Instructions and Parts List

# 3M-Matic™ 700r Random Case Sealer with AccuGlide™ II Taping Heads

Type 19000

## Important Safeguards

Turn to page three for operating safety information.

## Important

It is recommended you immediately order the spare parts listed on page 44. These parts are expected to wear through normal use, and should be kept on hand to minimize production delays.



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Litho in U.S.A.

**3M Masking and Packaging Systems Division**
3M Center Bldg. 220-8W-01
St. Paul, MN 55144-1000

3M

# To Our Customers:

**This is the 3M-Matic™/AccuGlide™/Scotch™ brand equipment you ordered. It has been set up and tested in the factory with "Scotch" brand tapes. If technical assistance or replacement parts are needed, call or Fax the appropriate number listed below.**

**Included with each machine is an Instructions and Parts List manual.**

## Technical Assistance:

3M-Matic™ Helpline – 1-800/328 1390. Please provide the customer support coordinator with the machine number, machine type/model and serial number. If you have a technical question that does not require an immediate response, you may Fax it to 715/381 0248.

## Replacement Parts and Additional Manuals

Order parts by part number, part description and quantity required. Also, when ordering parts and/or additional manuals, include machine name, number and type. A parts order form is provided at the back of this manual.

**3M/Tape Dispenser Parts**
**241 Venture Drive**
**Amery, WI 54001-1325**

**1-800/344 9883**
**FAX# 715/268 8153**

**Minimum billing on parts orders will be $25.00. Replacement part prices available on request.**
**$10.00 restocking charge per invoice on returned parts.**
Note : Outside the U.S., contact the local 3M subsidiary for parts ordering information.

3M

**3M Packaging Systems Division**
3M Center, Building 220-8W-01
St. Paul, MN 55144-1000


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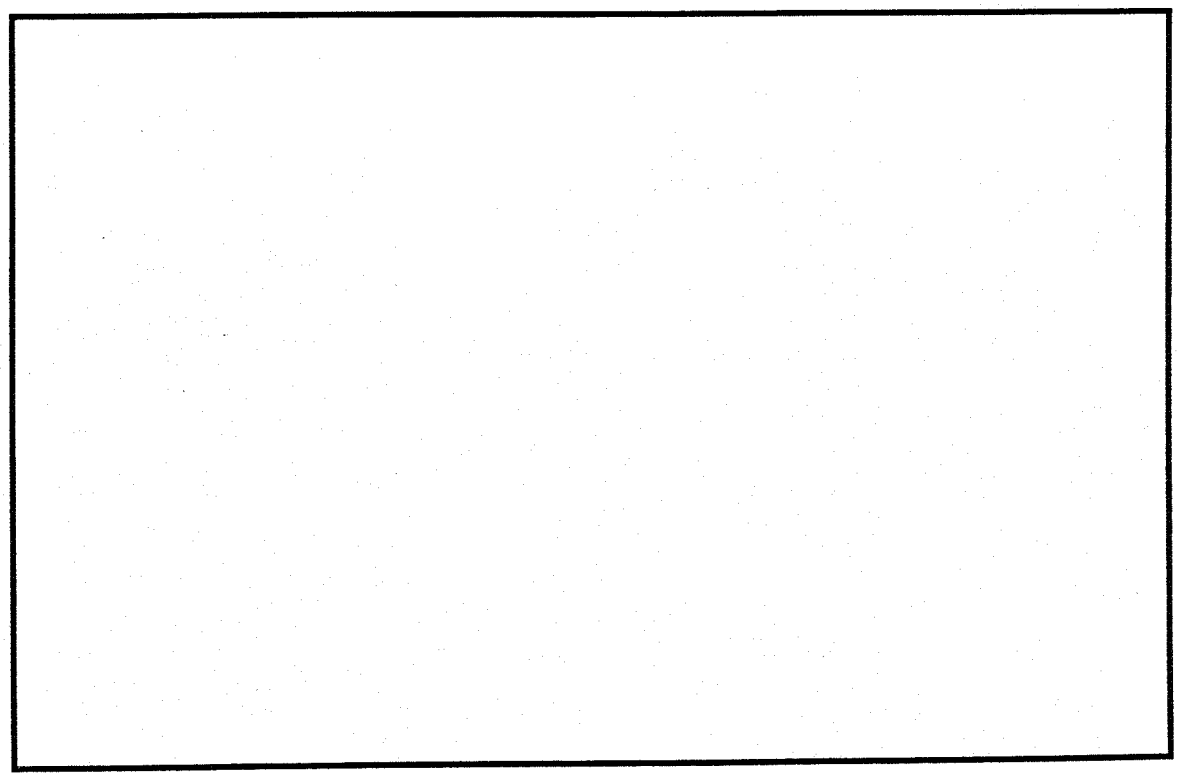
# To Our Customers:

**This is the 3M-Matic™/AccuGlide™/Scotch™ brand equipment you ordered. It has been set up and tested in the factory with "Scotch" brand tapes. If any problems occur when operating this equipment, and you desire a service call, or phone consultation, call, write or Fax the appropriate number listed below.**

**Included with each machine is an Instructions and Parts List manual.**

**SERVICE, REPLACEMENT PARTS AND ADDITIONAL MANUALS AVAILABLE DIRECT FROM:**



Order parts by part number, part description and quantity required. Also, when ordering parts and/or additional manuals, include machine name, number and type.

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**3M Packaging Systems Division**

3M Center, Building 220-8W-01
St. Paul, MN 55144-1000
1-800/328 1390

Instruction Manual
700r Random Case Sealer
Type 19000

Table of Content — Page



(Table of Content continued on next page)

Table of Content (Continued) Page



**Equipment Warranty and Limited Remedy: THE FOLLOWING WARRANTIES ARE MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, A CUSTOM OR USAGE OF TRADE:**

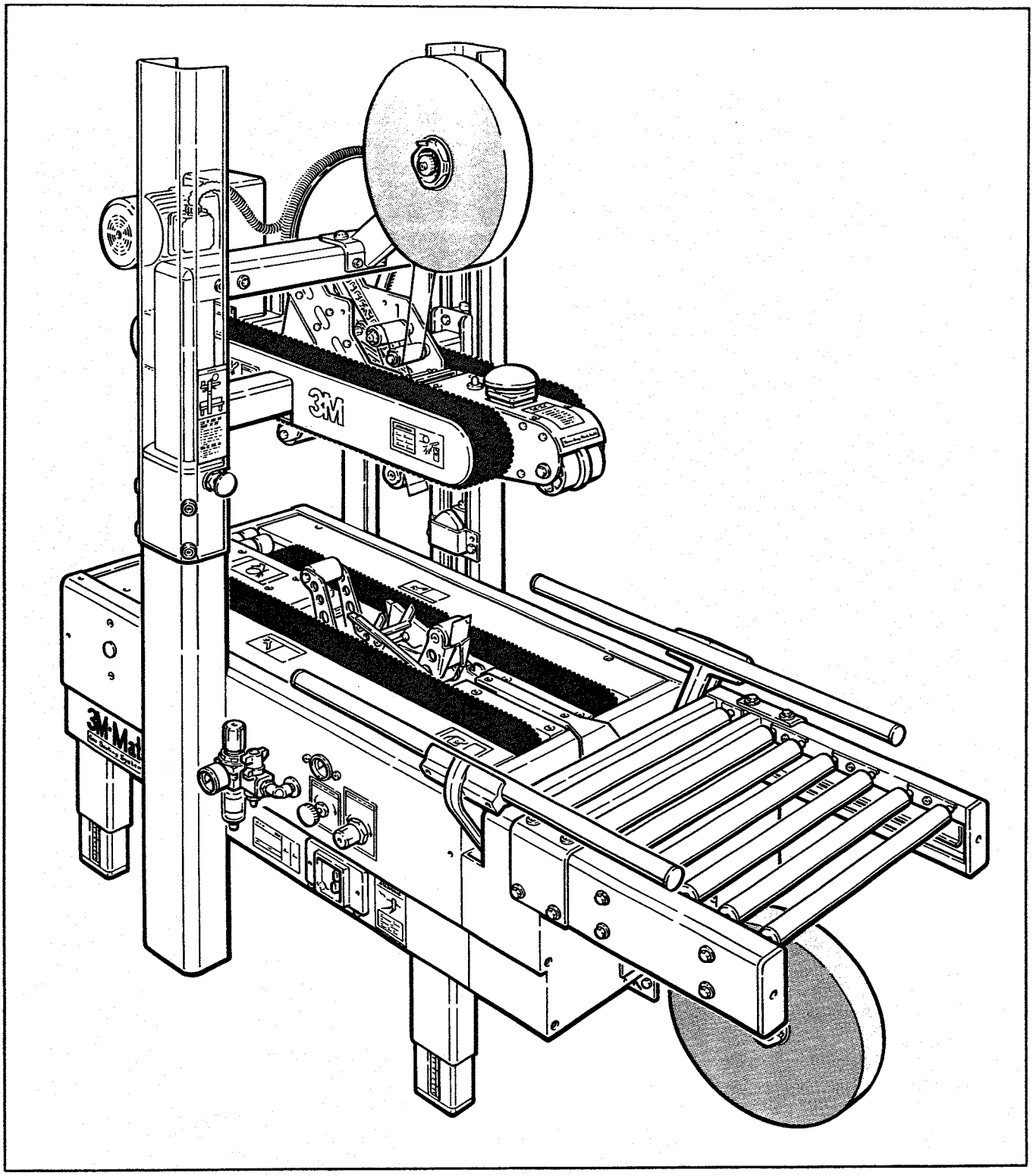
3M Sells its 3M-Matic™ 700r Random Case Sealer, Type 19000 with the following warranties:

1. The Taping Head knife blades, springs and rollers will be free from all defects for ninety (90) days after delivery.
2. All other Taping Head parts will be free from all defects for three (3) years after delivery.
3. The gearmotor will be free from all defects for one (1) year after delivery.
4. All other parts will be free from all defects for ninety (90) days after delivery.

If any part is proved to be defective within its warranty period, then the exclusive remedy and 3M's and seller's sole obligation shall be, at 3M's option, to repair or replace the part, provided the defective part is returned immediately to 3M's factory or an authorized service station designated by 3M. A part will be presumed to have become defective after its warranty period unless the part is received or 3M is notified of the problem no later than five (5) calendar days after the warranty period. If 3M is unable to repair or replace the part within a reasonable time, then 3M, at its option, will replace the equipment or refund the purchase price. 3M shall have no obligation to provide or pay for the labor required to install the repaired or replacement part. 3M shall have no obligation to repair or replace (1) those parts failing due to operator misuse, carelessness, or due to any accidental cause other than equipment failure, or (2) parts failing due to non-lubrication, inadequate cleaning, improper operating environment, improper utilities, or operator error.

**Limitation of Liability:** 3M and seller shall not be liable for direct, indirect, special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability or any other legal theory.

The foregoing Equipment Warranty and Limited Remedy and Limitation of Liability may be changed only by a written agreement signed by authorized officers of 3M and seller.



**"3M-Matic" 700r Random Case Sealer - Type 19000**

## Description

The **"3M-Matic"** 700r Random Case Sealer with **"AccuGlide"** II Taping Heads is designed to apply a "C" clip of **"Scotch"** brand Pressure-sensitive Film Box Sealing Tape to the top and bottom center seams of regular slotted containers. The 700r will automatically adjust to a wide range of box sizes (see box size specifications).

NOTE: IN THE EVENT THESE SAFETY LABELS SHOWN ON PAGES 3-8 ARE DAMAGED OR DESTROYED, REPLACEMENTS ARE AVAILABLE. SEE PAGE 44.

There are four kinds of warning labels used on the case sealers.

The two illustrated labels (A-B), "Warning Sharp Knife" shown in figure 1-1, are attached to the sides of the upper frame at the location of the cut-off blade on the upper taping head. Two similar labels are attached to the bed frame at the location of the cut-off blade on the lower taping head. The labels warn operators and service personnel of the very sharp knife used to cut the tape at the end of the tape application.

The "Warning - Sharp Knife" label (C), shown in figure 1-1, is attached to the orange cut-off blade guard on both taping heads. The label warns the operator and service personnel of the very sharp knife located behind the guard and to keep hands out of this area except for tape loading and/or servicing the taping heads.

The taping heads are equipped with an orange blade guard that covers the blade. The taping heads should never be operated with the blade guards removed.

Turn air and electrical supplies off before servicing the taping heads.

The taping heads should not be washed down or subject to conditions causing moisture condensation on components.

The "Warning - Hazardous Voltage" label, shown in figure 1-2, is attached to the frame next to the on/off switch control box. The label warns service personnel to unplug the power supply before attempting any service work on the case sealer.

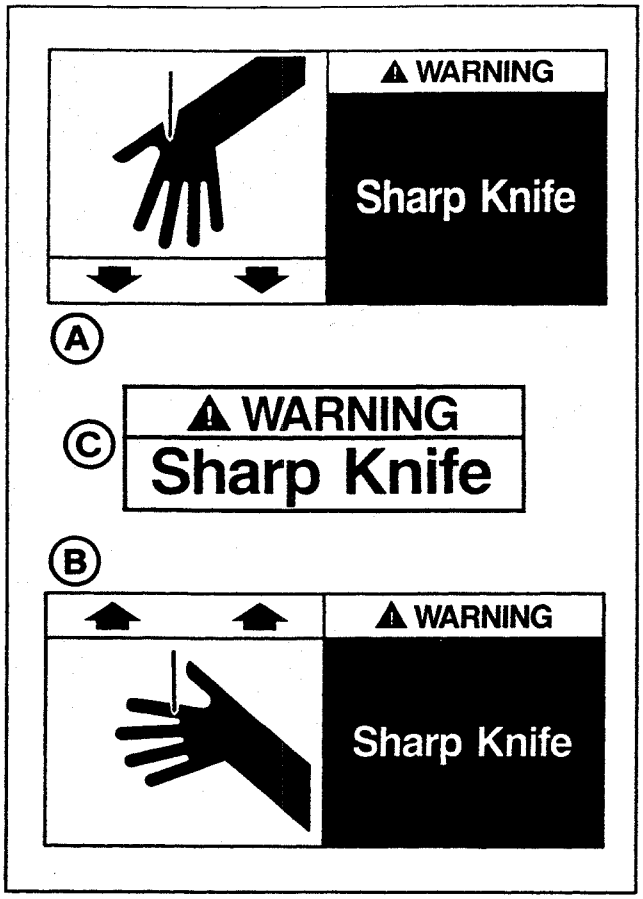



Figure 1-1 - Knife Warning Labels

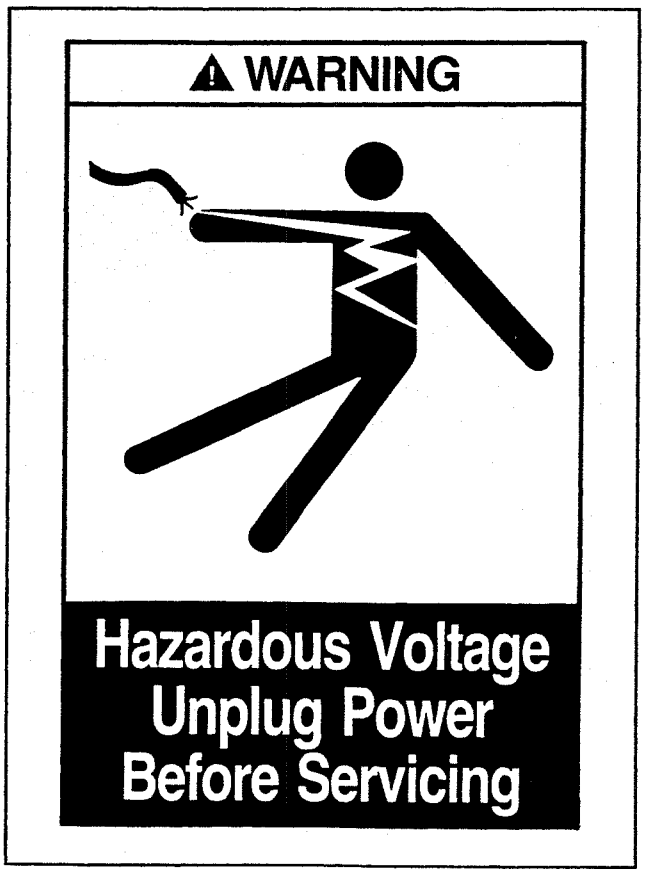



Figure 1-2 - Electrical Warning Label

The two **"Warning - Keep Hands Away From Moving Belts"** labels, as shown in **figure 1-3**, are located on the right and left side panel of the upper head frame - infeed end. The labels warn operators and service personnel to keep hands away from this area when the drive belts are running.

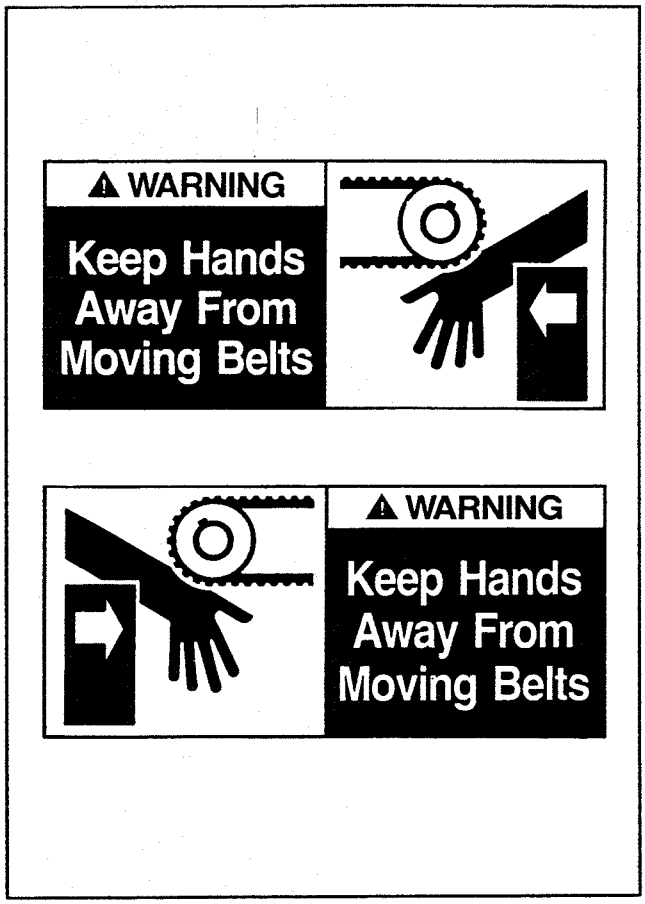



**Figure 1-3 - Hands Warning Label**

The **"Caution - Keep Hands Out Of This Area"** label, shown in **figure 1-4**, is attached to the center plate at the exit end of the bed frame. The label warns the operator to keep hands out of this area when the drive belts are running.


**Figure 1-4 - Hands Caution Label**

The second **"Caution - Keep Hands Out Of This Area"** label, shown in **figure 1-5,** is attached to the gear motor at the rear of the upper frame. It warns the operator to keep hands out of this area when the upper taping head mechanism is in operation.


**Figure 1-5 - Hands Caution Label**

The **"Safety Instructions"** label, shown **in figure 1-6,** is attached to the top front of the upper frame. The label provides convenient safeguard instructions for the operator and service personnel.

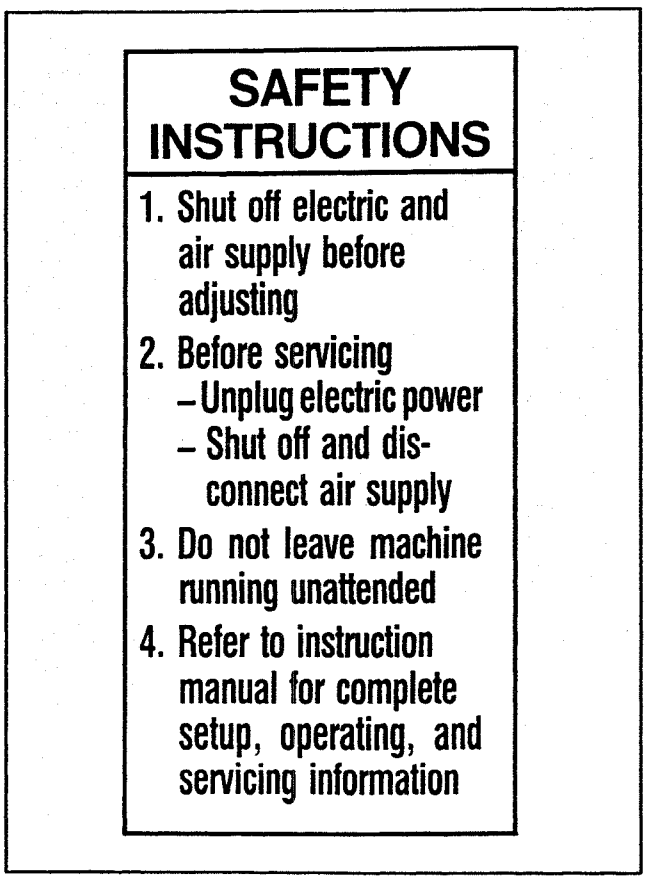



**Figure 1-6 - Safety Instructions Label**

The **"Notice - Feed Box From This End"** label, shown in **figure 1-7**, is attached to the right side plate at the infeed end of the bed frame. It alerts the operator that this is the infeed end of the case sealer.

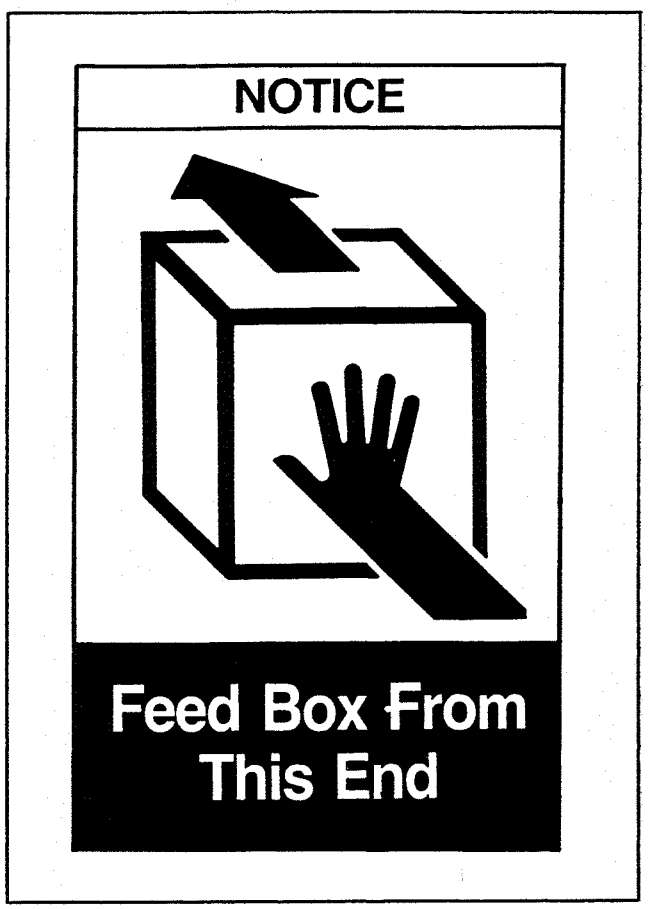



**Figure 1-7 - Box Feed Label**

The **"Notice - Raise and Lower Upper Drive Assembly"** label, shown in **figure 1-8**, is attached to the left hand plastic column guard. The label provides instructions on raising and lowering the upper drive assembly.

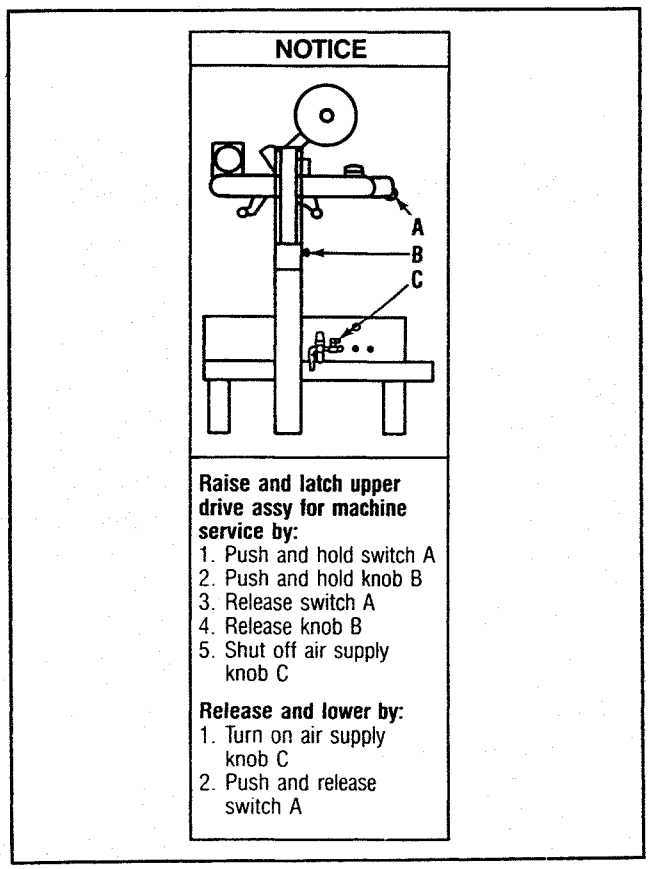



**Figure 1-8 - Upper Drive Assembly Label**

The **"Centering Guide Force Adjust"** label, shown in **figure 1-9,** is attached to the left side frame over the centering guide control knob. The label provides increase/decrease force information to the operator.

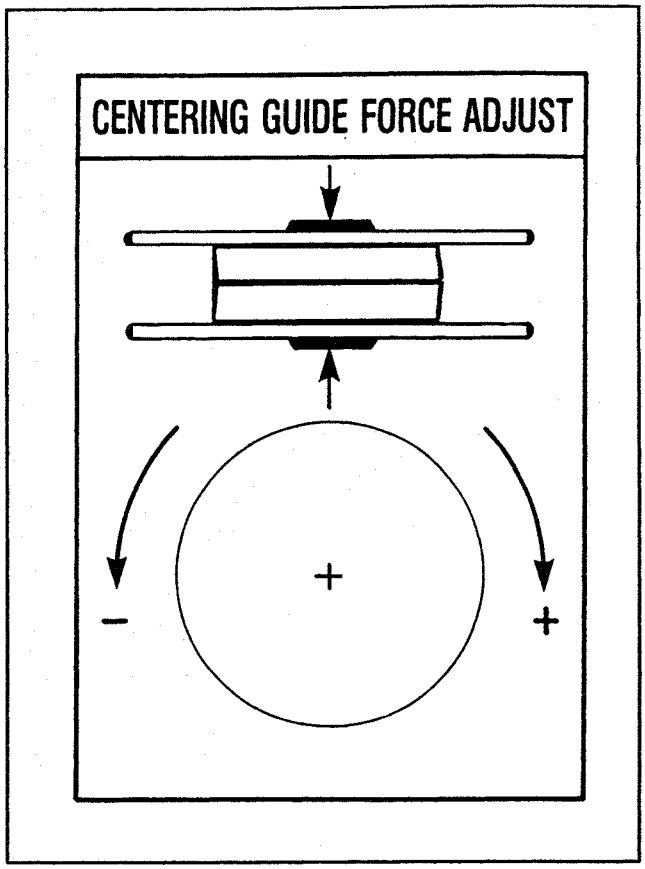



**Figure 1-9 - Centering Guide Force Adjust Label**

The **"Top Drive Assembly Force Adjust"** label, shown in **figure 1-10,** is attached to the left side frame over the top drive assembly control knob. The label provides increase/decrease force information to the operator.

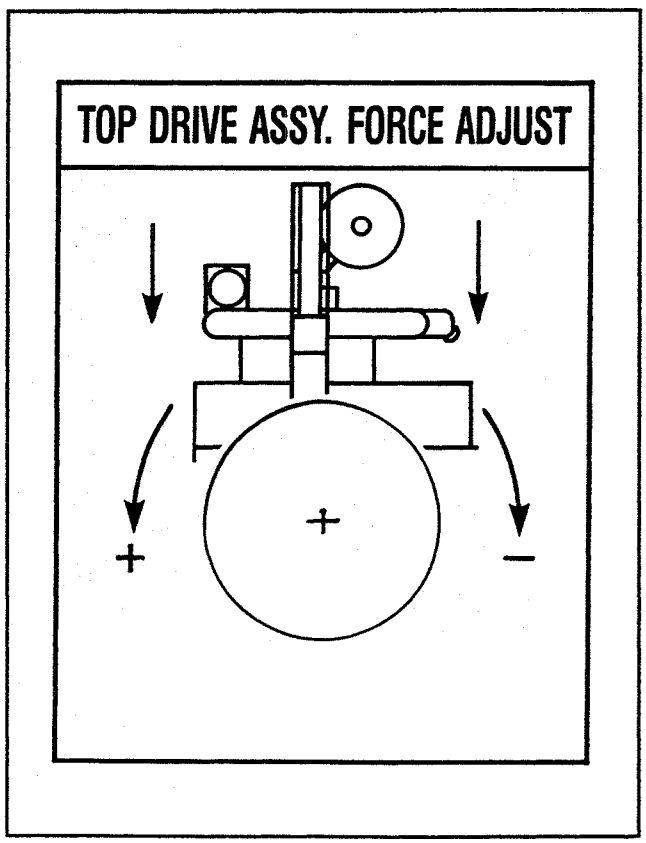



**Figure 1-10 - Top Drive Assembly Force Adjust Label**

The **"Box Centering Switch"** label (A), shown in **figure 1-11**, is attached to the switch which is located in the center of the bed frame at the infeed end. The label identifies the box centering switch.

The **"Drive Assembly Raising Switch"** label (B), shown in **figure 1-11**, is located above the switch which is at the front of the upper frame. The label identifies the drive assembly raising switch.

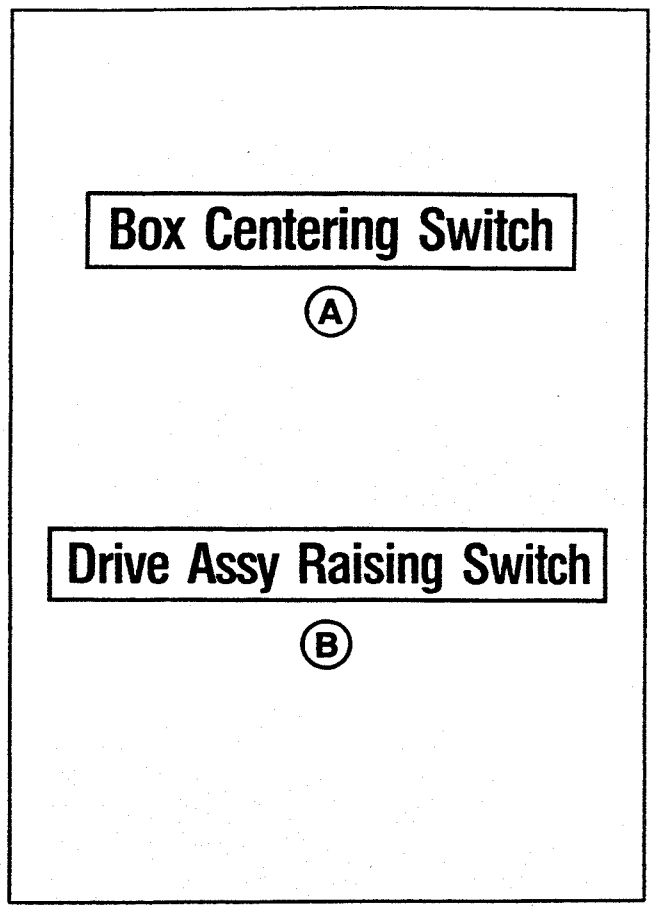



**Figure 1-11 - Box Centering Switch/Drive Assembly Raising Switch**

The **"Tape Threading Label"**, shown in **figure 1-12**, is attached to the left side of both the upper and lower taping heads. This label provides a convenient tape threading diagram. More detailed tape loading and threading information is provided in this manual in the set-up procedure section.

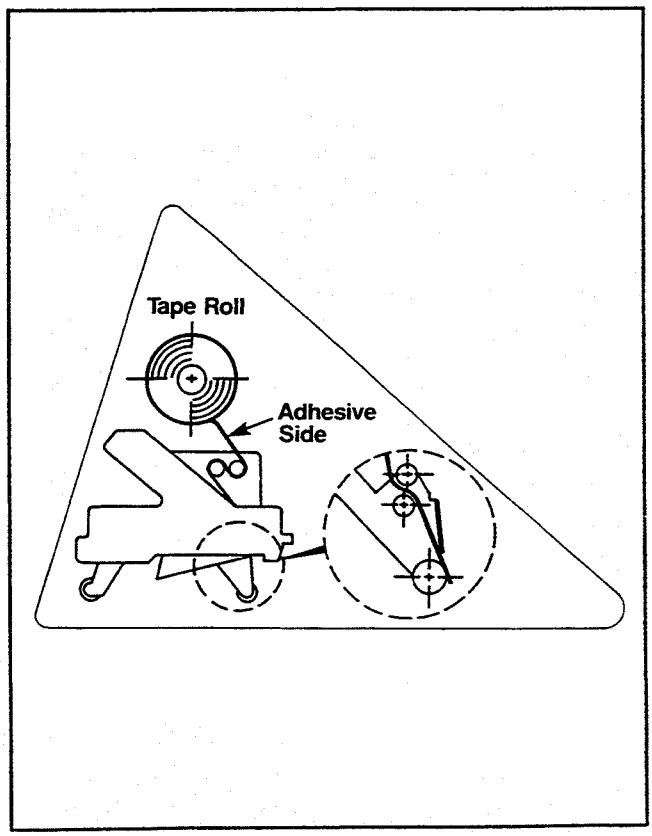



**Figure 1-12 - Tape Threading Label**

The 700r is equipped with a centrally located stop switch, shown in figure 1-13. This pushbutton switch is accessible from either side of the machine for operator convenience.

**THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. READ AND UNDERSTAND THEM BEORE INSTALLING OR OPERATING THIS EQUIPMENT.**

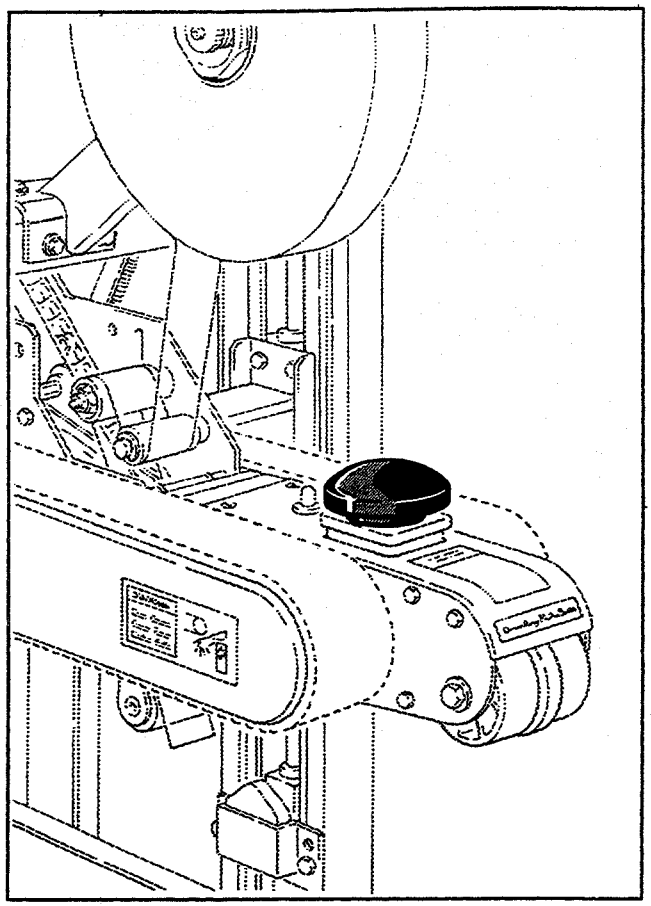


**Figure 1-13 - Centrally Located Stop Switch**

## Specifications

1. **Power Requirements:**

   Electrical - 115V, 60Hz, 3.8A, 440 watts
   Pneumatic - 70 PSIG [5 bar gauge pressure]
   3.75 SCFM [110 litre/min @ 21° C, 1,01 bar] at 15 boxes per minute.
   A pressure regulator is included.

   The machine is equipped with two 1/6 HP gearmotors and comes with an eight foot [2,4 m] standard neoprene covered power cord and a grounded plug.
   Contact your 3M Representative for power requirements not listed above.

2. **Operating Rate:**

   Up to 15 boxes per minute. Actual production rate is dependent on box size, box size mix, and operator dexterity.

   Box drive belt speed is 75 FPM [0,38 m/s]

3. **Operating Conditions:**

   Use in dry, relatively clean environments at 40° to 120°F [4° to 50°C] with clean, dry boxes.

   **IMPORTANT SAFEGUARD**

   Machine should not be washed down or subjected to conditions causing moisture condensation on components.

4. **Tape:**

   **"Scotch"** brand pressure-sensitive film box sealing tapes.

5. **Tape Width:**

   1 1/2 inches or 36 mm minimum to 2 inches [50 mm] maximum.

6. **Tape Roll Diameter:**

   Up to 16 inches [405 mm] maximum on a 3 inch [76,2 mm] diameter core.
   (Accommodates all system roll lengths of **"Scotch"** brand film tapes.)

7. **Tape Application Leg Length - Standard:**

   2 3/4 inches $\pm$ 1/4 inch [70 mm $\pm$ 6 mm]

   **Tape Application Leg Length - Optional:**

   2 inches $\pm$ 1/4 inch [50 mm $\pm$ 6 mm]

(Specifications continued on next page.)

8. **Box Board:**

Style - regular slotted container - RSC
125 to 275 P.S.I. bursting test, single wall or double wall B or C flute.

9. **Box Weight and Size Capacities:**

A. Box weight, up to 85 lbs. [38,6 kg] **maximum** - contents must support flaps.

B. Box size:

| | **Minimum** | **Maximum** |
|---|---|---|
| Length - | 6.0 inches [150 mm] | unlimited |
| Width - | 6.0 inches [150 mm]* | 21.5 inches [550 mm] |
| Height - | 4.8 inches [120 mm]** | 24.5 inches [620 mm] |

* **Note:** Cartons narrower than 10 inches [250 mm] in width may require more frequent belt replacement because of limited contact area.
** 3.5 inches [90 mm] height with heads adjusted to apply 2 inch [50 mm] tape leg lengths.

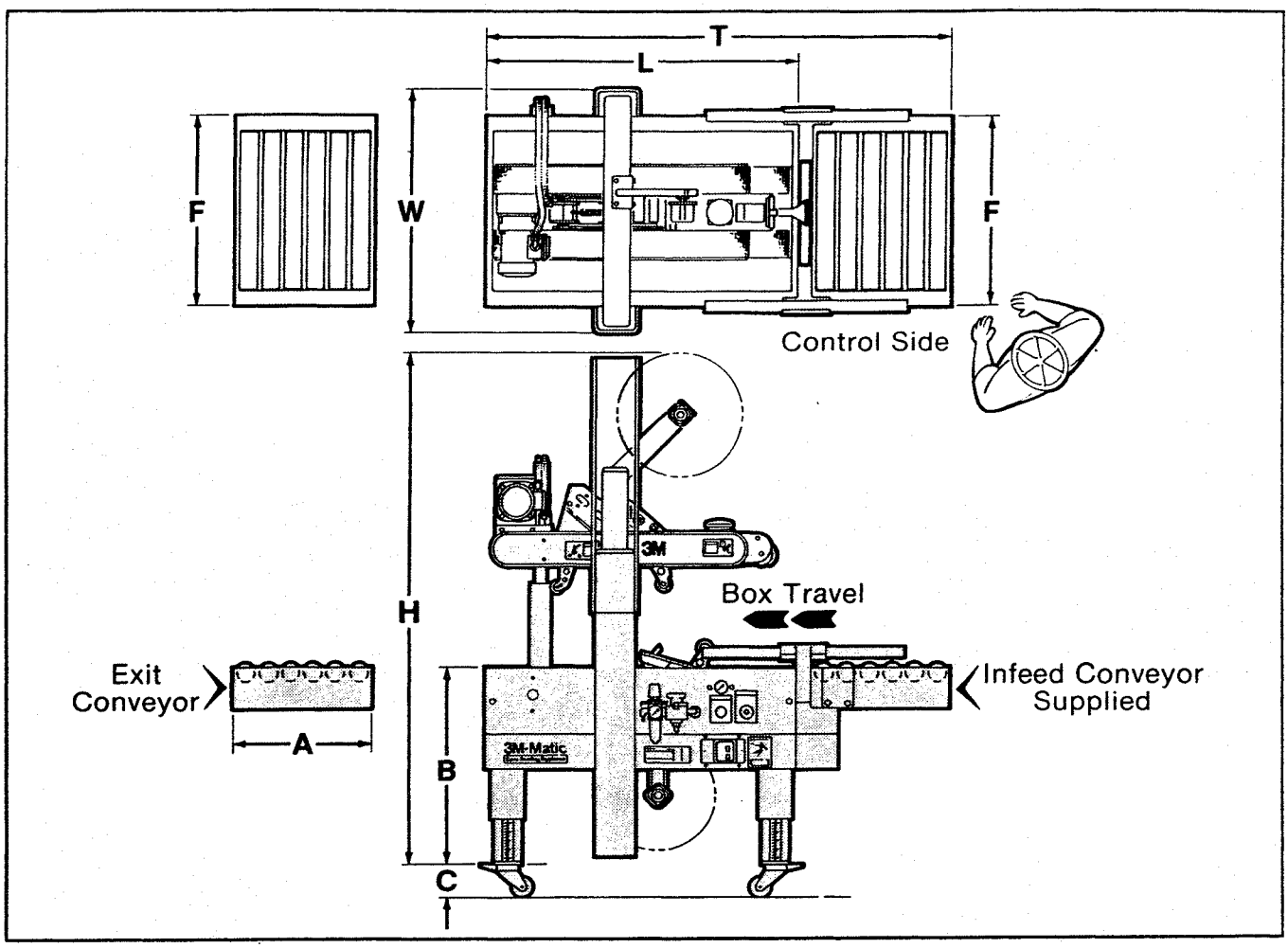
**Special modifications** may be available for carton sizes not listed above. **Contact your 3M Representative** for information.

**Note:** The 3M-Matic 700r Random Case Sealer can accommodate most boxes within the size range listed above. However, if

$$\frac{\text{BOX LENGTH IN DIRECTION OF SEAL}}{\text{BOX HEIGHT}} \quad \textbf{IS LESS THAN .5}$$

boxes should be test run to assure proper machine performance.

(Specifications continued on next page.)




10. **Machine Dimensions:**

| | W | L | H | A* | B | C** | F |
|---|---|---|---|---|---|---|---|
| **Minimum** | | | | | | | |
| inches [mm] | 31 [790] | 46 1/2 [1180] | 62 [1575] | 18 [455] | 24 [610] | 4 [100] | 24 1/2 [625] |
| **Maximum** | | | | | | | |
| inches [mm] | 31 [790] | 46 1/2 [1180] | 86 [2185] | 18 [455] | 35 [890] | 4 [100] | 24 1/2 [625] |

T = 64 1/2 inches [1640 mm]

* Exit conveyor is optional
** Casters are optional

Weight - approximate 500 pounds [225 kg] crated
approximate 430 pounds [200 kg] uncrated

11. **Set-Up Recommendations:**

> Machine must be level.

> Customer supplied infeed and exit conveyors (if used) should provide straight and level box entry and exit.

> Exit conveyors (powered or gravity) must convey sealed boxes away from machine.

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## Set-Up Procedure

It is **recommended** that the 700r Case Sealer be set-up and operated with product before placing it in the production line. This approach will allow your thorough review and familiarization with the 700r before subjecting it and operating personnel to a production situation where time for set-up, adjustments, and operator training usually becomes limited.

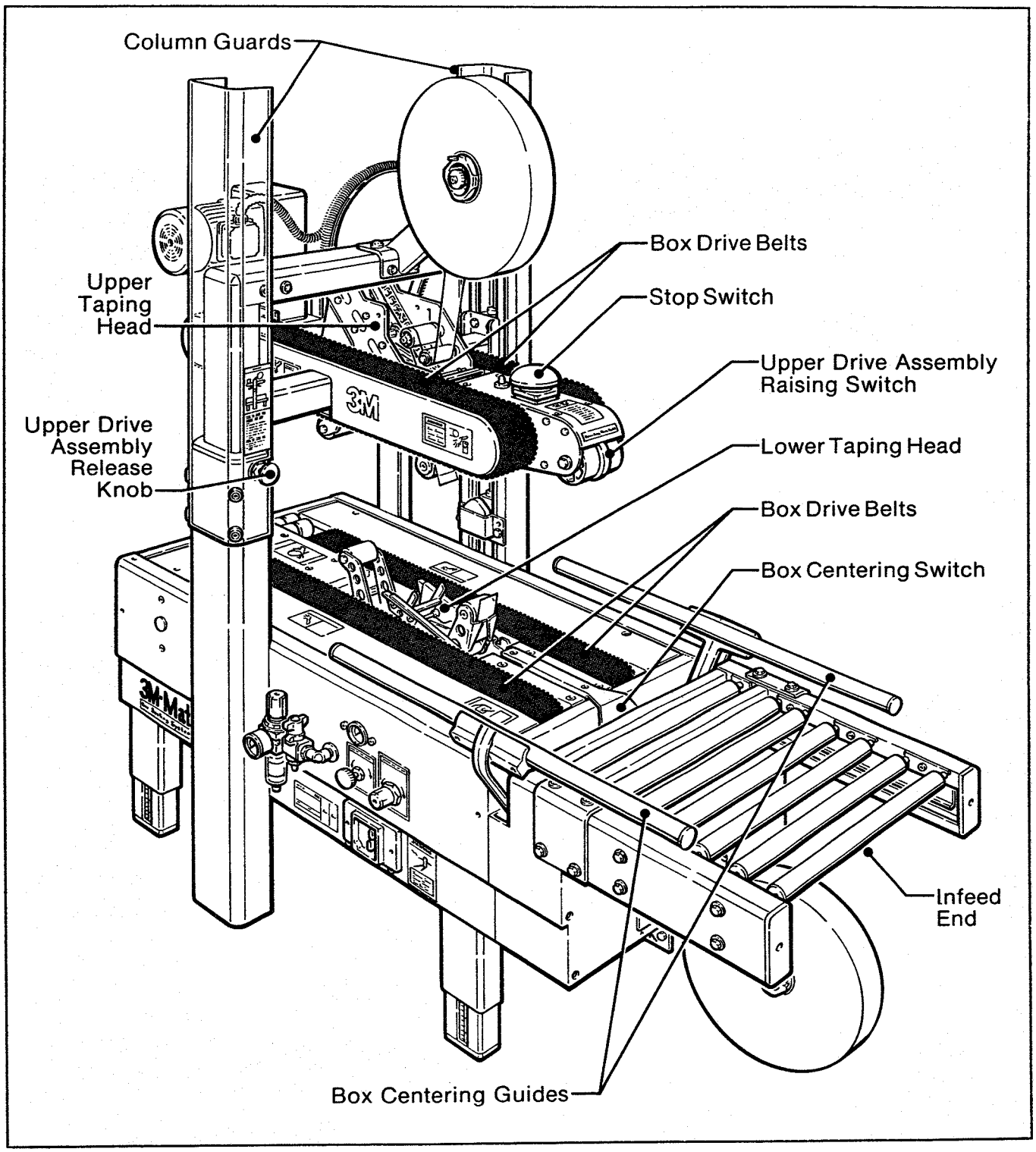


**Figure 2-1 - Set-Up Instructions - Case Sealer Components - Left Front View**

## Receiving And Handling

After the machine has been uncrated, examine the case sealer for damage that might have occurred during transit. **If damage is evident, file a damage claim immediately** with the transportation company and also your 3M Representative.

The following instructions are presented in **the order recommended** for setting up and installing the case sealer, as well as **for learning the operating functions and adjustments.** Following them step by step will result in your thorough understanding of the machine and an installation in your production line that best utilizes the many features built into the case sealer.

1. Lift off fiberboard cover from pallet after removing staples at bottom.

2. Remove and discard the two "U" shaped hold down clamps from lower cross bar, as shown in figure 2-2A. These are sheet metal brackets that prevent the upper head assembly from bouncing during shipping.

3. Install the upper tape drum bracket on the top cross bar, as shown in figure 2-2B.

4. The plastic column guards, shown in figure 2-2, have been installed upside down for shipping. They must be reversed for safe operation of the machine. **Remove and retain** the screws and washers holding the plastic guards on the columns. Remove the protective plastic film from the guards. Rotate the guards 180° and install back on the column as shown. **Replace** existing screws and washers to **secure** the guards in place.

5. Ensure that the tape drum bracket assembly, located on the lower taping head, is mounted straight down, as shown in figure 2-3A. The tape drum bracket assembly, **can be pivoted to provide clearance or for retrofit in certain cases.**

## Lower Outboard Tape Roll Mount - Alternate

Remove the tape drum bracket assembly, stud spacer and fasteners from the lower taping head. Install and secure on the infeed end of the lower frame, as shown in figure 2-3B.

## Conveyor Bed Height

The case sealer is equipped with four **adjustable legs** that are located at the corners of the frame. The legs can be adjusted to obtain different machine conveyor bed heights from **24 inches [610 mm] minimum** to **35 inches [890 mm] maximum.**

Refer to Figure 2-3C and set the conveyor bed height as follows:

1. Block up the machine frame to allow adequate leg adjustment.

2. **Loosen, but do not remove,** two M8 x 1,25 mm socket head screws in one leg (use M6 hex wrench). Adjust the leg length for the desired conveyor bed height. **Retighten** the two screws to secure the leg. Adjust all four legs as noted.

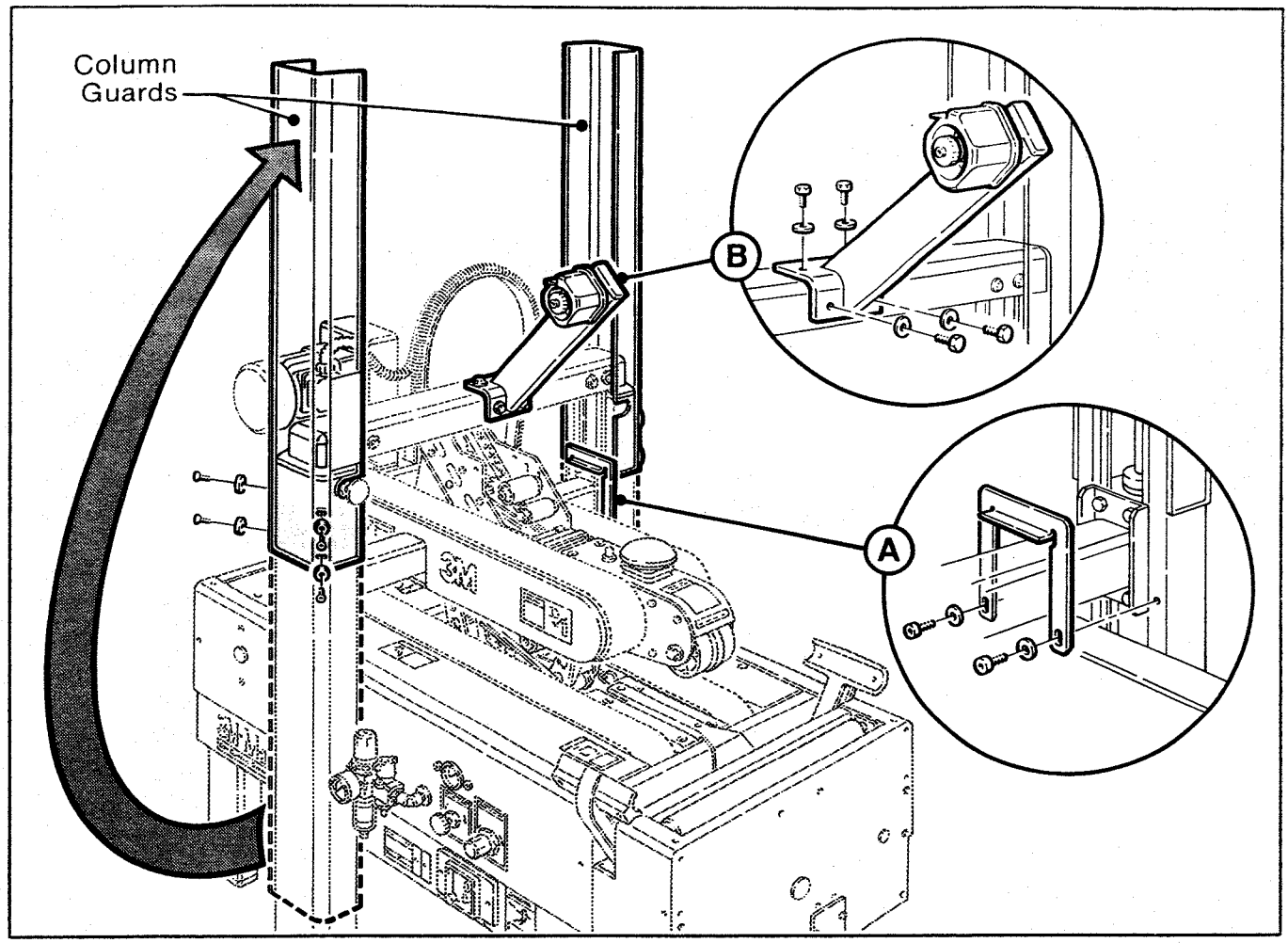


Figure 2-2 - Set-Up and Installation

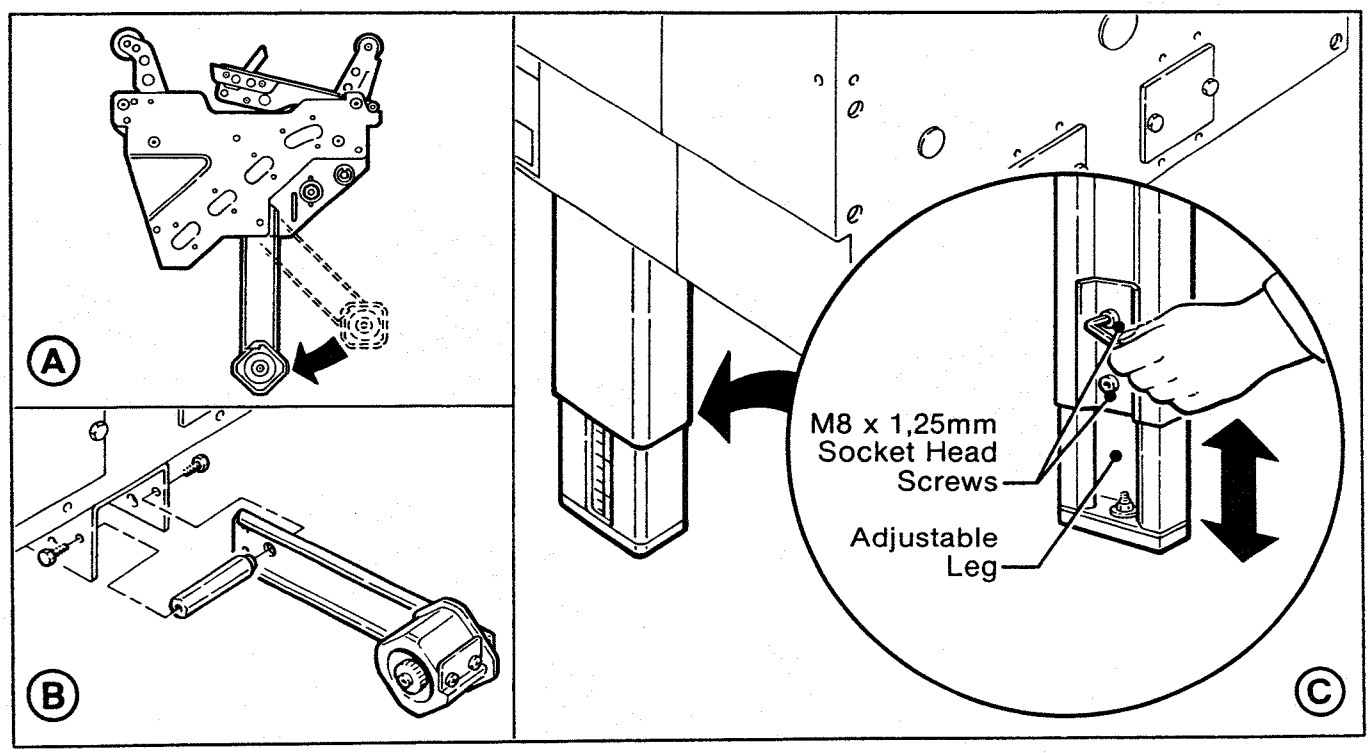


Figure 2-3 - Conveyor Bed Height Adjustment and Lower Tape Drum Bracket Position

## Infeed Conveyor Assembly

1. Remove the conveyor and the package of parts from the carton.

2. Verify that the package contains two right angled cover plates, twelve M8 x 15 hex head screws, and eight M8 flat washers.

3. To assemble the infeed conveyor, refer to figure 2-4 and locate four bolt holes on the infeed end of the case sealer frame.

4. Insert a M8 x 15 screw in each hole so that only a few threads take hold. Do not use washers with these screws.

5. Attach the infeed conveyor over the screws using the inverted keyholes in the end of the conveyor. Tighten all four screws with a 13 mm wrench.

6. Refer to figure 2-5. Set the cover plates over the joint between the conveyor and the frame on each side and secure them with four M8 x 15 screws and M8 washers.

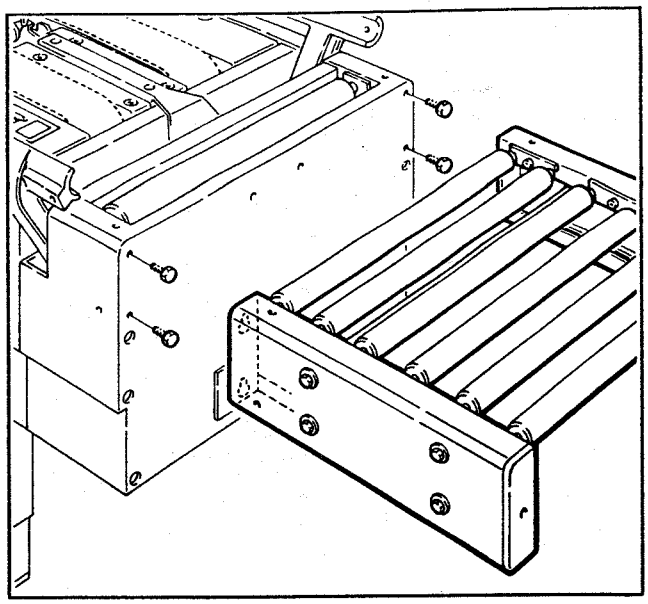

**Figure 2-4 - Infeed Conveyor**

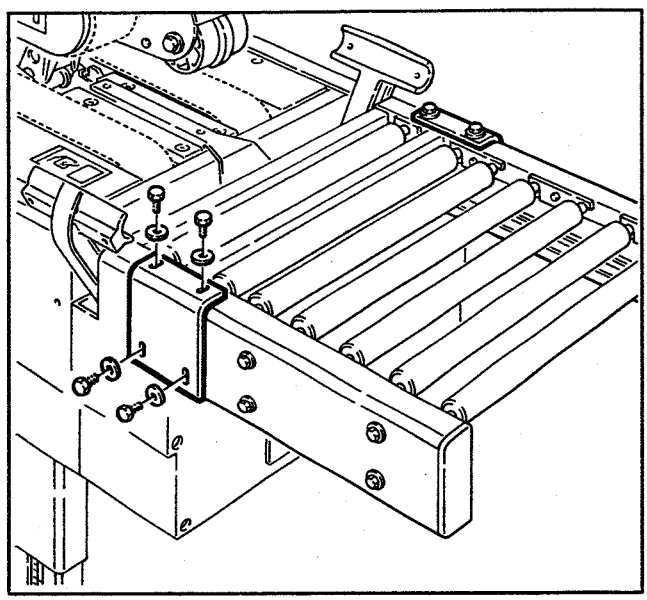

**Figure 2-5 - Cover Plates**

## Centering Guides

1. Remove the two centering guides and four M5 x 20 socket head screws from the package.

2. Using a 5 mm hex key wrench, attach the centering guides to the rails with the four M6 x 20 screws (two in each guide) as shown in figure 2-6.

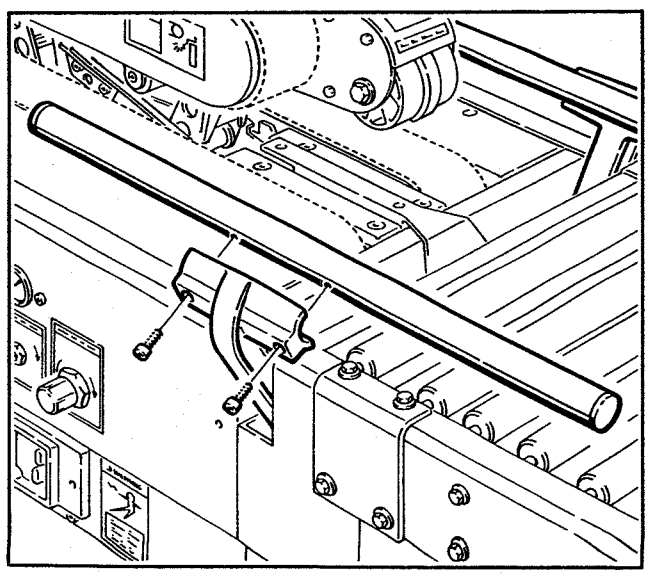

**Figure 2-6 - Centering Guides**

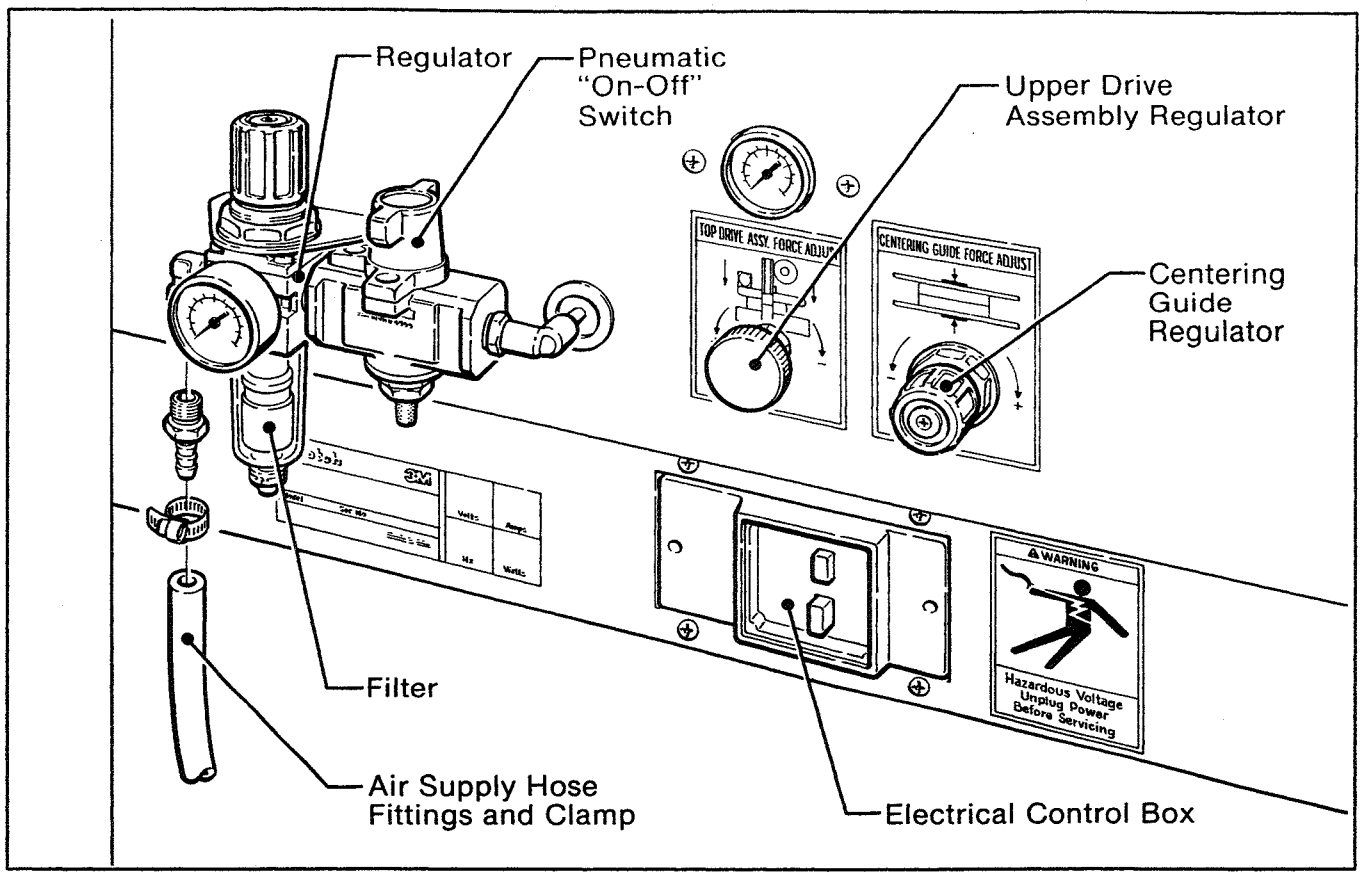


**Figure 2-7 - Pneumatic Connections**

**Pneumatic Connection**

**WARNING - USE CARE WHEN WORKING WITH COMPRESSED AIR.**

The case sealer requires a **70 PSIG [5 bar gauge pressure], 3.75 SCFM [110 litre/min @ 21° C, 1,01 bar]** compressed air supply. As shown in figure 2-7, an on/off valve, pressure regulator, and filter are provided to service the air supply.

**Notice:** A precision regulator is used to balance the top drive assembly. Due to the self relieving feature of this regulator a small amount of air will continually vent to the atmosphere. **This is normal and amounts to approximately 0.1 SCFM [ 3 litre/min.]**

1. The main air supply line should be connected to the on/off valve by means of the barbed fitting and hose clamp provided on the outer side of the on/off valve as shown in figure 2-7. The customer supplied air hose (5/16 ID) [8 mm] should be slipped over the barbed fitting and clamped tightly in place.

   If another type of connector is desired, the fitting can be removed and replaced with the desired 1/4-18 NPT threaded connector.

   Always turn the valve **"Off"** when the air supply line is being connected or disconnected.

2. Turn the air supply on by setting the air on/off valve to SUP.

   **Note:** The air valve has provisions for lock out/tag out according to plant policy.

**Pneumatic Connection** (Continued)

3. Check that air pressure is present and correct.

   Note: The air regulator is preset to 70 PSIG [5 bar]. If you do not read this pressure, turn the air regulator control adjustment knob to adjust the pressure to 70 PSIG [5 bar].

**Mechanical Latch**
Refer to Figure 2-9

The mechanical latch is provided to hold the upper drive assembly at the fully raised position for tape threading and maintenance.

**To raise and latch the upper drive assembly:**
1. Push and hold the drive assembly raising switch "A".
2. Push and hold latching knob "B".
3. Release switch "A".
4. Release knob "B".
5. Shut off air supply.

**To release and lower the upper drive assembly:**
1. Turn on air supply.
2. Push and release switch "A".

**Bumper Supports**

1. Raise and lock the upper drive assembly into its raised position.
2. Refer to figure 2-10 and install two rubber bumpers; one on each side column.

**CAUTION - When mounting the bumpers, use the bottom holes in the brackets. This is the standard position. The upper set of holes allows the upper drive assembly to return to a lower position. However, this minimum position can only be used if the taping heads are first adjusted to apply 2 inch [50 mm] long tape legs. Interference and damage to the taping heads may occur if the upper mounting bracket holes are used with taping heads at the standard setting.**

Remove all packaging materials and tools from the machine.

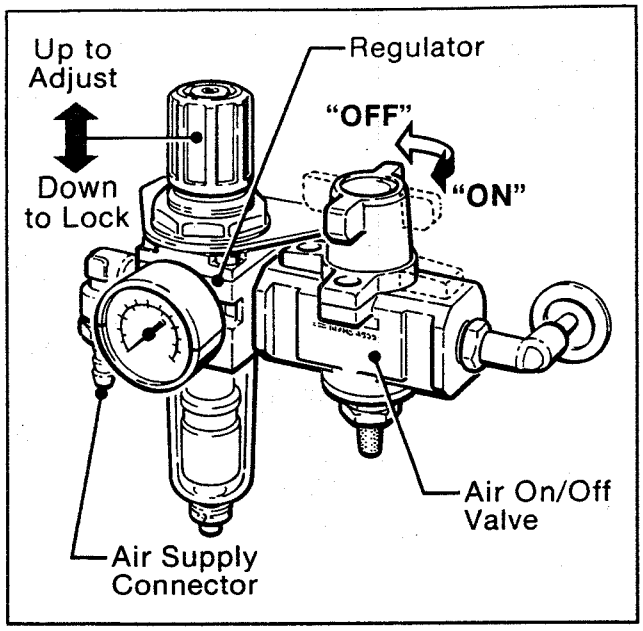


**Figure 2-8 - Pressure Regulator and On/Off Valve**

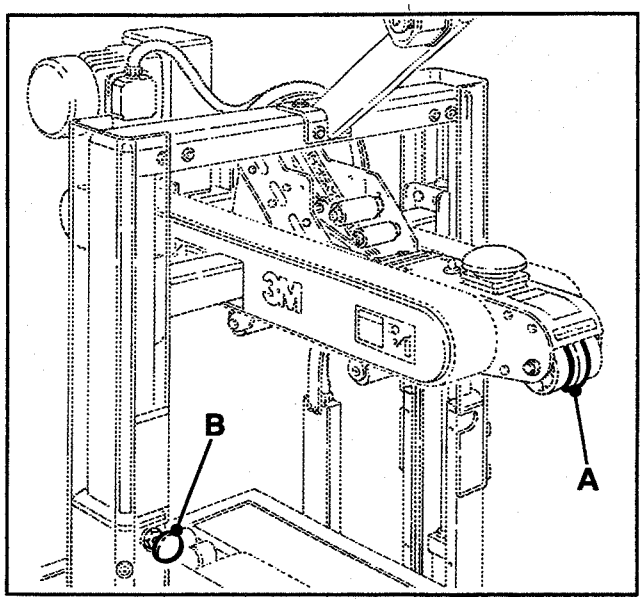


**Figure 2-9 - Mechanical Latch**

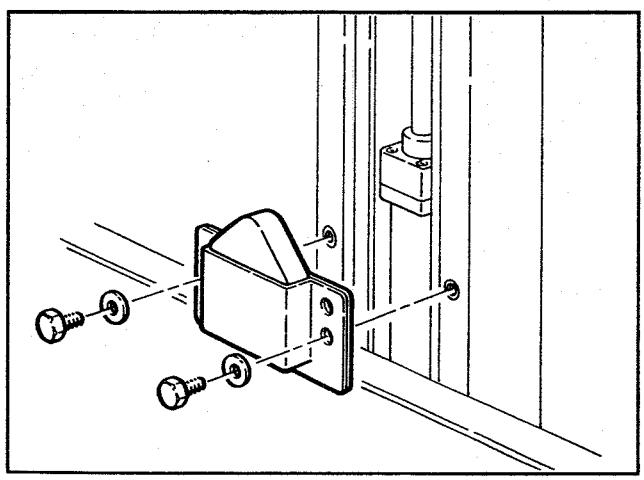

**Figure 2-10 - Bumper Supports**

**Pneumatic Component Controls**

In addition to the on/off valve, shown in figure 2-8, the pneumatic components have several controls and settings which will be covered in this section.

To provide **independent adjustment** of the **centering guide** and **upper drive assembly** movements, the air supply is routed through the main pressure regulator and filter assembly and then split into two separate circuits. Both centering guide and upper drive assembly circuits have controls and settings as follows:

**Centering Guide Movement Circuit**
Refer to Figure 2-11

**The regulator** is used to adjust **centering guides** according to weight of boxes. Pressure should be adequate to center boxes, but low enough to allow easy pushing of boxes under taping head. The regulator setting can be locked by tightening the phillips screw as shown.

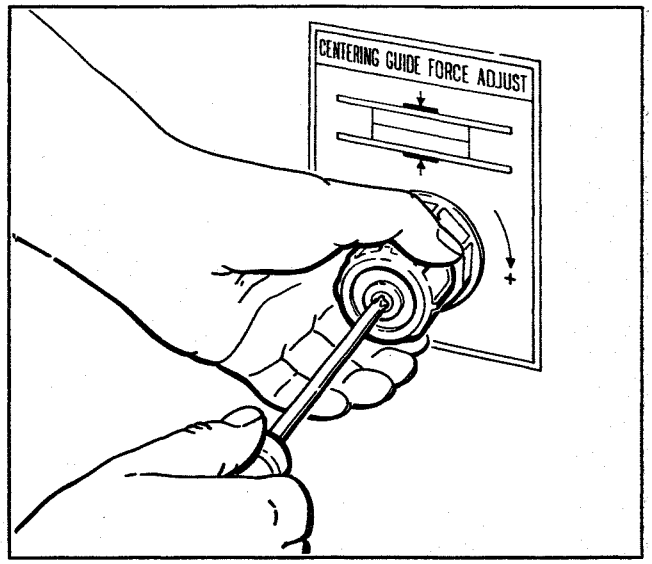


**Figure 2-11 - Centering Guide Pneumatic Regulator**

**Upper Drive Assembly Movement Circuit**

**"Down" Movement Air Pressure Regulator**
Refer to Figure 2-12

Set nominally to control **"down"** movement of upper drive assembly and its pressure exerted against the box. The regulator setting is changed as necessary for the boxes being sealed to provide adequate drive assembly pressure against the box to positively convey the boxes through the machine. If the boxes **stop** or **hesitate** while being conveyed, **decrease** the regulator pressure which will increase the drive assembly force on the box for more friction between the box and drive belts. Adjust setting as necessary to get continuous movement of boxes through machine.

For boxes which are fully packed with products that support the top flaps, the adjustment of this regulator is not critical since the boxes can support the pressure of the drive assembly at a wide range of regulator settings. However, if **underfilled** or **fragile boxes** are sealed, this regulator can be used to set the upper drive assembly **pressure to a minimum** that is still adequate to positively convey the box and to prevent damage of boxes. The regulator setting can be locked by securing the lock nut on the regulator shaft as shown in figure 2-12.

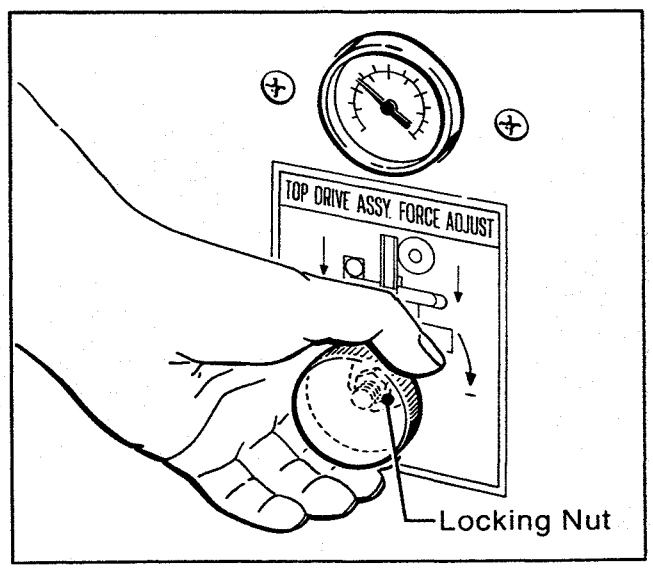


**Figure 2-12 - Pneumatic Upper Drive Assembly Regulator**

**IMPORTANT SAFEGUARDS**

1. **BOTH THE UPPER AND LOWER TAPING HEADS UTILIZE EXTREMELY SHARP KNIFE BLADES. THE BLADES ARE LOCATED UNDER THE ORANGE BLADE GUARD WHICH HAS THE "WARNING - SHARP KNIFE" LABEL. BEFORE WORKING WITH THE TAPING HEADS OR ATTEMPTING TO LOAD THE TAPE, REFER TO FIGURES 2-13 AND 2-14 AND IDENTIFY THE BLADE LOCATION. KEEP HANDS OUT OF THESE AREAS EXCEPT AS NECESSARY TO SERVICE THE TAPING HEADS.**

2. **NEVER ATTEMPT TO WORK ON THE TAPING HEADS OR LOAD TAPE WHEN THE BOX DRIVE BELTS ARE RUNNING.**

3. **BOX DRIVE MOTORS ARE DESIGNED TO RUN AT A MODERATE TEMPERATURE OF 120° F [50° C]. IN SOME CASES THEY MAY FEEL WARM TO THE TOUCH.**

## Tape Loading

The taping head accommodates up to 2 inch [50 mm] wide tape rolls. To apply **1 1/2 inch or 36 mm or 1 3/4 inch or 42 mm wide tapes,** refer to **"Adjustments Section"** for set-up information.

A plastic threading needle is provided with each machine and it is **recommended** that the detailed instructions and sketches in this manual be referred to the first few times the unit is loaded and until the operator becomes thoroughly familiar with the tape loading operation.

## Tape Loading - Upper Taping Head

**⚠ WARNING - TURN OFF ELECTRICAL POWER AND AIR SUPPLY AND DISCONNECT POWER CORD FROM ELECTRICAL SUPPLY BEFORE BEGINNING WORK ON THE TAPING HEADS OR TO LOAD TAPE. IF POWER CORD IS NOT DISCONNECTED, SEVERE INJURY TO PERSONNEL COULD RESULT.**

1. It is first necessary to raise the upper taping head frame to a convenient working position. Use the mechanical latch to hold the upper drive head in the fully raised position.

2. For tape loading operations, use the plastic threading needle, and follow the loading procedures (figures 2-15 to 2-17) to complete the tape threading.

## Tape Loading - Lower Taping Head

1. For ease in set-up loading, first remove the lower taping head from the conveyor bed. Lift the head straight up from the conveyor bed.

2. The lower taping head is loaded and threaded in the same manner as the upper taping head. Follow the upper taping head tape loading procedure.

3. Replace the lower taping head.

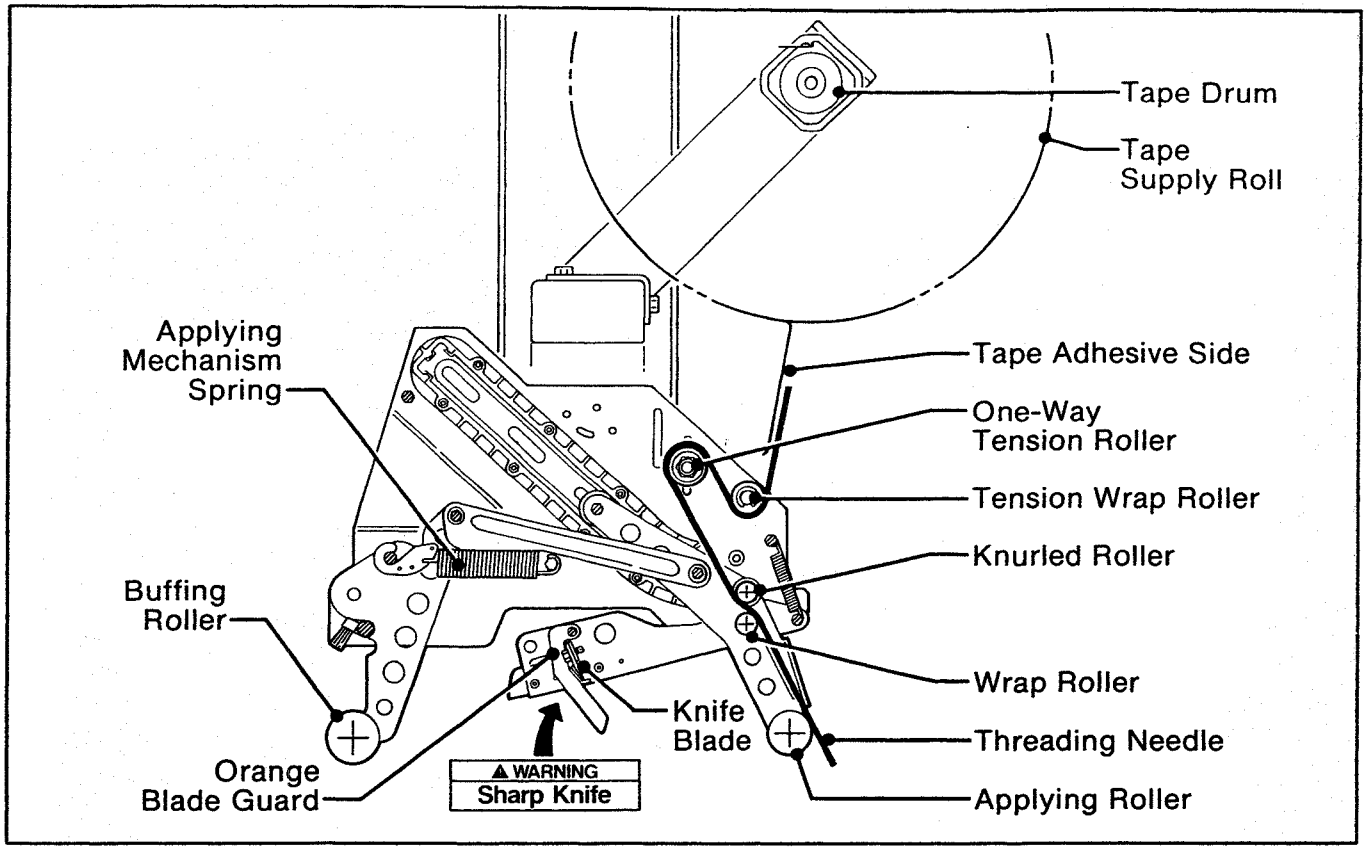


**Figure 2-13 - Tape Threading Diagram - Upper Taping Head - Left Side View**

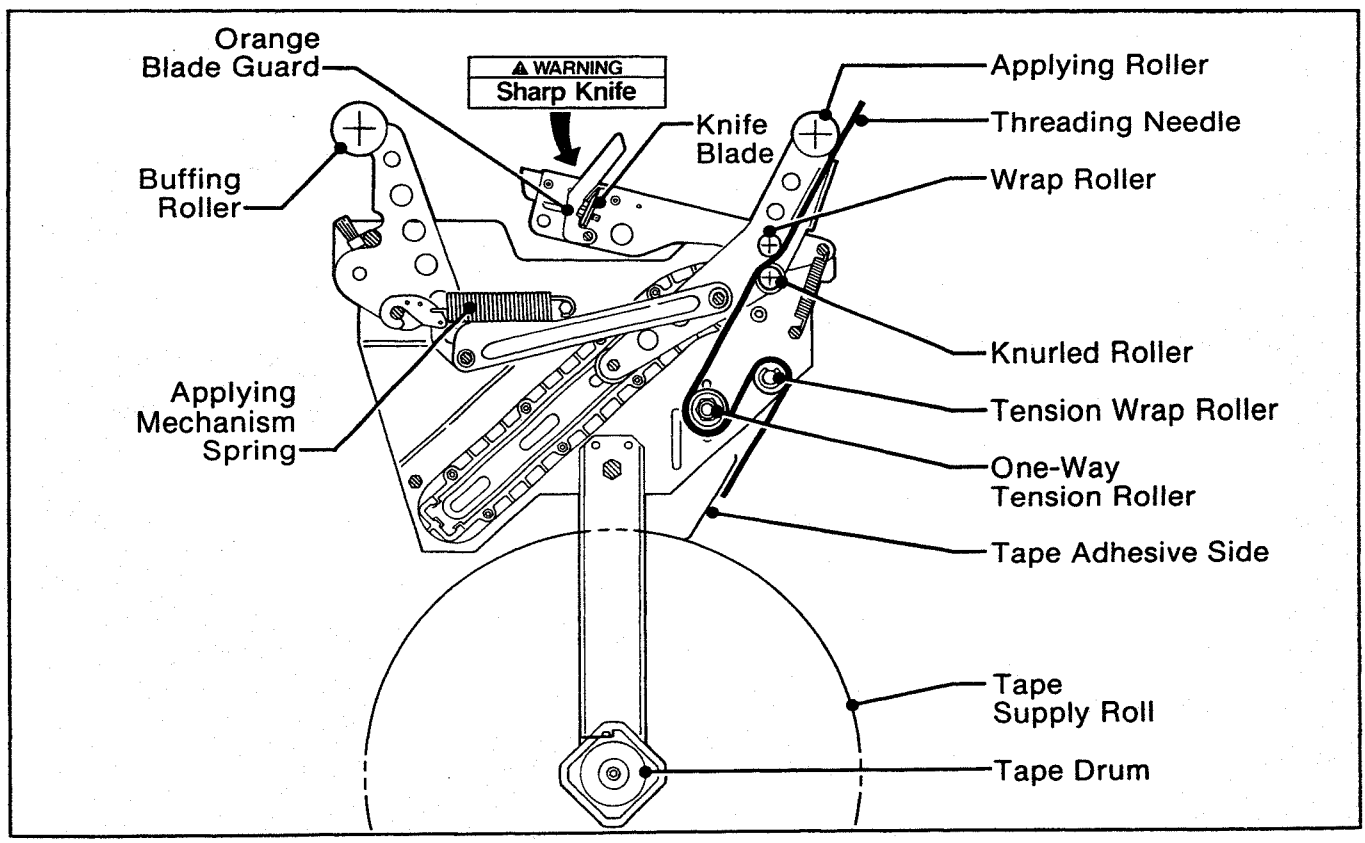


**Figure 2-14 - Tape Threading Diagram - Lower Taping Head - Left Side View**

**Figure 2-15**

Insert the plastic needle **downward** around rollers as illustrated.

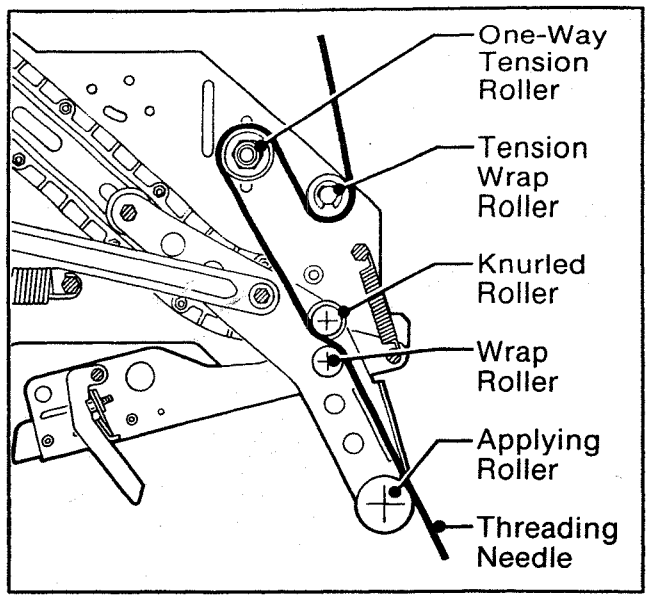


**Figure 2-15**

**Figure 2-16**

Place tape roll on drum to **dispense tape from bottom of roll, adhesive side** forward. Seat tape roll fully against back flange of drum. Adhere tape lead end to upper end of threading needle as shown.

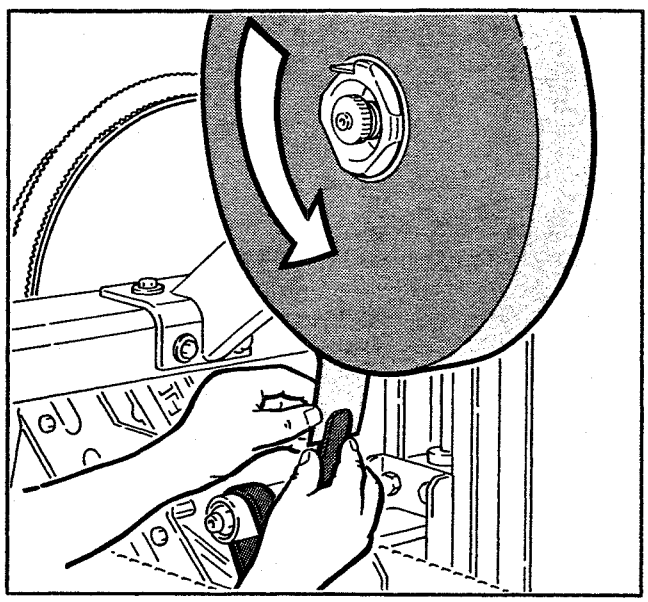

**Figure 2-16**

**Figure 2-17**

**⚠ WARNING - USE CARE WHEN WORKING NEAR BLADES AS BLADES ARE EXTREMELY SHARP. IF CARE IS NOT TAKEN, SEVERE INJURY TO PERSONNEL COULD RESULT.**

Manually turn tape roll to create slack tape while pulling threading needle through tape applying mechanism until needle is through and tape is in alignment with applying roller.

Excess tape should be cut with a scissors at applying roller.

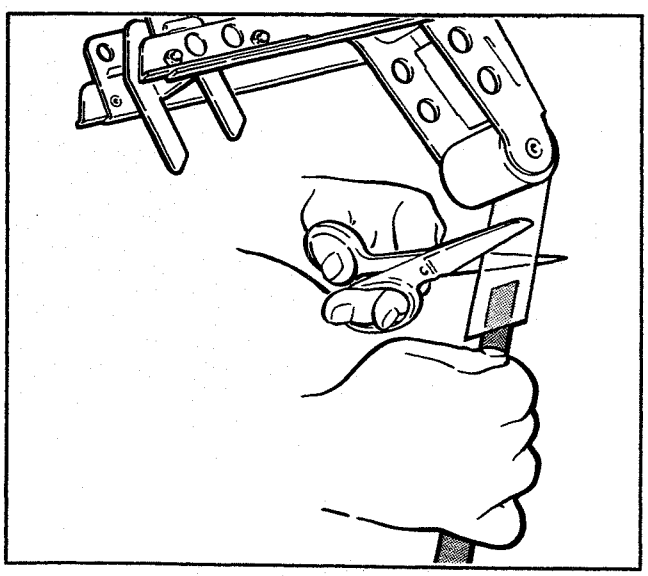

**Figure 2-17**

## Electrical Connection

The electrical control box, shown in Figure 2-7, contains the **"On-Off" switch** with **pre-set** circuit breaker and can be located on either side of the main conveyor for customer operating convenience. An 8 foot [2,4 m] standard **three conductor power cord with plug** is provided at the back of the electrical control box for **115 Volt, 60 Hz, 3.8 amp** electrical service. **The receptacle providing this service must be properly grounded.** The electrical power supply is turned **"On"** by pressing the **black** button, **"Off"** by pressing the **red** button. Before the power cord is plugged into **115 Volt, 60 Hz outlet,** make sure the **red** buttom is depressed and that all **packaging materials** and **tools** are **removed** from the machine.

**Note** - Machines outside the U.S. may be equipped with 220/240 Volt, 50 Hz systems, or other electrical requirements compatible with local practice.

## Operation

### Pneumatic Components Function

The air supply powers movement of the centering guides and upper drive assembly to automatically adjust the case sealer to the box size being sealed as follows (refer to figures 2-18 and 2-19).

1. A box centering switch in the center of the infeed roller conveyor actuates movement of the **centering guides.** When the operator pushes a box onto the infeed conveyor, as shown in figure 2-18, the lever is depressed causing the air cylinder powered centering guides to move inward, thereby centering the box.

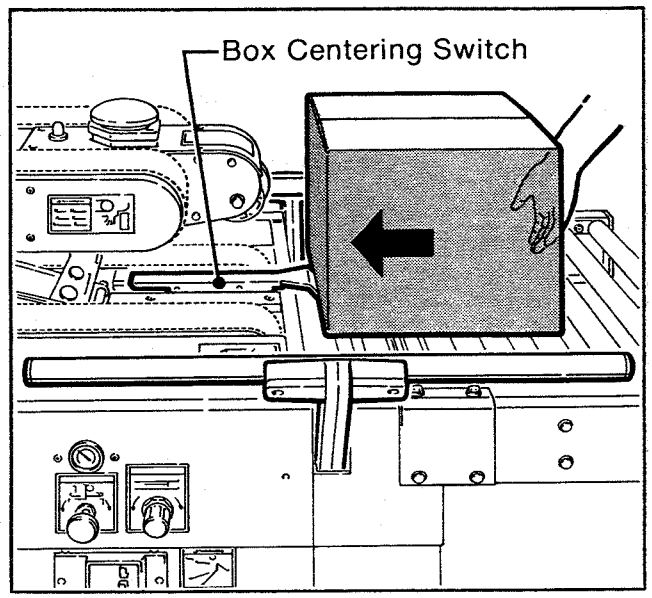


**Figure 2-18 - Box Centering Switch**

**⚠ CAUTION - KEEP HANDS AWAY FROM DRIVE BELTS WHEN FEEDING BOXES.**

2. Once the box is centered by the guides, the operator pushes the box against the raising switch on the upper drive assembly, as shown in figure 2-19, causing the **upper taping head** to be raised by two air cylinders. The upper taping head will continue to rise above the box height so the operator can insert the box underneath the **upper drive belts.**

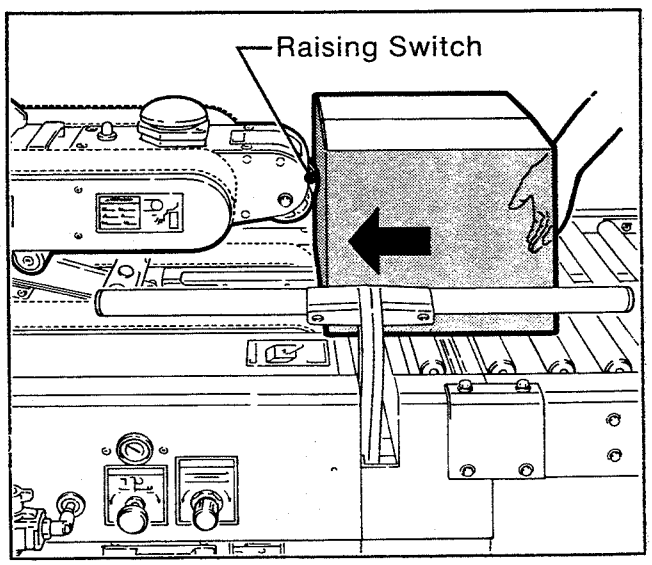


**Figure 2-19 - Drive Assembly Raising Switch**

**CAUTION - KEEP HANDS AWAY FROM DRIVE BELTS WHEN FEEDING BOXES.**

3. Once the box is pushed under the upper taping head, the upper taping head valve lever is released causing the drive assembly to descend onto the box top, as shown in figure 2-20, allowing the drive belts to convey the box through the **upper and lower taping heads** for application of the tape seals.

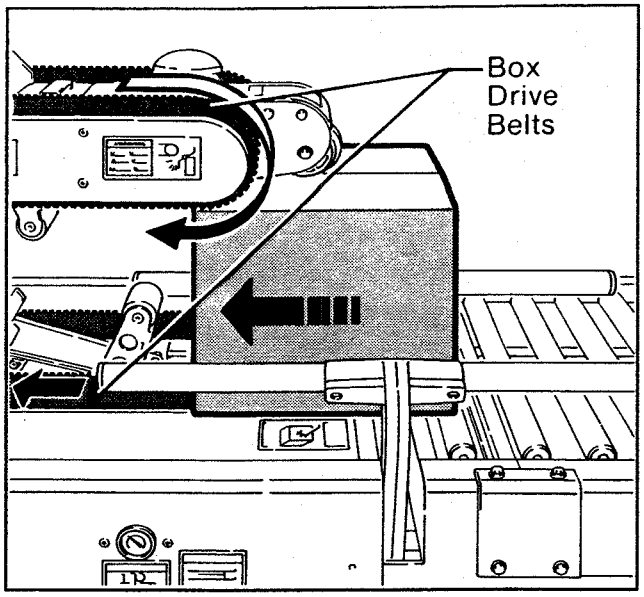


**Figure 2-20 - Drive Belts**

4. As the box is conveyed through the machine, the **box centering switch** is released causing the **centering guides** to return to their **full open position,** ready for insertion of the next box.

5. Once the box is conveyed from under the upper taping head, the **upper drive assembly** descends to its **rest position,** ready for insertion of the next box.

At this point **it is recommended** that the centering guides and upper valve levers be manually actuated to understand the functions described above. Depressing the guide valve lever causes the guides to close, releasing the valve lever causes the guides to open. Depressing the upper valve lever causes the upper drive assembly to rise, releasing the valve lever causes the drive assembly to descend.

Once the pneumatic component functions are understood, **it is recommended** that the electrical supply also be turned on and pre-taped boxes fed through the case sealer following the **pneumatic component sequence 1 through 5.** This will insure that the operating sequence and powered component functions are understood.

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## Tape Web Alignment
## Figure 3-1

The tape drum assembly on each taping head is pre-set to accommodate 2 inch [50 mm] wide tape, but is adjustable to provide alignment of narrower tapes. If adjustment is necessary to center the tape width on the centerline of the taping head, (and therefore box center seam), make adjustment as follows:

1. Loosen the locking hex nut behind tape drum on tape drum shaft. Use an adjustable wrench or 25 mm open end wrench.
2. **Turn tape drum shaft** in or out to center the tape web (use 5 mm hex wrench).
3. Tighten locking hex nut to secure the adjustment.

No other components require adjustment for tape web alignment.

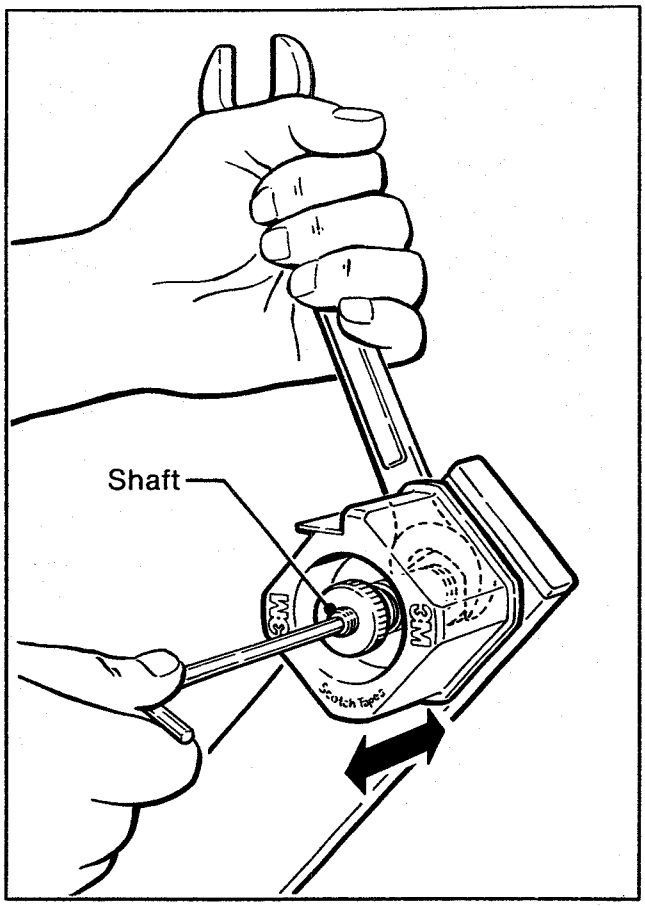


**Figure 3-1**

## Tape Drum Friction Brake
## Figure 3-2

The tape drum friction brake on each taping head is **pre-set** for normal operation to prevent tape rollover travel. Should tension adjustment be required, **turn the thumbwheel on the shaft to vary compression of the spring.** Turn thumbwheeel **clockwise to increase** the braking force, and **counterclockwise to decrease** the braking force. Adjust to minimum tension that prevents excessive tape rollover travel.

> Notice - excess braking force will cause poor tape application and may lead to tape tabbing on the trailing tape leg.

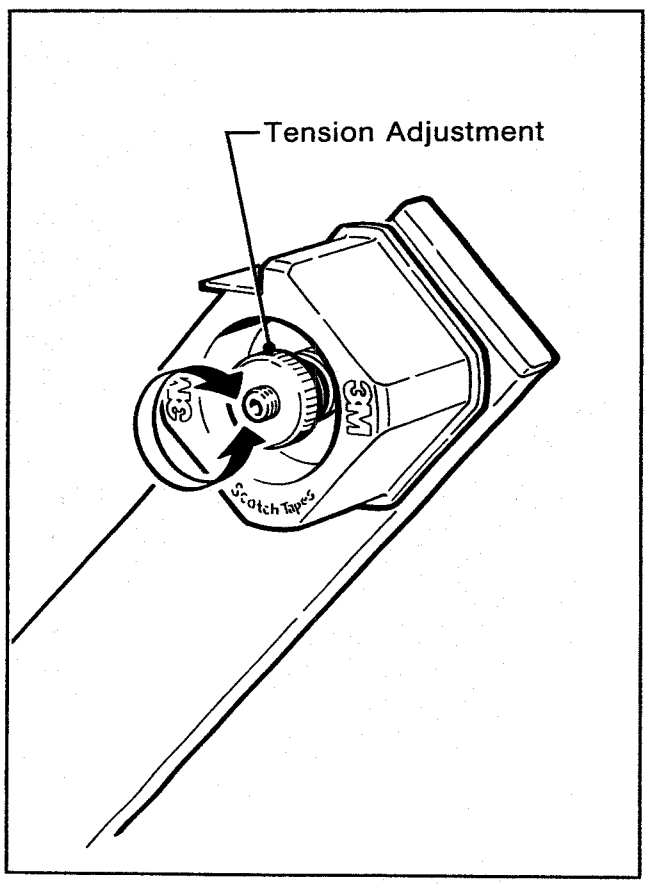


**Figure 3-2**

**Applying Mechanism Spring**
**Figure 3-3**

The applying mechanism spring, shown in figures 2-13 and 2-14, controls applying and buffing roller pressure on the box and returns the mechanism to the reset position. The spring pressure setting, as shown in figure 3-3A, is for normal operation but is adjustable.

**Removing the spring end loop from the spring holder** and placing loop in other holes provided, as shown in figure 3-3B, **will adjust the spring pressure.**

The spring pressure should be set to the minimum possible while maintaining good tape application.

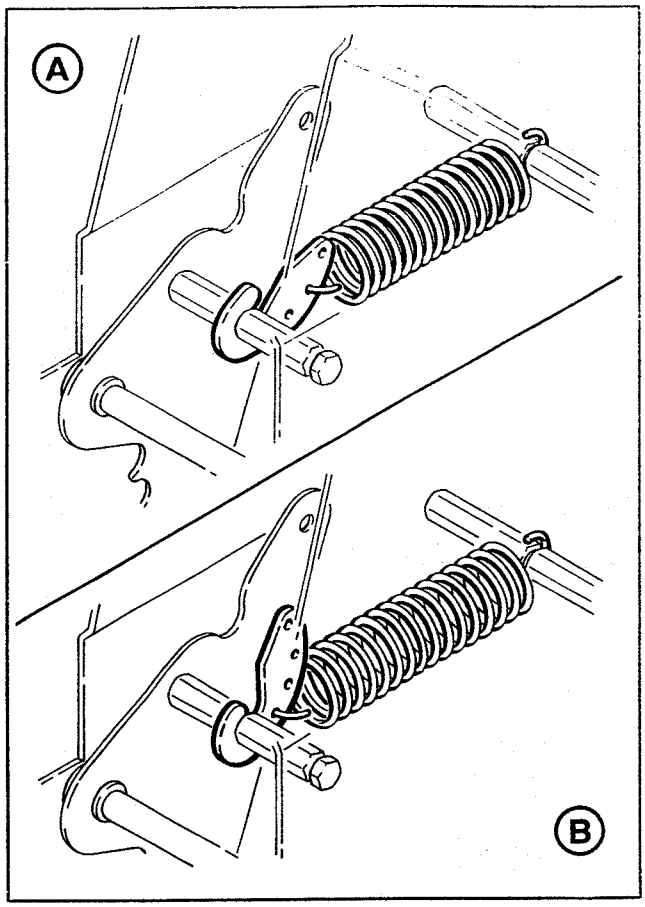


**Figure 3-3**

**One Way Tension Roller Assembly**
**Figure 3-4**

The one way tension roller is factory set. When replacing this assembly, the roller must have **1 lb. [0,5 kg] minimum** tangential force when turning.

**To Set Tension:**

1. Wrap a cord or small strap (non-adhesive) 4-6 turns around the tension roller.
2. Attach a spring scale to the end of the cord or strap.
3. Turn the adjusting nut until a force of approximately 1-2 lbs. [0,5 kg to 0,9 kg] is required to turn the roller by pulling on the spring scale.

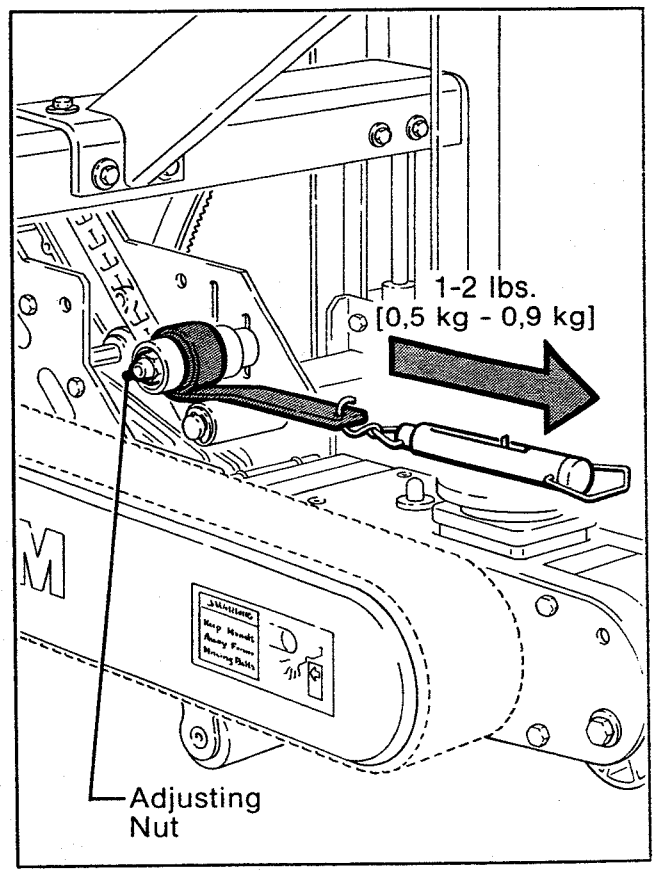


**Figure 3-4**

## Box Drive Belts

The four continuously moving box drive belts convey boxes through the tape applying mechanism. The box drive belts are powered by electric gear motors.

Tension adjustment of these belts may be required during normal operation. Belt tension must be adequate to positively move the box through the machine and they should run fully on the surface of the pulleys at each end of the frame. The idler pulleys on the infeed end are positioned by adjustment screws. Adjustment of these screws can be made by using the following steps to provide proper tension. Each belt is adjusted separately.

**⚠ WARNING - TURN OFF ELECTRICAL POWER AND AIR SUPPLY, AND DISCONNECT POWER CORD FROM ELECTRICAL SUPPLY BEFORE BEGINNING ADJUSTMENTS. IF POWER CORD IS NOT DISCONNECTED, SEVERE INJURY TO PERSONNEL COULD RESULT.**

### Box Drive Belt Tension

Belt tension is obtained by **tightening** the adjustment screw so that a moderate pulling force of **7 lbs. [3,5 kg]** applied at the midspan, as shown in figure 3-5, will deflect the belt **1 inch [25 mm]**.
This will assure **positive contact** between the belt and the drive pulley on the discharge end of the drive assembly.

**Refer to Figures 3-6 and 3-7**

Step 1. **Remove and retain** two center plates/front cover and four screws.

Step 2. **Loosen, but do not remove,** lock nut M10 with a 17 mm open end wrench.

Step 3. **Reset the tension** on the drive belt as needed. Adjust the M8 screw, **in to increase - out to decrease.** Tighten lock nut to **secure tension setting.**

Step 4. Replace two center plates/front cover and secure with original screws.

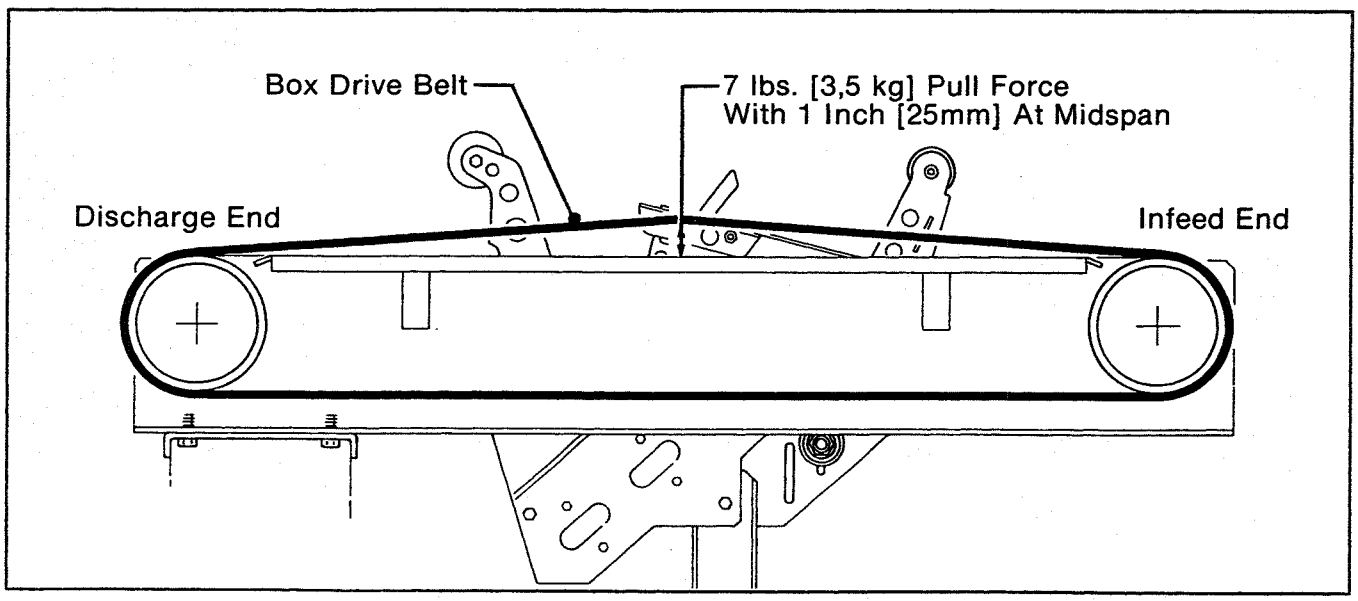


**Figure 3-5 - Box Drive Belt Tension Adjustment - Left Side View**

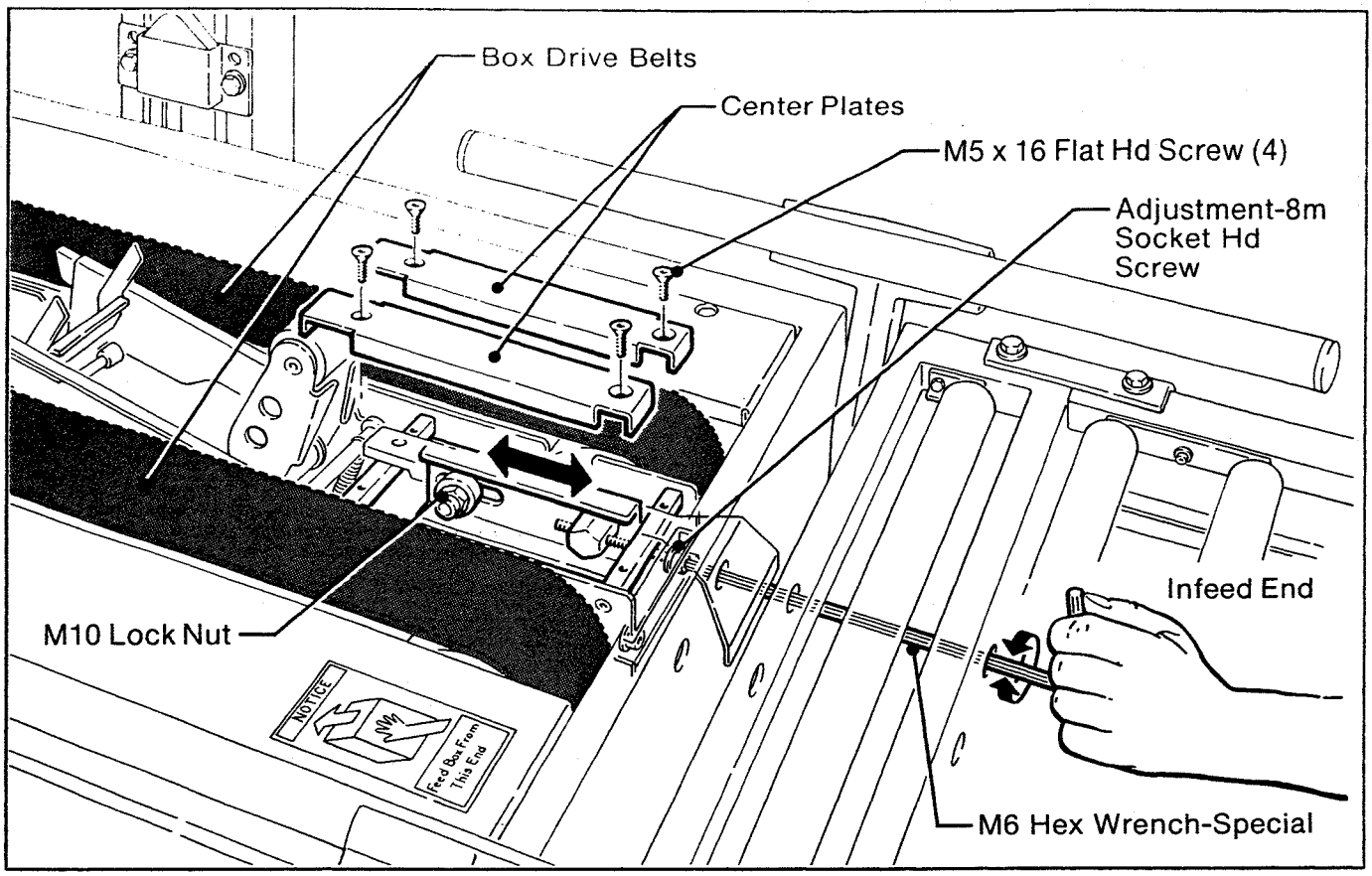


**Figure 3-6 - Box Drive Belt Tension Adjustment - Conveyor Bed Frame Infeed End**

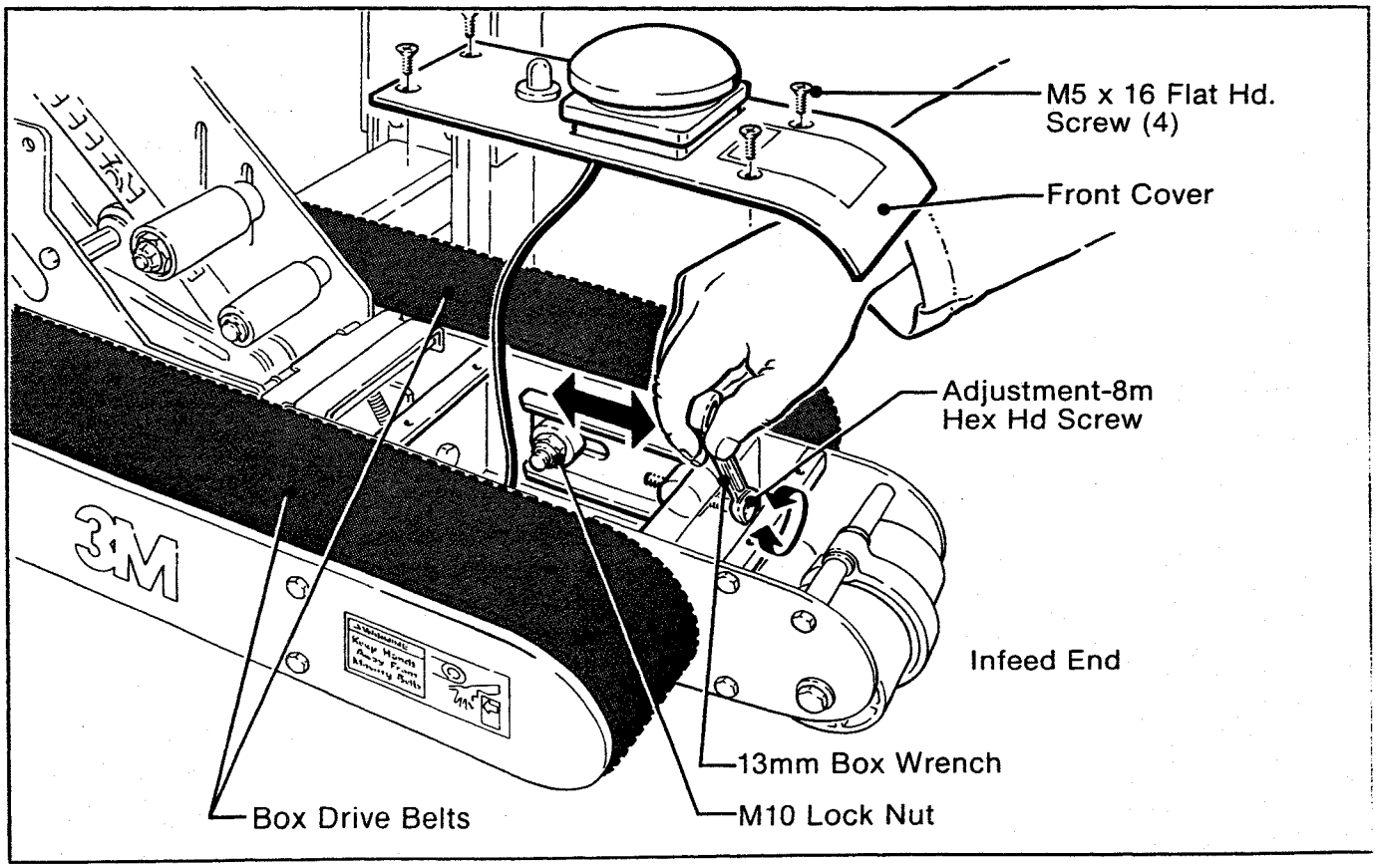


**Figure 3-7 - Box Drive Belt Tension Adjustment - Upper Drive Assembly**

**Tape Application Leg Length**
**Figure 3-8**

For **best tape application performance,** the taping heads should maintain tape leg lengths of 2 3/4 inch ± 1/4 inch [70 mm ± 6 mm].

The **one-way tension roller position** on the taping head is adjustable to control the **leading tape leg length.**

**Refer to Figure 2-15**

Moving this roller in the slot farther away from the box top or bottom surface will decrease the leading leg length. Moving it closer to the box top or bottom surface will increase the leading leg length.

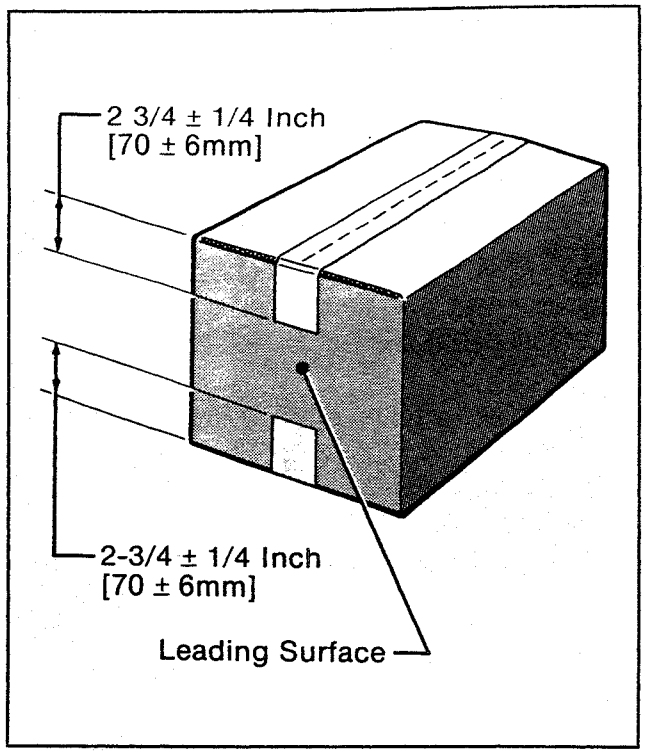


**Figure 3-8 - Adjusting Tape Leg Length**

## Maintenance

The case sealer has been designed for long, trouble free service. The machine will perform best when it receives **routine maintenance and cleaning.** Machine components that fail or wear excessively should be **promptly** repaired or replaced to **prevent damage** to other portions of the machine or to the product.

**⚠ WARNING - TURN OFF ELECTRICAL POWER AND AIR SUPPLY, AND DISCONNECT POWER CORD FROM ELECTRICAL SUPPLY BEFORE BEGINNING MAINTENANCE. IF POWER CORD IS NOT DISCONNECTED, SEVERE INJURY TO PERSONNEL COULD RESULT. USE CARE WHEN REPLACING BLADES AS BLADES ARE EXTREMELY SHARP. IF CARE IS NOT TAKEN, SEVERE INJURY TO PERSONNEL COULD RESULT.**

**Blade Replacement**
**Figure 4-1**

1. **Loosen, but do not remove,** the blade screws (A). Remove and discard the old blade.
2. Mount the new blade (B) with the **beveled side away** from the blade holder.
3. Bottom the blade slots against the screws. This will position the blade at the correct angle. **Tighten** the blade screws to secure the blade.

The **same steps** are followed on the **upper and lower taping heads.** Connect the main power supply.

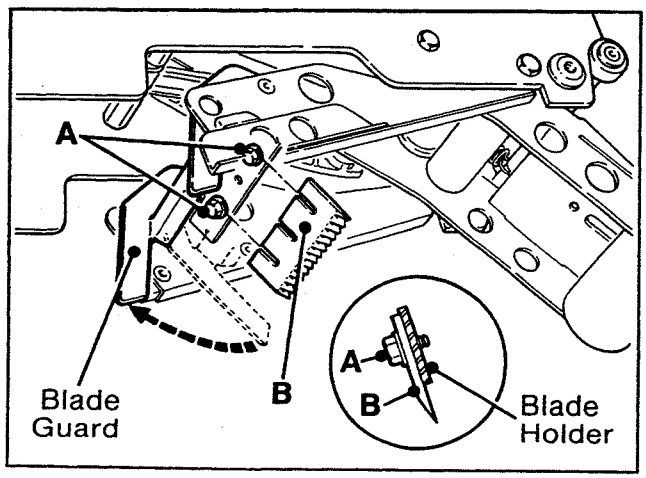


**Figure 4-1 - Blade Replacement**

**Replacing Box Drive Belts**

Case sealers are supplied with continuous belts. However, replacement belts are spliced (laced splice) for easy installation.

**Lower Drive Belts**
**Figure 4-2**

**To Remove Old Drive Belt:**

**IT IS NOT NECESSARY TO REMOVE LOWER TAPING HEAD**

1. Remove and retain two center plates (A) and four screws.
2. Loosen, but do not remove lock nut (B).
3. Loosen tension screw (C) until all tension is removed.
4. Remove and retain side cover (D) and fasteners.
5. Cut thru old belt to remove and discard.
6. Place new belt over pulleys with laced splice at top. Insert splicing pin. **Pin must not extend beyond edge of belt.**
7. Refer to the adjustment section - "Box Drive Belts" and reset the belt tension as noted.
8. Replace the side cover and two center plates, and secure with original fasteners.

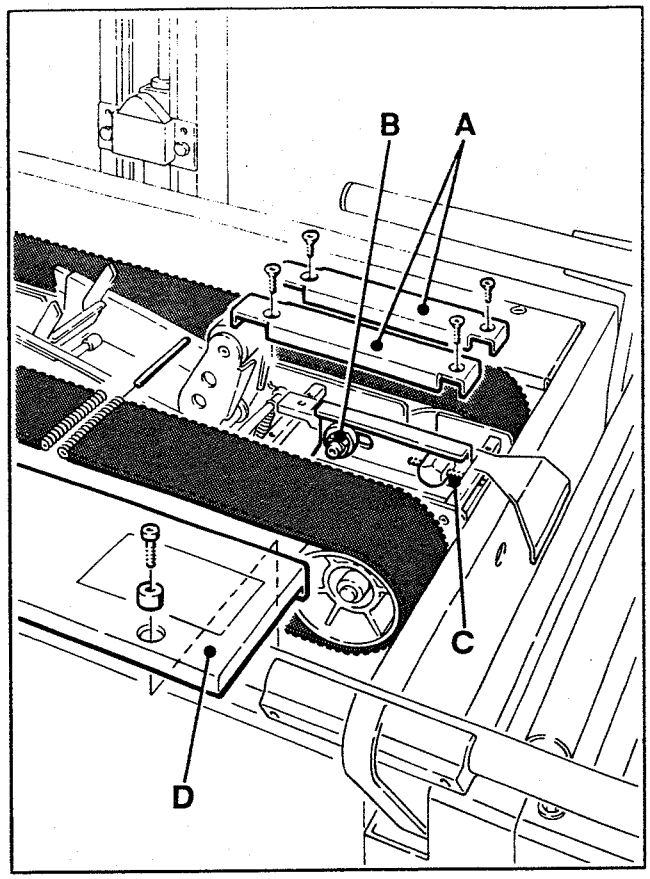


**Figure 4-2 - Lower Drive Belt Replacement**

**Upper Drive Belts**
**Figure 4-3**

**To Remove Old Drive Belt:**

**IT IS NOT NECESSARY TO REMOVE UPPER TAPING HEAD**

1. Remove and retain front cover (A) and four screws.
2. Loosen, but do not remove lock nut (B).
3. Loosen tension screw (C) until all tension is removed.
4. Cut thru old belt to remove and discard.
5. Place new belt over pulleys with laced splice at top. Insert splicing pin. **Pin must not extend beyond edge of belt.**
6. Refer to the adjustment section - "Box Drive Belts" and reset the belt tension as noted.

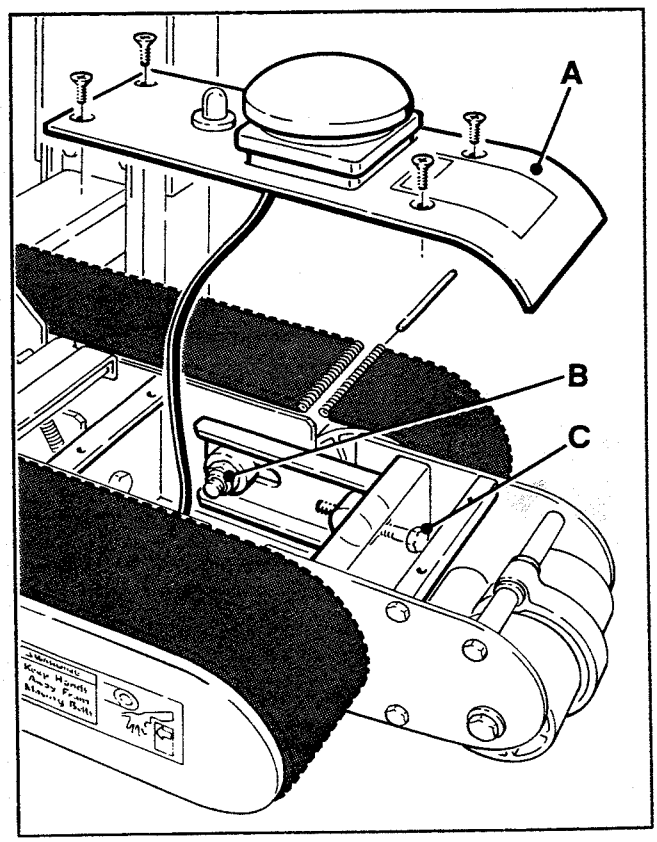


**Figure 4-3 - Upper Drive Belt Replacement**

## Cleaning of the Machine

**CAUTION - NEVER ATTEMPT TO REMOVE DIRT BY BLOWING IT OUT WITH COMPRESSED AIR. THIS CAN CAUSE THE DIRT TO BE BLOWN INSIDE THE MOTOR, AND SLIDING SURFACES. GRITTY DIRT IN THESE AREAS CAN CAUSE SERIOUS EQUIPMENT DAMAGE. NEVER WASH DOWN OR SUBJECT EQUIPMENT TO CONDITIONS CAUSING MOISTURE CONDENSATION ON COMPONENTS. SERIOUS EQUIPMENT DAMAGE COULD RESULT.**

Regular slotted containers produce a great deal of **dust** and **paper chips** when processed or handled in equipment. If this dust is allowed to build up on machine components, it can cause **component wear** and **overheating** of drive motor. The dust build up can best be removed from the machine by a shop vacuum. Depending on the number and type of boxes sealed in the case sealer, this **cleaning** should be done approximately **once per month.** If the boxes sealed are dirty, or if the environment in which the machine operates is dusty, cleaning on a more frequent basis may be necessary. **Excessive dirt** build up that cannot be removed by vacuuming should be wiped off with a **damp cloth.**

### Cut-Off Blade:

Should tape **adhesive build-up** occur, carefully wipe clean with **oily cloth.**

### Electrical Schematic

**WARNING - TURN OFF ELECTRICAL POWER AND AIR SUPPLY, AND DISCONNECT POWER CORD FROM ELECTRICAL SUPPLY BEFORE BEGINNING MAINTENANCE. IF POWER CORD IS NOT DISCONNECTED, PERSONNEL COULD BE EXPOSED TO DANGEROUS VOLTAGES. SEVERE INJURY OR EQUIPMENT DAMAGE COULD RESULT.**

Figure 4-4 illustrates the electrical system of the case sealer.
No adjustments to the electrical systems are required.

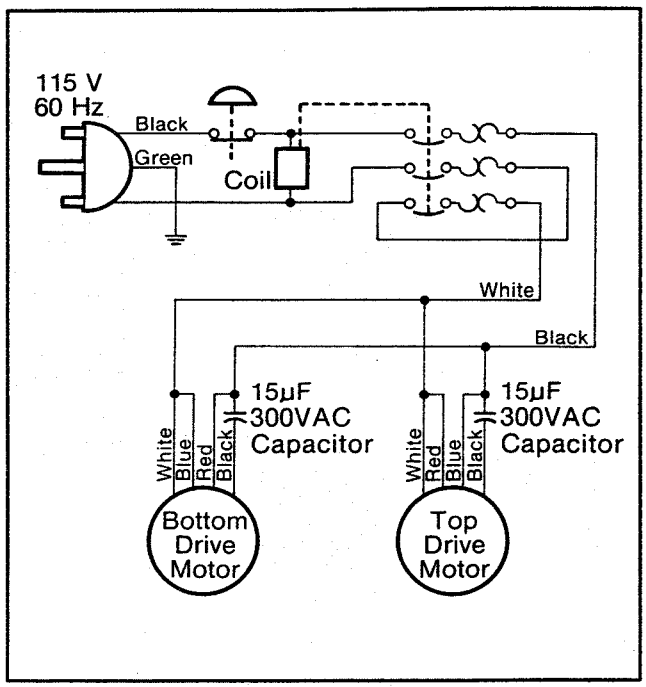


**Figure 4-4**

### Circuit Breaker

The case sealer is equipped with a circuit breaker which trips the **"On-Off" switch** to tripped position. If circuit is **overloaded** and circuit breaker trips, **wait 2 minutes,** move to **"Off"**, then turn **"On"**. Located inside the electrical control box on the side of the main frame just below the conveyor bed, the circuit breaker has been **pre-set** at 4.5 amps and requires no further maintenance.

## Lubrication - Mechanical

Like most other equipment, the case sealer must be properly lubricated to insure long, trouble/free service. Most of the **machine bearings** are **permanently lubricated and sealed** and do not need to be greased. The **drive motor** is also **permanently lubricated** and should not require additional lubrication.

Figures 4-5 and 4-6 illustrate the taping head and frame points which **should be lubricated** every **250 hours** of operation. Lubricate the rotating and pivoting points noted by the arrows ( ➡ ) with **SAE #30 non-detergent oil.** At the same time, a small amount of **multipurpose grease** should be applied to the end of each spring where the loop is secured at an eyelet, post, or hole noted by the arrows ( ⇨ ).

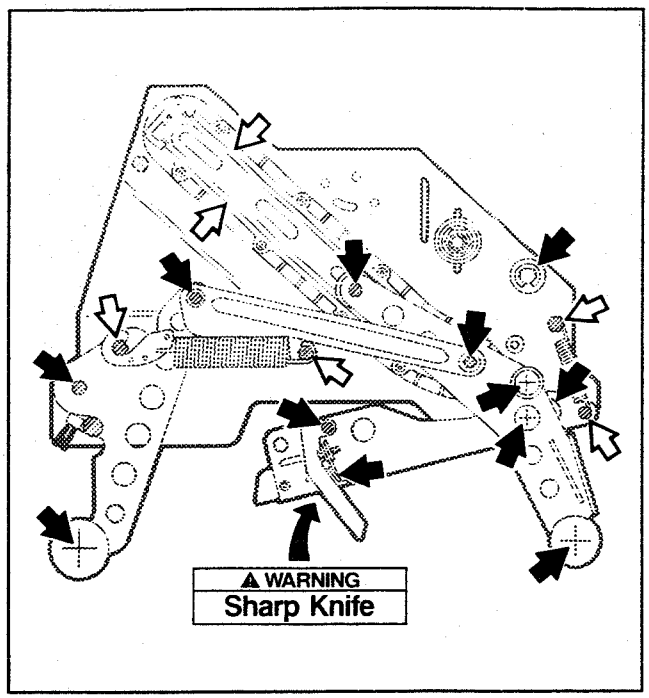


**Figure 4-5 - Lubrication Points - Upper and Lower Taping Heads**

**⚠ CAUTION - WIPE OFF EXCESS OIL AND GREASE; IT WILL ATTRACT DUST AND DIRT WHICH CAN CAUSE PREMATURE EQUIPMENT WEAR AND JAMMING. TAKE CARE THAT OIL AND GREASE ARE NOT LEFT ON THE SURFACE OF ROLLERS AROUND WHICH TAPE IS THEADED, AS IT CAN CONTAMINATE THE TAPE'S ADHESIVE.**

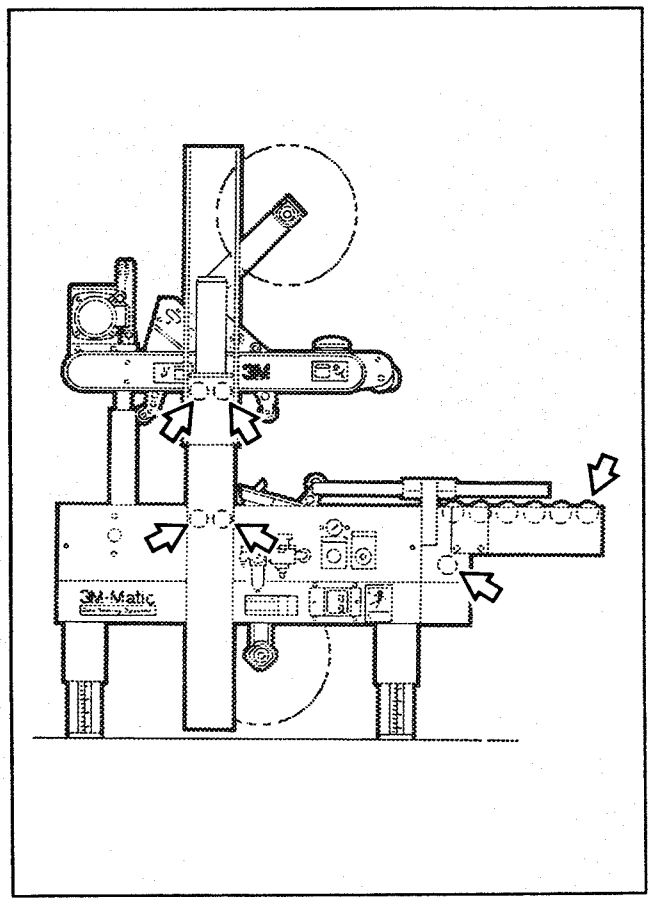


**Figure 4-6 - Lubrication Points - Frame**

## Blade Oiler Pad

The taping heads are equipped with a felt blade oiler pad that has been **pre-lubricated** at the factory to provide a film of oil on the cut-off blade to reduce adhesive build-up. Apply **SAE #30 non-detergent oil** as needed. **SATURATE FELT OILER PAD.**

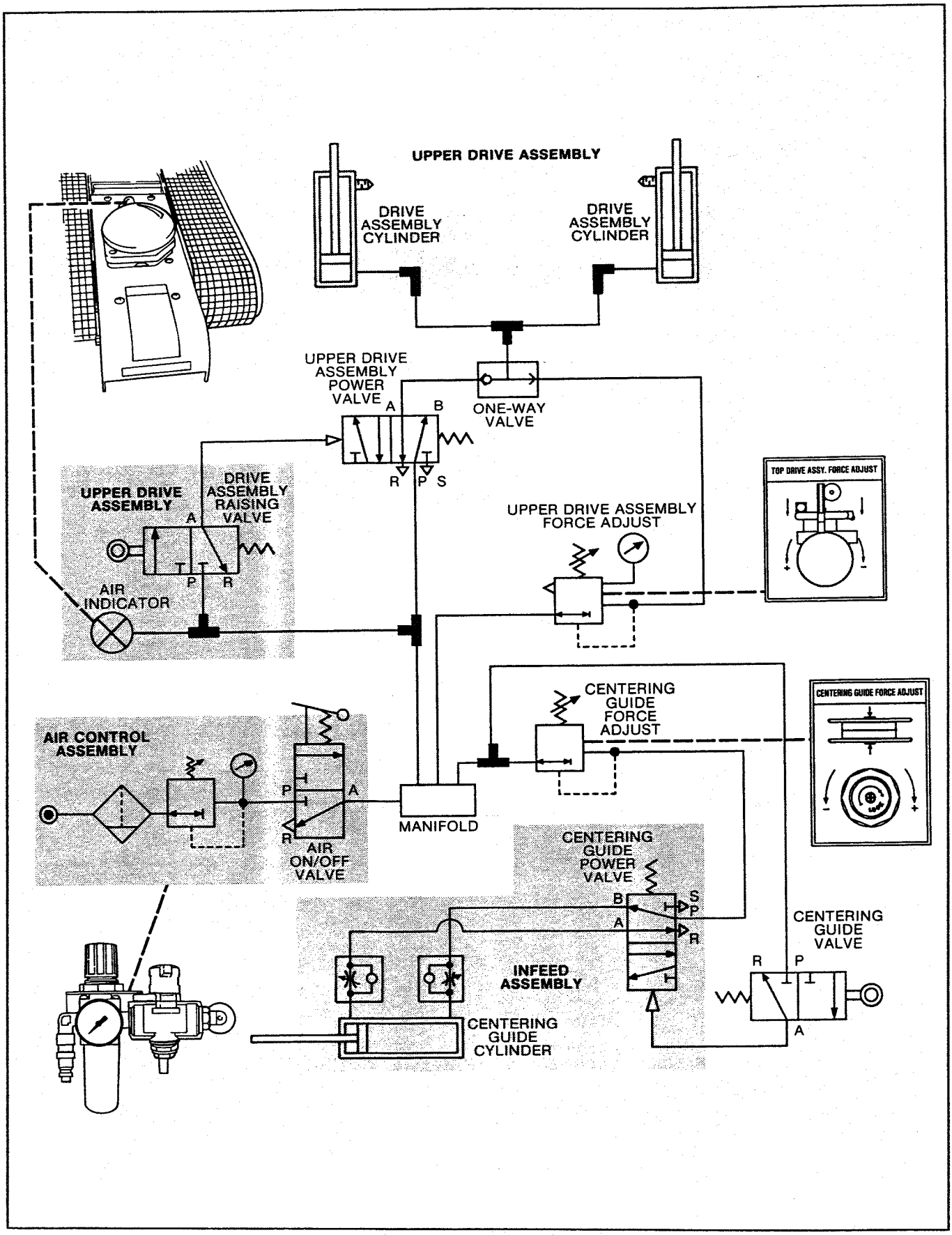


Figure 4-7 - Pneumatic Schematic

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## Changing the Tape Leg Length From 2 3/4 to 2 Inches

**⚠ WARNING - TURN OFF ELECTRICAL POWER AND AIR SUPPLY, AND DISCONNECT POWER CORD FROM ELECTRICAL SUPPLY BEFORE BEGINNING WORK ON THE CASE SEALER OR TAPING HEADS. IF POWER CORD IS NOT DISCONNECTED, SEVERE INJURY TO PERSONNEL COULD RESULT.**

The following changes to the case sealer will allow the taping of boxes of 3.50 inches [90 mm] minimum height.

### Case Sealer
Figure 5-1

1. Latch upper drive assembly in upper position, turn off air supply and electric power. **Remove and retain** the screws, washers and bumper stop assembly on both side columns of the main frame.
2. Remount and secure the stop bumper assembly using the top holes and original fasteners. (Figure 5-1A)

**⚠ WARNING - USE CARE WHEN WORKING NEAR BLADES AS BLADES ARE EXTREMELY SHARP. IF CARE IS NOT TAKEN, SEVERE INJURY TO PERSONNEL COULD RESULT.**

### Taping Heads

1. Pivot up the clamp that secures the upper taping head as shown in figure 5-1B.
2. Slide the head forward and straight down to remove it from the case sealer.
3. Lift the lower taping head, shown in figure 5-1C, straight up to remove it from the case sealer bed.

Figure 5-2

1. Remove and retain the two hex screws to remove the brush from the normal position "A" on the taping head frame.
2. Remount and secure the brush in position "A-A" (forward of the normal location) using the original fasteners.
3. Remove and retain the two flat head screws to remove the blade cut-off bracket extension in normal position "B".
4. Remount and secure the bracket extension in the forward position "B-B" using the original fasteners. Relocate both the right and left extensions..
5. Remove and retain the hex head screw and washer to remove the one-way tension roller assembly from slot "C" in the head frame.
6. Remount and secure tension roller assembly near top of slot "C-C" in frame using original fasteners.

Figure 5-3

The one way tension roller position is adjustable to control the leading tape leg length. Moving this roller farther away from the box top or bottom surface will decrease the leading tape leg length. Moving it closer to the box top or bottom surface will increase the leading tape leg length.

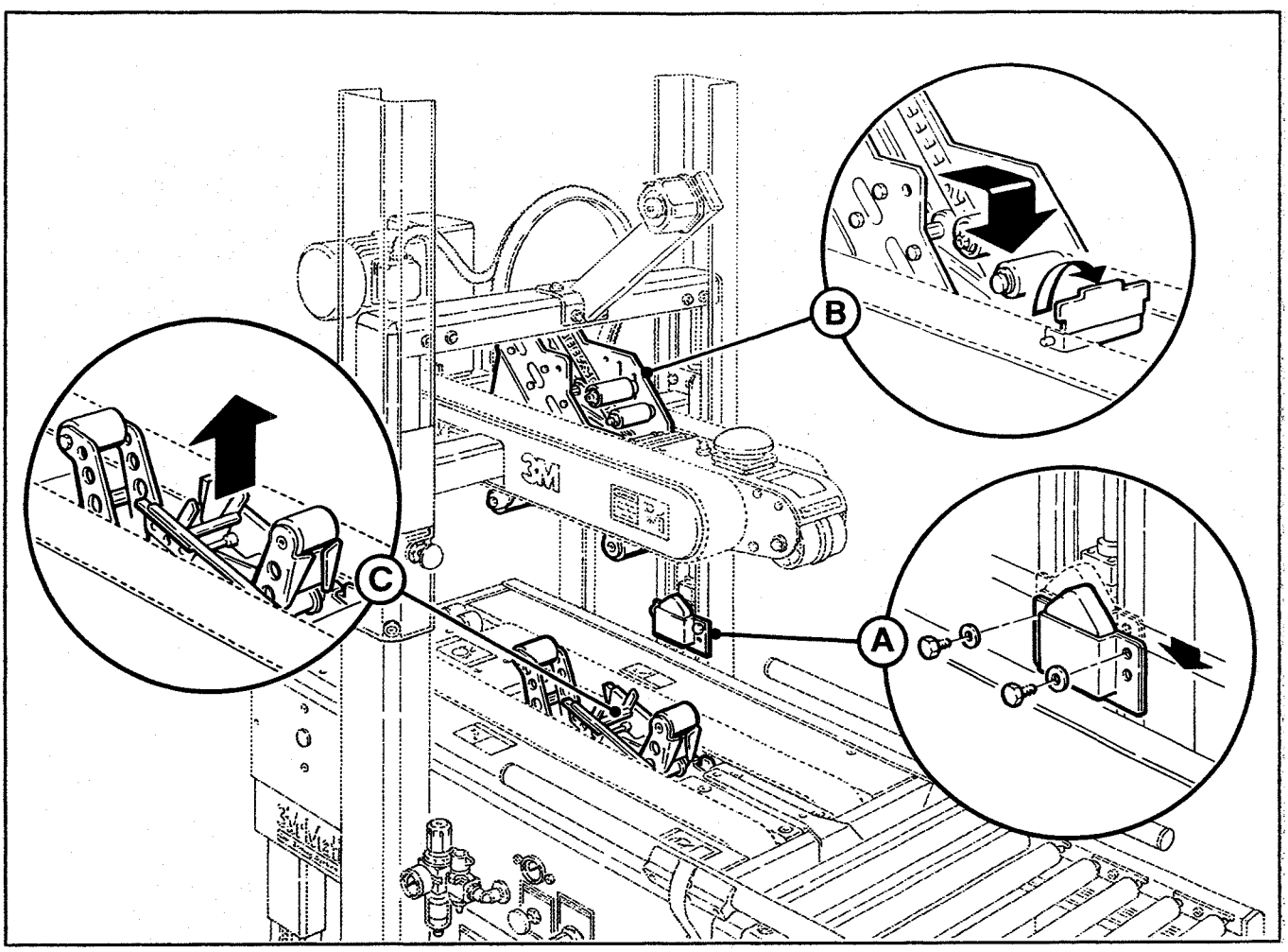


Figure 5-1 - Changes to Case Sealer

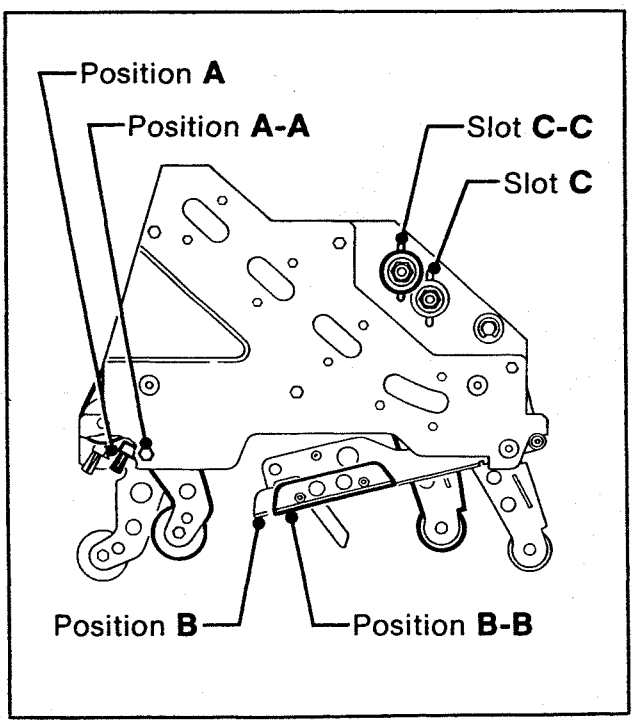


Figure 5-2 - Changes to Taping Head

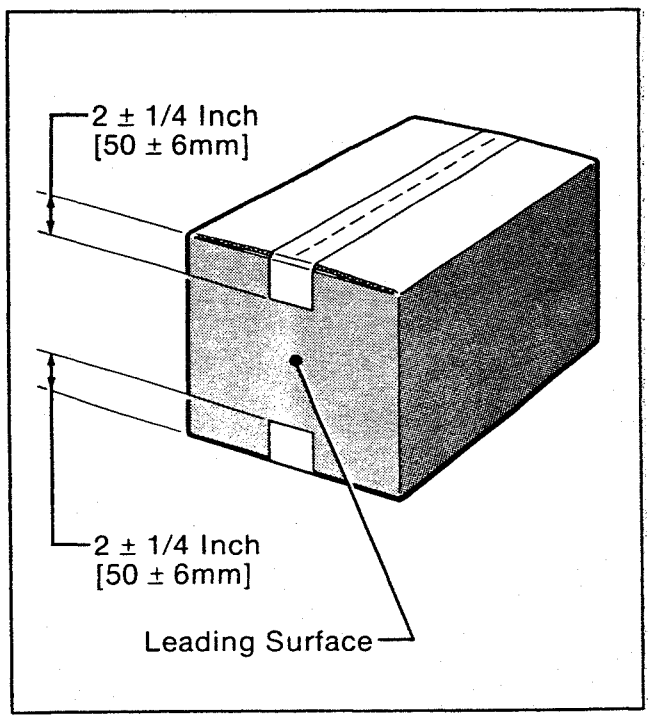


Figure 5-3 - Adjusting Tape Leg Length

**Box Height Range** - Refer to Figure 5-4

**⚠ WARNING - TURN OFF ELECTRICAL POWER AND AIR SUPPLY, AND DISCONNECT POWER CORD FROM ELECTRICAL SUPPLY BEFORE BEGINNING WORK ON THE CASE SEALER OR TAPING HEADS. IF POWER CORD IS NOT DISCONNECTED, SEVERE INJURY TO PERSONNEL COULD RESULT.**

The operating range of the upper drive assembly can be adjusted to minimize its movement to the range of box heights being sealed. Therefore, the operating speed can be increased. The range is established by limiting the lowest position of the drive assembly through positioning the **stop bumpers** at different levels on the side columns. After establishing the minimum box height to be sealed, position the **stop bumpers** as follows:

1. Latch upper drive assembly in upper position, turn off air and electric.

2. **Remove and retain** the screws, washers and bumper stop assembly on both side columns of the main frame (Figure 5-4).

3. **Remove and relocate** the stop bumper assembly to the upper mounting position on both side columns/main frame. Be sure that the stop bumpers are **reassembled as shown** and **secure.**

4. **Turn on** the air and electrical power to the case sealer. The upper taping head will now descend only part way thus increasing operating speed.

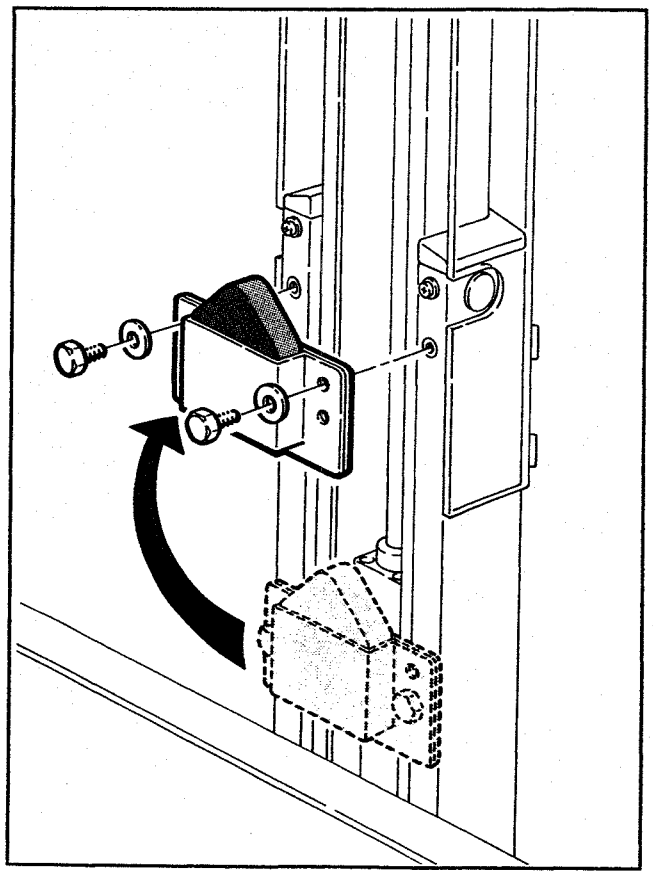

**Figure 5-4 - Stop Bumpers**

## Troubleshooting

Review the Set-Up Procedure Section so that the operational components of the machine are understood. The Troubleshooting Guide lists some possible machine problems, causes and corrections.

**TROUBLESHOOTING GUIDE**

| Problem | Cause | Correction |
|---|---|---|
| Drive belts do not convey boxes | Narrow boxes | Check machine specifications Boxes are narrower than recommended, causing slippage and premature belt wear |
| | Worn drive belts | Replace drive belts |
| | Top taping head does not apply enough pressure | Adjust the upper drive assembly force adjust regulator to increase the force against the top of the box. Turn air regulator counterclockwise. |
| | Taping head applying spring holder missing | Replace spring holder |
| | Taping head applying spring set too high | Reduce spring pressure |
| Drive belts do not turn | Worn or missing friction rings | Replace friction rings |
| | Drive belt tension too low | Adjust belt tension |
| | Electrical disconnect | Check power and electrical plug |
| | Circuit breaker not at correct setting | Set to correct current value |
| | Motor not turning | Evaluate problem and correct |
| Upper and lower applying mechanisms interfere with each other | Machine's minimum height stop does not match tape head leg length setting | Check manual to make sure taping heads match machine setting |
| Air leak at upper drive assembly force adjust regulator | No problem | Slight leakage from this regulator is normal |
| Drive belts break | Worn belt | Replace belt |
| Squeaking noise as boxes pass through machine | Dry compression rollers | Lubricate compression rollers |
| | Dry column bearings | Lubricate column bearings |
| | Defective column bearings | Replace column bearings |
| Tape not centered on box seam | Tape drum not centered | Reposition tape drum |
| | Centering guides not centered | Adjust centering guides |
| | Box flaps not of equal length | Check box specifications |

(continued)

Troubleshooting Guide

| Problem | Cause | Correction |
|---|---|---|
| Upper drive assembly does not move up or moves up slowly | Low air pressure | Disconnect the air supply. Make sure main pressure regulator reads zero. Reconnect air supply and adjust regulator to read 70 PSIG [5 bar]. |
| | Defective head raising valve | Clean or replace head raising valve |
| | Worn head raising valve actuator | Replace valve |
| | Clogged or damaged exhaust mufflers on the upper ends of the head raising cylinders | Clean or replace exhaust mufflers |
| | Defective head power valve | Clean or replace the head power valve |
| Upper taping head does not move down at the end of the taping cycle | Upper drive assembly force adjust regulator set too light | Adjust the upper drive assembly force adjust regulator to increase the force against the top of the box. Turn air regulator. counterclockwise |
| | Defective top drive assembly force adjust regulator | Replace regulator |
| | Defective one-way valve | Clean or replace valve |
| | Defective head power valve | Clean or replace valve |
| Upper drive assembly comes down too fast or too hard | Upper drive assembly force adjust regulator set too heavy | Adjust upper drive assembly force adjust regulator to decrease force against top of box. Turn regulator clockwise. |
| | Defective upper drive assembly force adjust regulator | Replace regulator |
| | Cushion screw misadjusted | Adjust cushion screw at base of cylinder |
| | Cushion screw missing | Replace screw |
| Centering guides move slower than normal | Centering guide force adjust regulator set too low | Adjust regulator |
| | Centering guide cylinder speed controls not in correct adjustment | Adjust speed controls mounted on centering guide cylinder |
| | Defective centering guide power valve | Clean or replace valve |

(continued)

## Troubleshooting Guide

| Problem | Cause | Correction |
|---|---|---|
| The tape leg on the front of the case is too long | The tape is threaded incorrectly | The tape must go around the wrap roller before going around the one-way tension roller |
| | The tape tension is too low | Adjust the one-way tension roller |
| | The knurled roller drags | Check for adhesive build-up between the knurled roller and its shaft. Clean and lubricate shaft. Remove all lubricant from roller surfaces. |
| | Tape tracks to one side or drags on the support tabs of applying frame | Ajust the tape web alignment |
| | The one-way tension roller is not correctly positioned | Position the roller in its mounting slot so that the tape extends just beyond the center line of the applying roller |
| | Taping head is not set up properly | Check leg length adjustments |
| The blade does not cut tape or the tape end is jagged or shredded | The blade is dull and/or has broken teeth | Replace the blade |
| | Tape tension is insufficient | Increase tape tension by adjusting the one-way tension roller |
| | Adhesive has built up on the blade | Clean and adjust the blade |
| | The blade is not positioned properly | Make sure the blade is bottomed out against the mounting bolts |
| | The blade is dry | Lubricate the blade oiler pad on the blade guard |
| | The blade is in backwards | Mount the blade so that the beveled edge is away from the entrance end of the head |
| | One or both cutter springs are missing or stretched | Replace the defective springs |
| | Cutting is insufficient | Install an additional cutter spring |
| | Tension roller surface is not fully contacting the taping head frame | Make sure one-way bearing is below the surface of the tension roller. If not, press bearing further into roller or replace roller. |

(continued)

**Troubleshooting Guide**

| Problem | Cause | Correction |
|---|---|---|
| Tape is tabbing on the trailing leg on the back of the box | There is excess tension on the tape drum assembly and/or the one-way tension roller assembly | Adjust the one-way tension roller and/or the tape drum assembly |
| | Rollers in the tape path do not rotate freely | Clean adhesive deposits from the surface, ends and shafts of the rollers. Then lubricate roller shafts. Remove all lubricant from roller surfaces. |
| | The blade is not cutting tape properly | Refer to tape cutting problems |
| | The tape is threaded incorrectly | Rethread the tape |
| | Applying mechanism spring has too little tension | Move spring hook to next tighter hole |
| The tape end does not stay in the application position in front of the applying roller | The tape is incorrectly threaded | Rethread the tape |
| | Flanged knurled roller overruns on return of applying mechanism to its rest position | Adjust tension roller position in mounting slot to lengthen tape leg |
| | Applying roller overruns on return of applying mechanism to its rest position | There should be a slight drag when rotating the applying roller. If not, check friction springs and/or friction pins and replace if necessary. |
| | The one-way tension roller is not correctly positioned | Position roller in its mounting slot so that tape end extends beyond center line of applying roller |
| | The one-way tension roller is defective | Replace the one-way tension roller |

## Replacement Parts And Service Information

### Spare Parts

It is suggested that the following spare parts be ordered and kept on hand:

| Qty. | Ref. No. | 3M Part Number | Description |
|---|---|---|---|
| 1 | 2880-15 | 78-8057-6179-4 | Roller - Applying |
| 1 | 2881-5 | 78-8057-6178-6 | Roller - Buffing |
| 1 | 2881-10 | 78-8070-1274-1 | Spring - Upper Extension |
| 1 | 2883-2 | 78-8017-9173-8 | Blade - 2.56 Inch/65 mm |
| 2 | 2883-12 | 78-8052-6602-6 | Spring - Cutter |
| 1 | 2886-10 | 78-8070-1273-3 | Spring - Lower Extension |
| 2 | 2812-38 | 78-8070-1531-4 | Belt - Drive W/Hook |

### Label Kit

A label kit, part number 78-8070-1428-3, is available as a stock item. It contains all the safety labels used on the 700r Random Case Sealer.

### Tool Kit

A tool kit, P/N 78-8060-8476-6, is available as a stock item. The kit contains the necessary open end and hex socket wrenches for use with the metric fasteners on the case sealer. The threading tool, part number 78-8076-4726-4, contained in above kit is also available as a replacement stock item. Refer to **"How To Order Replacement Parts"** for ordering information.

### How To Order Replacement Parts

1. Order parts by **part number, part name, machine number, type number** and part **quantity** required. A parts order form is provided at the back of the manual.

> **Minimum billing on parts orders will be $10.00.**
> **Replacement part prices available on request.**

2. Replacement parts and part prices available direct from:

**3M/Tape Dispenser Parts**
**241 Venture Drive** — **800/344 9883**
**Amery, WI 54001-1325** — **FAX #715/268 8153**

**Note** - Outside the U.S. contact the local 3M subsidiary for parts order information.

### Repair Service

Refer to the first page of this instruction manual **"Service Instructions"**, for information on repair service.

## Options/Accessories

For additional information on the options/accessories listed below, contact your 3M Representative.

| Part Number | Option/Accessory |
|---|---|
| 78-8069-3983-7 | Caster Kit Attachment |
| 78-8069-3924-1 | Conveyor Extension Attachment |
| 78-8069-3926-6 | Low Tape Sensor Kit |
| 78-8069-3911-8 | "AccuGlide" II STD Taping Head, Upper |
| 78-8069-3912-6 | "AccuGlide" II STD Taping Head, Lower |

**Replacement Parts Illustrations and Parts Lists**
**700r Random Case Sealer, Type 19000**
**Taping Head Assemblies**

1. Refer to **Taping Head Assemblies** figure to find all the parts illustrations identified by **figure numbers.**

2. Refer to the figure or figures to determine the **individual parts** required and the parts **reference number.**

3 . The **replacement parts list,** that follows each illustration, includes the **part number** and **part description** for the parts in that illustration.

> **Note** - The complete description has been included for standard **fasteners** and some **commercially available components.** This has been done to allow obtaining these standard parts locally, should the customer elect to do so.

4. Refer to page 44 - **"Replacement Parts and Service Information"** of this manual for replacement parts ordering information.

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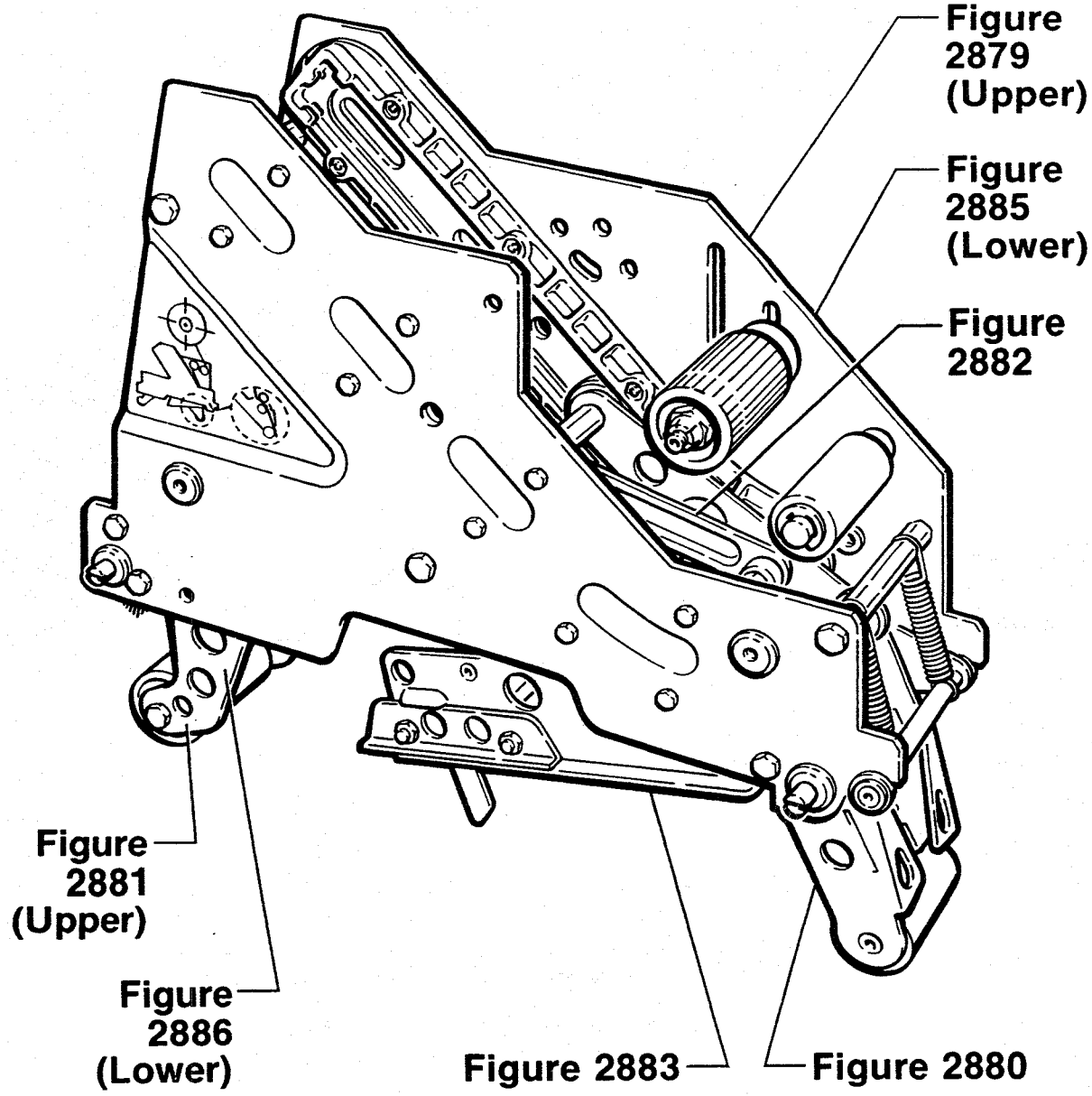


Taping Head Assemblies

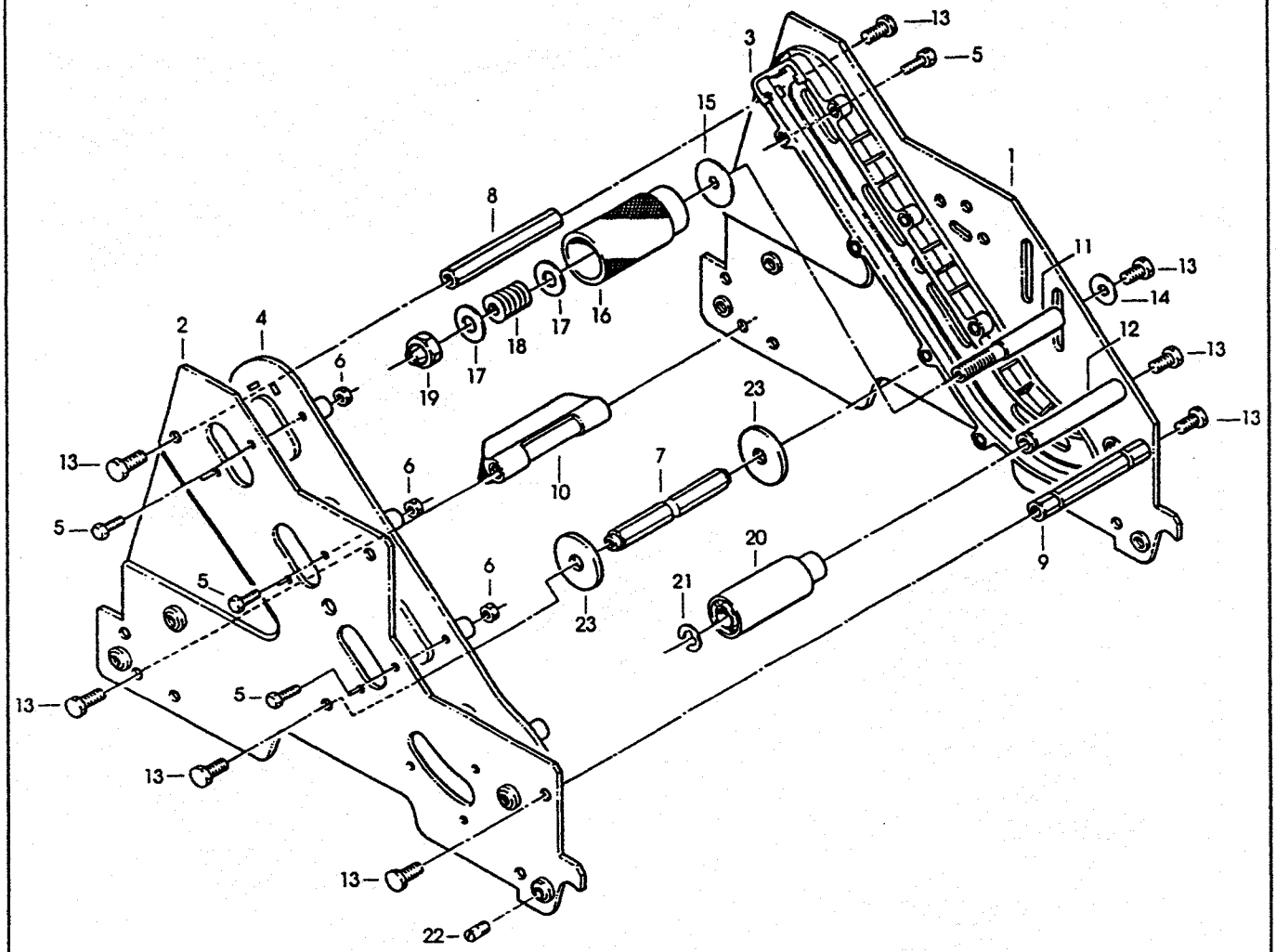


Figure 2879 Upper

Figure 2879 Upper

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2879-1 | 78-8070-1386-3 | Frame - Tape Mount Upper Assembly |
| 2879-2 | 78-8070-1387-1 | Frame - Front Upper Assembly |
| 2879-3 | 78-8068-4143-9 | Guide - R/H |
| 2879-4 | 78-8068-4144-7 | Guide - L/H |
| 2879-5 | 83-0002-7336-3 | Screw - Hex Hd M4 x 14 |
| 2879-6 | 78-8010-7416-8 | Nut - Hex M4 |
| 2879-7 | 78-8070-1251-9 | Spacer - Spring |
| 2879-8 | 78-8052-6559-8 | Spacer - Upper |
| 2879-9 | 78-8052-6560-6 | Spacer - Front |
| 2879-10 | 78-8060-7936-0 | Brush Assembly |
| 2879-11 | 78-8052-6564-8 | Shaft - Tension Roller |
| 2879-12 | 78-8052-6568-9 | Shaft - Wrap Roller |
| 2879-13 | 26-1003-5828-7 | Screw - Hex Hd M6 x 12 |
| 2879-14 | 78-8042-2919-9 | Washer - Triple, M6 |
| 2879-15 | 78-8070-1268-3 | Washer - Roll Back Up |
| 2879-16 | 78-8052-6565-5 | Roller - Top Tension |
| 2879-17 | 78-8052-6566-3 | Washer - Friction |
| 2879-18 | 78-8052-6567-1 | Spring - Compression |
| 2879-19 | 78-8017-9077-1 | Nut - Self Locking M10 x 1 |
| 2879-20 | 78-8052-6569-7 | Roller - Wrap |
| 2879-21 | 26-1000-1613-3 | Ring - Retaining 10DIN6799 |
| 2879-22 | 78-8076-4500-3 | Stud - Mounting |
| 2879-23 | 78-8076-5242-1 | Stop - Cut-Off Frame |

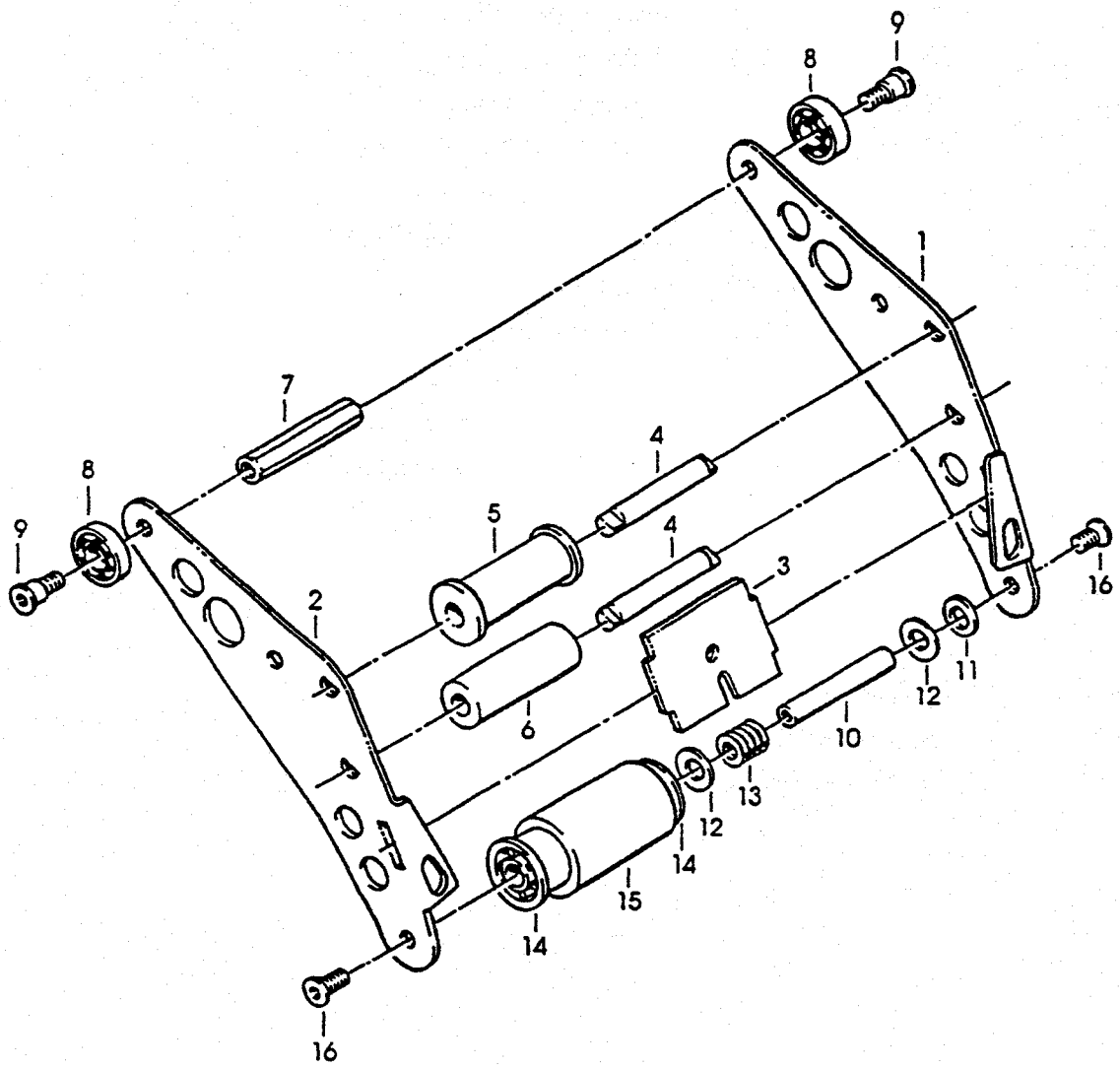


Figure 2880

Figure 2880

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2880-1 | 78-8070-1206-3 | Arm - Applying R/H |
| 2880-2 | 78-8070-1207-1 | Arm - Applying L/H |
| 2880-3 | 78-8070-1221-2 | Plate - Tape |
| 2880-4 | 78-8070-1309-5 | Shaft - Roller |
| 2880-5 | 78-8070-1367-3 | Roller - Knurled Assembly |
| 2880-6 | 78-8070-1266-7 | Roller - Wrap |
| 2880-7 | 78-8052-6580-4 | Spacer - Rear |
| 2880-8 | 78-8017-9082-1 | Bearing - Special 30 mm |
| 2880-9 | 78-8017-9106-8 | Screw - Bearing Shoulder |
| 2880-10 | 78-8052-6575-4 | Shaft - Roller |
| 2880-11 | 78-8017-9074-8 | Washer - Nylon 15 mm |
| 2880-12 | 78-8052-6566-3 | Washer - Friction |
| 2880-13 | 78-8052-6567-1 | Spring - Compression |
| 2880-14 | 78-8060-8395-8 | Bushing - Applying Roller |
| 2880-15 | 78-8057-6179-4 | Roller - Applying NM |
| 2880-16 | 26-1005-4759-0 | Screw - Flat Hd M6 x 12 |

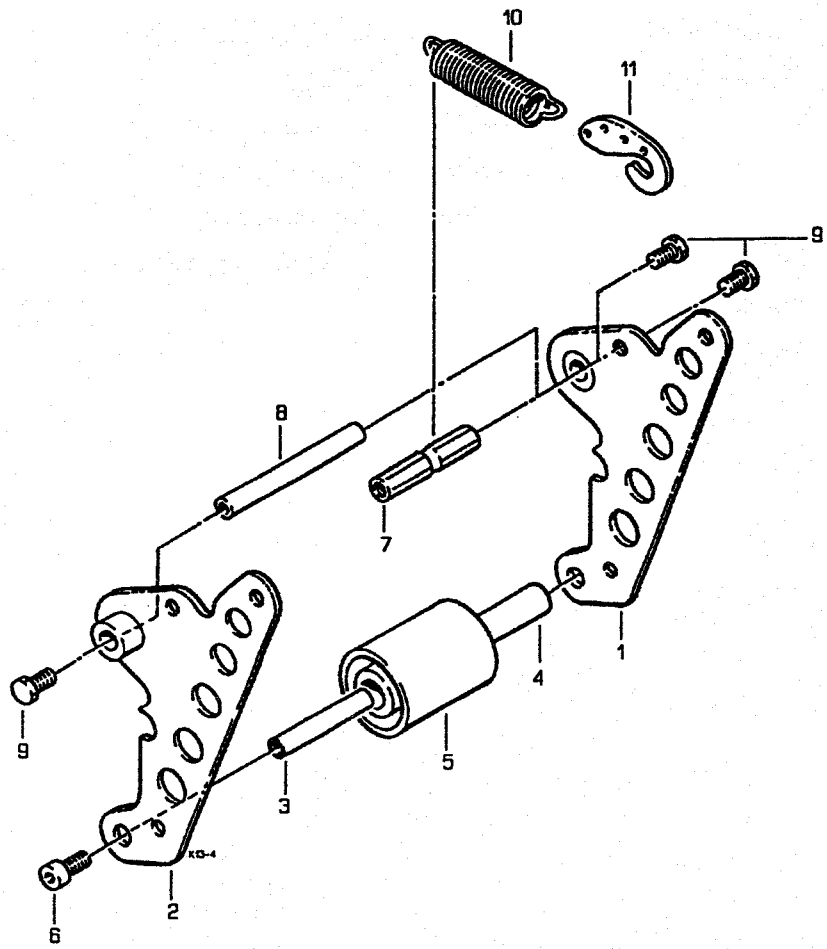


Figure 2881 Upper

Figure 2881 Upper

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2881-1 | 78-8070-1392-1 | Buffing Arm Sub Assembly |
| 2881-2 | 78-8070-1391-3 | Buffing Arm Sub Assembly |
| 2881-3 | 78-8052-6575-4 | Shaft - Roller |
| 2881-4 | 78-8052-6586-1 | Bushing - Buffing Roller |
| 2881-5 | 78-8057-6178-6 | Roller - Buffing NM |
| 2881-6 | 78-8076-4503-7 | Screw - M6 x 12 |
| 2881-7 | 78-8070-1220-4 | Spacer - Spring |
| 2881-8 | 78-8017-9109-2 | Shaft - 10 x 90 mm |
| 2881-9 | 26-1003-5828-7 | Screw - Hex Hd M6 x 12 |
| 2881-10 | 78-8070-1274-1 | Spring - Upper (Silver) |
| 2881-11 | 78-8070-1244-4 | Holder - Spring |

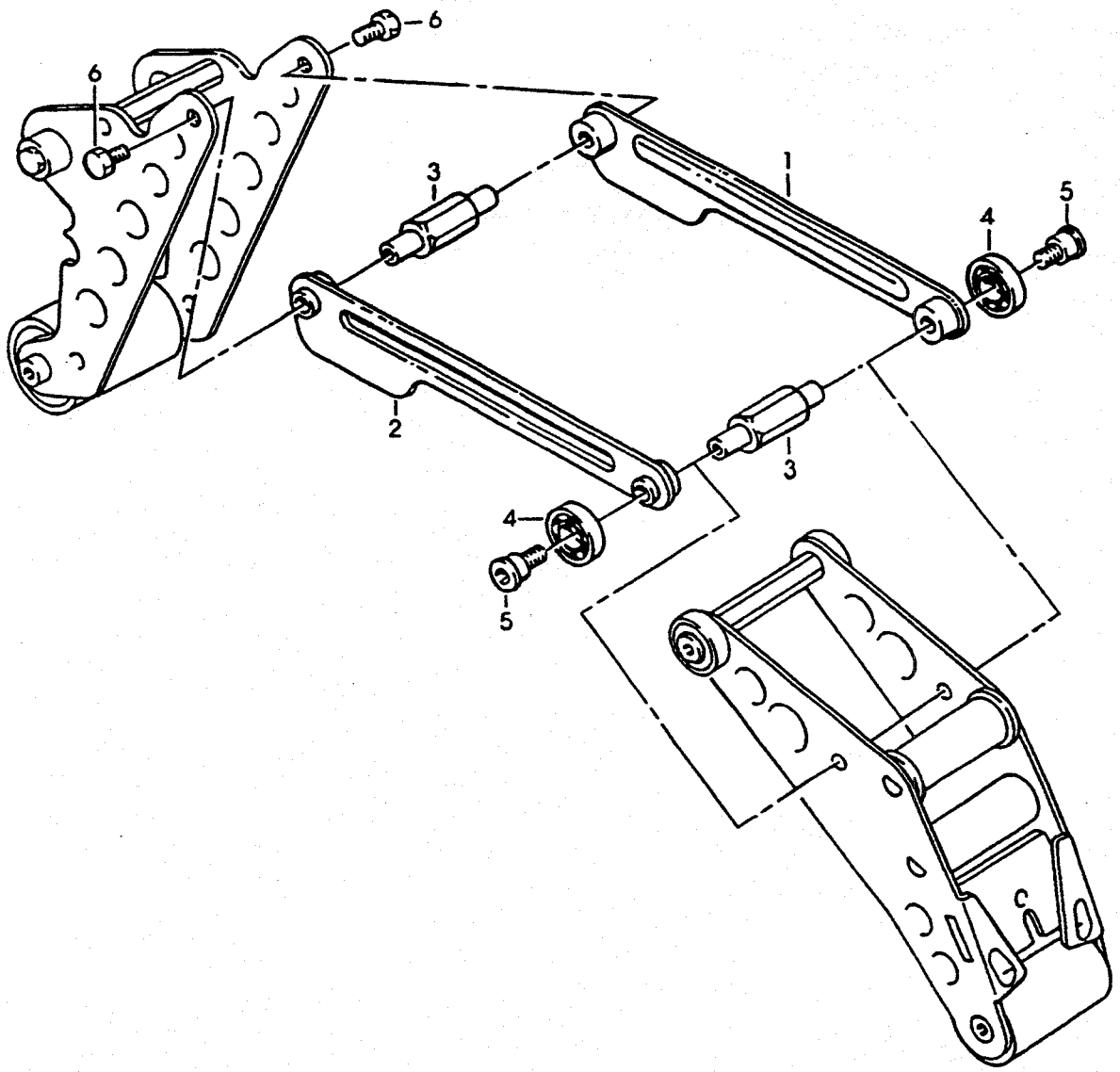


Figure 2882

Figure 2882

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2882-1 | 78-8070-1388-9 | Link - Arm Bushing Assembly |
| 2882-2 | 78-8070-1389-7 | Link - Arm Bushing Assembly |
| 2882-3 | 78-8070-1271-7 | Shaft - Pivot |
| 2882-4 | 78-8017-9082-1 | Bearing - Special 30 mm |
| 2882-5 | 78-8017-9106-8 | Screw - Bearing Shoulder |
| 2882-6 | 78-8010-7163-6 | Screw - Hex Hd M5 x 10 |

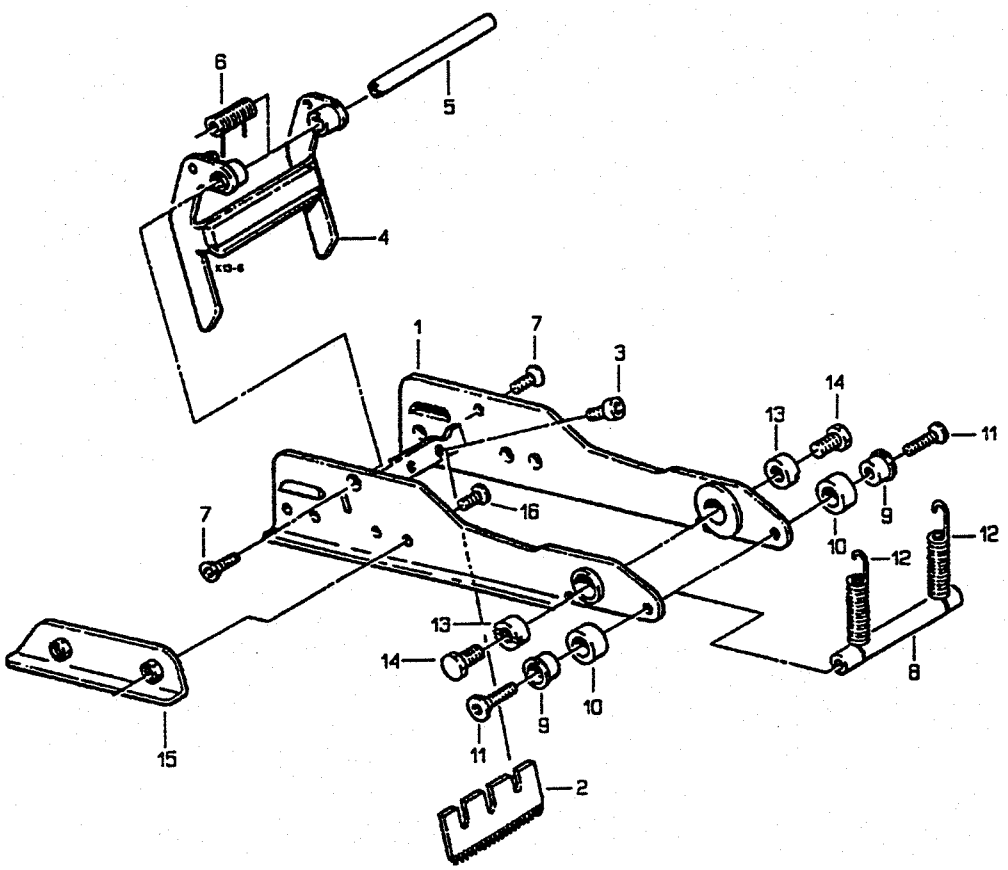


Figure 2883

Figure 2883

| Part No. | 3M Part No. | Description |
|---|---|---|
| 2883-1 | 78-8070-1217-0 | Frame - Cut-Off Weldment |
| 2883-2 | 78-8017-9173-8 | Blade - 2.56 Inch/65 mm |
| 2883-3 | 26-1009-9247-3 | Screw - Soc Hd Cap, M5 x 8 |
| 2883-4 | 78-8070-1371-5 | Guard - Blade Assembly |
| 2883-5 | 78-8052-6597-8 | Shaft - Blade Guard |
| 2883-6 | 78-8070-1390-5 | Spring - Tension |
| 2883-7 | 26-1005-4757-4 | Screw - Flat Hd M4 x 10 |
| 2883-8 | 78-8017-9135-7 | Shaft - Spacer |
| 2883-9 | 78-8052-6600-0 | Spacer |
| 2883-10 | 78-8070-1269-1 | Bumper |
| 2883-11 | 26-1005-4758-2 | Screw - Flat Hd M5 x 20 |
| 2883-12 | 78-8052-6602-6 | Spring - Cutter |
| 2883-13 | 78-8017-9132-4 | Pivot - Cutter Lever |
| 2883-14 | 78-8060-7852-9 | Screw - Hex Hd M6 x 10 |
| 2883-15 | 78-8070-1216-2 | Slide - Extension |
| 2883-16 | 78-8017-9170-4 | Screw - Phillips FH M4 x 8 |

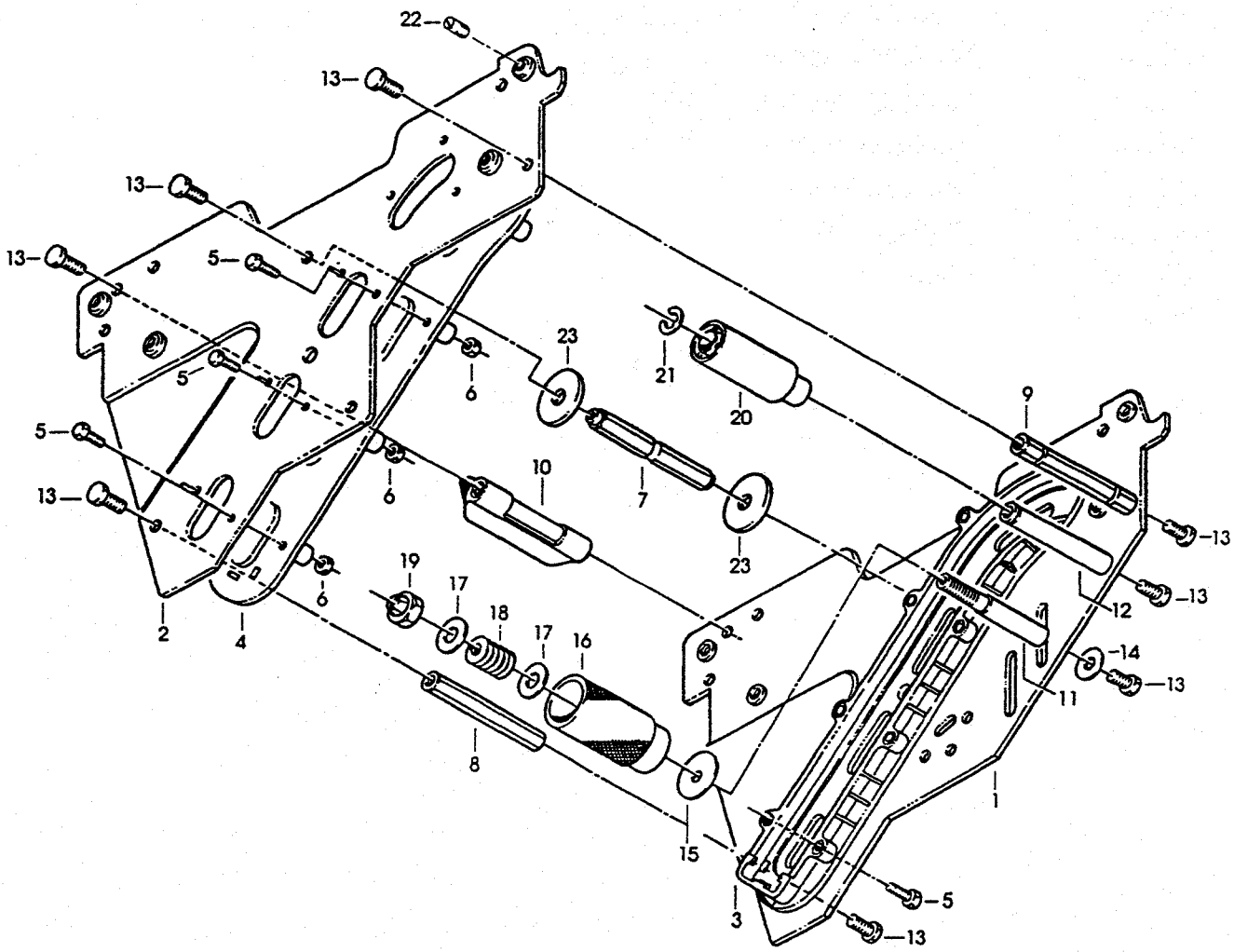


Figure 2885 Lower

Figure 2885 Lower

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2885-1 | 78-8070-1369-9 | Frame - Tape Mount Lower Assembly |
| 2885-2 | 78-8070-1370-7 | Frame - Front Lower Assembly |
| 2885-3 | 78-8068-4143-9 | Guide - R/H |
| 2885-4 | 78-8068-4144-7 | Guide - L/H |
| 2885-5 | 83-0002-7336-3 | Screw - Hex Hd M4 x 14 |
| 2885-6 | 78-8010-7416-8 | Nut - Hex M4 |
| 2885-7 | 78-8070-1251-9 | Spacer - Spring |
| 2885-8 | 78-8052-6559-8 | Spacer - Upper |
| 2885-9 | 78-8052-6560-6 | Spacer - Front |
| 2885-10 | 78-8060-7936-0 | Brush Assembly |
| 2885-11 | 78-8052-6564-8 | Shaft - Tension Roller |
| 2885-12 | 78-8052-6568-9 | Shaft - Wrap Roller |
| 2885-13 | 26-1003-5828-7 | Screw - Hex Hd M6 x 12 |
| 2885-14 | 78-8042-2919-9 | Washer - Triple M6 |
| 2885-15 | 78-8070-1268-3 | Washer - Roll Back Up |
| 2885-16 | 78-8052-6606-7 | Roller - Tension Bottom |
| 2885-17 | 78-8052-6566-3 | Washer - Friction |
| 2885-18 | 78-8052-6567-1 | Spring - Compression |
| 2885-19 | 78-8017-9077-1 | Nut - Self Locking M10 x 1 |
| 2885-20 | 78-8052-6569-7 | Roller - Wrap |
| 2885-21 | 26-1000-1613-3 | Ring - Retaining 1DIN6799 |
| 2885-22 | 78-8076-4500-3 | Stud - Mounting |
| 2885-23 | 78-8076-5242-1 | Stop - Cut-Off Frame |

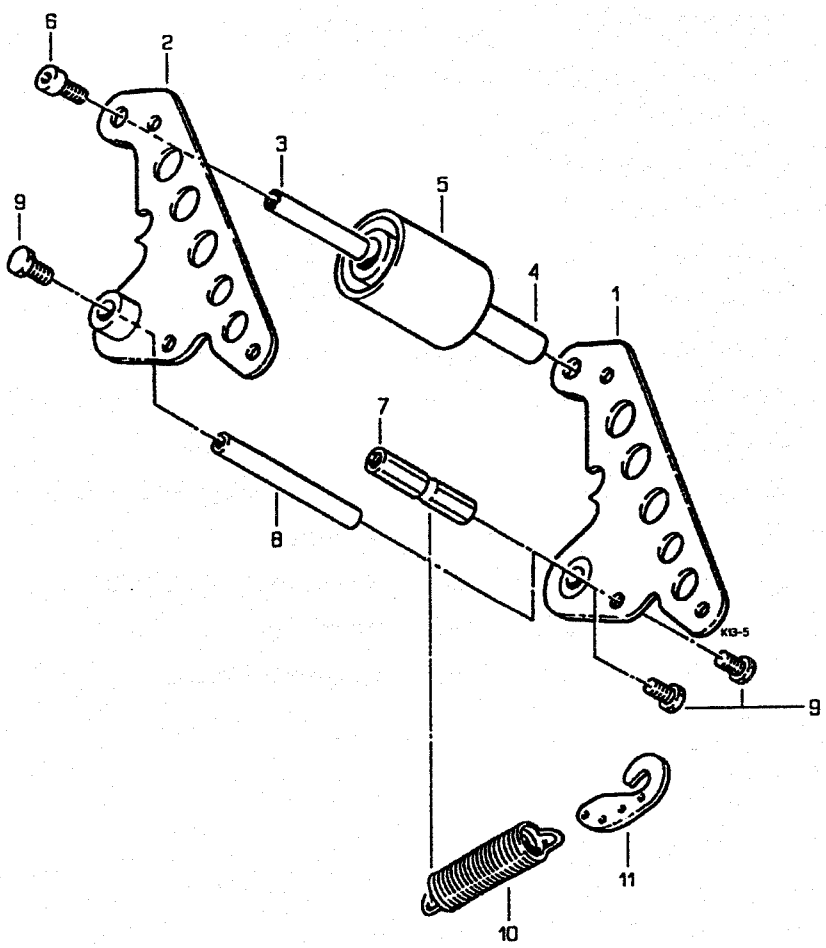


Figure 2886 Lower

Figure 2886 Lower

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2886-1 | 78-8070-1391-3 | Buffing Arm Sub Assembly |
| 2886-2 | 78-8070-1392-1 | Buffing Arm Sub Assembly |
| 2886-3 | 78-8052-6575-4 | Shaft - Roller |
| 2886-4 | 78-8052-6586-1 | Bushing - Buffing Roller |
| 2886-5 | 78-8057-6178-6 | Roller - Buffing NM |
| 2886-6 | 78-8076-4503-7 | Screw - M6 x 12 |
| 2886-7 | 78-8070-1220-4 | Spacer - Spring |
| 2886-8 | 78-8017-9109-2 | Shaft - 10 x 90 mm |
| 2886-9 | 26-1003-5828-7 | Screw - Hex Hd M6 x 12 |
| 2886-10 | 78-8070-1273-3 | Spring - Lower (Black) |
| 2886-11 | 78-8070-1244-4 | Holder - Spring |

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1. Refer to **Frame Assemblies figure** to find all parts illustrations identified by **figure numbers.**

2. Refer to the figure or figures to determine the **individual parts** required and the parts **reference number.**

3. The **replacement parts list,** that follows each illustration, includes the **part number** and **part description** for the parts in the illustration.

> **Note** - The complete description has been included for standard **fasteners** and some **commercially available components.** This has been done to allow obtaining these standard parts locally, should the customer elect to do so.

4. Refer to page 44 - **"Replacement Parts and Service Information"** of this manual for replacement parts ordering information.

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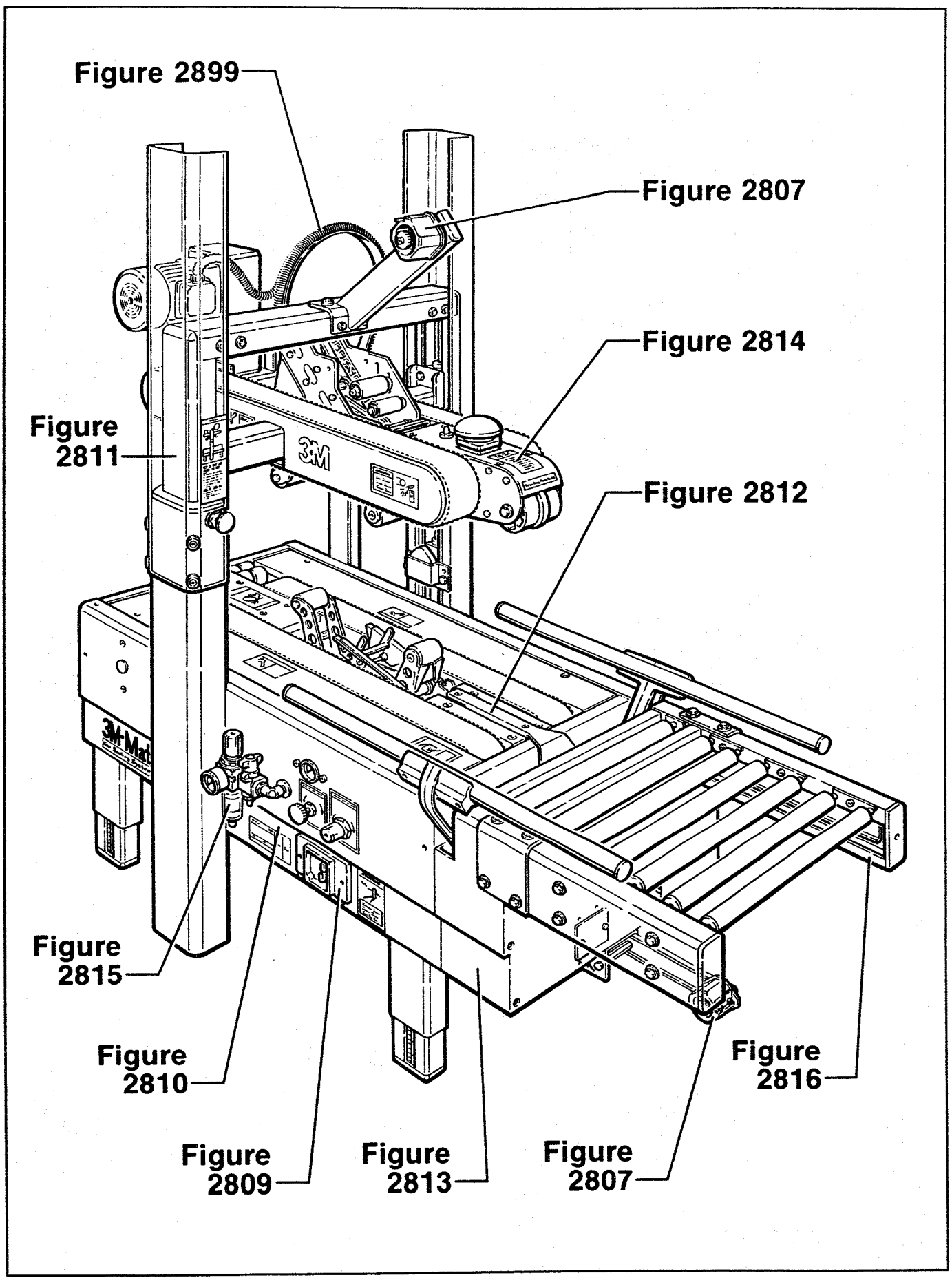


Frame Assemblies

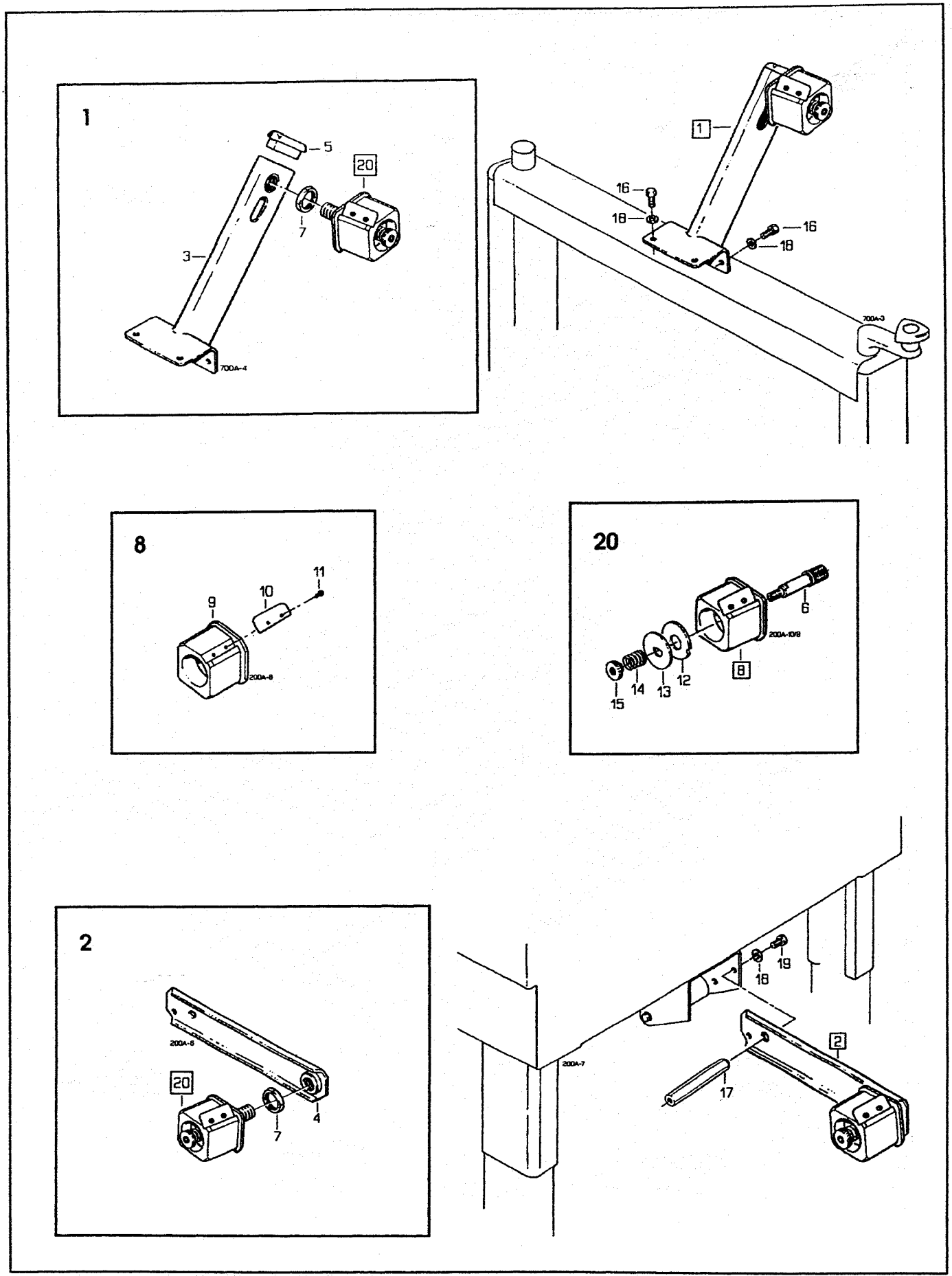
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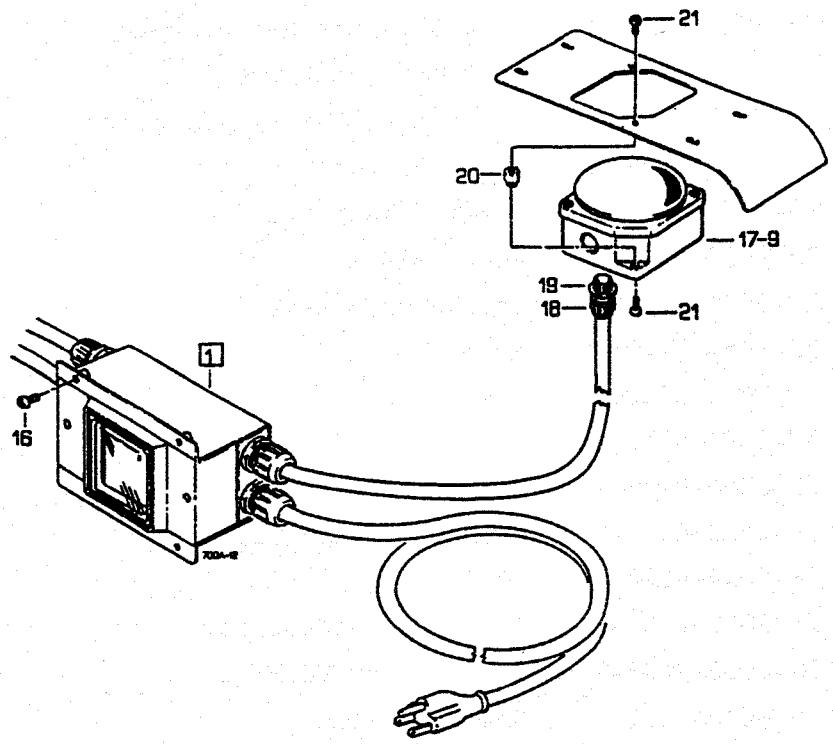
Figure 2807

Figure 2807

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2807-1 | 78-8076-4633-2 | Tape Roll Bracket Assembly |
| 2807-2 | 78-8070-1565-2 | Tape Drum Bracket Assembly |
| 2807-3 | 78-8070-1566-0 | Bracket - Tape Drum |
| 2807-4 | 78-8070-1395-4 | Bracket - Bushing Assembly |
| 2807-5 | 78-8070-1568-6 | Cap - Bracket |
| 2807-6 | 78-8076-4519-3 | Shaft - Tape Drum |
| 2807-7 | 78-8017-9169-6 | Nut - M18 x 1 |
| 2807-8 | 78-8070-1569-4 | Tape Drum Assembly |
| 2807-9 | 78-8052-6749-5 | Tape Drum Assembly |
| 2807-10 | 78-8052-6268-6 | Leaf - Spring |
| 2807-11 | 26-1002-5753-9 | Screw - Self Tapping |
| 2807-12 | 78-8060-8172-1 | Washer - Friction |
| 2807-13 | 78-8052-6271-0 | Washer - Tape Drum |
| 2807-14 | 78-8054-8826-5 | Spring |
| 2807-15 | 78-8060-7851-1 | Ring Nut - Adjusting |
| 2807-16 | 78-8060-7886-7 | Screw - Hex Hd M6 x 16 |
| 2807-17 | 78-8070-1215-4 | Spacer - Stud |
| 2807-18 | 26-1000-0010-3 | Washer - Flat M6 |
| 2807-19 | 78-8010-7169-3 | Screw - Hex Hd M6 x 12 |
| 2807-20 | 78-8060-8474-1 | Tape Drum Assembly - 2 Inch Head |



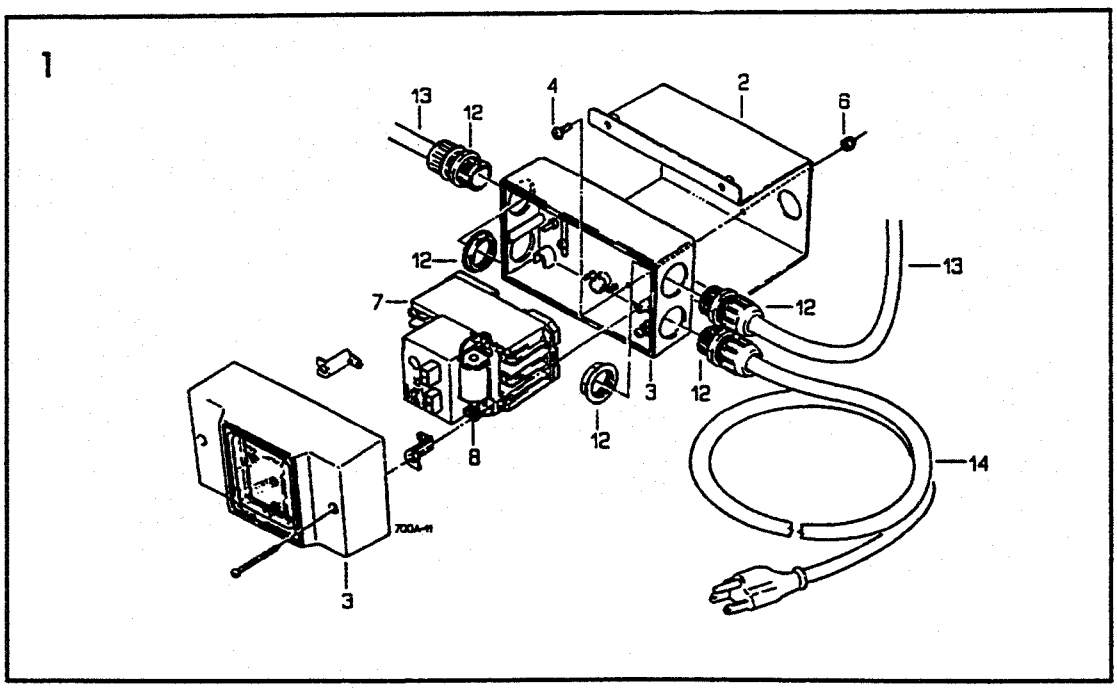
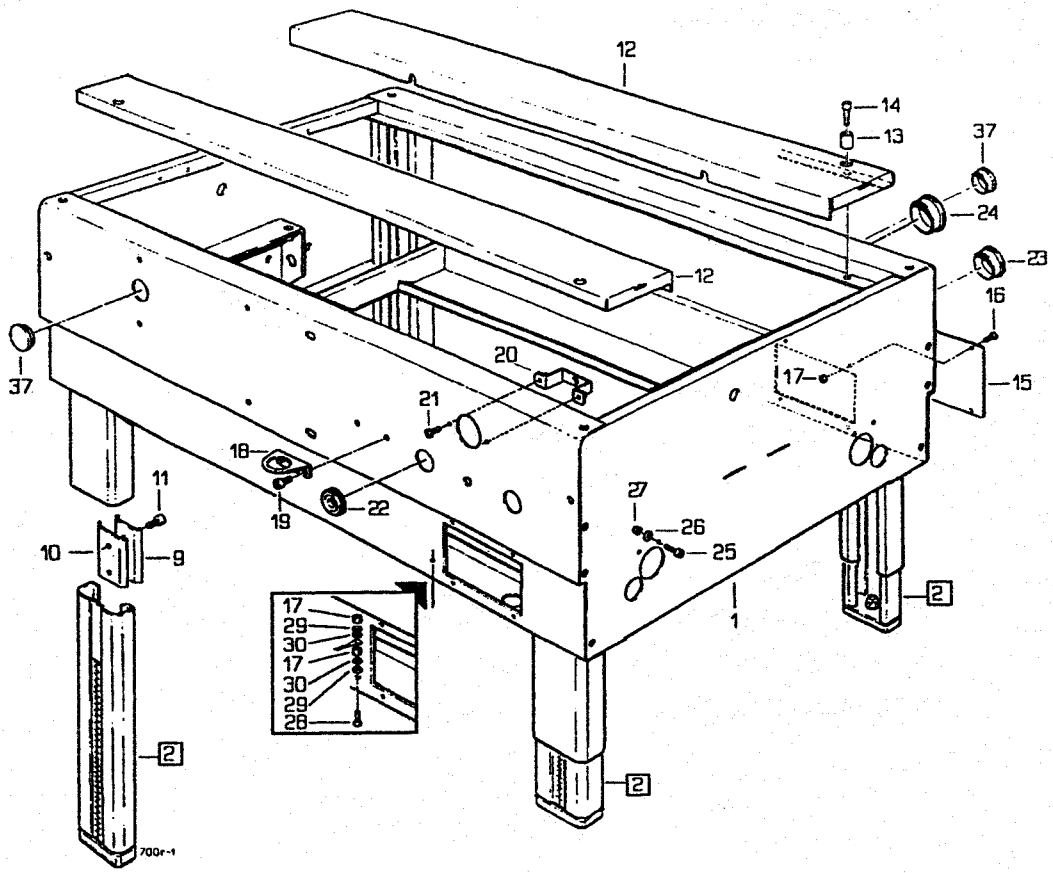




Figure 2809

Figure 2809

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2809-1 | 78-8076-4642-3 | On/Off Switch W/Coil |
| 2809-2 | 78-8070-1572-8 | Support - Switch |
| 2809-3 | 78-8070-1573-6 | Box - On/Off Switch |
| 2809-4 | 78-8017-9257-9 | Screw - M4 x 10 |
| 2809-6 | 26-1003-6914-4 | Nut - Plastic Insert M4 |
| 2809-7 | 78-8076-4506-0 | On/Off Switch W/Coil 4-6, (Set to 4.5 amps) |
| 2809-8 | 78-8076-4643-1 | Coil - Low Tension, 110V |
| 2809-12 | 78-8057-5807-1 | Cord Grip |
| 2809-13 | 78-8060-8053-3 | Wire - 3-Pole, 5 Meters Length |
| 2809-14 | 78-8028-7909-4 | Power Cord U.S.A. |
| 2809-16 | 78-8060-8087-1 | Screw - M5 x 10 |
| 2809-17 | 78-8060-7633-3 | Safety Button |
| 2809-18 | 78-8076-4532-6 | Union |
| 2809-19 | 78-8076-4645-6 | Lock Nut - GMP11 |
| 2809-20 | 78-8076-4646-4 | Bushing |
| 2809-21 | 78-8060-7815-6 | Screw - M4 x 8 |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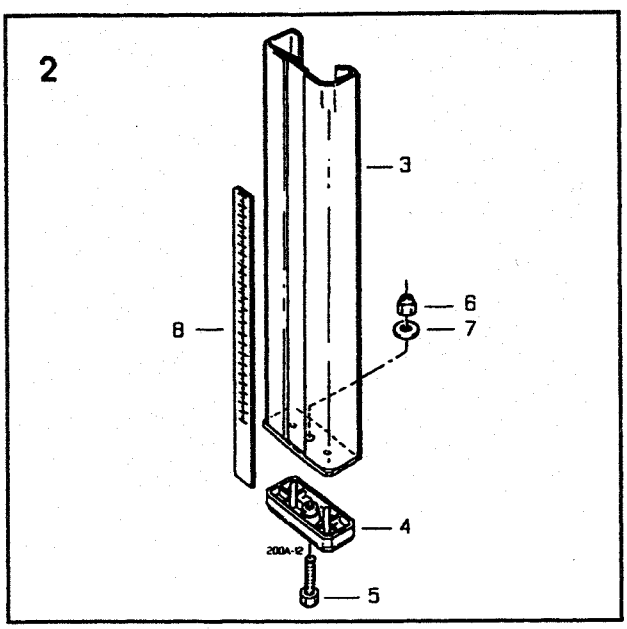
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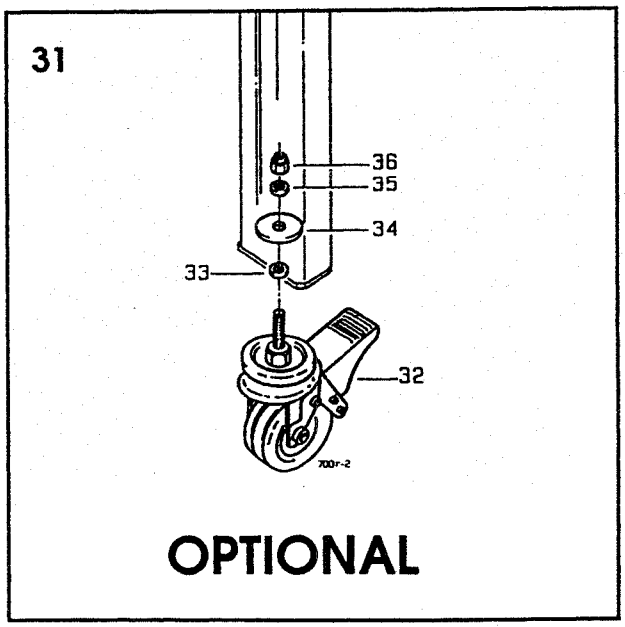
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Figure 2810

Figure 2810

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2810-1 | 78-8076-4533-4 | Bed - Conveyor |
| 2810-2 | 78-8060-8478-2 | Leg Assembly - Inner |
| 2810-3 | 78-8060-8479-0 | Leg - Inner |
| 2810-4 | 78-8060-8480-8 | Pad - Foot |
| 2810-5 | 78-8055-0867-4 | Screw - Hex Hd M8 x 30 |
| 2810-6 | 78-8017-9313-0 | Nut - Self Locking M8 |
| 2810-7 | 26-1004-5507-5 | Washer - M8 |
| 2810-8 | 78-8060-8481-6 | Label - Height |
| 2810-9 | 78-8052-6676-0 | Clamp - Outer |
| 2810-10 | 78-8052-6677-8 | Clamp - Inner |
| 2810-11 | 26-1003-7963-0 | Screw - Soc Hd M8 x 16 |
| 2810-12 | 78-8076-4620-9 | Plane - Conveyor Bed |
| 2810-13 | 78-8060-8486-5 | Bushing |
| 2810-14 | 78-8010-7211-3 | Screw - Soc Hd M6 x 25 |
| 2810-15 | 78-8060-8487-3 | Cover - Switch |
| 2810-16 | 78-8060-8087-1 | Screw - M5 x 10 |
| 2810-17 | 78-8010-7417-6 | Nut - Hex M5 |
| 2810-18 | 78-8076-4534-2 | Bracket - Mounting, Filter |
| 2810-19 | 78-8010-7209-7 | Screw - Soc Hd M6 x 12 |
| 2810-20 | 78-8076-4535-9 | Bracket |
| 2810-21 | 78-8076-4625-8 | Screw - Special M5 x 16 |
| 2810-22 | 78-8076-4702-5 | Grommet /28 |
| 2810-23 | 78-8060-8184-6 | Cap - /35X1,5 |
| 2810-24 | 78-8076-4536-7 | Cap - /45X1,5 |
| 2810-25 | 78-8076-4537-5 | Screw - Soc Hd Hex Hd M3 x 25 |
| 2810-26 | 78-8076-4538-3 | Washer - Flat M3 |
| 2810-27 | 78-8059-5517-2 | Nut - Self Locking M3 |
| 2810-28 | 78-8060-8488-1 | Screw - Hex Hd M5 x 20 |
| 2810-29 | 78-8046-8217-3 | Washer - Special |
| 2810-30 | 78-8005-5741-1 | Washer - Plain M5 |
| 2810-31 | 78-8060-8060-8 | Caster Assembly - /80 |
| 2810-32 | 78-8060-8061-6 | Caster - /80 |
| 2810-33 | 78-8060-8124-2 | Spacer - Caster |
| 2810-34 | 78-8060-7699-4 | Washer - /12-45, 5X4 |
| 2810-35 | 78-8017-9059-9 | Washer - Flat For M12 Screw |
| 2810-36 | 78-8060-7532-7 | Nut - M12 Self Locking |
| 2810-37 | 78-8076-4701-7 | Cap - /28 |

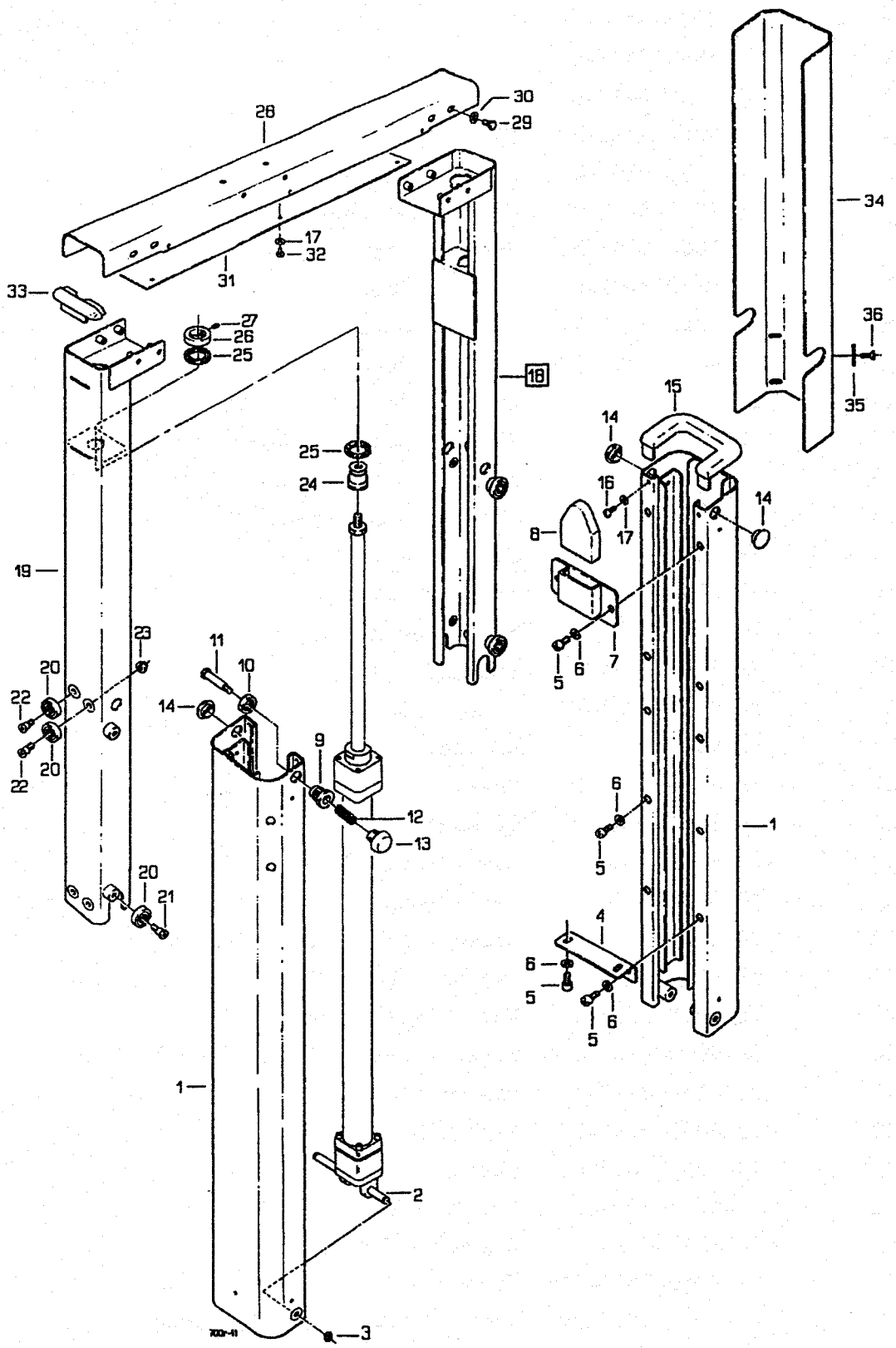
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Figure 2811

Figure 2811

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2811-1 | 78-8076-4539-1 | Column - Outer |
| 2811-2 | 78-8076-4540-9 | Pin - Air Cylinder |
| 2811-3 | 78-8060-8035-0 | E-Ring - 7DIN6799 |
| 2811-4 | 78-8060-8490-7 | Plate - Column Mounting |
| 2811-5 | 26-1003-7963-0 | Screw - Soc Hd M8 x 16 |
| 2811-6 | 78-8017-9318-9 | Washer - Plain 8 mm |
| 2811-7 | 78-8076-4541-7 | Plate - Bumper Support |
| 2811-8 | 78-8076-4542-5 | Bumper |
| 2811-9 | 78-8076-4543-3 | Bushing - Height Stop |
| 2811-10 | 78-8017-9169-6 | Nut - M18 x 1 |
| 2811-11 | 78-8076-4544-1 | Stud - Height Stop |
| 2811-12 | 78-8076-4545-8 | Spring |
| 2811-13 | 78-8076-4546-6 | Knob |
| 2811-14 | 78-8076-4547-4 | Cap - /18 |
| 2811-15 | 78-8060-8491-5 | Cap - Column |
| 2811-16 | 78-8076-4548-2 | Screw - Self Tapping 8P x 16 |
| 2811-17 | 78-8005-5740-3 | Washer - Plain 4 mm |
| 2811-18 | 78-8076-4549-0 | Column Assembly - Inner |
| 2811-19 | 78-8076-4550-8 | Column - Inner |
| 2811-20 | 78-8054-8617-8 | Bearing - Special |
| 2811-21 | 78-8017-9106-8 | Screw - Bearing Shoulder |
| 2811-22 | 78-8054-8589-9 | Screw - Special |
| 2811-23 | 26-1003-6916-9 | Nut - Locking Plastic Insert M6 |
| 2811-24 | 78-8076-4551-6 | Mounting - Rod |
| 2811-25 | 78-8054-8823-2 | Bumper |
| 2811-26 | 78-8076-4552-4 | Ring Nut - Rod |
| 2811-27 | 78-8059-5617-0 | Set Screw - M6 x 8 |
| 2811-28 | 78-8076-4553-2 | Crossmember |
| 2811-29 | 78-8060-7886-7 | Screw - Hex Hd M6 x 16 Special |
| 2811-30 | 26-1000-0010-3 | Washer - Flat M6 |
| 2811-31 | 78-8070-1504-1 | Cover |
| 2811-32 | 26-1002-5753-9 | Screw - Self Tapping |
| 2811-33 | 78-8070-1505-8 | Cap - Inner Column |
| 2811-34 | 78-8076-4554-0 | Guard - Column |
| 2811-35 | 78-8054-8577-4 | Washer - Special |
| 2811-36 | 26-1001-9843-6 | Screw - Flat Soc Hd M6 x 16 |

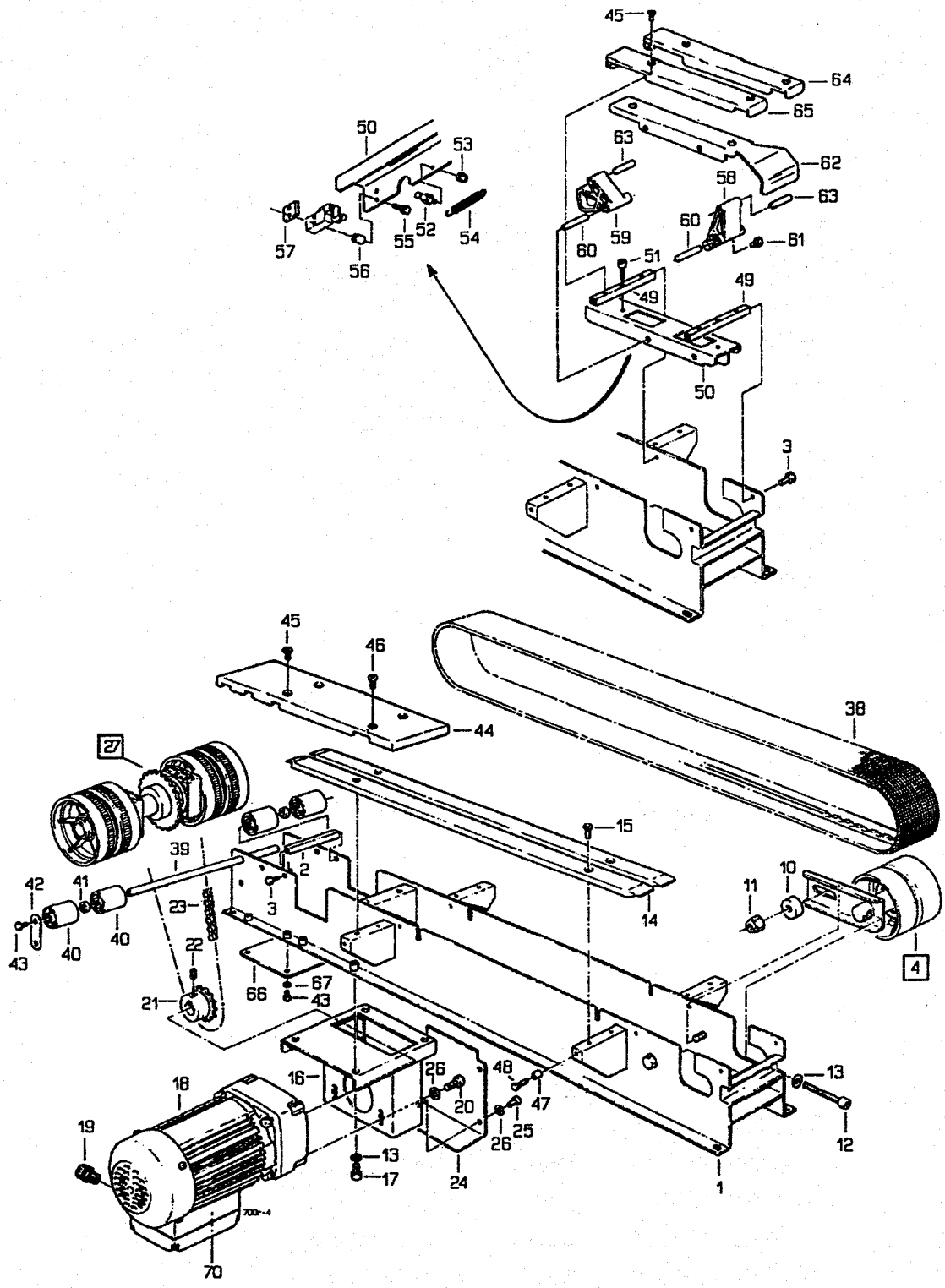
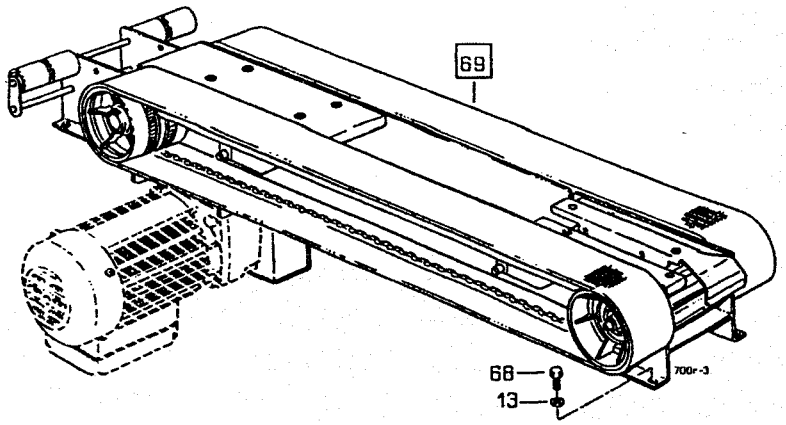
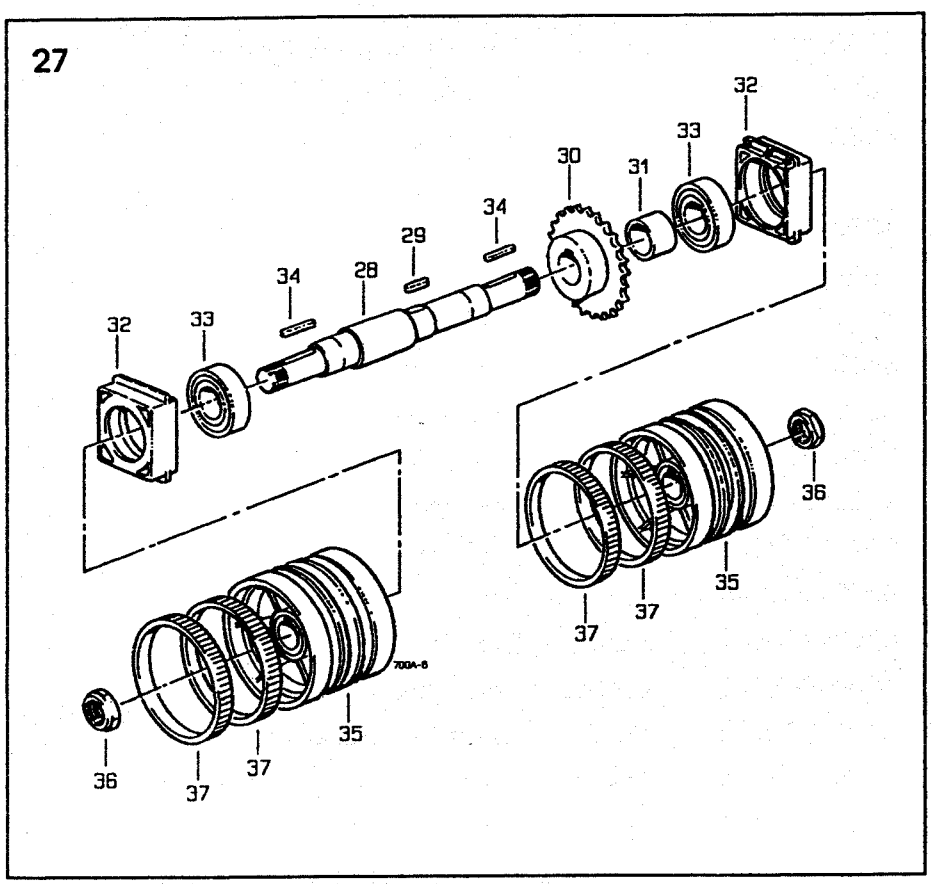



Figure 2812/1 of 2

Figure 2812 (Page 1 of 2)

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2812-1 | 78-8070-1580-1 | Frame - Drive |
| 2812-2 | 78-8070-1514-0 | Spacer |
| 2812-3 | 26-1003-5828-7 | Screw - Hex Hd M6 x 12 |
| 2812-4 | 78-8070-1516-5 | Belt - Tensioning Assembly |
| 2812-5 | 78-8070-1517-3 | Belt - Tensioning |
| 2812-6 | 78-8052-6710-7 | Roller - Idler |
| 2812-7 | 78-8052-6709-9 | Washer - Special |
| 2812-8 | 78-8010-7435-8 | Washer - Lock M6 |
| 2812-9 | 26-1003-7957-2 | Screw - Soc Hd Hex Hd M6 x 16 |
| 2812-10 | 78-8070-1518-1 | Spacer - Shaft |
| 2812-11 | 26-1003-6918-5 | Nut - Plastic Insert Hex Flange M10 |
| 2812-12 | 78-8070-1519-9 | Screw - Soc Hd Hex Hd M8 x 70 |
| 2812-13 | 78-8017-9318-9 | Washer - Plain 8 mm |
| 2812-14 | 78-8070-1520-7 | Guide - Drive Belt |
| 2812-15 | 26-1005-4758-2 | Screw - Flat Hd M5 x 20 |
| 2812-16 | 78-8070-1521-5 | Support - Gearbox |
| 2812-17 | 26-1003-7963-0 | Screw - Soc Hd M8 x 16 |
| 2812-18 | 78-8070-1522-3 | Gearmotor - 115V, 60HZ |
| 2812-19 | 78-8057-5807-1 | Cord Grip |
| 2812-20 | 78-8070-1523-1 | Screw - 1/4 - 28X1/2 SHCS |
| 2812-21 | 78-8070-1524-9 | Sprocket - 3/8" Z=17 |
| 2812-22 | 78-8023-2479-4 | Screw - Set W/End Cup M6 x 10 |
| 2812-23 | 78-8070-1525-6 | Chain - 3/8" P=54 |
| 2812-24 | 78-8070-1526-4 | Cover - Chain |
| 2812-25 | 78-8010-7209-7 | Screw - Soc Hd M6 x 12 |
| 2812-26 | 26-1000-0010-3 | Washer - Flat M6 |
| 2812-27 | 78-8070-1527-2 | Shaft With Drive Pulleys |
| 2812-28 | 78-8070-1528-0 | Shaft - Gearbox |
| 2812-29 | 78-8057-5811-3 | Key - 6 x 6 x 20 mm |
| 2812-30 | 78-8054-8986-7 | Sprocket - 3/8" Pitch, 28 Teeth |
| 2812-31 | 78-8054-8984-2 | Bushing |
| 2812-32 | 78-8070-1529-8 | Support - Shaft |
| 2812-33 | 78-8070-1530-6 | Bearing - 6205-2RS |
| 2812-34 | 78-8057-5739-6 | Key - M5 x 5 x 30 mm |
| 2812-35 | 78-8060-8072-3 | Roller - Drive |



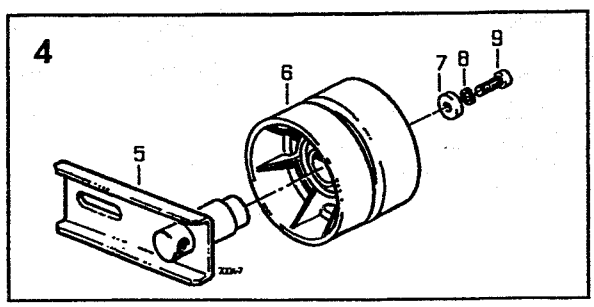




Figure 2812/2 of 2

Figure 2812 (Page 2 of 2)

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2812-36 | 78-8060-8416-2 | Nut - Special M20 x 1 |
| 2812-37 | 78-8052-6713-1 | Ring - Polyurethane |
| 2812-38 | 78-8070-1531-4 | Belt - Drive With Hook |
| 2812-39 | 78-8070-1581-9 | Shaft - Roller |
| 2812-40 | 78-8060-7693-7 | Roller - 32 x 38 |
| 2812-41 | 78-8070-1582-7 | Spacer - Roller |
| 2812-42 | 78-8070-1583-5 | Plate - Drive |
| 2812-43 | 26-1003-5820-4 | Screw - Hex Hd M5 x 12 |
| 2812-44 | 78-8070-1585-0 | Cover - Drive, Rear |
| 2812-45 | 26-0001-5862-1 | Screw - Flat Hd Soc M5 x 12 |
| 2812-46 | 26-1005-5316-8 | Screw - Flat Hd Hex Dr M5 x 16 |
| 2812-47 | 78-8070-1534-8 | Stud - Side Plate |
| 2812-48 | 78-8060-8488-1 | Screw - Hex Hd M5 x 20 |
| 2812-49 | 78-8076-4555-7 | Spacer |
| 2812-50 | 78-8076-4556-5 | Support - Valve |
| 2812-51 | 26-1003-7951-5 | Screw - Soc Hd Hex Soc M5 x 20 |
| 2812-52 | 78-8054-8757-2 | Pin - Spring Holder |
| 2812-53 | 26-1005-6859-6 | Nut - Self Locking M5 |
| 2812-54 | 78-8017-9136-5 | Spring - Cutter |
| 2812-55 | 26-1003-7947-3 | Screw - Soc Hd Hex Soc M4 x 35 |
| 2812-56 | 78-8054-8758-0 | Spacer - Valve Holder |
| 2812-57 | 78-8059-5607-1 | Plate - Threaded |
| 2812-58 | 78-8076-4557-3 | Lever - Front |
| 2812-59 | 78-8076-4558-1 | Cam - Valve |
| 2812-60 | 78-8054-8756-4 | Shaft - 6 x 46 mm |
| 2812-61 | 26-1002-4955-1 | Screw - Self Tapping 8P x 13 |
| 2812-62 | 78-8076-4559-9 | Lever - Drive, Bottom |
| 2812-63 | 78-8054-8758-0 | Spacer - Valve Holder |
| 2812-64 | 78-8076-4560-7 | Cover - Right |
| 2812-65 | 78-8076-4561-5 | Cover - Left |
| 2812-66 | 78-8076-4562-3 | Cover - Bottom |
| 2812-67 | 78-8005-5741-1 | Washer - Plain M5 |
| 2812-68 | 26-1003-5841-0 | Screw - M8 x 16 |
| 2812-69 | 78-8076-4563-1 | Bottom Drive Assembly |
| 2812-70 | 78-8076-4515-1 | Capacitor - 115V Gearmotor |

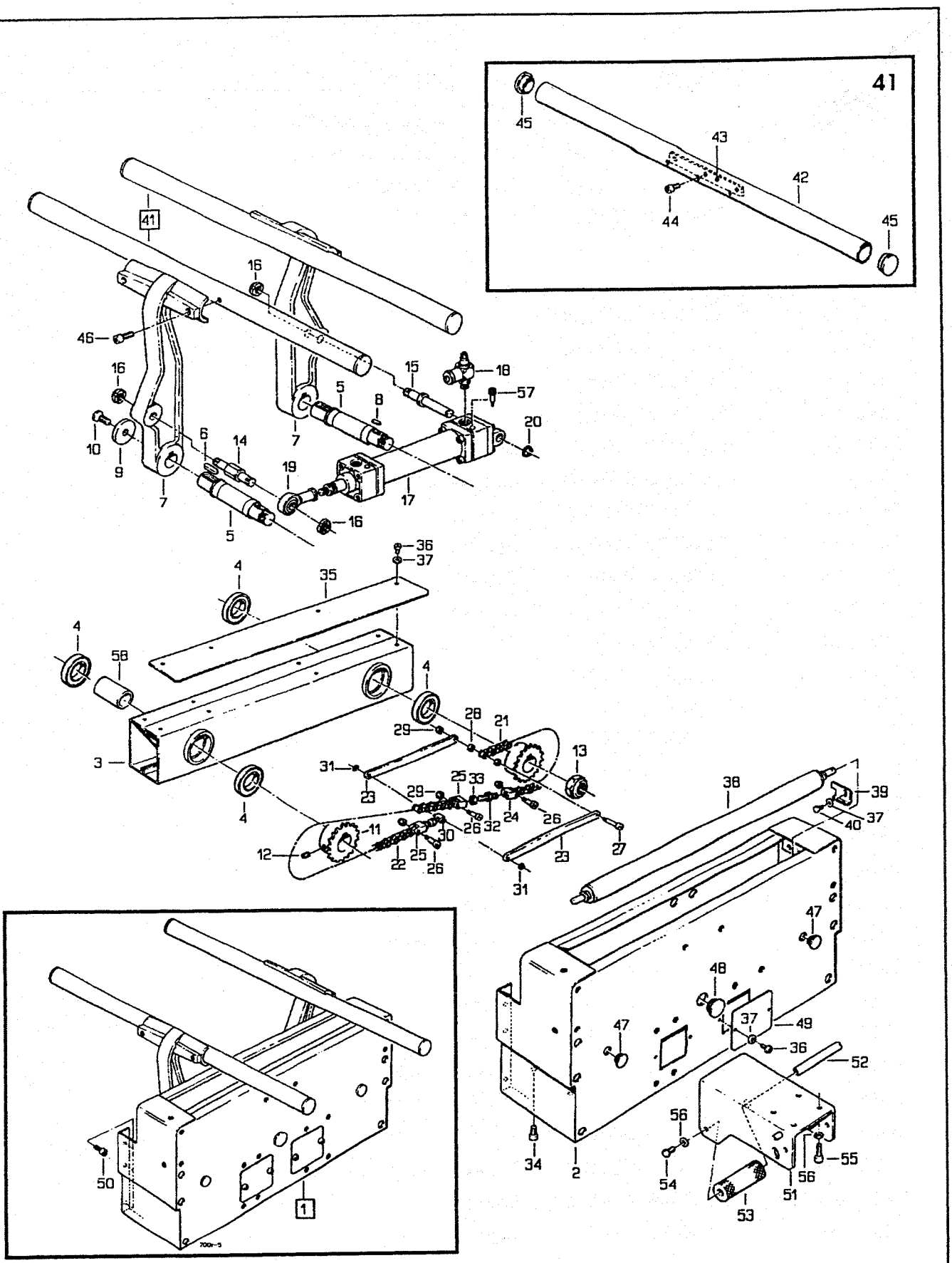

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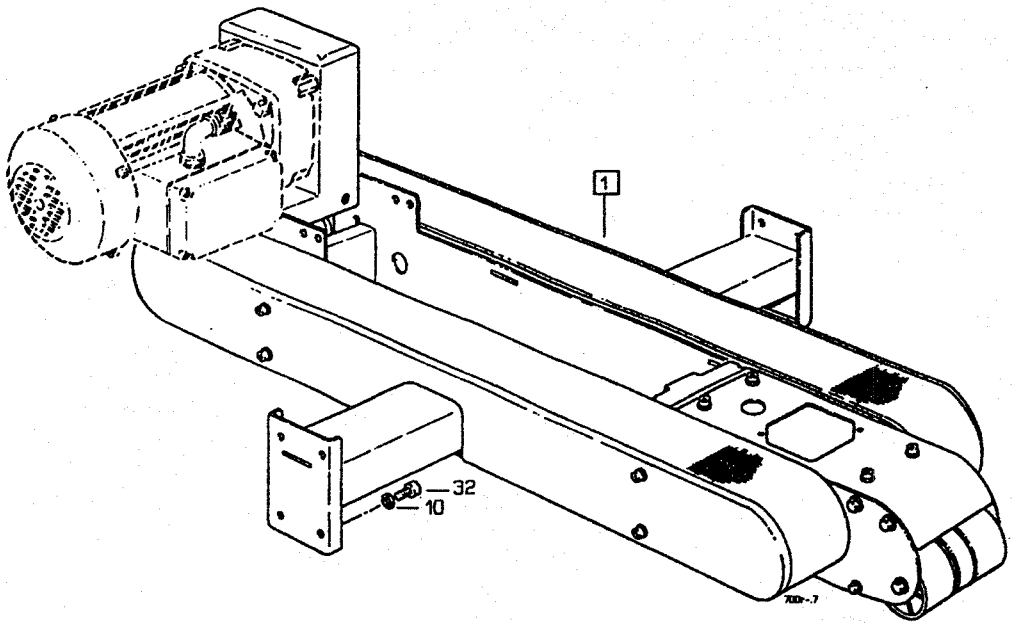
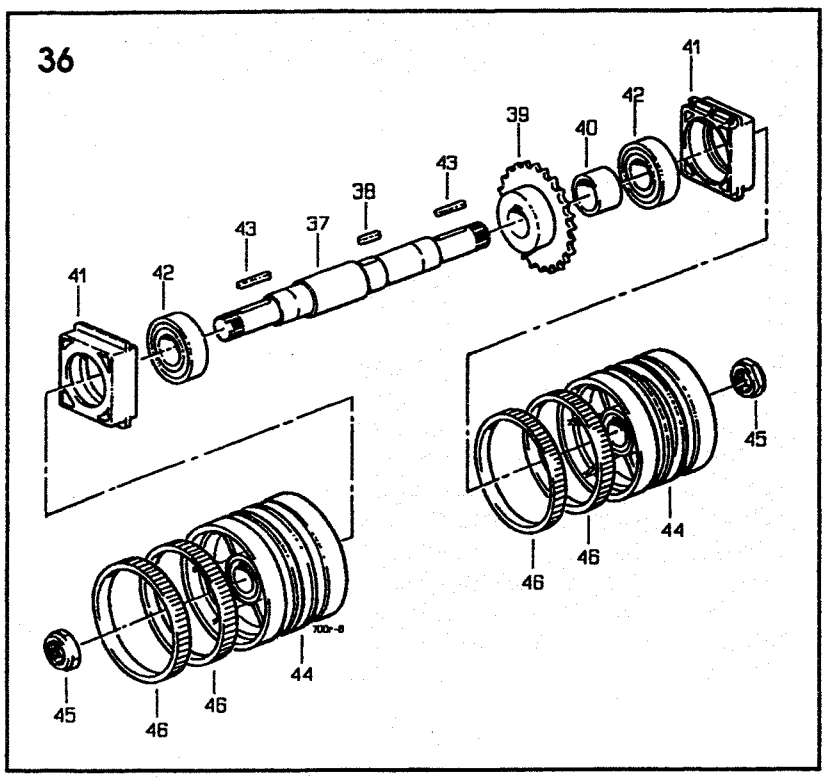
Figure 2813

Figure 2813

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2813-1 | 78-8076-4564-9 | Infeed Conveyor Assembly |
| 2813-2 | 78-8076-4565-6 | Frame - Infeed |
| 2813-3 | 78-8076-4566-4 | Frame |
| 2813-4 | 78-8023-2551-0 | Frame |
| 2813-5 | 78-8076-4567-2 | Pivot - Infeed |
| 2813-6 | 78-8076-4568-0 | Key - 7X8X25 |
| 2813-7 | 78-8076-4569-8 | Lever - Infeed |
| 2813-8 | 78-8076-4570-6 | Key - 6X6X15 |
| 2813-9 | 78-8054-8588-1 | Washer - 8,5/40X6 |
| 2813-10 | 78-8054-8567-5 | Screw - Soc Hd Special |
| 2813-11 | 78-8076-4571-4 | Sprocket - Z=20 |
| 2813-12 | 78-8023-2479-4 | Screw - Set W/End Cup, M6 x 10 |
| 2813-13 | 78-8060-8416-2 | Nut - Special M20 x 1 |
| 2813-14 | 78-8076-4572-2 | Stud - Joint |
| 2813-15 | 78-8076-4573-0 | Pin - Air Cylinder |
| 2813-16 | 78-8076-4574-8 | Ring Nut |
| 2813-17 | 78-8076-4575-5 | Cylinder - Air, /40X155 |
| 2813-18 | 26-1005-6881-0 | Flow Control - 6 mm |
| 2813-19 | 78-8057-5747-9 | Mount - Cylinder Rod End |
| 2813-20 | 26-1000-1609-1 | E-Ring - M8 |
| 2813-21 | 78-8076-4576-3 | Chain - 3/8" P=25 |
| 2813-22 | 78-8076-4577-1 | Chain - 3/8" P=45 |
| 2813-23 | 78-8054-8787-9 | Chain - Link |
| 2813-24 | 78-8054-8788-7 | Chain - Connector |
| 2813-25 | 78-8054-8786-1 | Chain - Connector |
| 2813-26 | 78-8060-7520-2 | Screw - M3 x 20 |
| 2813-27 | 78-8060-7519-4 | Screw - M3 x 25 |
| 2813-28 | 78-8054-8783-8 | Washer - Special |
| 2813-29 | 78-8059-5517-2 | Nut - Self Locking M3 |
| 2813-30 | 78-8054-8784-6 | Block - Chain |
| 2813-31 | 78-8656-4004-5 | E-Ring - M4 |
| 2813-32 | 78-8054-8785-3 | Rod - Threaded Right/Left |
| 2813-33 | 78-8010-7418-4 | Nut - Hex M6 |
| 2813-34 | 26-1003-7963-0 | Screw - Soc Hd M8 x 16 |
| 2813-35 | 78-8076-4578-9 | Cover - Chain |
| 2813-36 | 26-1002-5753-9 | Screw - Self Tapping |
| 2813-37 | 78-8005-5740-3 | Washer - Plain 4 mm |
| 2813-38 | 78-8076-4579-7 | Roller - /32X492 |
| 2813-39 | 78-8076-4647-2 | Plate - Infeed |
| 2813-40 | 78-8010-7157-8 | Screw - Hex Hd M4 x 10 |
| 2813-41 | 78-8076-4648-0 | Guide Assembly |
| 2813-42 | 78-8076-4649-8 | Guide - Infeed |
| 2813-43 | 78-8076-4650-6 | Plate - Guide |
| 2813-44 | 78-8010-7229-5 | Screw - Soc Hd M6 x 10 |
| 2813-45 | 78-8054-8779-6 | End - Cap |
| 2813-46 | 78-8010-7210-5 | Screw - Soc Hd Hex Soc M6 x 20 |
| 2813-47 | 78-8054-8821-6 | End - Cap |
| 2813-48 | 78-8060-7885-9 | End Cap - /25X1,2 |
| 2813-49 | 78-8076-4651-4 | Plate - Infeed |
| 2813-50 | 26-1003-7964-8 | Screw - Soc Hd Hex Soc Dr M8 x 20 |
| 2813-51 | 78-8076-4652-2 | Support - Bracket |
| 2813-52 | 78-8060-8484-0 | Shaft - Roller |
| 2813-53 | 78-8060-8485-7 | Roller |
| 2813-54 | 78-8032-0375-7 | Screw - Hex Hd M6 x 16 |
| 2813-55 | 26-1003-7957-2 | Screw - Soc Hd Hex Hd M6 x 16 |
| 2813-56 | 26-1000-0010-3 | Washer - Flat M6 |
| 2813-57 | 78-8076-4653-0 | Screw - Cushioning Cyl./40 |
| 2813-58 | 78-8076-4518-5 | Spacer - Bearing |
| 2813-59 | 78-8060-8435-2 | Repair Kit - Cylinder/40 |



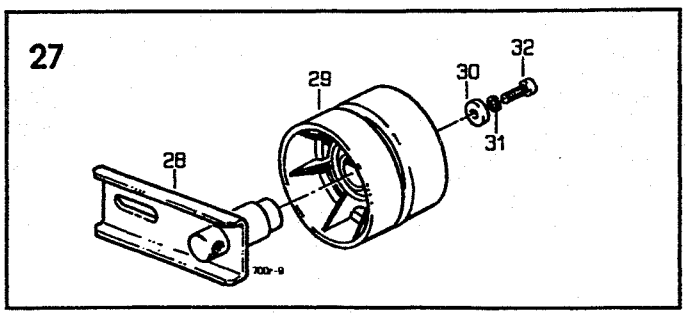




Figure 2814/1 of 2

Figure 2814 (Page 1 of 2)

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2814-1 | 78-8076-4654-8 | Upper Drive Assembly |
| 2814-2 | 78-8070-1588-4 | Frame - Drive, Upper |
| 2814-3 | 78-8070-1520-7 | Guide - Drive Belt |
| 2814-4 | 26-1005-4758-2 | Screw - Flat Hd M5 x 20 |
| 2814-5 | 78-8070-1589-2 | Clamp - Upper Head |
| 2814-6 | 78-8070-1590-0 | Shaft - Roller |
| 2814-7 | 78-8060-8087-1 | Screw - M5 x 10 |
| 2814-8 | 78-8076-4655-5 | Spacer - Valve |
| 2814-9 | 78-8010-7169-3 | Screw - Hex Hd M6 x 12 |
| 2814-10 | 26-1000-0010-3 | Washer - Flat M6 |
| 2814-11 | 78-8070-1591-8 | Shaft - Roller /15X106 |
| 2814-12 | 78-8076-4656-3 | Roller |
| 2814-13 | 78-8076-4657-1 | Link - Actuator, Valve |
| 2814-14 | 26-1003-5841-0 | Screw - M8 X 16 |
| 2814-15 | 78-8017-9318-9 | Washer - Plain 8 mm |
| 2814-16 | 78-8076-4658-9 | Shaft |
| 2814-17 | 78-8052-6566-3 | Washer - Friction |
| 2814-18 | 78-8016-5855-6 | E-Ring - 10 mm |
| 2814-19 | 78-8060-7693-7 | Roller - 32 X 38 |
| 2814-20 | 78-8070-1593-4 | Spacer - Roller |
| 2814-21 | 26-1003-5820-4 | Screw - Hex Hd M5 x 12 |
| 2814-22 | 78-8005-5741-1 | Washer - Plain M5 |
| 2814-23 | 78-8076-4659-7 | Plate - Valve |
| 2814-24 | 78-8010-7163-6 | Screw - Hex Hd M5 x 10 |
| 2814-25 | 26-1003-7946-5 | Screw - Soc Hd M4 x 25 |
| 2814-26 | 78-8059-5607-1 | Plate - Threaded |
| 2814-27 | 78-8070-1516-5 | Belt - Tensioning Assembly |
| 2814-28 | 78-8070-1517-3 | Belt - Tensioning |
| 2814-29 | 78-8052-6710-7 | Roller - Idler |
| 2814-30 | 78-8052-6709-9 | Washer - Special |
| 2814-31 | 78-8010-7435-8 | Washer - Lock M6 |
| 2814-32 | 26-1003-7957-2 | Screw - Soc Hd Hex Hd M6 x 16 |
| 2814-33 | 78-8070-1518-1 | Spacer - Shaft |

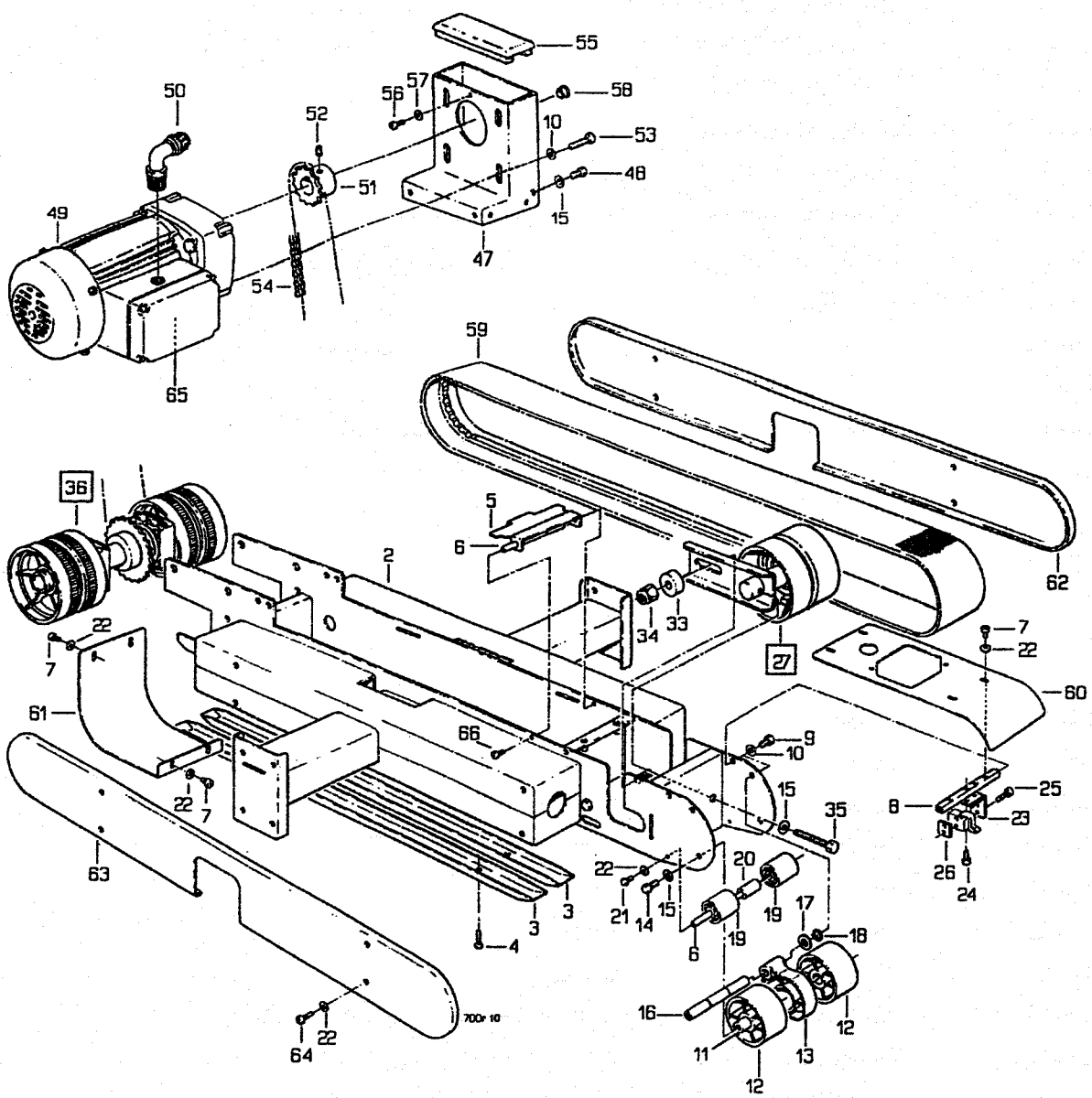



Figure 2814/2 of 2

Figure 2814 (Page 2 of 2)

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2814-34 | 26-1003-6918-5 | Nut - Plastic Insert Hex Flange M10 |
| 2814-35 | 78-8070-1594-2 | Screw - Hex Hd M8 x 60 |
| 2814-36 | 78-8070-1527-2 | Shaft - W/Drive Pulleys |
| 2814-37 | 78-8070-1528-0 | Shaft - Gearbox |
| 2814-38 | 78-8057-5811-3 | Key - 6 x 6 x 20 mm |
| 2814-39 | 78-8054-8986-7 | Sprocket - 3/8" Pitch, 28 Teeth |
| 2814-40 | 78-8054-8984-2 | Bushing |
| 2814-41 | 78-8070-1529-8 | Support - Shaft |
| 2814-42 | 78-8070-1530-6 | Bearing - 6206-2RS |
| 2814-43 | 78-8057-5739-6 | Key - M5 x 5 x 30 mm |
| 2814-44 | 78-8060-8072-3 | Roller - Drive |
| 2814-45 | 78-8060-8416-2 | Nut - Special M20 x 1 |
| 2814-46 | 78-8052-6713-1 | Ring - Polyurethane |
| 2814-47 | 78-8070-1595-9 | Support - Drive |
| 2814-48 | 26-1003-5842-8 | Screw - Hex Hd M8 x 20 |
| 2814-49 | 78-8070-1522-3 | Gearmotor - 115V, 60Hz |
| 2814-50 | 78-8070-1596-7 | Union - Elbow, PG 13,5 |
| 2814-51 | 78-8070-1524-9 | Sprocket - 3/8" Z=17 |
| 2814-52 | 78-8023-2479-4 | Screw - Set W/End Cup, M6 x 10 |
| 2814-53 | 78-8070-1523-1 | Screw - 1/4-28 x 1/2 SHCS |
| 2814-54 | 78-8070-1597-5 | Chain - 3/8" P=62 |
| 2814-55 | 78-8070-1598-3 | Cover |
| 2814-56 | 26-1002-4955-1 | Screw - Self Tapping 8P x 13 |
| 2814-57 | 78-8005-5740-3 | Washer - Plain 4 mm |
| 2814-58 | 78-8054-8821-6 | End - Cap |
| 2814-59 | 78-8070-1531-4 | Belt - Drive W/Hook |
| 2814-60 | 78-8076-4661-3 | Cover - Upper, Front |
| 2814-61 | 78-8076-4622-5 | Cover - Rear, Upper |
| 2814-62 | 78-8076-4660-5 | Cover - Upper, Right |
| 2814-63 | 78-8076-4662-1 | Cover - Upper, Left |
| 2814-64 | 78-8076-4625-8 | Screw - Special M5 x 16 |
| 2814-65 | 78-8076-4515-1 | Capacitor - 115V Gearmotor |
| 2814-66 | 26-1003-7948-1 | Screw - Soc Hd Hex Soc M5 x 10 |

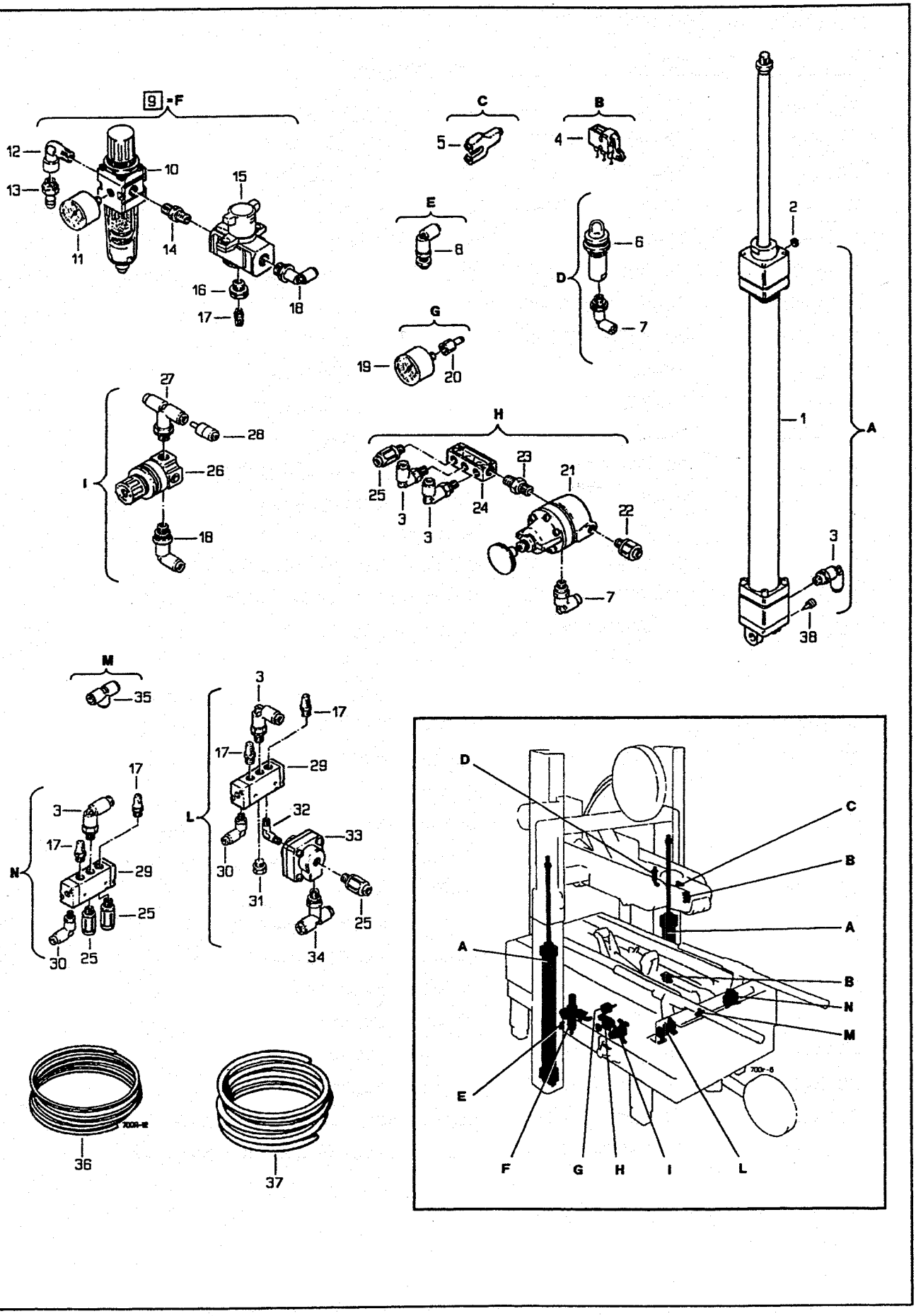

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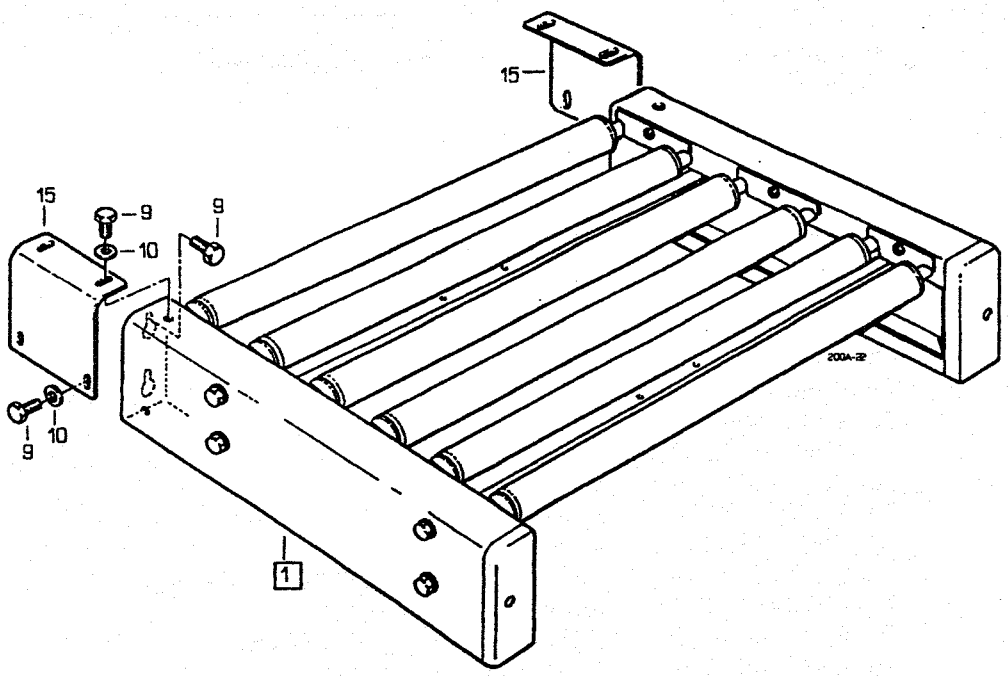
Figure 2815

Figure 2815

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2815-1 | 78-8076-4663-9 | Cylinder - Air /32X580+20 |
| 2815-2 | 78-8057-6176-0 | Muffler |
| 2815-3 | 26-1005-6893-5 | Elbow - 90 Degree |
| 2815-4 | 78-8060-8091-3 | Valve - R/O-3-PK-3 |
| 2815-5 | 78-8076-4664-7 | Union - Female |
| 2815-6 | 78-8076-4665-4 | Indicator - Visual |
| 2815-7 | 26-1005-5909-0 | Elbow |
| 2815-8 | 78-8076-4666-2 | Plate - Guiding |
| 2815-9 | 78-8076-4667-0 | Filter Assembly |
| 2815-10 | 78-8076-4668-8 | Filter - Pressure Regulator |
| 2815-11 | 78-8054-8838-0 | Gauge - Air |
| 2815-12 | 78-8060-7900-6 | Union - RA 022 1/4" - 1/4" |
| 2815-13 | 26-1005-6897-6 | Hose - Connector |
| 2815-14 | 78-8060-7899-0 | Nipple - RA 012 1/4" - 1/4" |
| 2815-15 | 78-8076-4669-6 | Valve - 3-Way |
| 2815-16 | 78-8076-4670-4 | Reduction - 3/8" - 1/8" |
| 2815-17 | 26-1005-6890-1 | Muffler |
| 2815-18 | 78-8055-0756-9 | Union - Rotating MR41-06-14 |
| 2815-19 | 78-8076-4671-2 | Gauge - Pressure |
| 2815-20 | 78-8076-4672-0 | Union - Straight, Female |
| 2815-21 | 78-8076-4673-8 | Regulator - Pressure |
| 2815-22 | 26-1005-6901-6 | Union - Straight |
| 2815-23 | 78-8076-4674-6 | Nipple - 1/4" - 1/8" |
| 2815-24 | 78-8059-5633-7 | Air - Distributor |
| 2815-25 | 26-1005-6910-7 | Union - Staight |
| 2815-26 | 78-8076-4675-3 | Regulator - 0.5-7 BAR |
| 2815-27 | 78-8076-4676-1 | Union |
| 2815-28 | 78-8057-5735-4 | Fitting - Reducer MR25-04-06 |
| 2815-29 | 78-8076-4677-9 | Valve - V2A 5120-01 |
| 2815-30 | 78-8057-5732-1 | Fitting - Elbow MR41-04-05 |
| 2815-31 | 78-8060-7690-3 | Cap - B-1/8" |
| 2815-32 | 78-8017-9426-0 | Elbow - 90 Degree, 1/8" Male X 1/8" |
| 2815-33 | 78-8076-4678-7 | Valve - Quick Exhaust |
| 2815-34 | 78-8060-8183-8 | Union - Rotating MR20-06-18 |
| 2815-35 | 78-8076-4679-5 | Union - Tee |
| 2815-36 | 78-8060-8033-5 | Tubing - 5M Skein, D4/3 |
| 2815-37 | 78-8060-8034-3 | Tubing - 5M Skein, D6/4 |
| 2815-38 | 78-8076-4680-3 | Screw - Cushioning, CIL/32 |
| 2815-39 | 78-8017-9406-2 | Repair Kit - Cylinder /32 |



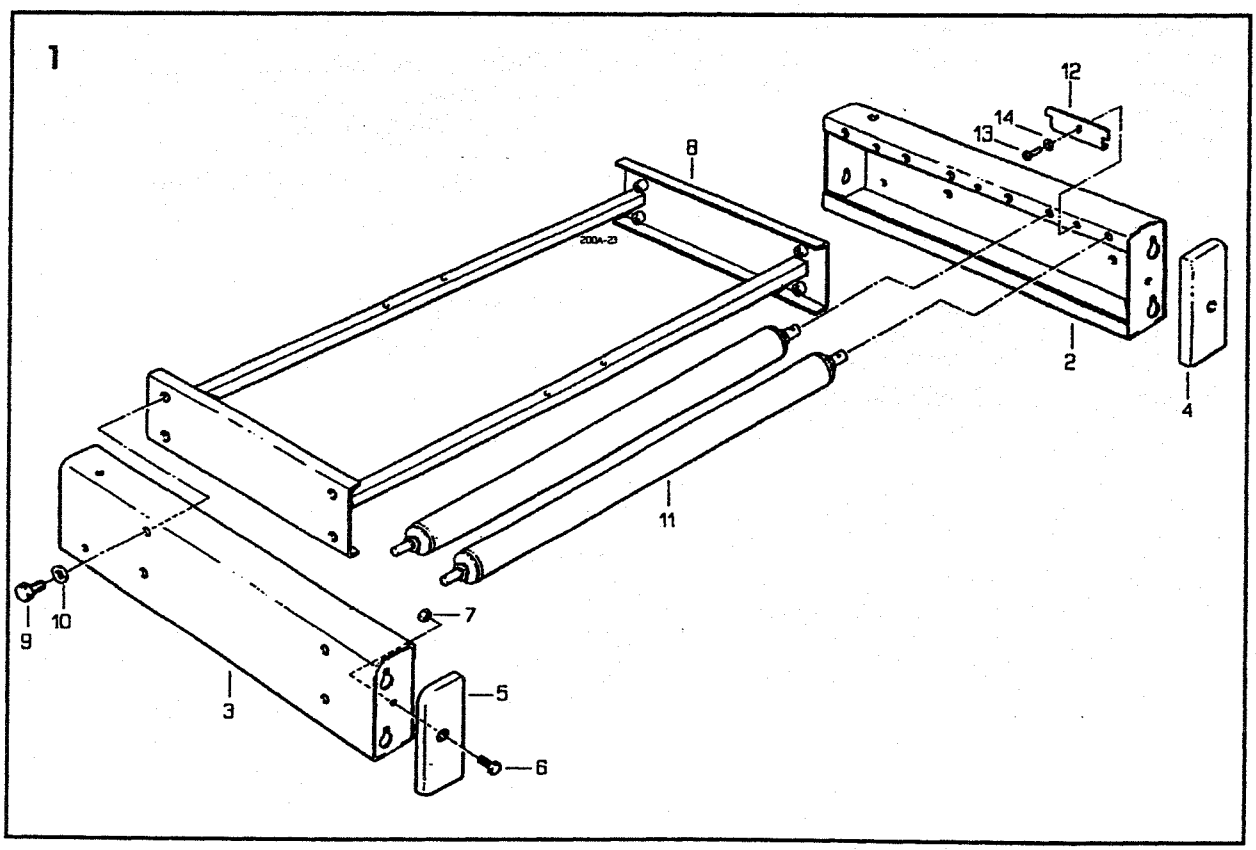




Figure 2816

Figure 2816

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2816-1 | 78-8076-4508-6 | Conveyor - Infeed |
| 2816-2 | 78-8076-4509-4 | Frame - R/H |
| 2816-3 | 78-8076-4510-2 | Frame - L/H |
| 2816-4 | 78-8076-4511-0 | Cap - Front, R/H |
| 2816-5 | 78-8076-4512-8 | Cap - Front, L/H |
| 2816-6 | 78-8032-0375-7 | Screw - Hex Hd M6 x 16 |
| 2816-7 | 78-8010-7418-4 | Nut - Hex M6 |
| 2816-8 | 78-8076-4513-6 | Plate - W/Rod |
| 2816-9 | 26-1003-5841-0 | Screw - M8 x 16 |
| 2816-10 | 78-8017-9318-9 | Washer - Plain 8 mm |
| 2816-11 | 78-8076-4579-7 | Roller - /32X492 |
| 2816-12 | 78-8076-4507-8 | Plate - Infeed |
| 2816-13 | 78-8010-7157-8 | Screw - Hex Hd M4 x 10 |
| 2816-14 | 78-8005-5740-3 | Washer - Plain 4 mm |
| 2816-15 | 78-8076-4514-4 | Bracket - Infeed Conveyor |

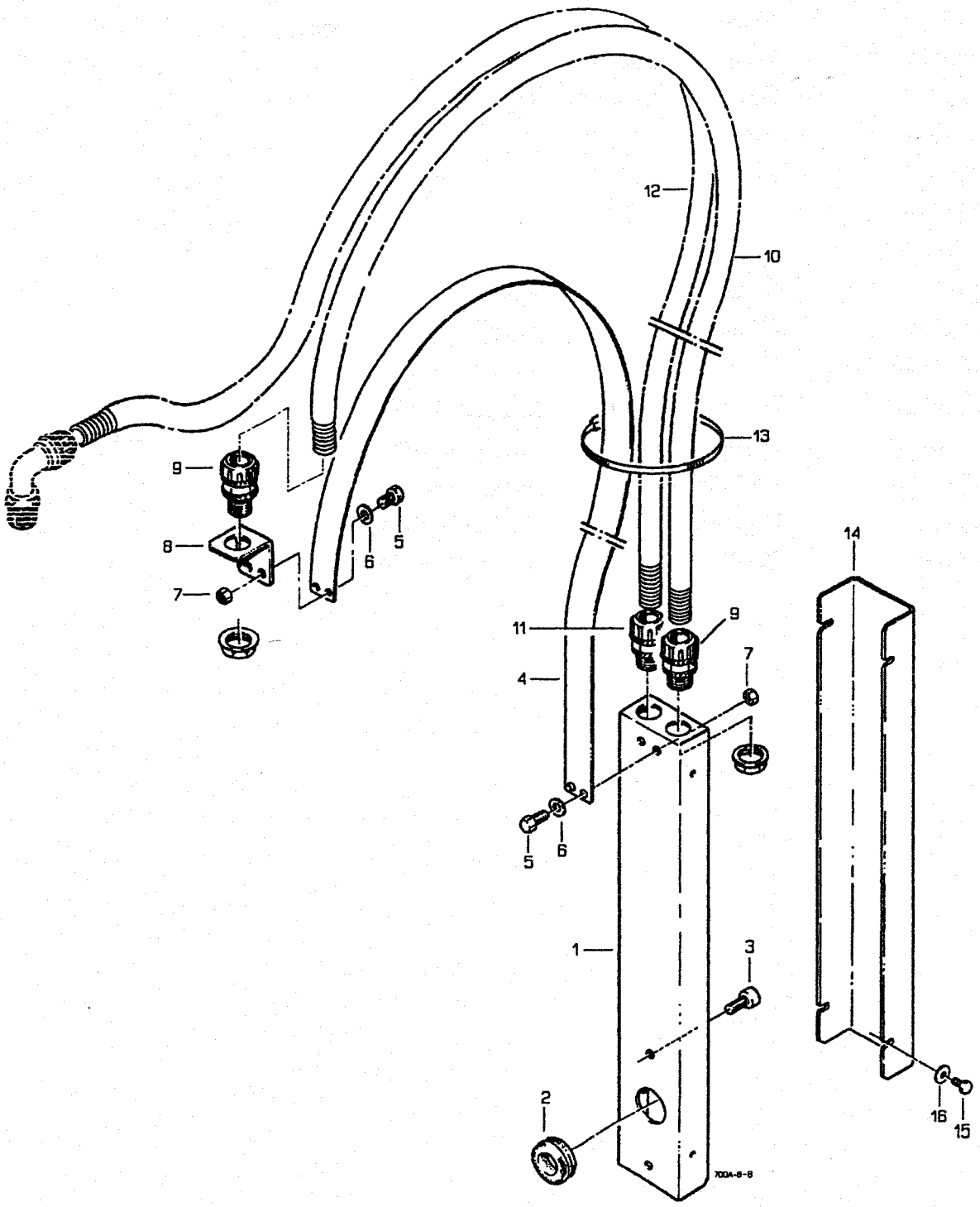



Figure 2899

Figure 2899

| Ref. No. | 3M Part No. | Description |
|---|---|---|
| 2899-1 | 78-8076-4634-0 | Housing - Wire |
| 2899-2 | 78-8076-4702-5 | Grommet - /28 |
| 2899-3 | 26-1003-7963-0 | Screw - Soc Hd M8 x 16 |
| 2899-4 | 78-8076-4636-5 | Strap - Wire |
| 2899-5 | 78-8010-7163-6 | Screw - Hex Hd M5 x 10 |
| 2899-6 | 78-8005-5741-1 | Washer - Plain M5 |
| 2899-7 | 78-8010-7417-6 | Nut - Hex M5 |
| 2899-8 | 78-8076-4637-3 | Plate - Strap |
| 2899-9 | 78-8076-4520-1 | Union - PG13, Sleeve /16 |
| 2899-10 | 78-8076-4521-9 | Sleeving - Wire, 900 mm /16 |
| 2899-11 | 78-8076-4638-1 | Union - PG13.5, Sleeve /14 |
| 2899-12 | 78-8076-4640-7 | Sleeving - Wire, 1100 mm /14 |
| 2899-13 | 78-8060-8029-3 | Clamp - 140X3,5 |
| 2899-14 | 78-8076-4641-5 | Cover |
| 2899-15 | 26-1003-5810-5 | Screw - Hex Hd M4 x 8 |
| 2899-16 | 78-8017-9018-5 | Washer - Plain M4 Special |