

**PEERLESS MACHINE & TOOL  
CORPORATION  
MARION – INDIANA – USA**

**SAFETY**

Peerless believes that the machinery covered in this manual represents the finest in design and construction available in the paper converting industry today.

With the proper care and maintenance, and careful attention to safety of operation, this equipment will give you years of safe and trouble free operation.

We at peerless have strived to meet the challenge of safety on every level of design, whether it be in electrics, pneumatics, or mechanical applications.

We state without reservation that every area of design, which could be hazardous to the physical well-being of the operators, or attending personnel, has been guarded to the best of our ability and the design knowledge available.

Under normal operation, no guards or safety-connected devices should be removed at any time, for any reason.

When normal servicing is performed, all power to the machinery should be shut down, and all safety stop switches should be set, or engaged.

Know your machinery thoroughly and understand the working parts as well as you can, as it will aid in safe operation.

Take all equipment serious, and always be alert for any abnormal operating conditions that might arise. Should this happen, immediately shut down the machine and engage all safety stop switches. Alert your supervisory personnel at once.

We are proud of the Peerless name and reputation gained over the past 75 years or more.

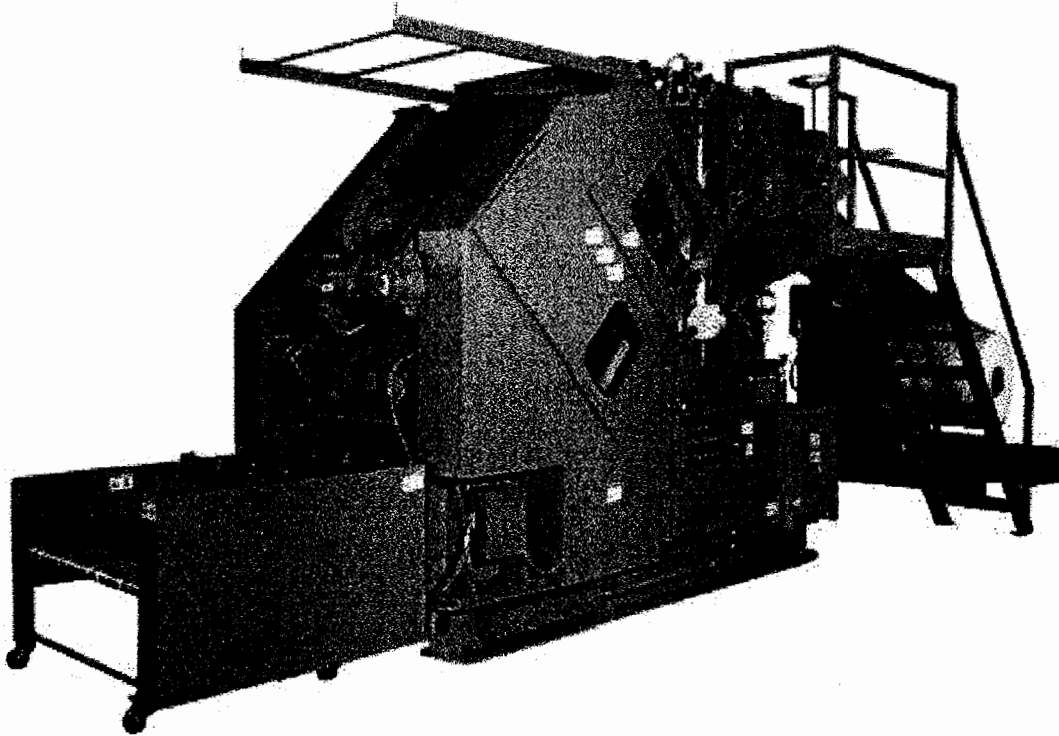
Our safety and reliability record are “without equal”, the very meaning of the word “Peerless”.

## DO'S AND DON'TS FOR OPERATION OF PEERLESS MACHINERY

1. Don't ever service, maintain, alter, adjust, or modify the equipment in any manner unless properly trained to do so, and unless the equipment is completely shut-down using all power disconnections and safety locks or interlocks. Follow current lockout/tag out regulations.
2. Don't ever allow ant personnel to operate or service machinery in any manner unless properly trained to do so.
3. Don't ever perform any operation on the machinery with the aid of any other person if that person is not properly trained in such operation or service procedure.
4. Don't ever allow service personnel or operating personnel to have any other person turn on the equipment while any maintenance, adjustment, or service is being performed on the machinery.
5. Do check regularly to insure that guards, safety decals, and features of the machinery are in place and operating properly.
6. Do replace safety guards, decals, and features with new updated guards, decals, and features as they are designed and made available.
7. Do report any safety problems or questionable operations to supervisory personnel.
8. Do properly train all personnel in the proper use and maintenance of the machinery.
9. Do require all personnel operating or maintaining the machinery to review each feature of the Parts, Service, and Operators Manual.
10. Do follow all national, state, regional, and local regulatory codes in the installation and operation of all machinery.
11. Don't use any machinery or feature of any machine which has had a guard removed, replaced, or modified, unless properly trained in such operation, and the replacement features have been properly approved by Peerless.
12. Don't permit any alteration, correction, addition, or maintenance of any machine unless done by personnel properly trained by Peerless, or unless performed by Peerless personnel.
13. Don't use the machinery for any purpose for which it was not designed and recommended by Peerless.
14. Don't do any maintenance or clear any machine jams or correct any malfunctions unless the machine is completely shut-off, and you are properly trained in such steps.

15. Do report any machine malfunctions to supervisory personnel. Report to Peerless any machine defect or design flaw.
16. Do routinely inspect all hydraulic and pneumatic hoses and fittings. Replace any component at the first sign of wear with an authorized Peerless replacement part.
17. Don't permit any item or material, such as new paint, to cover up or distort any safety feature or safety instruction. Particularly, do not cover up any safety decal. Replace any decal, which becomes unreadable.
18. Do routinely check all machinery to insure proper operation. Don't ever operate a machine that is malfunctioning or continually jamming.
19. Do provide adequate light, clean area, and a safe operating area for any machinery. Don't ever operate a machine that is not properly secured, connected, or in any way presents a dangerous operating condition due to the machine itself, or the working area around the machine.
20. Don't ever troubleshoot the equipment unless properly trained to do so, and only after fully reviewing the Operators Manual.
21. Do require all personnel around the machinery to wear proper clothing and equipment. Don't permit any employee to wear loose clothing, or any item, which would create an unsafe working condition.
22. Don't, Don't, Don't ever put hands, fingers, or any clothing or material in an area close to a moving part of the machinery.
23. Do use proper recommended tools for clearing of any and all jams. Never use hands, or fingers to clear jams or to correct malfunctions of the machinery.
24. Don't ever change dies or other auxiliary equipment parts or items unless the machine is completely shut down, and you are properly trained in the procedure.
25. Don't ever use old machinery acquired from someone other than Peerless, unless the machinery has been updated at the Peerless plant or at your plant with proper Peerless personnel providing new updated safety features and guards.

## INTRODUCTION



The following pages will introduce our Paper Plate and Tray Forming Machine to you, and give you advice regarding the Operation, Maintenance, and Servicing of this Machine. This booklet will also be valuable to you if any questions appear regarding our Machine later on. It should always be at hand in your workshop.

If any problems should arise which cannot be settled by you, please do not hesitate to contact our Service Department.

We wish you all success and pleasure with your Peerless Paper Plate and Tray Forming Equipment.

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**AUTOMATIC PAPER PLATE & TRAY FORMING EQUIPMENT**

**RECEIVING MACHINE**

All Peerless Machines will arrive by truck transport, unless specified otherwise.

When a new machine arrives, care should be taken in removing the unit from the trailer so that no damage is incurred.

After the covering or crating is removed, clean the machine thoroughly with a nonflammable cleaning solvent.

The shipment should be carefully checked against the Packing List. If there is a shortage, or parts found damaged, this should be immediately reported to the representative from whom the machine was purchased, the report being accompanied by a Packing List.

**PLACING MACHINE**

A Peerless Plate Machine is extremely rigid. The entire unit is constructed of steel weldments and semi-steel castings. Any machine does better when placed on a solid foundation, free from vibration.

If the machine is placed on an upper floor, select the position over a girder or near a wall or someplace where there is the least vibration. Careful attention to the placing of the machine will insure the best results.

Set the machine by leveling the steel runners, testing in both directions. After the machine is level, it is now ready for the electrical power hook-up to large control panel. An electrical diagram will be supplied with the machine to show proper procedure.

## LUBRICATION SCHEDULE FOR PEERLESS PLATE MACHINES

LUBRICATION POINT	LUBE	ONE SHIFT	TWO SHIFT	THREE SHIFT	CODE
<b><u>ROLL STAND</u></b>					
Roller Bearings	823-0	2M	M	2W	GF
<b><u>FEED SECTION</u></b>					
Bearings	823-0	M	M	M	GF
Overrunning Clutch	30	W	W	W	OH
Feed Stroke	SOM	M	M	M	HO
Chain	SOM	M	M	M	HO
Chain Idler	823-0	M	M	M	GF
Feed Throw Off Lever	30	W	W	W	HO
Paper Guides	30	W	W	W	HO
Guide Screws	30	2W	2W	2W	HO
Roll Pull Rollers	823-0	2M	M	M	GF
Decurl Unit – Bevel Gears	882H	2M	2M	2W	HG
Feed Gears	882H	M	M	M	HG
Paper Control Hub	30	W	W	W	HO
<b><u>MACHINE SECTION</u></b>					
<b><u>CUTTING HEAD SECTION</u></b>					
Bearings	823-0	M	M	M	GF
Gears	882H	2M	M	2W	HG
Connecting Rods	823-0	M	M	M	GF
Cutting Head Gibs	823-0	2W	2W	2W	GF
<b><u>FORMING HEAD SECTION</u></b>					
Bearings	823-0	M	M	M	GF
Forming Head Gibs	823-0	2W	2W	2W	GF
Cam Rollers	823-0	M	M	M	GF
Forming Head Springs	882H	2M	2M	2M	HG
Center Guide and Bearings	823-0	2M	M	M	GF
<b><u>PINION &amp; INTERMEDIATE SECTION</u></b>					
Bearings	823-0	M	M	M	GF
Gears Open	882H	2M	M	2W	HG
<b><u>CAM HOUSING SECTION</u></b>					
Forming Cams	882H	2W	2W	W	HG
Cam Shaft Bearings	823-0	M	M	2W	GF
Ejector Shaft Bearing	823-0	M	M	M	GF
Bull Gears	882H	M	M	M	HG
Ejector Cam & Follower	882H	M	M	2W	HG
Intermediate Cam & Follower	882H	M	M	2W	HG

## LUBRICATION SCHEDULE FOR PEERLESS PLATE MACHINES

LUBRICATION POINT	LUBE	ONE SHIFT	TWO SHIFT	THREE SHIFT	CODE
<b><u>DRIVE MOTOR SECTION</u></b>					
Motor Bearings	823-0	M	M	M	GF
Variable Speed – Shaft Bearing	823-0	M	M	M	GF
Gear Box	90	CLM	CLM	CLM	OR
<b><u>AIR LINE SECTION</u></b>					
Lubricator	ATO-200	CLW	CLW	CLW	OR
<b><u>COUNTER-STACKER SECTION</u></b>					
Chain	SOM	M	M	M	HO
Jogger Linkage	823-0	M	M	M	GF
Jogger Linkage	30	W	W	W	HO
Gate Linkage	823-0	M	M	M	GF
Gate Linkage	30	W	W	W	HO
<b><u>BLANKING DIES</u></b>					
Guide Pins & Bushings	823-0	2W	W	W	GF
<b><u>LUBRICATION SCHEDULE CODE</u></b>					
CLW – Check Level Weekly	HG – Hand Grease				
CLM – Check Level Monthly	GF – Grease Fitting				
W – Weekly	HO – Hand Oil				
M – Monthly	OH – Oil Hole				
2W – Every Two Weeks	OR – Oil Reservoir				
2M – Every Two Months					

Almost all paper fibers are composed of three different materials, cellulose, hemicelluloses, and legnin. Along with many other additives, these three main substances have a tendency to be abrasive as well as having a drying effect on all oils and greases. Because of this, all bearings, gears, slides and all other moving parts should be kept free of all paper contamination.

<b><u>MOLUB-ALLOY</u></b>	<b><u>DESCRIPTION</u></b>
823-0	Elevated Temperature Grease NLGI #0
882H	Open Gear Lubricant, Heavy
30	General Purpose Oil SAE30
90	Medium Duty Gear Oil
SOM	Roller Chain and Cable Lubricant
ATO-200	Air Line Oil

## **LUBRICATION**

All Peerless Plate / Tray Machines are lubricated completely prior to shipment to the customer. It is advisable, however, to check all lubrication points on the machine prior to starting.

Provided on Page 3 is a Lubrication Chart, showing the recommended lubricants and interval of lubrication for all component parts.

## **STARTING MACHINE**

When your machine has been properly installed and wired, it is now ready for operation. Start the machine to check rotation of the drive pulley. The drive pulley should rotate clock-wise. If it is not, reverse the main power leads in the large panel box to attain proper rotation.

## **LACING PAPER WEB IN MACHINE**

When lacing the paper web into the feed section of the machine, it is imperative that the roll is centered on the roll stand, and the entire roll stand assembly be centered with the feed section of the machine.

Web guides are located on the feed plates for proper aligning of the web width to the blanking die. Two adjustment wheels on the control side of the machine control the guides. The outside knob adjusts the width between the guides. The inside wheel moves the web to the right or left. Again it is most important to have the roll and roll stand assembly centered in back of the machine. All paper guides will be adjusted and centered accordingly.

If running coated board stock, better results are obtained if the coated side of the paper is wound on the inside of the roll. Pull paper from the bottom side of the roll. This will give the paper an up curl condition, which is more easily handled than a down curl condition.

The paper can be decurled through a set of rollers as the paper enters the feed section.

Move the decurl rollers up or down while the machine is running to obtain proper decurling. As the blanks are discharged from the blanking section, check for flatness in the blank chute. The blanks should be as flat as possible. Keep adjusting the decurling mechanism until this flatness is achieved.

After the paper is thru the decurling mechanism, it must go between the two roll pull rollers. From the pull rollers, the paper goes down towards the floor, and then up thru the guides on the secondary feed plate. Thread the paper around the idler roller, across the main feed plate, between two aluminum feed rollers, and on thru the cutting die. One precaution is that there must be a free paper reservoir, approximately 18 inches, below the secondary feed plate.



After the feed is threaded, the air switch on the control side of the machine must be turned on before the paper will feed. To stop the paper feed, the switch must be turned off. Always stop the feed when the cutting die is closed. This will avoid cutting a partial blank. On models with a print registration eye, use the clutch switch in the control panel to stop and start the paper feed.

To activate the roll pull rollers, turn the pull rollers “OPEN/AUTOMATIC FEED” switch to the “AUTOMATIC FEED” position. The pull roller control eye will control the amount of free paper reservoir below the feed plate.

## **ADJUSTING FEED STROKE**

When changing from one size to another, it is necessary to make the required adjustment on the feed stroke mechanism to feed the proper amount of paper into the blanking section. The feed stroke should be set for the exact length of feed required for a given blank size plus proper trim. If this adjustment is not correct, the paper web will cut out on the sides or the bottom of the holes, causing problems.

The length of paper feed is controlled by the feed stroke arm, located on the opposite operator side of the machine, above the cutting section. The feed stroke is obtained through an overrunning clutch with a brake for tension to avoid free running.

To increase the feed length, loosen the lock bolt on the back side of the feed stroke arm, turn the adjusting screw to move the square nut towards the end of the arm, then lock it in position. To decrease the feed length, move the square nut towards the center of the arm.

## **PEERLESS 300 PAPER FEED/REGISTRATION SETUP & OPERATING INSTRUCTIONS**

### **RUNNING REGISTERED PRINT**

1. The register mark on the paper should be 1/8" wide and approximately 1-1/2" long. The mark should be as dark of a color as possible and be located in exact relation with the printed blanks. The distance between marks must be uniform.
2. Adjust the feed stroke to feed 1/8" more paper than the center to center distance of the register marks. Too short of feed length will not permit the print registration eye to stop the feed at the register mark.
3. Line up the printed pattern under the die punches and adjust the scanner light on a register mark. With the clutch switch in the operators panel off, close the cutting die. Turn the switch back on after the die is closed. The clutch switch should be turned on and off only when the cutting die is closed. This will prevent cutting a partial blank and being out of register. See page 9.
4. The Gemco cam switch must be adjusted to allow the scanner only to look in the immediate area of the register mark, and lock the scanner out of the system when the printing layout is under it. To adjust the cam switch, stop the machine when the feed stroke arm is on dead center at the end of the feed stroke. The cam switch, cam roller should be in the center of the 1-1/4" low spot on the cam.

### **TROUBLE SHOOTING**

1. Check for consistency of the center distance of the register marks. Refer to Set-Up Procedure.
2. Check the focus of the scanner and that the light is on. Refer to Set-Up Procedure.
3. Check the adjustment of the cam switch and make sure the switch is operable. Refer to Set-Up Procedure.
4. Check the tension on the friction brake. With the stroke arm linkage removed, the clutch arm should move freely. Approximately 20 pounds of air pressure on the brake should be sufficient.

## **SETTING UP SICK KT-10 REGISTER EYE FOR PRINTED PAPER**

The focal distance should be ½ inch (12.5 mm).

Turn the “registration eye” switch on. The green power on led should light up.

Set the program selector to Q.

Using a small piece or representative, printed, production paper, position the background under the light spot.

Press and hold the teach button on the top of the registraton eye.

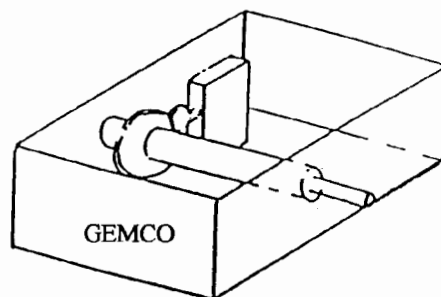
Move the printed paper, so the light spot moves from the background, across the register mark, and onto the background again, while holding the teach button down. Release the teach button.

The yellow led signal strength indicator lights if the light reception is acceptable. If it does not light, check the focal distance, clean the lense, etc., and try again.

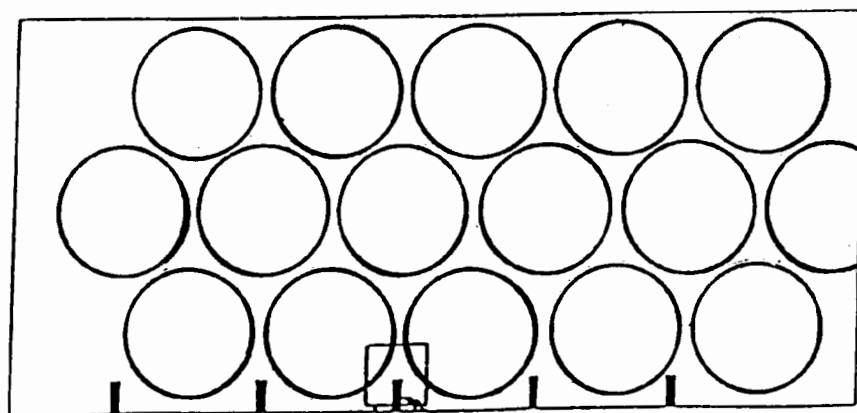
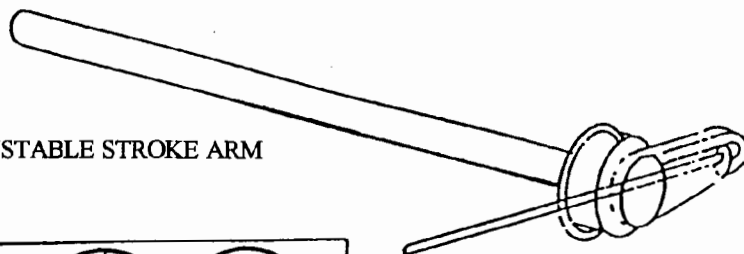
Refer to the following instructions for running registered print.

## REGISTRATION EYE CONTROL

ELECTRIC EYE CAM SWITCH



ADJUSTABLE STROKE ARM



REGISTER MARKS

FOCUS POINT

REGISTER EYE

## **MACHINE OPERATION**

The following paragraphs will describe the functions of a Peerless tray machine during the course of a normal revolution.

Paper is pulled from the roll stand by the two pull rollers in the center of the feed.

The purpose of the pull rollers is to unroll the paper roll stock and feed it into a reservoir of free paper behind the aluminum feed wheel. It is necessary to maintain this reservoir of paper at all times.

Since the pull rollers feed more paper than the machine feed requirements, the pull rollers are intermittent in their operation.

The moveable roller is raised and lowered by an air cylinder and electric air valve. The air cylinder will, upon demand from the pull roller control eye and air valve, raise the pull roller to stop the feeding of paper or lower the roller to resume feeding as the reservoir of paper is nearly used up.

From the reservoir, the paper is fed into the cutting die, in equal lengths, by means of an aluminum feed wheel driven by a one-way mechanical clutch and an adjustable stroke arm.

The total feed length should be one blank length plus 3/16" trim.

The paper should start feeding when the die is half way open and stop after one half revolution of the stroke arm.

The remaining one half revolution is used to retract the mechanical clutch in readiness for the next feed stroke.

Just before the blank is cut the intermediate blank stops should raise.

The blanks will be cut and slide to the intermediate blank stop position.

As soon as the waste paper is sheared and falls into the waste chute the "Waste Air" should blow it out the side of the machine.

After the forming dies are closed the intermediate stops are dropped. This allows the blanks to slide to the forming head stop position. The blanks will be held here until the dies are open the depth of a formed tray.

When the dies are open ½ to 1 inch the top die air should begin to blow. The top die air pressure should be kept very low. If the air pressure is too high it will prevent trays from being ejected and flat blanks from entering the dies.

As soon as the forming dies are open enough to allow a formed tray to escape the die plunger will raise to eject the tray.

Directly following the raising of the plunger the forming head stops should be high enough to allow the waiting blank to slide into the die.

As the top die closes to within an inch or so from the bottom the top die air should stop blowing.

Also at this point the plunger should retract.

The dies will close to form the tray before opening to the point where the tray can be ejected onto the stacker belts.

The stacker belts deliver trays, one at a time, to the stacker cans.

When the required amount of trays are in the stacker cans the stacker gate will open and the counter belts will move the stacked trays to a position accessible to the operator.

## **TROUBLE SHOOTING**

### **1. INSUFFICIENT AMOUNT OF PAPER BEHIND ALUMINUM FEED WHEEL**

Probable causes:

- A. Pull rollers “OPEN/AUTOMATIC FEED” switch in the wrong position.  
Select “OPEN” to hold the pull rollers apart while the feed is threaded.  
The switch should be in the “AUTOMATIC FEED” position under running conditions.  
This lets the pull roller control eye regulate the pull rollers.
- B. Excessive roll stand brake pressure.  
The air pressure on the roll stand brake can be enough to make the pull rollers slip or tear the paper.  
Since roll sizes and weights vary so much it is impossible to put a figure on the air pressure.  
However, the air pressure should never be to the point that the roll cannot be unwound by hand.
- C. Loose or broken air cylinder linkage.  
After inspecting for damaged linkage, and replacing any needed parts, there remains only one simple linkage adjustment.  
Loosen the set screws in the cast iron pull roller arm and rotate the shaft counter-clockwise.  
Since the shaft is eccentric rotating it will close the two pull rollers. With the rollers closed move the cylinder to 1/8 inch from its' extreme extended position and lock down the set screws in pull roller arm. This adjustment will insure the rollers are completely together before the air cylinder runs out of travel.

### **2. ERRATIC FEED LENGTH**

- A. Check the stroke arm linkage for bent, broken or loose parts.
- B. Be sure there is a sufficient reservoir of free paper behind the feed wheel to keep up with the machine feed requirements.  
In case of extremely long feed lengths the sprocket can be changed to speed up the rollers and feed additional paper.  
The pull roller control operation is described on page 6.

- C. Misalignment of upper and lower feed wheels.  
The two aluminum feed rollers must be parallel.  
The upper feed wheel shaft is fixed so all adjustment must be made with the lower shaft.  
The lower feed wheel shaft can be adjusted by means of the square head set screw in the cast blocks supporting each end of the shaft.  
Using a .002 or .003 feeler gauge adjust the lower shaft until the clearance between the rollers is the same from side to side. This clearance should be checked at 90° intervals and set to the tightest spot.
- D. Malfunction of the one-way mechanical clutch.  
Remove the stroke arm linkage and work the clutch by hand.  
If clutch feels sticky or doesn't engage every stroke it can be disassembled and serviced.  
The clutch dogs can be turned over and re-assembled for added life.  
Sufficient lubricant and cleanliness is also necessary to assure proper operation of the clutch.
- E. Slippage of electric clutch.  
On models with both mechanical and electric clutches running unprinted paper, mark the two halves of the electric clutch and watch it to assure yourself there is no slippage. Excess oil from the mechanical clutch is the biggest contributor to the problem of electric clutch slippage.
- F. If the machine is running register printing, refer to pages 7 & 8 for set up and trouble shooting of the registration eye.

### **3. BLANKS ARE NOT REACHING THE INTERMEDIATE BLANK STOPS**

Probable causes:

- A. The paper web may be off-center.  
If the paper web is off-center enough to allow a portion of the outside die position to be uncovered, a misformed blank will be cut and may jam in the cutting die.
- B. Blanks may be too curly to slide in the blank chute.  
The cut blanks should be either completely flat or have a very slight up-curl condition. Any amount of down-curl is a deterrent to the blanks sliding freely. Adjust the decurl mechanism until any down-curl of the blanks is eliminated.
- C. The cutting die knock-out springs may be adjusted wrong.  
The purpose of the springs is to push the cut blank partially thru the cutting plate to a point where the plate is relieved enough to allow the blank to free fall. Normally, the springs should be below the punch by about  $\frac{3}{4}$  of an inch. If the springs are not down far enough, the blank may never reach the cleared portion of the cutting plate and therefore, will not fall to the die slides. Bending the springs down too far will push the paper into the punch hole before it is cut. Since the paper is concave instead of flat, the cut blank will be oversize.



If the blank is too much oversize, the blank can not be discharged from the die plate. A more radical misadjustment can have the springs down so far that they interfere with the paper web as it is being fed across the die.

**D. Misalignment of the blank chute.**

The sides of the blank chute slides must be in line with the bridges in the cutting die. Also, the blank chute slides should be slightly lower than the slides in the cutting die. Proper blank chute alignment is described on page 30.

#### **4. BLANKS REACHING THE FORMING DIES AT THE WRONG TIME**

Probable causes:

**A. Interference in the blank chute.**

Clean blank chute. Remove any scrap paper or accumulation of paper dust. Repair any damage to the chute that may have occurred.

**B. Inspect the blanks to be sure they are flat and are not malformed.**

**C. Improper operation of the intermediate blank stops.**

Before making any time changes, check to see that the linkage connecting the intermediate stops is intact and working satisfactorily. If a timing adjustment is necessary refer to the Cam Limit Switch, instructions on page 18, for proper timing of the stops.

#### **5. BLANKS NOT ENTERING THE FORMING DIES COMPLETELY**

Probable causes:

**A. Improper adjustment of the top die air.**

As described in "Machine Operation," page 10, the top die air must blow at a very low pressure. Too much air pressure will blow the blank downward and it will bump into the bottom die plunger. Each top die air supply can be regulated by a petcock at the die air manifold.

**B. Down-Curl in the Blanks.**

The problem of down-curl plagues the machine operation in several places but nowhere as severe as the time the blank must enter the forming die. Any down-curl in the blanks will cause the leading edge to catch on the raised bottom die plunger.

If the down-curl absolutely can not be eliminated by adjustment of the decurl mechanism a temporary solution is to raise the blank chute a little higher than its' normal 3/8" to 1/2" above the bottom die flange.

**C. Improper adjustment of the forming head blank stops.**

The forming head blank stop must hold the flat blank behind the forming die until the formed tray has been discharged.

The blank should enter the forming die just behind the escaping formed tray.  
The height of the blank stop is determined by the adjustment of the set collar on the end of the square stop.

**D. Misalignment of the Blank Chute.**

As described on page 29 the blank chute must be in line sideways with the die guides and in the proper height relationship to allow the blank to fall into the forming die without interference.

**E. Incorrect bottom die plunger timing.**

The die plunger gives support to the blank as it enters the forming die. Without the plunger to slide across, the blank may dive into the lower side of the die preventing it from entirely entering.

**6. FORMED TRAYS NOT BEING DISCHARGED FROM THE FORMING DIES**

Probable Causes:

**A. Top forming dies too hot.**

As described on page 18 the top die air is used to control the heat of the top dies.  
Normally a range of 130 to 160 degrees will be satisfactory.

If the dies become too hot, the tray can stick to the die preventing the tray from being discharged.

Re-check the timing of the top die air, page 18, to assure the air is being used to its' fullest benefit.

If the machine is shut down for any length of time with the dies closed, a cooling off period for the top dies will have to be allowed.

**B. Improper ejector timing.**

The most frequent problem is that the plunger is set to raise before there is a sufficient gap between the upper and lower forming dies to allow the tray to escape.

If the plunger ejector, is radically out of time, it may raise and drop before the tray has a chance to be discharged from the die.

The timing of the ejector will vary with each change of die depth.

**7. STACKED TRAYS NOT BEING DISCHARGED FROM THE STACKER CANS**

Probable Causes:

**A. Adjustment of the stacker can opening or the jogger pad motion is incorrect.**

The opening between the stacker gate and the back of the stacker cans has to be great enough to allow the stacked trays to rock with the jogger pad.

The motion of the jogger pad should rock the stacked trays toward the stacker gate rather than away from it.

Further information on stacker-counter adjustments can be found on page 30.

**B. Check the electrical operation of the counter.**

The counter input is controlled by the Limit Switch. Make sure the Limit Switch is sending its' electrical signal to the counter with each stroke of the machine.

Also be sure that, after the machine has cycled the number of revolutions preset on the counter, the counter is sending its' electrical signal to the air valve and stacker motor to open the stacker gate and start the counter belts in motion.

**8. STACKER MOTOR STARTS BUT GATE DOESN'T OPEN**

Probable Causes:

- A. Inspect the air line and fitting to the air cylinder.
- B. Examine the linkage for loose or broken parts and replace as Necessary.
- C. Check the electric air valve to be sure it is operating satisfactorily.

**9. STACKER GATE OPENS BUT COUNTER MOTOR DOESN'T START**

Probable Causes:

- A. Check all electrical connections and fuses.
- B. Inspect the counter motor driver belt and pulley to be sure they are tight.

## **GEMCO CAM LIMIT SWITCH**

As evidenced by the preceding “Machine Operation” and “Trouble Shooting” sections, the Gemco cam switch plays an important role in the function of a Peerless Tray and Plate machine.

Each position of the Gemco switch can be individually adjusted for both the timing and dwell of the specified operation.

Note the instructions on pages 18 - 21 for proper timing and adjustment procedures.

## **OPERATION OF GEMCO CAM LIMIT SWITCH**

### **1<sup>ST</sup> POSITION – “COUNTER”**

In this case the Gemco cam switch is used to count strokes of the machine so, at the pre-set count, the counter can open the stacker gate and start the stacker motor to discharge the counted and stacked trays.

### **2<sup>ND</sup> POSITION – “FORMING HEAD TOP STOP”**

For convenience and smoother press operation, we recommend utilizing Gemco cam switch 2 in the press stop circuit to stop the press motion with the forming head in its' completely open position. Press motion will not stop until the forming head is at, or near, its' completely open position when depressing the auto cycle stop button. Press motion will stop immediately when the emergency stop button is depressed or any guard or safety device is opened.

Adjust Gemco cam switch 2 to stop the press with the forming head at, or near, its' completely open position. Changing production or press conditions will require altering Gemco cam switch 2.

### **3<sup>RD</sup> POSITION – “TOP DIE AIR”**

The top die air is used to control the heat build-up in the top dies and eject formed plates.

The top dies are fitted with an air inlet for a supply of air from the top die air manifold. This supply of air is controlled by the Gemco cam switch and an electric air valve.

The air should blow under very low pressure, from the time the dies are opened ½ inch to 1 inch and should continue to blow until they are within an inch or so of closing.

### **4<sup>TH</sup> POSITION – “INTERMEDIATE BLANK STOPS”**

The intermediate blank stops also are operated by an air cylinder and an electric air valve timed by the Gemco cam switch.

There are two basic settings of the intermediate blank stops. The size of the tray is the determining factor when selecting which setting is right for your application.

Unless the physical size of the blank prevents using forming head blank stops, the blank will be stopped twice.

The first stop is the intermediate position. The intermediate blank stop fingers should raise just before the cutting die punches. With the fingers up, the blanks will be held back until the forming dies are closed. While the forming dies are in the closed position the blank can be released from the intermediate stops and allowed to fall to the forming head blank stops. The stop fingers should stay down only long enough to allow the blank to slide by and then raise again in preparation for the next stroke of the cutting die.

If the blank length prohibits using forming head blank stops, the intermediate stops will be the only ones used.

In this case the intermediate blank stops should raise as described before but should remain in their raised position until the forming dies are open far enough to allow a formed tray to be ejected. The blank should then be released from the intermediate stops so it will be entering the die just behind the escaping formed tray.

#### **5<sup>TH</sup> POSITION – “WASTE AIR”**

As soon as the cutting die shears the waste off and it falls into the waste chute the waste air valve should open to blow the waste out the side of the machine.

The amount of time the valve needs to be open is determined by how far you need to move the waste or by the weight of the waste.

The open time of the valve is also regulated by the Gemco cam switch.

#### **6<sup>TH</sup> POSITION – “NOT USED”**

#### **7<sup>TH</sup> POSITION – “PRINT REGISTRATION EYE”**

In the operation of the print registration eye the Gemco cam switch is used to isolate the area that the scanner is allowed to see. As explained on page 7, step 4, the scanner should only be allowed to look in the immediate area of the register mark.

#### **8<sup>TH</sup> POSITION – “NOT USED”**

## CAM SWITCH SETTINGS

SWITCH	CONTACT	DESCRIPTION	SETTING	
CS1	A	COUNTER	BLACK	0°
			RED	30°
CS2	B	FORMING HEAD TOP STOP	YELLOW	340°
			WHITE	310°
CS3	A	TOP DIE AIR	BLACK	320°
			RED	30°
CS4	A	INTERMEDIATE BLANK STOP	BLACK	140°
			RED	235°
CS5	A	WASTE AIR	BLACK	80°
			RED	180°
CS6		NOT USED		
CS7	A	PRINT REGISTRATION EYE	BLACK	65°
			RED	100°
CS8		NOT USED		

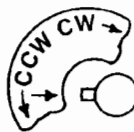
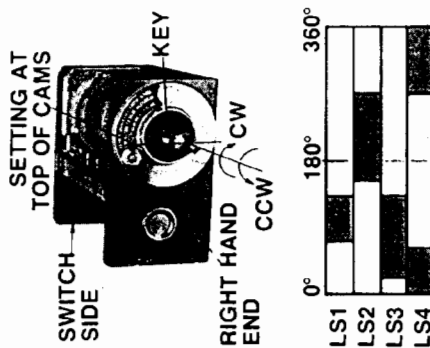


## Rotating Cam Limit Switch

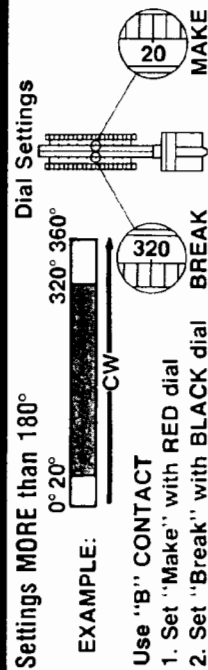
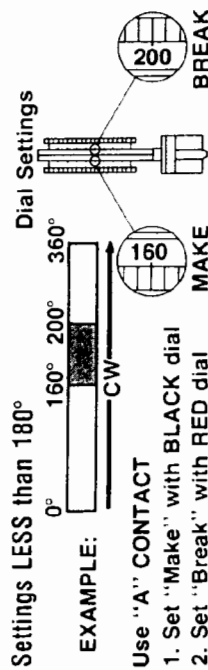
1080 North Crooks Road Clawson, Michigan 48017

### Cam Adjustment Procedure

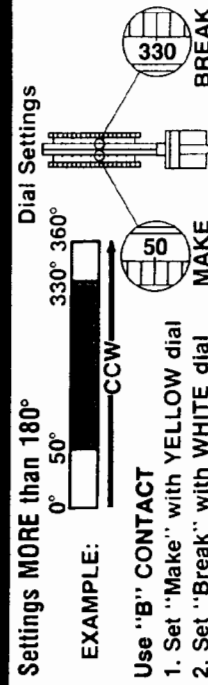
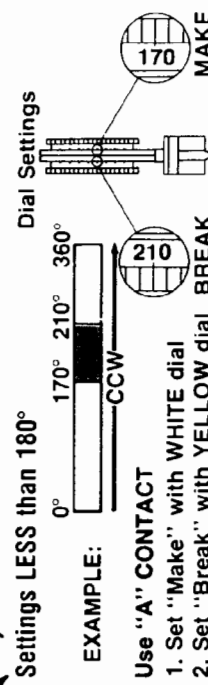
1. Couple the input shaft to the driving member with the Shaft Keyway aligned with the Positioning Arrow located on the Right Hand Bearing End Plate. The machine should be in the start cycle position. The key on the cam shaft should be pointed up and all cam settings should be reading zero at the top position.
2. Establish a timing chart for each desired limit switch setting with specified angular settings.
3. Determine the direction of rotation of the Right Hand End of the cam shaft; CW or CCW. The right hand end of the rotating cam shaft will have a positioning arrow located on the Bearing Plate Decal.
4. Proceed with the desired cam settings at the top of the cam as shown below.



#### Settings for CLOCKWISE Shaft Rotation (CW)



#### Settings for COUNTERCLOCKWISE Shaft Rotation (CCW)





## BASIC DIE ALIGNMENT PROCEDURES

After the Initial Installation of the forming dies, the following procedures and checklist will aid in proper die alignment.

1. Open dies, loosen the four bolts on the bottom die, move the bottom die up and down to establish the amount of movement. Determine the center of this movement and tighten the bolts.  
A flat head socket cap screw installed in two opposite corner bolt holes will center the die about the clearance holes. Install hex head cap screws in the other two bolt holes. Remove the flat head socket cap screws and install hex head cap screws.
2. Loosen the bolts on the top die slightly, enough that the die will move with slight force.
3. Place two well-formed plates in the bottom die.
4. Bring the dies together to full compression, open the dies, and then bring the dies to full compression again. Tighten the bolts on the top die.
5. Adjust the bolster bolts so they are all even.
6. Remove the plates and heat the dies to running temperature.
7. Mark a blank with pen or pencil, place the blank in the die, with the mark in front, cycle the press one revolution.
8. Remove the plate and hold it up to a strong light. Tight places will show up as light places on the plate.
9. Check points to look for on plates:
  - A. Tight places -- look at the plate with a light. Move the die until no tight places appear.
  - B. The angle of the plunger impression -- it should be the same all around.
  - C. Rollover or outer edge of the plate should be the same all around. If not, check for curl in the paper or the blank stops not set properly.
  - D. Flutes should be round. If they appear oblong, the die needs to be turned.
  - E. The textures of the board should look the same around all radii. If one side appears smoother or more pressed, the die must be moved.

After looking at the plate, mark with a pen or pencil the direction you feel the die should be moved to achieve the desired results. After marking the plate, look again to make sure you are right, it is very easy to move opposite the desired direction.

Move the bottom die whenever possible, because the bottom die can be better controlled while moving.

After each move, put in another marked blank and start with procedure #7 again until the desired results are obtained.

## **STACK COUNTER**

The stack counter acknowledges each press revolution by an output from the PLS. Product is counted by press revolutions. After reaching the programmed count number, products are discharged from the stacker cans. An internal timer controls the length of time that the discharge belts run to deliver product to the operator.

### **TO CHANGE / CREATE A STACK COUNT (PRESET) VALUE**

Repeatedly press the "-" button on the counter face until "C... / P1..." is displayed.

Repeatedly press the "SEL" button on the counter face until the number you want to change is flashing.

Repeatedly press the "+" or "-" button on the counter face until the desired number is displayed.

Repeat procedure to alter all digits necessary to correct the complete number.

Press the "ENT" button on the counter face to record the new value.

Resume normal operation.

### **TO CHANGE / CREATE A TIMED OUTPUT VALUE**

Press the "RUN/PGM" button on the counter face.

Press the "ENT" button on the programmer face.

Repeatedly press the "-" button on the programmer face until "program out mode" is displayed.

Repeatedly press the "SEL" button on the counter face until "RELAY 1 NORMAL" is displayed.

Repeatedly press the "-" button until "RELAY / PUL 0.00" is displayed.

Repeatedly press the "SEL" button until the number you want to change is flashing.

Repeatedly press the "+" or "-" button until the desired number is displayed.

Repeat procedure to alter all digits necessary to correct the complete number.

Press the "ENT" button.

Press the "RUN / PGM" button.

Further programming instructions can be found in the "DURANT AMBASSADOR SERIES COUNT CONTROL" manual included with your press information.

Resume normal operation.

## TEMPERATURE RANGES

Temperature settings vary due to the many types of paper, coatings, moisture content, and inks.

The following general facts may help.

Uncoated board with 6 to 12% moisture typically runs with the top die heat at 250 - 325 degrees F (120 - 160 degrees C), and the bottom die heat at 250 - 375 degrees F (120 - 190 degrees C).

Lacquer coatings usually have to be run at cooler temperatures. Top 125 - 250 degrees F (50 - 120 degrees C), bottom 200 - 350 degrees F (90 - 180 degrees C).

Nitro-Cellulose and water based coatings usually run better at higher temperatures. Top 200 - 300 degrees F (90 - 150 degrees C), bottom 250 - 375 degrees F (120 - 190 degrees C).

Poly coated boards are usually run with the top die heat at 75 - 150 degrees F (25 - 65 degrees C), and the bottom die heat at 200 - 375 degrees F (90 - 190 degrees C) depending on the poly coating material.

## **DIE HEAT TEMPERATURE CONTROL**

The die heat temperature controls have two displays. The upper displays the actual temperature of the die and is red in color. The lower displays the set point and is green in color.

Use the up / down keys on the temperature control to change the set point value.

The temperature control has a high temperature limit and output, which opens a mechanical relay in the die heat circuit to prevent overheating.

## **INSTRUCTIONS FOR CHANGING DIES**

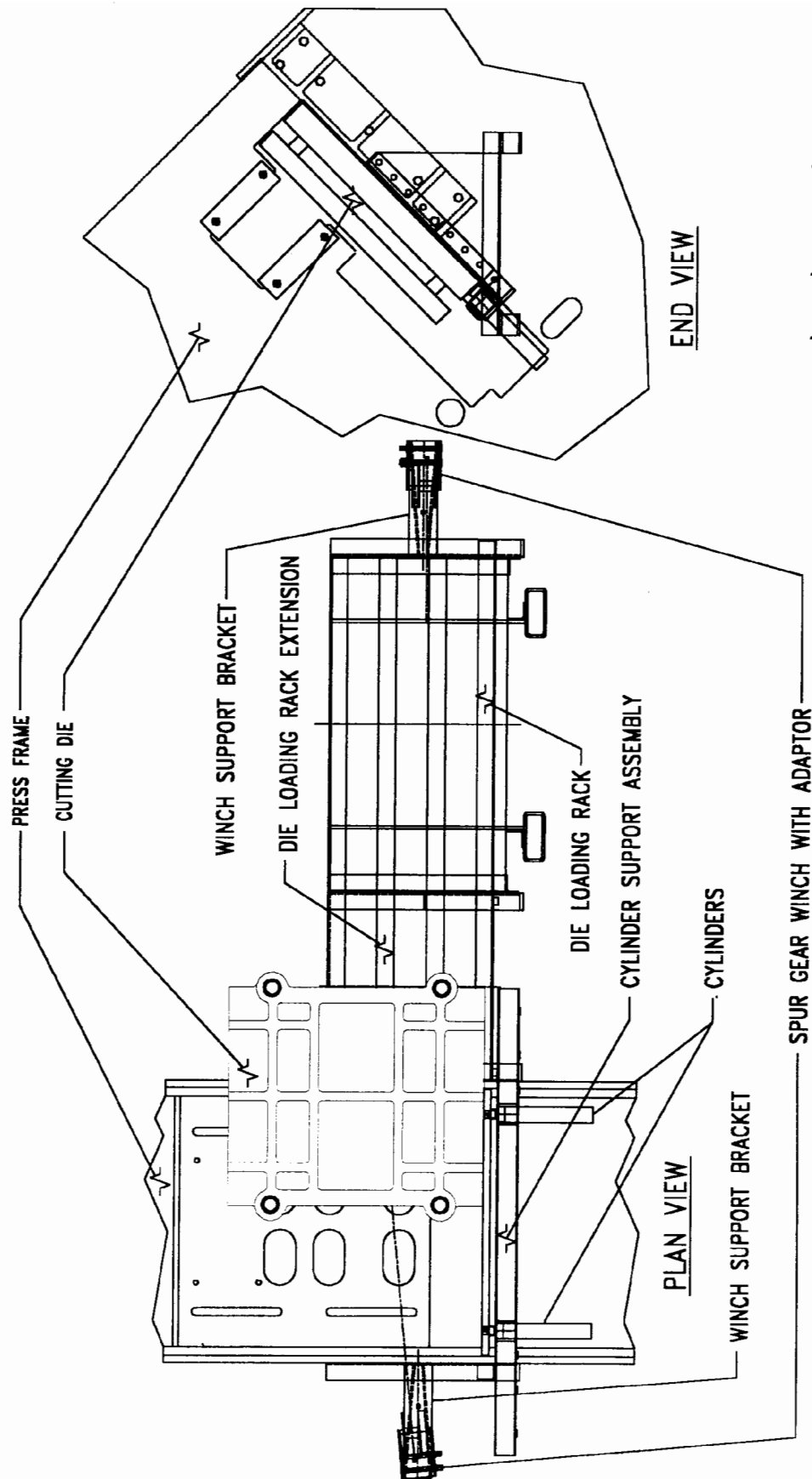
### **CUTTING DIE REMOVAL**

1. Disconnect the airline, and remove the two bolts on each side of waste chute. Remove the waste chute thru the side of the machine.
2. Remove the two bolts fastening the blank chute to its mounting angles, and the two bolts holding the blank chute to the cutting die. Remove the blank chute thru the side of the machine.
3. Rotate the machine until the cutting die is open about 1/4 inch.
4. Switch off and lock out all electrical power to the machine. Refer to the Do's and Don'ts For Operation Of Peerless Machinery, page B and C of this manual.
5. Remove the lower portion of both machine side guards.
6. As shown in the sketch on page 26, attach the die loading rack extension, and one winch support bracket to the machine sideframes. The parts are reversible and can be mounted to either machine sideframe, depending on the desired direction of cutting die installation / removal.

The parts have four possible mounting positions to accommodate the range of cutting die sizes. The first or lowest mounting position is for dies 33 to 36 inches long. The second position is for dies 27 to 33 inches long. The third position is for dies 21 to 27 inches long. The fourth or highest position is for dies 15 to 21 inches long.

7. As shown in the sketch on page 26, install the cylinder support assembly, centered across the machine width. This assembly is supported by the die loading rack extension and winch support bracket.
8. Connect both hand operated hydraulic oil pumps to the hydraulic cylinders. Pump the cylinders up until the cutting die is supported by the assembly.
9. Remove the top and bottom cutting die-mounting bolts.
10. Slowly retract the hydraulic cylinders, lowering the cutting die, by slowly rotating the release lever on the hydraulic oil pumps.
11. Clamp the die loading rack to the forks of a lift truck and position the rack at the side of the machine as shown in the sketch on page 26. The die loading rack must be lined up as close as possible with the die loading rack extension.
12. As shown in the sketch on page 26, attach the second winch support bracket to the die loading rack. Thread the eyebolt into the end of the cutting die. Attach the winch strap to the eyebolt and pull the die thru the side of the machine and onto the die rack.

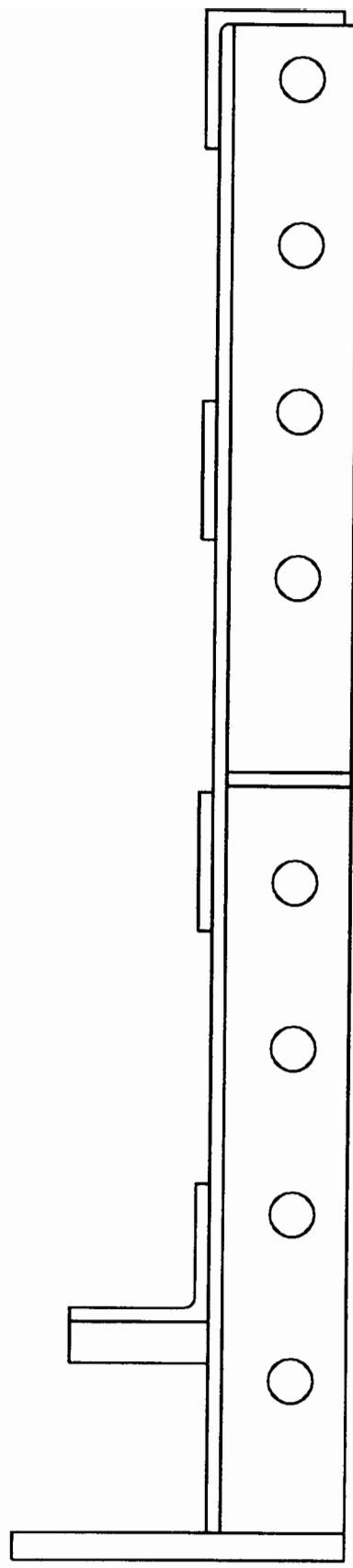
# PEERLESS CUTTING DIE INSTALLATION/REMOVAL SYSTEM



Q:\DWGS\CUSTOMER\DIELOAD.DWG  
SCALE - 22 : 1

MINIMUM AND MAXIMUM CUTTING DIE LENGTHS  
FOR EACH DIE LOADING RACK MOUNTING POSITION

DIMENSIONS SHOWN ARE FOR LONG BASE MACHINES.  
 SHORT BASE MACHINES USE THE HOLES LABELED 36 IN AND 915 MM.



15 IN	21 IN	27 IN	33 IN	381 MM	533.MM	686 MM	838 MM
27 IN	30 IN	33 IN	36 IN	686 MM	762 MM	838 MM	915 MM

## CUTTING DIE INSTALLATION

1. Install the die loading rack extension, winch support bracket, cylinder support assembly, and hand operated oil pumps as described in "Cutting Die Removal."
2. Place the cutting die on the die loading rack.
3. Position the die along the side the machine, attach the winch strap, and pull it into place.
4. Push the die up, into location, with the hand operated oil pumps. When die is in the proper location, all top die-mounting bolts should be easily installed by hand.
5. Tighten the bottom mounting bolts, do not tighten the top bolts until all installation steps are completed.
6. Remove the gib caps on both sides of the machine. Visually check to see if the head is centered across the width of the machine. The head ends should be flush with the outside of the gibs. If the head isn't properly centered, bump it into position with a plastic hammer.
7. Place a 0.004 / 0.005 inch shim between the cutting head and the top gib on both sides. Use a clamp on each side to pull the head up tightly against the shim.
8. If all top mounting bolts can still be turned with your fingers, the die is properly aligned and the bolts can all be tightened. If the bolts cannot be turned freely, shift the die, with the head still clamped in position, until all bolts are free and then tighten. Start by tightening the center bolt on both sides of the die, and work outward until all bolts are tight.
9. Remove the clamps and shims from the gibs. Check gib to head clearance. There should be at least 0.004-inch clearance on each side of the head. The cutting head should ride in the center of the gibs. The guide posts in the die should hold the head in position.
10. If applicable, place a sheet of paper in the scoring section of the die. Make sure the paper you use is big enough to cover the entire scoring section, and is representative of the paper you will be using in production. Run the press over one cycle and remove the sheet to examine the scores. Shim under the counter plate until the scoring is uniform. As a general rule, a good score will be 0.005 to 0.006 inches deep.



## **FORMING DIE REMOVAL**

1. Close the forming dies.
2. Remove the plunger / ejector mechanism.
3. After making sure the electrical power to the dies is switched off, disconnect all heater wires and thermostat probes.
4. Disconnect the top die air lines.
5. Remove the top and bottom die mounting bolts.
6. Raise the forming head slowly to the up position and remove the top dies. The plunger stems in the bottom dies will prevent them from sliding out.
7. Remove the bottom forming dies.
8. Remove the top die mounting plate.
9. Remove the bolster bolt nuts by using a jack to slightly compress the bolster springs, remove the nuts at the bottom side of forming base. Remove the bolster bolts and bolster plates.

## **FORMING DIE INSTALLATION**

1. Starting from one side of the machine, install the first bolster plate, or spacer if needed, using the required amount of bolster springs and bolts. Install the remaining bolster plates, bolts, spacers, and springs.
2. Using a jack to compress the springs, push the bolster plate down until the top of the plate is flush with the top of the forming base. Install the washers and nuts on the bolster bolts, and tighten against the bottom of the forming base. Repeat the procedure for each bolster plate.
3. Install the top die mounting plate. Be sure that the 3/8" tapped holes for the blank stops are turned toward the top of the machine.
4. Install the bottom dies. Try to center them in the clearance on the mounting holes before tightening the bolts.
5. Connect all bottom die wiring and install the heat probes. Switch the heat on, and set the controllers for the desired temperature.
6. Starting at one side, place a formed plate / tray in the bottom die. Place the top die on the bottom die, and bring head down slowly to within 1/16 inch of closed position.

7. Install the top die mounting bolts, but do not tighten. Bring the forming head down to the closed position and tighten the bolts.
8. With the die closed, and the plate / tray still in position, adjust the bolster nuts to within 0.020 inch of the bottom of the forming base. Adjust all bolts evenly.
9. Open the dies, and following the "Basic Die Alignment Procedure," page 22, align the dies.
10. Repeat steps 6 thru 9 on each die.
11. Make any necessary electrical and air connections on the top dies.
12. Install the plunger / ejector mechanism.

## **AUXILIARY EQUIPMENT INSTALLATION**

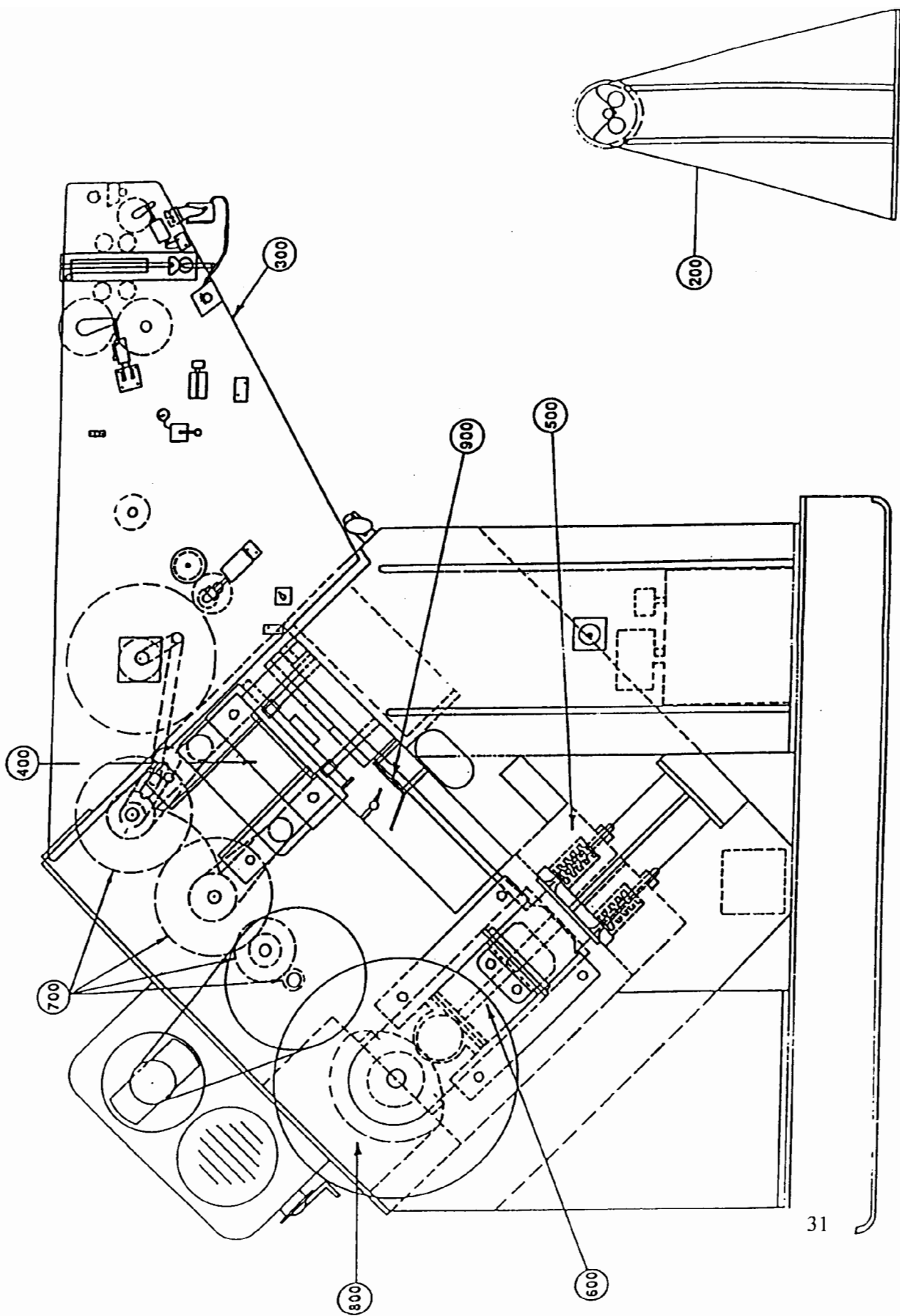
1. Install the blank chute. Align the blank chute slides with the bridges in the cutting die. Adjust the lower end of the blank chute, 3/8 to 1/2 inch above the bottom forming dies. The lower end of the blank chute can be adjusted from side to side, by loosening the nut on the square head set screw, and sliding chute sideways in the slotted 1/4 x 1 bar.
2. Install the waste chute and connect the air line.

## **FEED AND STACKER ADJUSTMENTS**

1. Adjust the feed paper guides, and select the appropriate PLS program.
2. Install the stacker cans.
3. Adjust the opening between the stacker gate and the stacker cans to accommodate the plate / tray size. This can be done by loosening the lock bolt on each side of the counter section, and moving it lengthwise in the slots, toward or away from the conveyor section.
4. To position the 1-inch wide belts, remove the belt from crowned pulley and loosen the setscrew in the pulley. Shift the pulley to the desired location and tighten the setscrew. Replace the belt on the pulley. Normally two belts per plate / tray are used.
5. The tray stop fingers can be moved by loosening the setscrew and sliding them on the square bar. One tray stop in the center of each pair of conveyor belts is standard.
6. The jogger pads, located on the square bar in the center of the stacker can, can be moved by loosening the setscrew. The pad should be in the center of the stacker can width.

This completes the normal procedure for changing the dies in all Peerless Tray and Plate Forming Machines.

The individual user may find methods, which suit his particular condition better. However, none of the above steps should be omitted. We feel all steps indicated are necessary to insure proper installation.



**PEERLESS PLATE AND TRAY PRESS MAINTENANCE  
FOR 24 HOURS/DAY, 5 DAYS /WEEK OPERATION**

**I. FEED SECTION**

**A. PULL ROLL SHAFT CYLINDER AND LINKAGE**

Worn linkage limits pull roll engagement.

- 12 – 18 months normal life expectancy.

**B. FEED CLUTCH**

Worn clutch causes erratic feed lengths.

- Lubricate internal components weekly with a few drops of motor oil.
- Expect to replace internal components every 4 – 6 months, entire unit every 12 – 18 months, to maintain consistent feed length control.

**C. FEED CLUTCH LINKAGE**

Worn linkage causes erratic feed lengths.

- 9 – 12 months normal life expectancy.

**D. FEED AND PULL ROLLER IDLER SHAFTS AND BUSHINGS**

Worn shafts and bushings affect paper feed control.

- Lubricate weekly with friction type bearing grease.
- 12 – 18 months normal life expectancy.

**E. FEED GEARS**

Worn gears affect feed length.

- Lubricate monthly with open gear grease.
- 3 – 5 years normal life expectancy.

**II. CUTTING SECTION**

**A. CUTTING HEAD WEAR PADS AND GIBS**

Worn pads dramatically increase cutting die wear.

- Monitor adjustment / wear monthly. Maintain 0.008 inch head pad / gib clearance.
- Lubricate every 8 hours with friction type bearing grease.
- 12 – 18 months normal life expectancy.

**B. CONNECTING ROD BUSHINGS AND ECCENTRICS**

Worn components increase cutting die wear.

- Lubricate every 8 hours with friction type bearing grease.
- Properly maintain cutting die.
- 12 – 18 months normal life expectancy.

**C. ECCENTRIC SHAFT BEARINGS**

Worn bearings increase cutting die wear.

- Lubricate daily with friction type bearing grease.
- Properly maintain cutting die.
- 18 – 24 months normal life expectancy.

**III. CUTTING DIE**

**A. ALIGNMENT PINS AND BUSHINGS**

Worn components increase die wear. Galled components increase connecting rod bushing wear, or in extreme cases, cause permanent die or press damage.

- Lubricate every 2 – 4 hours with heavy oil (STP) or light viscosity friction type bearing grease.
- 9 – 12 months normal life expectancy.

**B. CUTTING PLATE / CUTTING PLATE INSERTS**

Cutting plates must remain sharp to produce cleanly cut blanks.

- Properly maintain press cutting section, die pins, and punches.
- Peen and sharpen every 9 – 12 months.
- Expect to replace every 3 – 4 years.

**C. CUTTING PUNCHES**

Punches must remain sharp to “shear” the die plate in its’ “Peen and Sharpen” maintenance service. A sharp cutting edge is also required to produce cleanly cut blanks.

- Properly maintain press cutting section, die pins, and punches.
- Regrind to sharpen every 9 – 12 months.
- Expect to replace every 3 – 4 years.

**IV. FORMING SECTION**

**A. FORMING HEAD WEAR PADS AND GIBS**

Worn pads increase forming die wear. In more extreme cases die alignment cannot be retained.

- Monitor adjustment / wear monthly. Maintain 0.012 inch head pad / gib clearance.
- Check head position every 6 months. Forming head and forming base center lines (in feed direction) must be aligned. Adjust as necessary.
- Lubricate every 2 - 4 hours with friction type bearing grease.
- 9 – 12 months normal life expectancy.

#### **B. FORMING CAMS**

Worn cams cause erratic head travel.

- Properly maintain forming head wear pads and gibs.
- Insure a continuous, clean supply of motor oil from the cam roller oiler to lubricate the cam / cam roller contact surface.
- Properly maintain the cam roller wipers to prevent contaminants from contacting the cam / cam roller surface.
- 2 – 3 years normal life expectancy.

#### **C. CAM ROLLERS**

Worn cam rollers increase forming cam wear.

- Properly maintain forming head wear pads and gibs.
- Insure a continuous, clean supply of motor oil from the cam roller oiler to lubricate the cam / cam roller contact surface.
- Properly maintain the cam roller wipers to prevent contaminants from contacting the cam / cam roller surface.
- 12 – 18 months normal life expectancy.

#### **D. CAM ROLLER BEARINGS**

Worn cam roller bearings increase forming cam and roller wear.

- Lubricate every 8 hours with friction type bearing grease.
- Properly maintain bearing seals to prevent lubricant contamination.
- 12 – 18 months normal life expectancy.

### **V. FORMING DIES**

#### **A. PLUNGERS AND DIE RING**

Worn components adversely affect formed plate / tray quality.

- Properly maintain press-forming section.
- Maintain correct die alignment.
- Expect to refurbish dies every 2 – 3 years to maintain quality production.

### **IV. GEARS**

#### **A. ALL INTERIOR GEARS AND PINION GEARS**

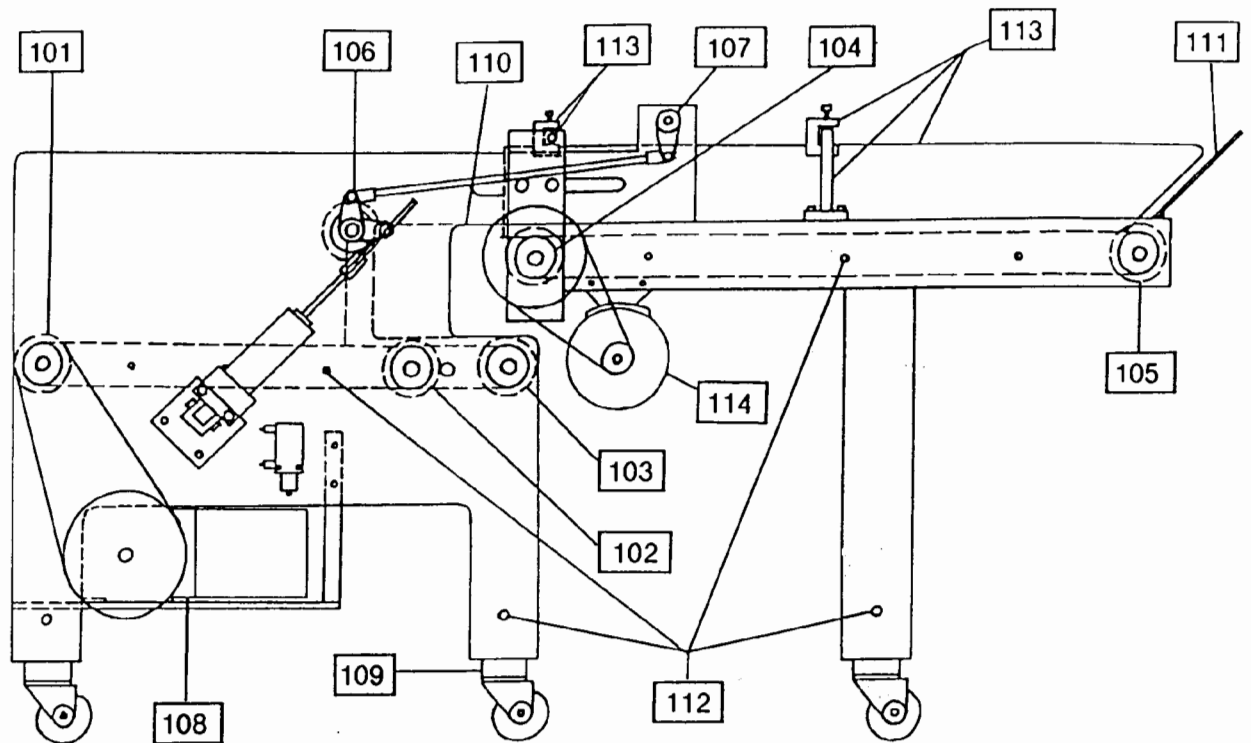
- Lubricate monthly with open gear grease.
- Avoid grease contamination.
- Properly maintain press cutting and forming sections.
- 18 – 24 months normal life expectancy.

#### **B. BULL GEARS**

- Lubricate monthly with open gear grease.
- Avoid grease contamination.
- Properly maintain press cutting and forming sections.
- 3 – 5 years normal life expectancy.

# COUNTER STACKER

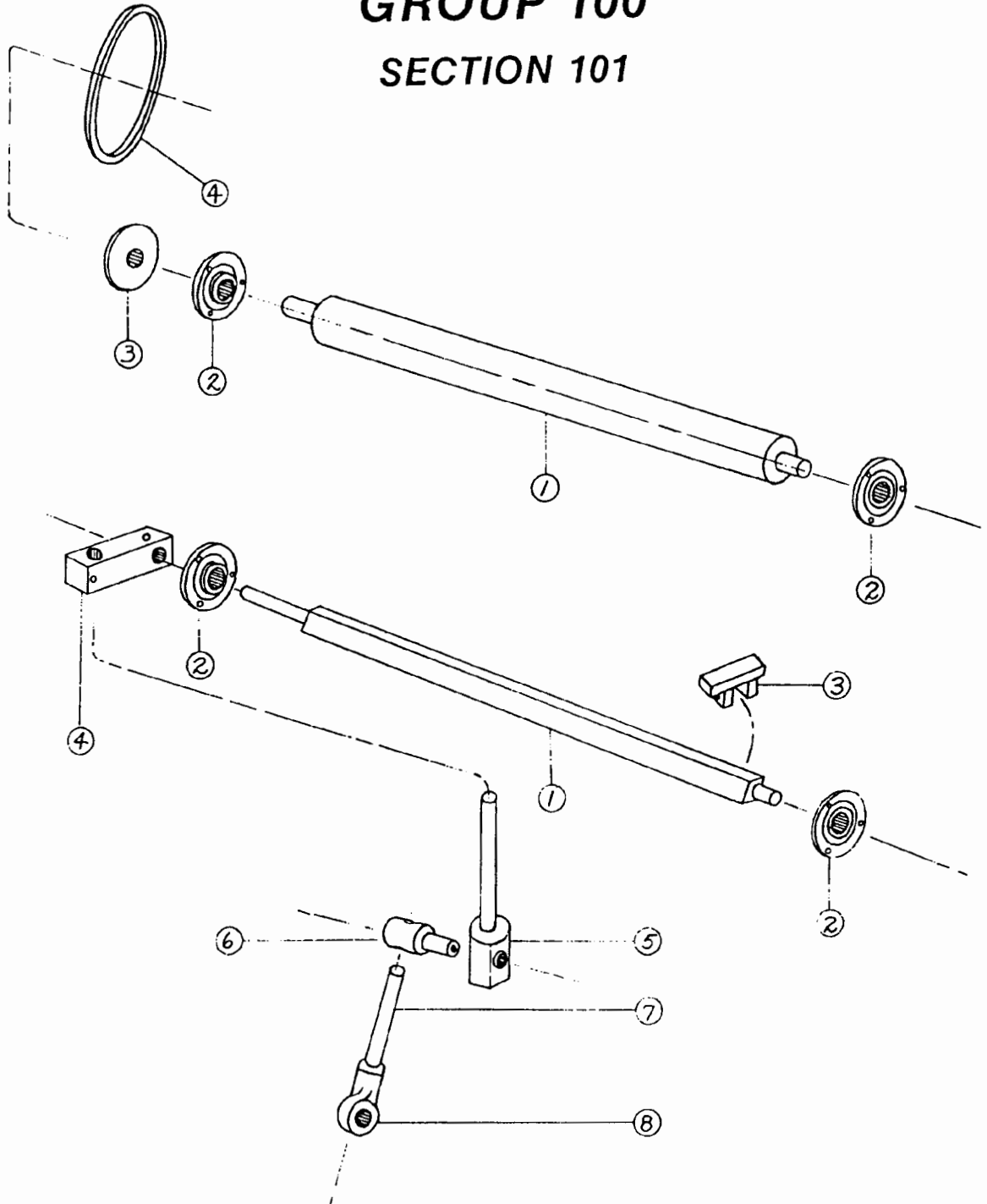
## GROUP 100





# GROUP 100

## SECTION 101



## SECTION 102

# **GROUP 100**

## **SECTION 101**

INDEX NO.	PART DESCRIPTION
1	COUNTER DRIVE SHAFT
2	FLANGET BEARING
3	PULLEY
4	GRIP NOTCH BELT

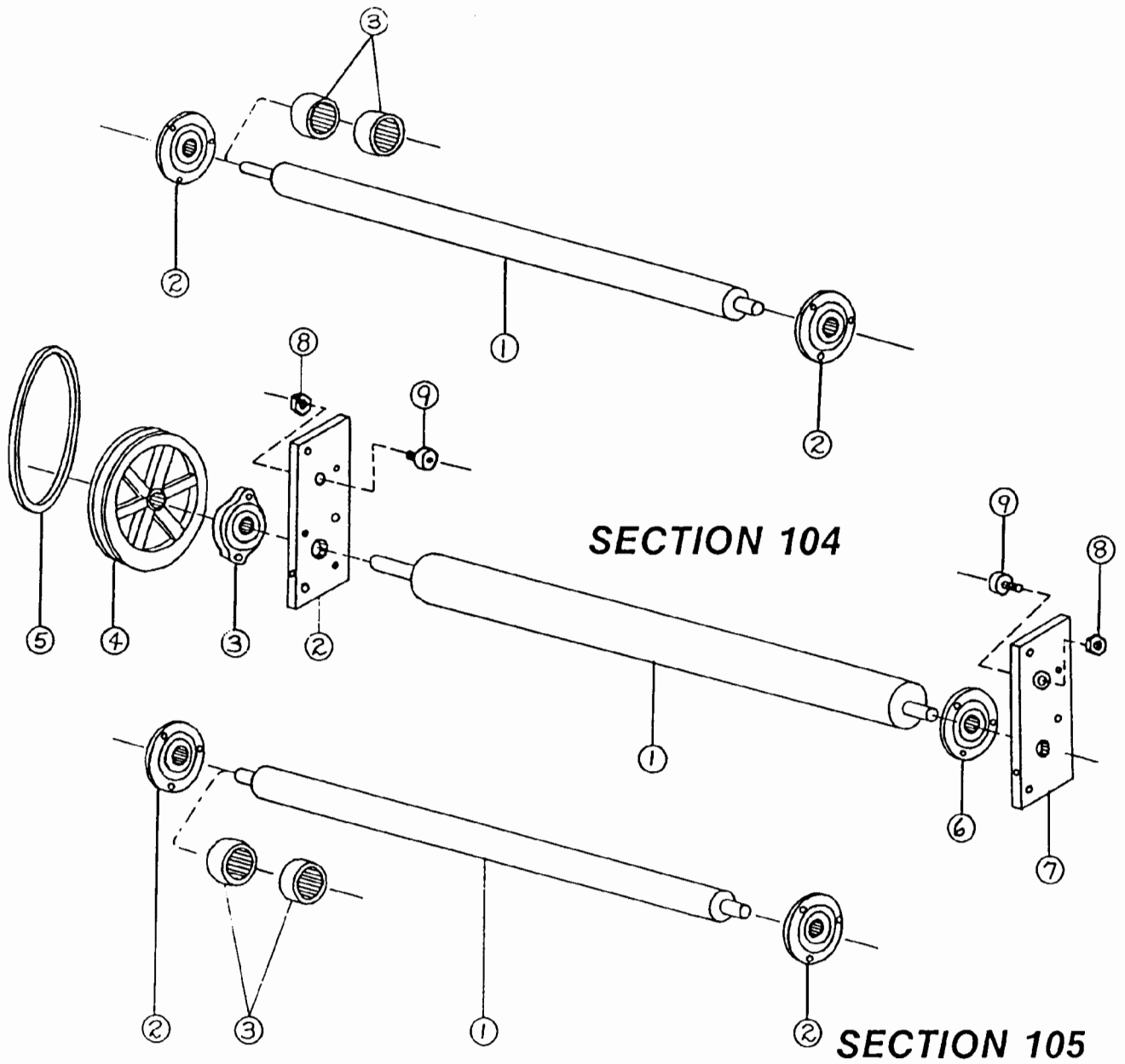
## **SECTION 102**

INDEX NO.	PART DESCRIPTION
1	JOGGER SHAFT
2	FLANGET BEARING
3	JOGGER PAD
4	JOGGER LINK
5	JOGGER ARM WITH OILITE BEARING
6	CONNECTING PIN
7	JOGGER ROD
8	HIEM UNIBAL ROD END

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# GROUP 100

## SECTION 103



## ***GROUP 100***

### ***SECTION 103***

INDEX NO.	PART DESCRIPTION
1	COUNTER CROWN PULLEY SHAFT
2	FLANGET BEARING
3	CROWN PULLEY

### ***SECTION 104***

INDEX NO.	PART DESCRIPTION
1	CONVEYOR DRIVE SHAFT
2	CONVEYOR END BAR
3	FLANGE BEARING
4	PULLEY
5	BROWNING BELT
6	FLANGET BEARING
7	CONVEYOR END BAR
8	CAM FOLLOWER NUT
9	McGILL CAM FOLLOWER

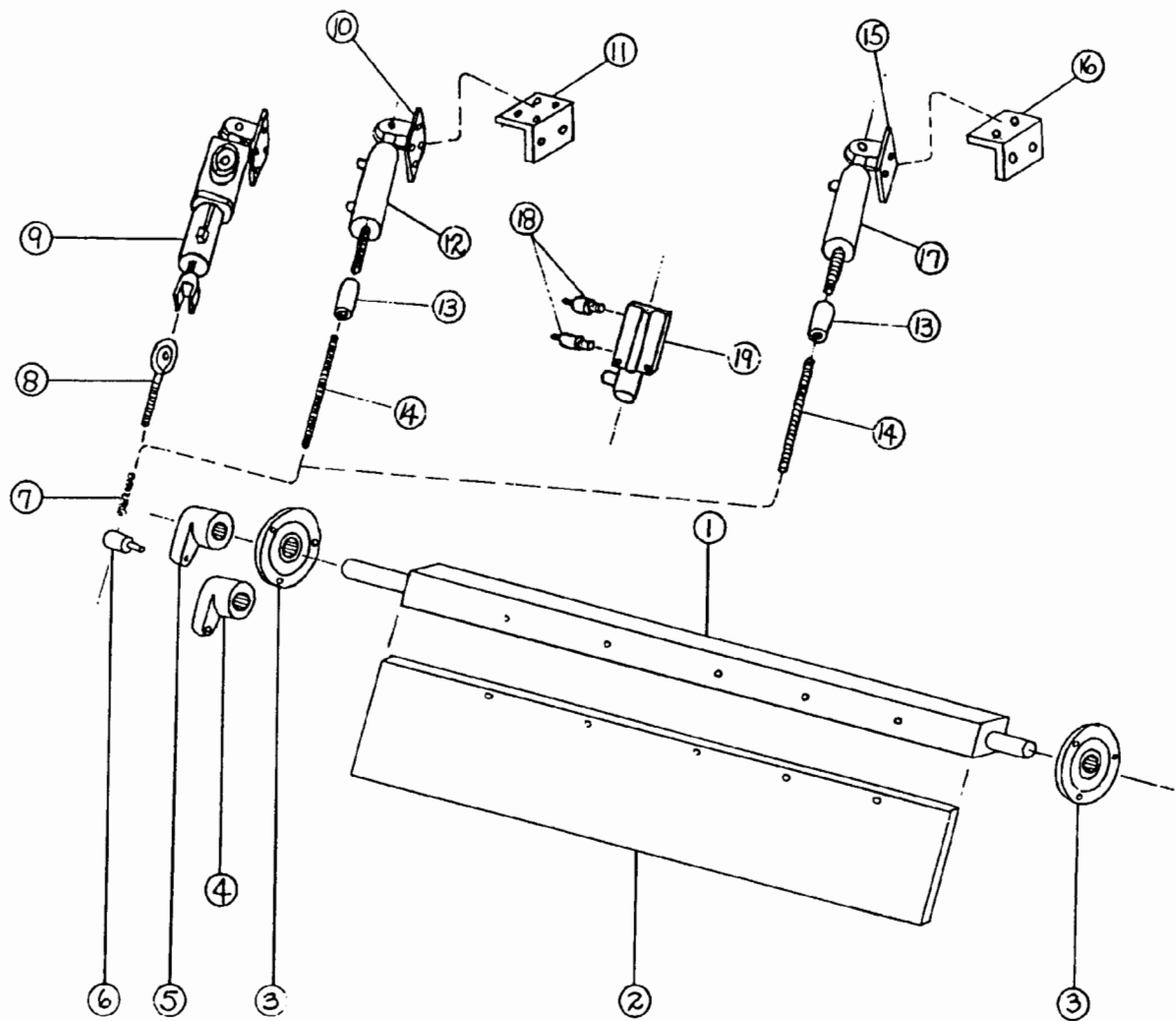
### ***SECTION 105***

INDEX NO.	PART DESCRIPTION
1	CONVEYOR CROWN PULLEY SHAFT
2	FLANGET BEARING
3	CROWN PULLEY

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

## SECTION 106

## SECTION 106



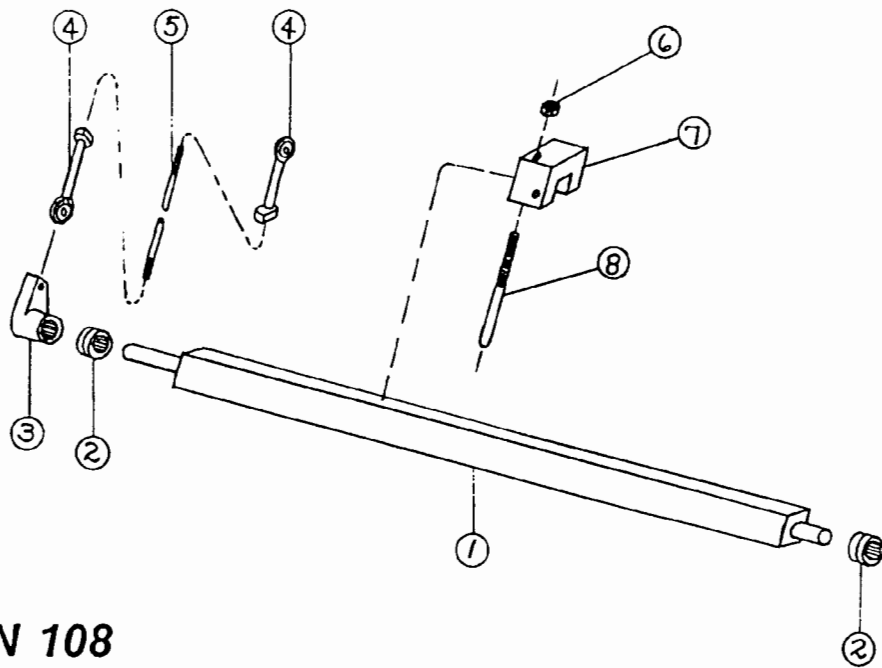
# **GROUP 100**

## **SECTION 106**

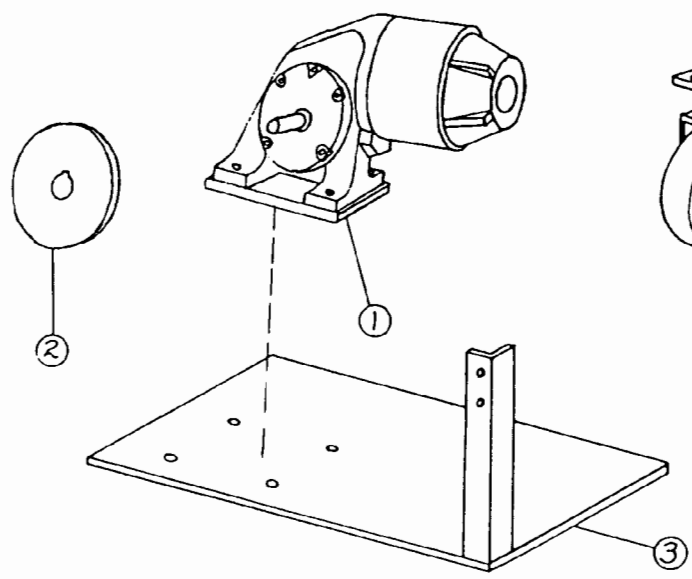
<b>INDEX NO.</b>	<b>PART DESCRIPTION</b>
1	GATE SHAFT
2	GATE (Specify 7" or 10" Width)
3	FLANGET BEARING
4	PLATE STOP LEVER
5	GATE ARM
6	ARM CONNECTING PIN
7	SPRING (9-1012-11)
8	GATE ARM Connecting Rod With AA628-10 Oilite Bushing
9	SCHRADER AIR CYLINDER
10	CYLINDER PIVOT
11	CYLINDER PIVOT MOUNT
12	BIMBA AIR CYLINDER
13	SLEEVE
14	GATE ARM CONNECTING ROD
15	CYLINDER PIVOT
16	CYLINDER PIVOT MOUNT
17	HUMPHREY AIR CYLINDER
18	SPEED CONTROL MUFFLER
19	SKINNER AIR VALVE

**ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.**

# **GROUP 100** **SECTION 107**



## **SECTION 108**



## **SECTION 109**



## **GROUP 100**

### **SECTION 107**

INDEX NO.	PART DESCRIPTION
1	PLATE STOP BAR
2	BEARING (½ ")
3	LEVER
4	HIEM UNIBAL ROD END
5	CONNECTING ROD
6	JAM NUT
7	PLATE STOP CLAMP
8	PLATE STOP FINGER

### **SECTION 108**

INDEX NO.	PART DESCRIPTION
1	GEAR MOTOR (Specify Dresser or Reliance)
2	PULLEY
3	GEAR MOTOR MOUNTING PLATE (Specify Dresser or Reliance)

### **SECTION 109**

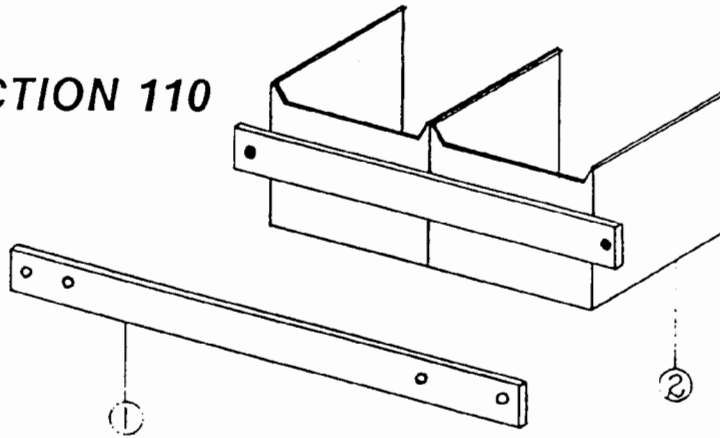
INDEX NO.	PART DESCRIPTION
1	PAYSON CASTOR

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

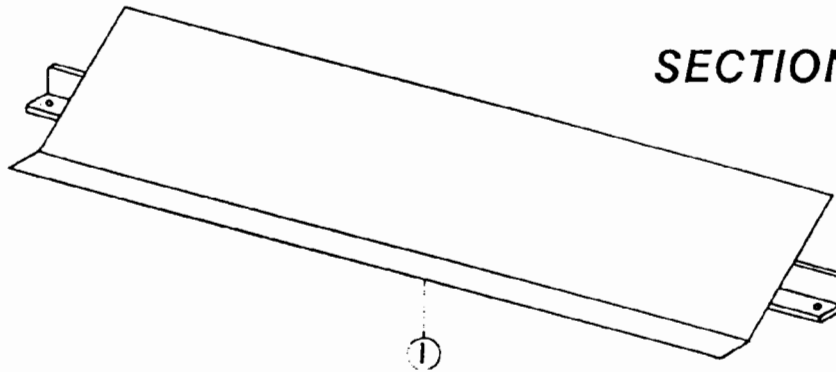


# GROUP 100

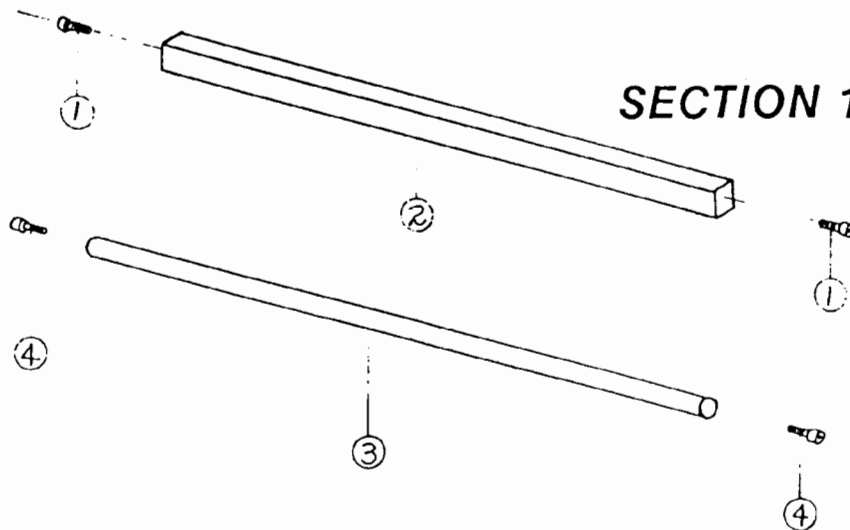
SECTION 110



SECTION 111



SECTION 112



# **GROUP 100**

## **SECTION 110**

INDEX NO.	PART DESCRIPTION
1	STACKER CAN MOUNTING BAR
2	STACKER CANS

## **SECTION 111**

INDEX NO.	PART DESCRIPTION
1	PLATE DEFLECTOR

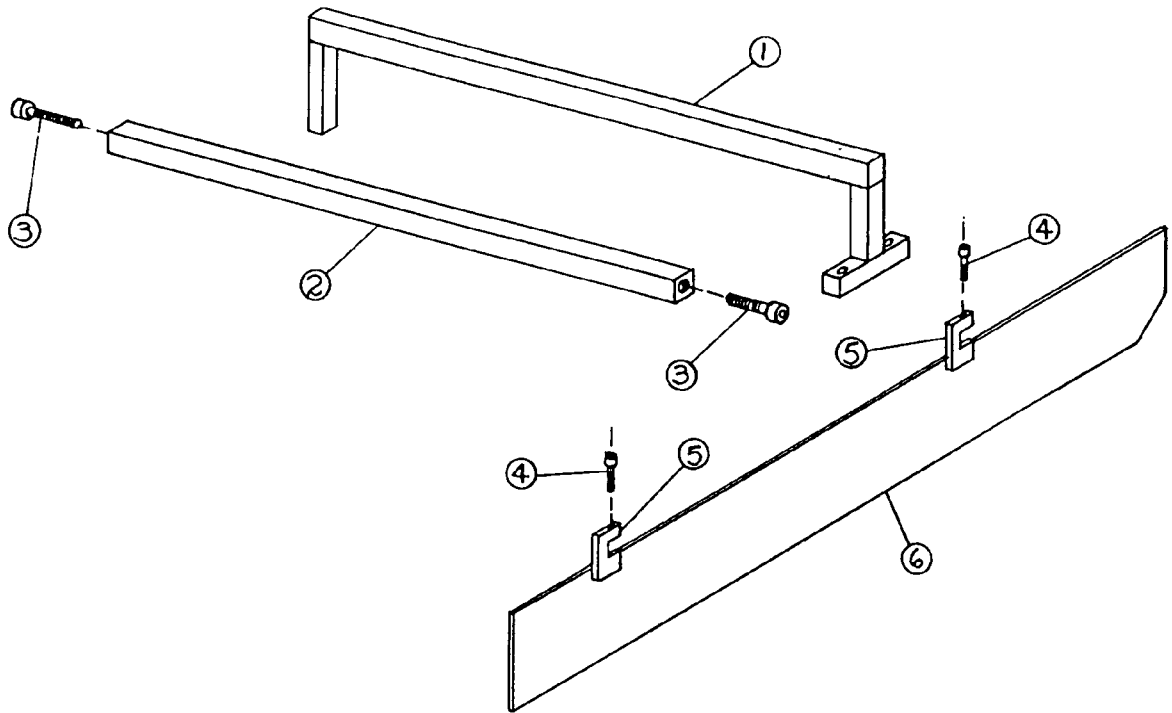
## **SECTION 112**

INDEX NO.	PART DESCRIPTION
1	SQUARE SPACER BOLTS
2	SQUARE SPACER BARS
3	ROUND SPACER BARS
4	ROUND SPACER BOLTS

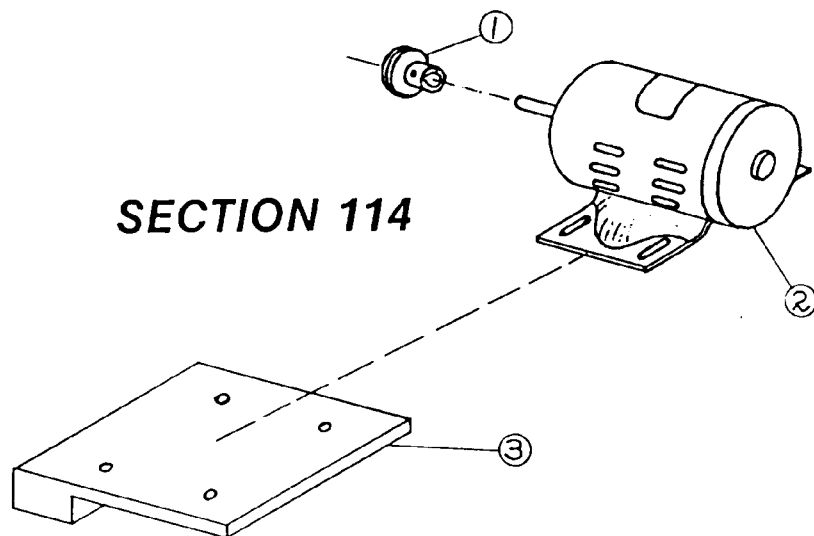
ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# GROUP 100

## SECTION 113



## SECTION 114



# **GROUP 100**

## **SECTION 113**

INDEX NO.	PART DESCRIPTION
1	BACK PLATE DIVIDER BAR
2	FRONT PLATE DIVIDER BAR
3	PLATE DIVIDER BAR BOLT
4	PLATE DIVIDER CLAMP BOLT
5	PLATE DIVIDER CLAMP
6	PLATE DIVIDER

## **SECTION 114**

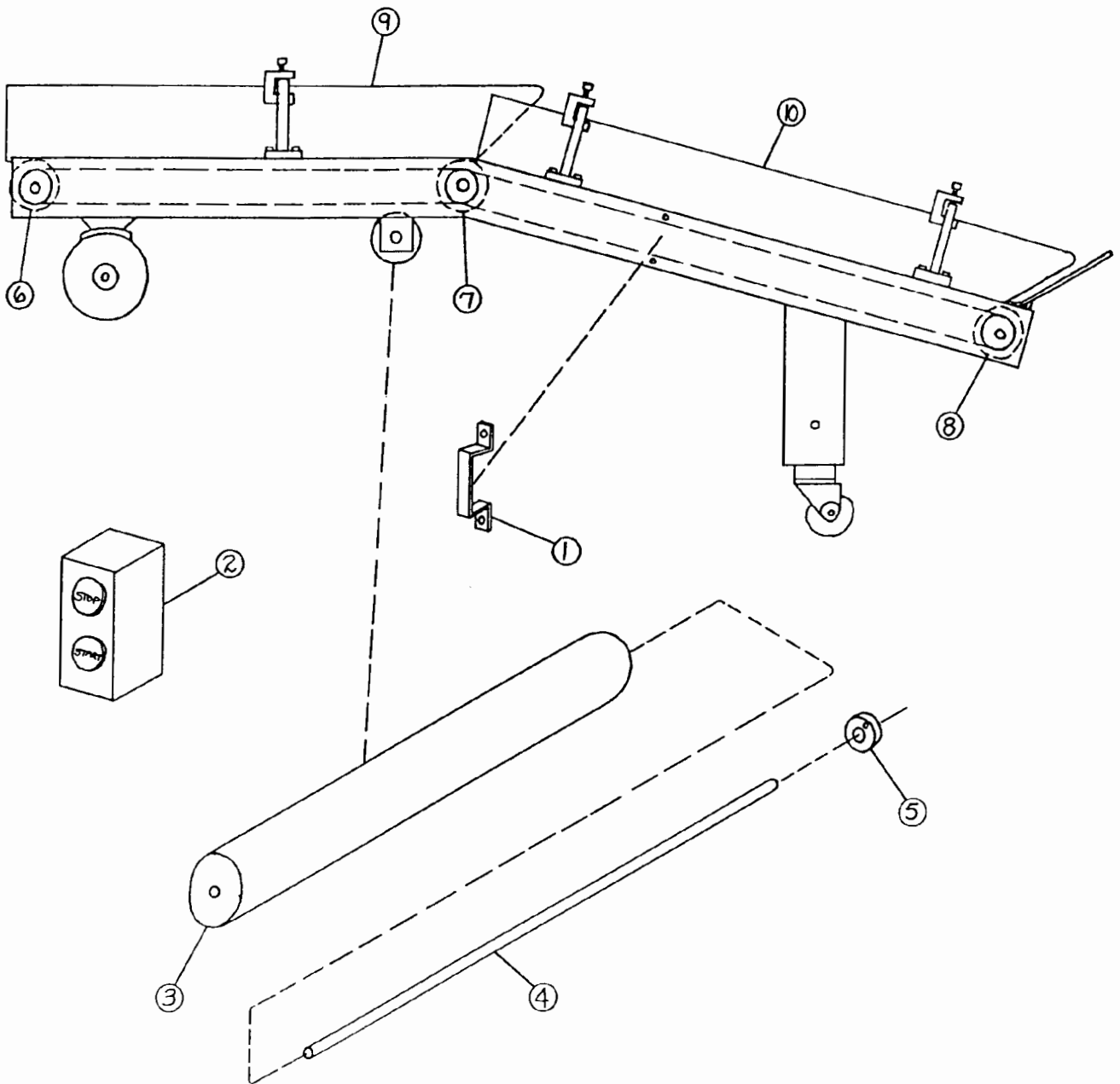
INDEX NO.	PART DESCRIPTION
1	BROWNING PULLEY
2	JOGGER MOTOR
3	JOGGER MOTOR MOUNTING PLATE

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# GROUP 100

## EXTENDED CONVEYOR

### SECTION 115



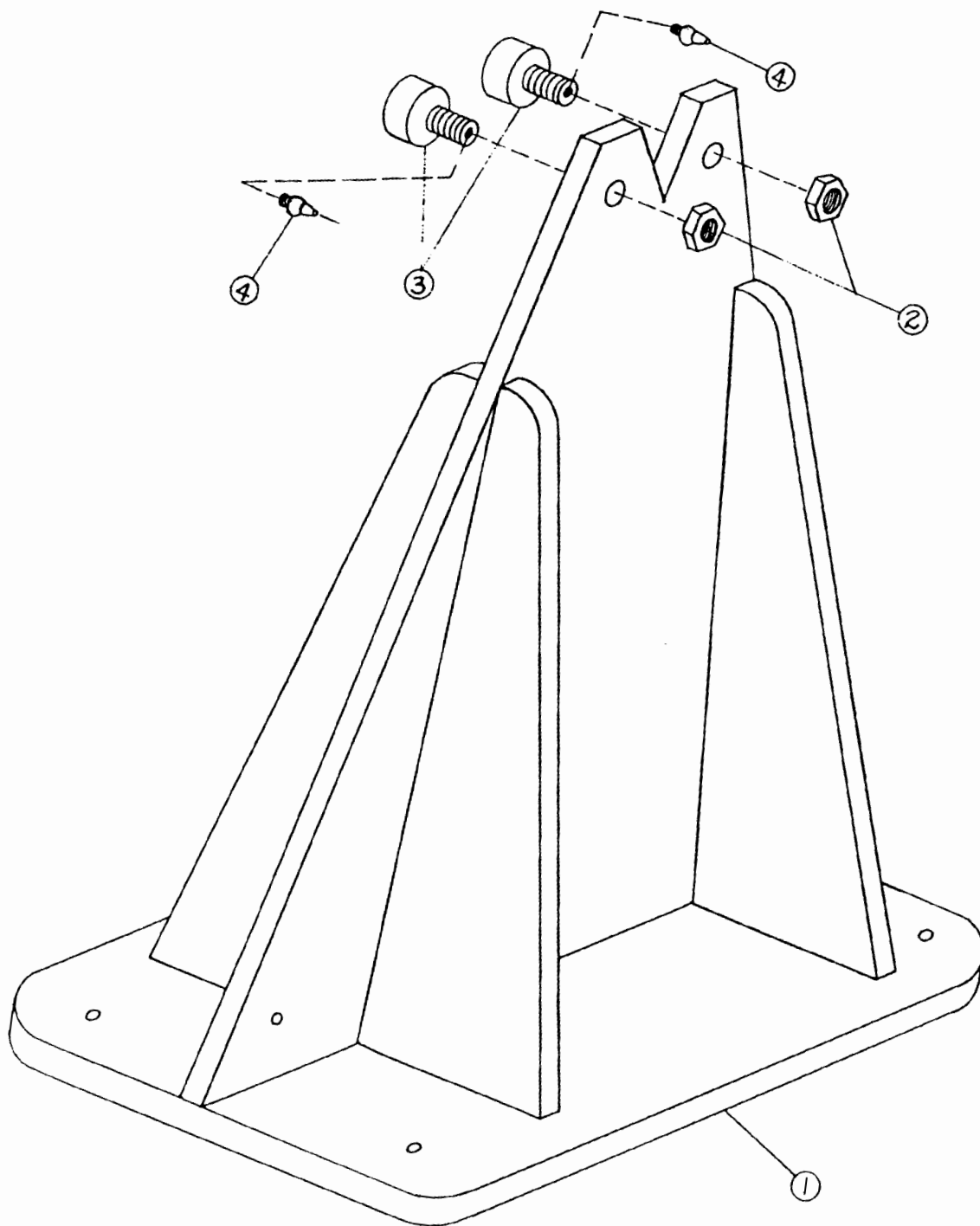
# **GROUP 100**

## **SECTION 115**

<b>INDEX NO.</b>	<b>PART DESCRIPTION</b>
1	WIRE BRACKETS
2	START-STOP BUTTONS IN HOFFMAN ENCLOSURE (Mounted on Counter)
3	IDLER ROLLER
4	IDLER ROLLER SHAFT
5	SHAFT END LOCK
6	CONVEYOR DRIVE SHAFT
7	EXTENDED CONVEYOR SHAFT
8	CONVEYOR CROWN PULLEY SHAFT
9	PLATE DIVIDER
10	PLATE DIVIDER (Extended Conveyor)

**ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.**

**GROUP 200**  
**SECTION 201**



# ***GROUP 200***

## ***SECTION 201***

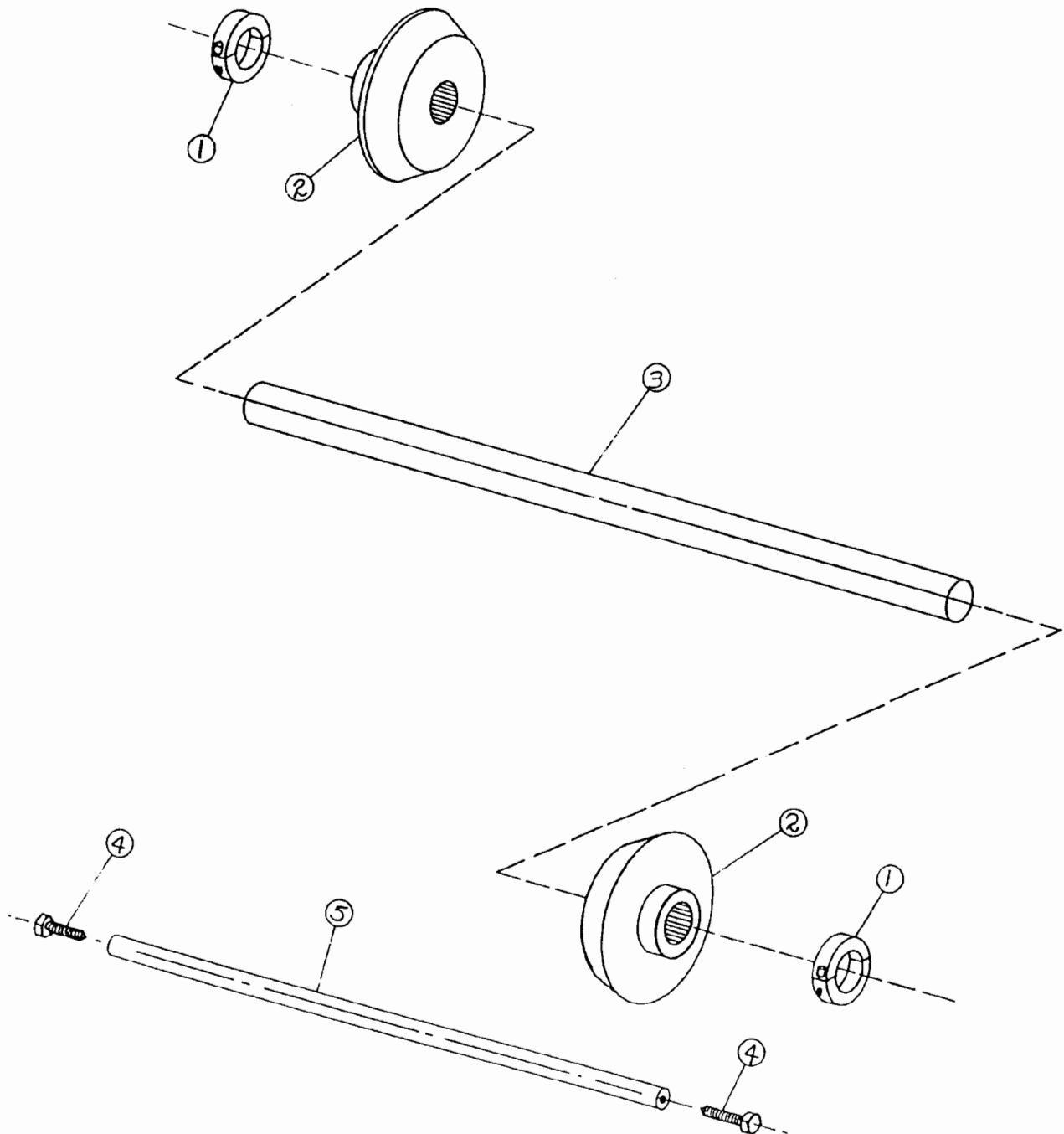
INDEX NO.	PART DESCRIPTION
1	HEAVY DUTY ROLL STAND
2	CAM FOLLOWER NUT
3	CAM FOLLOWER
4	GREASE FITTING

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.



# GROUP 200

## SECTION 202

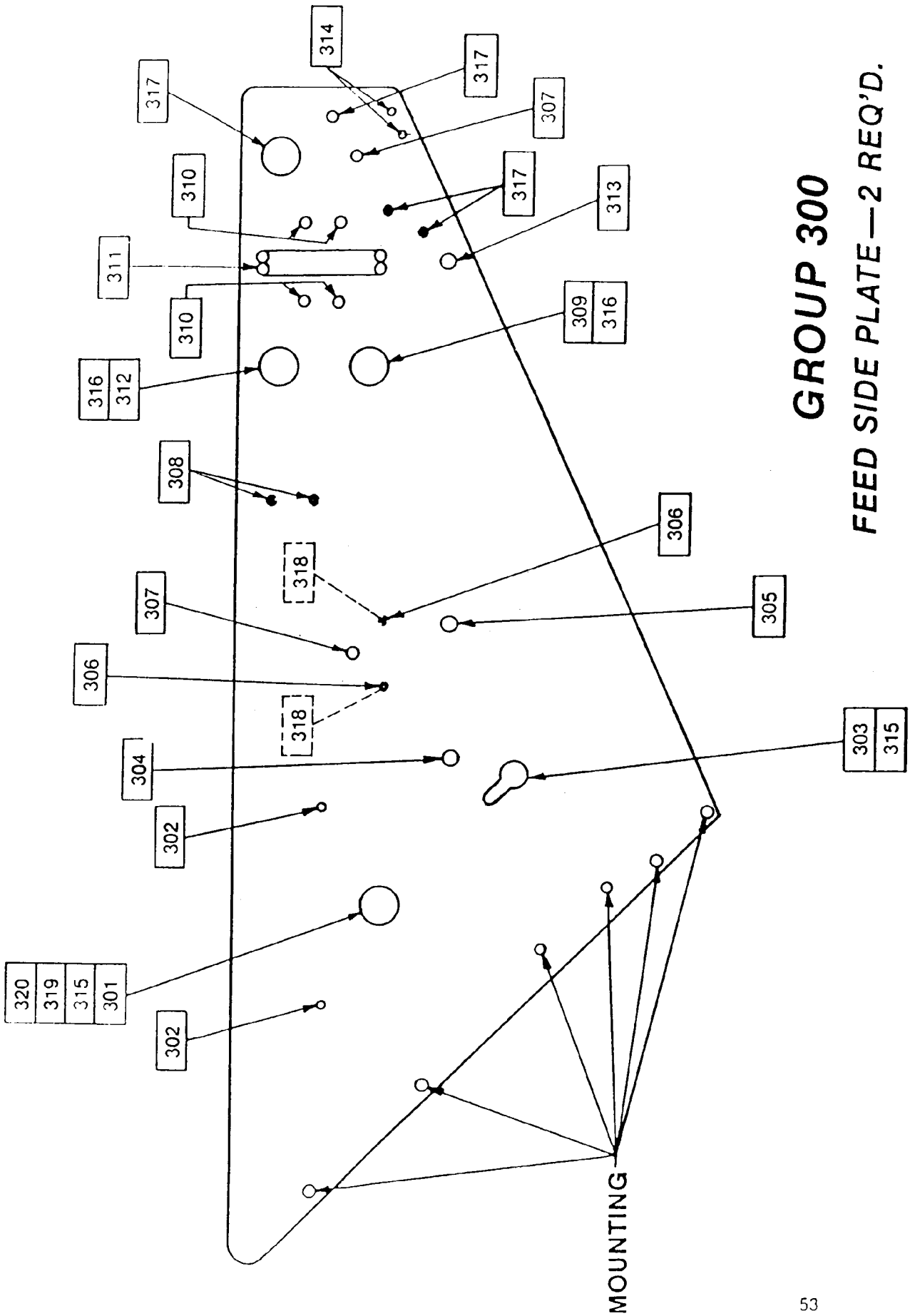


# **GROUP 200**

## **SECTION 202**

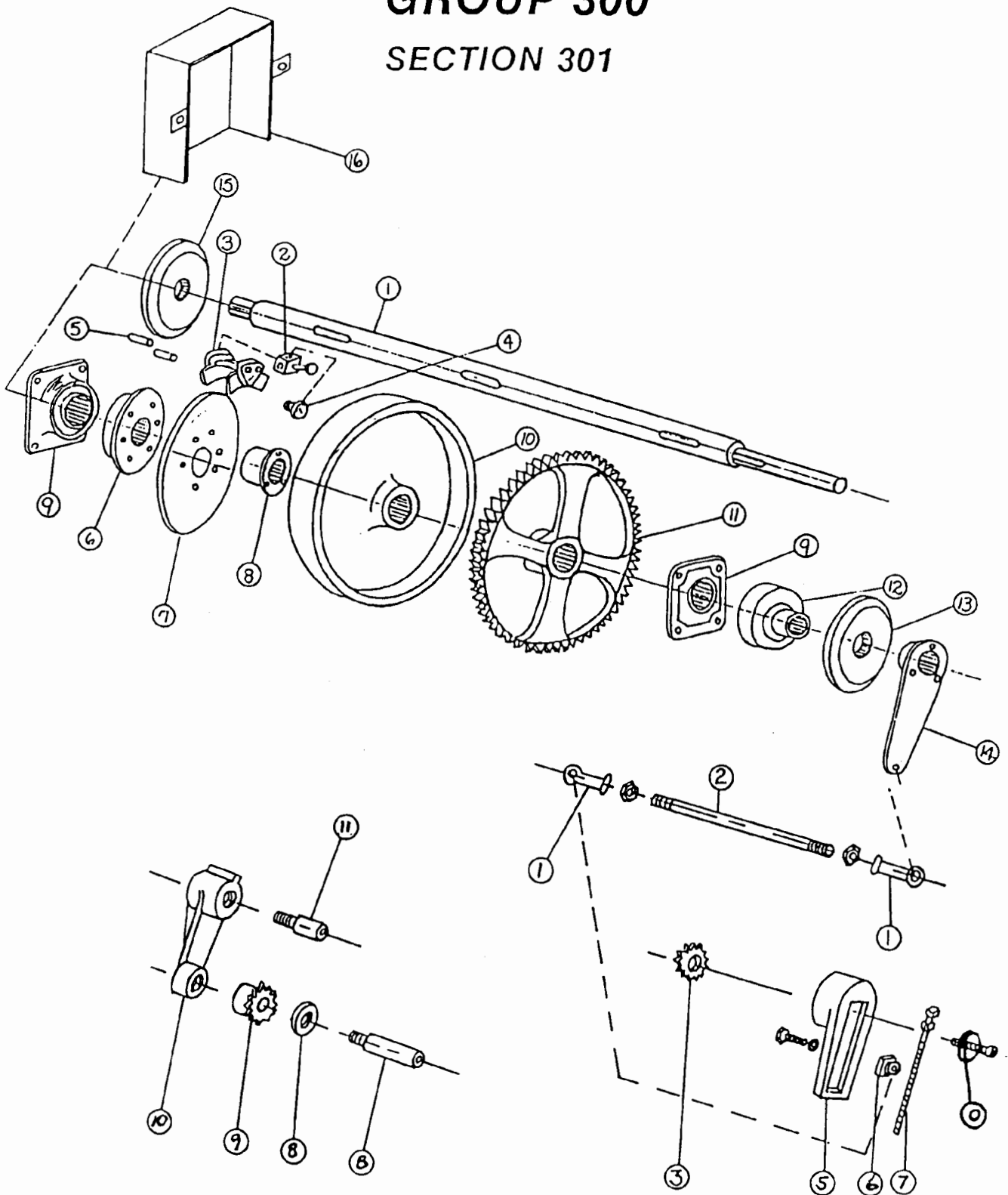
<b>INDEX NO.</b>	<b>PART DESCRIPTION</b>
1	SPLIT COLLAR
2	CORE ENDS
3	ROLL STAND SHAFT (Specify Length When Ordering)
4	SPACER BOLTS
5	ROLL STAND SPACER (Specify Length When Ordering)

**ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.**



# GROUP 300

## SECTION 301



## SECTION 302

GROUP 300

SECTION 301

<u>INDEX NO.</u>	<u>PART DESCRIPTION</u>
1	FEED SHAFT
2	WILKERSON REGULATOR
3	DISC BRAKE CALIPER
4	BRAKE PRESSURE GAUGE
5	BRAKE MOUNTING SPACERS (2 Req'd.)
6	DISC BRAKE HUB
7	10" BRAKE DISC
8	SK-1 15/16 Q.D. BUSHING
9	LINK BELT FLANGE BEARING
10	FEED WHEEL
11	FEED SHAFT GEAR
12	OVERRUNNING CLUTCH
13	WARNER CLUTCH
14	CLUTCH ARM (w/o Electric Eye)
15	WARNER BRAKE
16	BRAKE GUARD

SECTION 302

<u>INDEX NO.</u>	<u>PART DESCRIPTION</u>
0-87	STROKE ARM MOUNTING WASHER
1	HEIM UNIBAL ROD END
2	CONNECTING LINK
3	18 TOOTH SPROCKET
5-87	STROKE ARM
6-87	STROKE ARM NUT
7	STROKE ARM SCREW
8	TIGHTNER SHAFT & SET COLLAR
9	SPROCKET IDLER
10	FEED IDLER ARM
11	SHOULDER BOLT (MODIFIED)

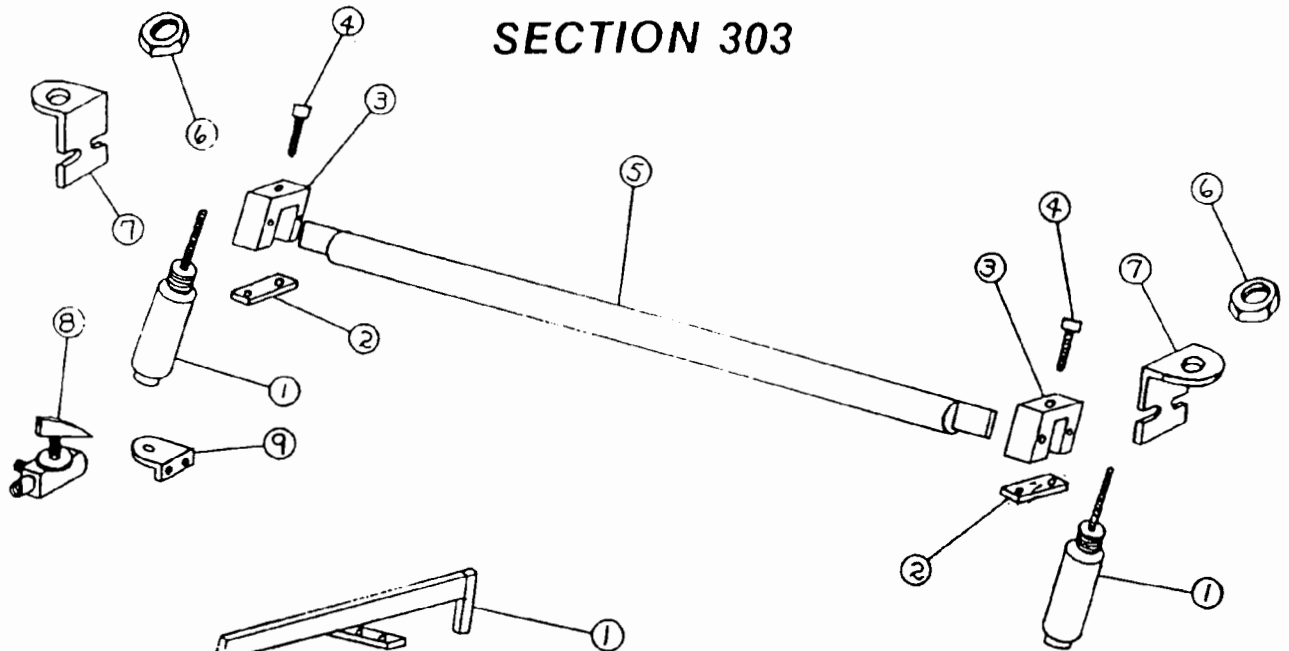
ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO.,  
INDEX NO. AND PRESS MODEL & SERIAL NO. WHEN ORDERING  
PARTS.

EFFECTIVE DATE MARCH, 1988

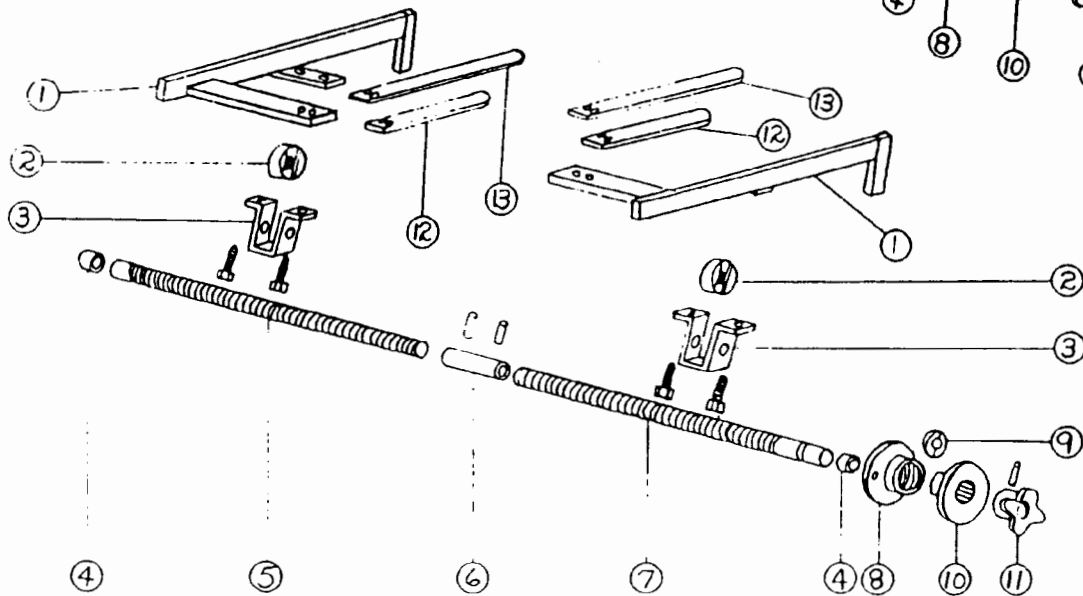
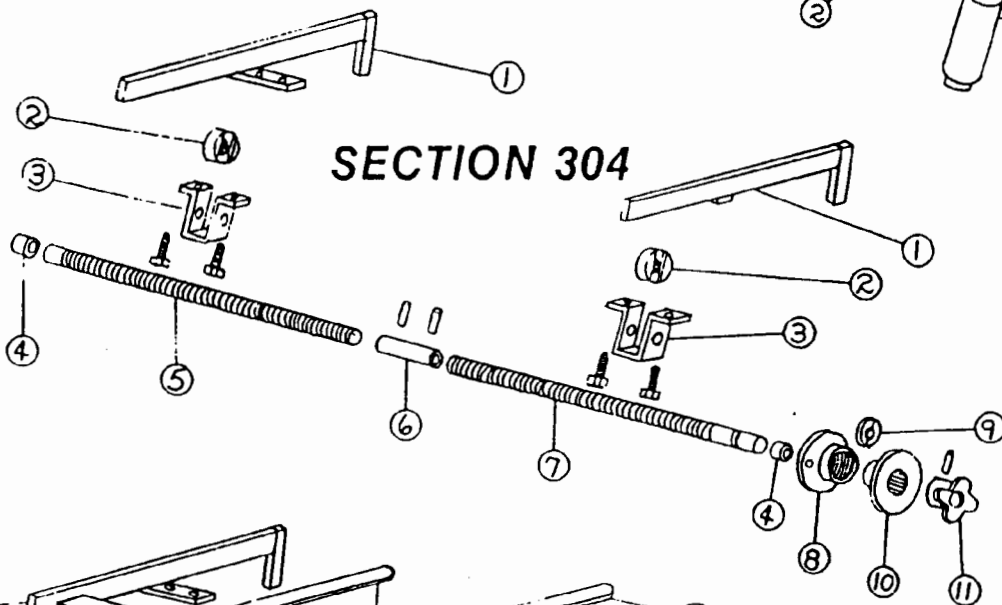
55

# GROUP 300

## SECTION 303



## SECTION 304



## SECTION 305

# **GROUP 300**

## **SECTION 303**

INDEX NO.	PART DESCRIPTION
1	HUMPHREY AIR CYLINDER
2	IDLER SHAFT SUPPORT
3	IDLER SHAFT BRACKET
4	ADJUSTING SCREW
5	FEED IDLER SHAFT
6	CYLINDER NUT
7	CYLINDER BRACKET
8	AIR SWITCH
9	AIR SWITCH BRACKET

## **SECTION 304**

INDEX NO.	PART DESCRIPTION
1	PAPER GUIDE, RIGHT AND LEFT
2	PAPER GUIDE NUT, RIGHT AND LEFT
3	PAPER GUIDE NUT BRACKET
4	OILITE BEARING
5	RIGHT HAND SCREW
6	SCREW COUPLING
7	LEFT HAND SCREW
8	GUIDE ADJUSTMENT SCREW
9	SCREW ADJUSTMENT BEARING
10	GUIDE ADJUSTMENT SCREW
11	HAND KNOB

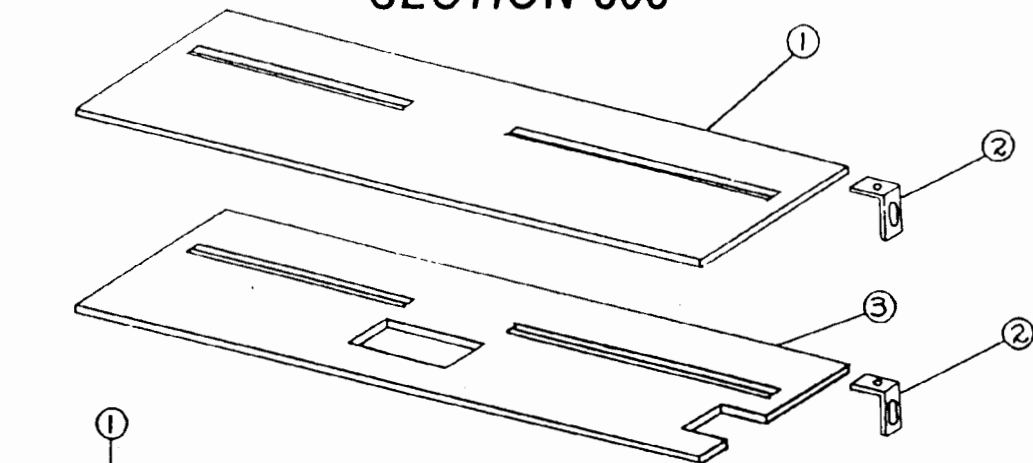
## **SECTION 305**

INDEX	PART DESCRIPTION
1	SECONDARY PAPER GUIDE, RIGHT AND LEFT
2	PAPER GUIDE NUT, RIGHT AND LEFT
3	PAPER GUIDE NUT BRACKET
4	OILITE BEARING
5	RIGHT HAND SCREW
6	SCREW COUPLING
7	LEFT HAND SCREW
8	GUIDE ADJUSTMENT SCREW
9	SCREW ADJUSTMENT BEARING
10	GUIDE ADJUSTMENT SCREW
11	HAND KNOB
12	LOWER PAPER SPRING (6")
13	UPPER PAPER SPRING (12")

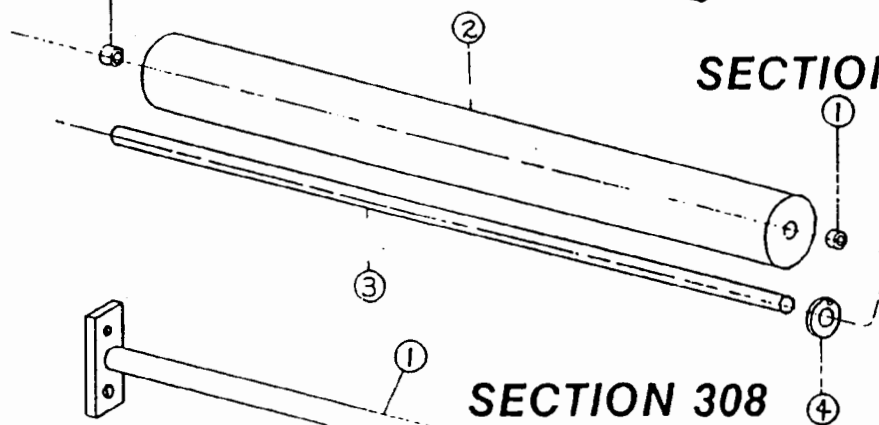
ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# GROUP 300

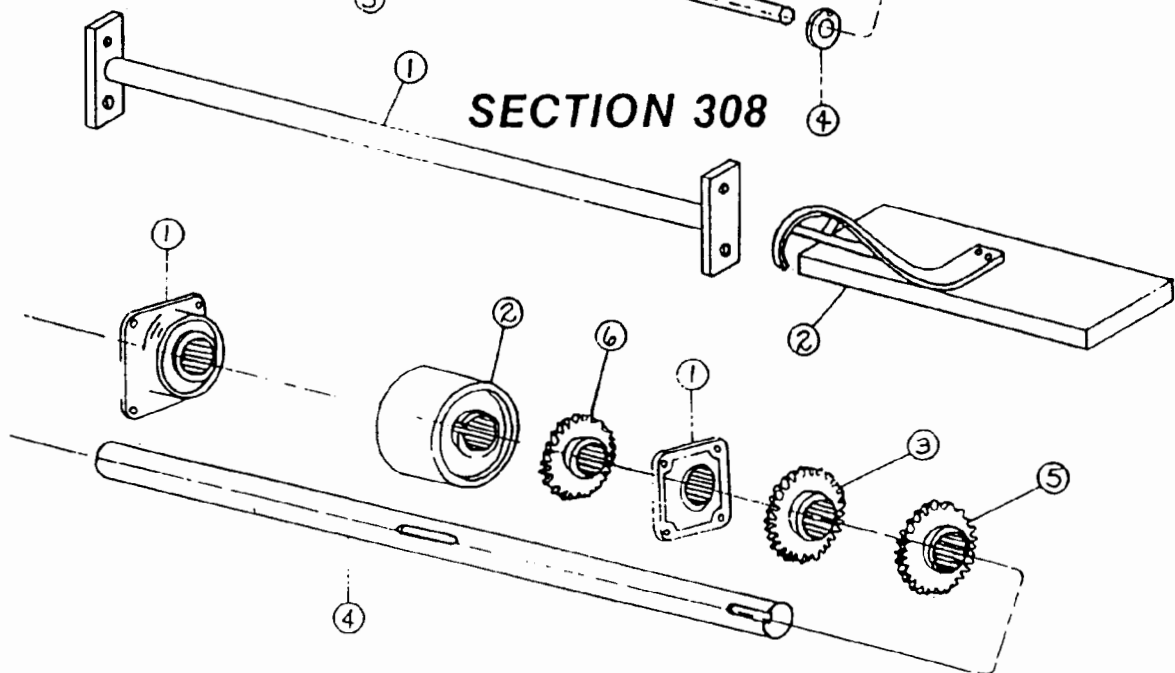
## SECTION 306



## SECTION 307



## SECTION 308



## SECTION 309

Bottom LB / TOP SB



## GROUP 300

### SECTION 306

INDEX NO.	PART DESCRIPTION
1	SECONDARY FEED PLATE
2	FEED PLATE BRACKET
3	UPPER FEED PLATE

### SECTION 307

INDEX NO.	PART DESCRIPTION
1	OILITE BEARING
2	PAPER ROLLER
3	PAPER ROLLER SHAFT
4	SHAFT END LOCK

### SECTION 308

INDEX	PART DESCRIPTION
1	SPACER BAR
2	PAPER HOLD DOWN BOARD

### SECTION 309

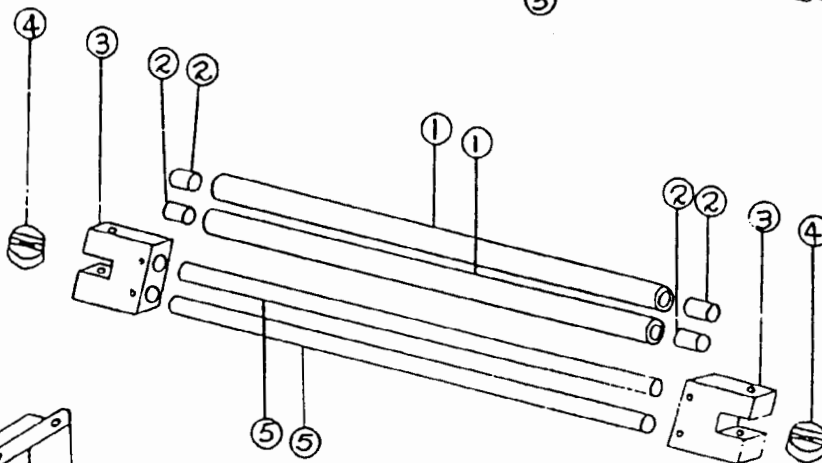
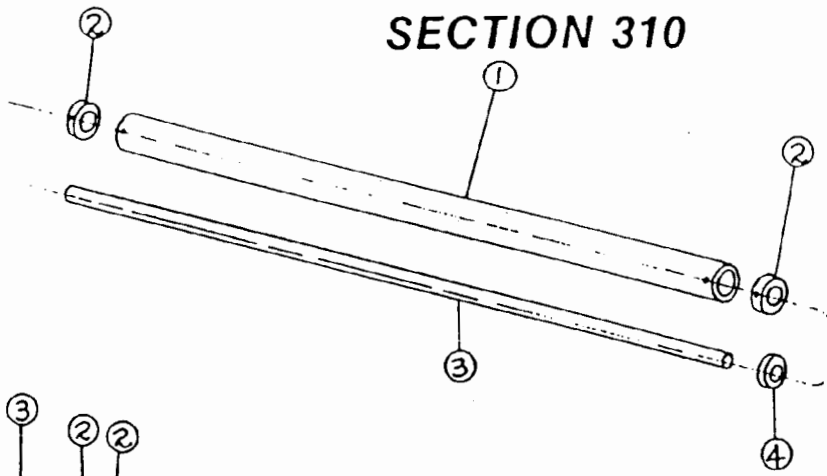
INDEX NO.	PART DESCRIPTION
1	LINKBELT BEARING
2	ROLL PULL ROLLER
3	SPROCKET — (9" Feed Up)
4	PULL ROLL SHAFT
5	SPROCKET — (11" Feed Up)
6	GEAR OR SPROCKET

CI LB / ROBERT SE

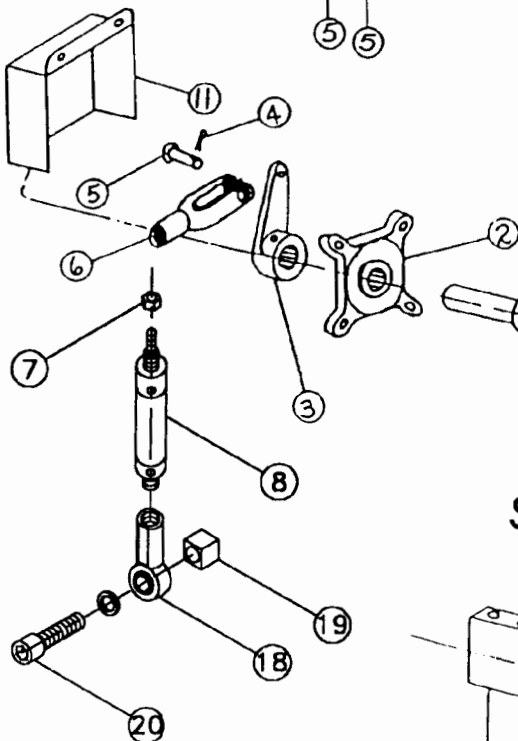
ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# GROUP 300

## SECTION 310

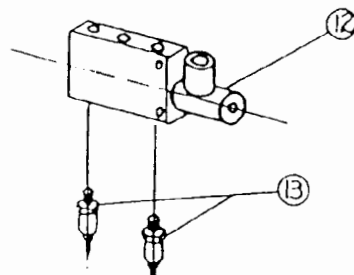


## SECTION 311



IDLER TUBE ON THIS SHAFT  
TOP - LB / BOTTOM - SB

## SECTION 312



# GROUP 300

## SECTION 310

INDEX NO.	PART DESCRIPTION
1	2" PAPER ROLLER
2	2" PAPER ROLLER BUSHING
3	PAPER ROLLER SHAFT
4	SHAFT END LOCK

## SECTION 311

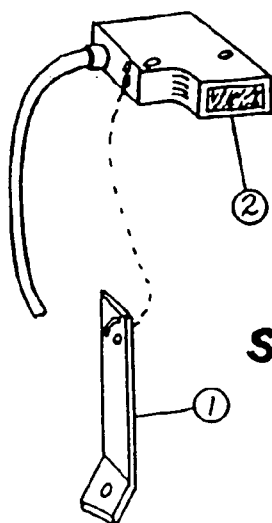
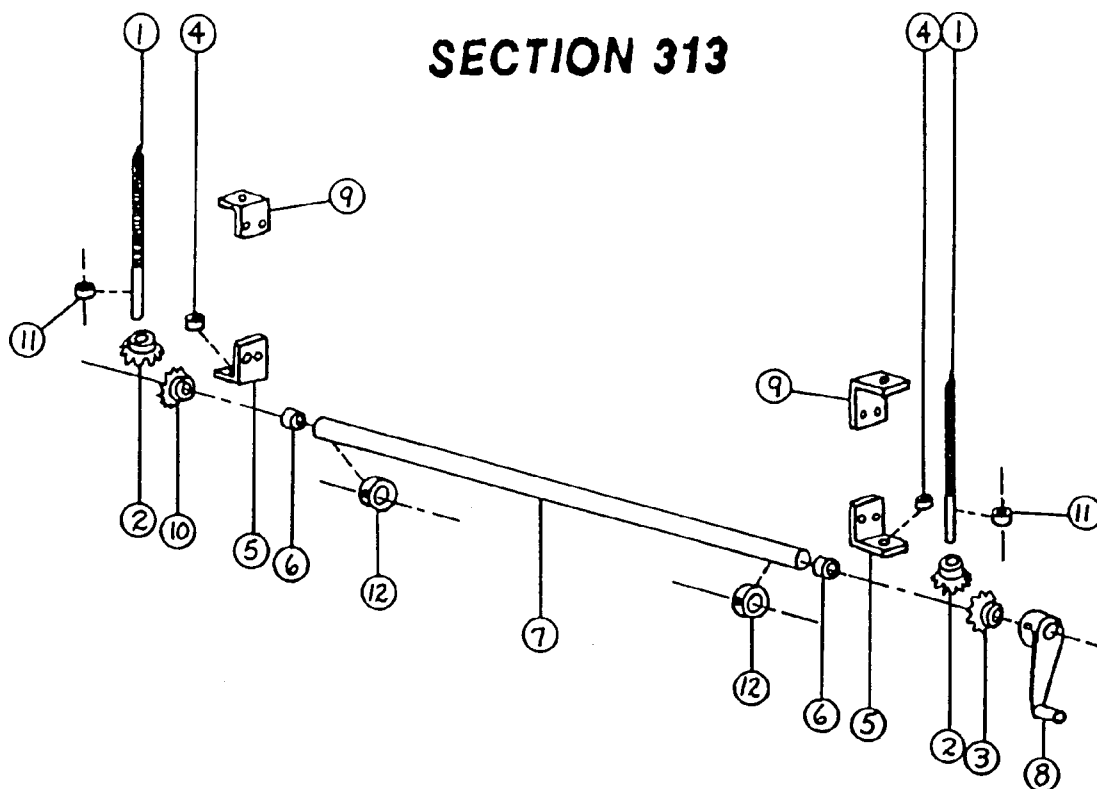
INDEX NO.	PART DESCRIPTION
1	STRAIGHTENER ROLLER
2	STRAIGHTENER ROLLER BEARING
3	STRAIGHTENER ROLLER END
4	STRAIGHTENER NUT
5	STRAIGHTENER ROLLER SHAFT

## SECTION 312

INDEX NO.	PART DESCRIPTION
1	ROLL PULL ECENTRIC SHAFT
2	ROLL PULL SHAFT BEARING
3	ROLL PULL SHAFT LEVER
4	COTTER PIN
5	CLEVIS PIN (7/16 X 1 1/4)
6	FINE PITCH YOKE
7	LOCK NUT
8	AIR CYLINDER
11	LEVER GUARD
12	FOUR WAY VALVE
13	SPEED CONTROL MUFFLER
18	CYLINDER PIVOT
19	CYLINDER PIVOT SPACER
20	SOCKET HEAD CAP SCREW AND LOCK WASHER

# GROUP 300

## SECTION 313



## SECTION 314

EFFECTIVE DATE SEPT. 1984

## *GROUP 300*

### *SECTION 313*

INDEX NO.	PART DESCRIPTION
1	STRAIGHTENER SCREW
2	MITER GEAR
3	MITER GEAR
4	OILITE BEARING
5	LOWER STRAIGHTENER BRACKET
6	OILITE BEARING
7	STRAIGHTENER SHAFT
8	STRAIGHTENER CRANK
9	UPPER STRAIGHTENER BRACKET
10	MITER GEAR (FACED OFF)
11	1/2" SET COLLAR
12	3/4" SET COLLAR

### *SECTION 314*

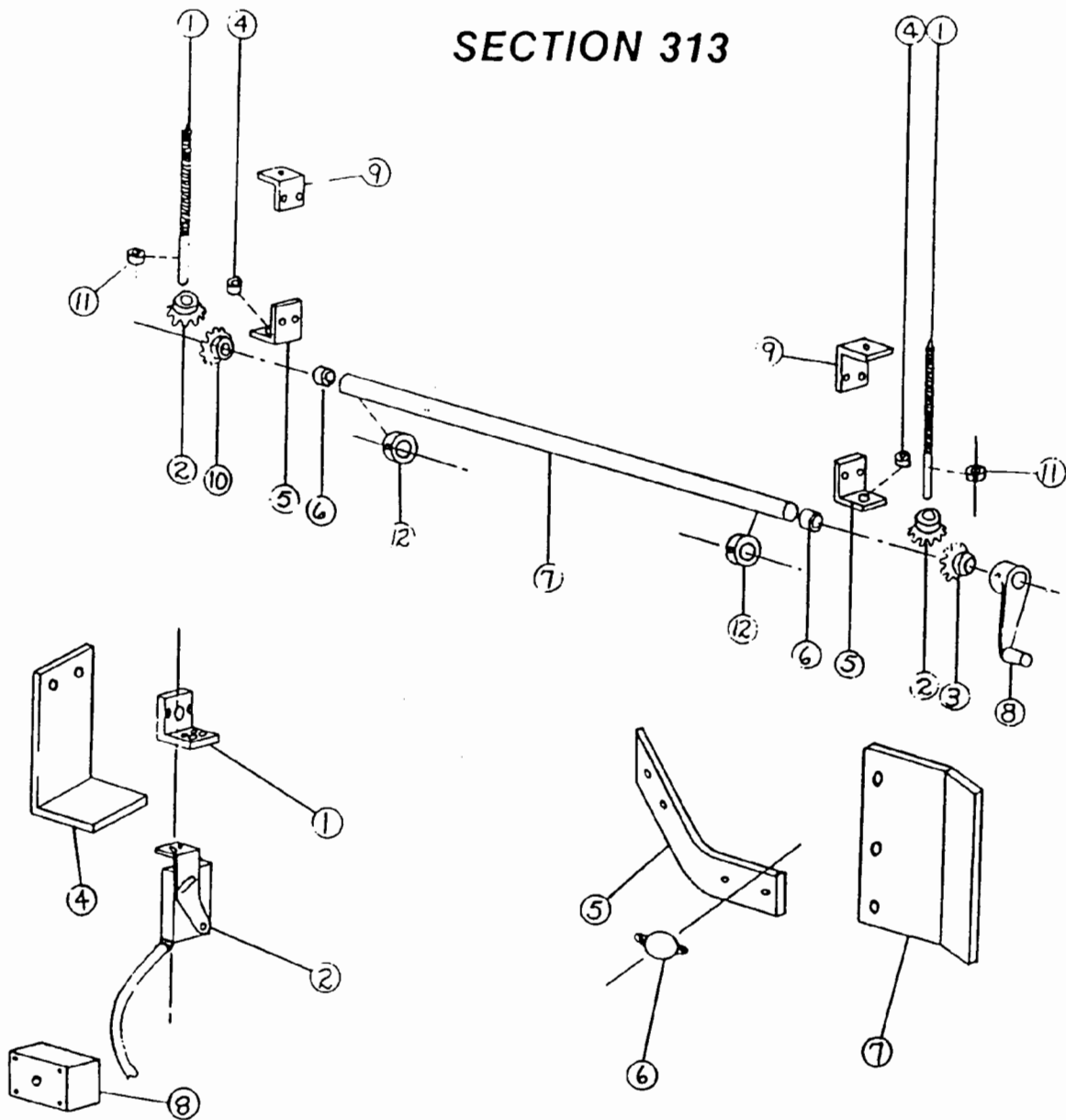
INDEX NO.	PART DESCRIPTION
1-85	ELECTRIC SENSOR BRACKET FOR SICK EYE
2-85	SICK ELECTRIC SENSOR

ATTENTION ALWAYS INDICATE GROUP NO. SECTION NO. INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS

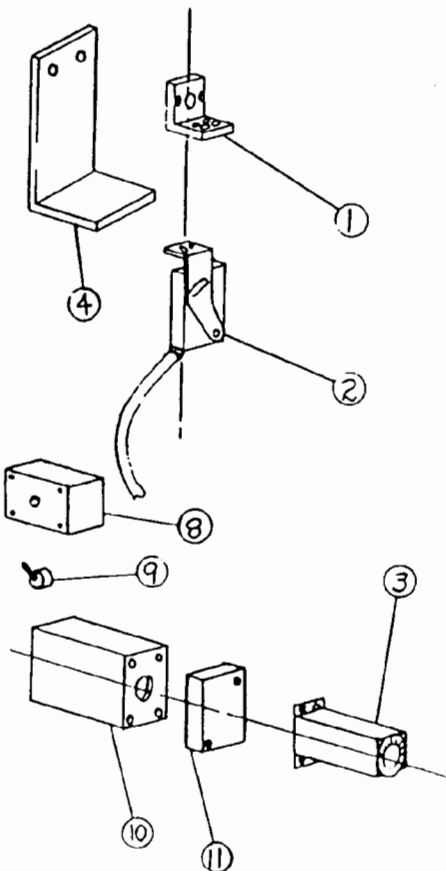
EFFECTIVE DATE SEPT. 1984

# GROUP 300

## SECTION 313



## SECTION 314



# **GROUP 300**

## **SECTION 313**

INDEX NO.	PART DESCRIPTION
1	STRAIGHTENER SCREW
2	MITER GEAR
3	MITER GEAR
4	OILITE BEARING
5	LOWER STRAIGHTENER BRACKET
6	OILITE BEARING
7	STRAIGHTENER SHAFT
8	STRAIGHTENER CRANK
9	UPPER STRAIGHTENER BRACKET
10	MITER GEAR (Faced Off)
11	½" SET COLLAR
12	¾" SET COLLAR

## **SECTION 314**

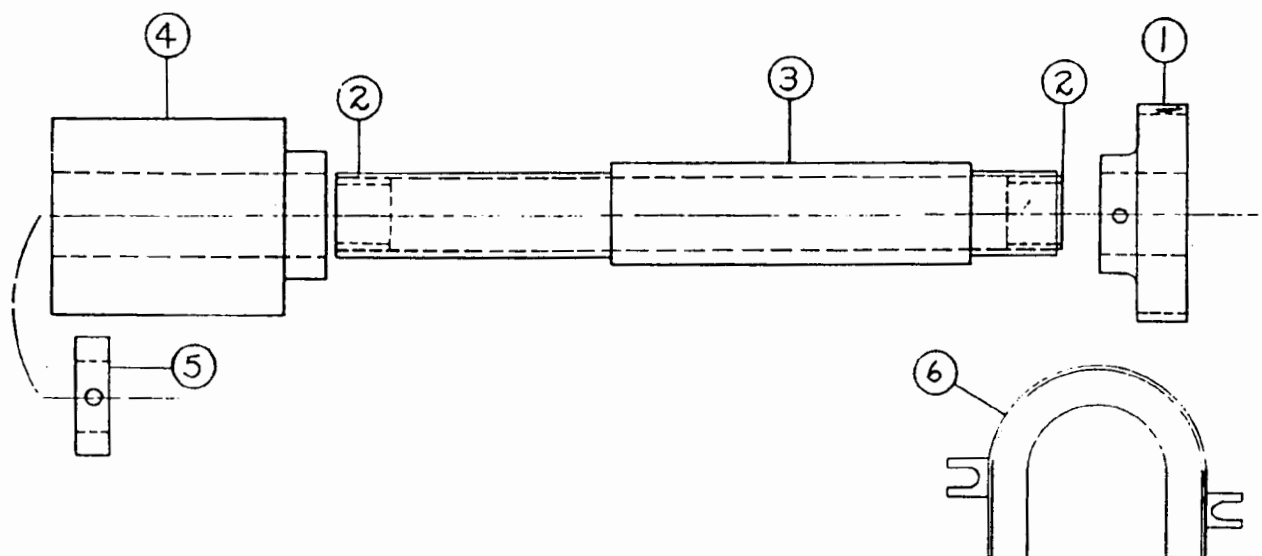
INDEX	PART DESCRIPTION
1	ELECTRIC SENSOR BRACKET
2	ELECTRIC SENSOR
3	DELAY TIMER
4	SENSOR GUARD
5	REFLECTOR MOUNTING BRACKET
6	REFLECTOR
7	REFLECTOR GUARD
8	ELECTRICAL HANDY BOX
9	TOGGLE SWITCH
10	HOFFMAN ENCLOSURE
11	TIME DELAY SPACER

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# **GROUP 300**

## **GEARED FEED**

### **SECTION 315**





# **GROUP 300**

## **SECTION 315**

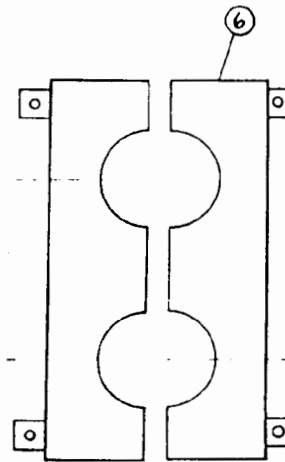
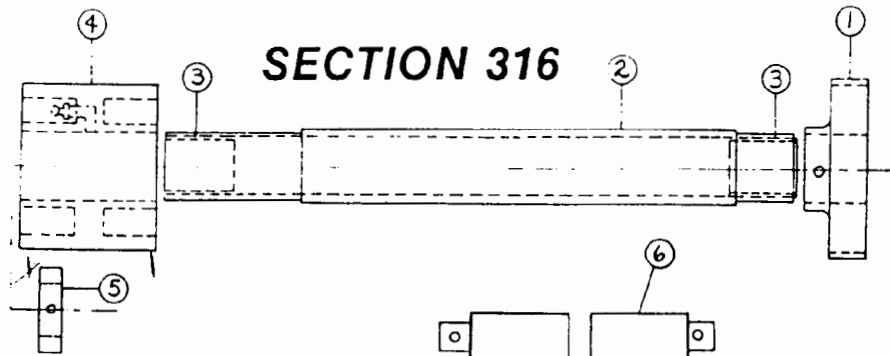
INDEX NO.	PART DESCRIPTION
1	IDLER TUBE GEAR
2	OILITE BEARING
3	IDLER TUBE
4	LOWER FEED WHEEL
5	SET COLLAR
6	GUARD FOR YSS-8-40 GEAR

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

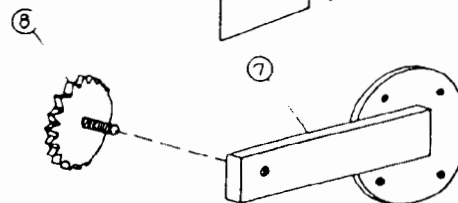
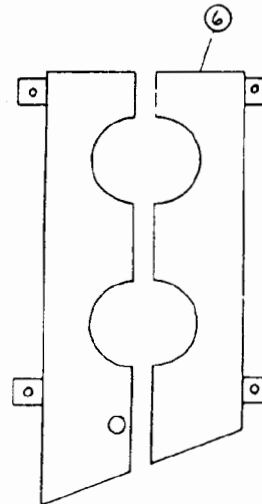
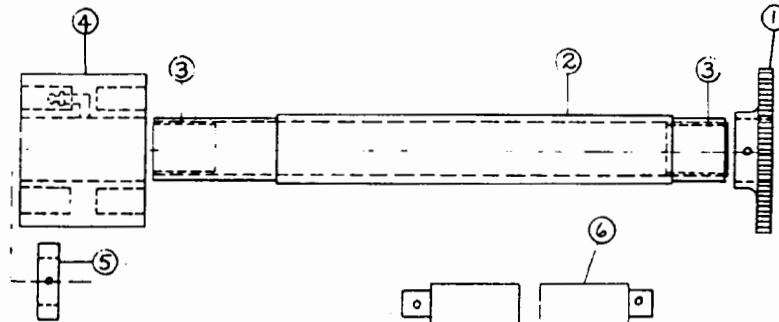
# GROUP 300

## GEARED PULL ROLL

### SECTION 316



### CHAIN DRIVEN PULL ROLL



# GROUP 300

## GEAR DRIVEN PULL ROLL

### SECTION 316

INDEX NO.	PART DESCRIPTION
1	TUBE GEAR—(Modified)
2	ROLL PULL IDLER TUBE
3	IDLER TUBE BEARINGS
4	ROLL PULL POLLER (Rubber Covered) <i>LB CI-SB</i>
5	SET COLLAR
6	GUARD (2 Piece)

## CHAIN DRIVEN PULL ROLL

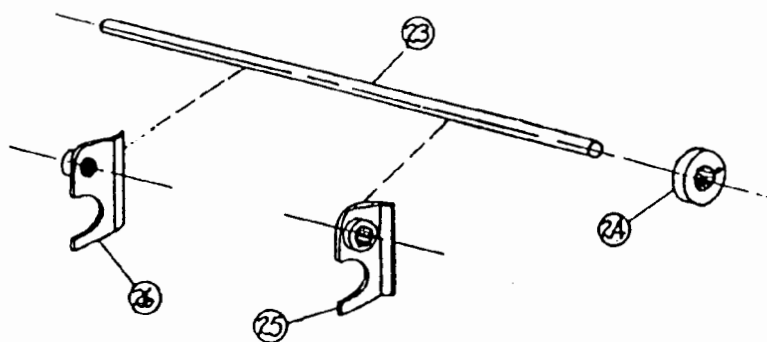
INDEX NO.	PART DESCRIPTION
1	CHAIN SPROCKET (Modified)
2	ROLL PULL IDLER TUBE
3	IDLER TUBE BEARINGS
4	ROLL PULL ROLLER (Rubber Covered) <i>LB CI-SB</i>
5	SET COLLAR
6	GUARD
7	MURRAY CHAIN TENSIONER
8	CHAIN SPROCKET

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# GROUP 300

## BACK PAPER GUIDE SHAFT

### SECTION 317



# GROUP 300

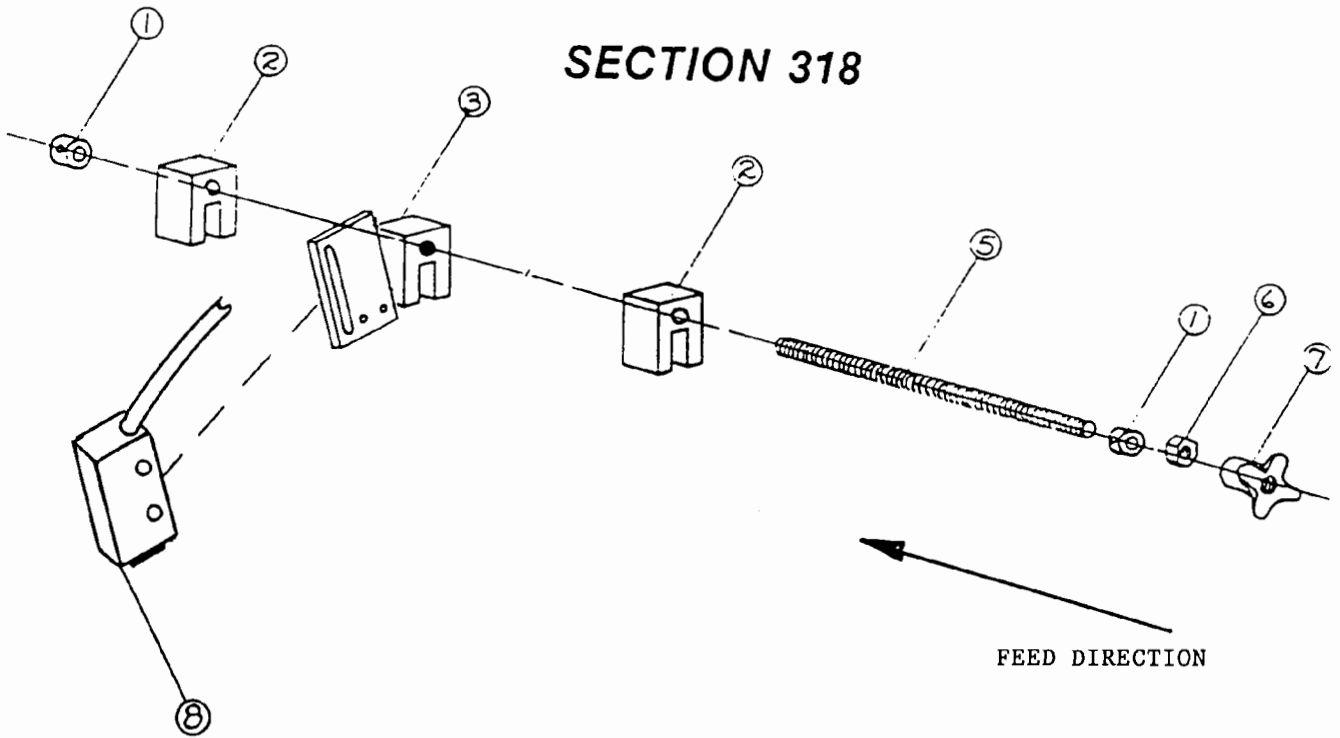
## SECTION 317

INDEX NO.	PART DESCRIPTION
23	BACK PAPER GUIDE SHAFT
24	SHAFT END LOCK
25	LEFT BACK PAPER GUIDE
26	RIGHT BACK PAPER GUIDE

# GROUP 300

## SCANNER ADJUSTMENT SCREW

### SECTION 318



ASSEMBLY SHOWN IS FOR OPPOSITE OPERATOR SIDE OF MACHINE.

PARTS 300-318-2 CLAMP ON FEED PAPER GUIDE, 300-304-1 (SEE NEXT SHEET).

# **GROUP 300**

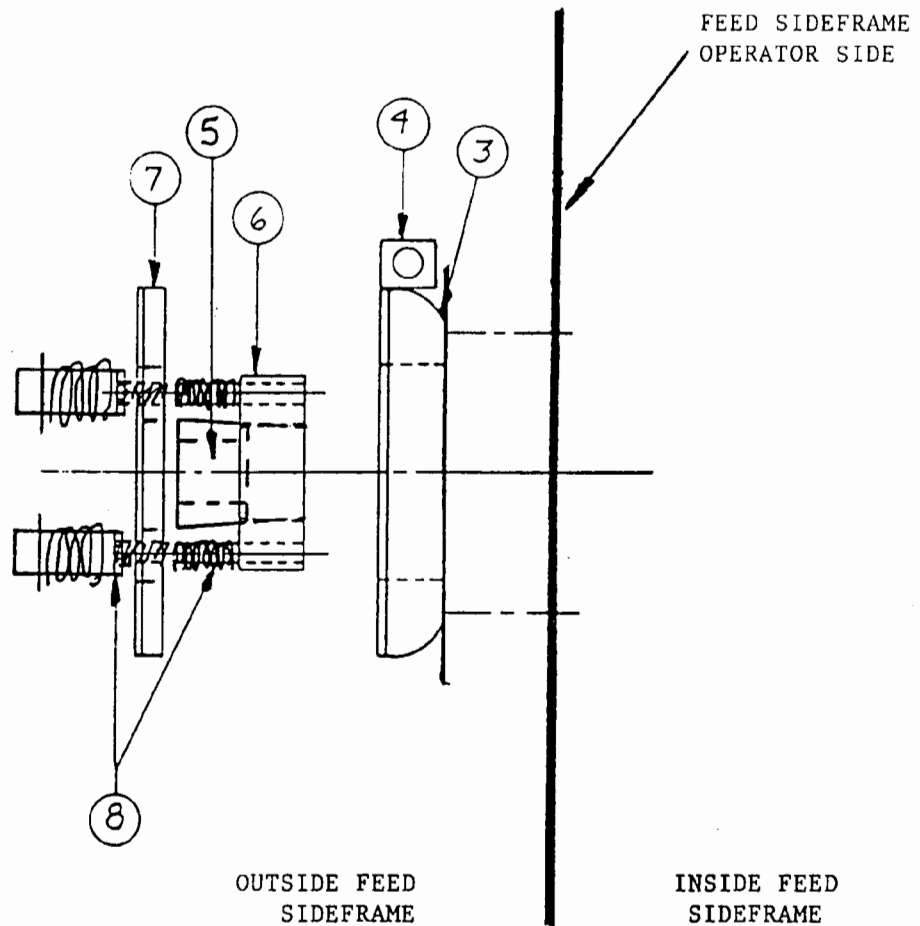
## **SECTION 318**

INDEX NO.	PART DESCRIPTION
1	SET COLLAR
2	SCANNER SCREW GUIDE
3	SCANNER SCREW NUT—WITH MOUNTING PLATE
5	SCANNER ADJUSTMENT SCREW
6	3/8-16 JAM NUT (Light Duty)
7	SCANNER SCREW KNOB
8	EYE SCANNER

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

**GROUP 300**  
**BRAKE FOR EYE-OPTIONAL**  
**SECTION 319**

WARNER





# GROUP 300

## SECTION 319

WARNER

INDEX NO.    PART DESCRIPTION

3	FIELD MAGNET
4	FIELD MAGNET ACCESSORY
5	TAPER BUSHING
6	DRIVE HUB
7	ARMATURE
8	ADJUSTO GAP KIT
9	BRAKE MAGNET ACCESSORIES (NOT SHOWN)

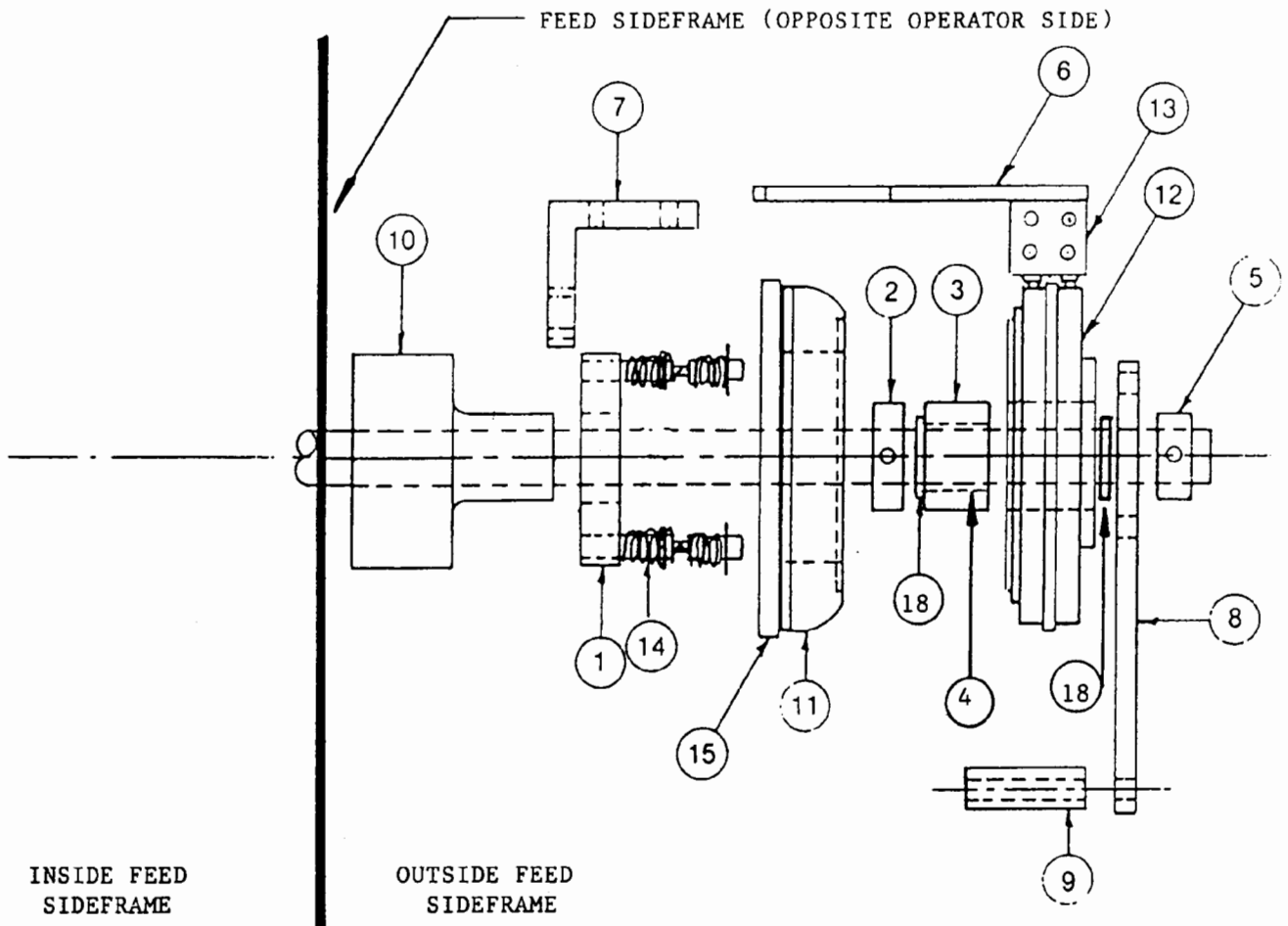
ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# GROUP 300

## ELECTRIC EYE CLUTCH

### SECTION 320

WARNER



# GROUP 300

## SECTION 320

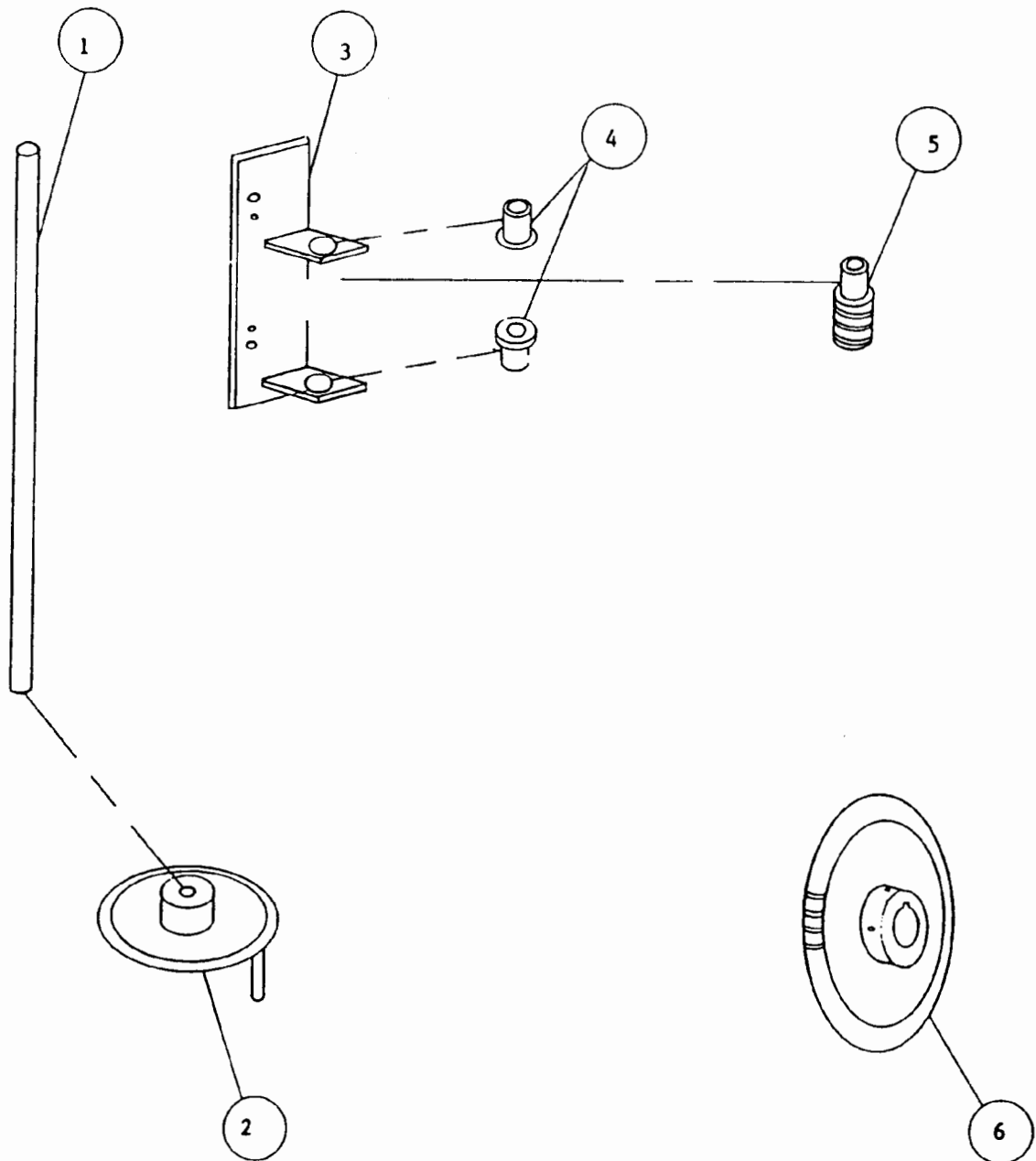
WARNER

INDEX NO.	PART DESCRIPTION
1	CLUTCH PLATE HUB
2	SPACER COLLAR
3	BUSHING
4	BRONZE BEARING
5	OUTSIDE COLLAR
6	BRUSH BRACKET
7	BRUSH BRACKET ANGLE
8	STROKE ARM
9	STROKE ARM SPACER
10	4-1-1L OVERRUNNING CLUTCH
11	FIELD MAGNET
12	RING
13	BRUSH UNIT
14	ADJUSTO GAP KIT
15	ARMATURE
16	WARNER CONTROL (NOT SHOWN)
17	CLUTCH MAGNET ACCESSORIES (NOT SHOWN)
18	THRUST WASHER

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

75

GROUP 300 SECTION 321

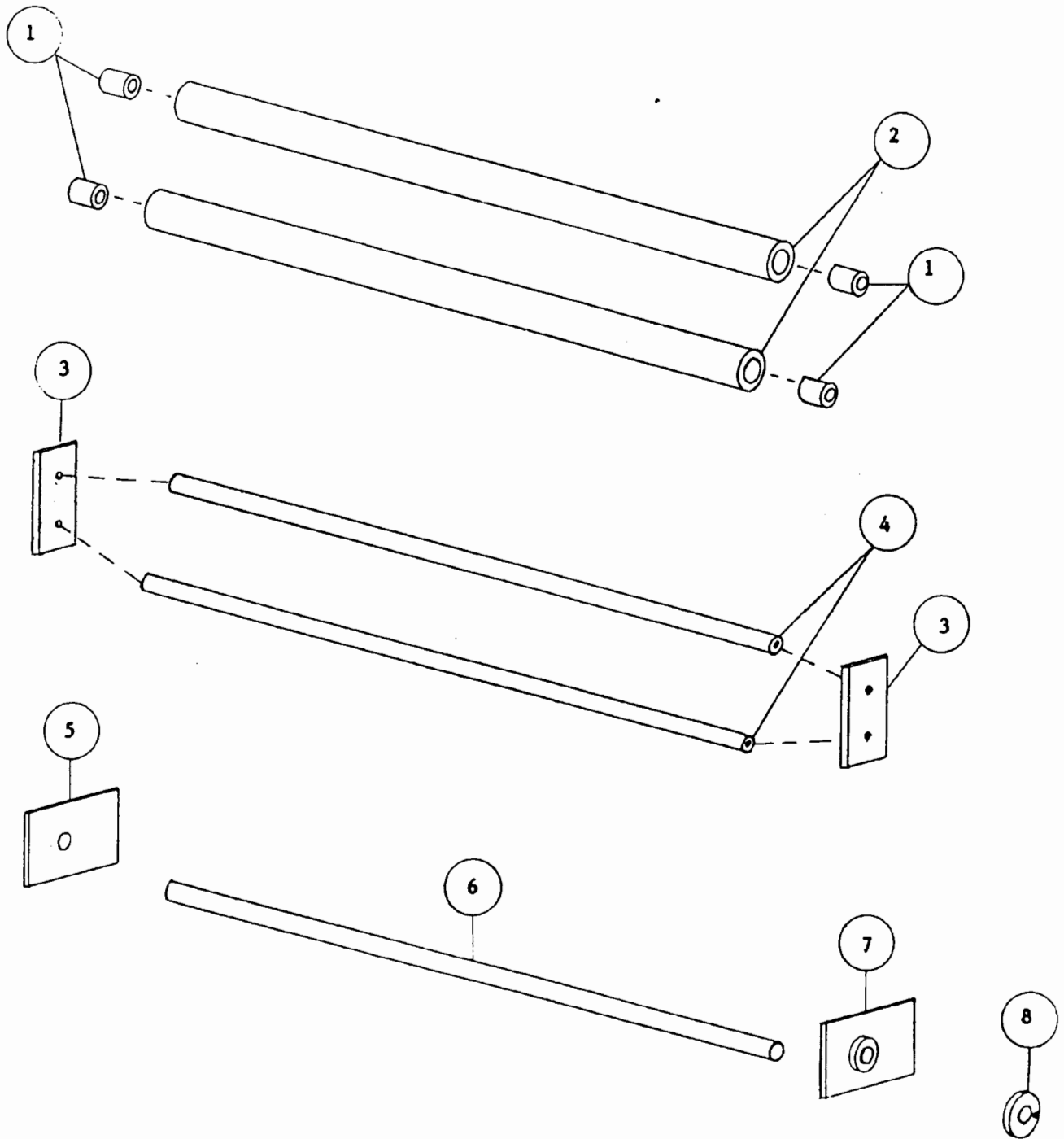


GROUP 300

SECTION 321

INDEX NO.	PART DESCRIPTION
1	WORM GEAR SHAFT
2	ALUMINUM HAND WHEEL
3	WORM GEAR BRACKET
4	FLANGED BUSHING
5	WORM GEAR
6	ADJUSTMENT ARM SHAFT GEAR

GROUP 300 SECTION 322

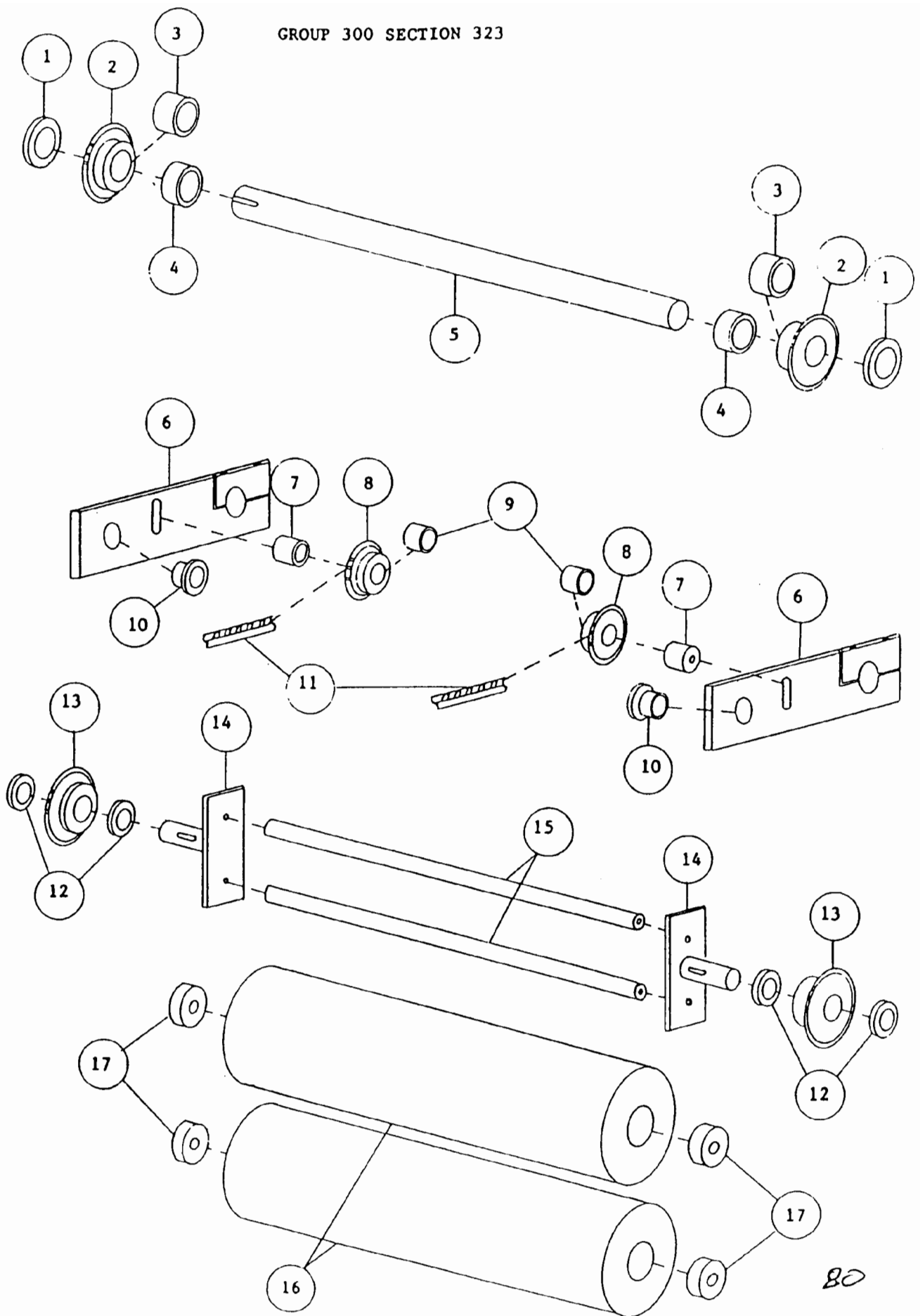


GROUP 300

SECTION 322

INDEX NO.	PART DESCRIPTION
1	OILITE BUSHING
2	1-1/4" DIA. DECURL ROLLER
3	DECURL ROLLER MOUNTING BAR
4	SMALL DECURL ROLLER SHAFT
5	RIGHT HAND PAPER GUIDE
6	PAPER GUIDE SHAFT
7	LEFT HAND PAPER GUIDE
8	SHAFT END LOCK

GROUP 300 SECTION 323





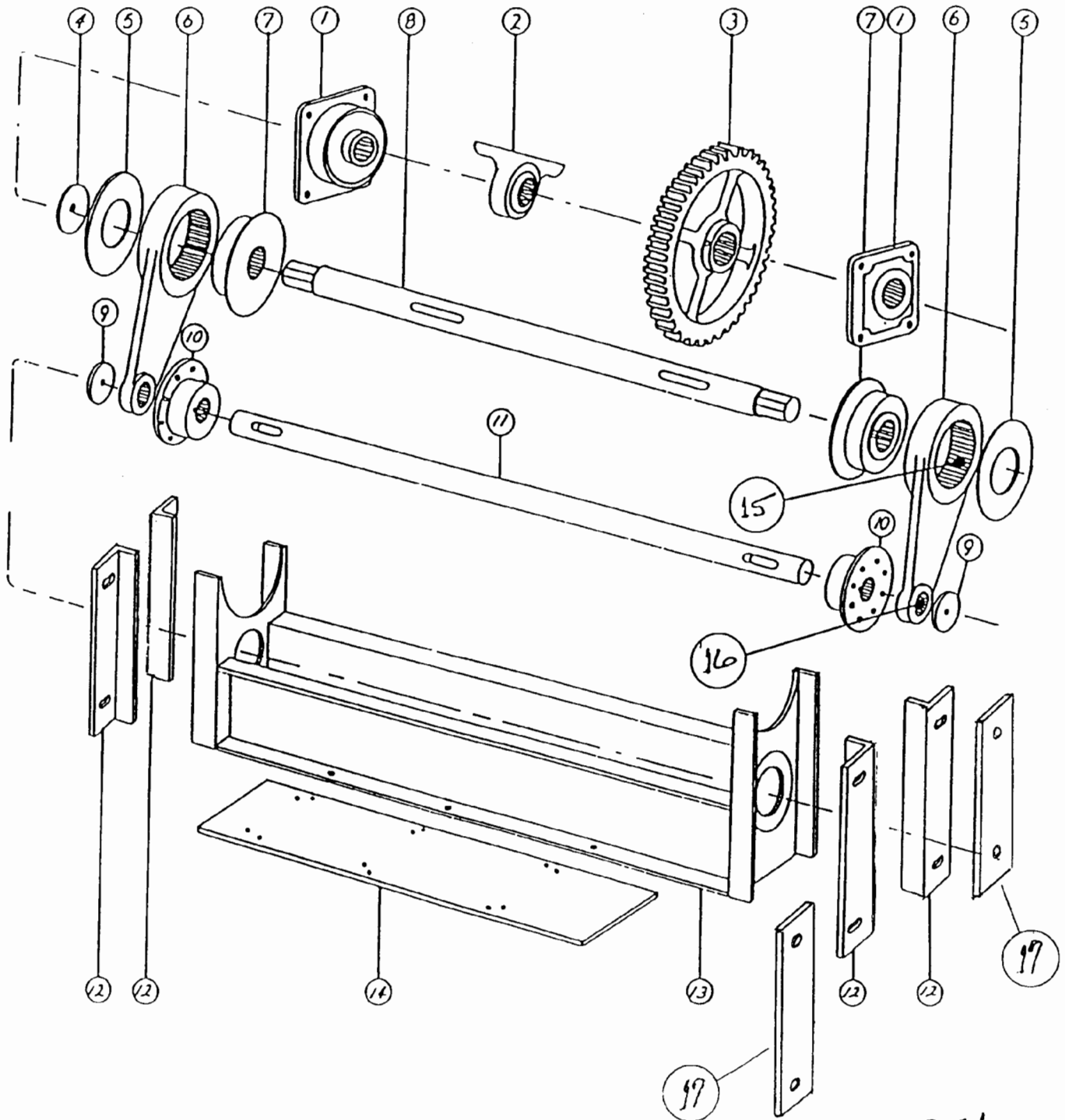
GROUP 300

SECTION 323

INDEX NO.	PART DESCRIPTION
1	OILITE THRUST WASHER
2	ADJUSTMENT ARM CHAIN SPROCKET
3	OILITE BUSHING
4	OILITE BUSHING
5	ADJUSTMENT ARM SHAFT
6	ADJUSTMENT ARM
7	IDLER SPROCKET SHAFT
8	IDLER SPROCKET
9	OILITE BUSHING
10	FLANGED OILITE BUSHING
11	#41 CHAIN
12	OILITE THRUST WASHER
13	5" ROLLER ARM CHAIN SPROCKET
14	5" ROLLER ARM
15	5" DIA. ROLLER SHAFT
16	5" ROLLER
17	BEARING

## GROUP 400

### CUTTING HEAD SECTION – E-34, E-46, P-34 STD, P-46 STD



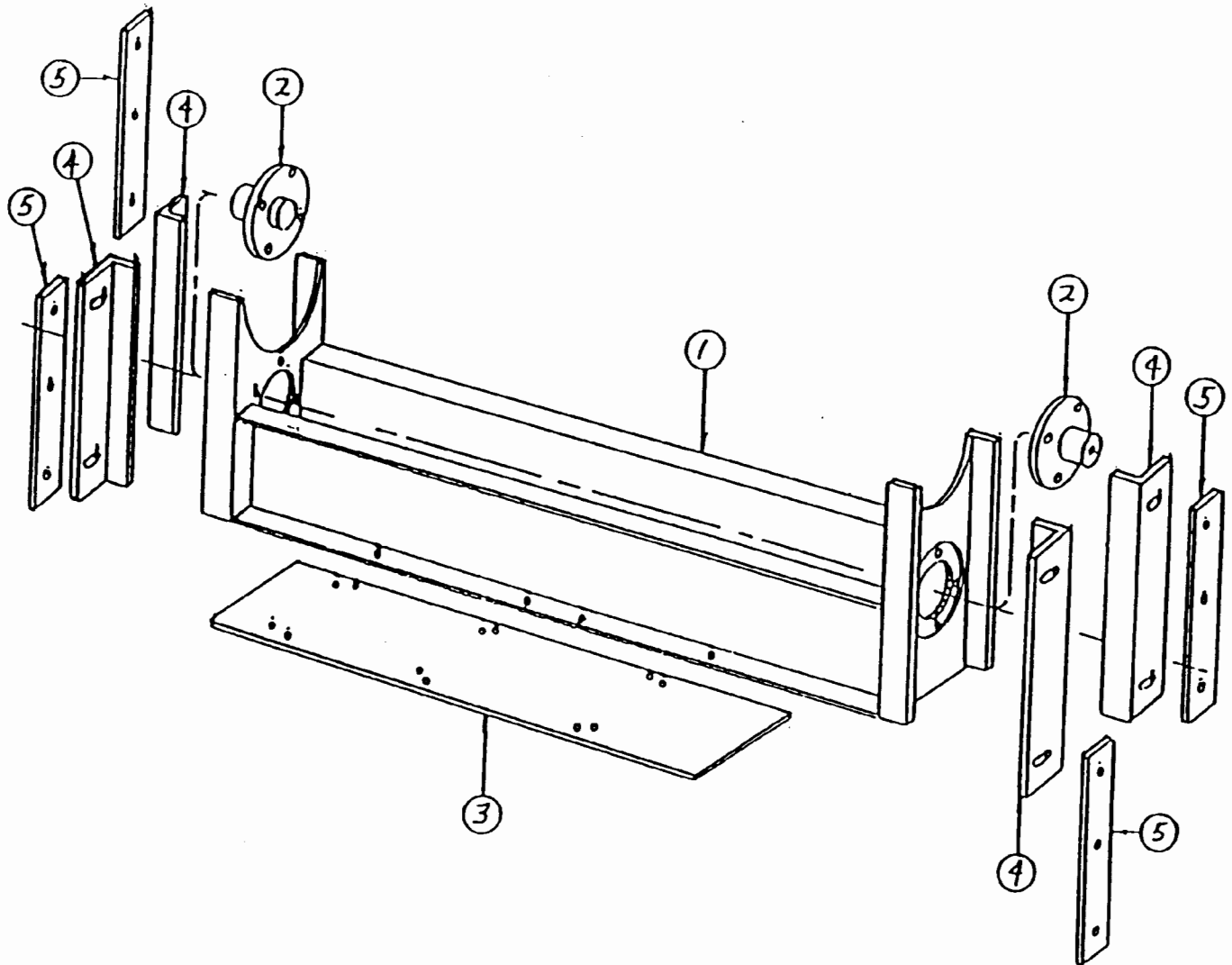
82A

## GROUP 400

### CUTTING HEAD SECTION – E-34, E-46, P-34 STD, P-46 STD

INDEX NO.	PART NO.	DESCRIPTION
1	400-401-19	LINK BELT BEARING
2	400-401-4	LINK BELT BEARING
3	400-401-20	5 PITCH – 64 TOOTH GEAR
4	400-401-18	UPPER ECCENTRIC SHAFT CAP
5	400-401-12	UPPER ECCENTRIC CAP
6	400-401-9	CONNECTING ROD
7	400-401-15	UPPER ECCENTRIC
8	400-401-13	UPPER ECCENTRIC SHAFT
9	400-401-17	CONNECTING ROD CAP
10	400-401-16	LOWER ECCENTRIC
11	400-401-23	LOWER ECCENTRIC SHAFT
12	400-403-2	CUTTING HEAD GIB
13	400-403-4	CUTTING HEAD
14	400-403-5	CUTTING HEAD DIE PLATE
15	400-401-10	UPPER CONNECTING ROD BUSHING
16	400-401-11	LOWER CONNECTING ROD BUSHING
17	400-403-1	GIB CAP

**GROUP 400**  
**CUTTING HEAD SECTION – E-57 AND P-57 STANDARD**

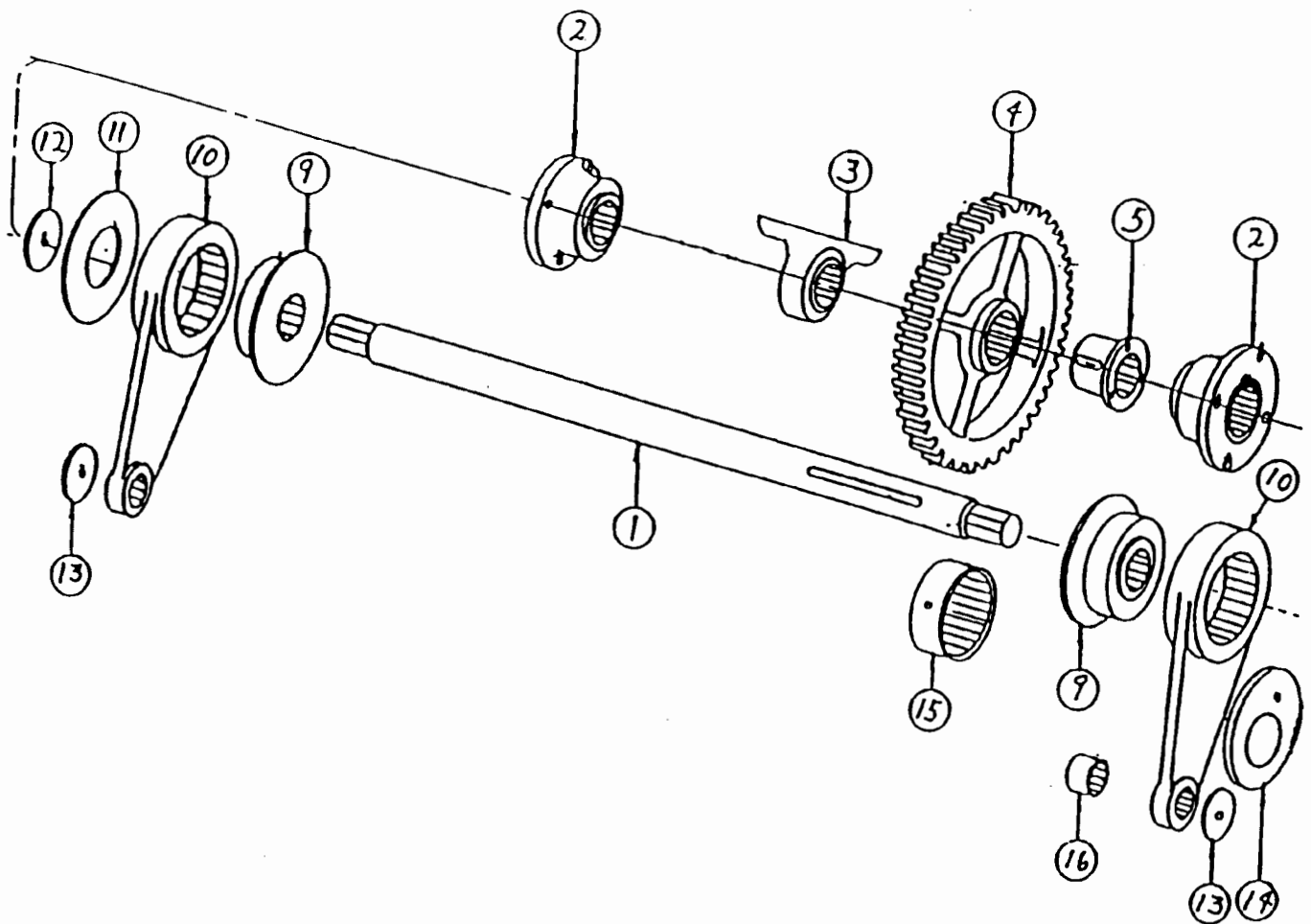


## **GROUP 400**

### **CUTTING HEAD SECTION – E-57 AND P-57 STANDARD**

INDEX NO.	PART NO.	DESCRIPTION
1	400-403-4	CUTTING HEAD
2	400-401-16	CONNECTING ROD PIN
3	400-403-5	CUTTING HEAD DIE PLATE
4	400-403-2	CUTTING HEAD GIB
5	400-403-1	GIB CAP

**GROUP 400**  
**UPPER ECCENTRIC SHAFT – E-57 AND P-57 STANDARD**



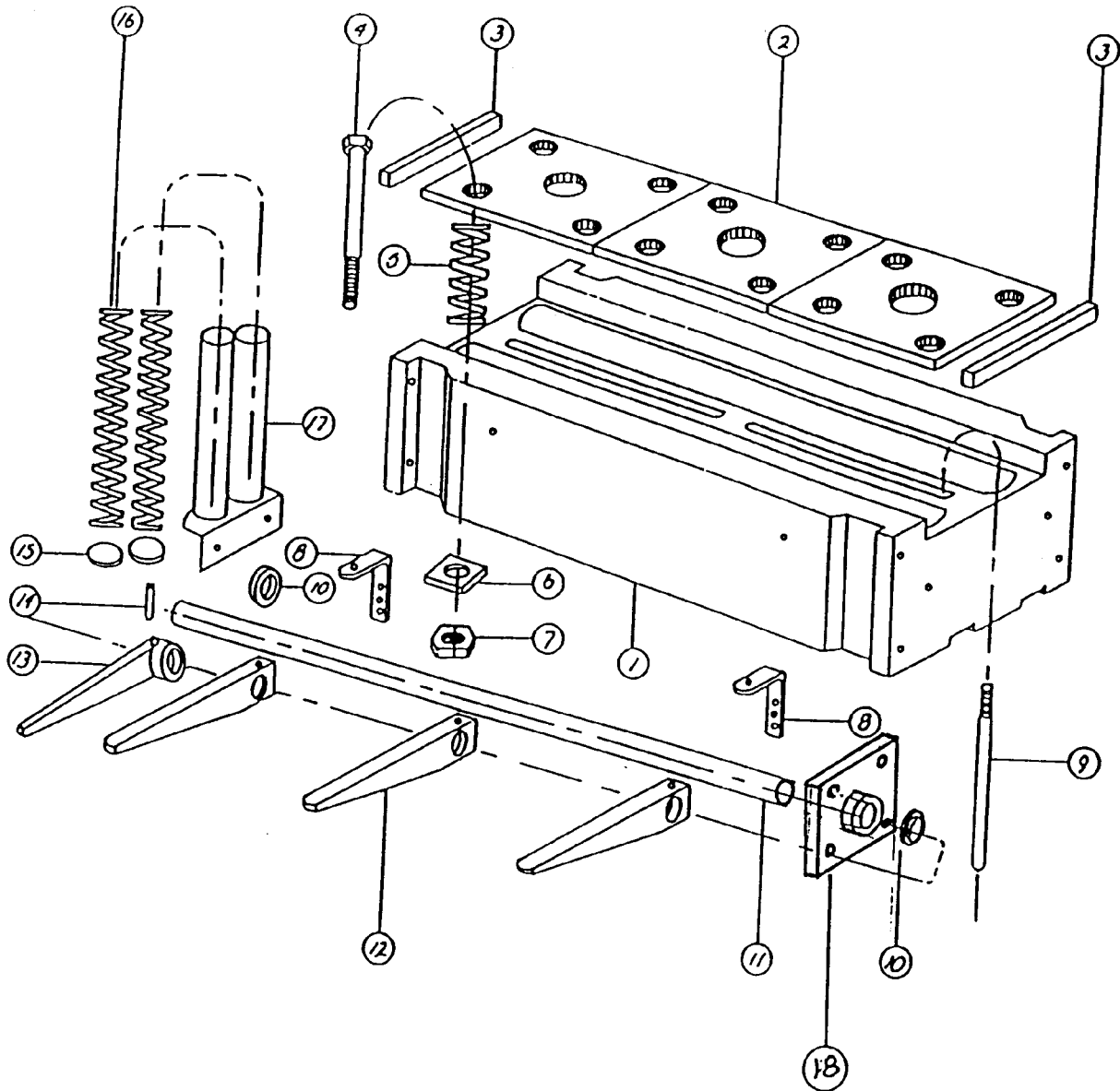
# GROUP 400

## UPPER ECCENTRIC SHAFT – E-57 AND P-57 STANDARD

INDEX NO.	PART NO.	DESCRIPTION
1	400-401-13	UPPER ECCENTRIC SHAFT
2	400-401-19	LINK BELT BEARING
3	400-401-4	LINK BELT BEARING
4	400-401-20	5 PITCH – 64 TOOTH GEAR
5	400-401-21	TAPER LOCK BUSHING
6	NOT USED	
7	NOT USED	
8	NOT USED	
9	400-401-15	UPPER ECCENTRIC
10	400-401-9	CONNECTING ROD
11	400-401-12	UPPER ECCENTRIC CAP
12	400-401-18	ECCENTRIC SHAFT CAP
13	400-401-17	CONNECTING ROD CAP
14	400-401-12	UPPER ECCENTRIC CAP
15	400-401-10	UPPER CONNECTING ROD BUSHING
16	400-401-11	LOWER CONNECTING ROD BUSHING

D — FORMING BASE

GROUP 500





# D — FORMING DIE BASE

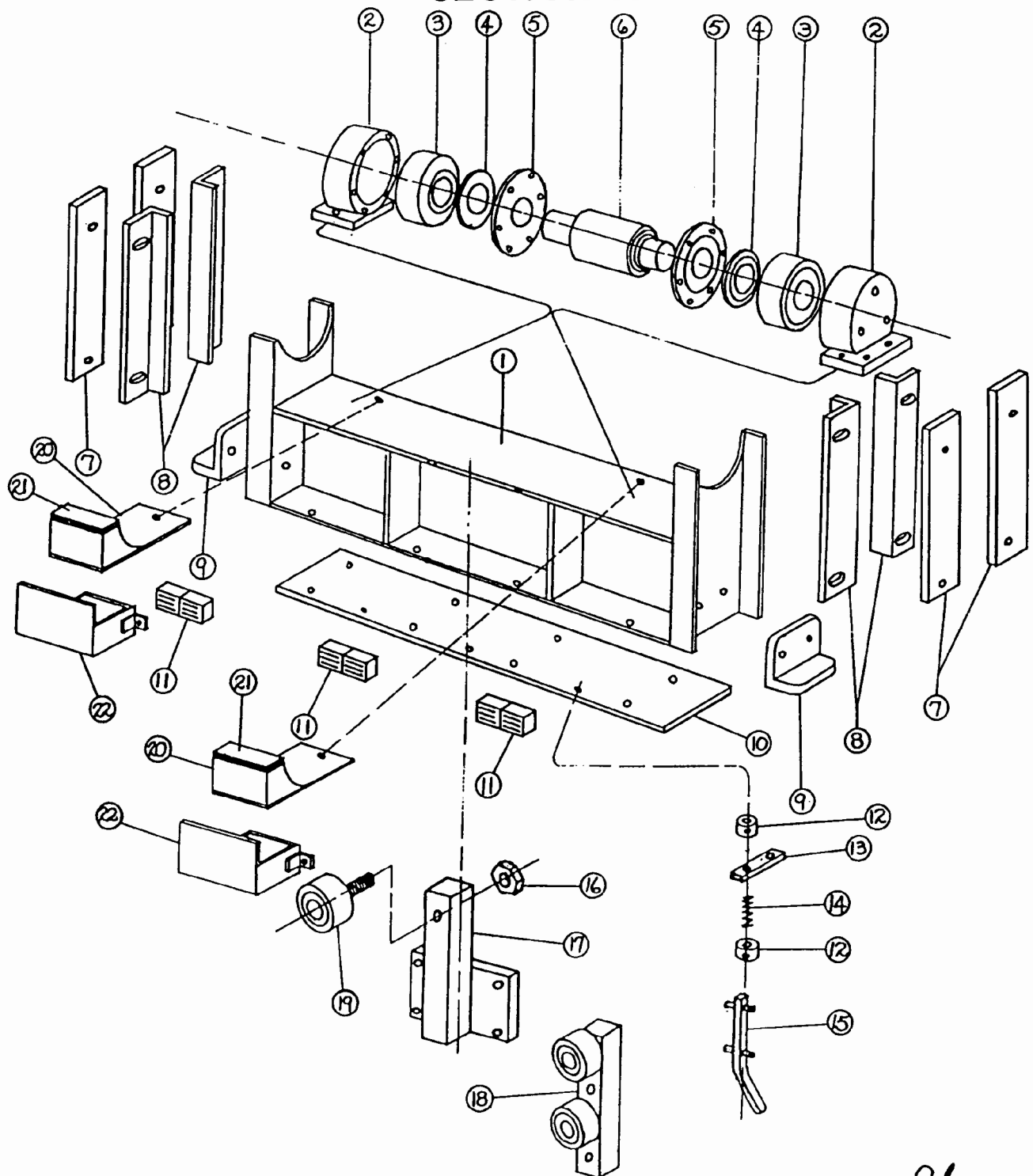
PART NO'S						
INDEX NO.	P-34 & P-34LB	P-46 & P-46LB	P-57	NAME		
1	111	3-500-501-12	B7	4-500-501-12	B-7-5 500-501-12	Forming Die Base
2					500-501-7	Bolster Plates — Order Size
3		Use in old style P-34 Machine Only			500-501-6	Bolster Spacers
4	121		121		121 500-501-4	Bolster Bolt
5	5		5		5 500-501-5	Bolster Spring
6	76		76		76 500-501-14	Bolster Washer
7	121A		121A		121A 500-501-13	Bolster Nut
8	79		79		79 500-501-11	Blank Chute Rest
9	57		57		57 500-502-14	Plunger Rod
10	52		52		52 500-502-15	Set Collar
11	M-7	3-500-502-16	M-7	4-500-502-16	M-7-5 500-502-16	Ejector Shell
12	M-40		M-40		M-40 500-502-18	Ejector Arm
13	M39		M39		M39 500-502-17	Ejector Adjustment Arm
14						Taper Pin No. 5
15	M49		M49		M49 500-501-2	Spring Adjustment Washers
16	28		28		28 500-501-1	Forming Head Springs
17	M48		M48		M48 500-501-3	Spring Cans
18					500-502-15	Bearing
19		(not shown)			400-888-9	Ejector Linkage
20		(not shown)			300-302-1	Ejector Linkage Rod End

**PAGES 88, 89, AND 90 NOT USED**

# GROUP 600

## FORMING HEAD

### SECTION 601



# GROUP 600

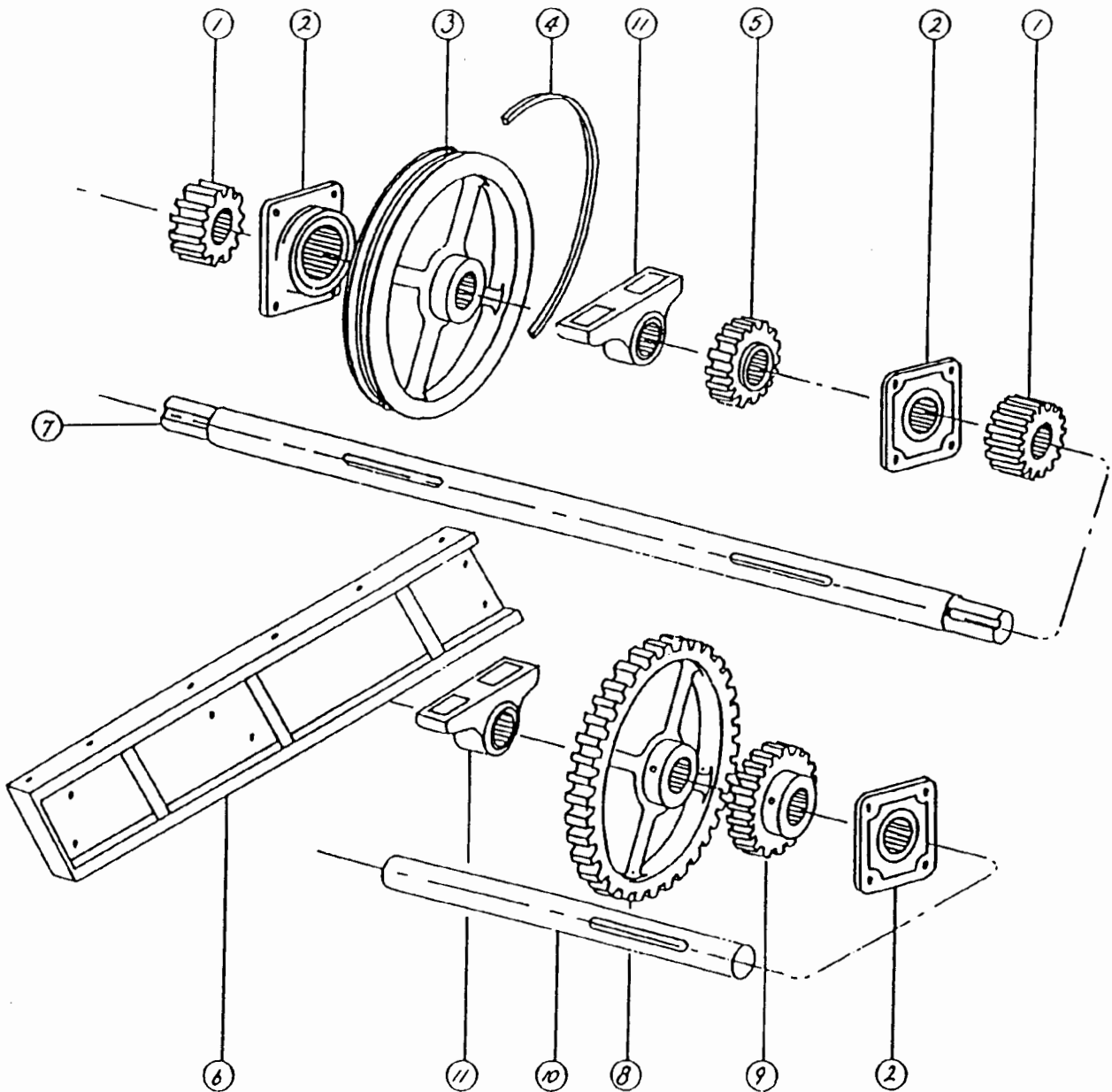
## SECTION 601

INDEX NO.	PART DESCRIPTION
1	FORMING HEAD
2	CAM ROLLER HOUSING
3	LINK BELT BEARING
4	GREASE SEAL
5	SEAL RETAINER
6	CAM ROLLER
7	GIB CAPS
8	FORMING GIBS
9	HEAD SPRING BRACKET
10	FORMING DIE MOUNTING PLATE (Include Number of Dies & Die Size When Ordering)
11	ELECTRICAL TERMINAL STRIP ASSEMBLY
12	SET COLLAR
13	BLANK STOP BRACKET
14	BLANK STOP SPRING
15	BLANK STOP FINGER
16	CAM FOLLOWER NUT
17	GUIDE BAR
18	GUIDE BAR (Old Style)
19	CAM FOLLOWER
20	CAM ROLLER OILER
21	FELT PAD
22	CAM ROLLER DRIP PAN

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

## GROUP 700

### PINION AND INTERMEDIATE – E-34, E-46, P-34 STD, P-46 STD



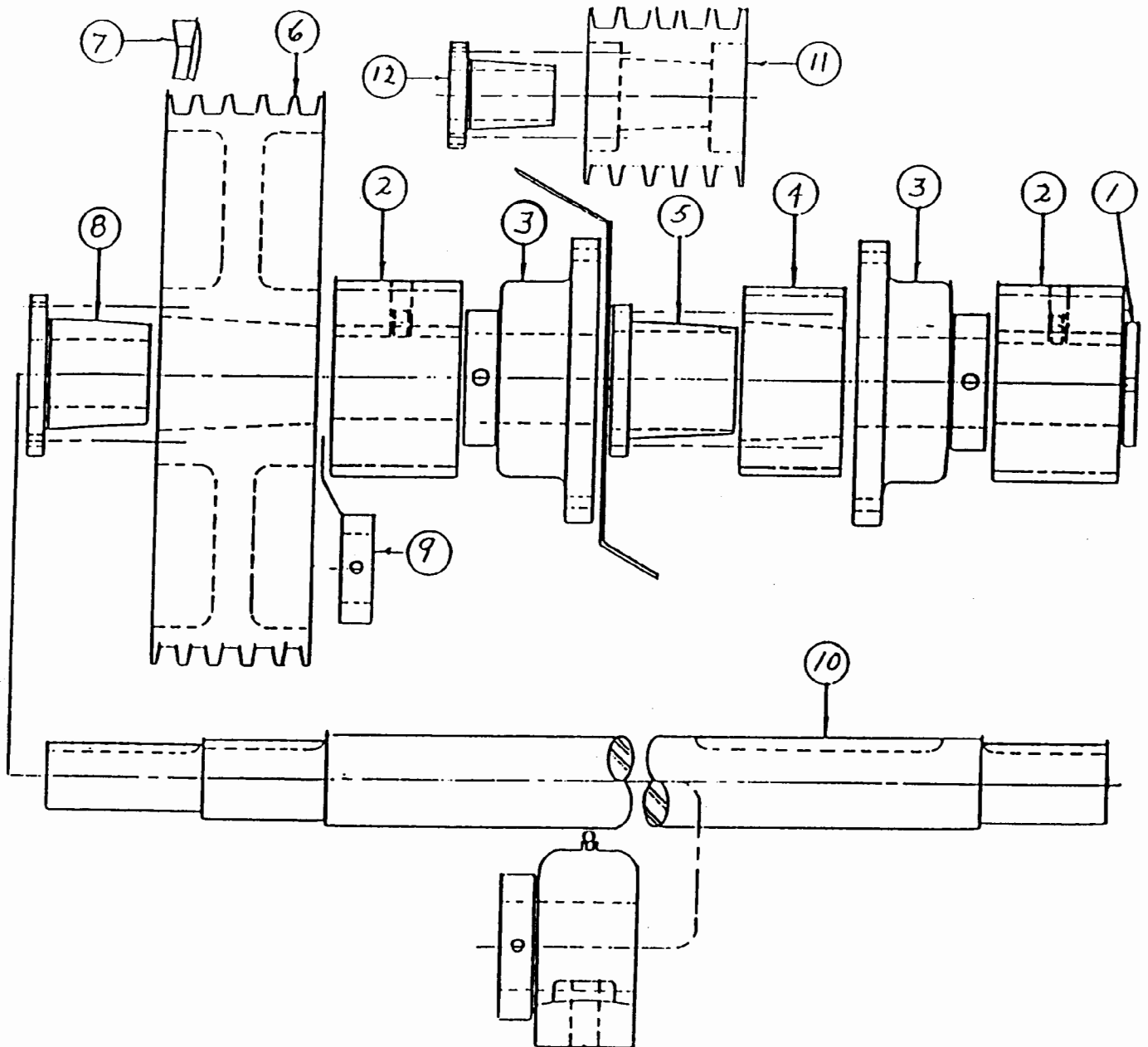
## GROUP 700

### PINION AND INTERMEDIATE – E-34, E-46, P-34 STD, P-46 STD

INDEX NO.	PART NO.	DESCRIPTION
1	700-703-5	3 PITCH 14 TOOTH GEAR
2	400-401-19	LINK BELT BEARING
3	700-703-13	SHEAVE
4	700-703-3	DRIVE BELTS
5	700-703-8	5 PITCH 24 TOOTH GEAR
6	700-704-2	CENTER RAIL
7	700-703-11	PINION SHAFT
8	700-704-7	5 PITCH 72 TOOTH GEAR
9	700-704-9	5 PITCH 32 TOOTH GEAR
10	700-704-6	INTERMEDIATE SHAFT
11	700-704-1	LINK BELT BEARING

## GROUP 700

### PINION SHAFT SECTION – E-57 AND P-57 STANDARD



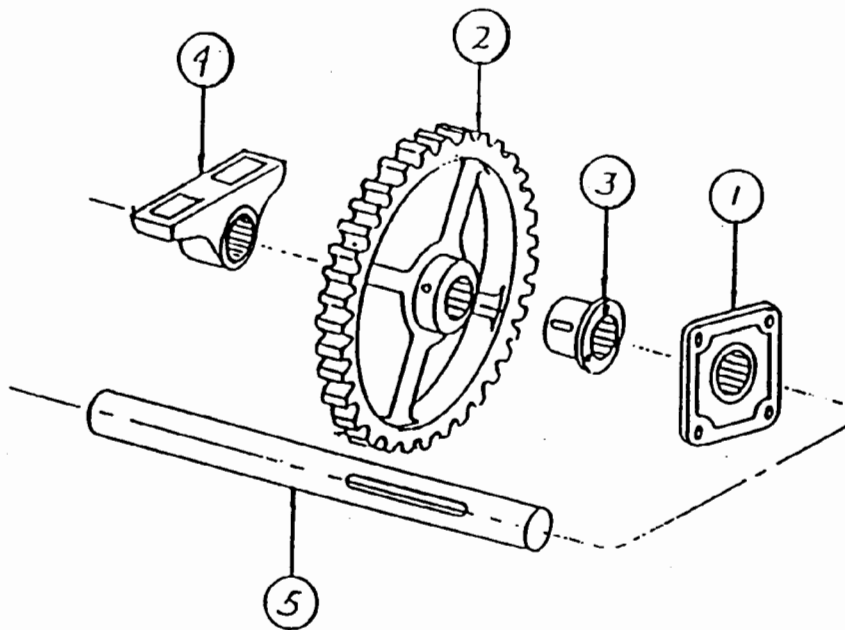
**GROUP 700**  
**PINION SHAFT SECTION – E-57 AND P-57 STANDARD**

INDEX NO.	PART NO.	DESCRIPTION
1	700-703-10	PINION SHAFT CAP
2	700-703-5	3 PITCH 14 TOOTH GEAR
3	400-401-19	LINK BELT BEARING
4	700-703-8	5 PITCH 24 TOOTH GEAR
5	700-703-9	TAPER LOCK BUSHING
6	700-703-2	DRIVEN SHEAVE
7	700-703-3	DRIVE BELTS
8	700-703-1	TAPER LOCK BUSHING
9	300-315-5	SET COLLAR
10	700-703-11	PINION SHAFT
11	900-908-20	DRIVE SHEAVE
12	900-908-18	TAPER LOCK BUSHING
13	700-703-7	LINK BELT PILLOW BLOCK BEARING



# GROUP 700

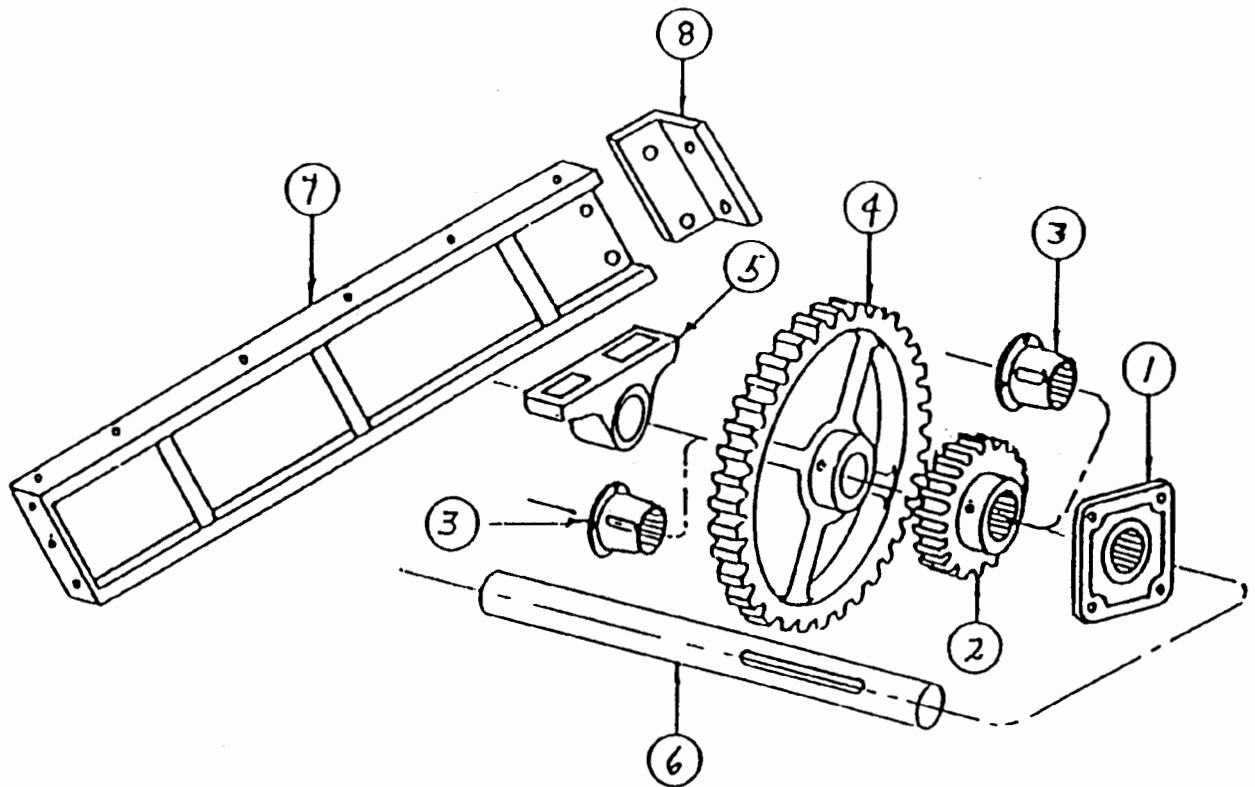
## FIRST INTERMEDIATE SHAFT – E-57 AND P-57 STANDARD



INDEX NO.	PART NO.	DESCRIPTION
1	400-401-19	LINK BELT BEARING
2	700-704-7	5 PITCH 72 TOOTH GEAR
3	700-704-8	TAPER LOCK BUSHING
4	700-704-1	LINK BELT PILLOW BLOCK BEARING
5	700-704-6	FIRST INTERMEDIATE SHAFT

# GROUP 700

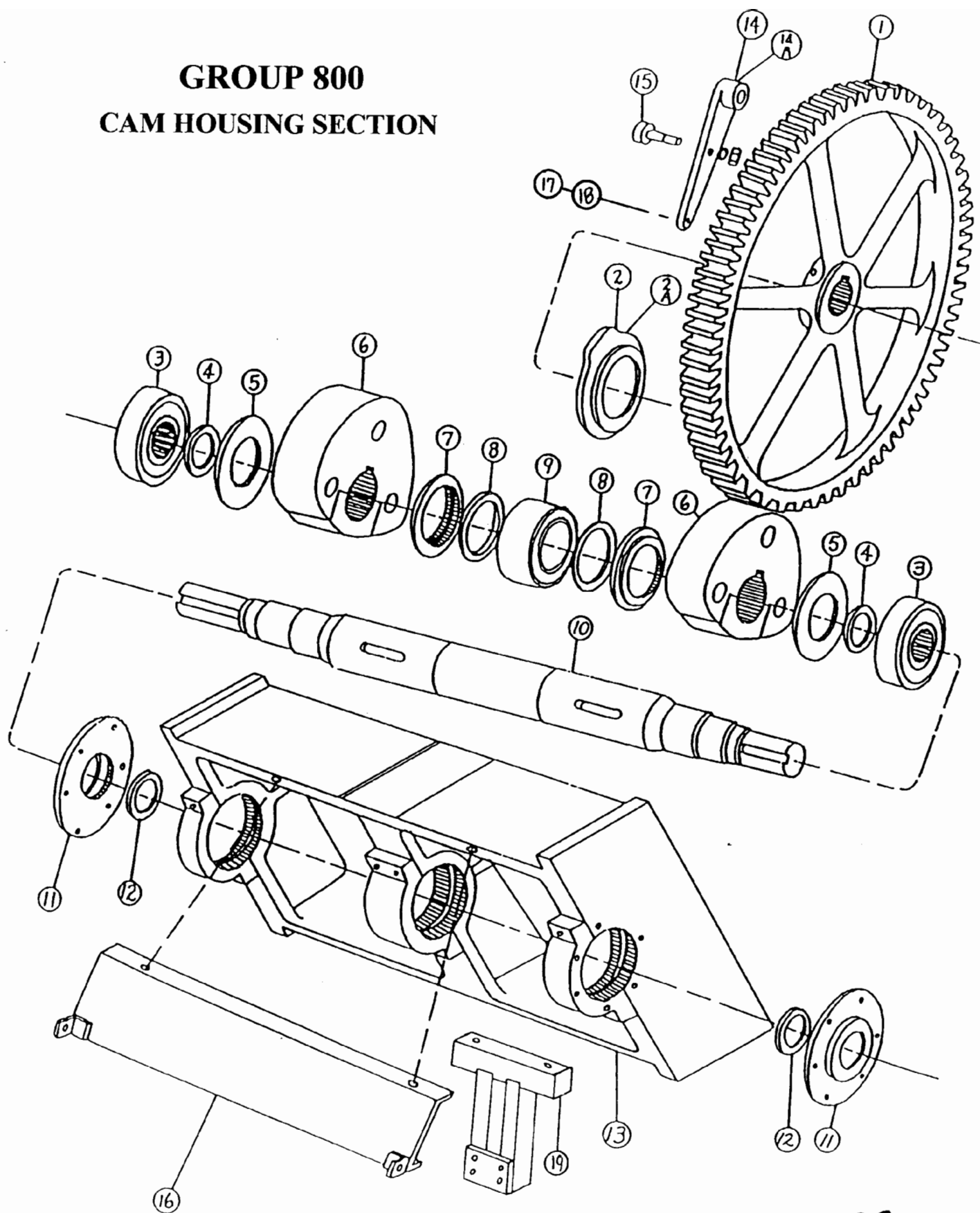
## SECOND INTERMEDIATE SHAFT – E-57 AND P-57 STANDARD



INDEX NO.	PART NO.	DESCRIPTION
1	400-401-19	LINK BELT BEARING
2	700-704-9	5 PITCH 32 TOOTH GEAR
3	700-704-10	TAPER LOCK BUSHING
4	700-704-7	5 PITCH 72 TOOTH GEAR
5	700-704-1	LINK BELT PILLOW BLOCK BEARING
6	700-704-6	SECOND INTERMEDIATE SHAFT
7	700-704-2	CENTER RAIL
8	700-704-3	CENTER RAIL BRACKET

# GROUP 800

## CAM HOUSING SECTION



## GROUP 800

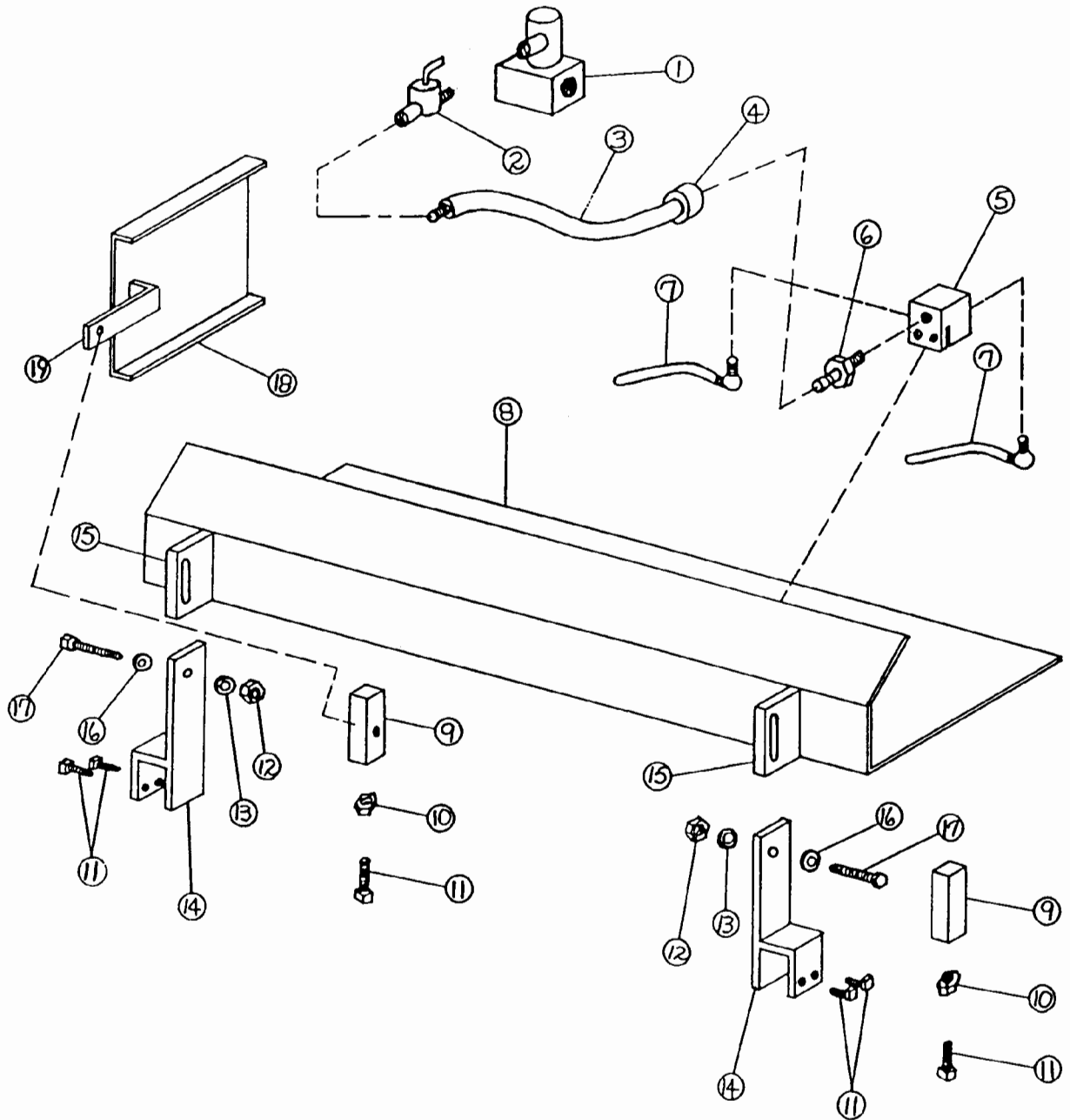
### CAM HOUSING SECTION

INDEX NO.	PART NO.	DESCRIPTION
1	800-801-2	BULL GEAR
2	800-801-11	EJECTOR CAM
2A	800-801-12	INTERMEDIATE STOP CAM
3	800-801-3	SKF BEARING
4	800-801-4	GREASE SEAL
5	800-801-5	SEAL RETAINER
6	800-801-6	FORMING CAMS
7	800-801-7	SEAL RETAINER
8	800-801-8	GREASE SEAL
9	800-801-9	MIDDLE BEARING
10	800-801-10	CAM SHAFT
11	800-802-1	SEAL RETAINER
12	800-802-2	GREASE SEAL
13	800-802-3	CAM HOUSING
14	400-888-5	TOP EJECTOR LEVER
14A	400-888-6	TOP INTERMEDIATE STOP LEVER
15	400-888-8	CAM FOLLOWER
16	800-802-7	FORMING HEAD GUARD
17	400-888-9	EJECTOR LINKAGE (NOT SHOWN)
18	300-302-1	EJECTOR LINKAGE ROD END
19	800-802-5	HEAD GUIDE T-BAR

# GROUP 900

## AIR SCRAP CHUTE

### SECTION 901



# GROUP 900

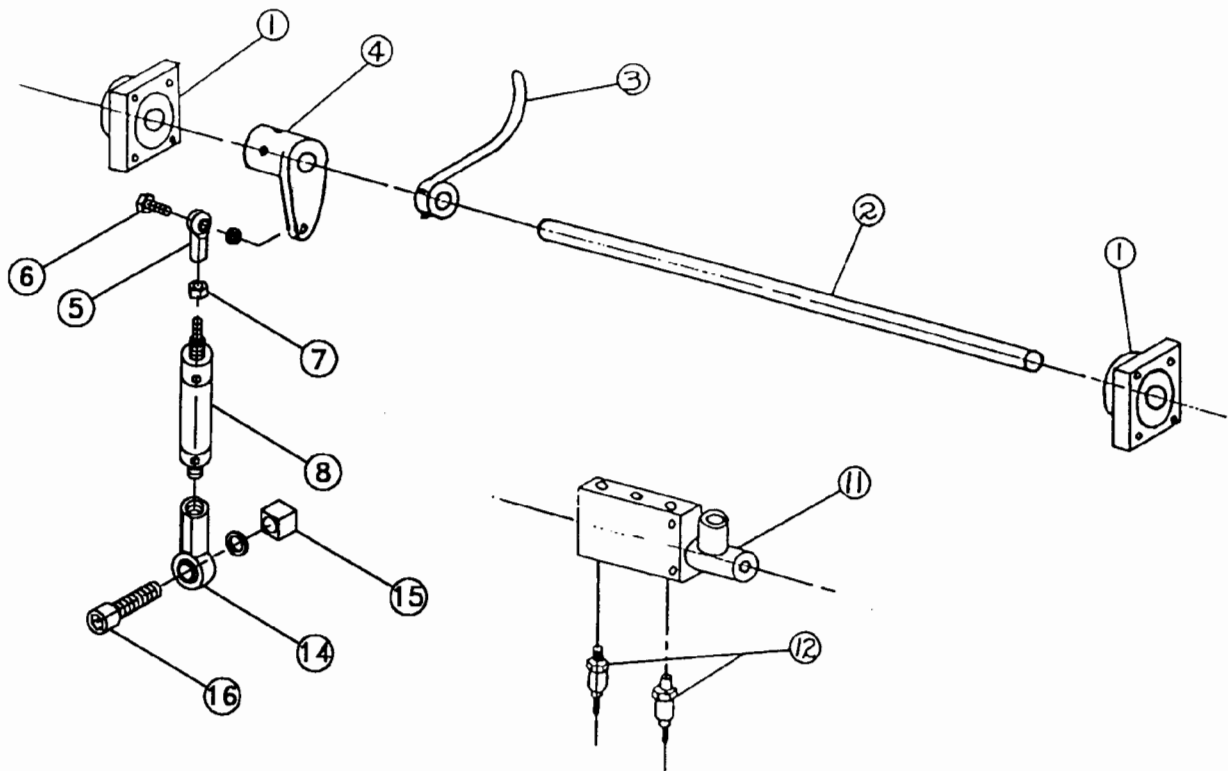
## SECTION 901

INDEX NO.	PART DESCRIPTION
1	TWO WAY AIR VALVE
2	AIR COCK (Female To Male)
3	FLEXIBLE AIR <del>HOSE</del> HOSE
4	<del>FEMALE</del> <del>SWAP</del> TITE DISCONNECT SWAP
5	AIR SCRAP EJECTOR BLOCK
6	<del>MALE</del> QUICK DISCONNECT
7	AIR DIRECTOR (Specify Length of Copper Tubing)
8	AIR SCRAP CHUTE
9	AIR SCRAP CHUTE POST
10	NUT
11	SQUARE HEAD SET SCREW
12	NUT
13	LOCK WASHER
14	AIR SCRAP EJECTOR PLATE BRACKET
15	AIR SCRAP CHUTE MOUNTING PLATE
16	WASHER
17	HEX HEAD BOLT
18	INSIDE CUTTING DIE GUARD
19	INSIDE CUTTING DIE GUARD MOUNTING ANGLE

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# **GROUP 900**

## **INTERMEDIATE BLANK STOP SHAFT**



### **SECTION 902**

# GROUP 900

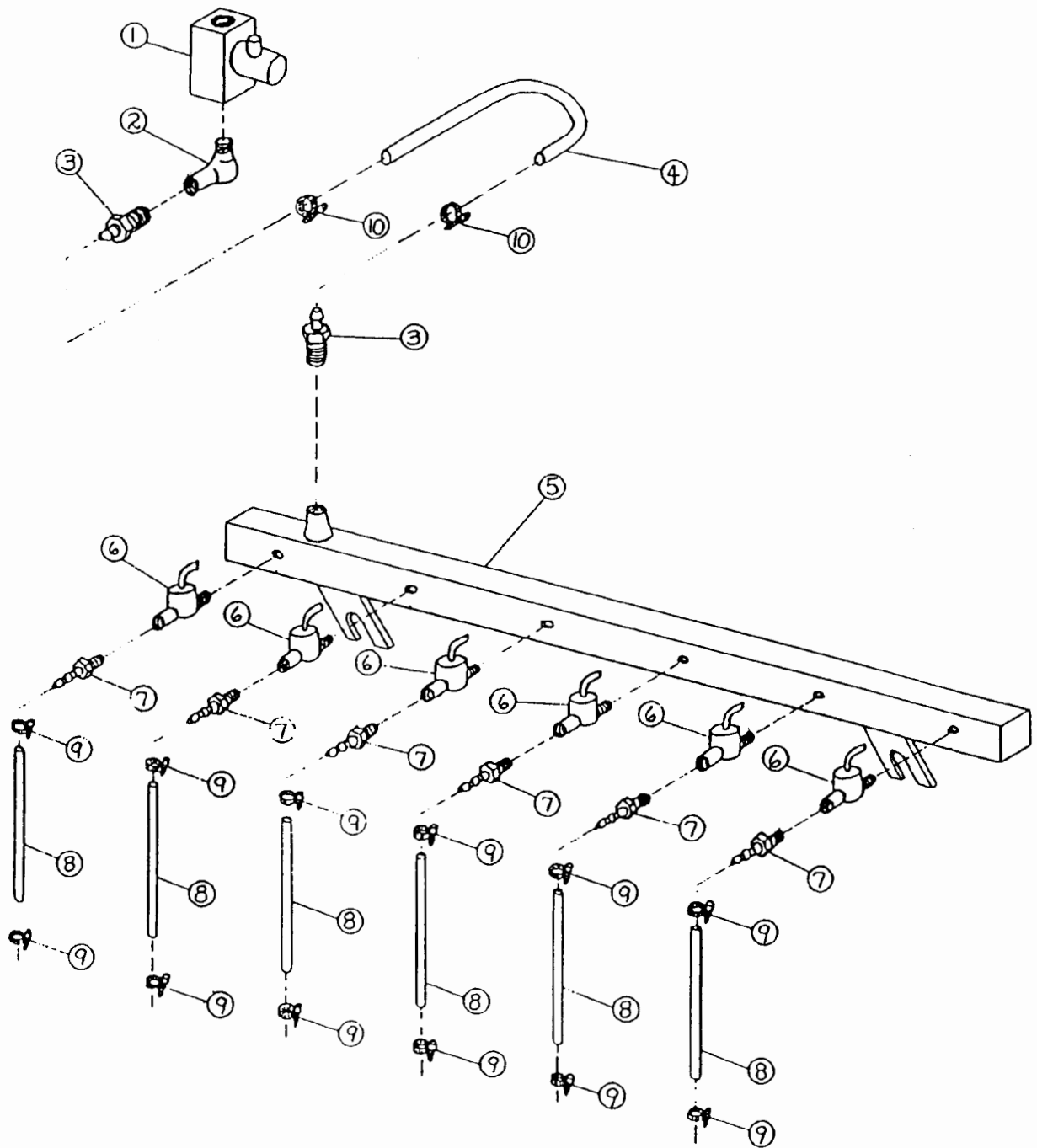
## SECTION 902

INDEX NO.	PART DESCRIPTION
1	LINK BELT BEARING
2	INTERMEDIATE BLANK STOP SHAFT
3	SPLIT COLLAR INTERMEDIATE STOP FINGER
4	BLANK STOP LEVER
5	ROD END
6	HEX HEAD CAP SCREW AND LOCK WASHER
7	JAM NUT
8	AIR CYLINDER
11	FOUR WAY VALVE
12	SPEED CONTROL MUFFLER
14	CYLINDER PIVOT
15	CYLINDER PIVOT SPACER
16	SOCKET HEAD CAP SCREW AND LOCK WASHER



# GROUP 900

## DIE AIR MANIFOLD



SECTION 903

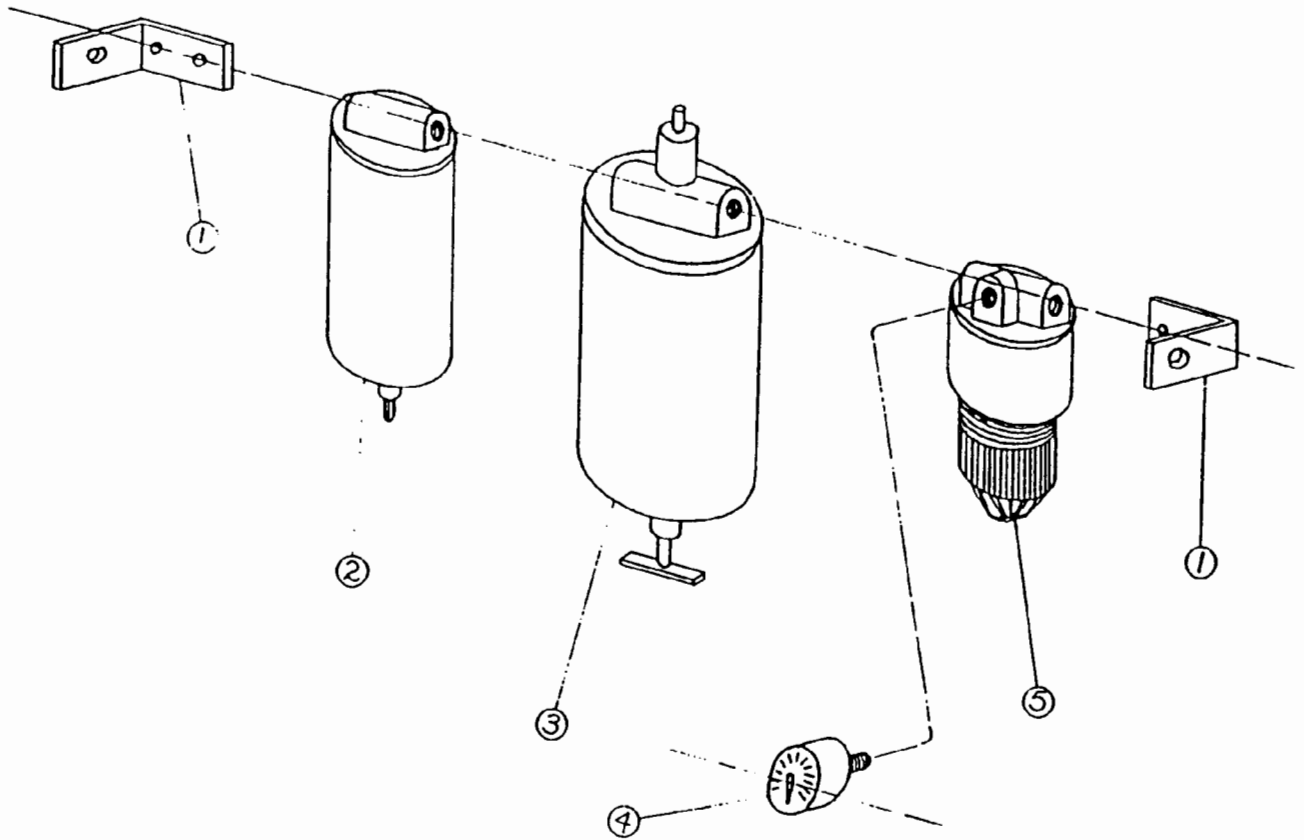
# **GROUP 900**

## **SECTION 903**

INDEX NO.	PART DESCRIPTION
1	TWO WAY AIR VALVE
2	STREET L
3	BARBED FITTING
4	FLEXIBLE AIR HOSE
5	DIE AIR MANIFOLD
6	SHUT OFF VALVE
7	BARBED FITTING
8	FLEXIBLE AIR HOSE
9	METAL HOSE CLAMP
10	METAL HOSE CLAMP

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

**GROUP 900**  
**OILER COMBO UNIT**  
**MAIN COMPONENTS**



**SECTION 905**

# **GROUP 900**

## **SECTION 905**

INDEX NO.	PART DESCRIPTION
1	OILER COMBO MOUNTING BRACKET
2	FILTER
3	LUBRICATOR
4	PRESSURE GAUGE
5	REGULATOR

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# **GROUP 900**

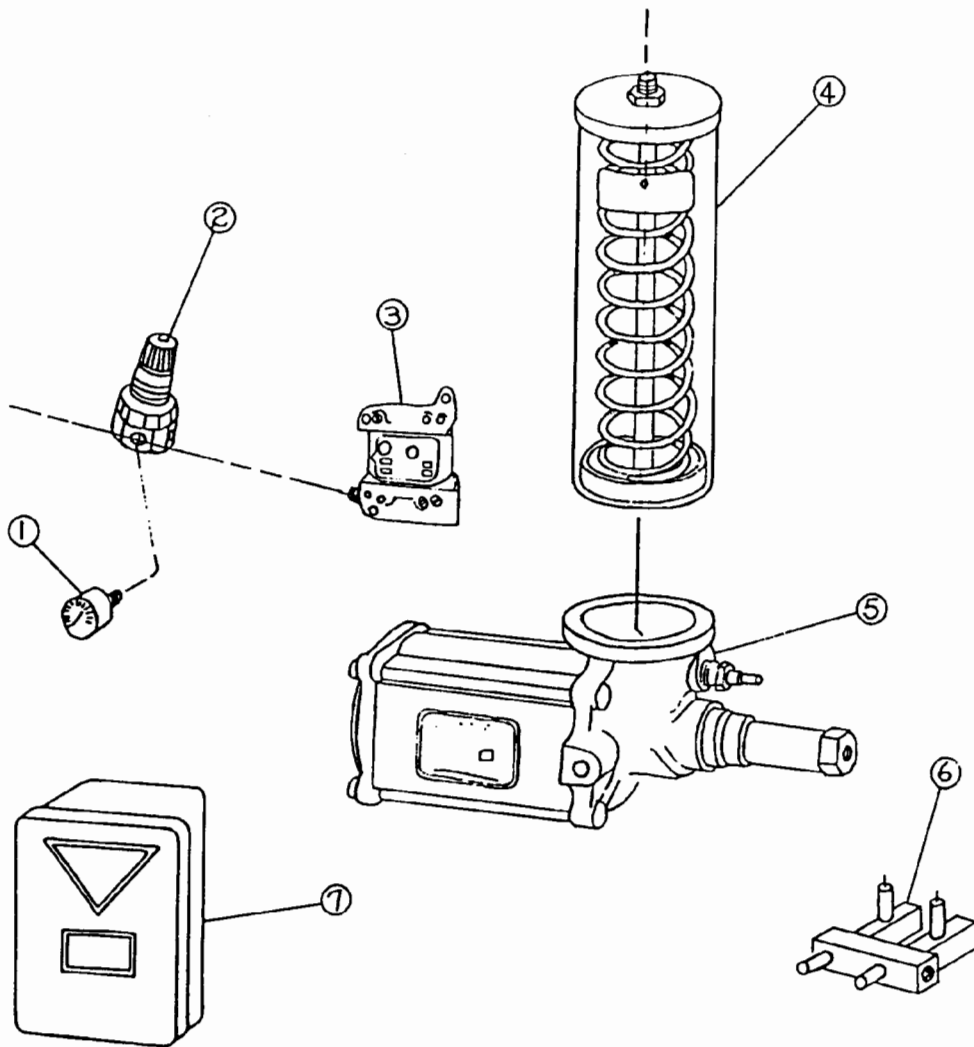
## **SECTION 906**

INDEX NO.	PART DESCRIPTION
1	GAUGE
2	REGULATOR
3	4 WAY SOLENOID AIR VALVE
4	LUBRICANT RESERVOIR
5	GREASE LUBRICANT RAM PUMP
6	INJECTORS WITH MOUNTING BRACKETS (Specify Number Of Injectors Per Unit)
7	CONTROLLER

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

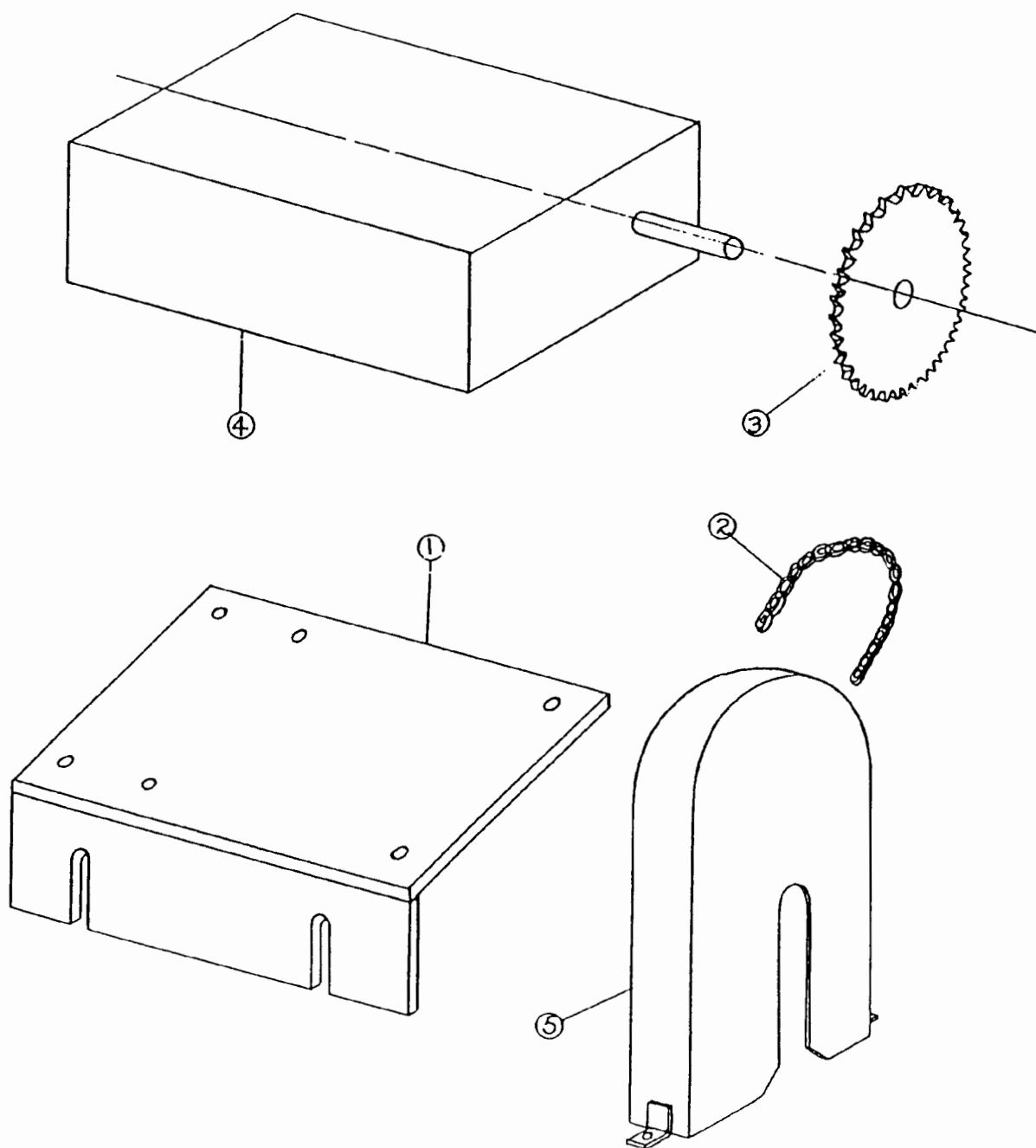
# GROUP 900

## GREASE SYSTEM



SECTION 906

**GROUP 900**  
**GEMCO CAM LIMIT SWITCH**  
**SECTION 907**



GROUP 900

SECTION 907

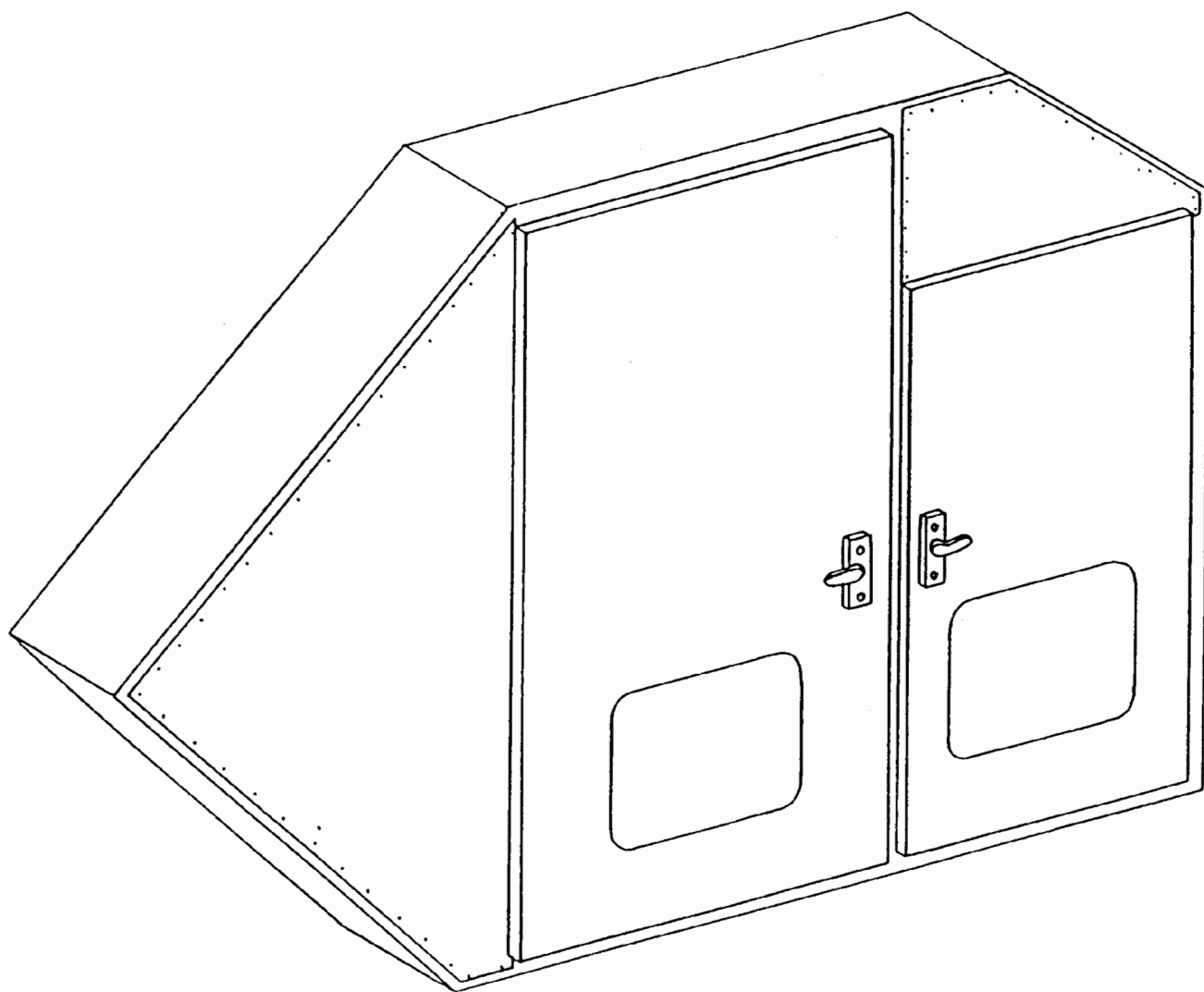
<u>INDEX NO.</u>	<u>PART DESCRIPTION</u>
1	CAM LIMIT SWITCH MOUNTING BRACKET
2	NO. 41 ROLLER CHAIN
3	SPROCKET WITH HUB
4	GEMCO CAM LIMIT SWITCH (SPECIFY A6 OR 8) SWITCH UNIT
5	CAM LIMIT SWITCH GUARD
6	TRANSDUCER
7	MOUNT FOR TRANSDUCER
8	RELAY MODULE
8A	1989-0-115-M-S RELAY MODULE (TRIM LINE ONLY)
9	QUICKSET P.L.S.
9A	1989-M-16-R-12-S-E-X PROGRAMER (TRIM LINE ONLY)
10	COUPLING FOR TRANSDUCER
11	CABLE 90° HEAD (TRANSDUCER TO QUICKSET)
11A	SD-3458-B CABLE (TRIM LINE ONLY)
12	CABLE 6' (QUICKSET TO RELAY MODULE)
12A	SD-3361-B CABLE (TRIM LINE ONLY)



# **GROUP 1000**

## **GUARDS**

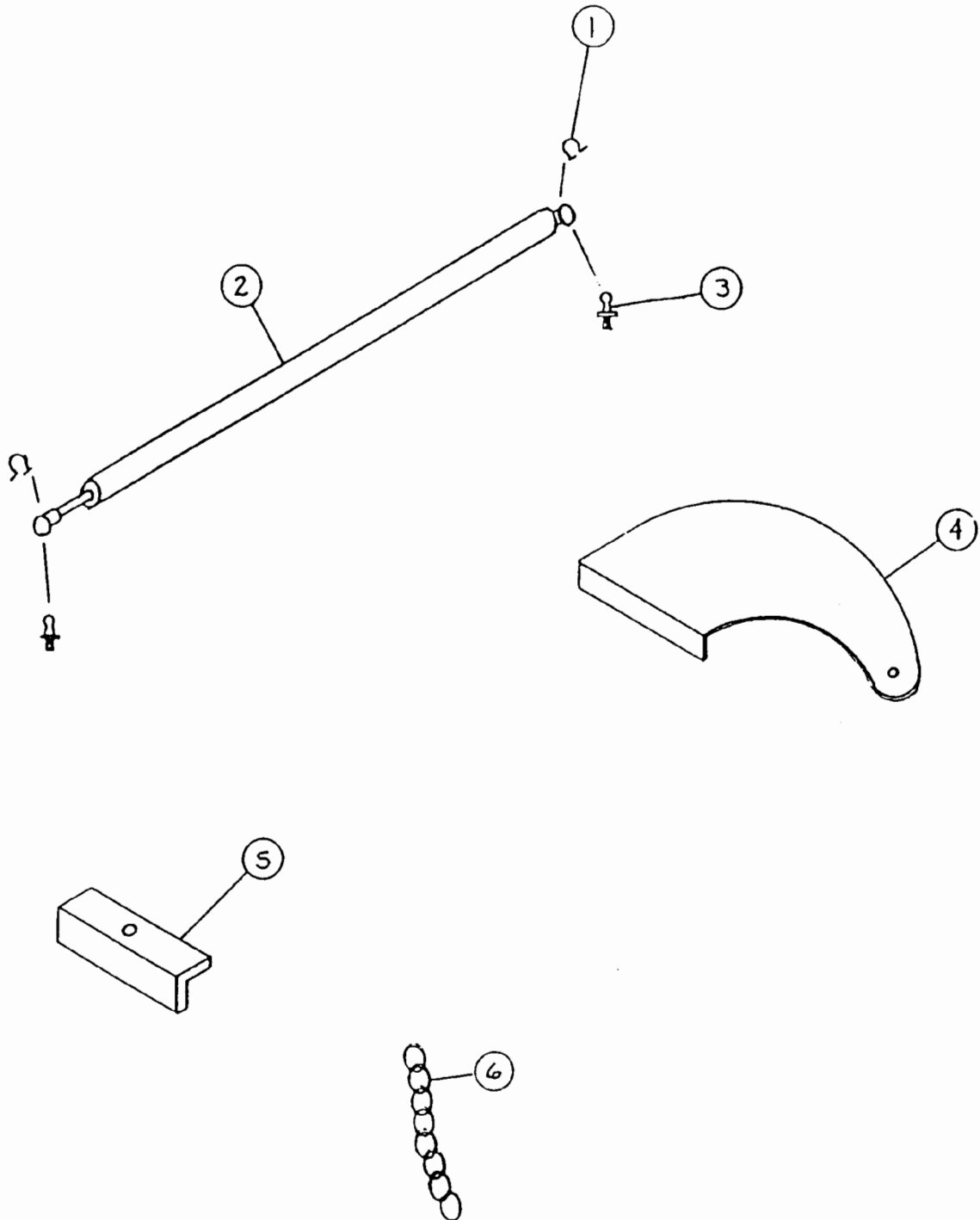
### **1000-700 GUARD**



**OPERATORS SIDE MACHINE GUARD**

\* STATE MACHINE SIZE WHEN ORDERING

GROUP 1000  
GUARDS  
1000-700 GUARD

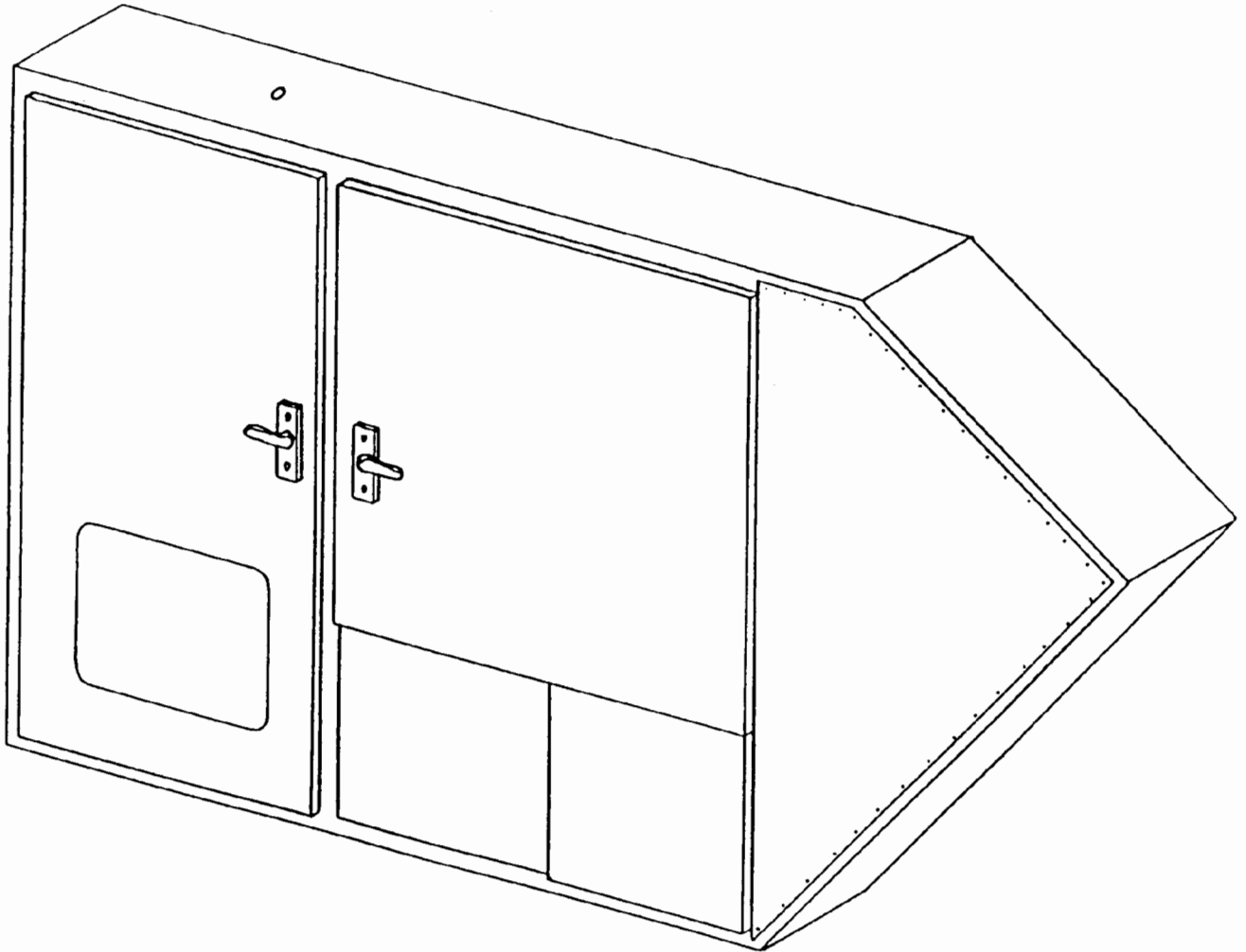


GROUP 1000

SECTION 700

INDEX NO.	PART DESCRIPTION
1	SAFETY CLIP
2	GAS CYLINDER
3	BALL STUD
4	LOWER DOOR BRACKET
5	UPPER DOOR BRACKET
6	SAFETY CHAIN

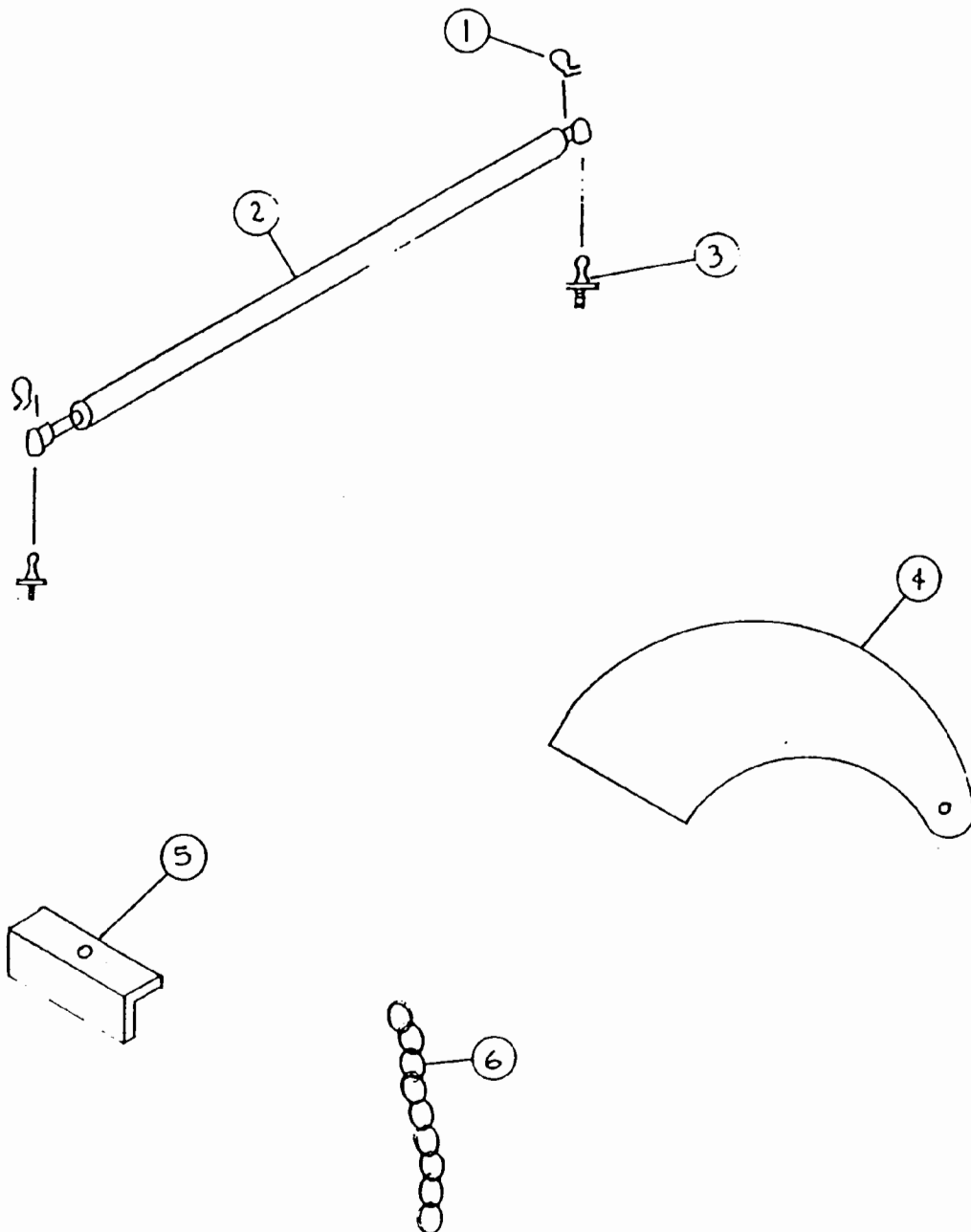
## 1000-700 2 GUARD



SIDE OPPOSITE OPERATOR MACHINE GUARD

\* STATE MACHINE SIZE WHEN ORDERING

GROUP 1000  
GUARDS  
1000-700-2 GUARD

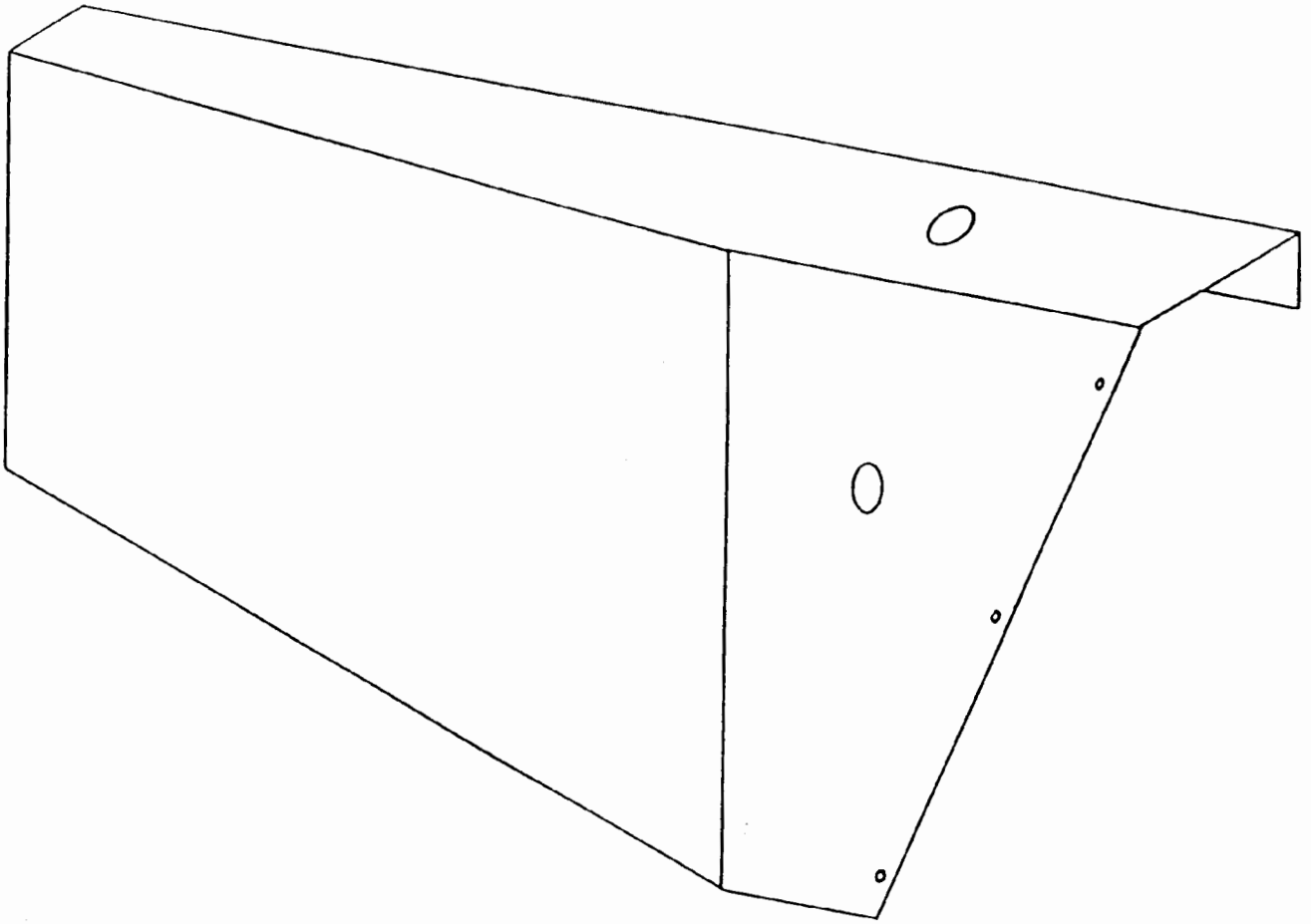


GROUP 1000

SECTION 700 - 2

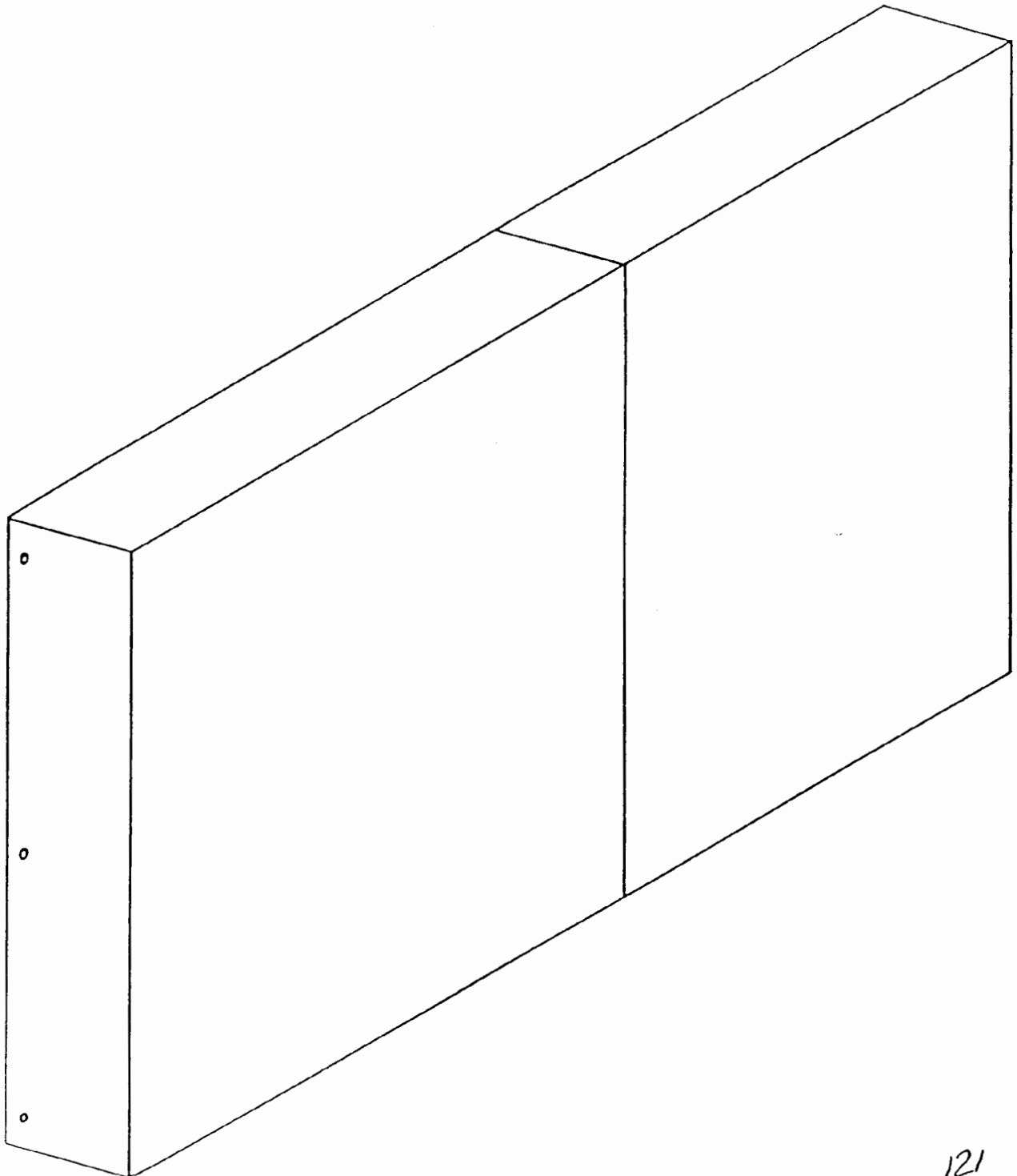
INDEX NO.	PART DESCRIPTION
1	SAFETY CLIP
2	GAS CYLINDER
3	BALL STUD
4	LOWER DOOR BRACKET
5	UPPER DOOR BRACKET
6	SAFETY CHAIN

## 1000-704 SIDE FEED GUARD



• STATE MACHINE SIZE WHEN ORDERING

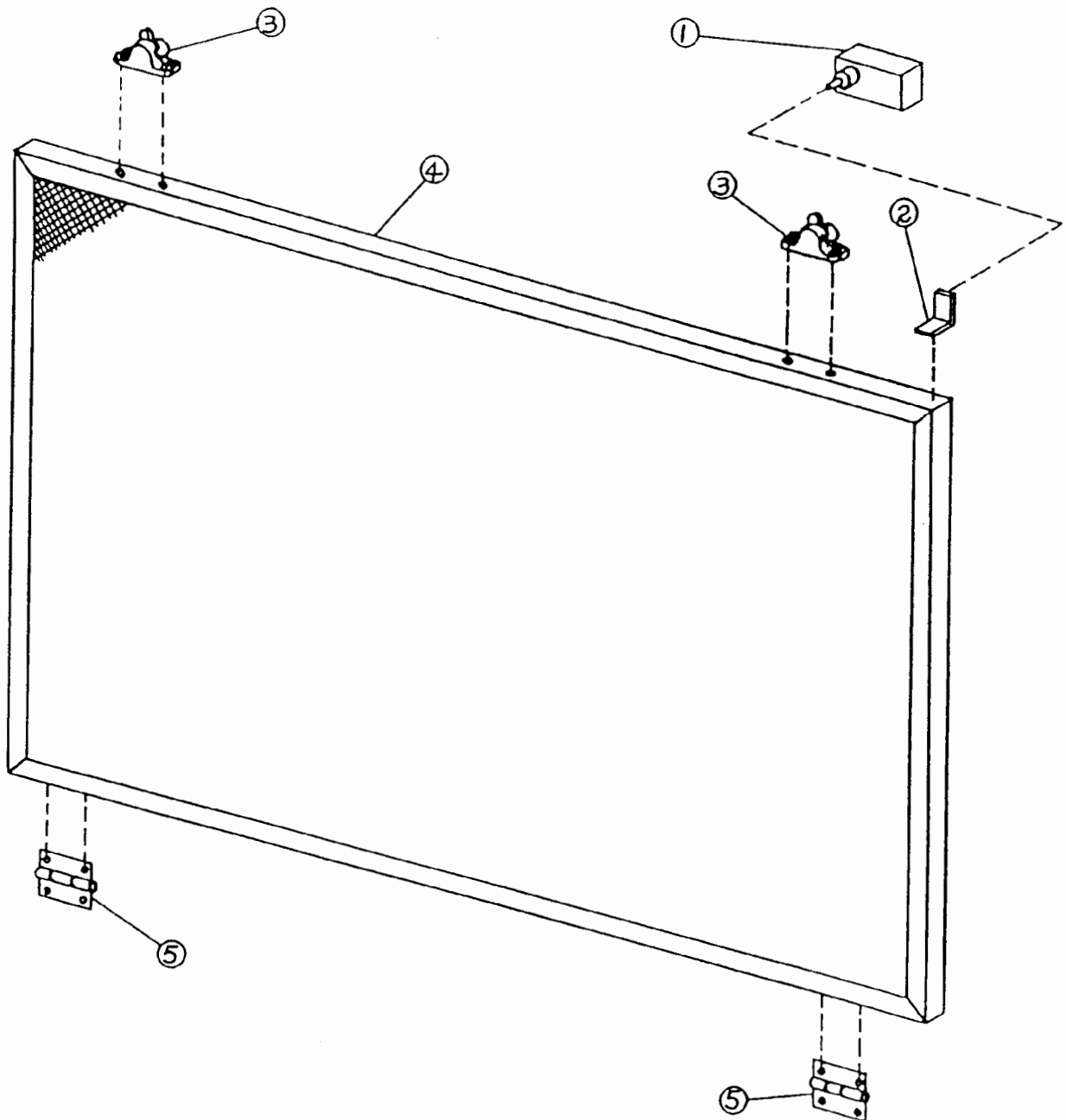
# 1000-705 COUNTER STACKER SIDE GUARD





# CUTTING DIE GUARD

1000-706



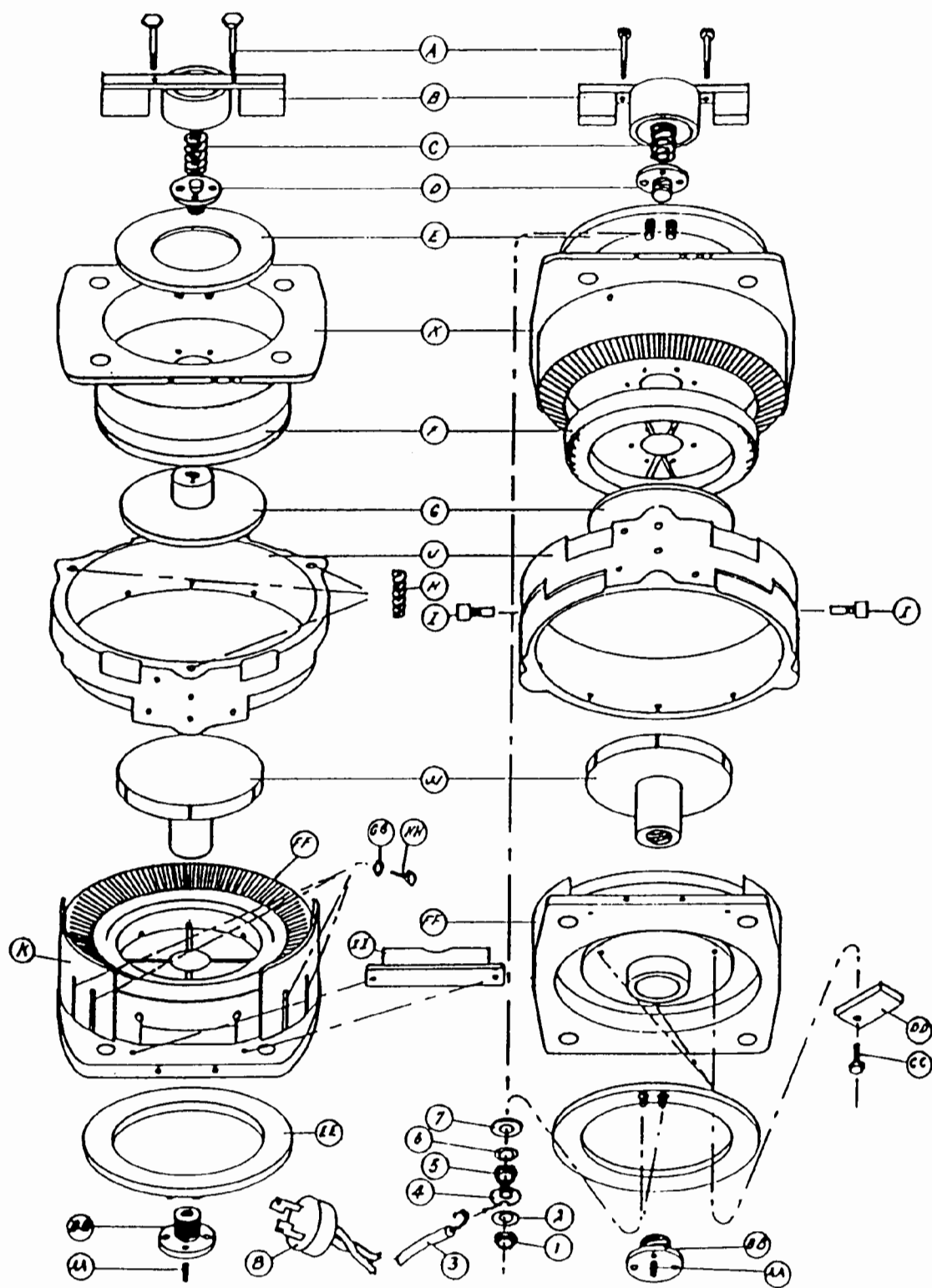
\* STATE MACHINE SIZE WHEN ORDERING

**GROUP 1000**  
**CUTTING DIE GUARD**  
**1000-706**

INDEX NO.	PART DESCRIPTION
1	LIMIT SWITCH
2	LIMIT SWITCH CONTACTOR
3	CAST ALUMINUM SASH FASTENER
4	CUTTING DIE GUARD
5	CUTTING DIE GUARD HINGES

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# FORMING DIE

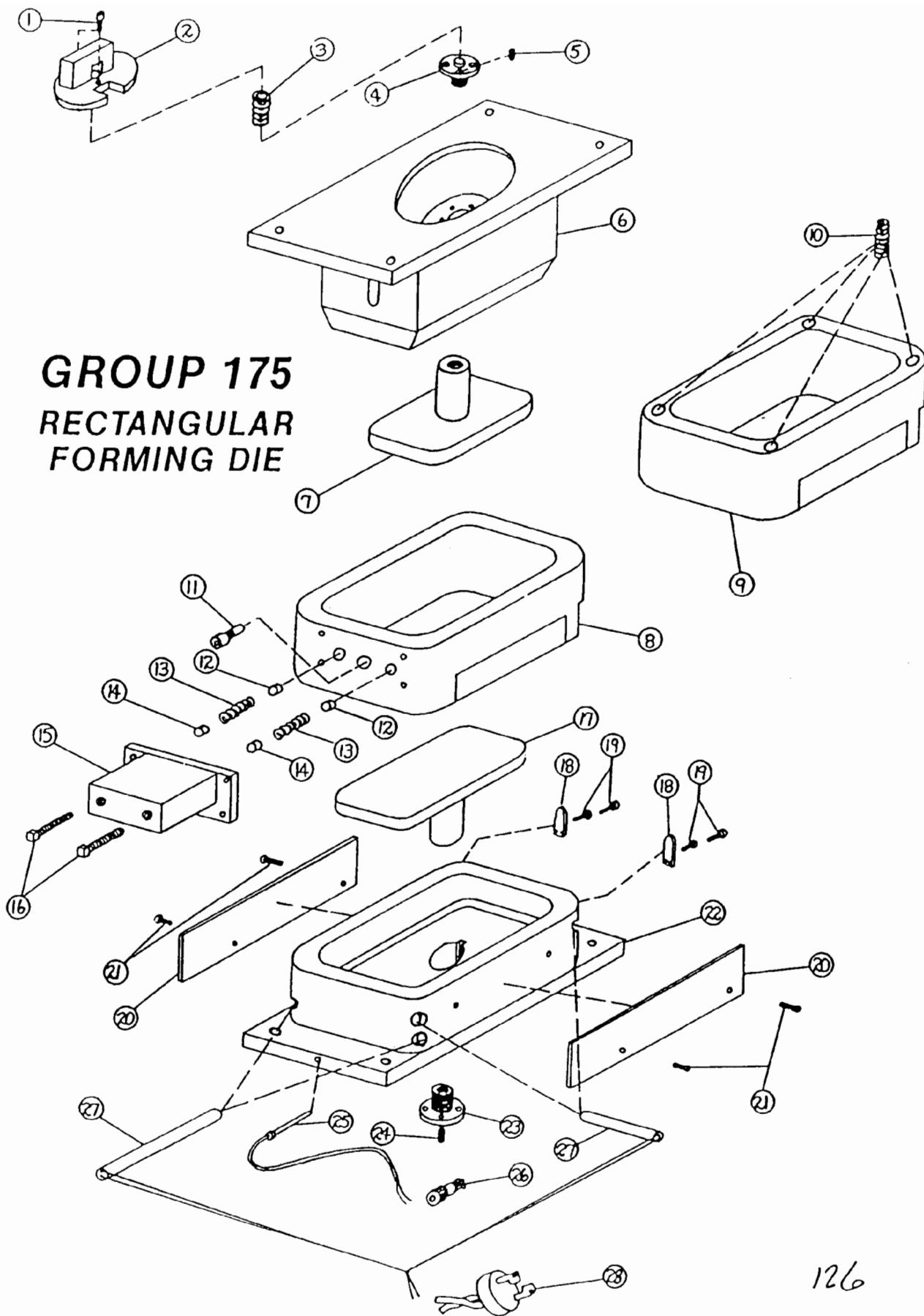


## FORMING DIE

<u>PART NO.</u>	<u>PART NAME — TOP HALF</u>
A	Heater Clamp Bolts — Top 150-1
B	Heater Clamp — Top 150-2
C	Top Plunger Spring 150-3
D	Top Plunger Cap 150-5
E	Heater Element — Top 150-6
K	Top Die Half 150-7
F	Top Die Insert 150-8
G	Top Plunger 150-9
H	Draw Ring Spring 150-10
I	Ring Stripper Bolts 150-11
J	Draw Ring 150-12

### PART NAME—BOTTOM HALF

AA	Plunger Cap Set Screw 150-32
BB	Plunger Cap — Bottom 150-31
CC	Heater Clamp Bolt — Bottom 150-29
DD	Heater Clamp — Bottom 150-30
EE	Heater Element 150-6
FF	Bottom Die Half 150-16
GG	Blank Stop Washer No Longer Use
HH	Blank Stop Bolt 150-17
II	Thermostat Bulb Holder No Longer Use
JJ	Bottom Plunger 150-15
K	Die Blank Stop 150-18
3	Heater Element Wire 150-26
8	Twist Lock Cap 150-33



**GROUP 175**  
**RECTANGULAR**  
**FORMING DIE**

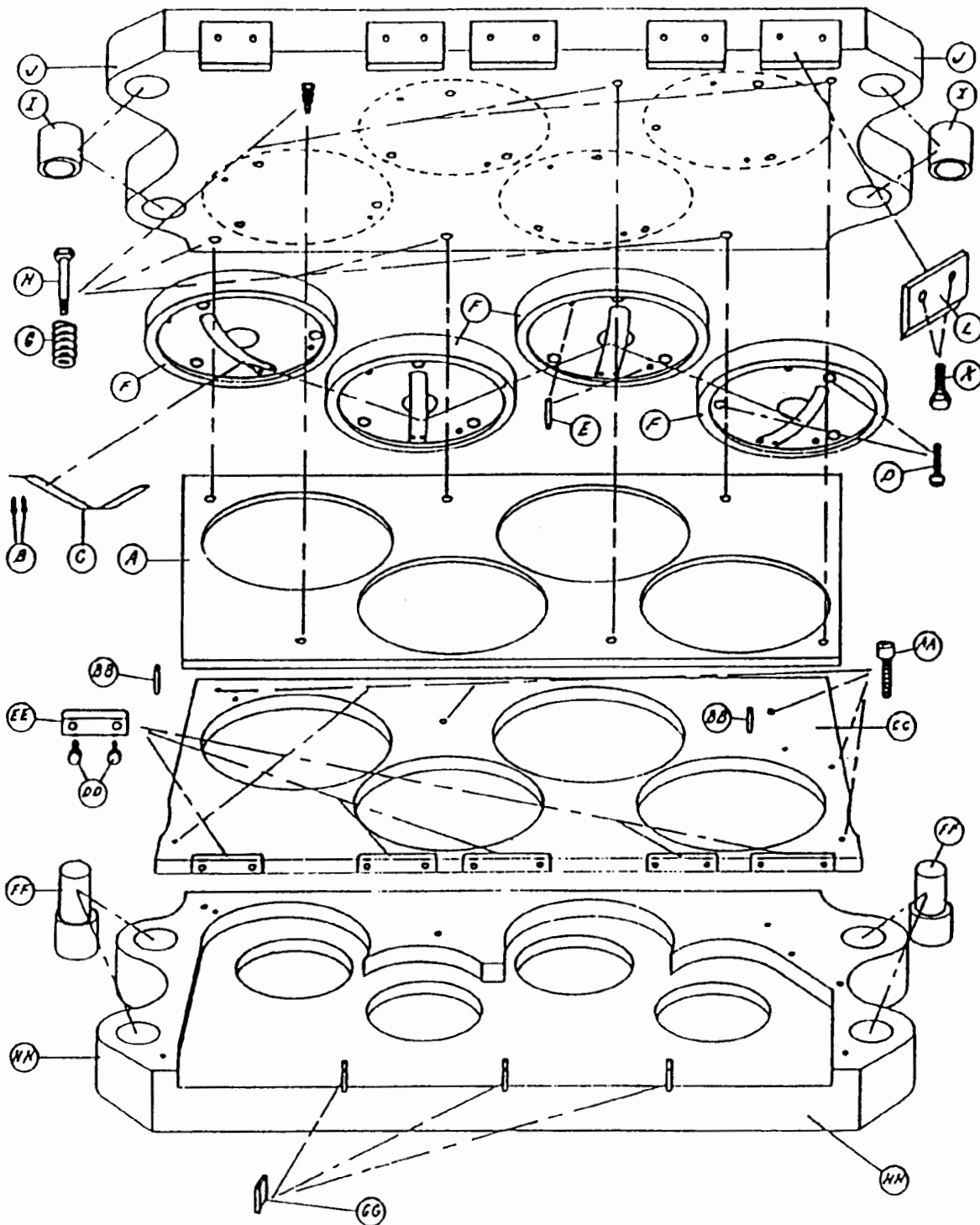
# GROUP 175

## RECTANGULAR FORMING DIE

INDEX NO.	PART DESCRIPTION
1	HEATER CLAMP BOLT
2	HEATER CLAMP
3	TOP PLUNGER SPRING
4	TOP PLUNGER CAP
5	TOP PLUNGER CAP SET SCREW
6	TOP DIE HALF
7	TOP PLUNGER
8	DRAW RING (Brake Band Type)
9	DRAW RING (Spring Loaded Type)
10	DRAW RING SPRING
11	RING STRIPPER BOLT
12	BRAKE PADS
13	BRAKE BAND SPRING
14	BRAKE BAND INSERTS
15	KNOCKDOWN EAR
16	BRAKE BAND ADJUSTMENT BOLT
17	BOTTOM PLUNGER
18	BLANK STOP
19	BLANK STOP BOLT
20	BLANK SIDE GUIDE
21	BLANK SIDE GUIDE SCREW
22	BOTTOM DIE HALF
23	BOTTOM PLUNGER CAP
24	BOTTOM PLUNGER CAP SET SCREW
25	THERMISTER OR THERMOCOUPLE PROBE
26	THERMISTER OR THERMOCOUPLE PLUG
27	HEATER ELEMENT
28	TWIST LOCK CAP

ATTENTION: ALWAYS INDICATE GROUP NO., SECTION NO., INDEX NO. AND  
PRESS MODEL & SERIAL NO. WHEN ORDERING PARTS.

# J — BLANKING DIE



## BLANKING DIE

PART NO.	PART NAME
A	Stripper Plate 251-6
B	Knockout Spring Screws 251-5
C	Knockout Spring 251-4
D	Punch Bolts 251-2
E	Punch Dowel Pins 251-3
F	Die Punch 251-1
G	Stripper Spring 251-12
H	Stripper Bolt 251-11
I	Liner Pin Bushing 251-8
J	Top Die Shoe 251-7
K	Cut Off Knife Bolt 251-10
L	Cut Off Knife 251-9
AA	Die Plate Bolts 250-8
BB	Die Plate Dowel Pins 250-7
CC	Die Plate 250-11
DD	Cut Off Insert Bolts 250-10
EE	Cut Off Inserts 250-9
FF	Liner Pins 250-5
GG	Bridges 250-12
HH	Bottom Die Shoe 250-6



## RE-SHARPENING PROCEDURES OF PEERLESS BLANKING DIES

1. Remove die from press and take apart.
2. Remove stripper plate, punches, cut-off knives and inserts.
3. Grind outside diameter of punch .002 or .003 at most. If punch is more than .015 under original size, replace.
4. Grind face of punch till sharp per print #1 enclosed.
5. Check guide pins and bushings for wear. If more than .003 clearance, replace.
6. Remount punches.
7. Put blue Dykem or other marking liquid on cutting edge of plate as marked on drawing.
8. Put dies together using test press or C-Clamps on each end of die, and hit top shoe with lead hammer till punches are through the plate.
9. Take dies apart. Areas of the plate that still have the blue Dykem on cutting edge have to be peened with a ball peen hammer as shown on drawing.
10. Repeat steps 7, 8 and 9 until the punch wipes off Dykem all the way around the cutting edge of plate.
11. File top side of plate, where peened, till cutting edge is sharp.

## SHARPENING CUT-OFF KNIVES AND INSERTS

1. Grind face of insert till sharp.
  2. Grind angle of knife till sharp.
  3. Remount knives as they were.
  4. Remount inserts using shims behind insert till they are flush with plate.
- Completely assemble die.