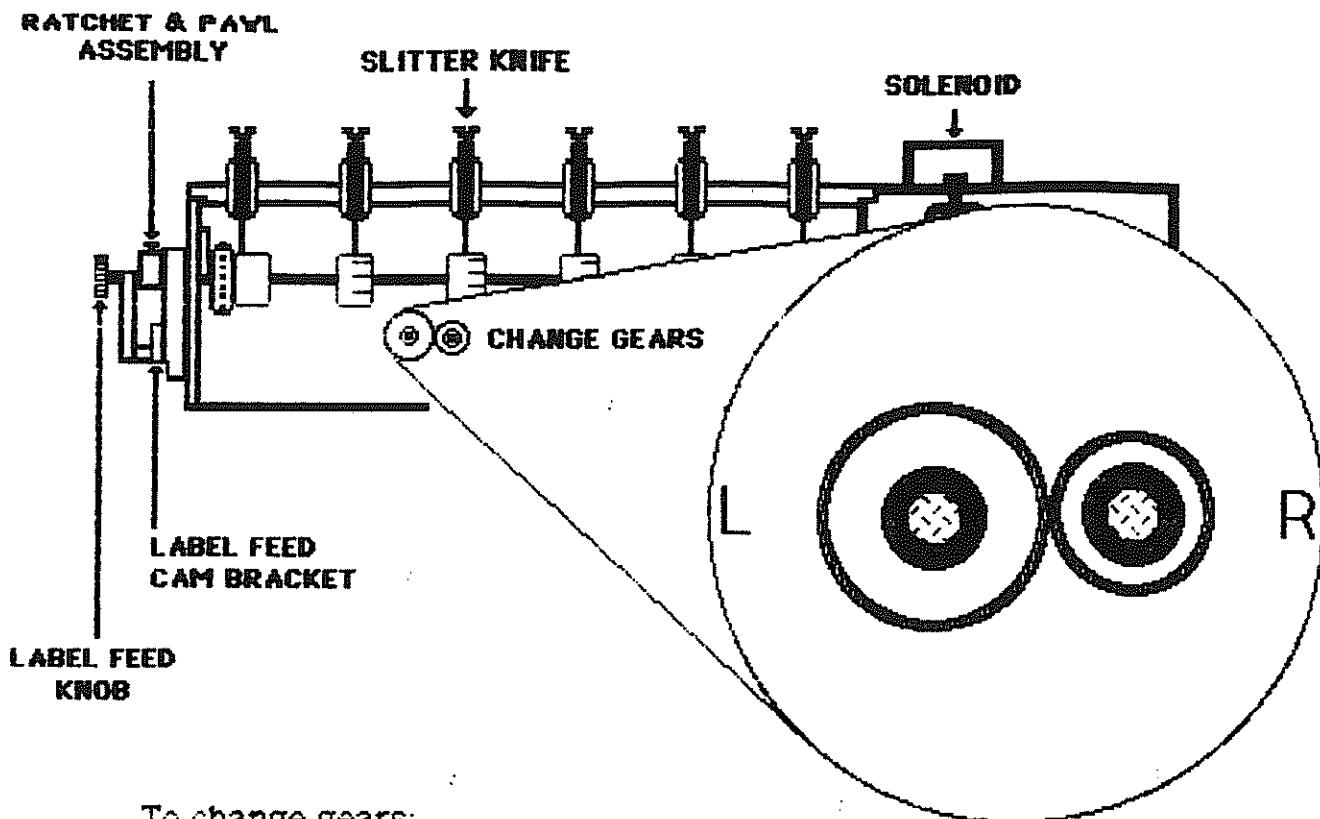


Add these label lengths and divide by the number of labels across to determine the average label length. This average label length will be used in setting both the scoring knives and the vacuum belt stroke.

EXAMPLE: 4 LABELS ACROSS (4-UP) 1ST LABEL LENGTH - 3.2"  
 2ND LABEL LENGTH - 2.9"  
 3RD LABEL LENGTH - 3.9"  
 4TH LABEL LENGTH - 3.6"  
 $13.6 \div 4 = 3.4"$

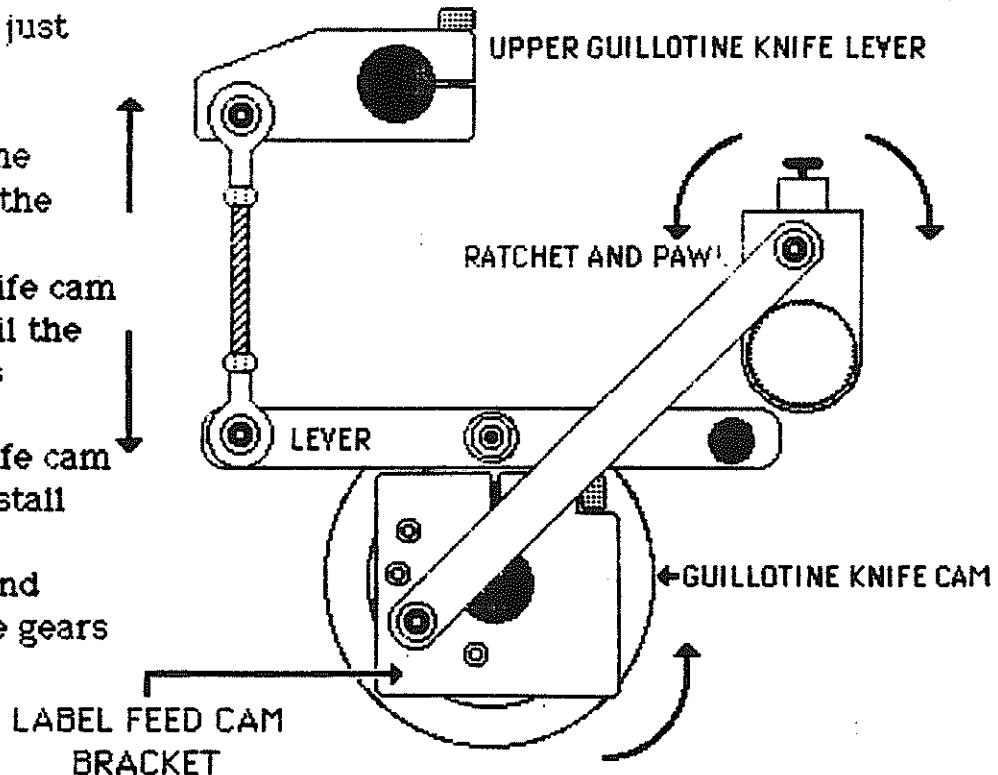
THE AVERAGE LABEL LENGTH IS 3.4 INCHES

## CHANGE GEARS



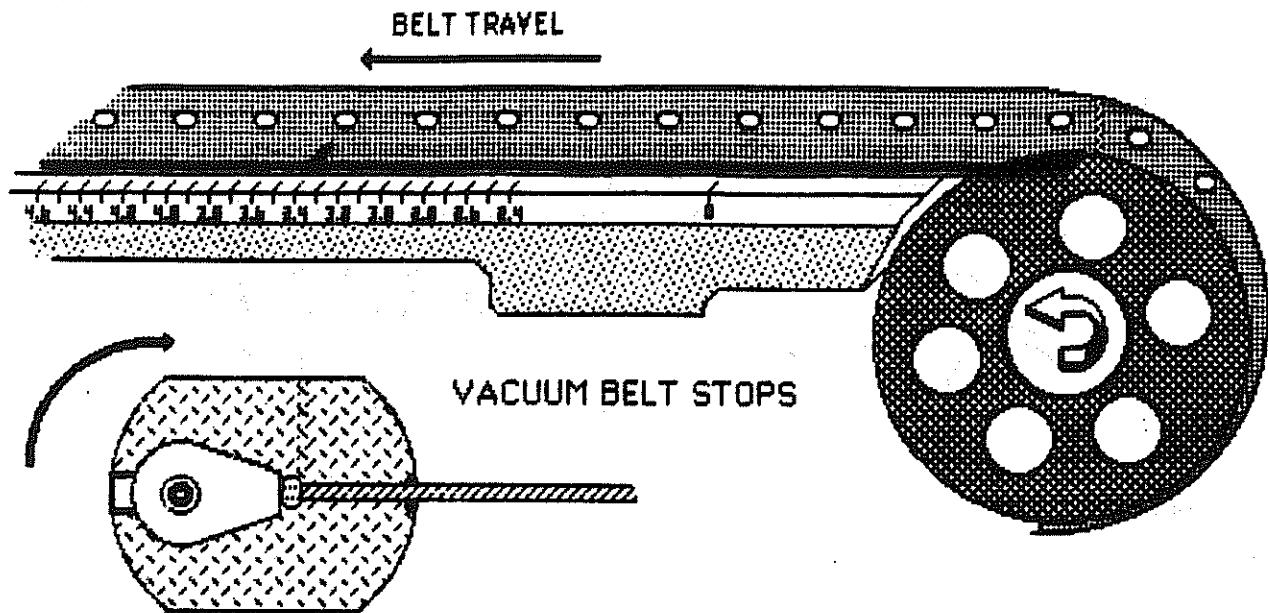
To change gears:

1. Rotate the labeling head until the vacuum belt just stops
2. Remove both gears
3. Put the new gear on the right side as you face the rear of the machine.
4. Turn the guillotine knife cam counter clockwise until the guillotine knife begins to come down.
5. Hold the guillotine knife cam in this position and install the left gear.
6. Replace the washers and bolts and lubricate the gears before operation.



## SETTING BELT STROKE

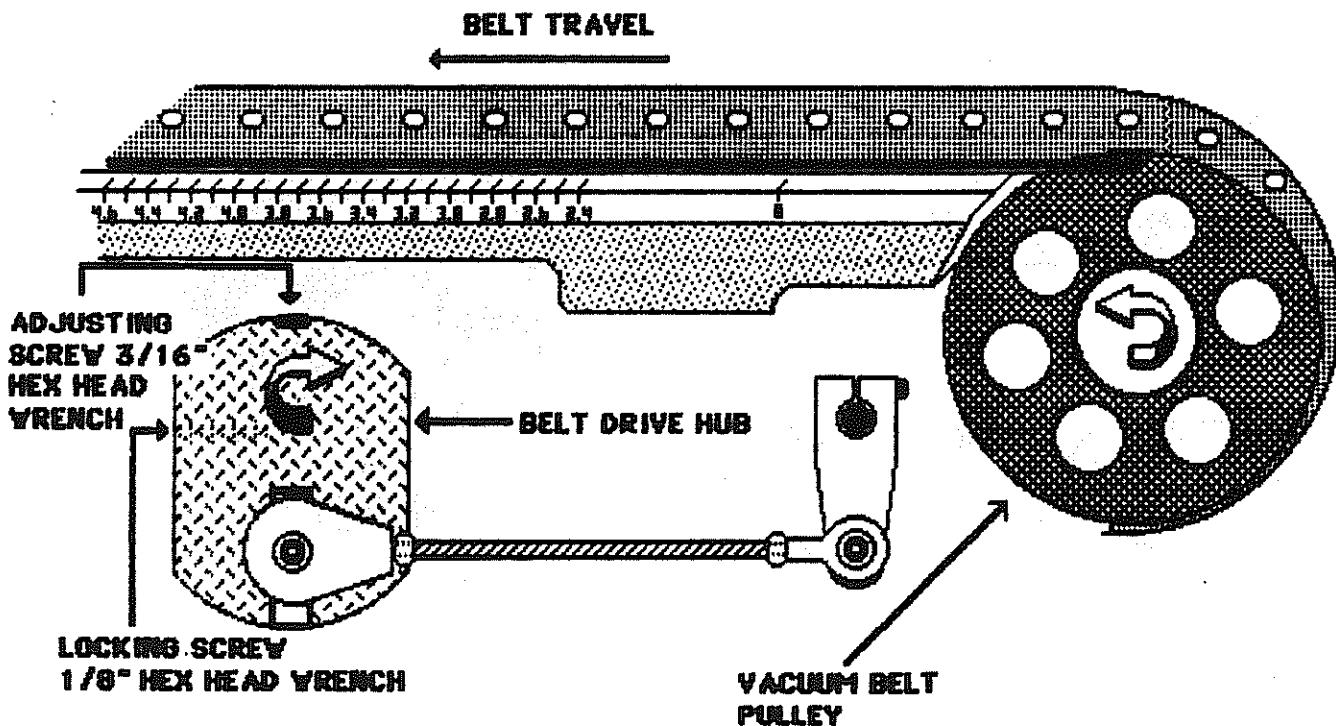
Rotate the head locking clamp clockwise by hand until the vacuum belt starts, makes one stroke and stops. Watch where the mark on the belt stops. Check belt stroke length by locating the number stamped on the vacuum belt support directly below the mark.



If the mark is not located over the number that equal the average label length, the belt stroke must be adjusted.

To do this, locate the locking screw (1/8" Hex Head Wrench) and loosen. Now adjustments may be made by turning the adjusting screw (3/16" Hex Head Wrench).

Turn the adjusting screw clockwise to shorten the belt stroke and counter clockwise to lengthen.

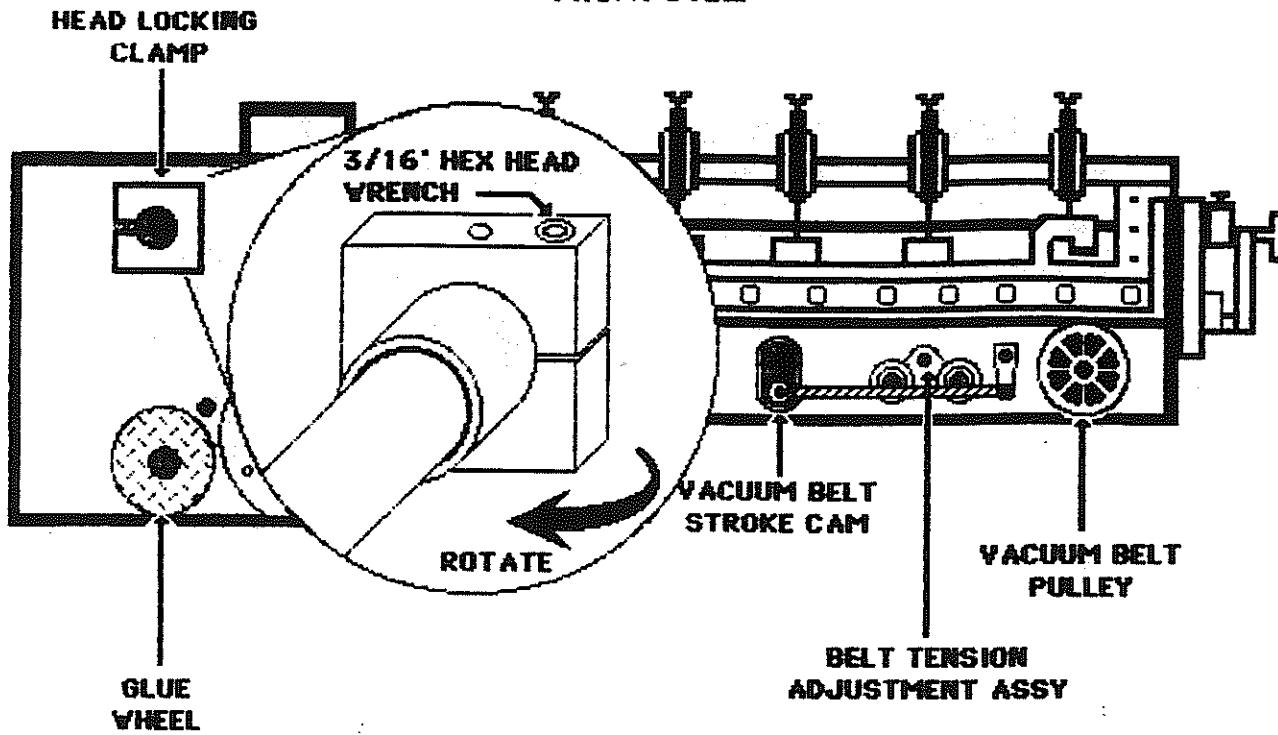


## SETTING BELT STROKE

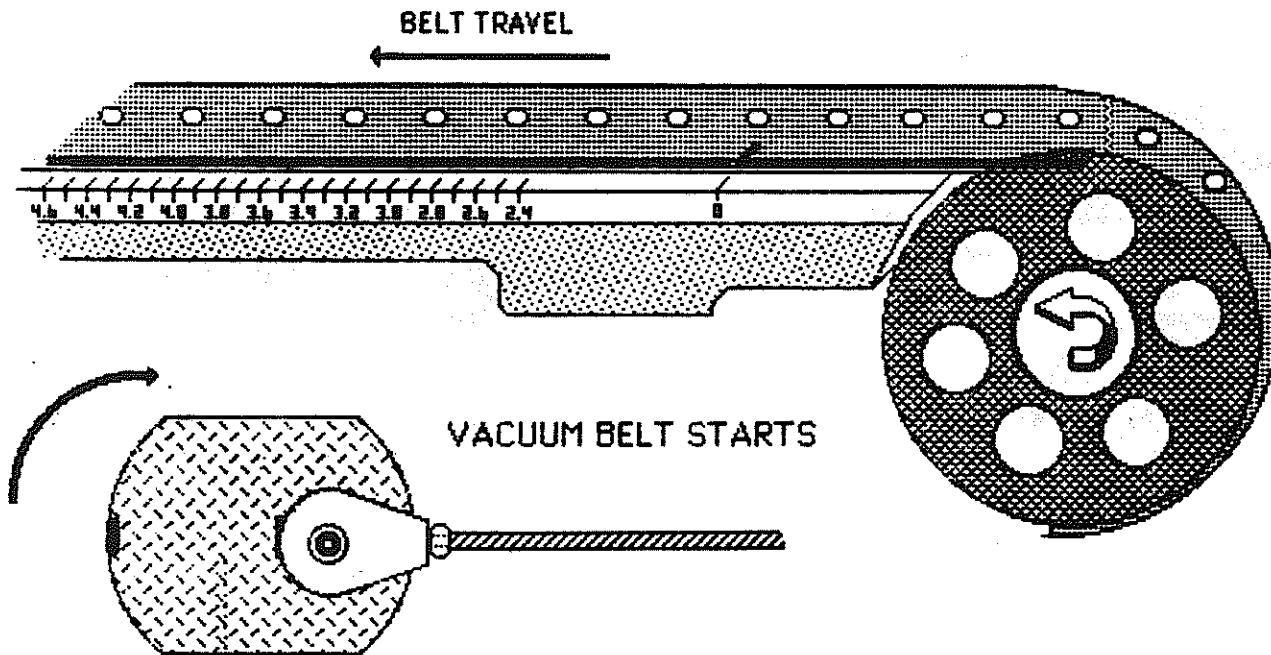
After the average label length has been determined the vacuum belt stroke can be set to that length.

LOCATE AND LOOSEN THE HEAD LOCKING CLAMP.

## FRONT VIEW



Rotate the labeling head by hand turning the head locking clamp clockwise until the vacuum belt stops. Place a mark on the vacuum belt over the "O" stamped into the vacuum belt support. (or bring a mark to the "O" by turning the vacuum belt pulley counter-clockwise).

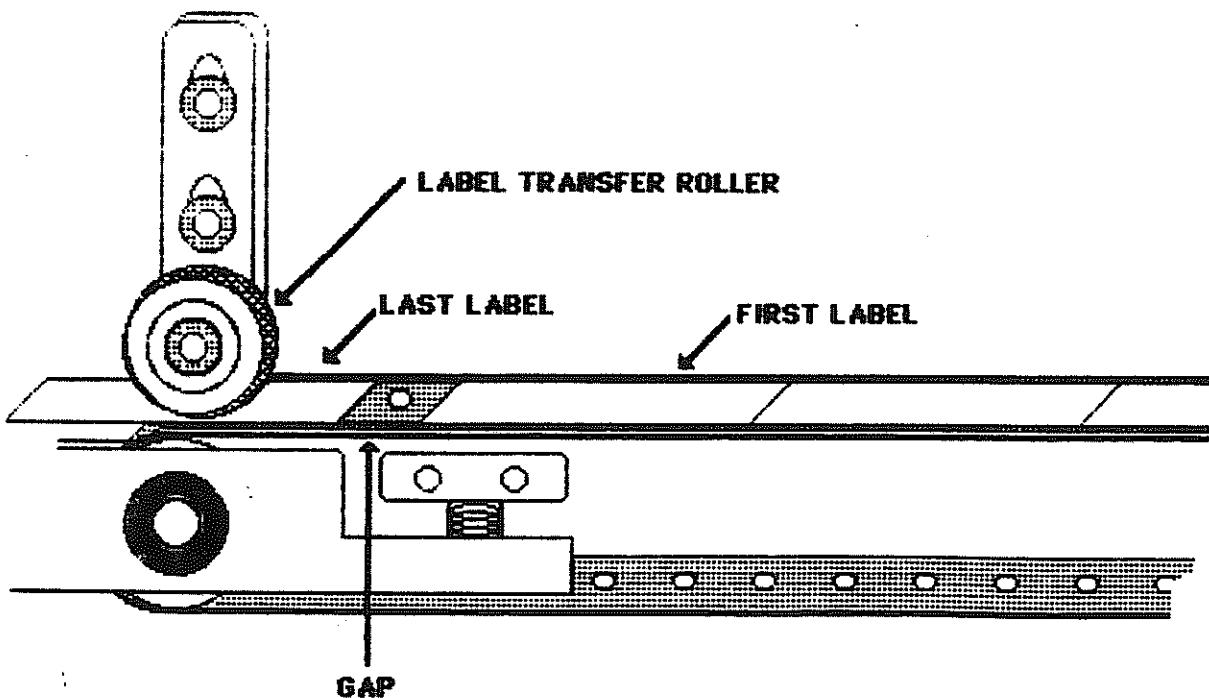
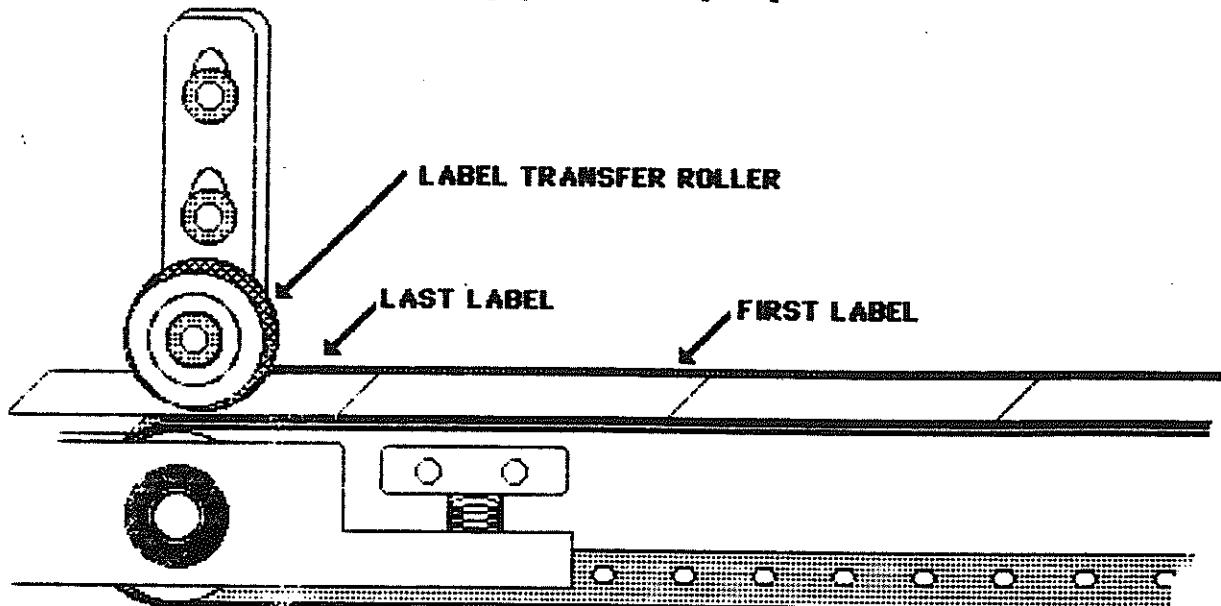


## SETTING BELT STROKE

Continue this process until the proper belt stroke has been obtained. Remember to ensure the belt has stopped moving before bringing the mark over the "0".

The belt stroke adjusting screw is very sensitive, a small turn moves the adjustment quite a bit. Be sure and lock the 1/8" hex head locking screw after final adjustment has been made.

This adjustment is made while turning the labeling head by hand. After all set up adjustments have been made, and the machine is brought up to speed, the belt stroke may need fine tuning. Simply adjust the belt stroke until the first label is positioned behind the last label and no gap or overlap is present.



## SETTING BELT STROKE

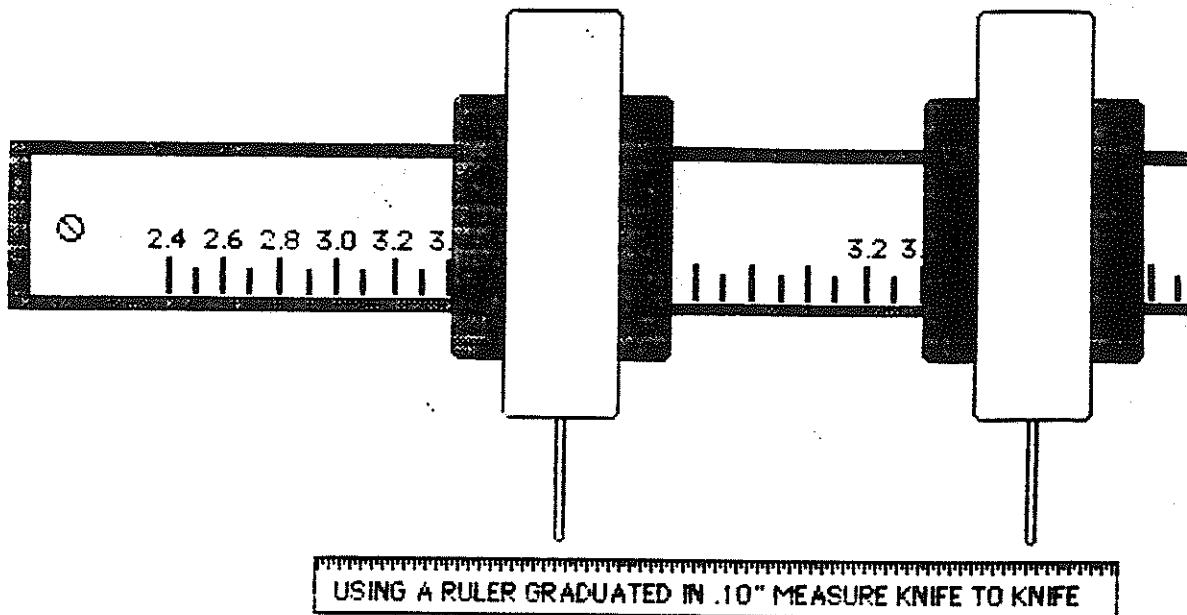
## REVIEW

1. DETERMINE LABEL LENGTH
2. UNLOCK LABEL HEAD CLAMP (3/16" HEX HEAD WRENCH)
3. ROTATE LABELING HEAD BY TURNING LABEL HEAD CLAMP CLOCKWISE UNTIL VACUUM BELT STOPS.
4. EITHER PLACE A MARK ON THE BELT (USING AN INK PEN) OR ROTATE THE VACUUM BELT PULLEY COUNTER-CLOCKWISE BY HAND UNTIL A MARK IS OVER THE "0" STAMPED ON THE BELT SUPPORT.
5. UNLOCK LOCKING SCREW IN THE BELT STROKE CAM (1/8" HEX HEAD WRENCH).
6. TURN THE ADJUSTING SCREW IN THE BELT STROKE CAM (3/16" HEX HEAD WRENCH) CLOCKWISE TO SHORTEN THE STROKE/COUNTER-CLOCKWISE TO LENGTHEN THE STROKE).
7. CHECK YOUR ADJUSTMENT BY ENSURING THE BELT HAS STOPPED TRAVELING, BRING THE MARK OVER THE "0" BY TURNING THE BELT PULLEY COUNTER-CLOCKWISE, ROTATE THE HEAD LOCKING CLAMP CLOCKWISE UNTIL THE BELT TRAVELS ONE STROKE AND CHECK THE SETTING.
8. CONTINUE STEPS 6 AND 7 UNTIL THE VACUUM BELT STROKE IS SET TO THE AVERAGE LABEL LENGTH.
9. TIGHTEN THE BELT STROKE CAM LOCKING SCREW (1/8" HEX HEAD WRENCH).

Once the average label length is determined the Slitter knives can be positioned.

Begin by loosening all the knives and raising them up slightly off the anvils and tightened. Be careful not to let the knives drop onto the anvils.

Next position the left hand knife (as you stand in front of the machine) so that the left side of the knife bushing is on the mark of the scale that represents the average label length.

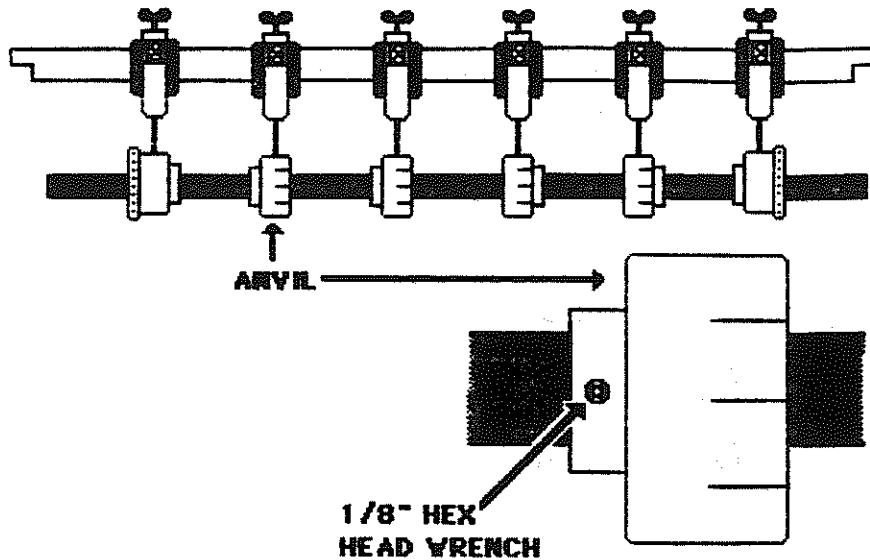


**DO NOT SET KNIFE PRESSURE AT THIS TIME.**

Continue to position the knives, from left to right, on the proper setting of the scale. If the average label length is not represented on the scale, use a ruler graduated in tenths to measure from knife edge to knife edge.

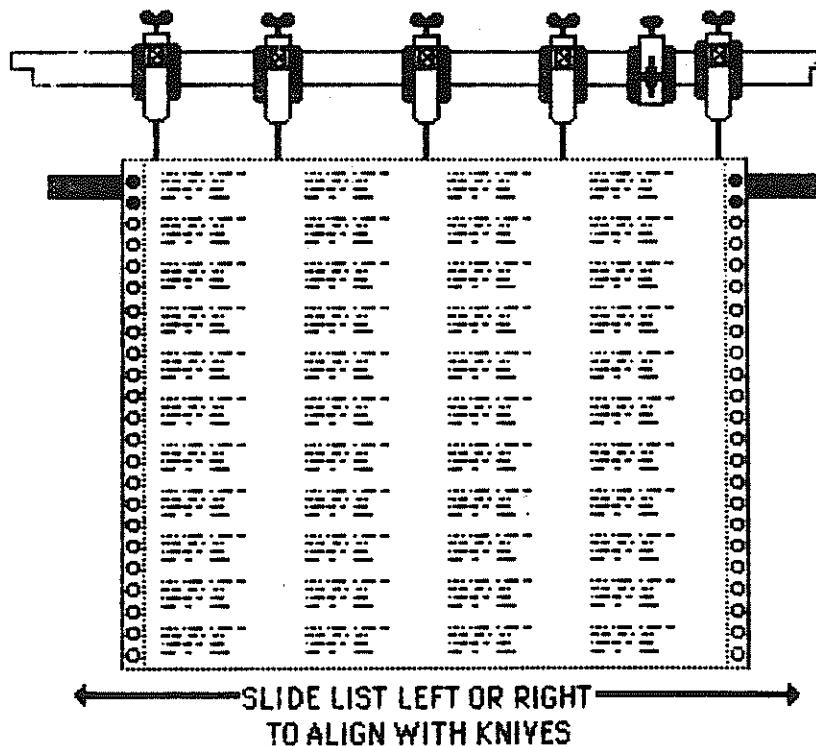
## POSITIONING SLITTER KNIVES, ANVILS AND PIN WHEELS

After the knives are positioned, loosen the set screws (1/8" hex head wrench) in the anvils and pin wheels. (This is easier to do standing in back of the machine). Also loosen the strippers on each pin wheel.



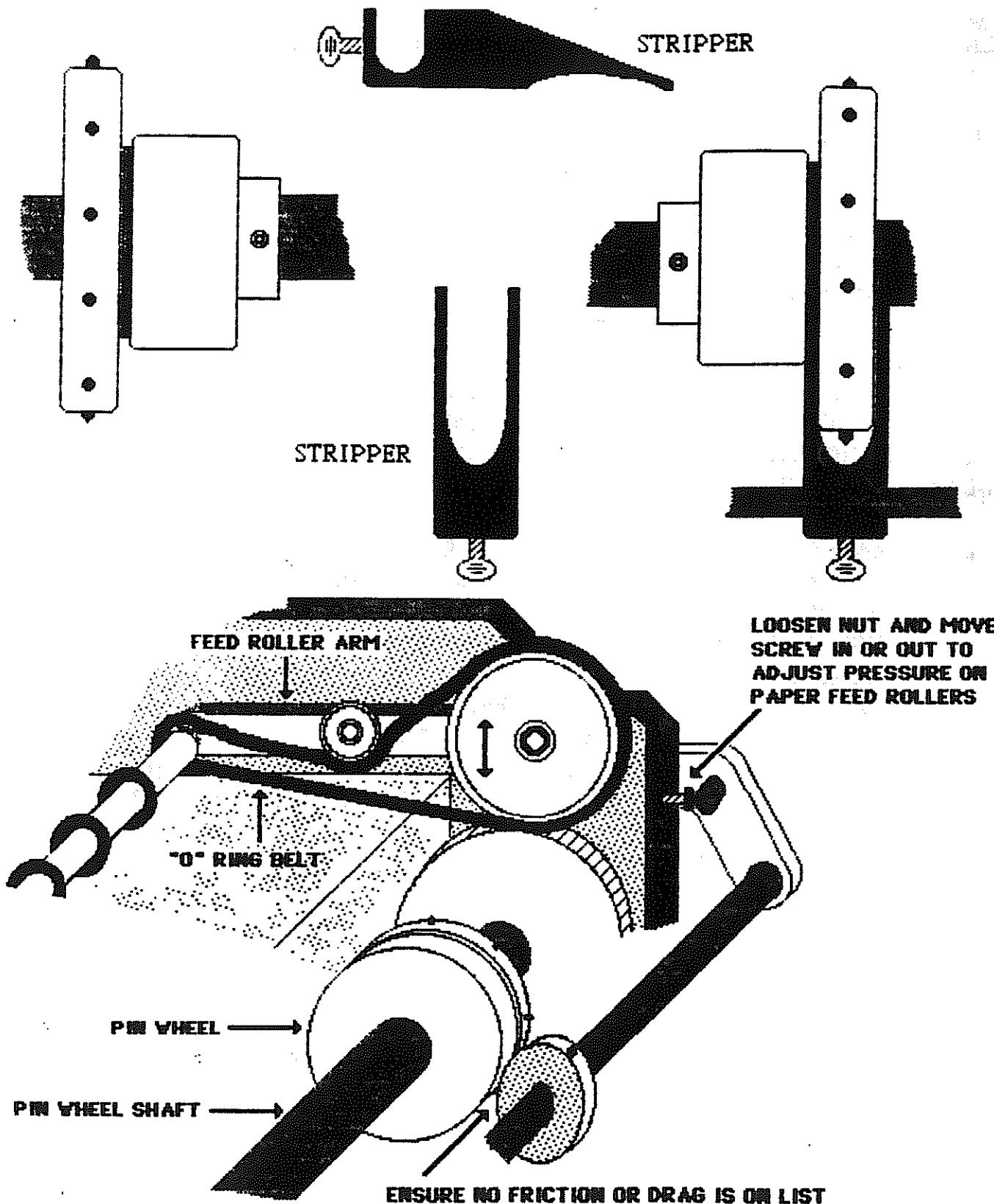
Slide the anvils underneath the knives and tighten the set screws (CAUTION: Do Not overtighten the set screws, you may damage the key and key way that ride through the anvils).

Next place the mailing list (printed side up so you can determine where to align the knives, the mailing list is fed print side down for operation) onto the pin wheels and slide the pin wheels and list left or right to align the slitter knives between the labels.



## POSITIONING SLITTER KNIVES, ANVILS AND PIN WHEELS

When setting the position of the pin wheels, be certain that the holes in the list are centered over the pins in the pin wheels. Tighten the set screws in the pin wheels, being careful not to overtighten, and readjust the strippers to keep the trim from wrapping around the pin wheels.



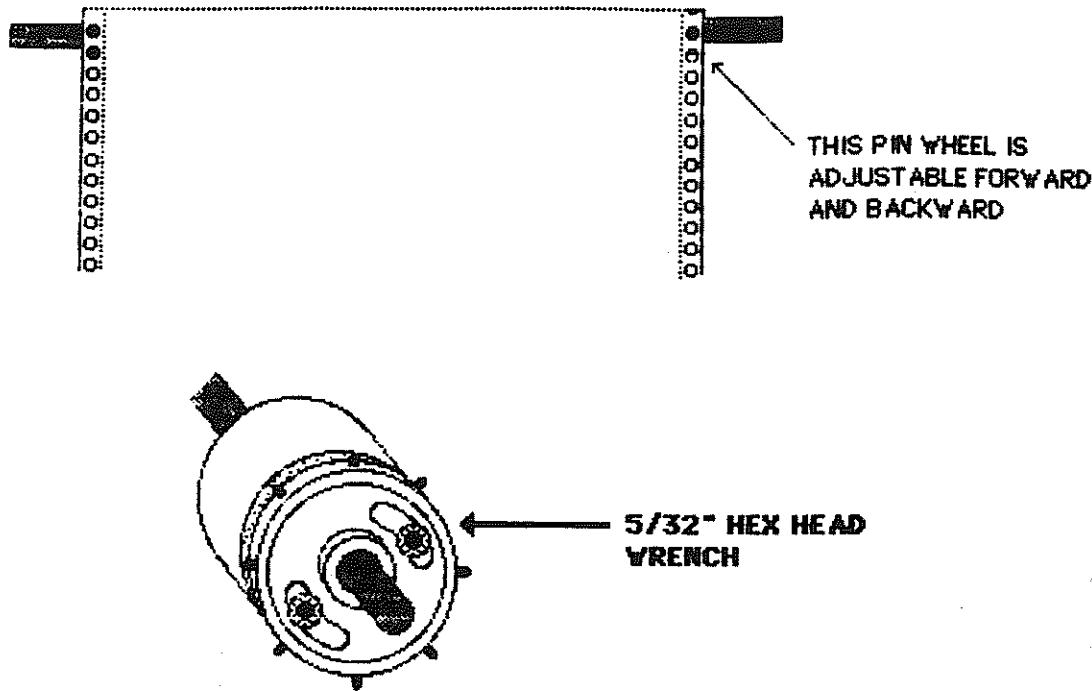
## POSITIONING SLITTER KNIVES, ANVILS AND PIN WHEELS

## REVIEW

1. DETERMINE THE AVERAGE LABEL LENGTH
2. LOOSEN AND RAISE ALL SLITTER KNIVES (BE CAREFUL NOT TO LET THE SLITTER KNIVES DROP ONTO THE ANVILS)
3. ALIGN THE LEFT SIDE OF THE LEFT KNIFE (AS YOU STAND IN FRONT OF THE MACHINE) WITH THE APPROPRIATE LABEL LENGTH SETTING MARKED ON THE SCALE.
4. ADJUST ALL THE KNIVES FROM LEFT TO RIGHT (USING A RULER IF NECESSARY) TO EQUAL THE AVERAGE LABEL LENGTH. THERE ARE SIX KNIVES ON THE KR211. YOU WOULD USE ALL SIX IF RUNNING A 5-UP LIST. WHEN RUNNING LESS THAN A 5-UP LIST JUST LIFT THE UNUSED KNIVES UP OUT OF THE WAY AND TIGHTEN.
5. STANDING IN BACK OF THE MACHINE, LOOSEN THE 1/8" HEX HEAD SET SCREWS IN THE ANVILS AND PIN WHEELS AND LOOSEN THE THUMB SCREWS THAT TIGHTEN THE STRIPPERS AND MOVE THE STRIPPERS OUT OF THE WAY.
6. SLIDE AN ANVIL UNDERNEATH EACH SLITTER KNIFE AND TIGHTEN THE SET SCREW. (EACH ANVIL (ON NEWER MACHINES) IS "SERATED" HALF WAY ACROSS, THIS ALLOWS YOU TO SET THE KNIFE PRESSURE SO THAT THE LABEL WILL ONLY SCORE RATHER THAN CUT. THE OTHER HALF OF THE ANVIL SURFACE IS NOT SERATED SO THAT YOU CAN CUT THROUGH THE LABEL RATHER THAN SCORING, THUS YOU CAN RUN SPECIAL LABELS SUCH AS PIGGY BACK ETC.). IF A GROOVE STARTS TO WEAR IN THE ANVILS FROM CONSTANTLY RUNNING THE KNIVES IN THE SAME SPOT YOU CAN MOVE THE ANVIL SLIGHTLY TO EXPOSE AN UNUSED SURFACE OF THE ANVIL TO THE KNIFE.
7. PLACE THE MAILING LIST ON THE PIN WHEELS AND SLIDE THE LIST AND PIN WHEELS LEFT OR RIGHT TO ALIGN THE KNIVES.
8. TIGHTEN THE PIN WHEELS IN PLACE MAKING SURE THAT THE HOLES IN THE MAILING LIST ARE PERFECTLY CENTERED OVER THE PINS IN THE PIN WHEELS.
9. TIGHTEN THE STRIPPERS IN PLACE.

## ALIGNING THE MAILING LIST

If the leading edge of the list is not feeding in straight, the pin wheels may need to be aligned with each other. This can be done by standing behind the machine and loosening two 5/32" Hex Head wrench screws in the right hand pin wheel and rotating to align the list. Retighten the screws and check for alignment.

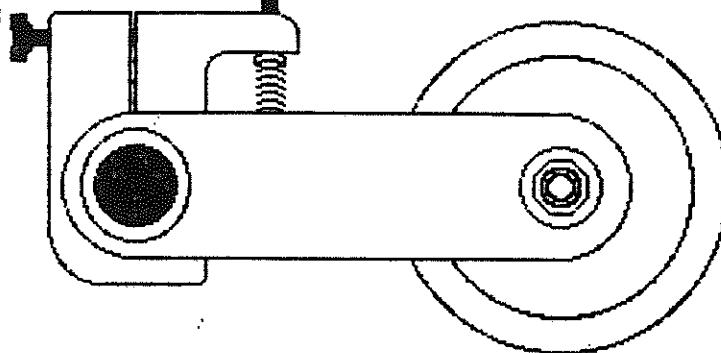


## SETTING THE SLITTER/SCORING KNIVES

The two knives on either end that ride on the pin wheels are to cut through the list so that the trim can be taken away. The other knives are to be set so that they score the paper enough to allow the labels to be burst apart\*. Caution should be taken in setting the knives. When an adjustment is made, the result of that adjustment will not be seen for several cycles of the machine. Patience and practice in adjusting the knives will lead to longer wear and smoother operation.

FIRST PUSH DOWN ON  
KNIFE JUST ENOUGH TO  
SHOW A CREESE IN THE  
PAPER, THEN TIGHTEN  
THIS KNOB

SECOND, APPLY MORE PRESSURE BY SLOWLY  
TURNING DOWN ON THIS KNOB TO GET DESIRED  
SCORE OR CUT



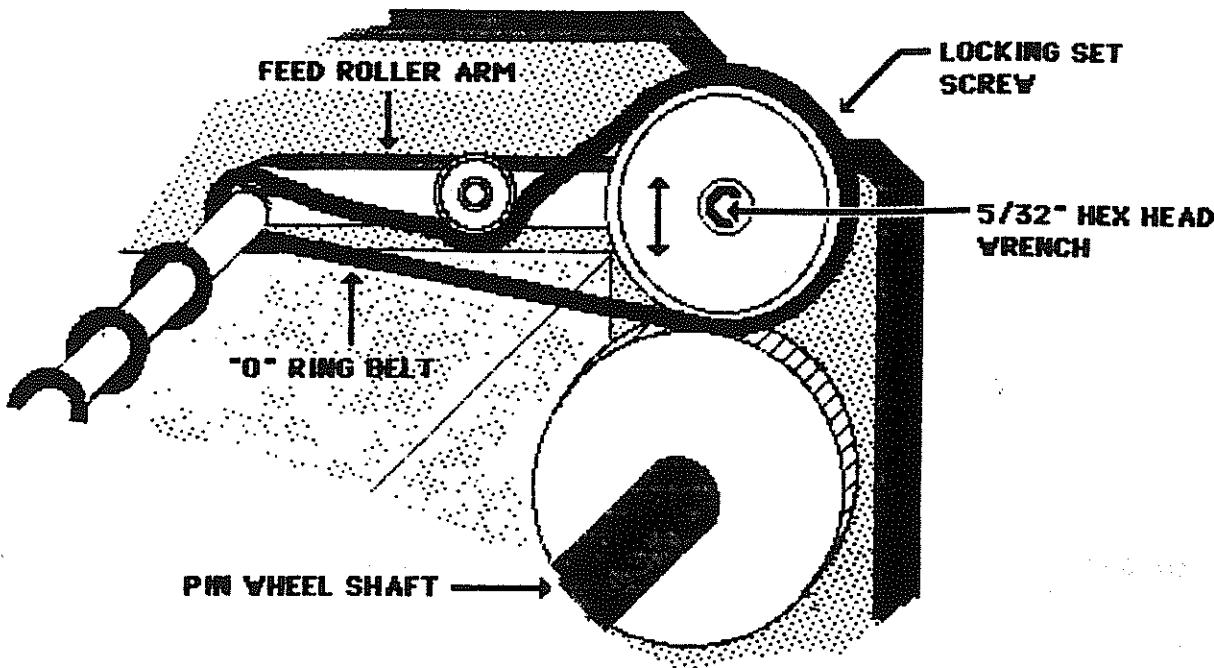
WHEN THE SLITTER KNIFE SPRING IS COMPLETELY COMPRESSED AND  
THE KNIFE NO LONGER CUTS, IT IS TIME TO REPLACE THE KNIFE.  
CONTINUING TO LEAVE PRESSURE ON THE KNIFE WHILE THE SPRING IS  
COMPRESSED CAN CAUSE DAMAGE TO THE ANVIL SHAFT.

### SETTING THE SLITTER/SCORING KNIVES CHECK-LIST

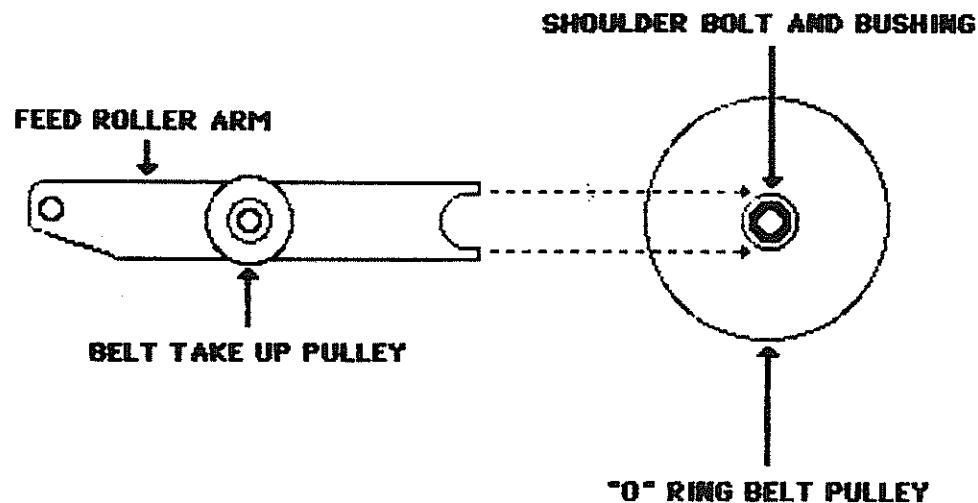
1. DO NOT PUT TOO MUCH PRESSURE ON KNIVES, JUST ENOUGH TO CUT THROUGH ON THE SLITTERS AND ALLOW BURSTING ON THE SCORING KNIVES.
2. REMEMBER IT TAKES SEVERAL CYCLES OF THE MACHINE BEFORE AN ADJUSTMENT TO THE SLITTER/SCORING KNIVES WILL BE REALIZED.
3. WHEN KNIVES DULL OR SPRINGS ARE FULLY COMPRESSED REPLACE KNIVES (SOMETIMES IT IS ALSO NECESSARY TO REPLACE THE SPRINGS)

\*When running heat activated or pressure sensitive labels it may be necessary to cut through the label paper. The anvils must be moved over to the non-serated side.

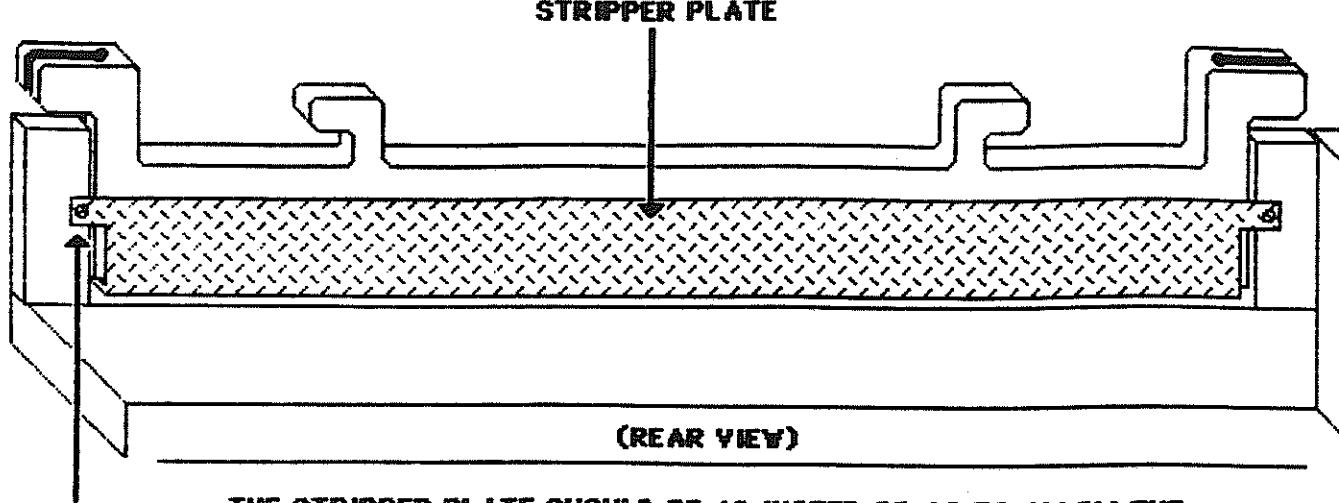
After the mailing list has been slit and scored, an "O" ring drive transports the labels under the guillotine knife for cutting. This "O" ring drive is driven by two hubs mounted on the same shaft as the pin wheels and anvils. Two pulleys press the "O" rings against these hubs to transfer the drive to an "O" ring shaft located just before the guillotine knife. These "O" rings are moveable along the shaft to help guide the labels smoothly between the guillotine knives.



Check that the two feed roller arms are properly engaged behind the "O" ring drive pulleys. Check the "O" rings for wear and make sure the tension on both "O" rings is the same. To adjust tension loosen locking set screws located in the head casting then move the adjusting screws (5/32" Hex Head wrench) to apply more or less pressure. Be sure to tighten locking set screws after adjustment.

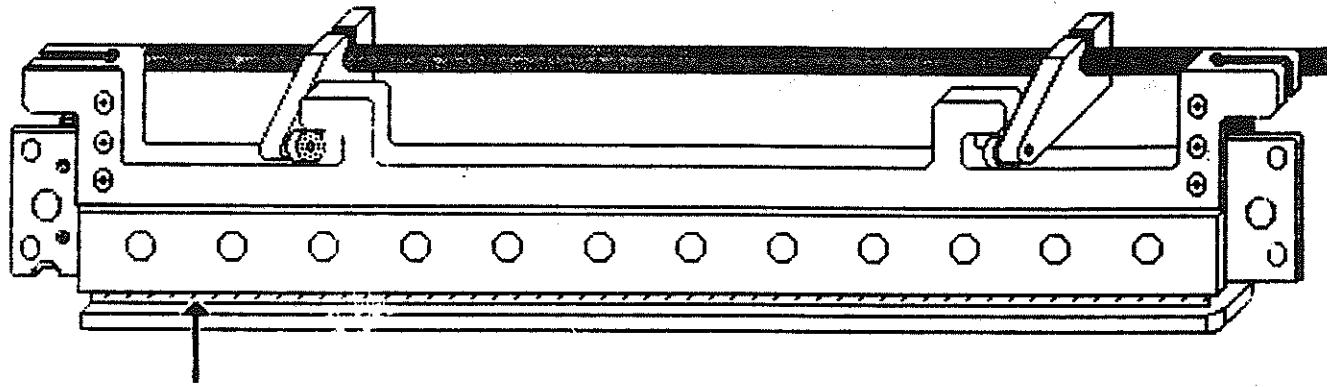


## LIST TRANSFER

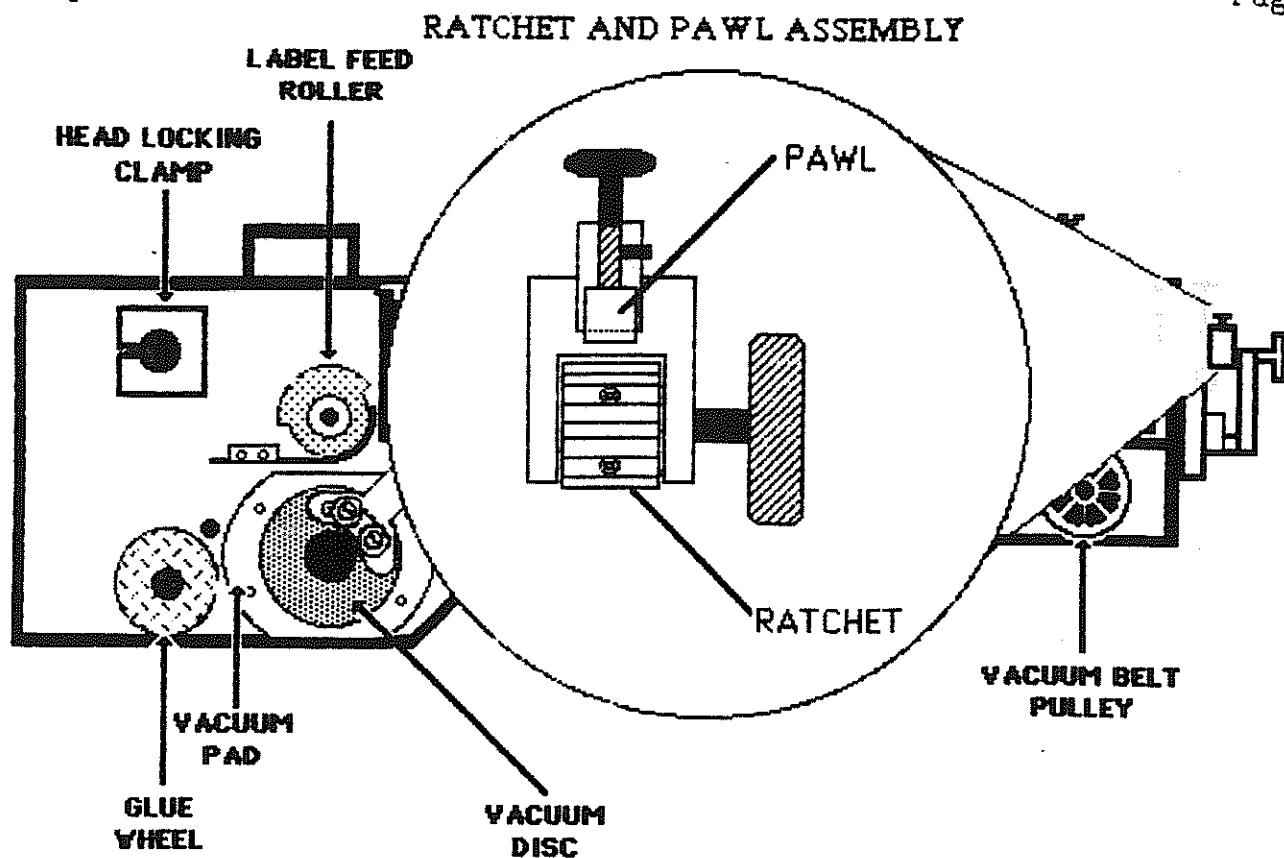


**THE STRIPPER PLATE SHOULD BE ADJUSTED SO AS TO ALLOW THE MAILING LIST TO FEED BETWEEN THE GUILLOTINE KNIVES FREELY**

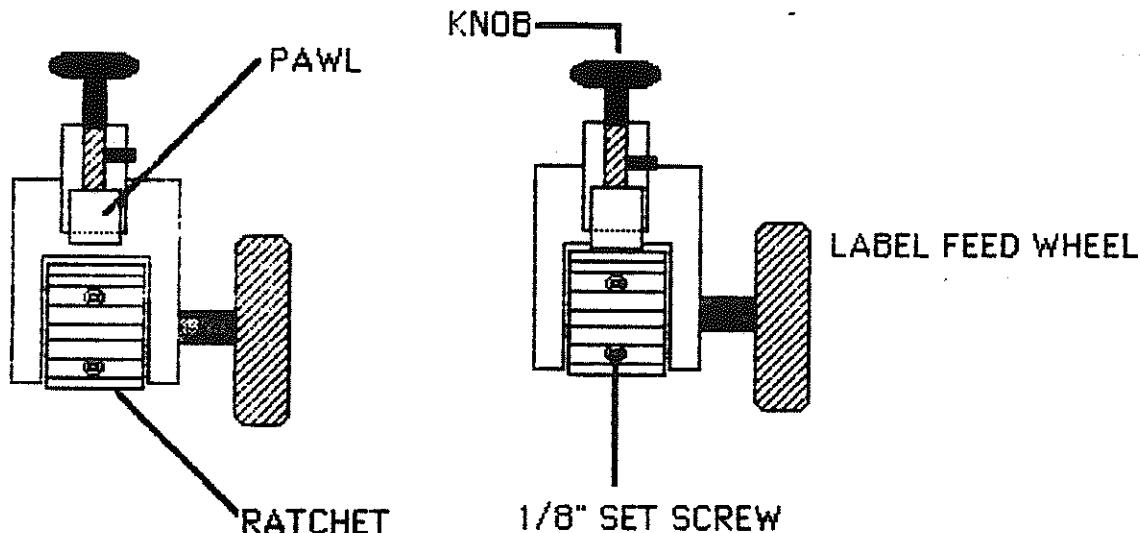
**TO ADJUST THE STRIPPER PLATE, LOOSEN THE TWO SCREWS AND SLIDE THE PLATE UP OR DOWN.**



**THE STRIPPER PLATE SHOULD EXTEND BELOW THE UPPER GUILLOTINE KNIFE WHEN THE UPPER KNIFE HOLDER IS IN THE UP POSITION**



The labels are fed on demand by a ratchet and pawl assembly.

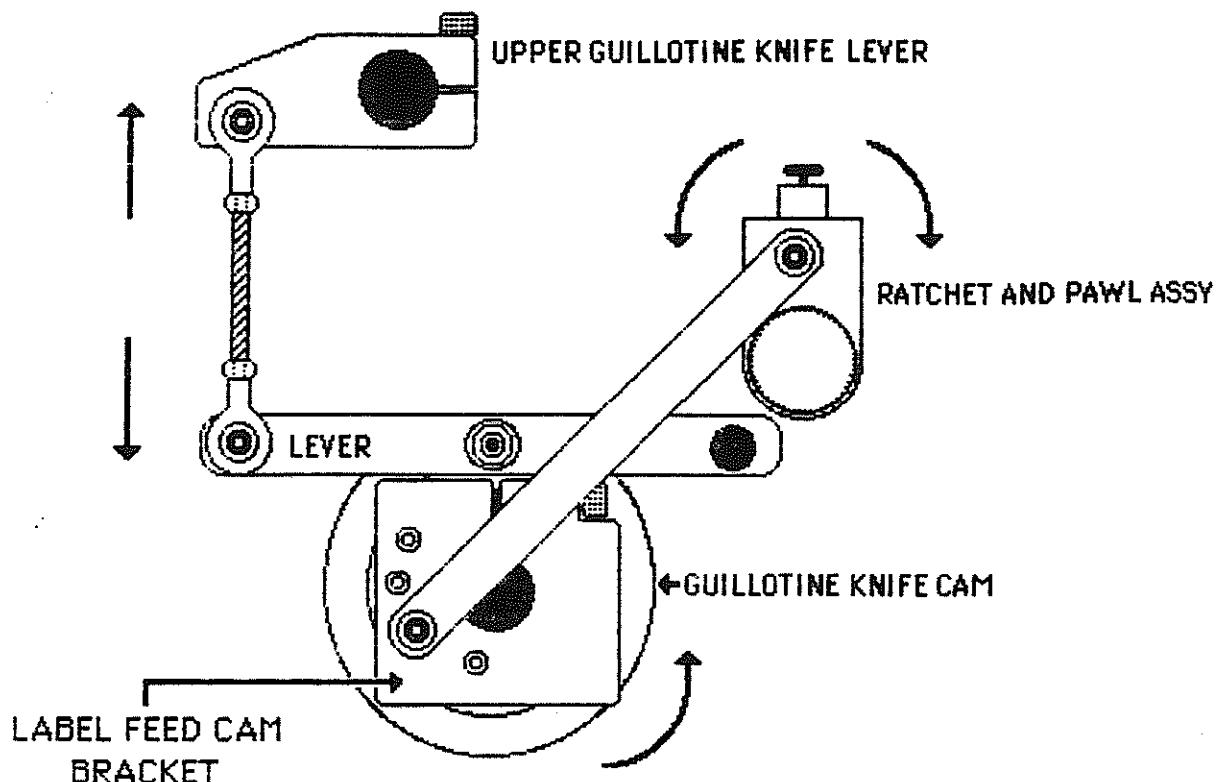


TO DISENGAGE LABEL FEED  
LIFT KNOB AND TURN RIGHT  
TO ENGAGE LABEL FEED  
LIFT KNOB AND TURN LEFT

TO CHANGE POSITION OF LABEL FEED  
LOOSEN SET SCREWS (2) HOLD RATCHET  
IN PLACE, TURN LABEL FEED WHEEL,  
ALIGN WHERE YOU WANT TO CUT UNDER  
GUILLOTINE, THEN TIGHTEN THE SET  
SCREWS.

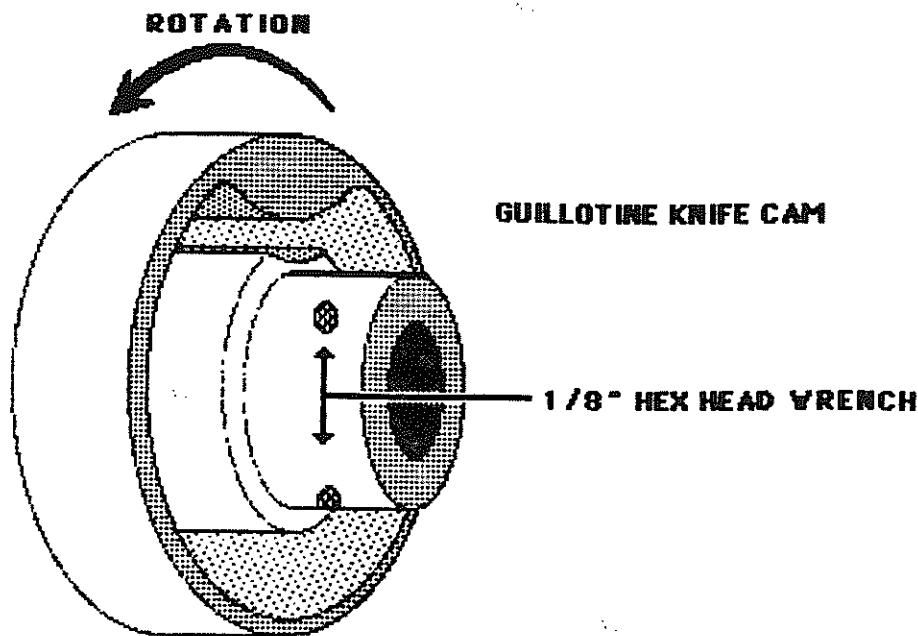
## GUILLOTINE KNIFE STROKE AND LABEL FEED TIMING

At the right end of the KR211 labeling head (as you stand in front of the machine) is the adjustments for the guillotine knife stroke and label feed timing.



The guillotine knife cam rides on a shaft that projects from the right end of the labeling head. This cam can be adjusted by two set screws (1/8" hex head wrench). The proper timing for this cam is that it activates the upper guillotine knife while the vacuum belt is stationary.

To set the guillotine knife cam, rotate the machine until the vacuum belt just stops. Loosen the two set screws in the guillotine knife cam and rotate the cam until the upper guillotine knife just starts to come down. Lock the two set screws.



Place a sheet of paper between the guillotine knives, rotate the machine by hand and watch that the vacuum belt does not move while the paper is being cut. If the belt moves, reset the cam.

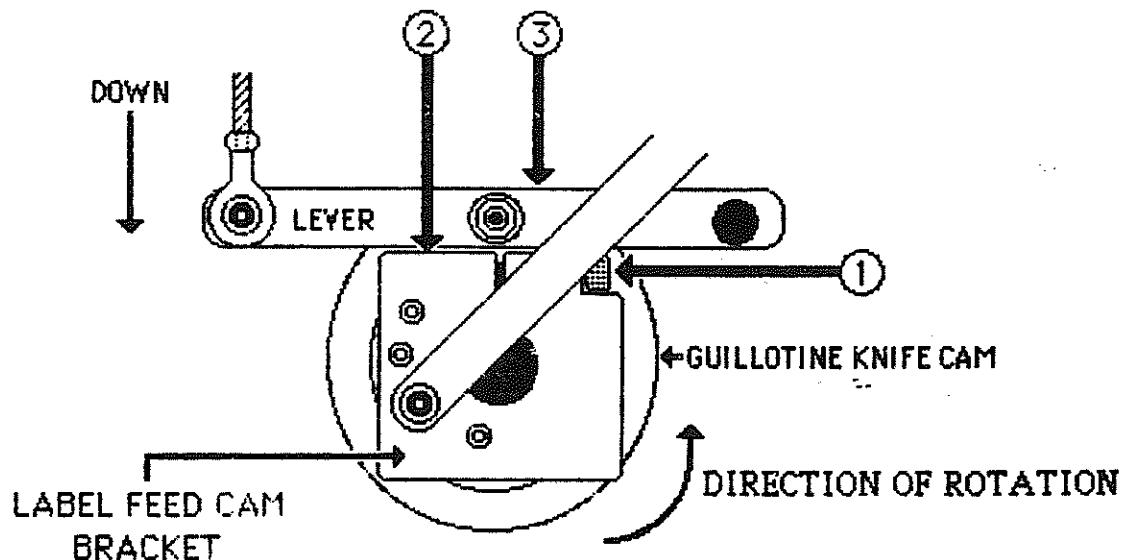
## GUILLOTINE KNIFE AND LABEL FEED TIMING

To set the label feed cam bracket, rotate the machine by hand until the guillotine knife cam has pulled the upper guillotine knife all the way down. Disengage the label feed by pulling up and locking the ratchet/pawl knob. Loosen the cam screw (3/16" hex head wrench) in the label feed cam bracket and rotate until the cam bracket is in the position pictured below, then tighten the cap screw.

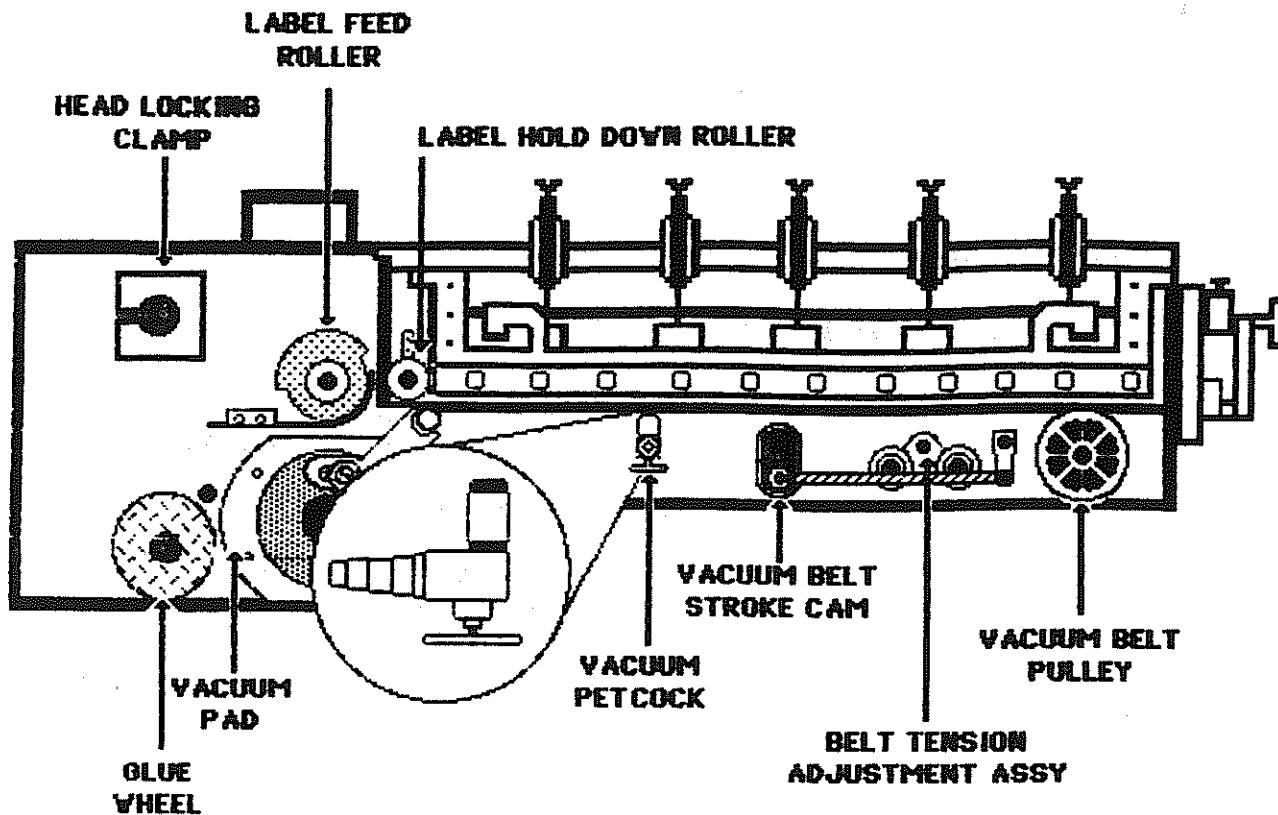
ROTATE MACHINE UNTIL THE GUILLOTINE KNIFE CAM HAS PULLED THE GUILLOTINE KNIFE ALL THE WAY DOWN. LOOSEN THE CAP SCREW IN THE LABEL FEED CAM BRACKET ①

ROTATE THE LABEL FEED CAM BRACKET UNTIL THE SURFACE ②  
IS PARALLEL WITH THE SURFACE OF THE LEVER ③

TIGHTEN THE LABEL FEED CAM BRACKET IN THIS POSITION



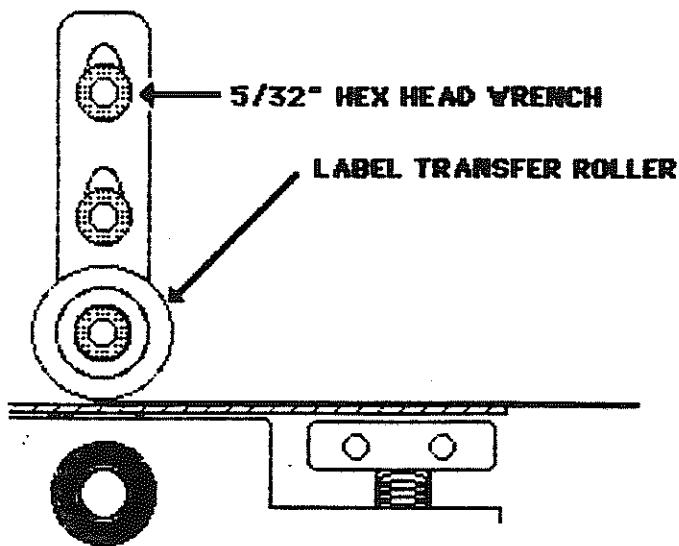
## TRANSFERRING THE LABELS FROM THE VACUUM BELT TO THE PRODUCT



The petcock located underneath the vacuum belt regulates the amount of vacuum to the belt. If there is too much vacuum the belt will not move consistently. Turn the knob on the petcock clockwise until there is just enough vacuum to keep the labels from falling off.

## TRANSFERRING THE LABELS FROM THE VACUUM BELT TO THE PRODUCT

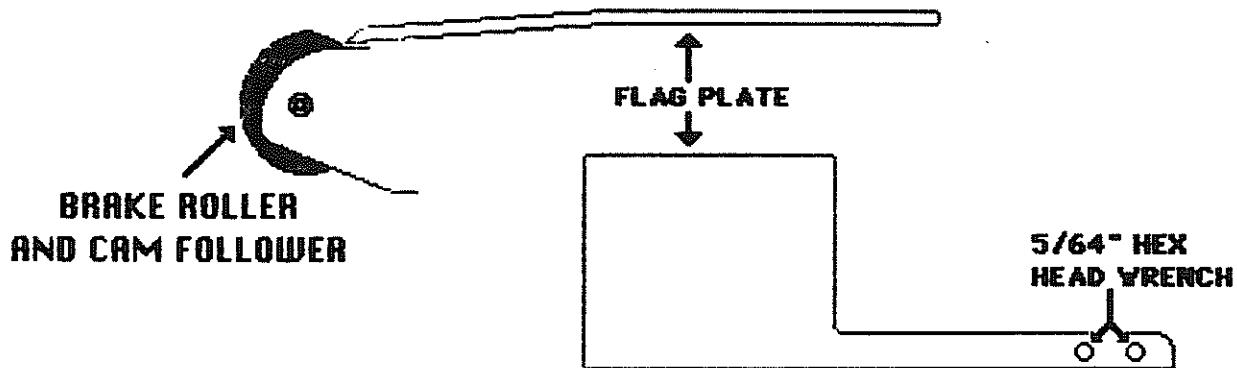
After the labels are fed into the machine and the slitter knives, belt stroke, guillotine knife and label feed have been set properly, the label strip should be on the vacuum belt and traveling into the label transfer area.



THE LABEL TRANSFER ROLLER HOLDS THE LABEL TO THE VACUUM BELT WHILE THE PREVIOUS LABEL IS "BURST" APART. THERE SHOULD BE ENOUGH DOWN PRESSURE TO ALLOW FOR A SEPARATION OF LABELS BUT NOT SO MUCH AS TO CAUSE THE LABEL TO SKEW OR DEFORM.

THE PURPOSE OF THE FLAG PLATE IS TO ACT AS A BRIDGE OR GUIDE FOR THE LABEL AS IT MOVES FROM THE VACUUM BELT INTO THE BRAKE ROLLER AND BAR.

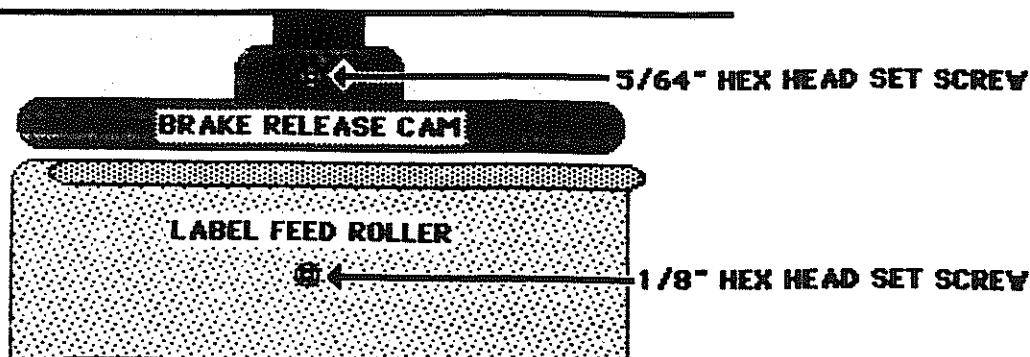
THE FLAG PLATE MAY NEED ADJUSTMENT IF THE LABELS EITHER GO UP BY THE BRAKE BAR OR JAM INTO THE BRAKE ROLLER. SIMPLY REMOVE THE PLATE AND BEND UP OR DOWN AS NECESSARY OR REPLACE THE FLAG PLATE.



C A U T I O N SHOULD BE TAKEN WHEN BENDING THE FLAG PLATE, IT WILL BREAK EASILY IF A LOT OF PRESSURE IS APPLIED. THE BEST WAY IS TO REMOVE IT AND LAY IT ON A FLAT SURFACE. THEN PUSH DOWN IN THE MIDDLE TO RAISE THE ANGLE OR BEND DOWN OVER THE EDGE OF A TABLE TO LOWER THE ANGLE.

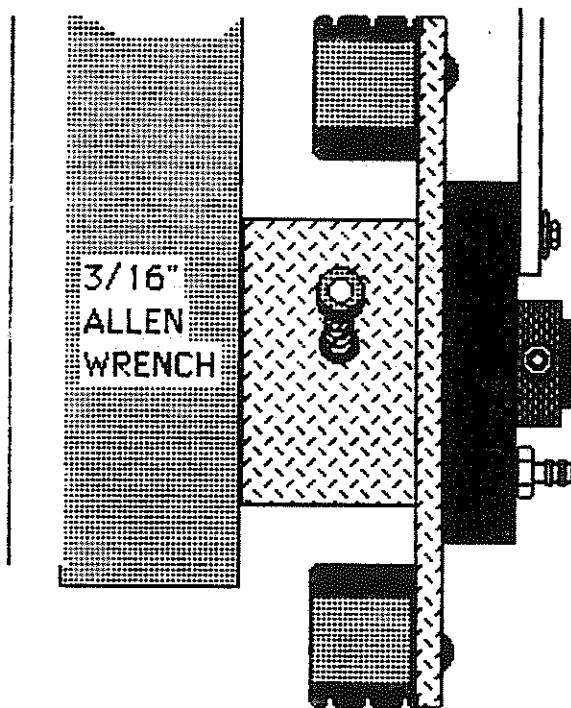
## TRANSFERRING THE LABELS FROM THE VACUUM BELT TO THE PRODUCT

To set the timing for the label transfer, locate and loosen the set screw in the label feed roller (1/8" hex head wrench). Loosen the set screw in the label brake release cam (5/64" hex head wrench). Loosen the screw in the label pick-off vacuum wheel (3/16" hex head wrench).



(TOP VIEW)

SIDE VIEW

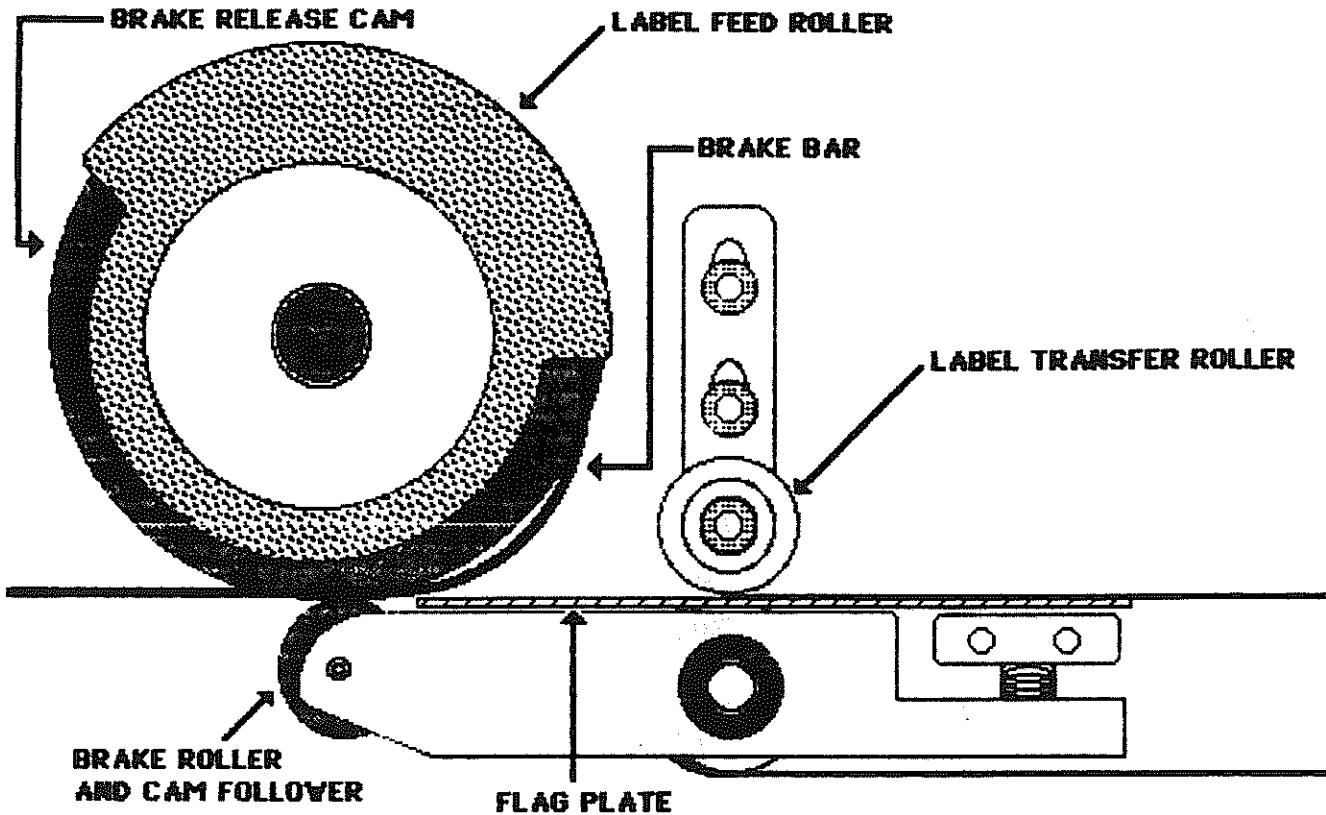


**TRANSFERRING LABELS FROM THE VACUUM BELT TO THE PRODUCT**

Once the set screws are loose, spin the label feed roller by hand until the high part of the roller is up. Next spin the brake release cam until the brake roller is up against the brake bar..

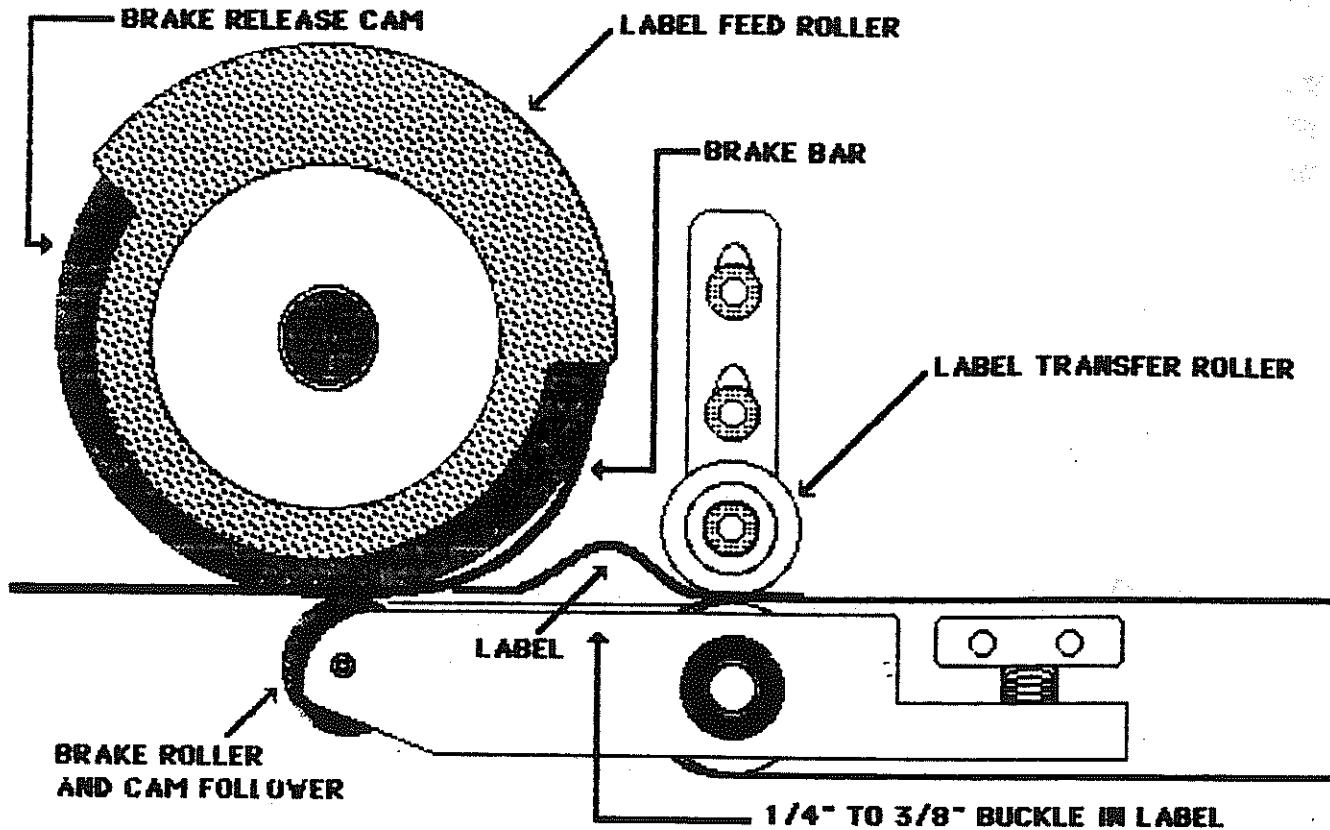
Turn on the main power and label head vacuum switches..

**NOTE:** These adjustments are made easier by locking the head to the drive shaft by tightening the 3/16" hex wrench screw and holding the brake release cam and label feed roller with the left hand and rotating the machine with the hand wheel.



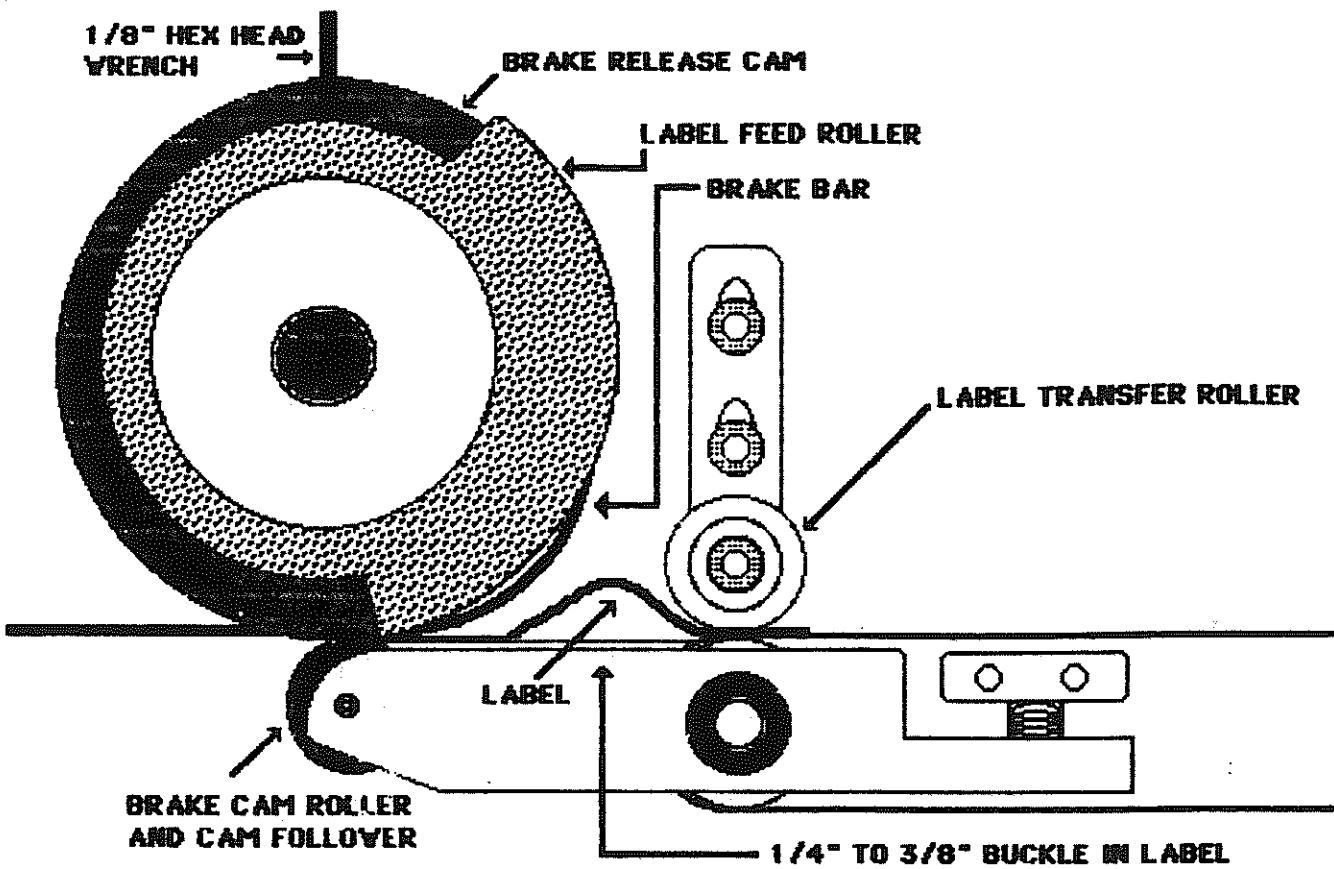
## TRANSFERRING LABELS FROM THE VACUUM BELT TO THE PRODUCT

Next, while holding both the label feed roller and the brake cam in this position, rotate the labeling head by hand until a label strip is cut, placed on the vacuum belt, moved under the label transfer roller, and is jammed into the brake bar/brake roller creating a buckle approximately  $1/4"$  to  $3/8"$ .



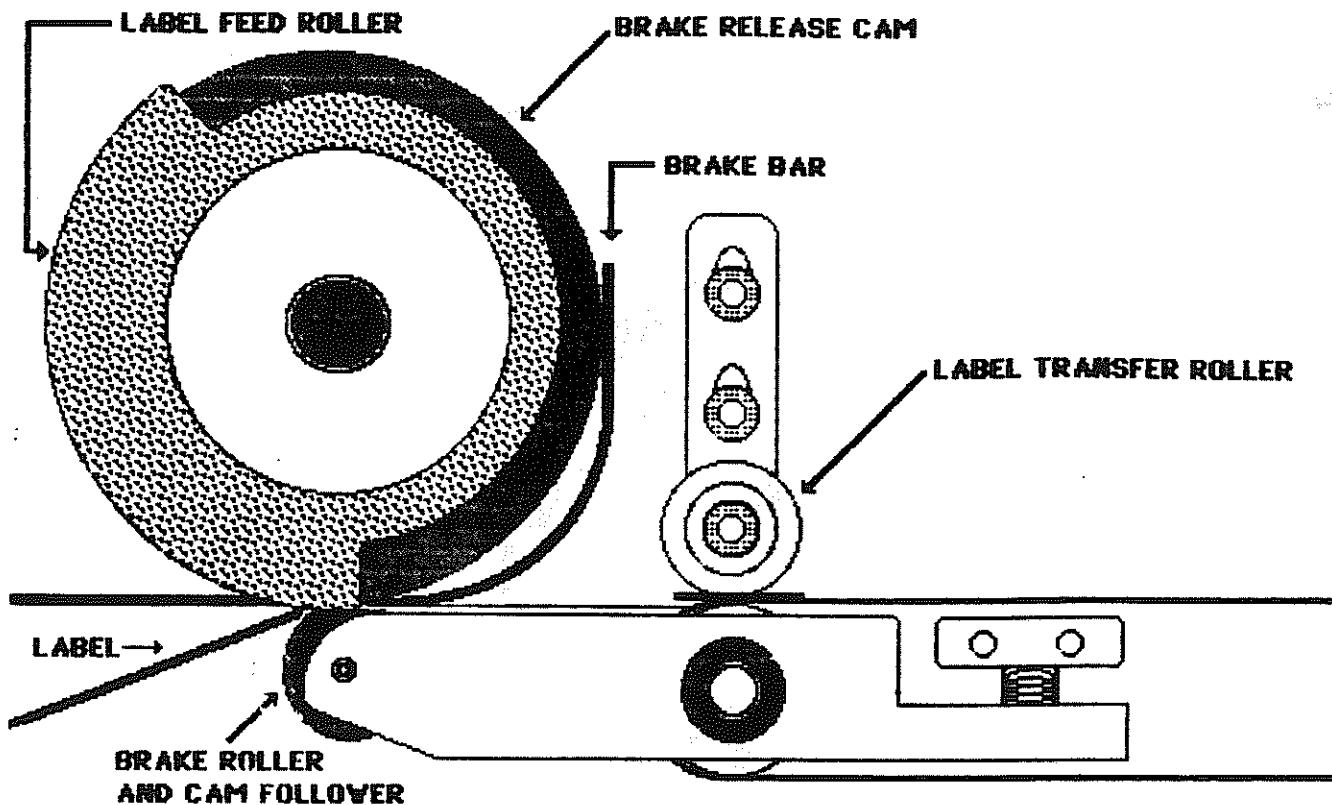
## TRANSFERRING LABELS FROM THE VACUUM BELT TO THE PRODUCT

Next rotate the label feed roller clockwise until the leading edge of the roller just makes contact with the label (be sure to hold the brake cam so that it doesn't move). Lock the label feed roller in place with the 1/8" hex head wrench.



## TRANSFERRING LABELS FROM THE VACUUM BELT TO THE PRODUCT

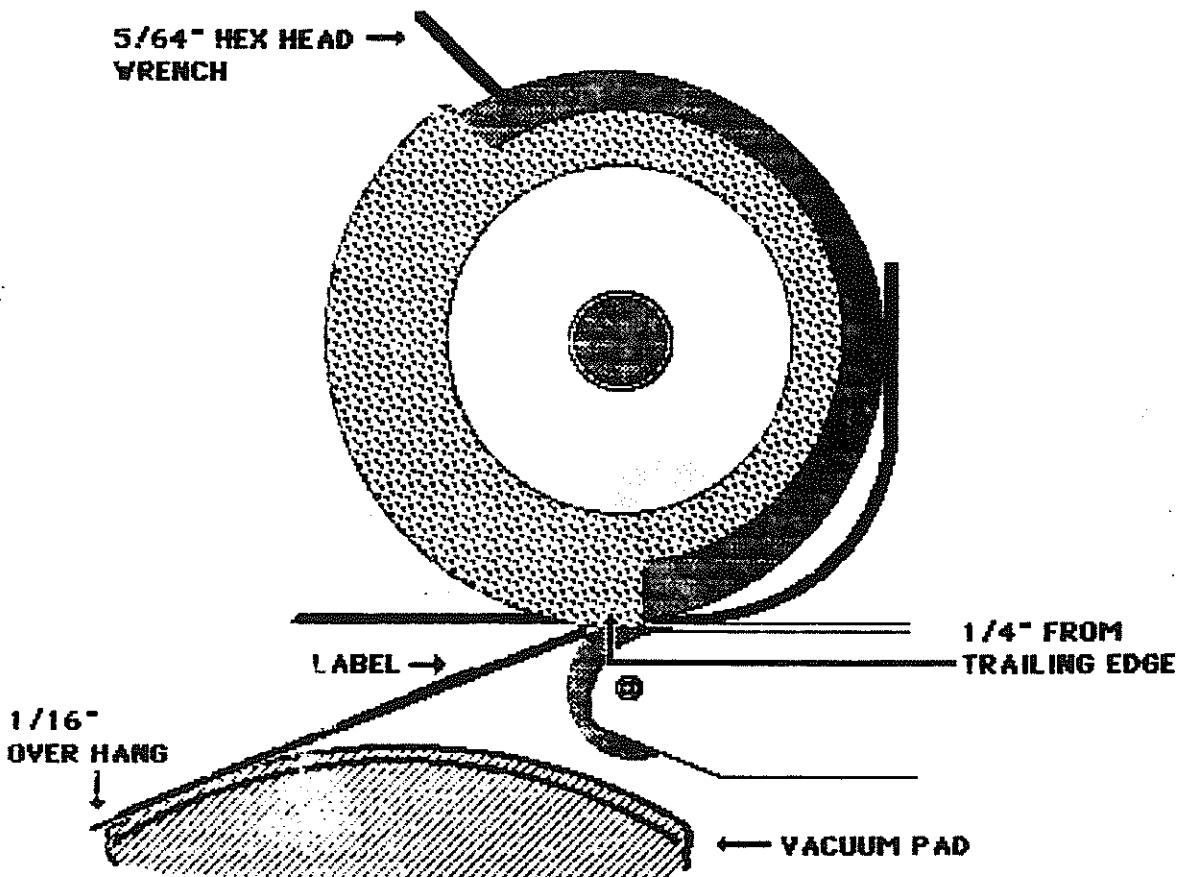
While continuing to hold the label brake cam, rotate the machine by hand until the trailing edge of the label feed roller is approximately 1/4" from being centered on the brake roller.



## TRANSFERRING LABELS FROM THE VACUUM BELT TO THE PRODUCT

At this point rotate the label pick-off vacuum wheel counter clockwise until it is  $1/16$ " behind the leading edge of the label, and lock in place with  $3/16$ " hex head wrench.

Next rotate the brake cam clockwise until the label is "Let Go" and vacuum pad on the label pickoff vacuum wheel has grabbed the label. Lock the brake cam in position using the  $5/64$ " hex head wrench.



IF THE LABELS ARE CROOKED ON THE MAILING PIECE, THEN THE LABEL BRAKE CAM IS RELEASING THE LABEL TOO SOON. IF THE LABELS ARE "FLYING" OFF AND NOT BEING PICKED UP BY THE VACUUM PAD, THEN THE LABEL BRAKE CAM IS RELEASING THE LABEL TOO LATE.

The labeling head is now set up and ready to place the label on the mailing piece. Rotate the base by hand until the mailing piece is fed and located underneath the labeling head. Slide the head on the head shaft until it is located over the mailing piece where the label is to be placed.

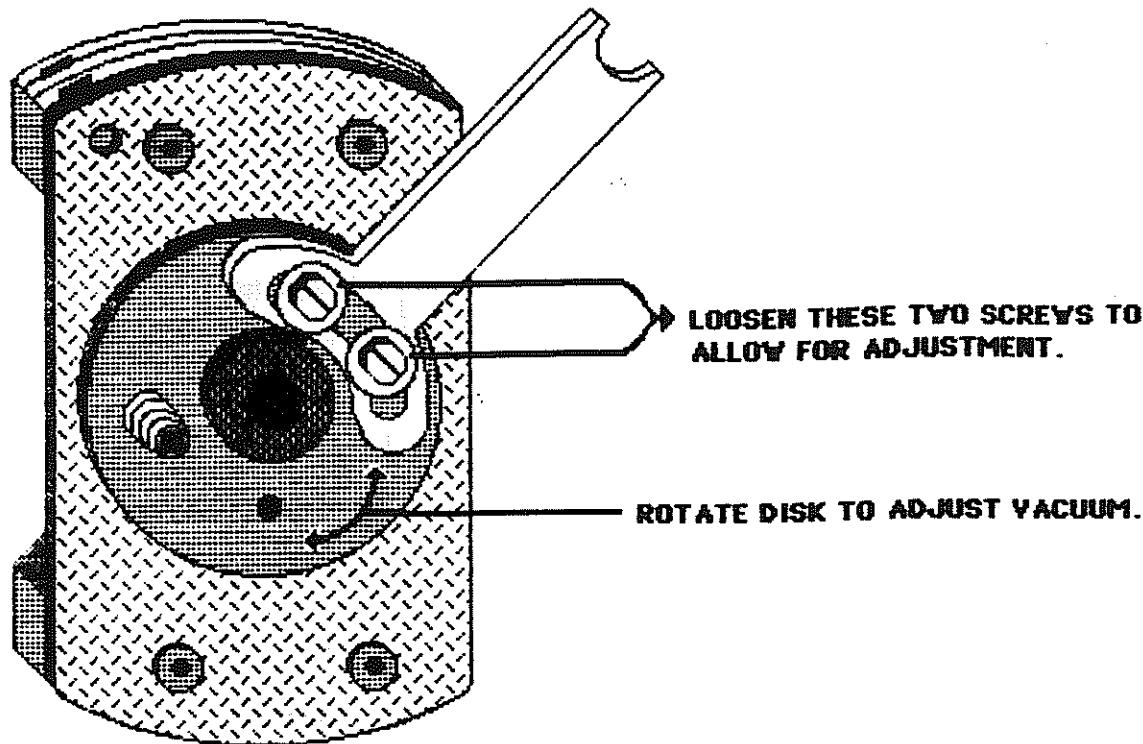
The left to right label position can be accomplished by rotating the head locking clamp. Once the label position has been set, tighten the head locking clamp in position with a  $3/16$ " hex head wrench.

Position the impression rollers. (See Section 215.160).

Adjust the head pressure. (See Section 215.180).

Time The head to the base. (See Section 215.190).

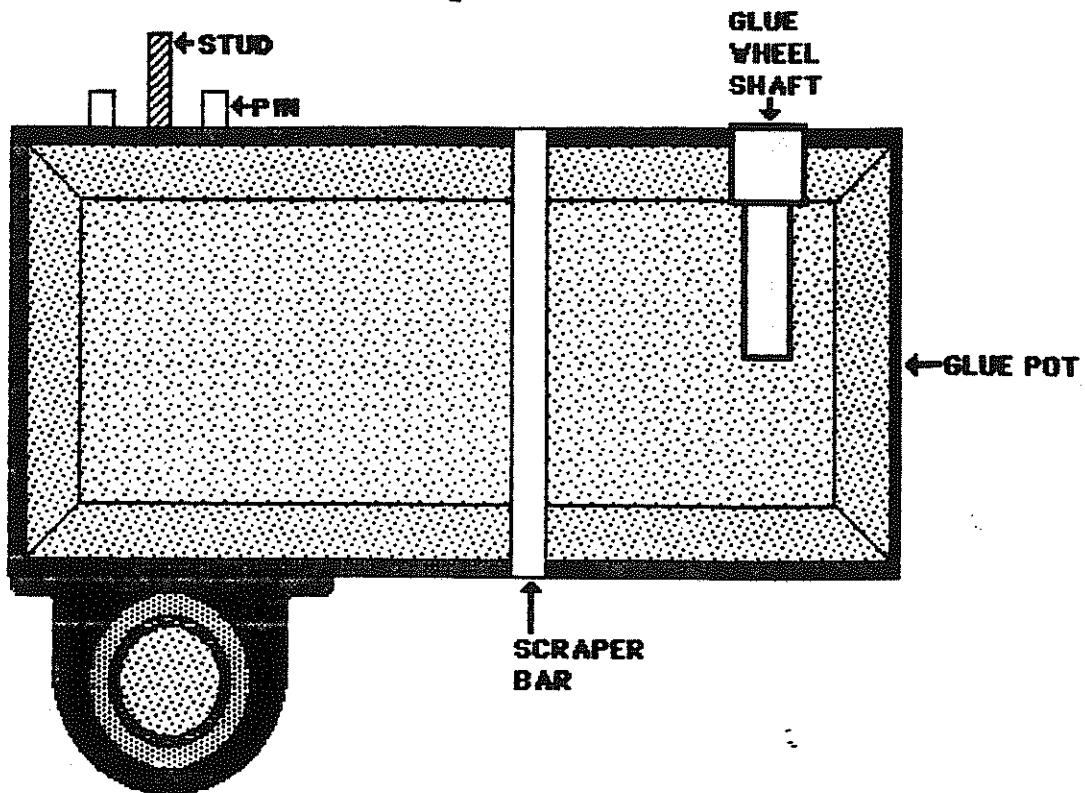
## PICK-OFF WHEEL VACUUM TIMING



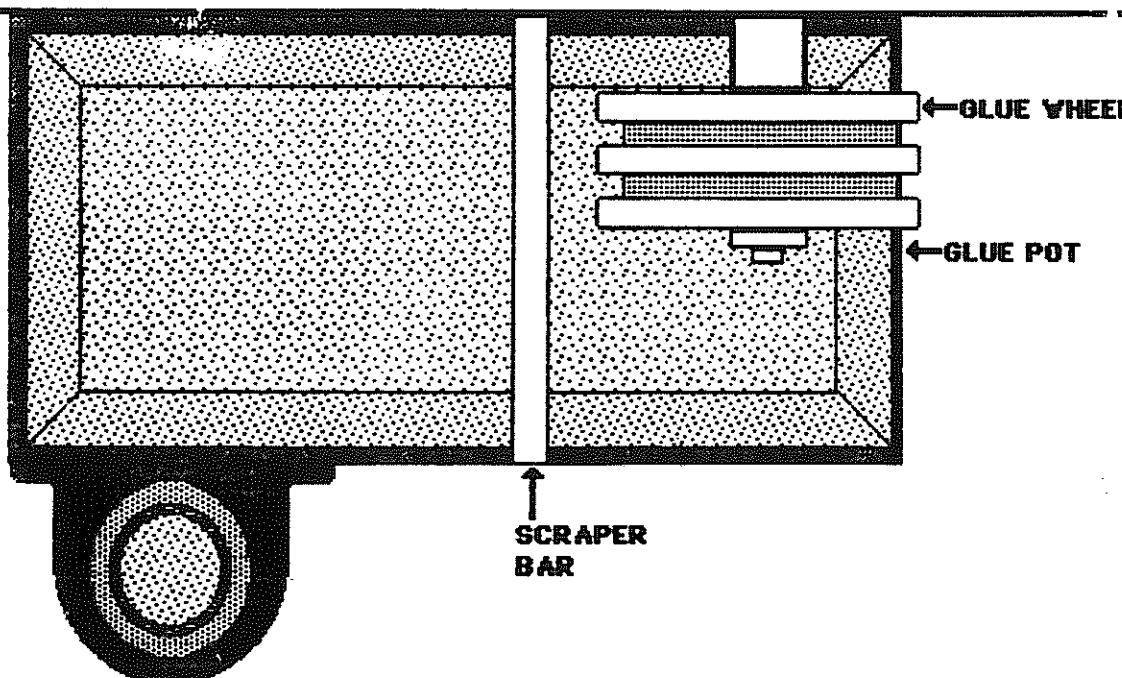
The pick-off wheel or vacuum pad has a disk that controls when the vacuum comes on and goes off. To adjust loosen the two screws on the disk bracket and rotate the disk back and forth. The vacuum should come on approximately  $1/4"$  prior to the vacuum pad picking up the label. Check that the vacuum goes off as the label is placed on the mailing piece.

## GLUE POT, WHEEL AND SCRAPER

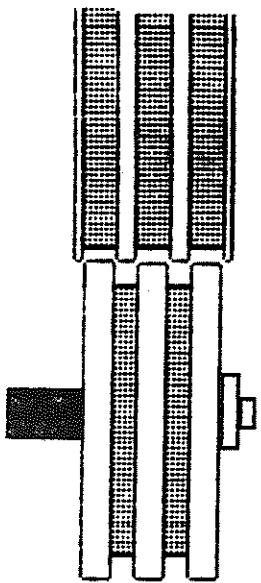
The glue pot is mounted on the labeling head with a bolt and two pins that extend through the glue pot into the labeling head. It is held in place with a lock bar that screws in from the back of the labeling head.



To attach the glue assembly, first put the glue pot in position and tighten the lock bar. Next put the glue wheel onto the glue wheel shaft, install key, washer and screw then tighten. The glue wheel should seat against the hub on the glue wheel shaft and align properly with the vacuum pad.



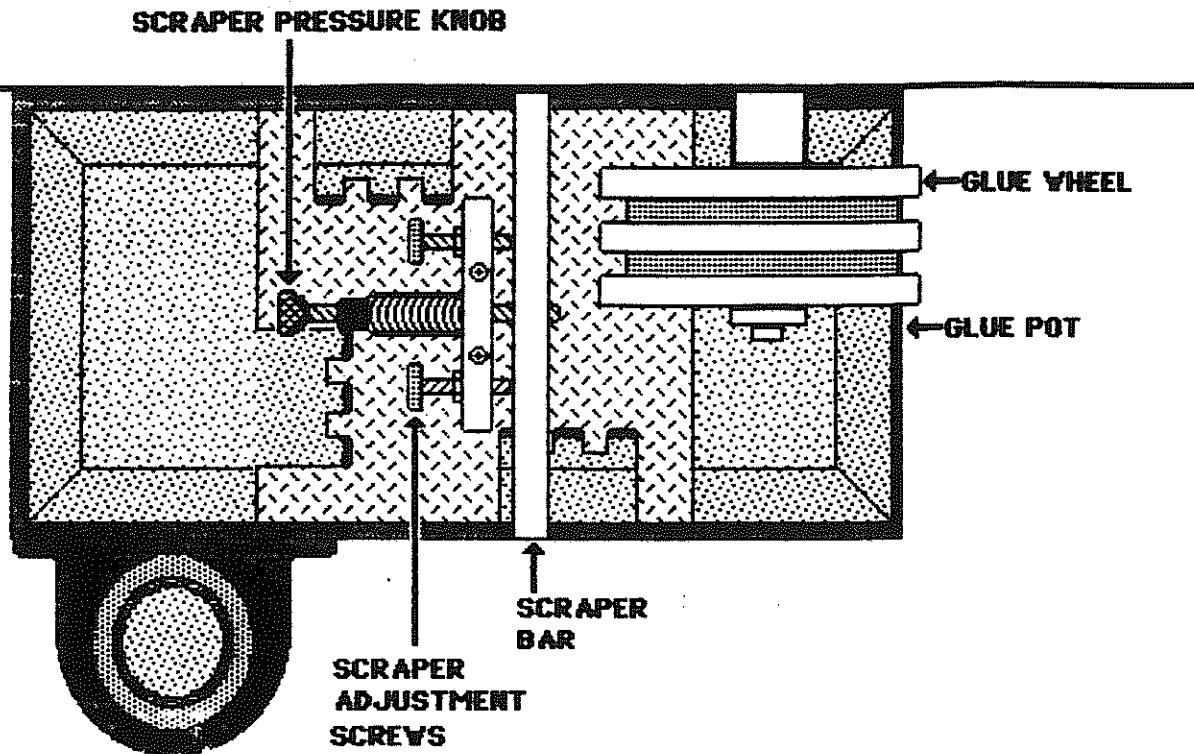
## GLUE POT, WHEEL AND SCRAPER



The vacuum pad and glue wheel must not touch each other. To check for alignment, remove labels and rotate machine by hand until the vacuum pad is meshed with the glue wheel. If they touch each other, check to see that the glue wheel is properly seated all the way onto the glue wheel shaft. If the problem continues to exist, then the glue wheel shaft or the vacuum pad shaft must be adjusted in or out. This is done by removing the covers on the head and unlocking the lock collars and sprockets, positioning the shafts in proper alignment and re-assembling the machine.

## GLUE POT, WHEEL AND SCRAPER

The scraper can now be installed and pushed upto the glue wheel. The scraper is held against the glue wheel with the spring loaded scraper pressure knob. The two screws that are mounted to the top of the scraper, push the scraper away from the glue wheel and allow glue to be carried by the glue wheel and applied to the label.

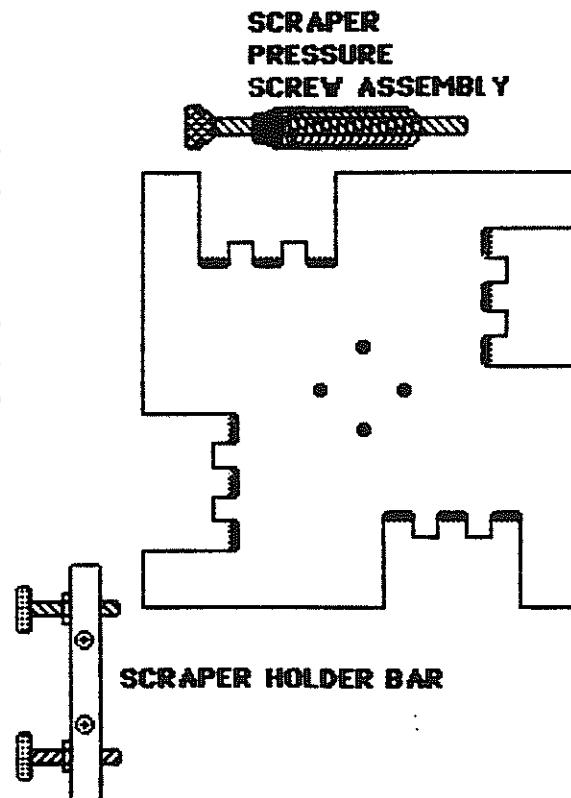


The amount of glue needed will vary from product to product and is also determined by the type of glue used.

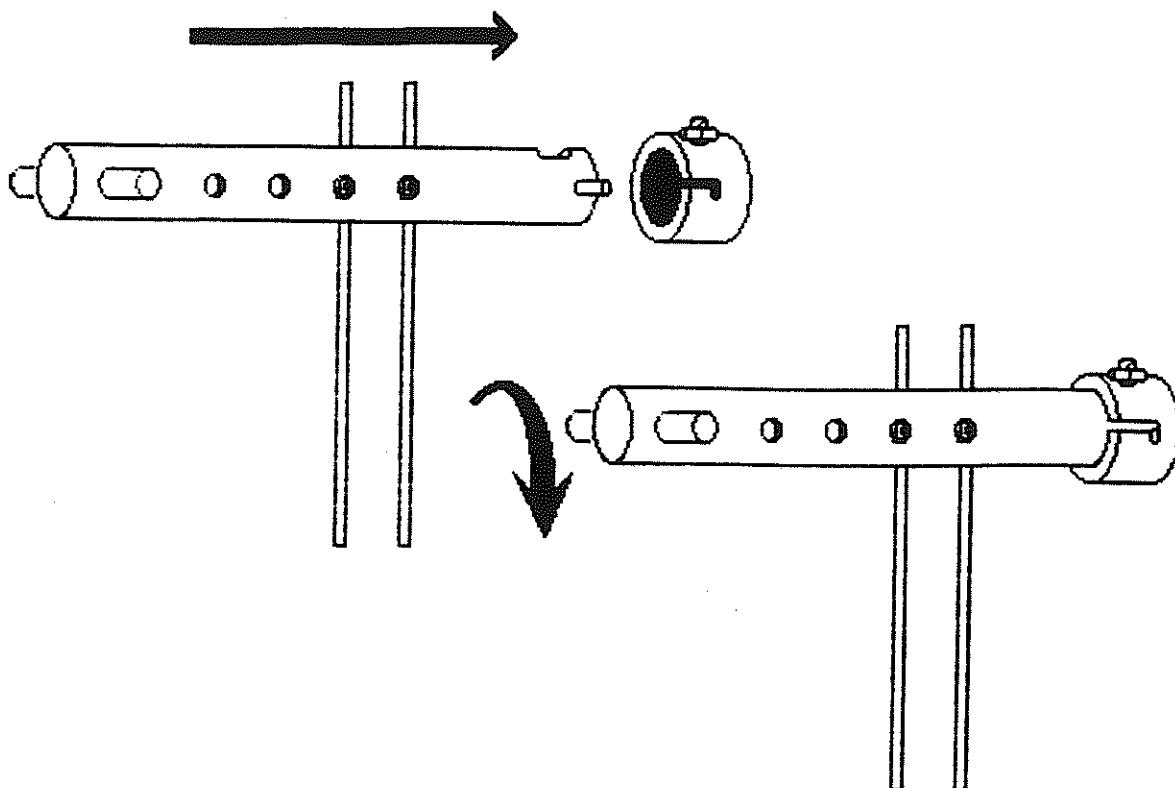
The scraper has four sides that can be used. Simply remove the scraper holder bar and rotate the scraper when one side is worn.

When removing the scraper to be cleaned, unscrew the pressure screw assembly and slide the scraper back out of the glue pot. Be careful not to damage the scraper.

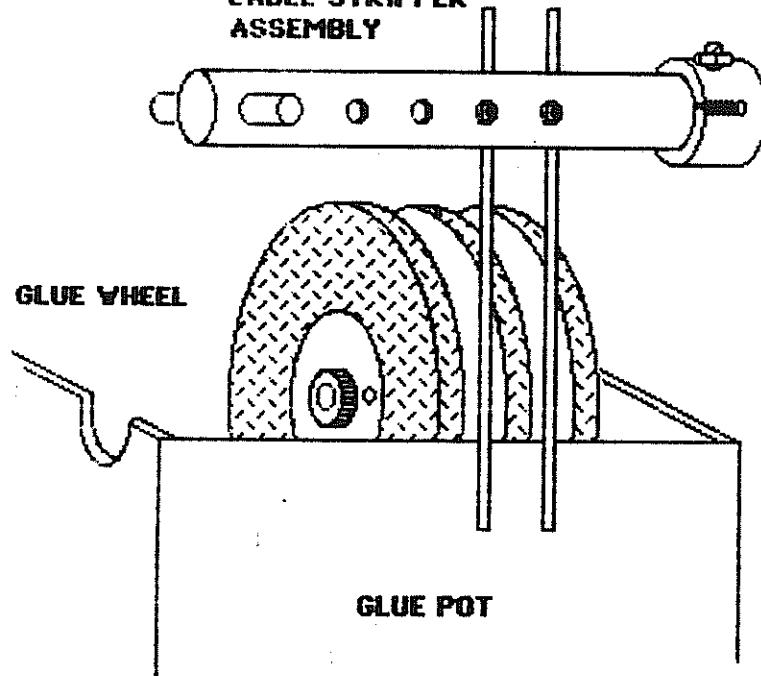
When cleaning the glue pot, be sure to clean the slots that the scraper rides in so the scraper will move freely back and forth. A tooth brush is best to use for cleaning the grooves and the glue wheel.



The stripper wires mount just above the glue wheel into a holder mounted on the labeling head. These wires can be bent very easily, caution should be taken to ensure that they are installed properly and do not rub on the glue wheel or vacuum pad. The stripper wires should be washed with the glue pot and wheel.



LABEL STRIPPER  
ASSEMBLY



The stripper wires, which go outside the glue pot, should not touch either the glue wheel or vacuum pad.

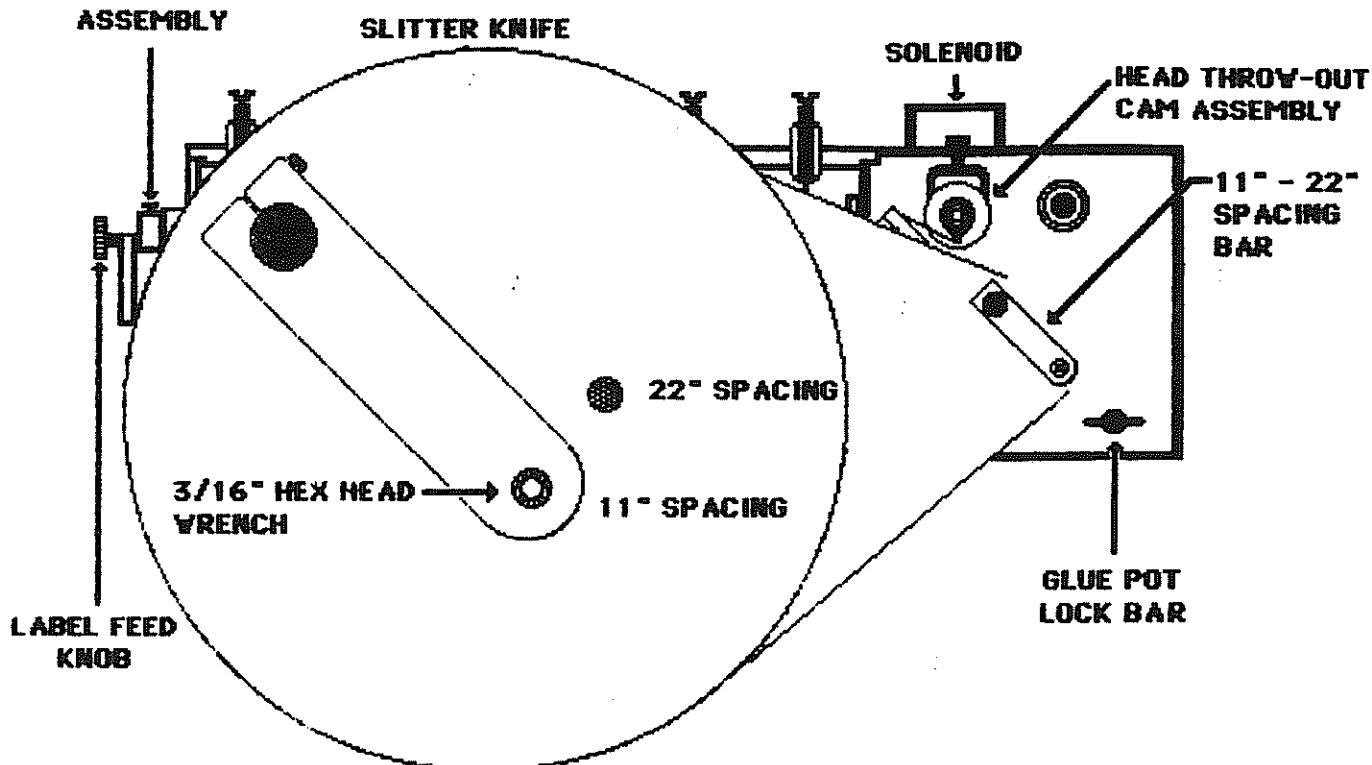
## 11" AND 22" SPACING

The KR211 labeling head will operate on either 11" or 22" spacing. On 11" spacing two vacuum pads are used on the label pick off wheel. On 22" spacing, only one pad is used.

To operate on 11" spacing the spacing lever located on the back of the head must be pushed down and the 3/16" hex head bolt placed in the lower hole.

The vacuum pads must both have vacuum to operate in 11" spacing, one of the pads has a vacuum shut-off screw (1/8" hex head wrench). To turn vacuum on to the pad loosen the adjustment screw.

RATCHET &amp; PAUL ASSEMBLY

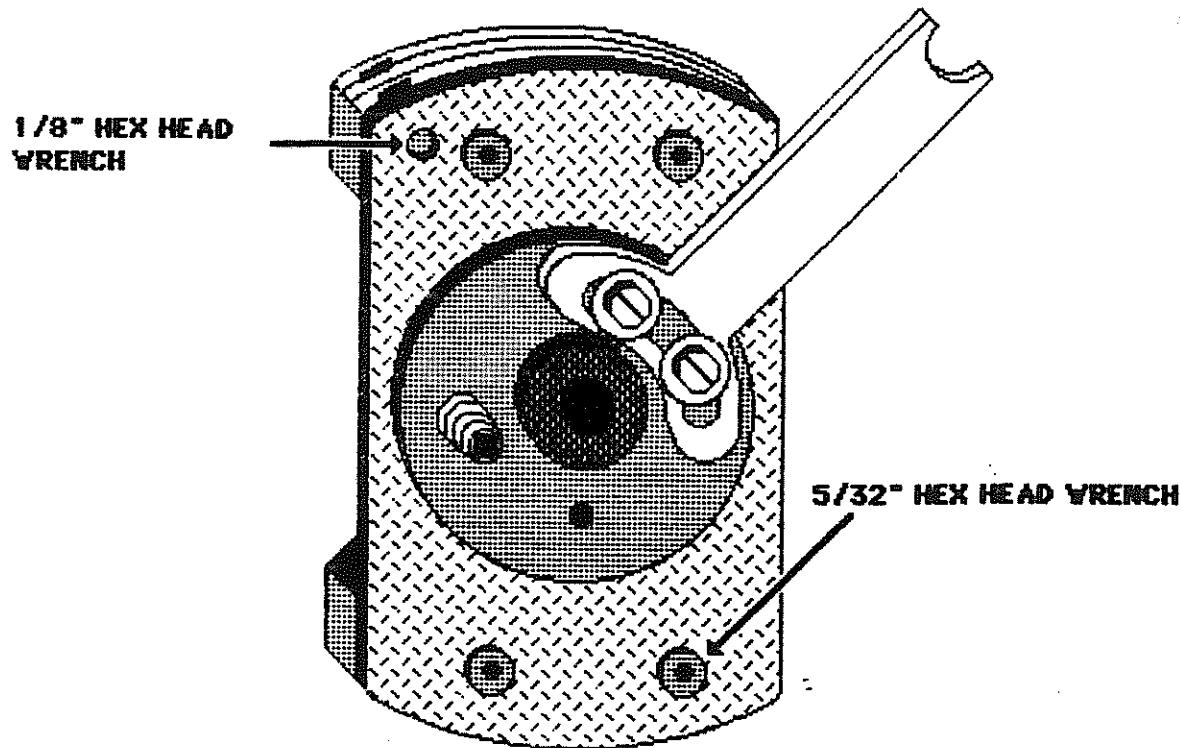


To operate in 22" spacing, the lever is in the uppermost position and secured with the 3/16" hex head wrench.

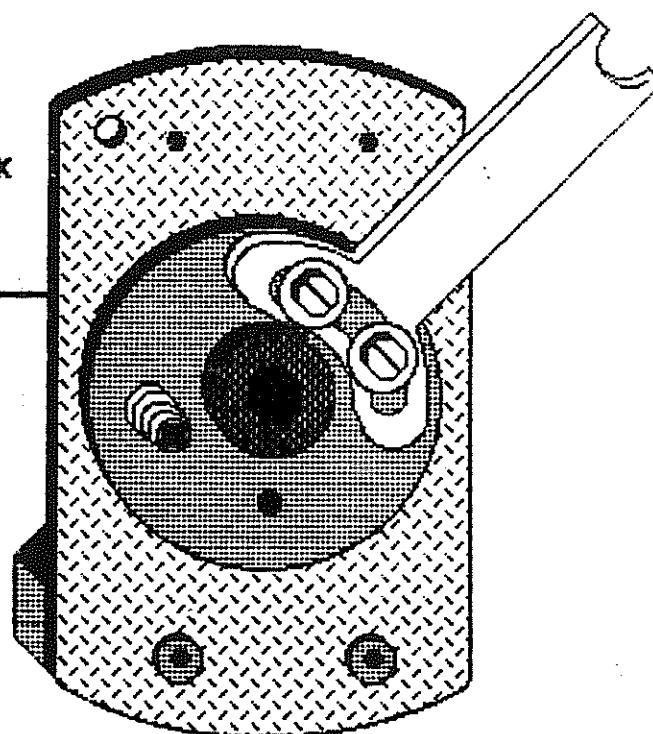
See Section 215.60 for Base spacing change.

**11" AND 22" SPACING**

The vacuum pad not being used must not have vacuum present. The easiest way to operate on 22" spacing is to remove the unused vacuum pad and tape over the vacuum hole in the back of the pick-off wheel. This will allow you to have a clean vacuum pad to install in case the pad being used gets clogged with glue.



**WHEN OPERATING ON 22"  
SPACING, REMOVE THE  
PAD AND TAPE OVER THE  
VACUUM HOLE ON THE BACK  
OF THE PICK OFF WHEEL.  
(BE SURE TO REMOVE TAPE  
WHEN CHANGING TO 11"  
SPACING)**



## MAINTENANCE AND LUBRICATION

ITEM	FUNCTION	REMARKS
Head (General)	Remove excessive paper dust, ink, glue and all other foreign materials.	Use clean, soft rag. (Dampen with water if necessary).
Glue Wheel Vacuum Pad, Glue Box and Scraper	Remove adhesive & clean.	Use warm running water and tooth brush.
Heat Wheel	Remove adhesive & clean	While heat wheel is still hot, wipe off with a clean soft rag.
Vacuum Belt	Remove excess paper dust from port holes	Remove hose at vacuum belt valve fitting and blow into fitting.
Slitter Knives	Check cut of label	By hand, run the machine through several cycles. Inspect each label to insure a clean cut or score. If there are any signs of ragged edges, the knives should be readjusted or replaced.
Guillotine Knives	Check cut of strip.	By hand, run the machine through several cycles. Inspect each strip to insure a clean cut. Each label, after being cut should fall freely to the label guide belt. If there are any signs of ragged edges, the knives should be readjusted or replaced.

## MAINTENANCE AND LUBRICATION

ITEM	FUNCTION	REMARKS
Pick-off Wheel	Remove all foreign materials from ports.	Dip pipe cleaner into laquer thinner and pass through port holes.
Label Wheel Vacuum Valve	Remove accumulated grit from grooves. Lubricate surface lightly.	Use lubriplate on surface. Check for uneven wear or warpage lap or replace if necessary.
Label transfer Rollers	Check for glazing on rubber surfaces. Clean if necessary.	Use alcohol.
Brush Wiper Ring (Heat Wheel)	Clean foreign material from rings.	Use alcohol.
Brushes (Heat Wheel)	Check for excessive, uneven wear or chips.	Replace if necessary.
Guillotine Knife plates	Fill oil cups. Wipe excess oil from plates.	Use SAE 30 oil.
Gears Knife Cam	Remove grit and old lubricant with clean rag. Replace lubricant. Do not lubricate excessively.	Use light grease.
Pin Wheel Shaft	Fill oil cups	Use SAE 30 oil.

## OPTIONS, ATTACHMENTS AND RECOMMENDED SPARE PARTS

STANDARD	OPTION	FEATURE
		Handle 3, 4, or 5 across label format
		Handle 1, 2, or 6 across label format
		Maximum label length 4.5 inches
		Minimum label length 2 inches
		Label Depth of .5 or 1 inch
		Label Depth of 1.5 or 2 inch (see note 1)
		Label Depth of 2 to 6 inches (requires Electronic Drive and special accessory kit)
		Quick adjust between 11" and 22" Format
		Heat Wheel Attachment (Label heights .5 to 2 inches in either 11" or 22" spacing)
		TS-500 Townsort - Electronic Mail Sorting Processor
		Electronic Label Drive
		Adjustable Label Placement while machine is running
		Electronic Guillotine Knife Control for Change Over from 3 up to 4 up etc

Note 1 - The standard KR-211 Labeling Head will feed 0.5", 1", 1.5" and 2" labels, however glue wheels, scrapers and pads may be required to ensure glue coverage on the label.

## OPTIONS, ATTACHMENTS AND RECOMMENDED SPARE PARTS

**KIRK-RUDY**  
**KR-211 LABELING HEAD**  
**RECOMMENDED SPARE PARTS**

QTY	PART #	DESCRIPTION
1	100751	WAFER WASHER
1	501031	ROLLER
1	105314	S/S KEY
1	101100	ONE WAY BEARING
1	190002	SOLENOID
1	105905	FEEDER BELT
1	190100	MICRO SWITCH
2	190647	LARGE O RING
10	190646	SMALL O RING
6	102704	SPRING
6	501039	CIRCULAR KNIFE
2	501074	STRIPPER WIRE
1	102708	SPRING
1	105612	SCREW
1	107662	SET SCREW
1	102114	KNOB
1	102204	COLLAR
1	106710	NUT
1	108102	S/S CAP SCREW
1	501040	S/S WASHER
1	501057-A	ROLLER ASSY
* 1	500905	LOWER GUILLOTINE KNIFE
* 1	500912	UPPER GUILLOTINE KNIFE

Replace these parts as they are used.

\*Guillotine knives need not be purchased until the set of knives on the labeling head have been turned



## TROUBLE SHOOTING

## PROBLEM                          PROBABLE CAUSE                          SEE SECTION

## LIST WILL NOT STAY ON PIN WHEELS

- (1) LIST NOT PROPERLY ALIGNED ON PIN WHEELS 211.80 PAGE 3 & 211.90 PAGE 1
- (2) PAPER GUIDE ROLLERS NOT SET PROPERLY 211.80 PAGE 3
- (3) "O" RING FEED ROLLER ARM NOT SEATED PROPERLY IN "U" RING BELT PULLEY 211.120 PAGE 1
- (4) STRIPPER PLATE NOT SET PROPERLY 211.80 PAGE 3
- (5) GUILLOTINE KNIFE TIMING NOT SET PROPERLY 211.140 PAGE 1 & 2

## LIST "BUCKLES" BEFORE GUILLOTINE KNIFE

- (1) EXCESSIVE PRESSURE ON SLITTER KNIVES 211.110 PAGE 1
- (2) "O" RING DRIVE NOT SET PROPERLY 211.120 PAGE 1
- (3) "O" RING DRIVE SLIPPING 211.80 PAGE 1
- (4) STRIPPER PLATE NOT SET PROPERLY 211.120 PAGE 2
- (5) GUILLOTINE KNIFE TIMING NOT SET PROPERLY 211.140 PAGE 1 & 2

## GUILLOTINE KNIVES NOT CUTTING

- (1) IMPROPER ANGLE ON UPPER KNIFE GK.10 PAGE 8 STEP 19
- (2) BACK AND FORTH PLAY IN KNIFE GK.10 PAGE 7 STEP 18
- (3) TRYING TO CUT ON PERFORATION 211.130 PAGE 1
- (4) EXCESSIVE HUMIDITY IN LIST TS.10 PAGE 11
- (5) DULL GUILLOTINE KNIVES GK.10
- (6) PRESSURE SENSITIVE OR HEAT ACTIVATED LABELS TS.10 PAGE 11

## LIST NOT FEEDING PROPERLY

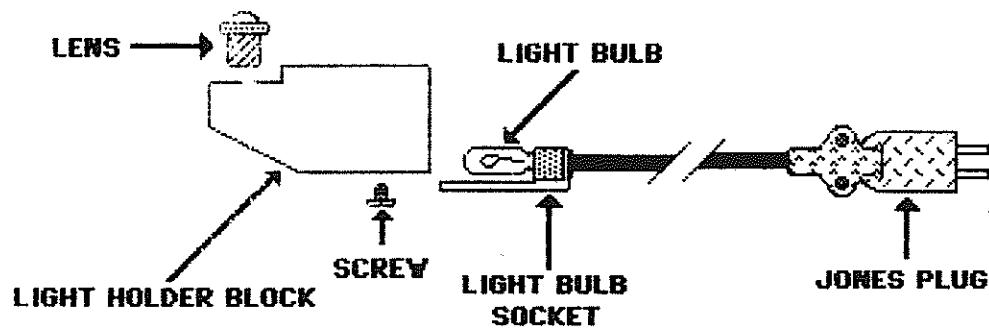
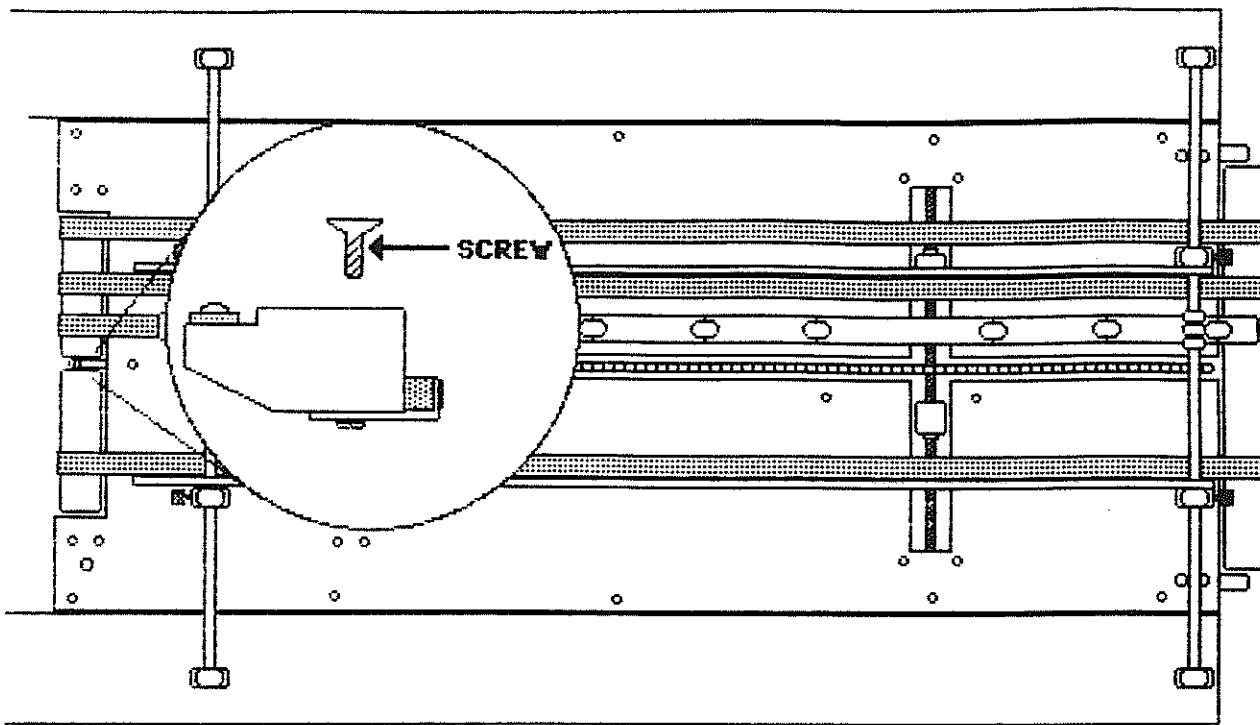
- (1) RATCHET & PAWL SLIPPING TS.10 PAGE 10
- (2) RATCHET AND PAWL WORN TS.10 PAGE 10
- (3) LABEL FEED TIMING NOT SET PROPERLY 211.140 PAGE 3
- (4) PERFORATION GETTING CAUGHT BETWEEN BACK OF BOTTOM GUILLOTINE KNIFE AND LABEL HEAD PLATE IS.10 PAGE 8
- (5) STRIPPER PLATE NOT SET PROPERLY 211.150 PAGE 2

## TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	SEE SECTION
LABEL STRIP DOES NOT INDEX CONSISTENTLY ON VACUUM BELT	(1) TOO MUCH VACUUM TO VACUUM BELT (2) CLUTCH BEARING SLIPPING IN VACUUM BELT PULLEY (3) VACUUM BELT SLIPPING (4) BELT STROKE NOT SET AND LOCKED (5) SLITTER KNIVES NOT POSITIONED PROPERLY (6) VACUUM PULLEY NOT LOCKED TO LABEL BELT	211.150 PAGE 1 TS.10 PAGE 9 TS.10 PAGE 7 211.70 PAGE 2 211.80 PAGE 1 VS.10 PAGE 5,6, & 7
-LABEL NOT TRANSFERRING TO VACUUM PAD -LABELS GOING ON CROOKED -LABELS FLYING OFF PRIOR TO VACUUM PAD	(1) LABEL TRANSFER NOT SET PROPERLY (2) PRESS DOWN ROLLER NOT SET PROPERLY OR WORN (3) BELT STROKE NOT SET PROPERLY (4) WORN OR DAMAGED PARTS IN LABEL TRANSFER (5) SLITTER KNIVES NOT SET PROPERLY OR DULL (6) GLUE WHEEL STRIPPER NOT SET PROPERLY	211.150 PAGE 3 THRU 6 211.150 PAGE 2 211.70 PAGE 1 THRU 4 REPLACE 211.110 211.170 PAGE 4
LABEL PLACEMENT NOT CONSISTENT	(1) LABEL TRANSFER NOT SET PROPERLY (2) SHUTTLE FEEDER ON BASE NOT SET-UP PROPERLY (3) TIMING CHAIN NOT TIMED 215.70 (4) INTERFERENCE WITH PRODUCT TRANSPORT (5) TOO MUCH PRESSURE ON HEAD (6) GLUE-WHEEL STRIPPER NOT SET PROPERLY (7) VACUUM TO VACUUM PAD CLOGGED OR NOT SET PROPERLY	211.150 PAGE 3 THRU 6 215.70/215.80/215.90 215.130 215.180 211.170 PAGE 4 215.90 PAGE 1
NO POWER TO MACHINE	(1) BLOWN FUSE OR CIRCUIT BREAKER AT SOURCE (2) MACHINE UN-PLUGGED (3) SWITCH NOT ON OR BAD	CORRECT CORRECT CORRECT

PROBLEM	PROBABLE CAUSE	SEE SECTION
POWER TO MACHINE VACUUM PUMPS WORK MACHINE AND CONVEYOR DO NOT RUN (CONVEYOR SWITCH IN AUTOMATIC)	(1) OPEN STOP CIRCUIT (2) BLOWN FUSE ON DRIVE BOARD (3) BAD DRIVE BOARD(S) AND/OR MOTOR(S)	215.40 PAGE 3 CORRECT CORRECT
FEEDER FEEDS DOUBLES OR RIPS	(1) WRONG VACUUM PLATE (2) GATE NOT SET PROPERLY (3) TOO MUCH VACUUM TO VACUUM PLATE	215.70 PAGE 2 215.80 PAGE 1 215.90 PAGE 2
PRODUCT FEEDS CROOKED	(1) PRODUCT GUIDES NOT ALIGNED WITH SIDE GUIDES (2) GATE SET TO TIGHT (3) UPPER FEED ROLLERS NOT SET PROPERLY (4) DAMAGED FEED ROLLER(S) (5) SKID BAR(S) NOT OVER BELT	215.130 215.80 215.90 PAGE 4 REPLACE 215.150
PRODUCT FEEDS INCONSISTENTLY OR NOT AT ALL	(1) NO VACUUM (2) POOR VACUUM (3) GATE SET TOO LOW (4) INCONSISTENT OR BAD PRODUCT.	215.40 PAGE 1/VS.10 VS.10 215.80 CORRECT
LABELS CONTINUE TO FEED WHEN NO PRODUCT IS PRESENT	(1) LIGHT INTENSITY TURNED TO "0" (2) LIGHT BULB BURNED OUT (3) SOLENOID BURNED OUT (4) BAD AMPLIFIER OR RELAY ON 72K7 BOARD (5) BAD PHOTO CELL (6) SOLENOID OR MICRO SWITCH UNPLUGGED	CORRECT TS.10 PAGE 5 TS.10 PAGE 6 REPLACE REPLACE CORRECT
LABEL HEAD WILL NOT FEED LABELS	(1) MICRO-SWITCH NOT SET PROPERLY (2) BAD MICRO-SWITCH (3) ARM ON MICRO SWITCH BENT (4) BAD RELAY ON 72K7 BOARD	215.190 REPLACE CORRECT REPLACE
LABELS WILL NOT STICK TO PRODUCT	(1) BAD ADHESIVE (2) GLUE WHEEL OR SCRAPER NOT SET PROPERLY (3) HEAD PRESSURE NOT SET PROPERLY	CORRECT 211.170 PAGE 3 215.180

## TROUBLE SHOOTING

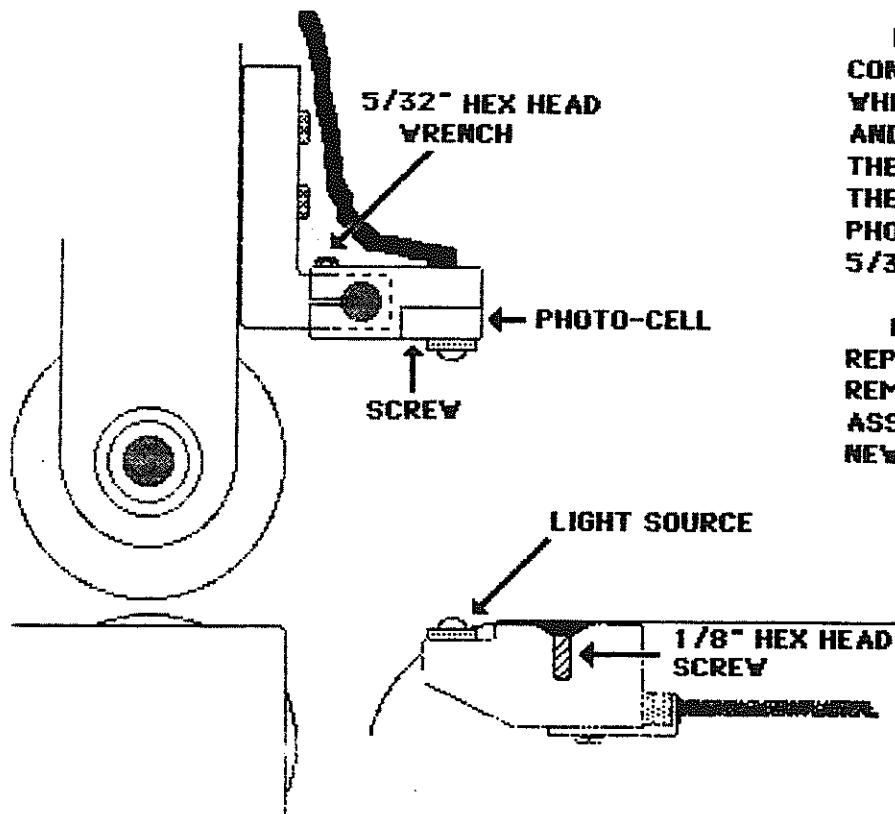


TO REPLACE THE LIGHT BULB, LOOSEN THE SCREW THAT HOLDS THE LIGHT HOLDER BLOCK TO THE TABLE TOP USING AN 1/8" HEX HEAD WRENCH. THE LIGHT HOLDER BLOCK WILL DROP DOWN.

REMOVE THE SCREW HOLDING THE SOCKET AND REMOVE THE SOCKET FROM THE HOLDER.

REPLACE THE BULB AND REASSEMBLE.

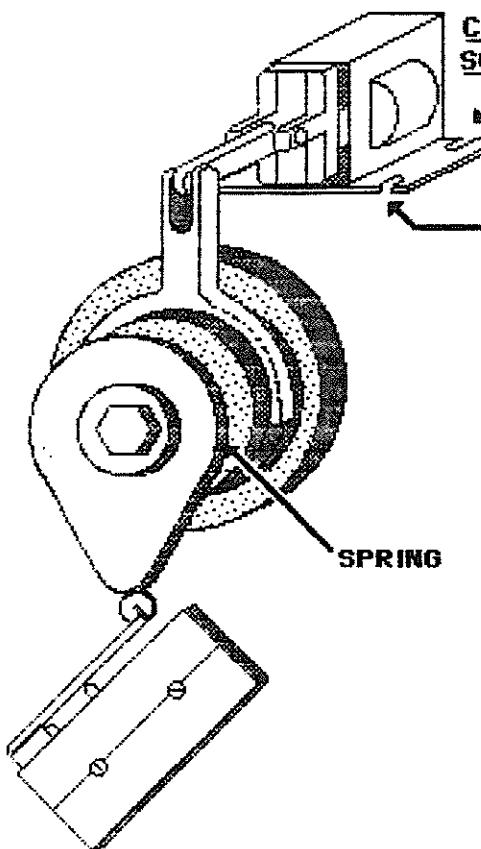
## TROUBLE SHOOTING



IF THE LABELING HEAD CONTINUES TO FEED LABELS WHEN NO PRODUCT IS PRESENT AND THE LIGHT IS TURNED UP, THE PROBLEM MAY BE WITH THE PHOTO-CELL. ALIGN THE PHOTO-CELL BY LOOSENING THE 5/32" SCREW.

IF THE PROBLEM CONTINUES, REPLACE THE PHOTO CELL BY REMOVING THE HOLDER, DISASSEMBLING AND INSTALLING NEW PHOTO CELL.

## TROUBLE SHOOTING



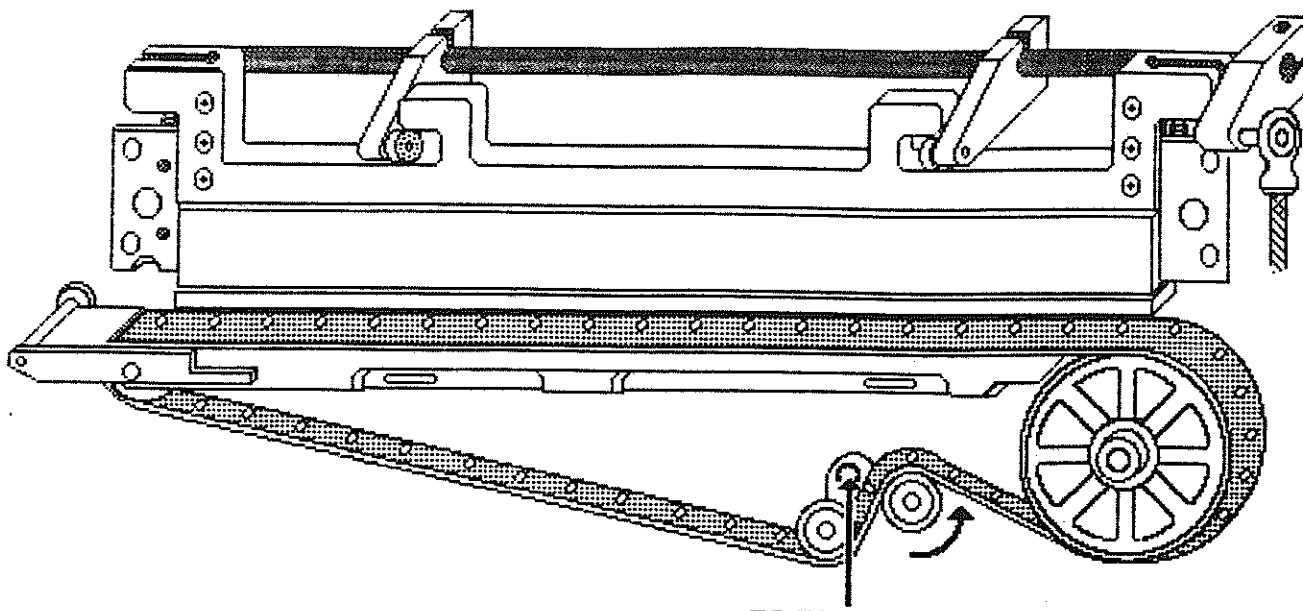
**CAUTION - TURN POWER OFF TO MACHINE. THE SOLENOID IS OPERATED ON 220 VOLTS.**

IF THE SOLENOID ENERGIZES BUT THE LABELS CONTINUE TO FEED, THE SOLENOID MAY NEED TO BE ADJUSTED. **CAUTION - TURN POWER OFF TO MACHINE** - LOOSEN THE FOUR SCREWS THAT MOUNT THE SOLENOID TO THE LABELING HEAD AND SLIDE THE SOLENOID BACK AND TIGHTEN SCREWS. CONTINUE THIS PROCESS UNTIL THE DRIVE ENGAGES WHEN THE SOLENOID ENERGIZES AND THE HEAD DOES NOT FEED LABELS.

IF THE SOLENOID "CHATTERS" WHEN ENERGIZED, THE SOLENOID MAY BE TOO FAR BACK, OR THE SPRING MAY BE TOO STRONG. THE SPRING CAN BE SHORTENED BY CUTTING A COIL OFF.

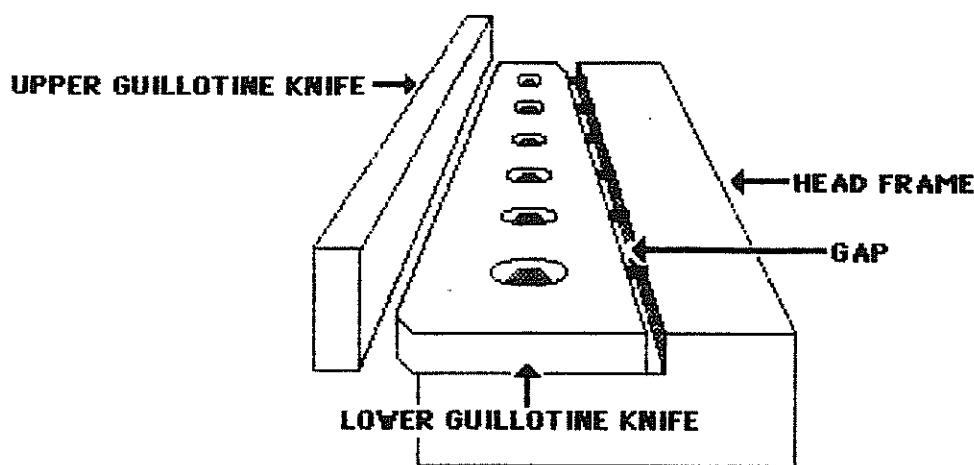
THE SOLENOID MAY BE BURNED OUT. TO TEST, TURN OFF POWER AND PLACE A CONTINUITY TESTER SUCH AS AN OHM METER ACROSS THE TWO TERMINALS. IF THE TESTER READS OPEN, THE SOLENOID NEEDS TO BE REPLACED.

## TROUBLE SHOOTING



**TO TIGHTEN THE VACUUM BELT,  
LOOSEN THE 3/16" HEX HEAD BOLT  
AND PUSH UP ON THE RIGHT BELT ROLLER  
THE TIGHTEN. ENSURE BELT IS BETWEEN  
ROLLERS AS SHOWN ABOVE.**

## TROUBLE SHOOTING

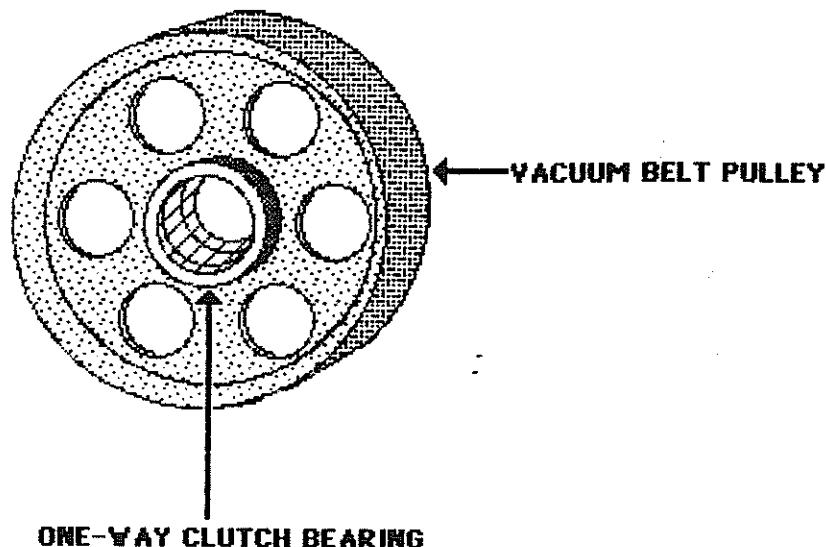


IF THE LIST BUCKLES WHILE TRYING TO FEED, AND THE TIMING IS PROPERLY SET, THE PROBLEM MAY BE WITH THE LIST "FAN FOLD" GETTING CAUGHT IN THE GAP BETWEEN THE LOWER GUILLOTINE KNIFE AND THE HEAD FRAME. TO RESOLVE THIS PROBLEM, PLACE A PIECE OF CLEAR TAPE OVER THE GAP.

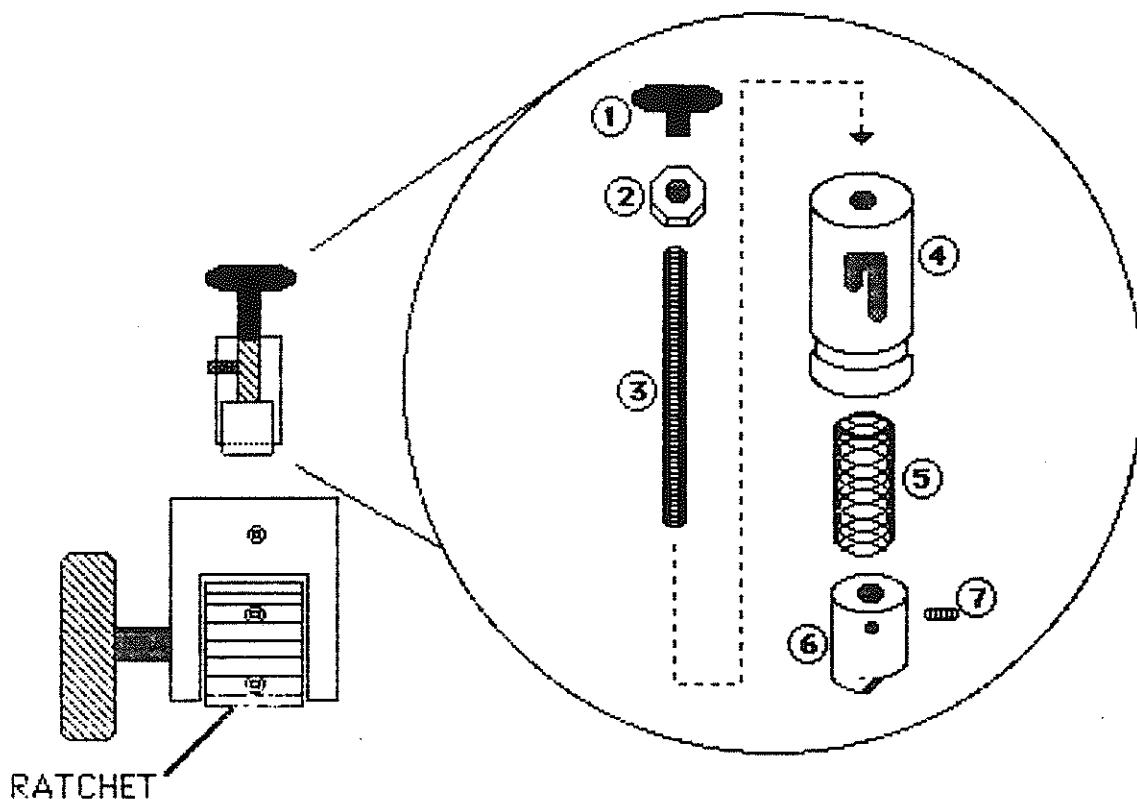
## TROUBLE SHOOTING

IF THE VACUUM BELT SLIPS AND THE VACUUM TO THE BELT IS SET PROPERLY,  
THE PROBLEM MAY BE WITH THE ONE-WAY CLUTCH BEARING. REMOVE THE VACUUM  
BELT PULLEY AND CLEAN THE ONE-WAY CLUTCH BEARING BY SPRAYING WITH WD-40.

IF THE PROBLEM CONTINUES, REPLACE THE ONE-WAY CLUTCH BEARING.



## TROUBLE SHOOTING



If the pawl will not disengage the problem may be with the set screw (part #7) being loose. If this problem continues re-set with a locking agent or adhesive.

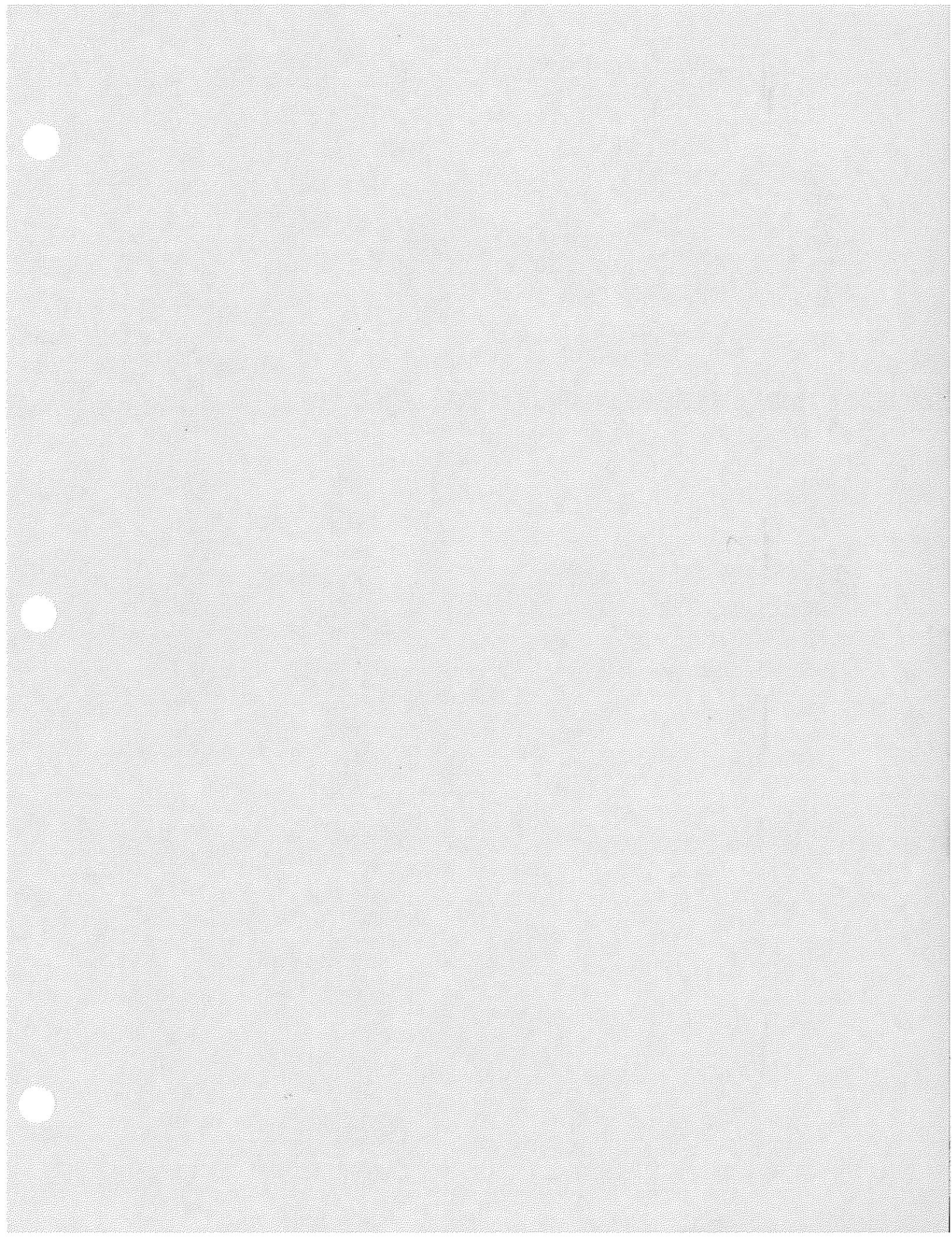
If the list indexes inconsistently and the timing is set properly, the ratchet and/or pawl may be worn. Replace and reassemble so that the pawl engages the ratchet evenly.

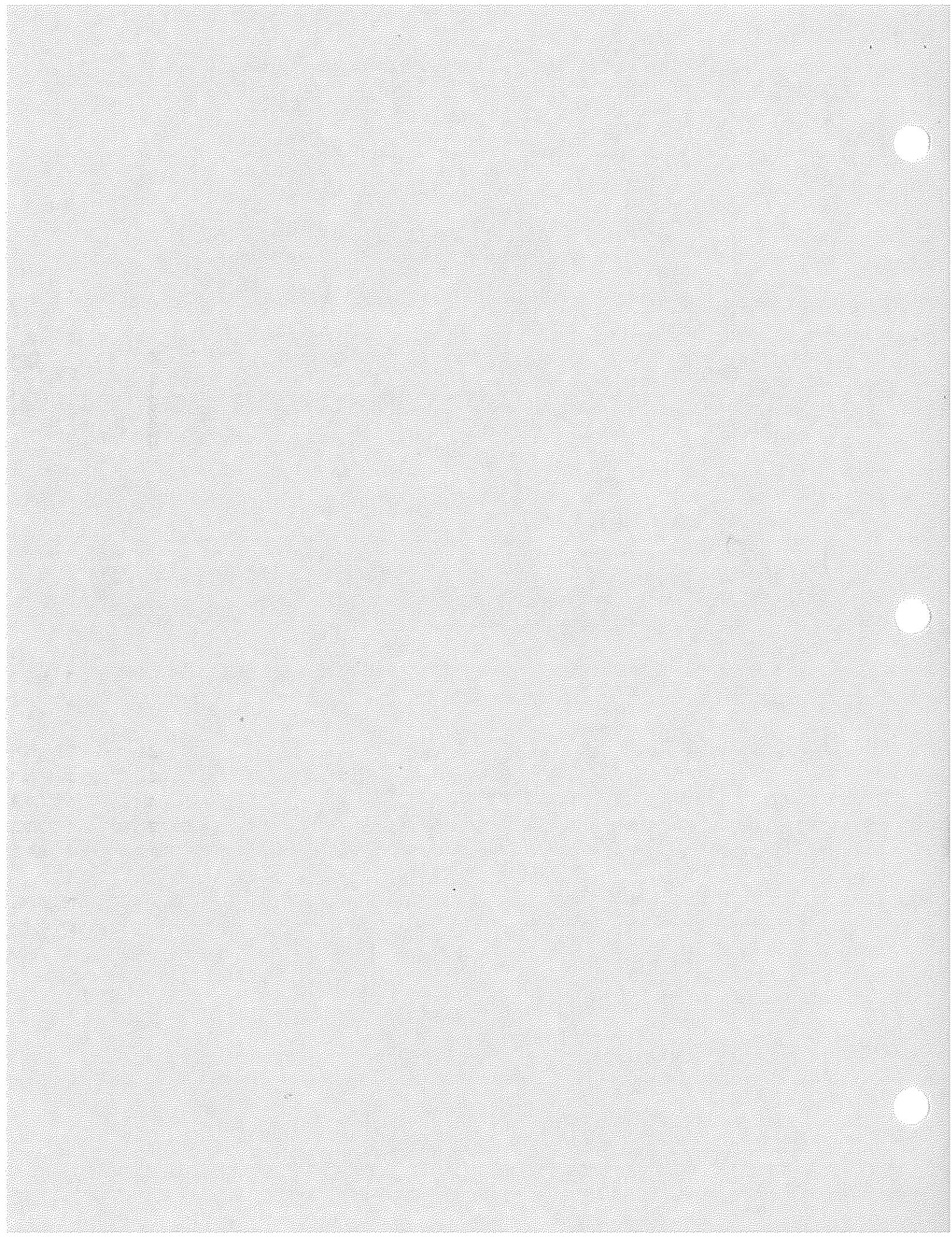
## TROUBLE SHOOTING

The KR211 Labeling Head is designed to cut labels printed on 20# paper. However, the proper care of the list in handling and storage will improve on the performance of the equipment. The guillotine knives will have difficulty cutting on the perforation. See the section on label format for proper printing positions. Below are listed a few hints on how to run list that have not been properly handled.

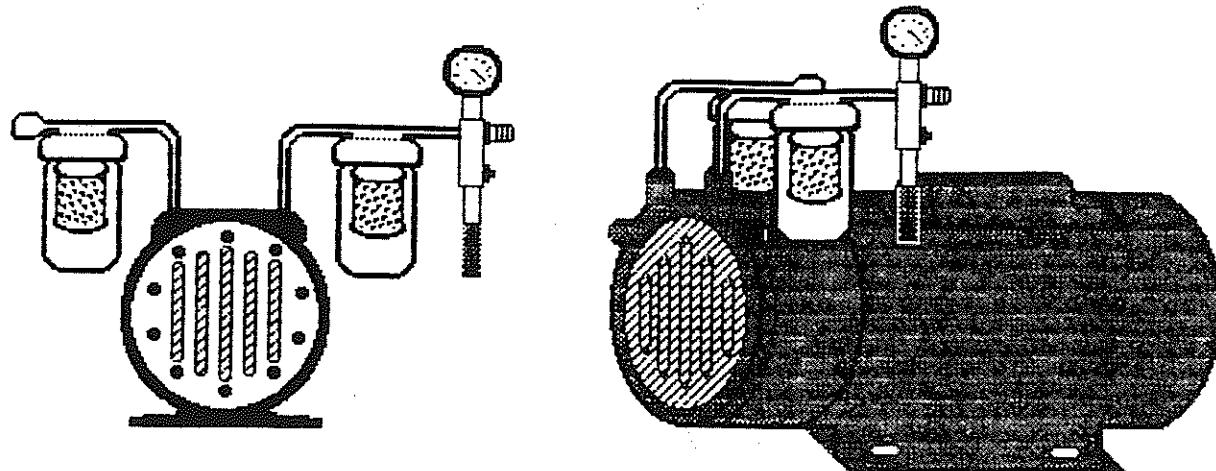
- 1.) If the list has too much moisture it will fold instead of cutting. Try to dry the list prior to running by placing in a microwave oven.
- 2.) If the list is too dry, static electricity will build up in the machine and cause problems in the transfer. Try using a humidifier/mist set next to the machine. Also spraying the list with an anti-static spray such as used for clothes may help.
- 3.) If the list has been mishandled and has been creased, try setting the list on the floor behind the machine.
- 4.) When running pressure sensitive or heat activated labels, it may be necessary to move the non serated portion of the anvils underneath the knives and cut through the list.







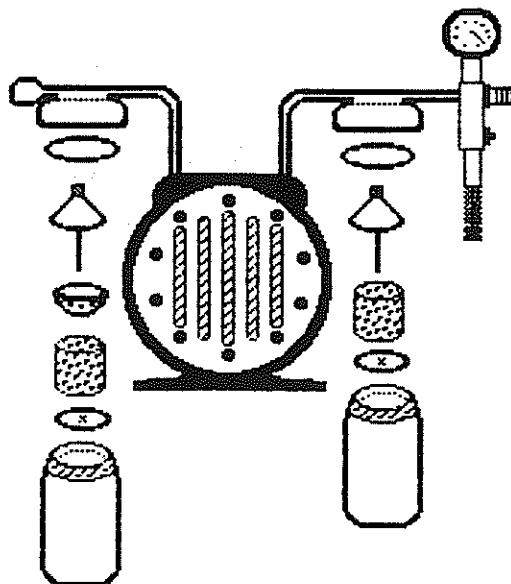
## VACUUM SYSTEM MAINTENANCE



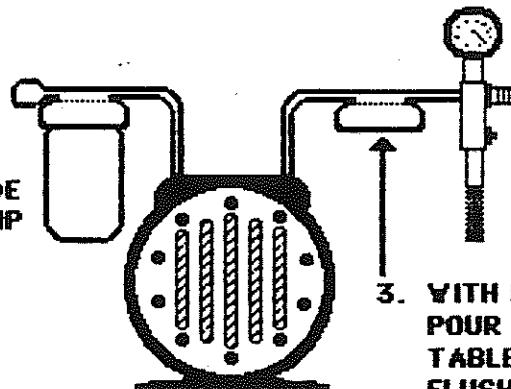
The vacuum system on the Kirk-Rudy will give years of service if properly maintained. Under normal operation, it is necessary to clean the filters frequently to allow for proper air flow. To clean the filters, remove the jar and unscrew the bottom plate from the filter assembly. Once removed the filters should be blown out or vacuumed to remove any paper dust. If the filters begin to degenerate or can not be cleaned, replace with new filters.

The vacuum pumps are designed and manufactured with carbon vanes and require no lubrication. However, the vanes will build up with excess carbon and dust which requires that the pumps be flushed. Under normal use, the pumps will require flushing approximately every three months and more often under heavy use or when running product that has a lot of dust such as newspapers.

If flushing and cleaning the vacuum system does not restore proper vacuum to the pump it may be necessary to replace the vanes. This is done by removing the shroud and end plate. Be sure to follow the manufacturers instructions for maintaining and repairing the vacuum pumps. These instructions are furnished with the machine or a copy can be obtained by contacting Kirk-Rudy.

**VACUUM SYSTEM MAINTENANCE**

1. REMOVE JARS, FILTERS, FILTER HOLDERS AND RUBBER SEALS FROM BOTH SIDES OF VACUUM PUMP.

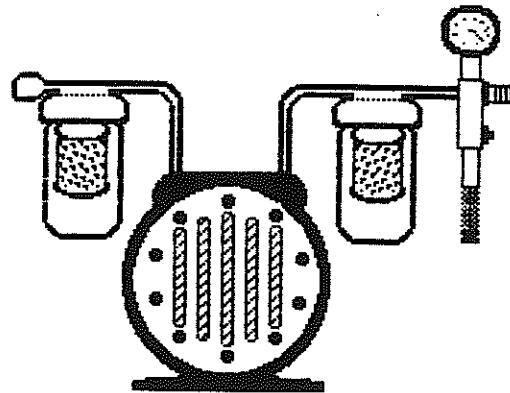


2. REINSTALL THE JAR ON THE EXHAUST SIDE OF THE VACUUM PUMP

3. WITH PUMP RUNNING, POUR IN ABOUT TWO TABLESPOONS OF FLUSHING SOLVENT.

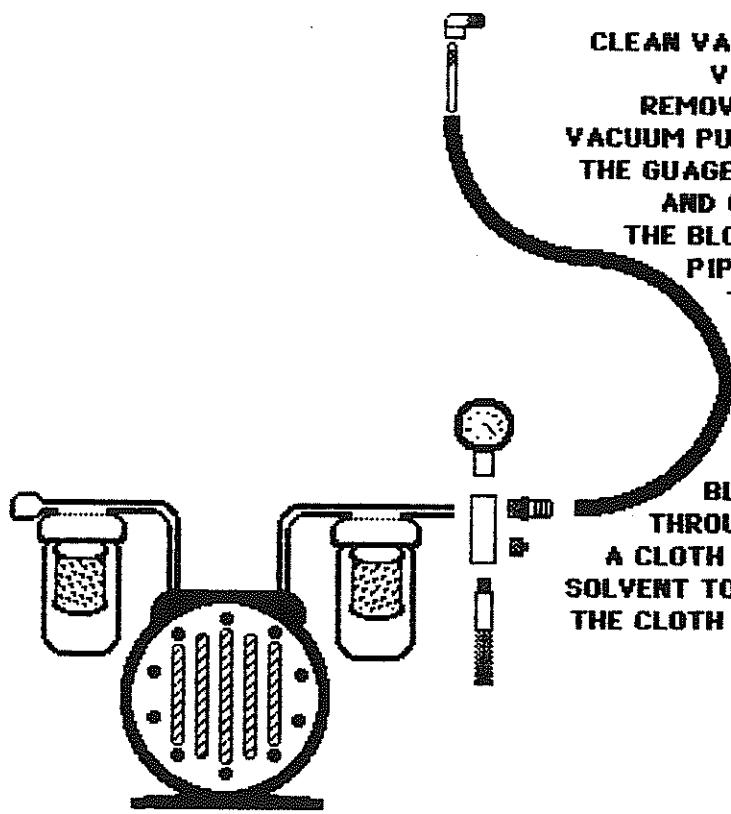
**CAUTION - USE ONLY MANUFACTURERS APPROVED  
FLUSHING SOLVENT. USE OF OTHER SOLVENTS  
COULD CAUSE THE PUMP TO EXPLODE AND  
CAUSE INJURY.**

## VACUUM SYSTEM MAINTENANCE



4. DISPOSE OF USED FLUSHING SOLVENT PROPERLY. ENSURE THAT RUBBER SEALS ARE PLIABLE AND INSTALL. IF SEALS ARE CRACKED OR BRITTLE, REPLACE. REINSTALL FILTER HOLDERS AND FILTER ELEMENTS. INSTALL JARS.

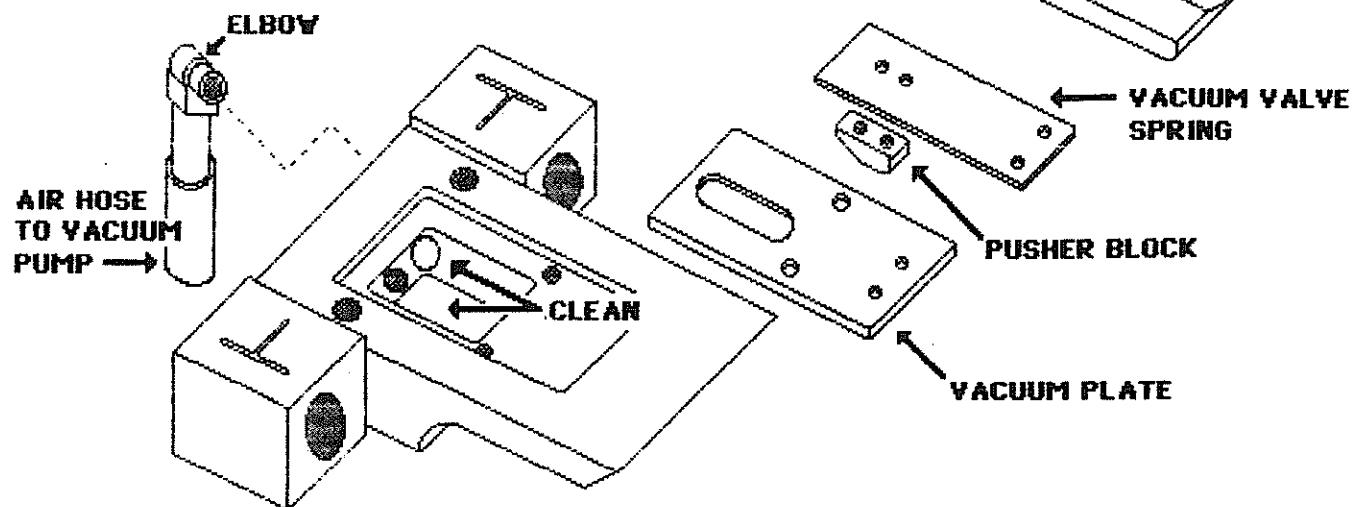
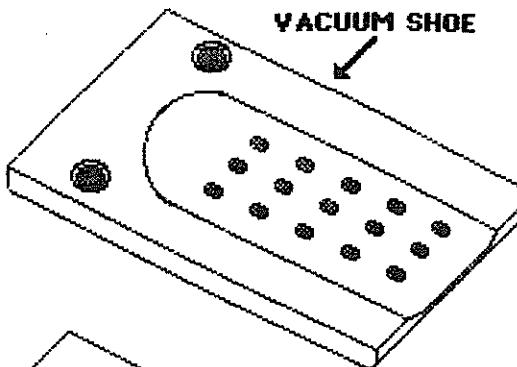
CLEAN VACUUM SYSTEM FROM THE VACUUM PUMP UP.  
REMOVE HOUSING FROM THE VACUUM PUMP INTAKE. DISASSEMBLE THE GAUGE, PRESSURE RELIEF VALVE AND CLEAN. ALSO CLEAN THE BLOCK, HOSE, ELBOW AND PIPE THAT CONNECTS TO THE VACUUM VALVE BODY ON THE FEEDER.  
THE HOSE CAN BE CLEANED BY BLOWING A STRING THROUGH THE HOSE, TYING A CLOTH SOAKED WITH CLEANING SOLVENT TO THE STRING AND PULLING THE CLOTH BACK THROUGH THE HOSE.



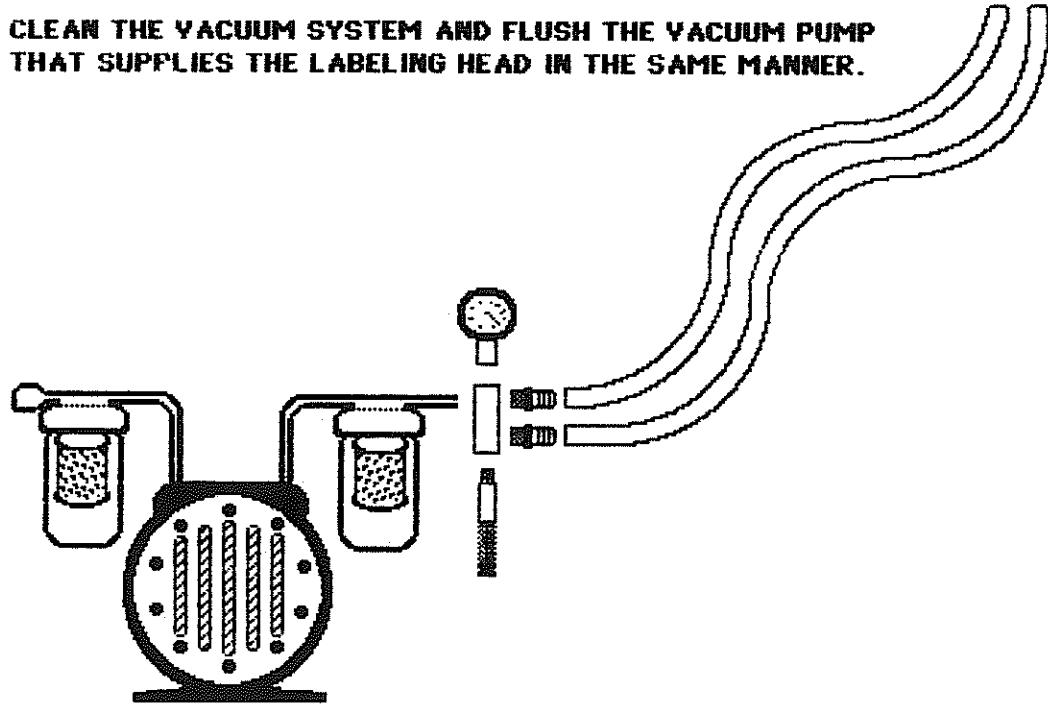
## VACUUM SYSTEM MAINTENANCE

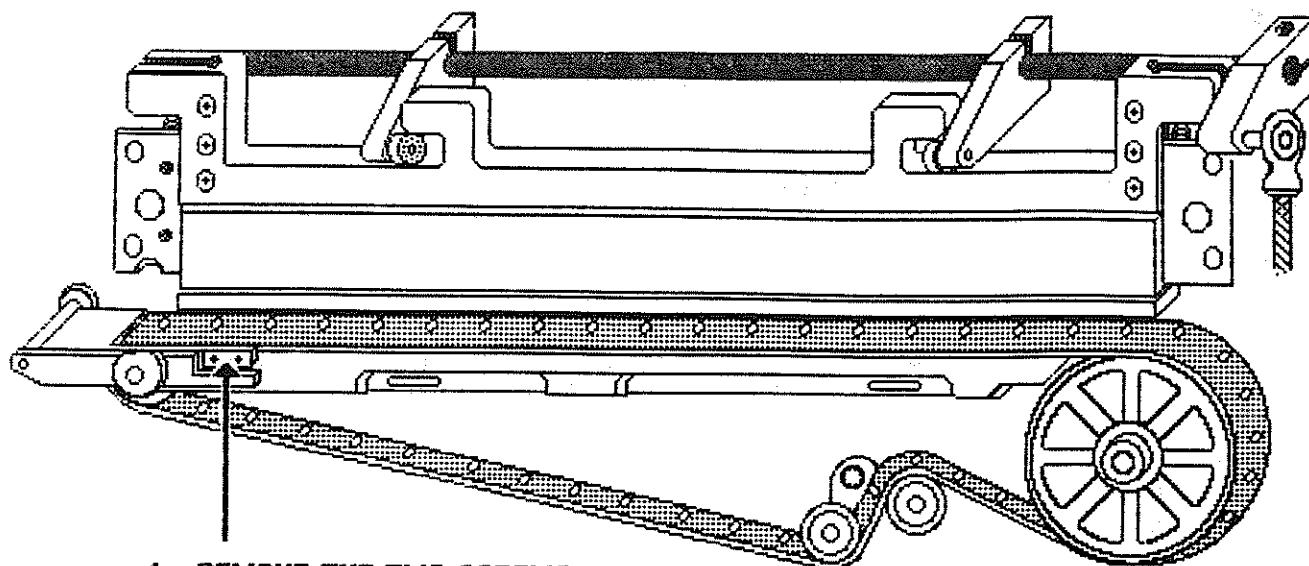
REMOVE THE VACUUM SHOE, VACUUM VALVE SPRING AND VACUUM PLATE. CLEAN AND REINSTALL.

CHECK THE VALVE SPRING AND PUSHER BLOCK FOR WEAR AND REPLACE IF NECESSARY.

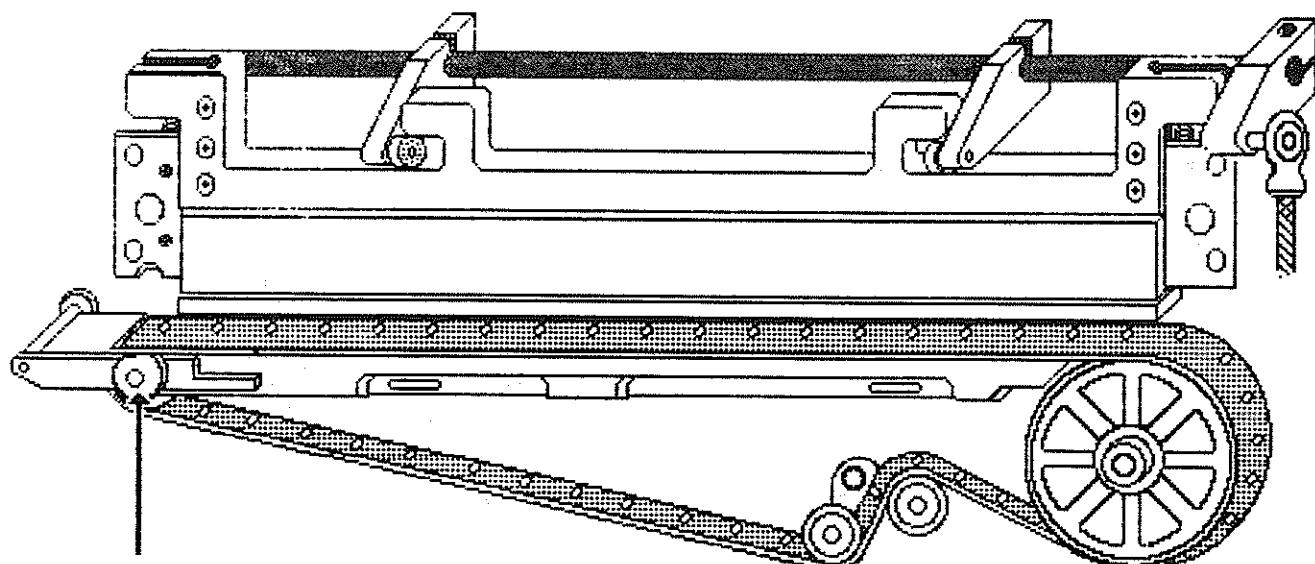


CLEAN THE VACUUM SYSTEM AND FLUSH THE VACUUM PUMP THAT SUPPLIES THE LABELING HEAD IN THE SAME MANNER.

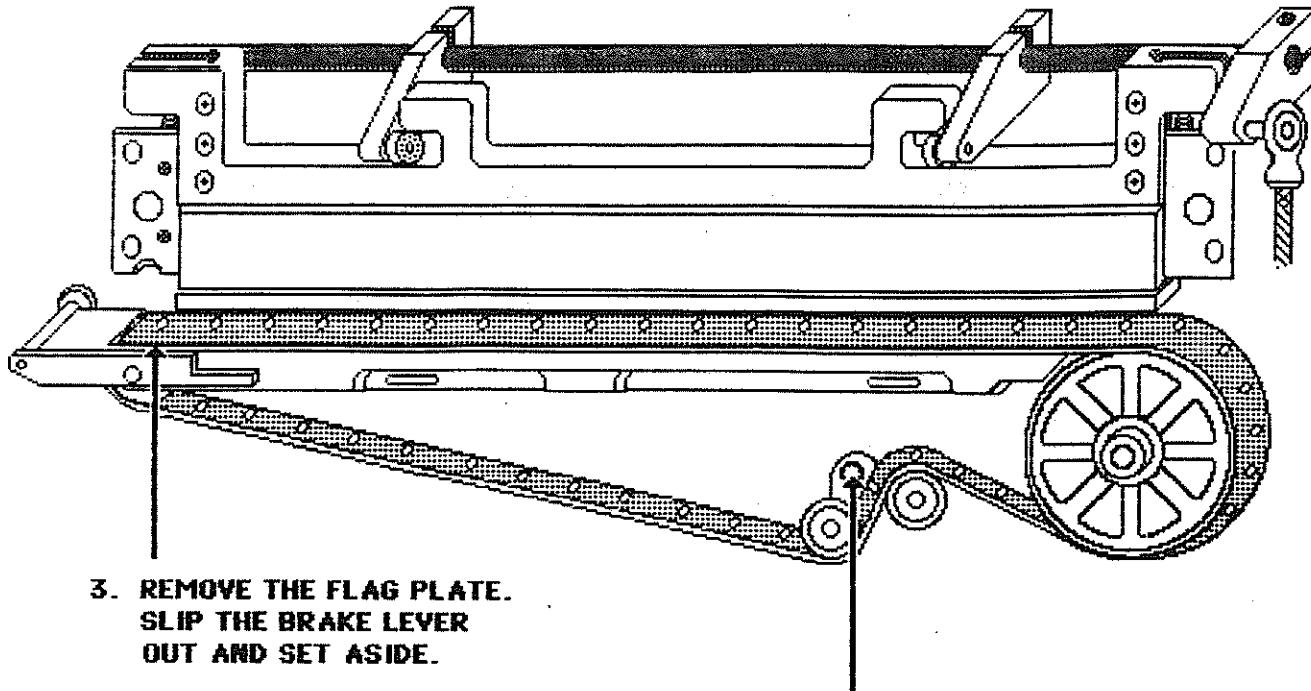


**VACUUM SYSTEM MAINTENANCE**

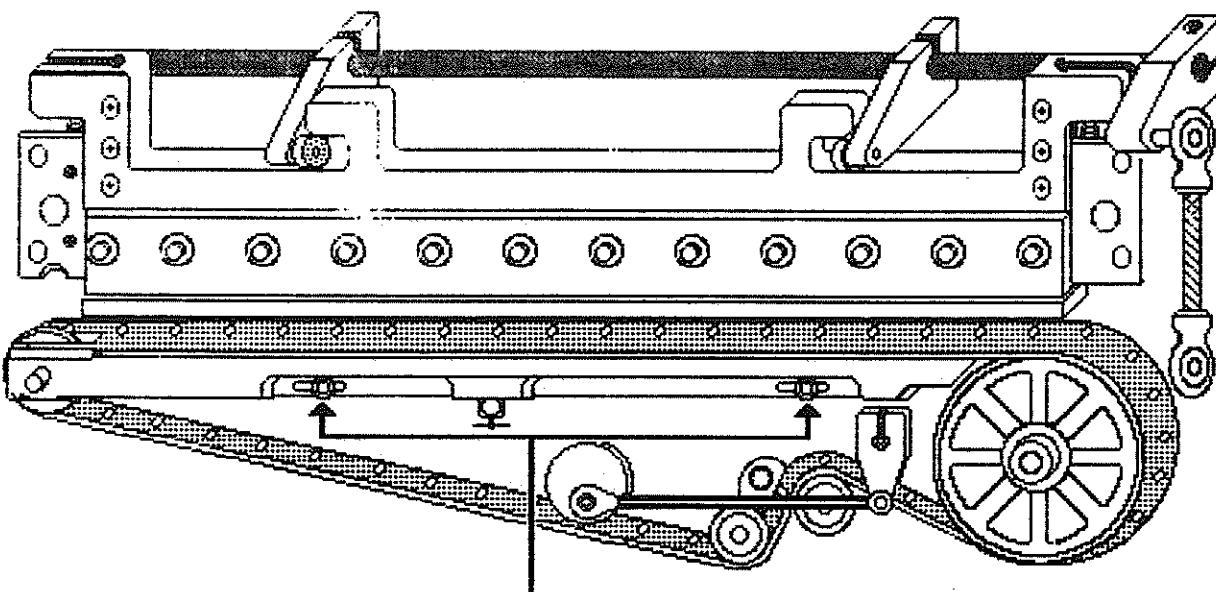
- 1. REMOVE THE TWO SCREWS,  
BLOCK AND SPRING THAT  
PUSH THE BRAKE LEVER.**



- 2. REMOVE THE LOCK COLLAR  
THAT RETAINS THE BRAKE LEVER.  
SLIP THE VACUUM DISC LEVER OFF  
OF THE SHAFT.**

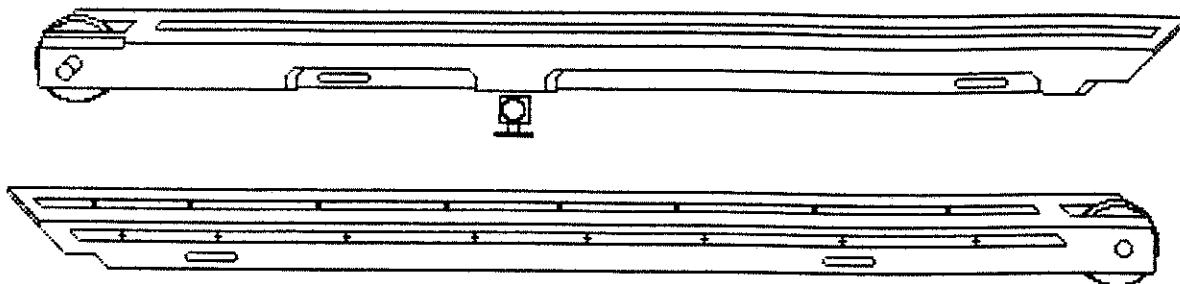
**VACUUM SYSTEM MAINTENANCE**

**4. LOOSEN THE BELT  
TENSION.**



**5. REMOVE THE VACUUM BELT FEEDER BAR AND VACUUM BELT  
BY REMOVING THE TWO HEX HEAD BOLTS.**

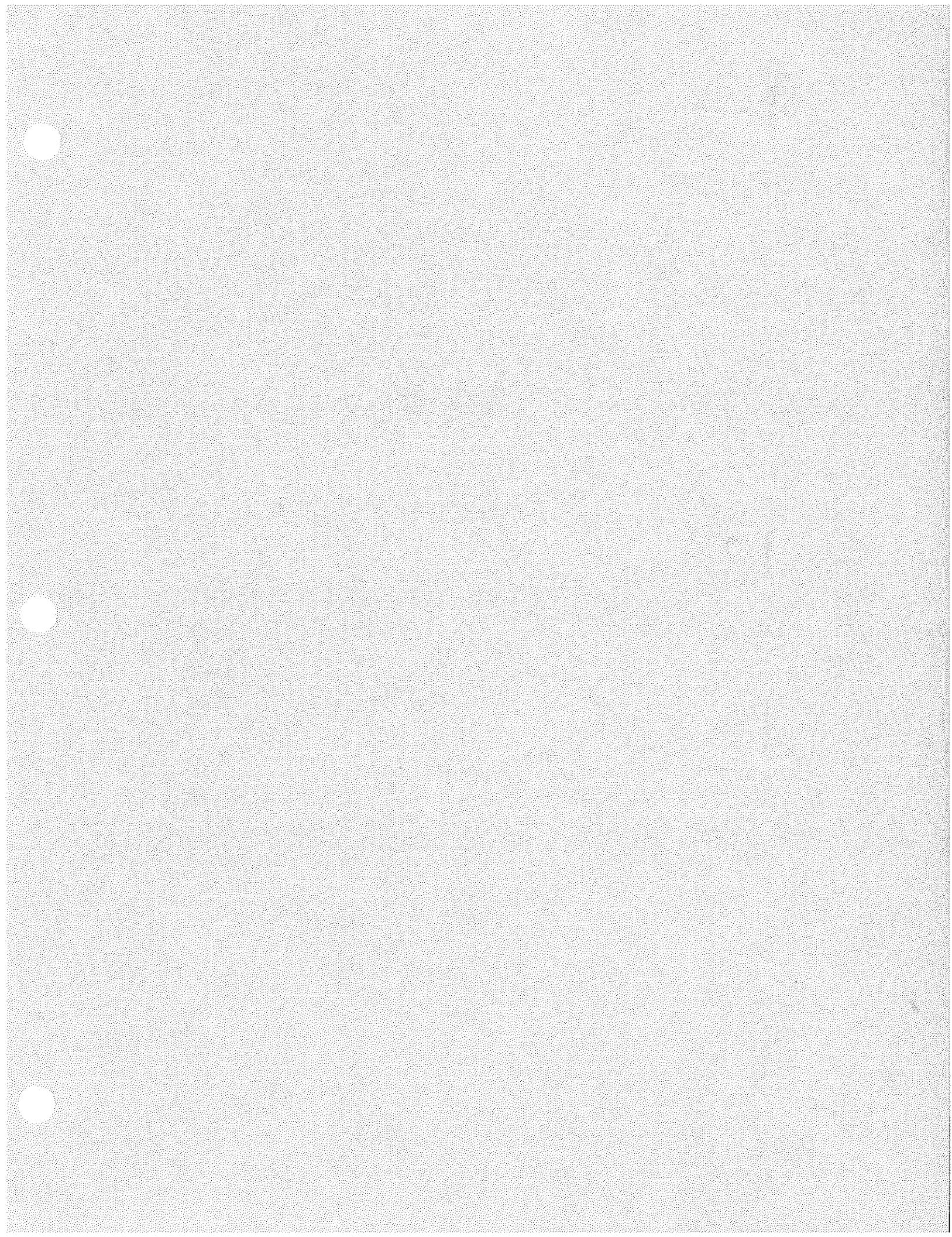
**6. SET VACUUM BELT ASIDE.**

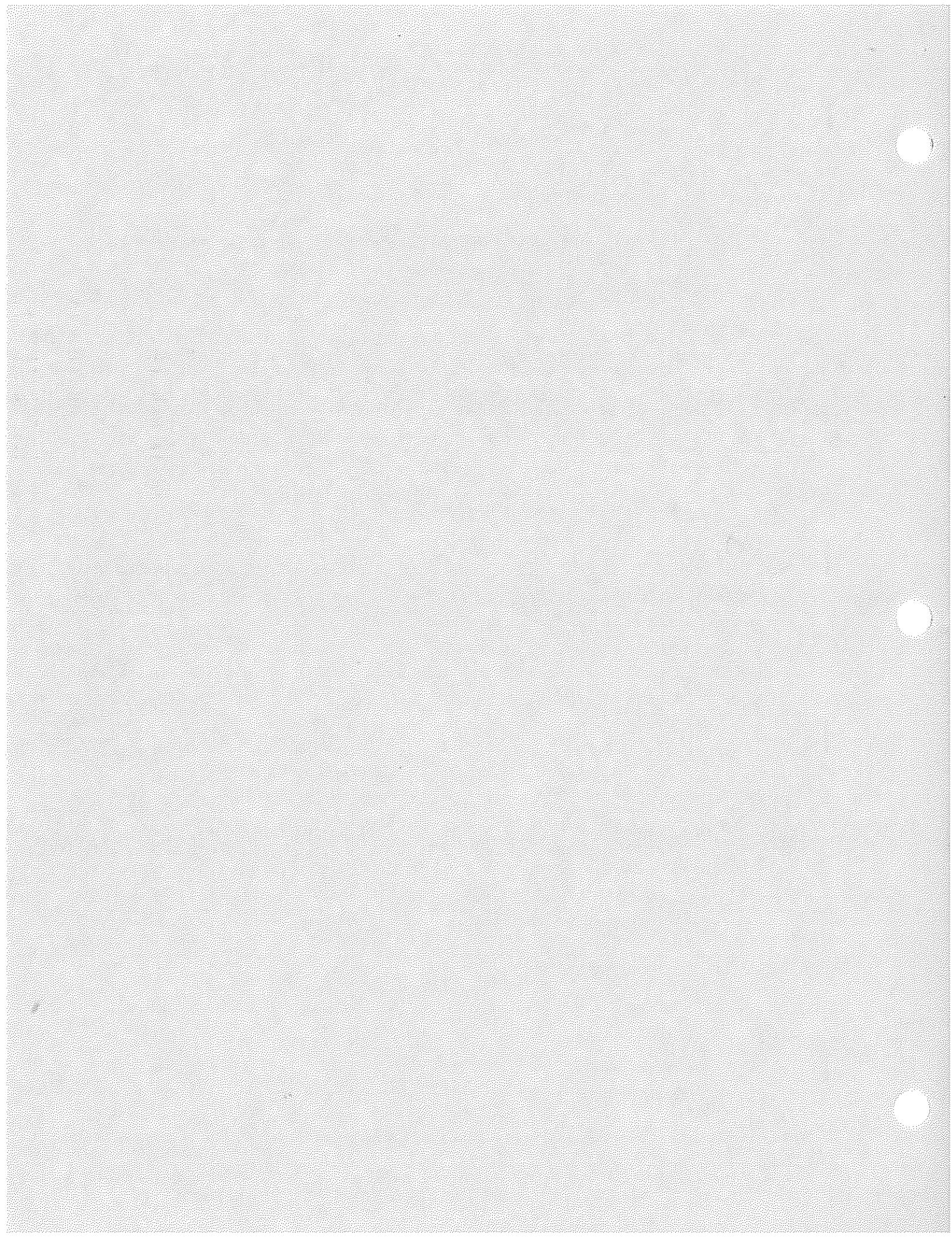
**VACUUM SYSTEM MAINTENANCE**

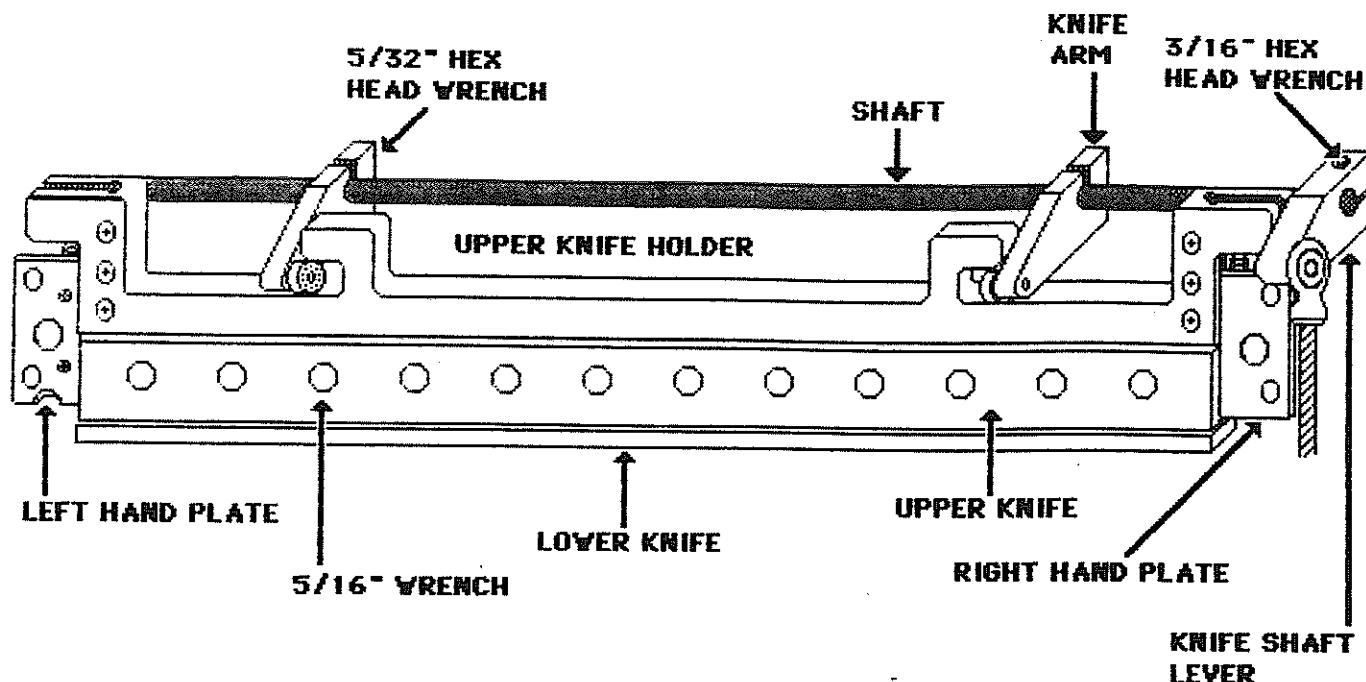
7. CLEAN THE VACUUM BELT FEEDER BAR AND WHERE IT FITS ON THE LABELING HEAD.  
USE PIPE CLEANERS AND ALCOHOL TO CLEAN PORTS, ENSURE THAT THERE IS AN AIR PASSAGE THROUGH EACH PORT.  
REMOVE THE PET COCK TO CLEAN IF NECESSARY.
8. COAT THE BACK OF THE VACUUM BELT FEEDER WITH A LIGHT COATING OF PETROLEUM JELLY TO ENSURE A GOOD SEAL THEN REASSEMBLE.

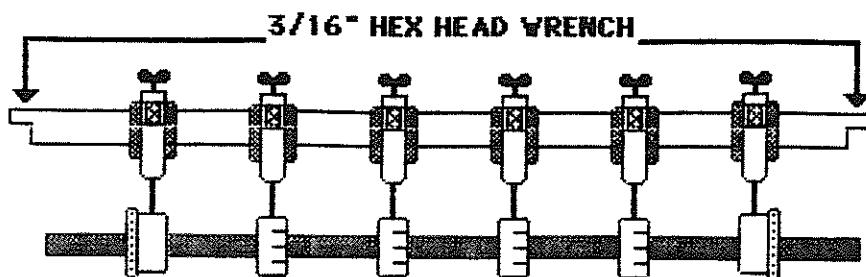
NOTE: PULL THE VACUUM BELT FEEDER BAR TO THE LEFT AS FAR AS POSSIBLE BEFORE TIGHTENING IN PLACE. BE SURE FLAT WASHERS ARE POSITIONED PROPERLY. BE SURE TO INSTALL VACUUM BELT WITH THE HOLES OVER THE VACUUM PORTS.



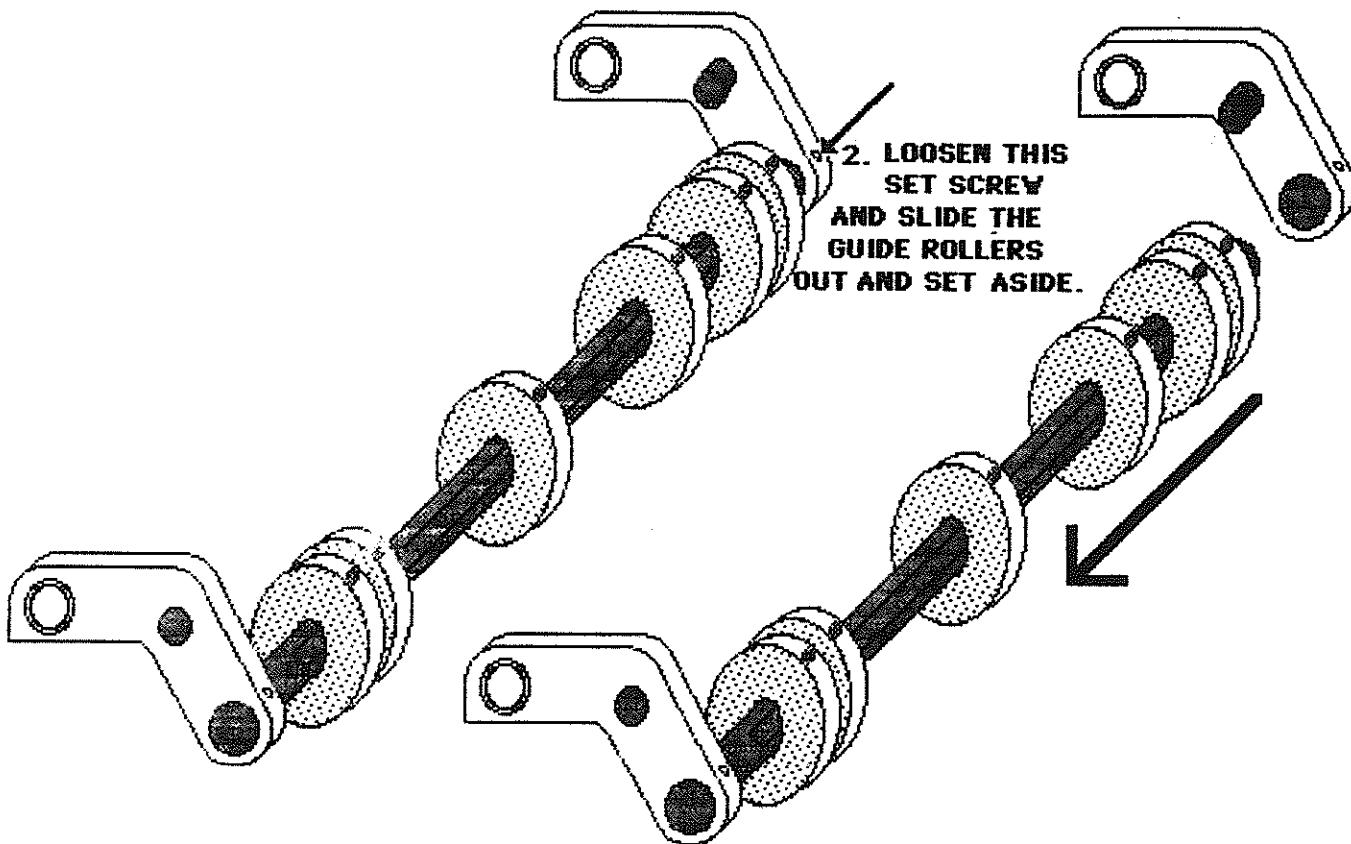




**GUILLOTINE KNIVES****COMPONENT LOCATION**

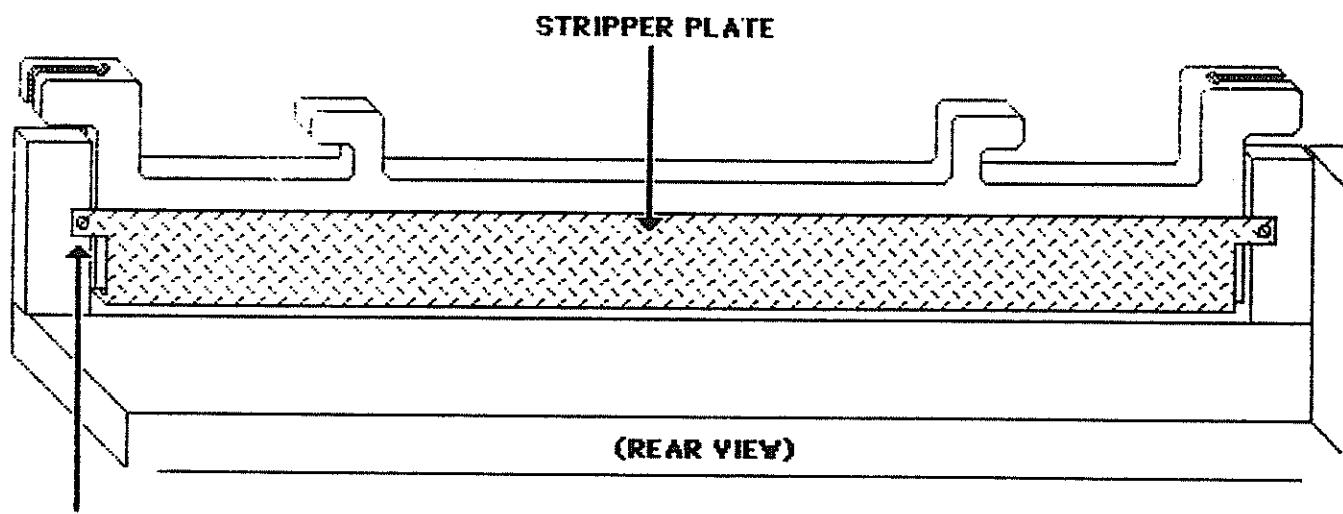
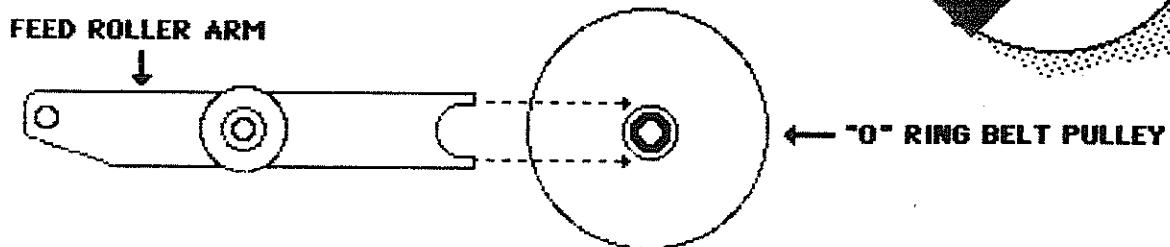
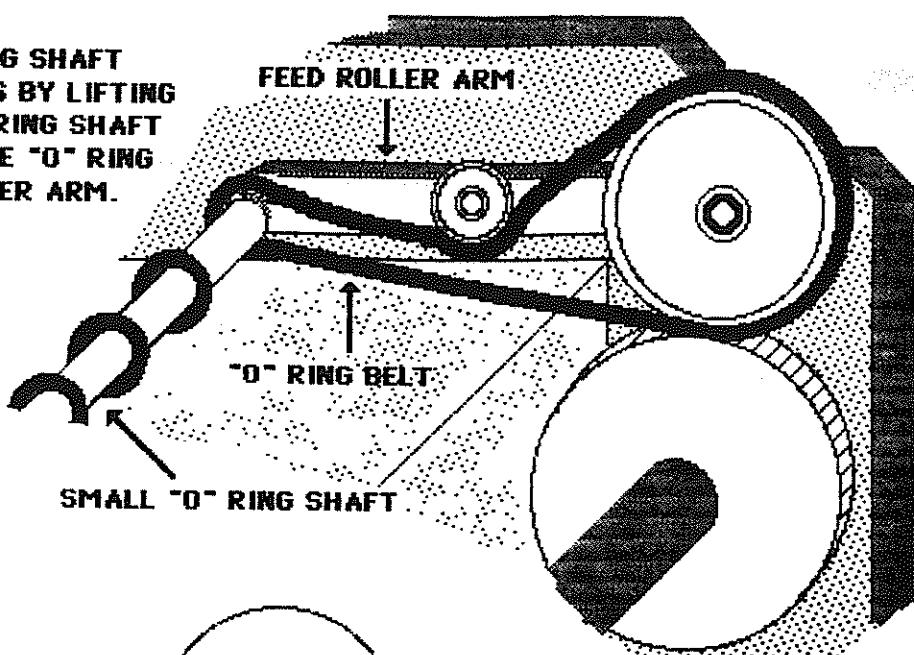
**GUILLOTINE KNIVES**

1. REMOVE SLITTER KNIFE ASSEMBLY BY REMOVING THE TWO SCREWS THAT HOLD THE ASSEMBLY TO THE LABELING HEAD. BE SURE TO PLACE THE SLITTER KNIFE ASSEMBLY DOWN SO THAT THE KNIVES WILL NOT BE DAMAGED.



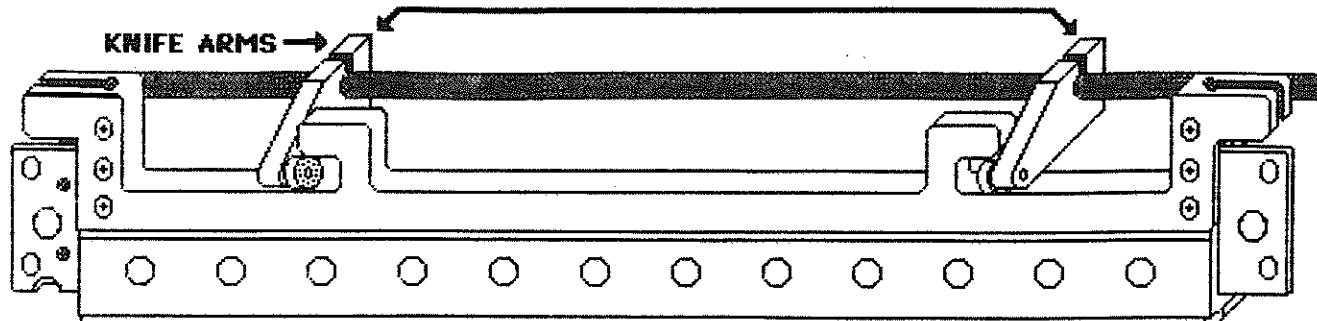
## GUILLOTINE KNIVES

3. REMOVE SMALL "O" RING SHAFT AND FEED ROLLER ARMS BY LIFTING UP ON THE SMALL "O" RING SHAFT AND PULLING THE LARGE "O" RING AROUND THE FEED ROLLER ARM.

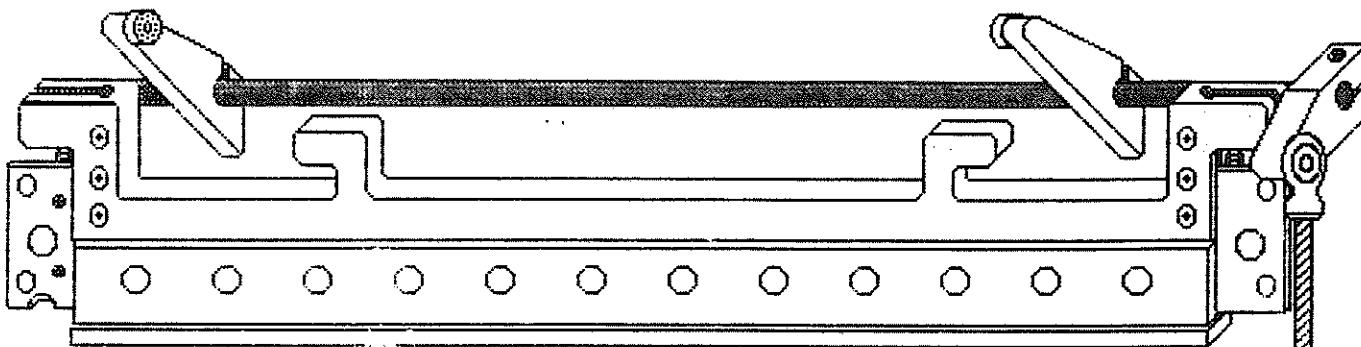


SCREW

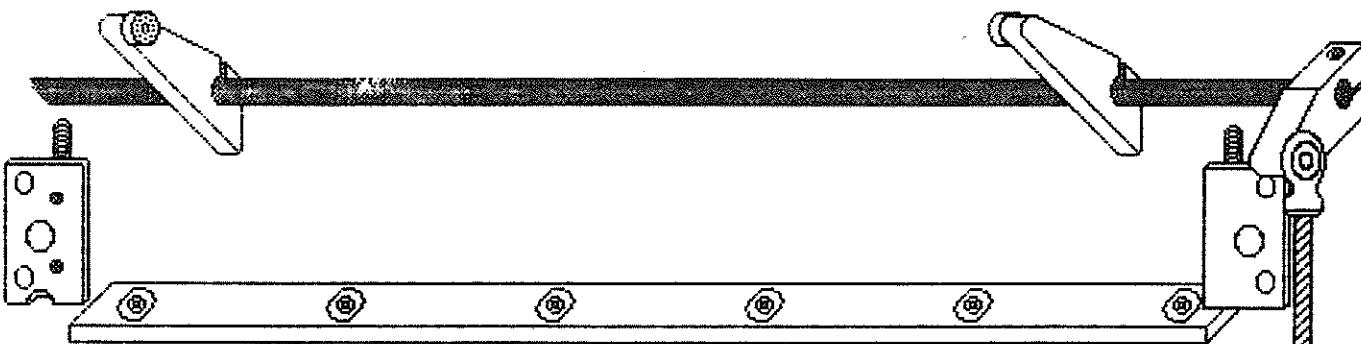
4. REMOVE THE STRIPPER PLATE USING THE TWO SCREWS AT EITHER END AND SET ASIDE.

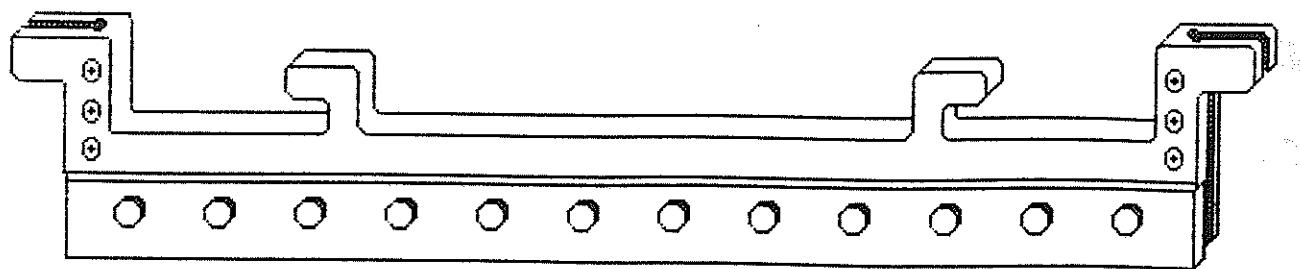
**GUILLOTINE KNIVES****5/32" HEX HEAD WRENCH**

5. LOOSEN THE TWO UPPER GUILLOTINE KNIFE ARMS USING A 5/32" HEX HEAD WRENCH.

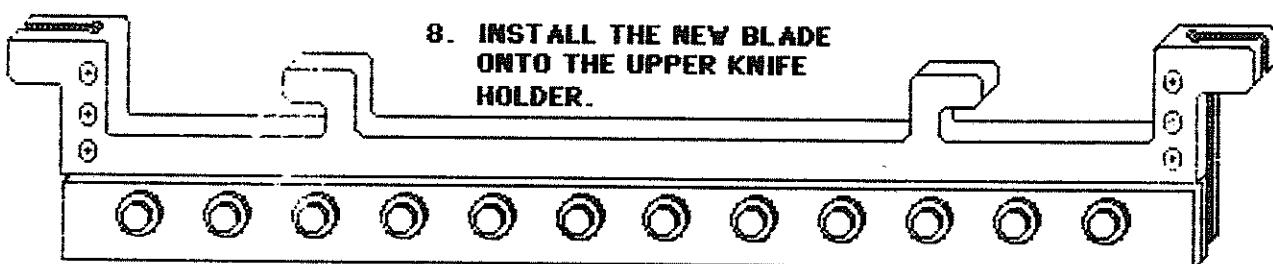
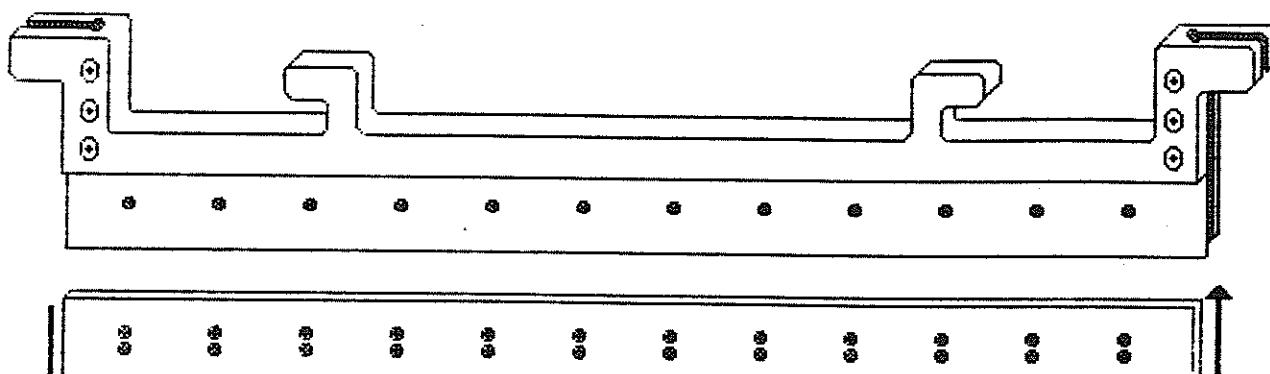


6. REMOVE UPPER GUILLOTINE KNIFE HOLDER BY LIFTING UP AND SET UPPER KNIFE HOLDER ON A FLAT SURFACE.



**GUILLOTINE KNIVES**

**7. REMOVE UPPER GUILLOTINE KNIFE FROM THE HOLDER USING A 5/16" WRENCH. EITHER TURN THE KNIFE OR REPLACE WITH A NEW KNIFE.**

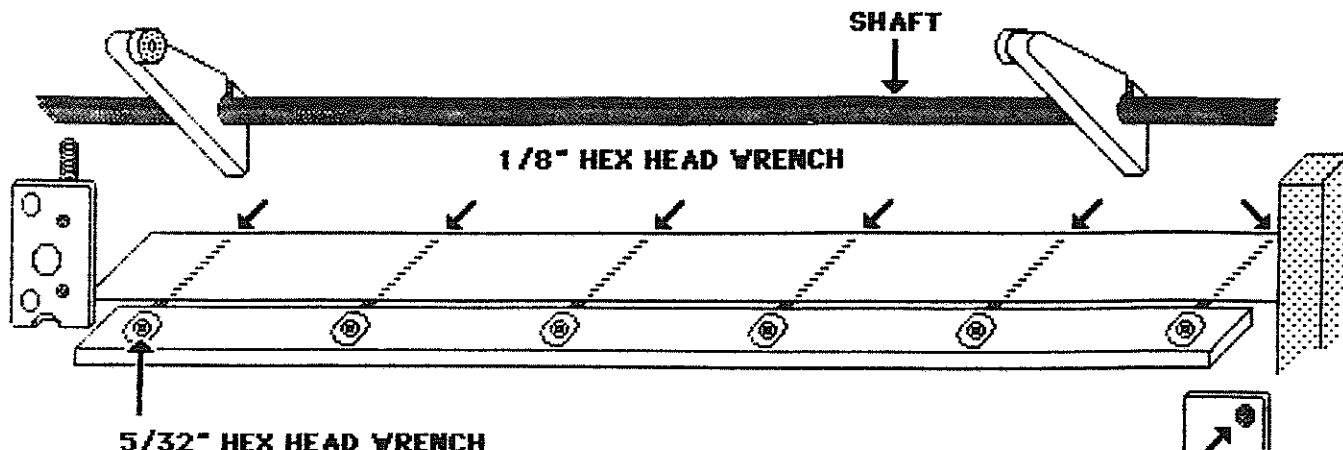


**8. INSTALL THE NEW BLADE  
ONTO THE UPPER KNIFE  
HOLDER.**

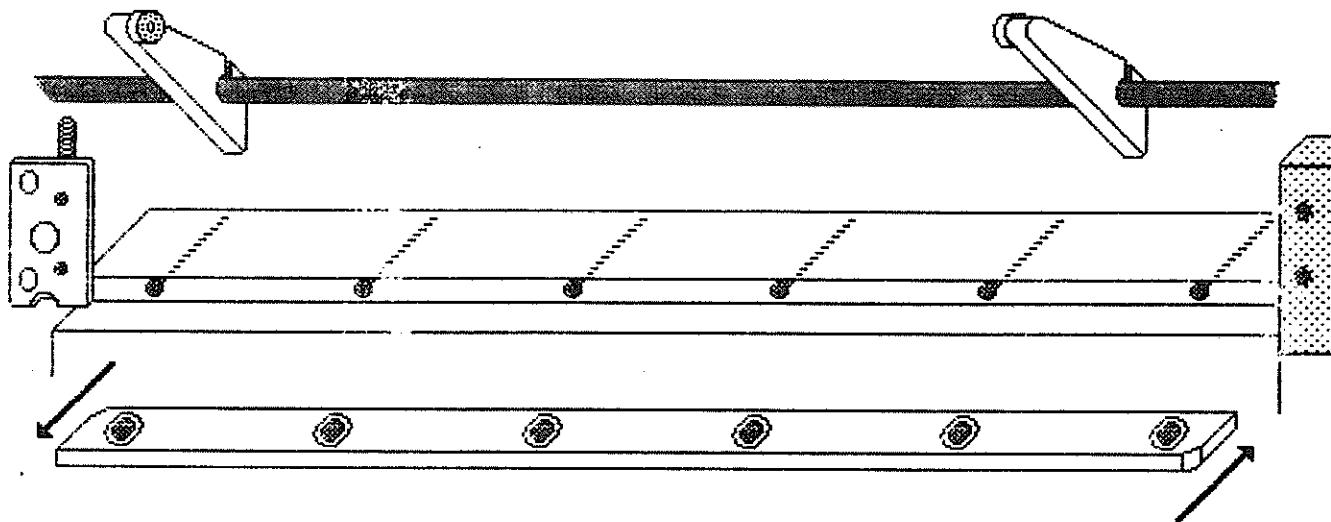
**← TIGHTEN →**

**THE 12 BOLTS**

**HOLDING THE UPPER GUILLOTINE  
KNIFE TO THE HOLDER FROM THE  
CENTER OUT WITH A 5/16"  
WRENCH**

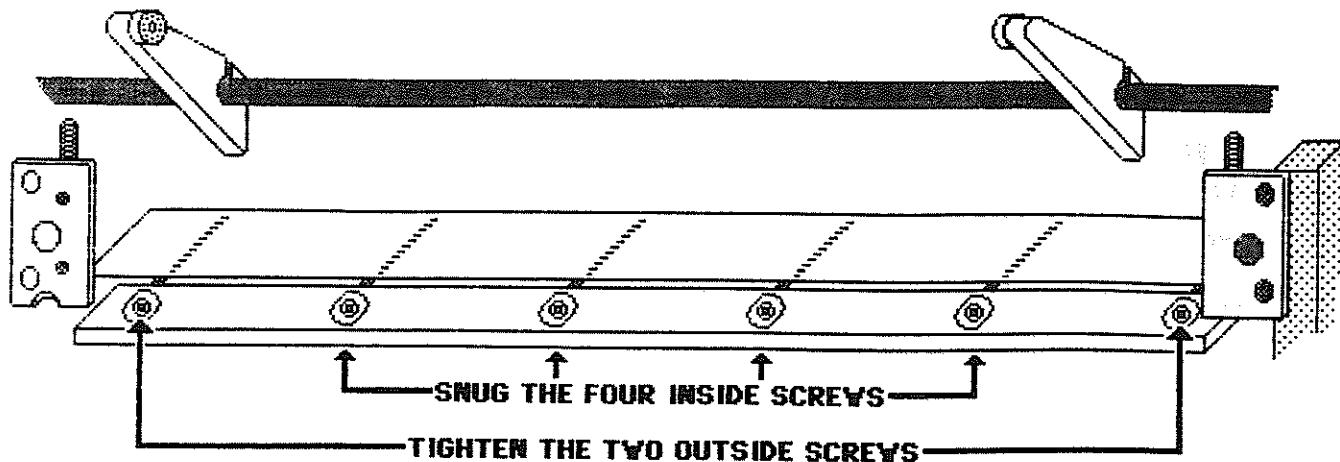
**GUILLOTINE KNIVES**

9. REMOVE RIGHT HAND PLATE AND LOWER GUILLOTINE KNIFE USING A 5/32" HEX HEAD WRENCH.
10. LOOSEN THE SIX ADJUSTING SET SCREWS FOR THE LOWER KNIFE WITH AN 1/8" HEX HEAD WRENCH.

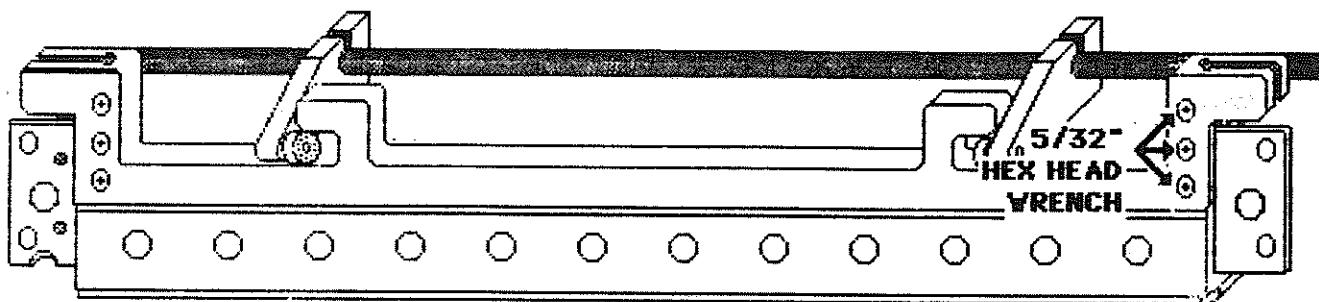


11. CLEAN THE AREA WHERE THE LOWER KNIFE WAS.
12. EITHER ROTATE OR REPLACE THE LOWER KNIFE.

## GUILLOTINE KNIVES

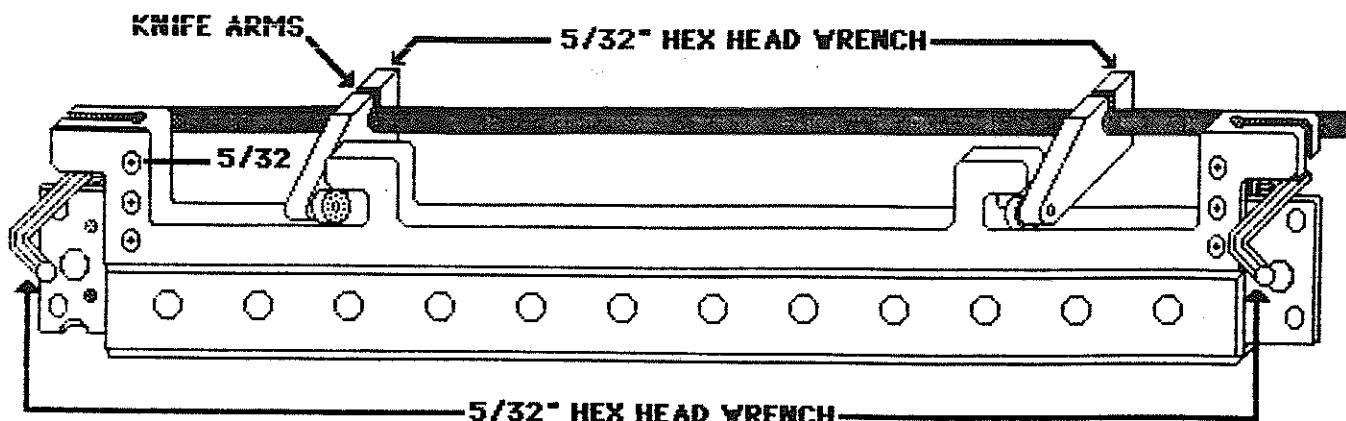


13. PUSH THE LOWER KNIFE ALL THE WAY BACK AGAINST THE ADJUSTING SCREWS AND INSTALL BUTTON HEAD SCREWS.
14. TIGHTEN THE TWO OUT SIDE BUTTON HEAD SCREWS AND SNUG THE FOUR INNER SCREWS.
15. REPLACE THE RIGHT HAND PLATE.

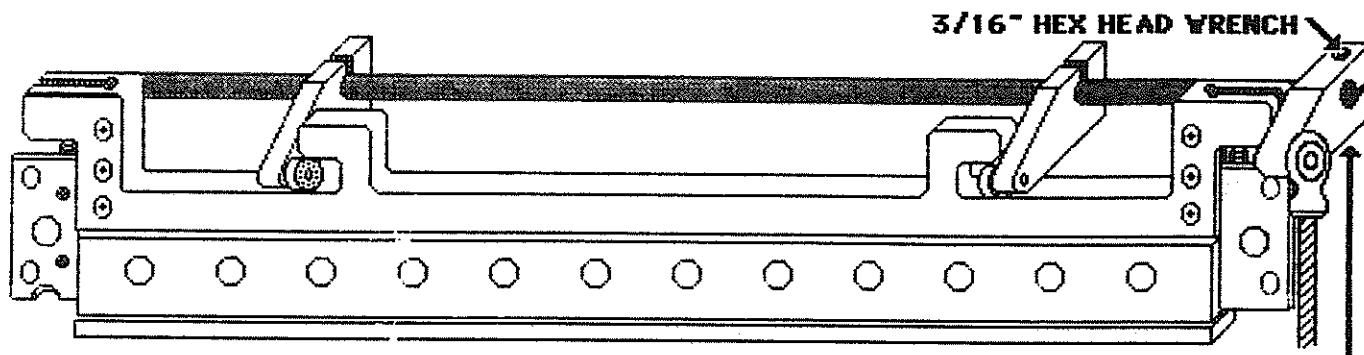


16. REPLACE THE UPPER KNIFE HOLDER WITH THE NEW KNIFE ATTACHED.
17. PUSH DOWN ON THE UPPER KNIFE HOLDER GENTLY TO ENSURE THAT THE KNIVES CLEAR EACH OTHER. IF THE UPPER KNIFE HITS THE BOTTOM KNIFE, LOOSEN THE LOWER KNIFE ADJUSTMENT SET SCREWS AND CAREFULLY PUSH THE LOWER KNIFE BACK. (USE A SMALL PIECE OF WOOD IF POSSIBLE - DO NOT KNOCK THE TOP EDGE OF THE LOWER KNIFE).
18. WHILE HOLDING DOWN THE UPPER KNIFE HOLDER, TIGHTEN ONE OF THE SIX SCREWS ON THE UPPER KNIFE HOLDER (THREE ON EACH SIDE). SLOWLY LOOSEN THE SCREW UNTIL THE KNIFE HOLDER "JUMPS" UP. DO THIS WITH THE OTHER FIVE SCREWS ON THE UPPER KNIFE HOLDER.

## GUILLOTINE KNIVES

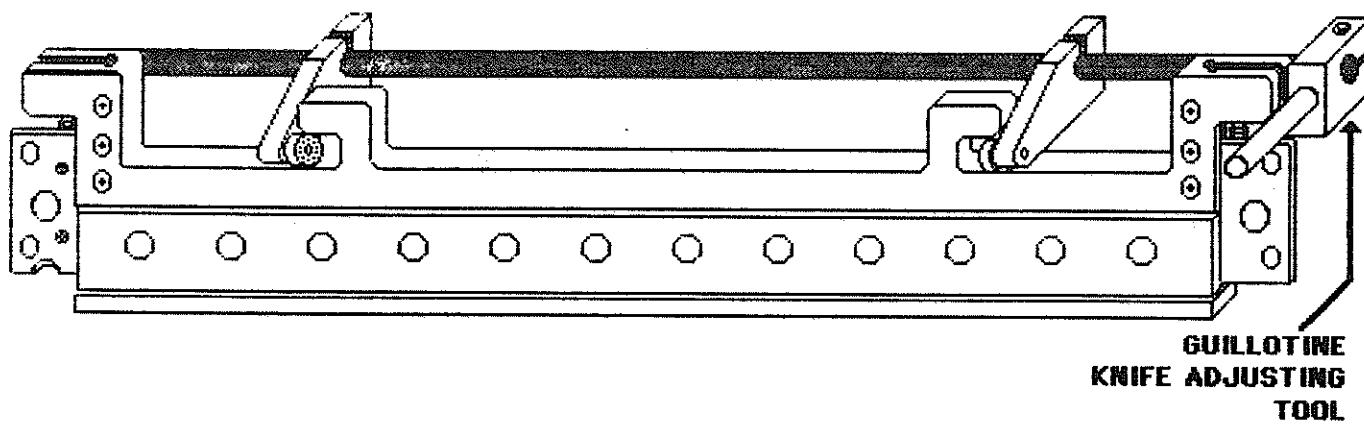


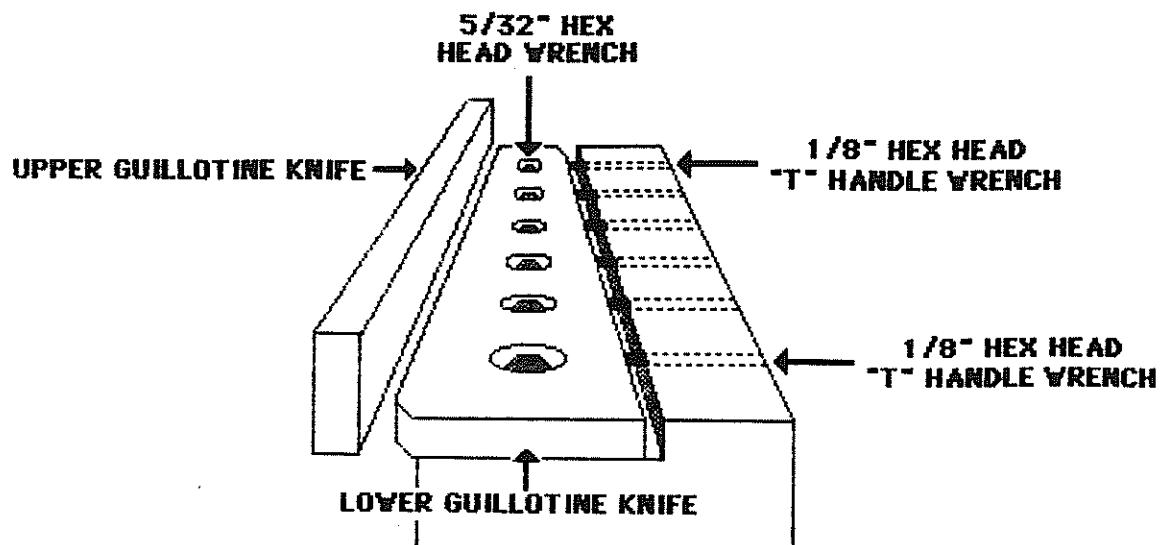
19. TAKE A 5/32" HEX HEAD WRENCH AND PLACE BETWEEN THE UPPER KNIFE HOLDER AND THE RIGHT HAND PLATE. PUSH THE UPPER KNIFE HOLDER DOWN TO PINCH THE WRENCH AND TIGHTEN THE RIGHT HAND KNIFE ARM. THEN REPEAT WITH THE LEFT SIDE. (THESE ADJUSTMENTS SET THE ANGLE OF THE UPPER KNIFE).



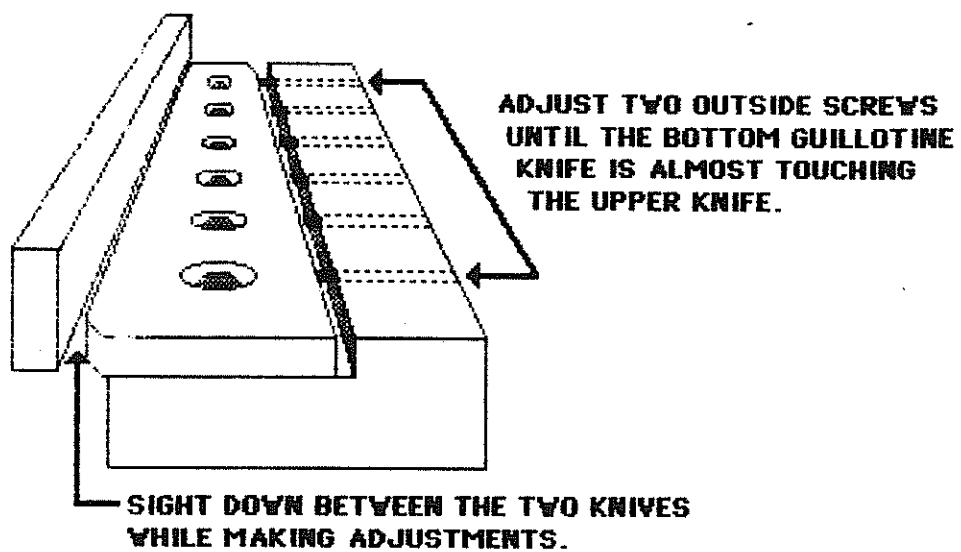
20. REMOVE THE KNIFE SHAFT LEVER AND INSTALL THE GUILLOTINE KNIFE ADJUSTING TOOL.

KNIFE SHAFT  
LEVER

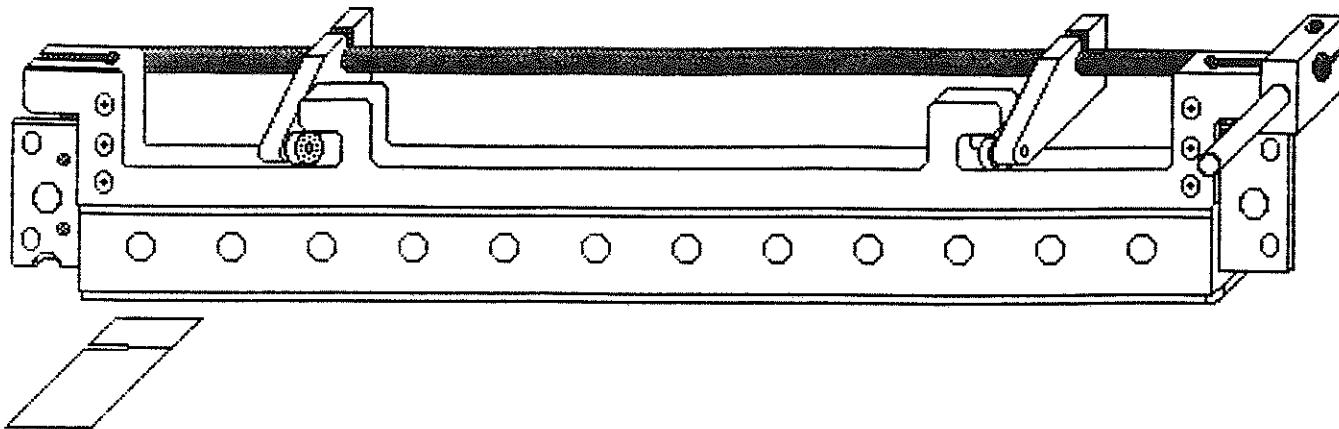


**GUILLOTINE KNIVES**

21. WHILE USING THE GUILLOTINE KNIFE ADJUSTING TOOL TO HOLD THE UPPER GUILLOTINE KNIFE DOWN, SIGHT BETWEEN THE UPPER AND LOWER KNIVES.
22. USING AN 1/8" HEX HEAD WRENCH, BRING THE BOTTOM KNIFE OUT UNTIL BOTH ENDS ALMOST TOUCH THE UPPER KNIFE. DO NOT ADJUST THE FOUR INNER ADJUSTING SCREWS AT THIS TIME.

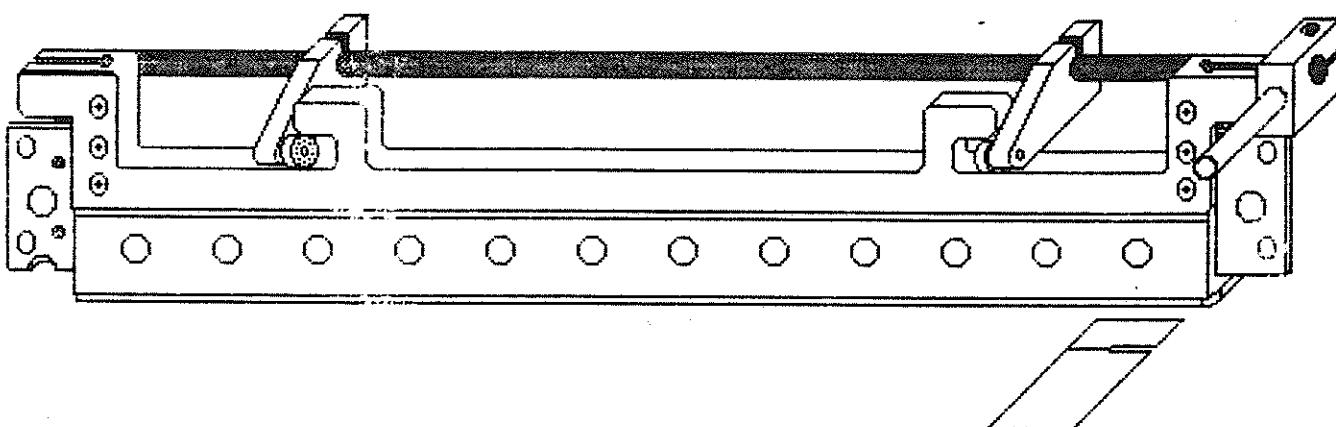


**N O T E:** THE LOWER KNIFE ADJUSTING SCREWS ARE VERY SENSITIVE, A SMALL TURN OF THE WRENCH EACH TIME IS ALL THAT IS NEEDED.

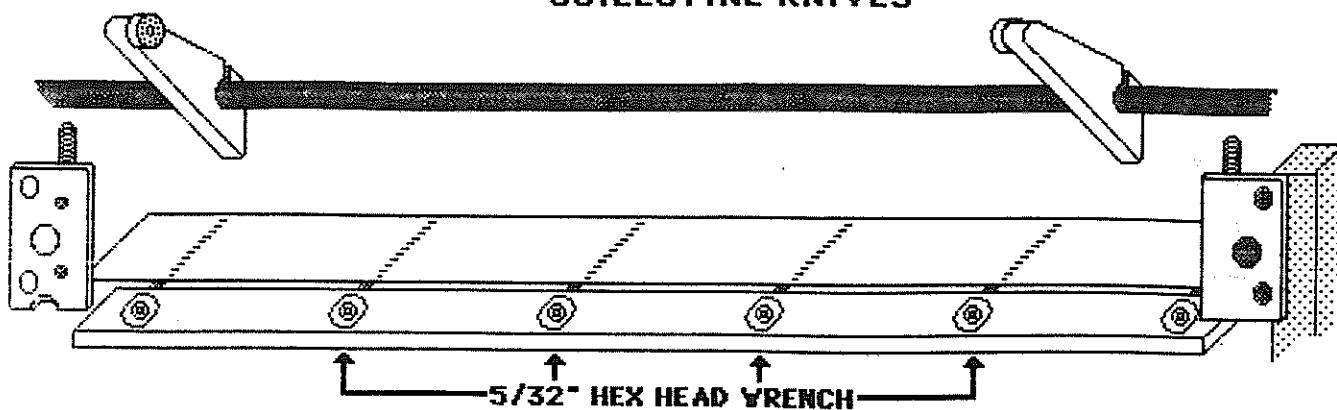
**GUILLOTINE KNIVES**

23. USING THE GUILLOTINE KNIFE ADJUSTING TOOL TO RAISE AND LOWER THE UPPER KNIFE, ADJUST THE LOWER KNIFE UNTIL A CUT IS MADE ON THE EXTREME LEFT SIDE OF THE BLADES. (USE A STRIP OF LABEL PAPER TO CHECK CUT).

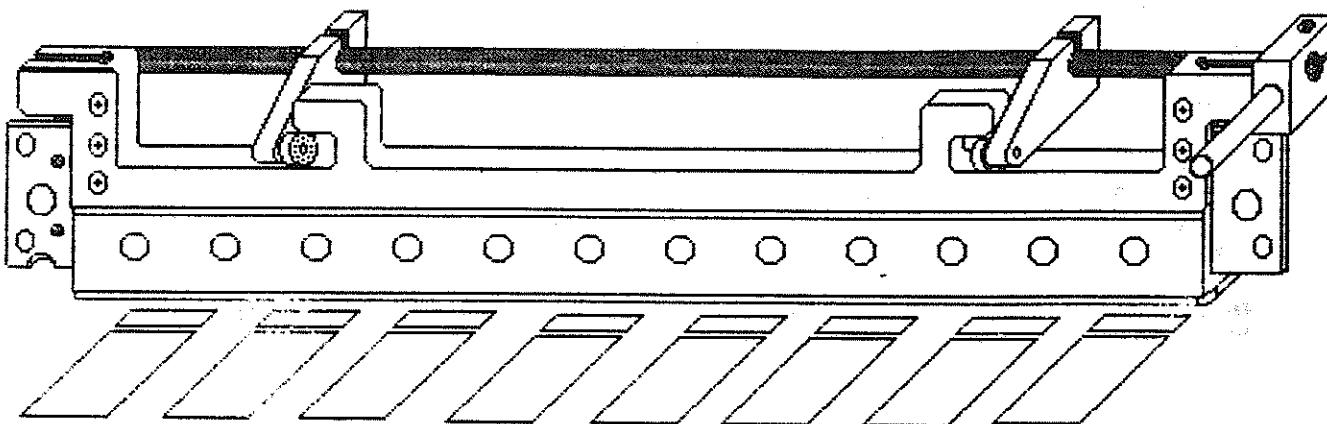
**CAUTION - MAKE ADJUSTMENTS ONLY WHEN UPPER KNIFE IS DOWN. IF THE UPPER KNIFE HITS THE LOWER KNIFE AFTER AN ADJUSTMENT, LOOSEN THE ADJUSTMENT AND TAP THE LOWER KNIFE BACK BEFORE PROCEEDING.**



24. ADJUST THE RIGHT HAND SIDE OF THE KNIVES UNTIL THEY CUT.

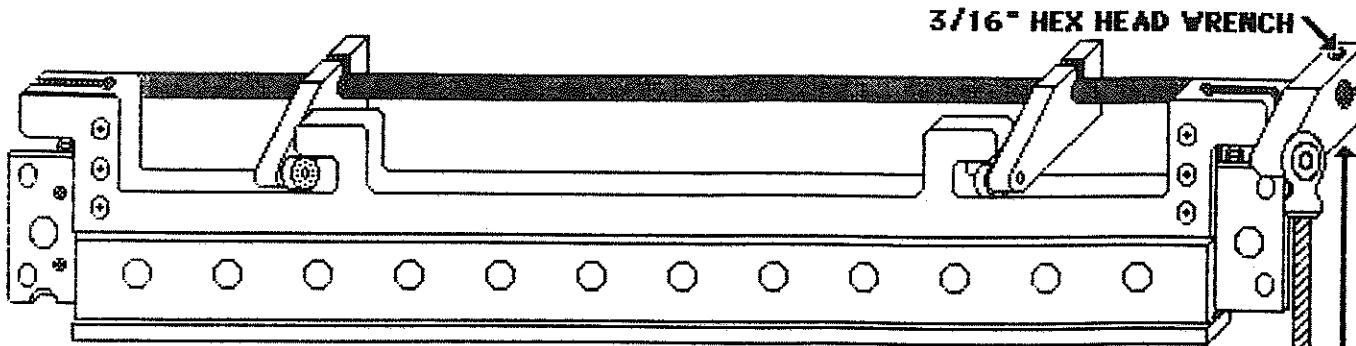
**GUILLOTINE KNIVES**

25. REMOVE THE UPPER KNIFE HOLDER AND TIGHTEN THE FOUR INSIDE SCREWS ON THE LOWER KNIFE.
26. INSTALL THE UPPER KNIFE HOLDER AND RE-SET ANGLE (SEE INSTRUCTION 19).



27. STARTING ON THE LEFT SIDE, CONTINUE TO ADJUST THE LOWER KNIFE ADJUSTING SCREWS UNTIL THE BLADES CUT ALL THE WAY ACROSS.
28. REMOVE ANY SCRAP PAPER AND INSERT A SHEET OF PAPER UNDERNEATH THE GUILLOTINE KNIVES. MAKE SEVERAL CUTS TO ENSURE KNIVES ARE ADJUSTED PROPERLY.

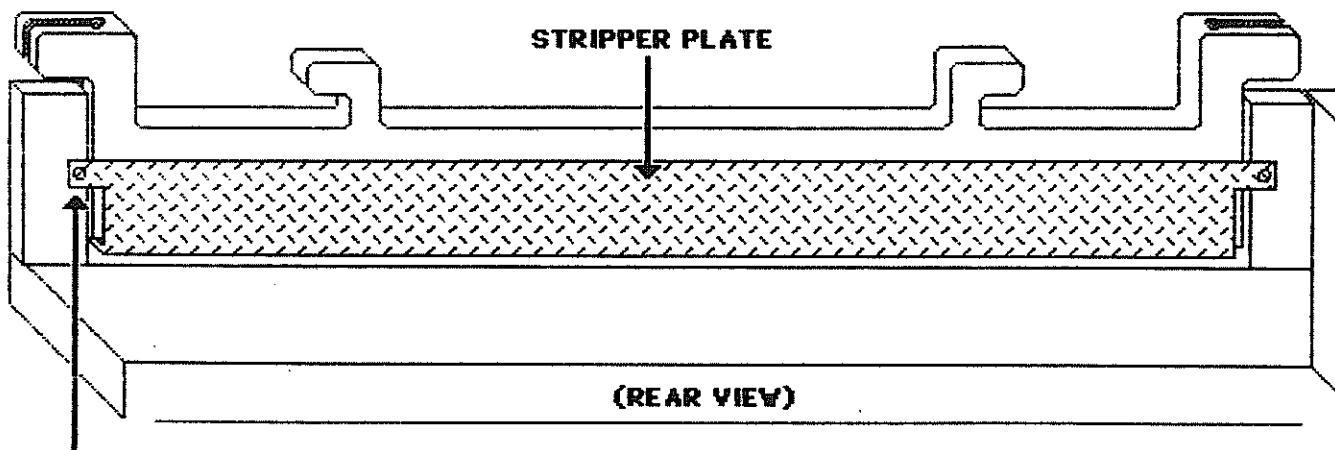
## GUILLOTINE KNIVES



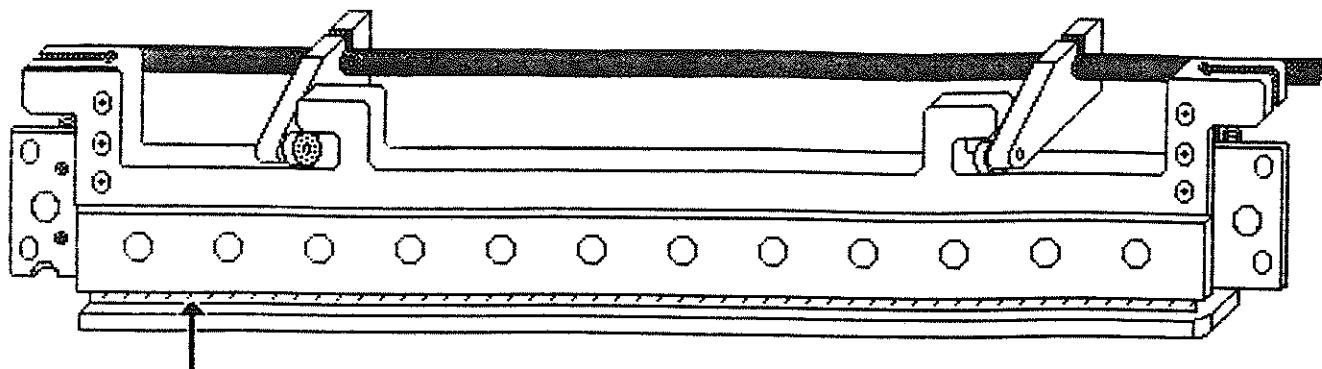
29. REMOVE GUILLOTINE ADJUSTING TOOL AND INSTALL THE KNIFE SHAFT LEVER - DO NOT TIGHTEN 3/16" HEX HEAD SCREW AT THIS TIME.
30. ROTATE HEAD UNTIL THE GUILLOTINE KNIFE CAM PULLS THE KNIFE SHAFT LEVER ALL THE WAY DOWN.
31. PUSH DOWN ON THE UPPER KNIFE HOLDER WITH YOUR HAND UNTIL THE UPPER KNIFE HAS PASSED THE LOWER KNIFE AND NO SPACE CAN BE SEEN BETWEEN THEM.
32. TAKE ANY PLAY OUT OF THE KNIFE SHAFT BY PUSHING DOWN ON THE BACK OF THE KNIFE SHAFT LEVER AND TIGHTENING THE 3/16" HEX SCREW.
33. THE ANGLE OF THE UPPER KNIFE CAN BE FINE TUNED BY ADJUSTING EACH KNIFE ARM INDIVIDUALLY. THE LEFT SIDE OF THE UPPER KNIFE SHOULD JUST PASS THE LOWER KNIFE. THE RIGHT SIDE OF THE UPPER KNIFE SHOULD BE OFF THE VACUUM BELT JUST ENOUGH TO ALLOW A LABEL TO FIT BETWEEN THE UPPER KNIFE AND THE VACUUM BELT.

**C A U T I O N:** ALL ADJUSTMENTS SHOULD BE MADE WITH THE UPPER KNIFE IN THE DOWN POSITION.

34. INSTALL STRIPPER PLATE, "O" RING DRIVE, LIST GUIDE ROLLERS AND SLITTER KNIVES.



THE STRIPPER PLATE SHOULD BE ADJUSTED SO AS TO ALLOW THE MAILING LIST TO FEED BETWEEN THE GUILLOTINE KNIVES FREELY  
TO ADJUST THE STRIPPER PLATE, LOOSEN THE TWO SCREWS AND SLIDE THE PLATE UP OR DOWN.

**GUILLOTINE KNIVES**

**THE STRIPPER PLATE SHOULD EXTEND BELOW THE UPPER GUILLOTINE KNIFE WHEN THE UPPER KNIFE HOLDER IS IN THE UP POSITION**



## LABEL FORMAT

### COMPUTER PAPER

THE COMPUTER PAPER SHOULD BE AT LEAST 20# WEIGHT, 11" LONG FOR 1 INCH HIGH LABELS AND 12" LONG FOR 1.5" AND 2" HIGH LABELS. THE PUNCHED HOLES SHOULD BE 1/2" APART AND 1/4" FROM CROSS PERFORATION.

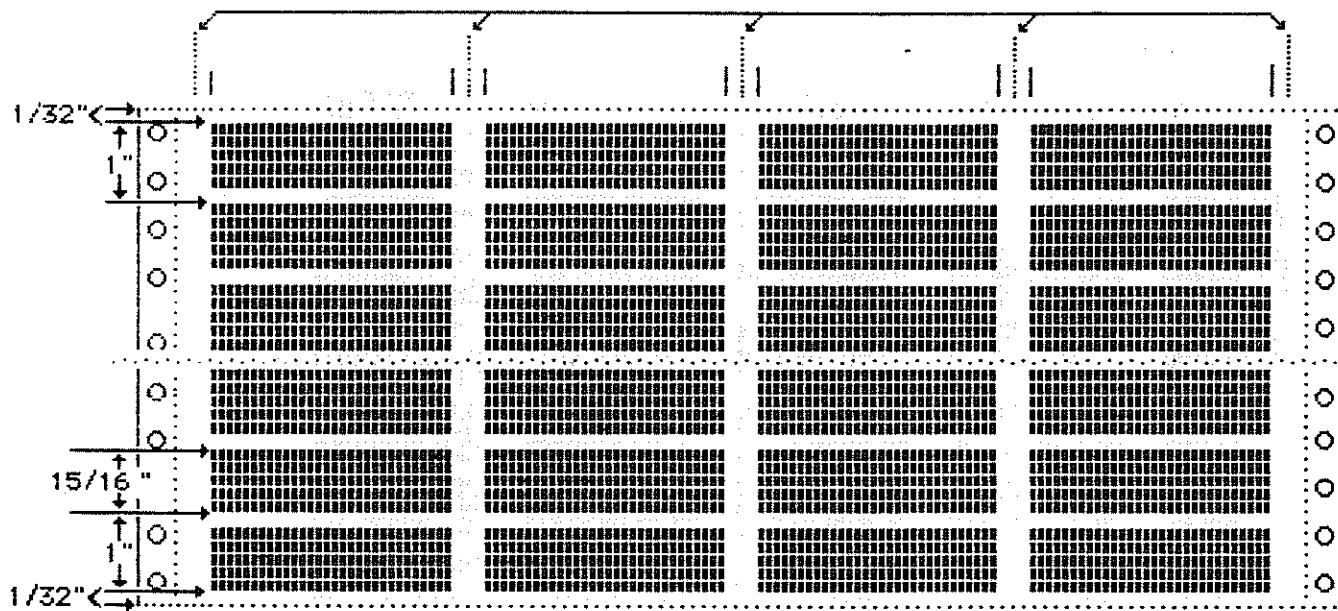
THE PRINTING AREA ON THE FORM SHOULD BE CENTERED SO THAT THE FORM CAN BE FED EITHER HEAD OR FOOT FIRST.

THE LABELS SHOULD HAVE A MINIMUM OF 2 PRINT POSITIONS LEFT BLANK ON EITHER SIDE, FOR EXAMPLE A 2.6" LABEL WILL HAVE A MAXIMUM OF 22 PRINT POSITIONS PER LINE AVAILABLE.

### PRINTER

ALL OF THE SPECIFICATIONS LISTED ARE BASED ON A 132 CHARACTERS PER LINE PRINTER WITH 6 OR 8 LINES PER INCH VERTICALLY AND 10 PRINT POSITIONS PER INCH HORIZONTALLY.

THESE LINES REPRESENT WHERE THE LABELS WILL BE CUT (ACTUAL LABEL LENGTH)



ALTHOUGH THE LABEL IS 1" HIGH, THE PRINT HEIGHT WILL BE 15/16" HIGH - ALLOWING FOR 1/16" BETWEEN LABELS AND 1/32" BETWEEN PERF AND PRINT.

**5 UP LABELS (2.6" EACH)**

LABEL PAPER WIDTH **14-7/8"**

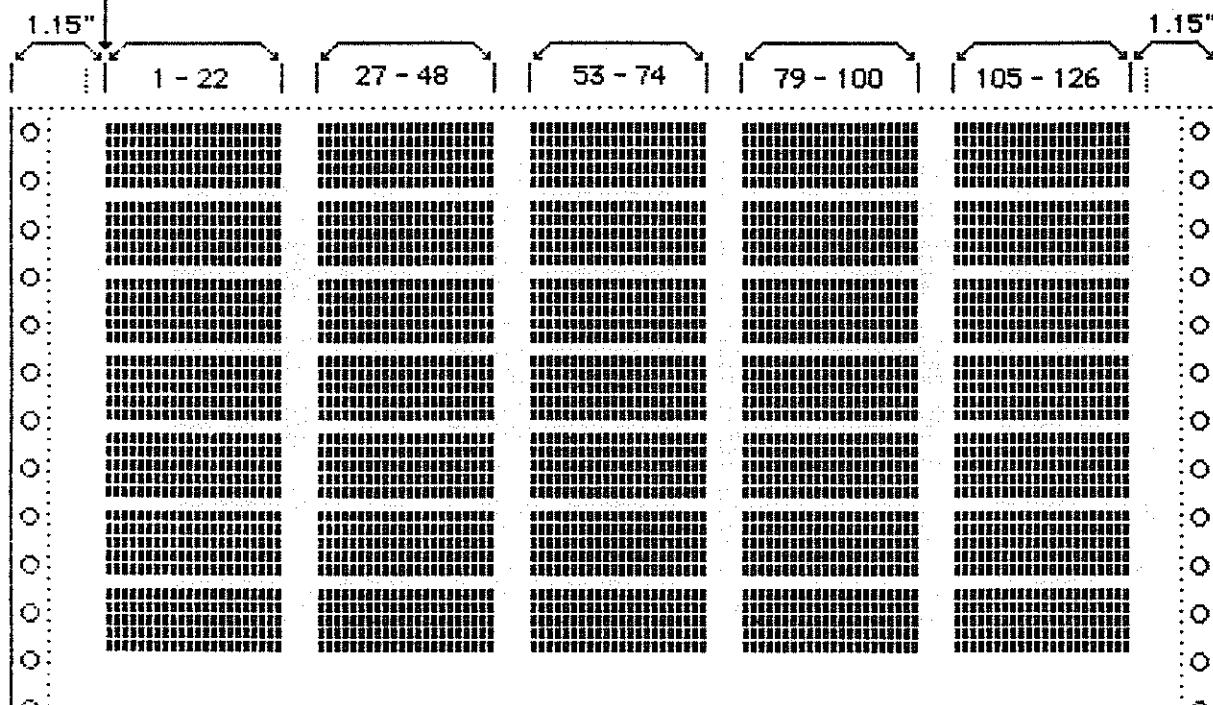
LABEL STRIP LENGTH AFTER TRIM **13"**

TRIM WIDTH **.95"** ON BOTH EDGES

PRINTER STARTING POINT **1.15"** FROM LEFT EDGE OF PAPER **1/32"** DOWN FROM TOP EDGE OF PAPER OR PERF.

AVAILABLE POSITIONS FOR PRINTING:  
**1 THROUGH 22**  
**27 THROUGH 48**  
**53 THROUGH 74**  
**79 THROUGH 100**  
**105 THROUGH 126**

**START FIRST PRINT POSITION HERE**



**4 UP LABELS (3.4" EACH)**

LABEL PAPER WIDTH **14-7/8"**

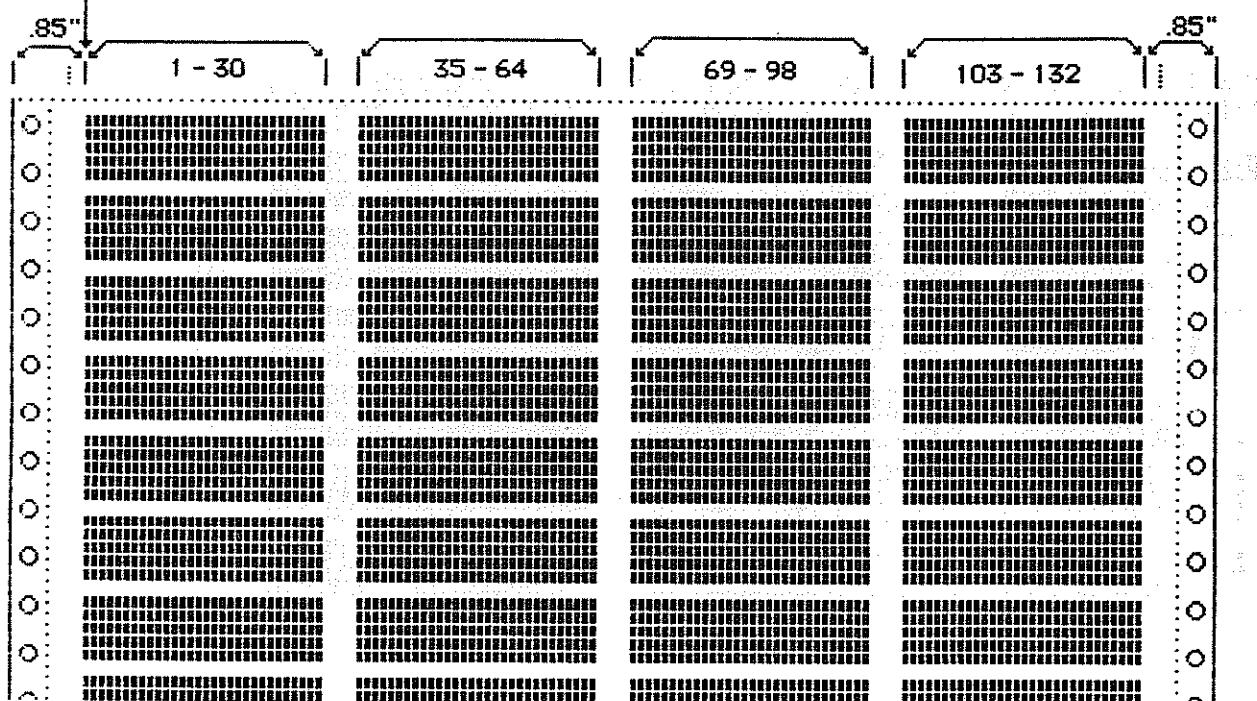
LABEL STRIP LENGTH AFTER TRIM **13.60"**

TRIM WIDTH **.65"** ON BOTH EDGES

PRINTER STARTING POINT **.85"** FROM LEFT EDGE OF PAPER **1/32"** DOWN FROM TOP EDGE OF PAPER OR PERF.

AVAILABLE POSITIONS FOR PRINTING:  
**1 THROUGH 30**  
**35 THROUGH 64**  
**69 THROUGH 98**  
**103 THROUGH 132**

**START FIRST PRINT POSITION HERE**



**3 UP LABELS (4.5" EACH)**

LABEL PAPER WIDTH **14-7/8"**

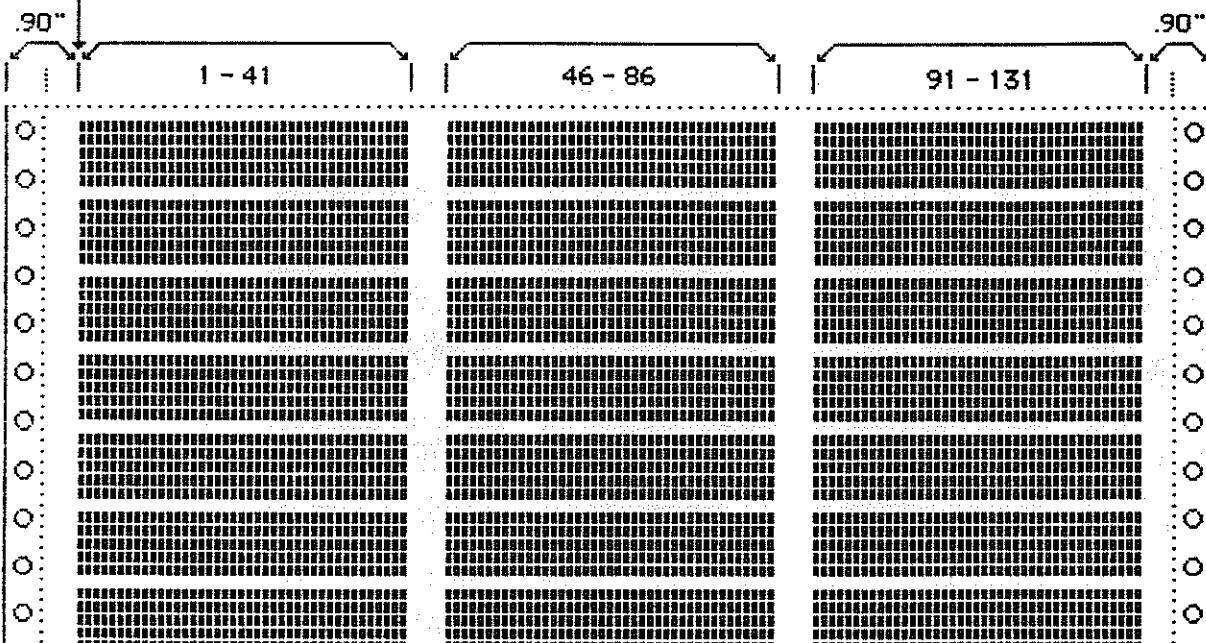
LABEL STRIP LENGTH AFTER TRIM **13.50"**

TRIM WIDTH **.70"** ON BOTH EDGES

PRINTER STARTING POINT **.90"** FROM LEFT EDGE OF PAPER **1/32"** DOWN FROM TOP EDGE OF PAPER OR PERF.

AVAILABLE POSITIONS FOR PRINTING: **1 THROUGH 41**  
**46 THROUGH 86**  
**91 THROUGH 131**

**START FIRST PRINT POSITION HERE**



**1 UP LABELS (4.5" EACH)**

LABEL PAPER WIDTH **5.5**

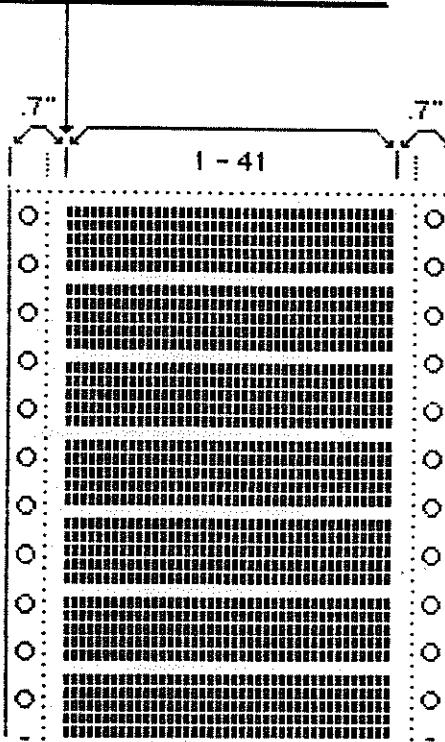
LABEL STRIP LENGTH AFTER TRIM **4.5"**

TRIM WIDTH **.50"** ON BOTH EDGES

PRINTER STARTING POINT **.70"** FROM LEFT EDGE OF PAPER **1/32"** DOWN FROM TOP EDGE OF PAPER OR PERF.

AVAILABLE POSITIONS FOR PRINTING: **1 THROUGH 41**

**START FIRST PRINT POSITION HERE**



**1 UP LABELS (3.5" EACH)**

LABEL PAPER WIDTH 4.5

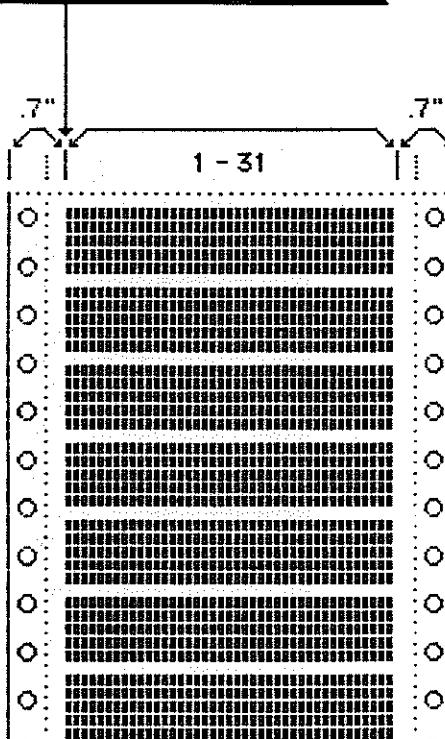
LABEL STRIP LENGTH AFTER TRIM 3.5"

TRIM WIDTH .50" ON BOTH EDGES

PRINTER STARTING POINT .70" FROM LEFT EDGE OF PAPER  $1\frac{1}{32}$ " DOWN FROM TOP EDGE OF PAPER OR PERF.

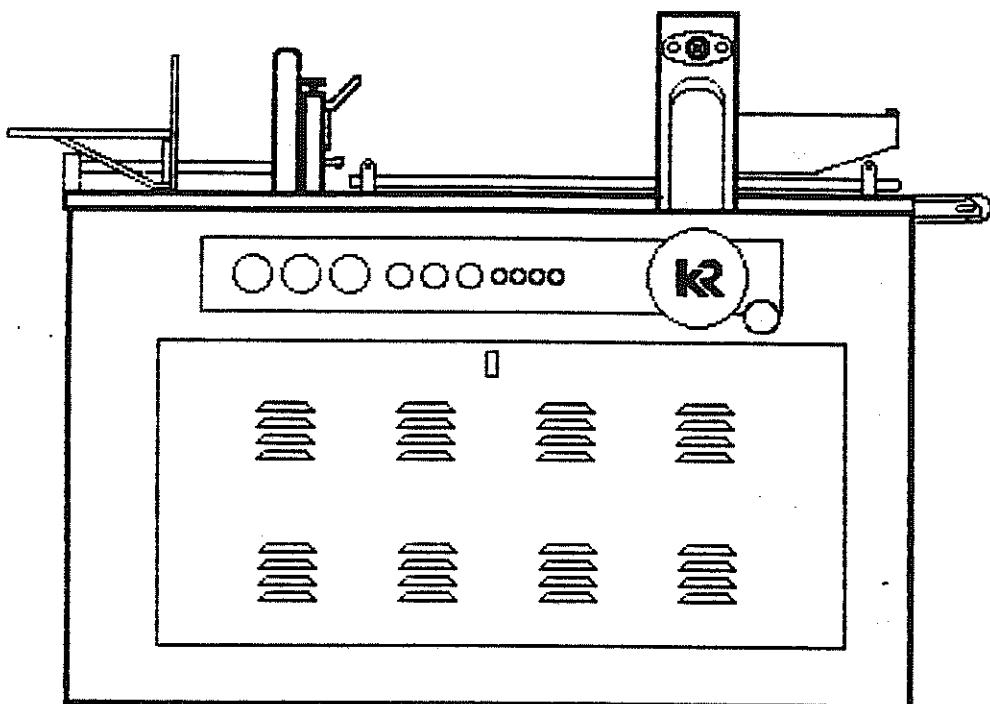
AVAILABLE POSITIONS FOR PRINTING: 1 THROUGH 31

**START FIRST PRINT POSITION HERE**

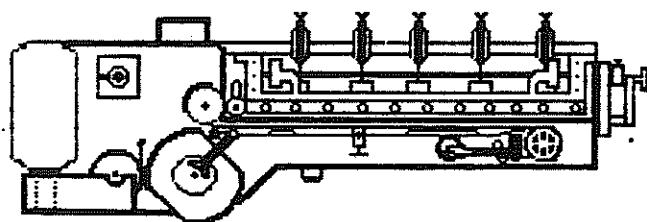


## KIRK - RUDY MAILING SYSTEMS

KIRK/RUDY has been manufacturing mailing systems since 1967. Systems that are engineered to do more for you, because KIRK-RUDY builds modular systems that work together. Systems designed to meet your changing needs. No other manufacturer can match the performance, versatility and economy of a KIRK/RUDY mailing system. More engineering means you can handle more.



Start with the Model 215 base. Standard equipment includes: dual oilless vacuum pumps, one for the feeder and one for the head. Removable table top and shuttle feed for ease of maintenance. Positive start and stop heavy duty D.C. drive motor. Four table top belts. Eleven and twenty-two inch spacing. Heavy duty skid bars. Dual impression rollers. Adjustable vacuum feed. One shot automatic lube system.



Now add the applicator head that you need to get your job done. The model 211 labeling head is the most versatile in the industry.

**KIRK-RUDY****FEATURES****KR-215 LABELING BASE**

STANDARD

OPTION

## FEATURE

- Heavy Duty Variable Speed Main Drive Motor
- Dual Oilless Vacuum Pumps (one for feeder/one for label head)
- Built-in Semi-Automatic One-shot Lubrication System
- Emergency Stop Bar
- Missed Document Detection System
- Quick Jam Release for Feeder
- Resettable Counter
- Choice of Wide or Standard Width Shuttle Feed Table
- Fully Adjustable Hopper
- Choice of Needle Blocks or Pusher Lugs
- Dual Spacing Range (11" or 22")
- Choice of 3 or 4 Table Top Belts
- Heavy Duty Adjustable Skid Bars (Choice of 1 or 2)
- In-line Jam Detection
- Removable Table Top for Ease of Maintenance
- Removable Shuttle Feed Table
- Adjustable Feed Roller Pressure
- Adjustable Vacuum on Shuttle Feeder
- Steel Feeder Gate
- Rubber Tip Feeder Gate
- In-Line Label Base for Second Application Head
- Predetermining Counter with either Kicker or Speed up conveyor (Not required when TS500 Town Sort is used)
- InkJet Configuration Package
- Modifications to increase thickness limits up to 1.5 inches
- Auto Load Conveyor (Designed for ease of loading of thick product, automatically maintains pre-determined level in feeder)
- Production Monitor
- Shuttle "Low Product" Detector
- Differential Label Control

KIRK-RUDY  
KR-211 LABELING HEAD

FEATURES

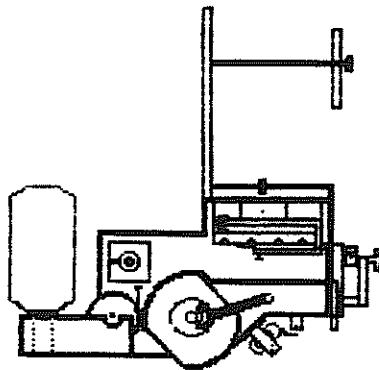
STANDARD

OPTION

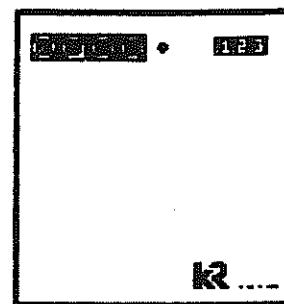
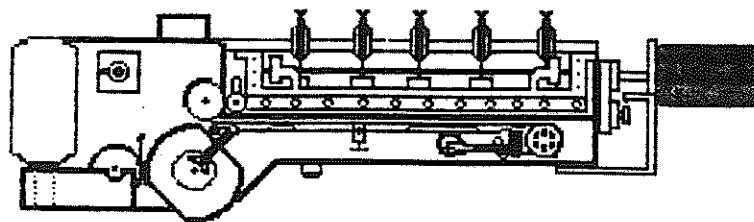
FEATURE

- Handle 3, 4, or 5 across label format
- Handle 1, 2, or 6 across label format
- Maximum label length 4.5 inches
- Minimum label length 2 inches
- Label Depth of .5 or 1 inch
- Label Depth of 1.5 or 2 inch (see note 1)
- Label Depth of 2 to 6 inches (requires Electronic Drive and special accessory kit)
- Quick adjust between 11" and 22" Format
- Heat Wheel Attachment (Label heights .5 to 2 inches in either 11" or 22" spacing)
- TS-500 Townsort - Electronic Mail Sorting Processor
- Electronic Label Drive
- Adjustable Label Placement while machine is running
- Electronic Guillotine Knife Control for Change Over from 3 up to 4 up etc.

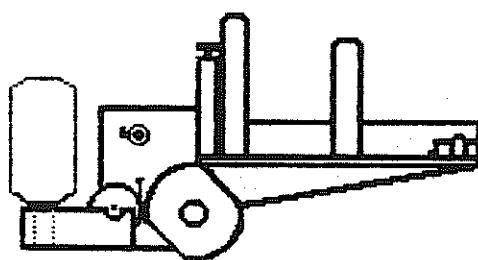
Note 1 - The standard KR-211 Labeling Head will feed 0.5", 1", 1.5" and 2" labels, however glue wheels, scrapers and pads may be required to ensure glue coverage on the label.



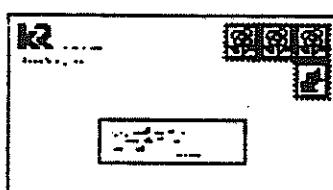
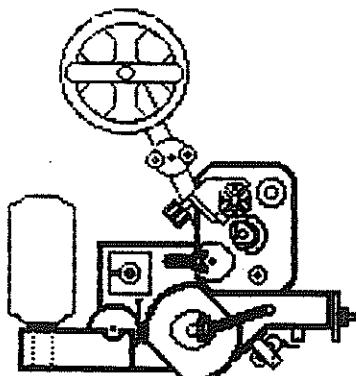
Your needs may demand the model 221-227 one-up format label head. With the ability to operate on the 215 base at high speeds and the added option of the TS-500 Town Sort it is one of the most reliable labeling heads available.



Your application may require the 211-E electronic drive head which allows you to run piggy-back as well as large format labels up to 6" in height and still offers all the features of the model 211.

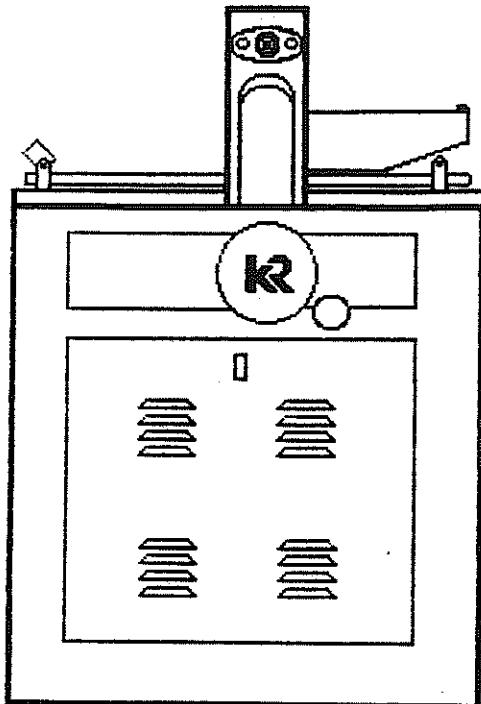


Versatile tipping applications are easily accomplished with a model 203 tip-on head that is available in models that can handle credit card size material up to magazine page sizes.

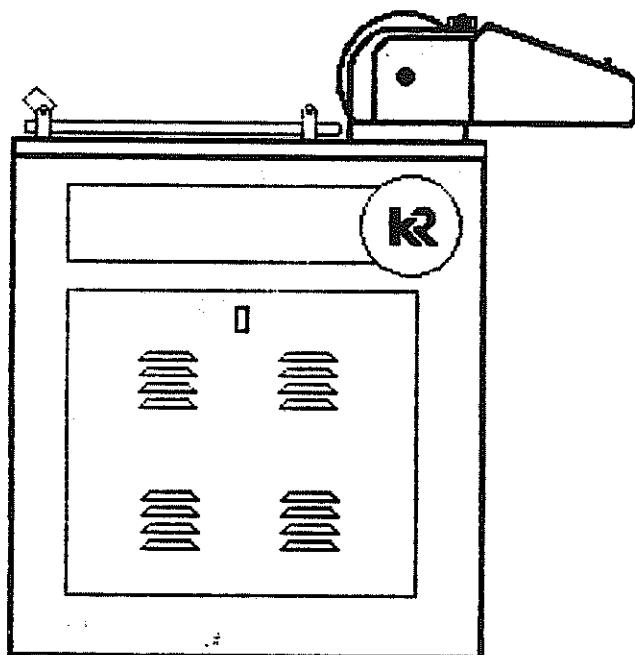


More personalized mailings have increased the demand for stamp applications. The model 221/223 stamp head, which can also apply multiple stamps, is designed to apply up to 15,000 or more roll form stamps per hour. The 223-EE stamp head will allow two different stamps of two different denominations to be applied at the same time. When installed on the model 219 utility base and operated in line with the model 211 labeling head, labeling and stamping can be done in one pass.

**Stamps affixed with KR-223-EE stamp head.**

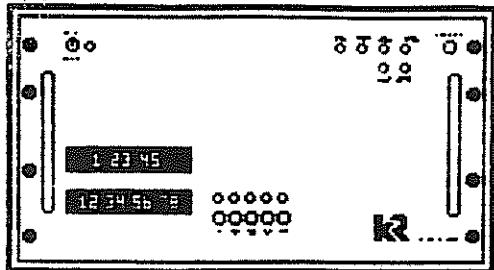


The model 219 in-line utility base allows for additional operations in one pass. Standard features include its own vacuum pump, misfeed detect and semi-automatic lubrication system. The unit can be designed to fit in-line with other systems, or you may select from several other KIRK RUDY in-line bases that can be custom designed to your specifications.



In-line imprinting with the model 240 imprinter head allows you to add extra messages to your clients' mailings and extra profits to your bottom line. Designed to accomplish crash imprinting allows for greater versatility.

**KIRK-RUDY HAS EARNED THE  
REPUTATION FOR DESIGNING  
SPECIAL EQUIPMENT TO SUIT  
SPECIFIC APPLICATIONS AND TO  
SOLVE PROBLEMS IN THE EVER  
CHANGING INDUSTRY OF PAPER  
HANDLING.**



## TS-500 SPECIAL FEATURES

The KIRK-RUDY TS-500 Townsort is designed for electronic mail sort processing. It is a microcomputer controlled system that sorts by zip codes or carrier route on pre-coded lists. The output of the unit can be used to actuate kickers, speed-up conveyors, or KIRK-RUDY stackers as well as most other stackers.

The operation of the unit is simple using thumbwheel settings with self diagnostic lamps that guide the operator through set-up and operation. The system is furnished with 5 readers, one for each label, and all the programing that is required for the labels is that a mark is placed in a readable location, on the label to be read. The processor only reads marks when a window is opened by electronic means controlled by the operator not by the mailing list. Below is a sample label.

The thumbwheel settings allows the operator to determine the number of pieces to be included in a stack, the number of pieces for an over-ride (I.E. the operator has determined that there will be 15 pieces to a stack with an over-ride of 7 pieces. Then a particular sort has 18 pieces, instead of getting a stack of 15 and a stack of 3, the processor will automatically actuate a stack of 18). Also with the simple thumbwheel settings, the operator can fine tune the operation as to when an action occurs.

1234567890  
DR. Mel Collins  
787 Main St. Suite 712  
Valdosta, Ga. 30300-0712

With the Thumbwheel settings,  
the operator can determine how  
many marks to read, 1 thru 9.

# KIRK-RUDY

**MAILING SYSTEM**  
Stamp affixing, labeling with electronic  
drive and zip sorting

