



# Instructions and Parts List

## 3M-Matic™

# S-857 "L" Clip Applicator

Type 29500



## Important Safety Information

Read "Important Safeguards",  
pages 3-4, BEFORE  
INSTALLING OR  
OPERATING THIS  
EQUIPMENT.

Serial No. \_\_\_\_\_  
For reference, record machine serial number here.

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

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# Instruction Manual

## S-857 “L” Clip Applicator Type 29500

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## Intended Use

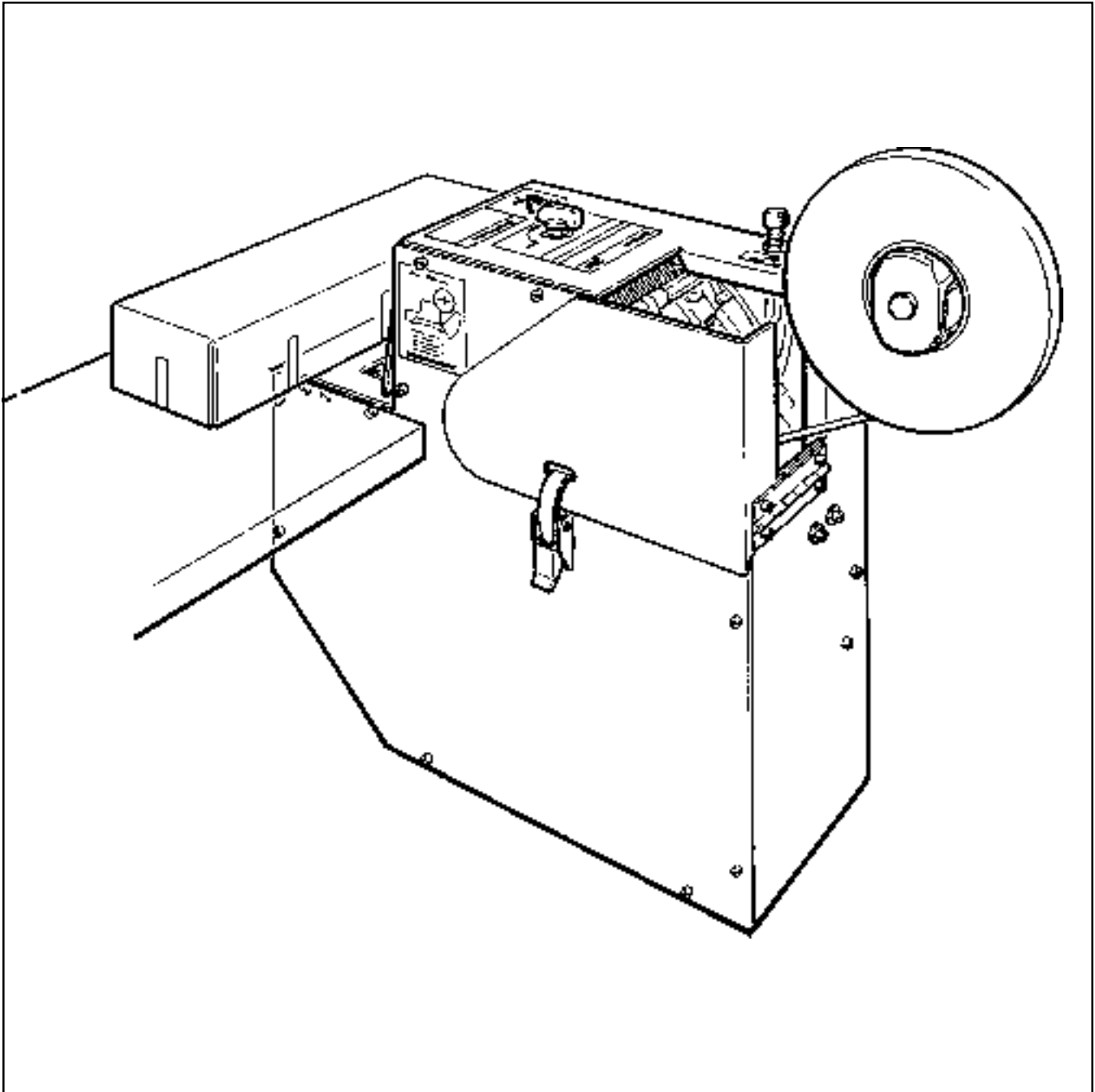
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The intended use of the S-857 "L" Clip Applicator is to apply an "L" clip of **Scotch™** brand filament tape to most box corners.

The machine is designed for installation adjacent to a conveyor system or on a stand for off-line systems, the S-857 allows the operator to quickly apply the "L" clip box closure. When a box is inserted into the

nest, the product paddle is depressed and the air operating mechanism which applies the "L" clip tape closure is activated causing the "L" clip to be automatically applied to the box corner.

The S-857 "L" Clip Applicator has been designed and tested for use with **Scotch™** brand filament tape.



**3M-Matic™ S-857 "L" Clip Applicator, Type 29500**

**Equipment Warranty and Limited Remedy: THE FOLLOWING WARRANTY IS 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 warrants that its **3M-Matic™ S-857 "L" Clip Applicator, Type 29500** will be free from defects for ninety (90) days after delivery. If any part is proved to be defective within the 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 the 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.

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## **S-857 Contents**

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- (1) S-857 "L" Clip Applicator, Type 29500
- (1) Instruction and Parts List Manual

## Important Safeguards

 This safety alert symbol identifies important messages in this manual. **READ AND UNDERSTAND THEM BEFORE INSTALLING OR OPERATING THIS EQUIPMENT.**

**Important** – In the event the following safety labels are damaged or destroyed, **they must be replaced to ensure operator safety.** See Parts Drawing/Lists, pages 23-39 for label part numbers.

The "**Warning – Sharp Knife**" label (A), shown in **Figure 1-1**, is attached to the top front surface of the applicator cabinet. This label reminds operators and service personnel to keep fingers away from the opening in the front of the applicator when applicator air supply is on.



**Figure 1-1 – Knife Warning Label**

The "**Warning – Sharp Knife**" label, shown in **Figure 1-2**, is attached to the blade guard on the tape cut-off assembly inside the S-857 applicator. When access cover is open, this label reminds operator and service personnel to shut off air supply and use caution when working near tape cut-off knife.



**Figure 1-2 – Knife Warning Label**

## Important Safeguards (Continued)

The "Safety Instructions" label, shown in **Figure 1-3**, is attached to the left side of the applicator next to the air regulator. This label reminds operators and service personnel of the recommended air pressure that the air regulator should be adjusted to.

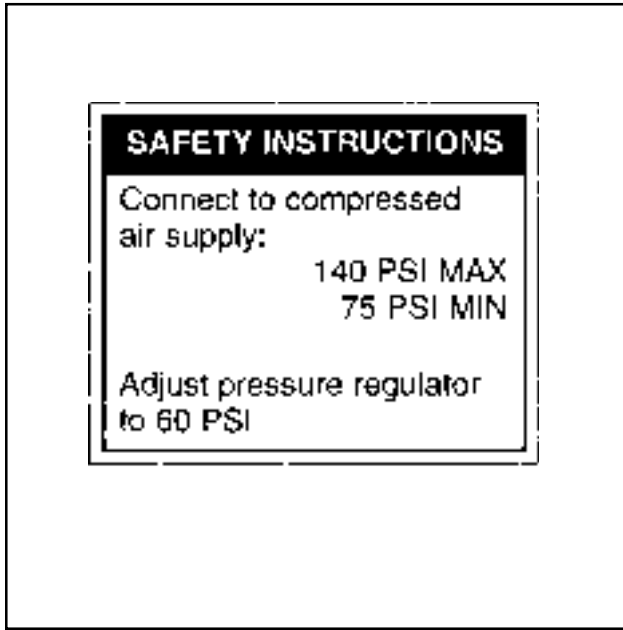


Figure 1-3 – Air Pressure Label

The "Tape Threading" label, shown in **Figure 1-4**, is attached to the right side of the S-857 cabinet near the top front edge. This label provides a convenient tape threading diagram. More detailed tape loading and threading information is provided in the operation section of this manual.

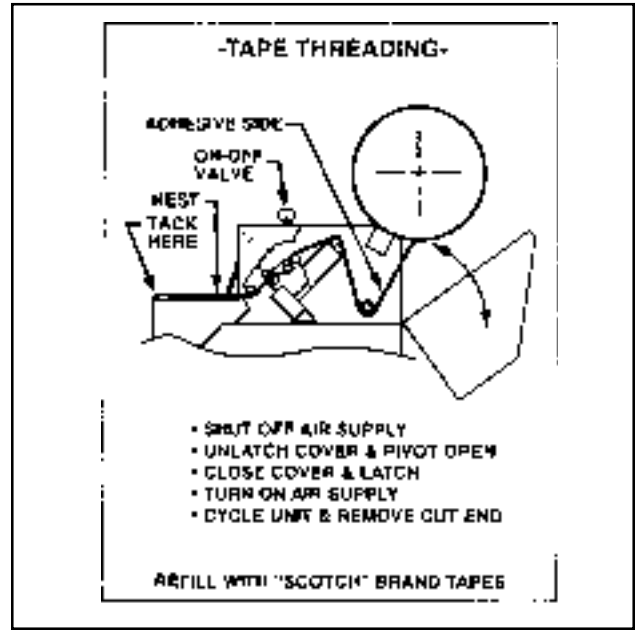


Figure 1-4 – Tape Threading Label

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# Specifications

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## 1. Tape Specifications:

Tape – Most "**Scotch**" brand filament tapes.

Tape Width – 3/8 inch [9 mm], 1/2 inch [12 mm], or 5/8 inch [15 mm].

Tape Roll Diameter – Up to 15 inches [380 mm] maximum on a 3 inch [76.2 mm] diameter core.

Applied Tape Length – 4 1/2 inches [115 mm] (nominal). Tape legs are 2 1/4 ±1/8 inches [55 mm ± 3.2 mm].

## 2. Air Power Requirements:

55 to 60 PSIG [380 to 415 kPa] gauge pressure.

2.16 SCFM [3.65 m<sup>3</sup>/h 21°C, 101 kPa] at 50 cycles/min

## 3. Box Size Capacity:

Bottom or Top Taping Position

Height – 2 1/4 inches [60 mm] minimum to unlimited maximum

Width – 3 inches [75 mm] minimum to unlimited maximum

Depth – 2 1/4 inches [60 mm] minimum to unlimited maximum

**Note:** Operator capability will determine maximum height, width, and depth. Smaller heights and widths are sometimes possible and it is recommended that your 3M Representative be contacted for testing of these applications.

## 4. Cycle Time:

1.2 seconds per cycle

The cycle time is sufficient to satisfy the majority of applications. Flow controls (see page 17 – Air Flow Controls) control the application rate and return stroke rate of the air cylinder. While these flow controls can be adjusted for increased speed, this practice may result in higher maintenance costs and shorten machine life.

## 5. Operating Conditions:

Use in dry, relatively clean environments at 40° to 120°F [5° to 49°C] with clean, dry boxes.

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

## 6. Machine Dimensions:

Length – 31 inches [790 mm] (includes 360 yard [330 m] tape roll)

Height – 29 inches [735 mm] (includes 360 yard [330 m] tape roll)

Width – 11 inches [280 mm]

Weight – Packaged 83 lb [37.7 kg]  
Unpackaged 75 lb [34 kg]



# Installation and Set-Up

## Receiving and Handling

After the applicator has been unpacked, examine it thoroughly for any damage that may have occurred during transit. **If damage is evident, file a damage claim immediately** with the transportation company and also notify your 3M Representative.

## Machine Set-Up

Read the installation instructions through completely before performing the set-up procedure. Refer to the back of this manual for literature on "Typical Mounting Set-Up" for the S-857 Applicator.

**Mounting** – The S-857 can be set up in either of three taping positions:

Bottom Taping Position – Shown in Figure 2-1. For application of "L" clip tape seal to the bottom corner of a box.

Top Taping Position – Shown in Figure 2-2. For application of a tape seal to the top corner of a box.

Side Taping Position – Shown in Figure 2-3. For application of a tape seal to the end of a box.

Three mounting areas have been provided on the S-857 main frame. A mounting bracket (with two holes) and a single mounting hole on the left side and two mounting holes located on the front of the machine. It is suggested that the S-857 be mounted securely at any two of these mounting areas.

**Note:** When mounting the unit, always align the top surface of the nest parallel with the work surface. When mounting the unit for side taping align the nest perpendicular to the work surface.

It is suggested that a secondary height adjustment be provided for head adjustments as referred to in the top taping operation section.

**Note:** The air flow control unit must be remounted in a vertical position when operating the S-857 in the top or side taping position. All additional brackets, fittings and air lines are to be supplied by the customer.

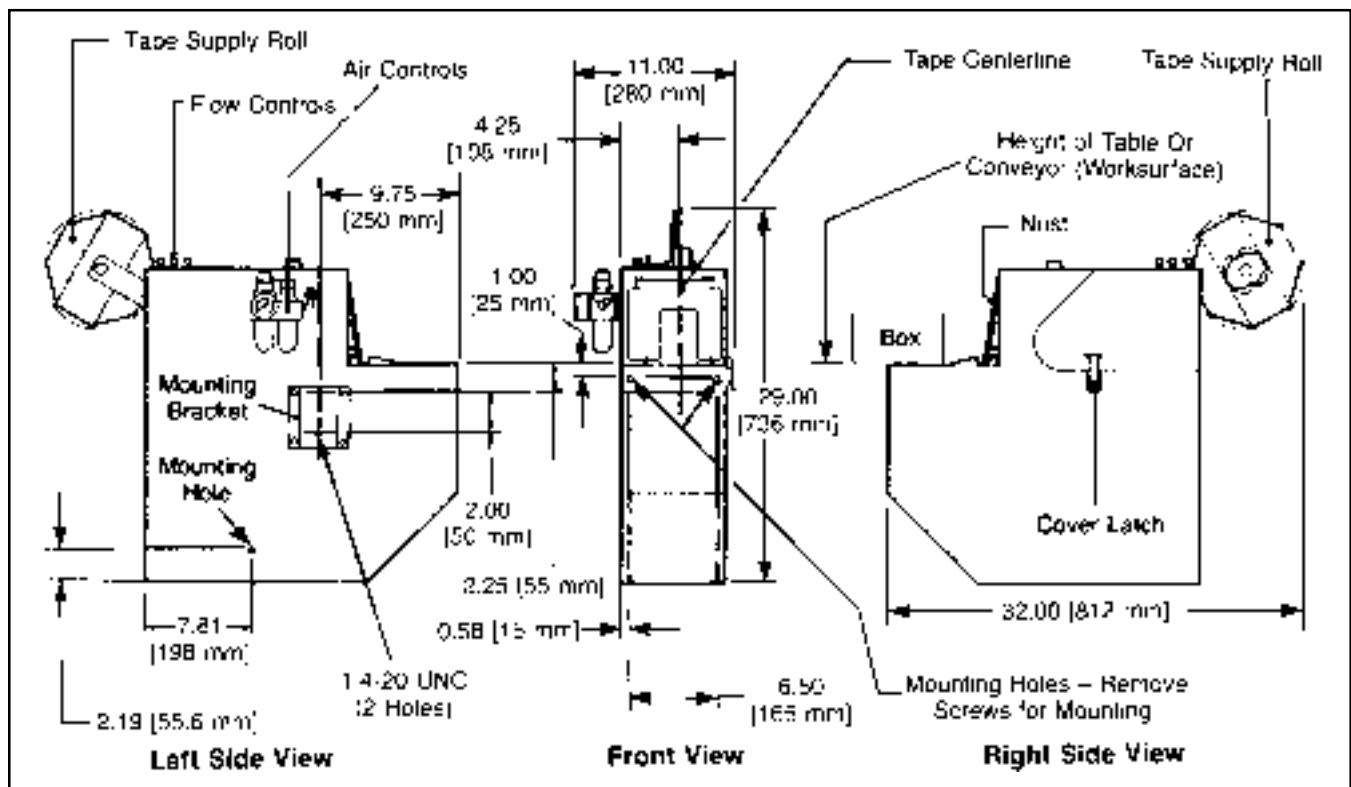


Figure 2-1 – Mounting – Bottom Taping Position

## Installation and Set-Up (Continued)

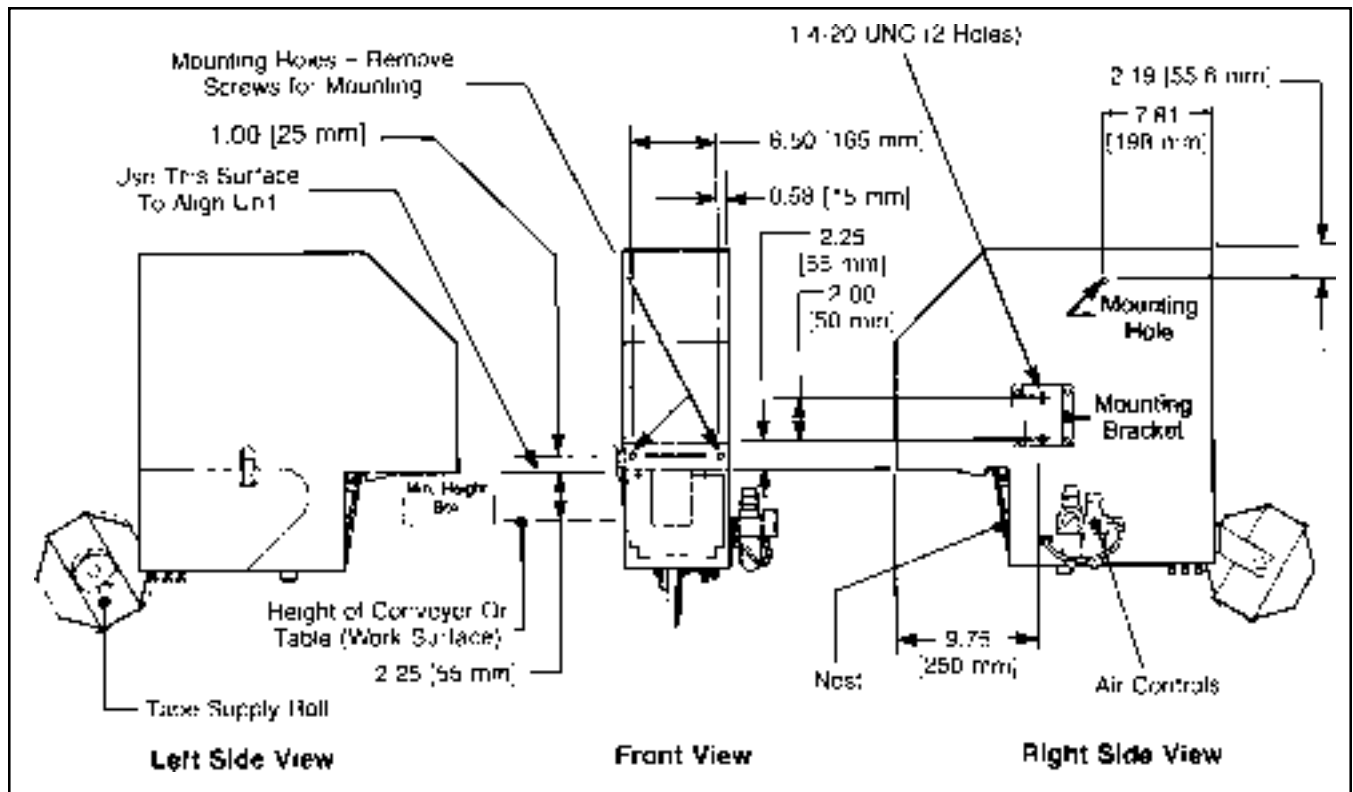


Figure 2-2 – Mounting Top Taping Position – Left Side View

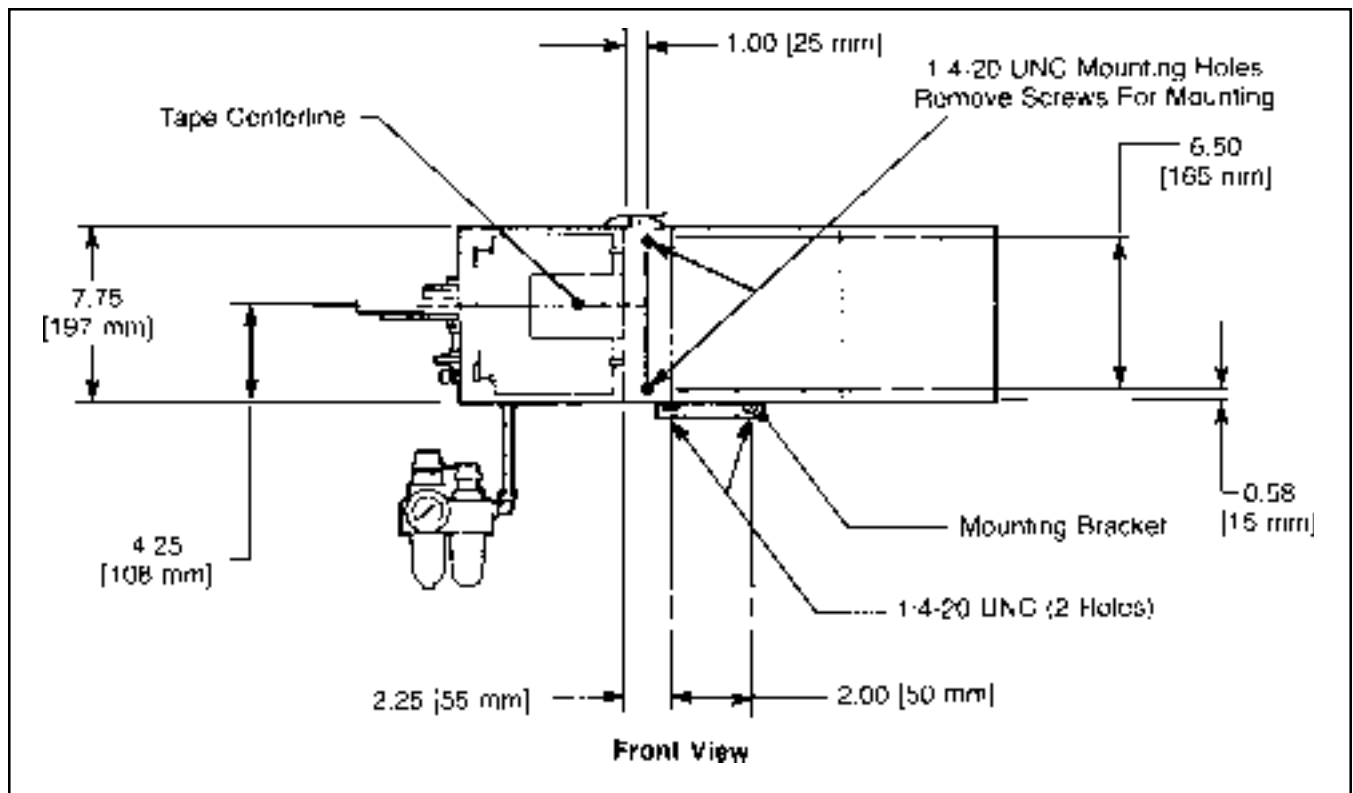


Figure 2-3 – Mounting Side Taping Position – Front View

## Installation and Set-Up (Continued)

**Air Regulator-Filter-Lubricator** – The air control unit is supplied with two mounting screws. Install the unit on the main plate, left side, in the mounting holes provided.

1. Refer to Figure 2-4 and locate the air control unit (A) in a vertical position for proper operation. Assemble and secure the two 8-32 x 1/2 lg. screws and flat washers.
2. Refer to Figure 2-5 and push the air line (B) onto the male elbow (C) on the right side of the air lubricator as shown.
3. Unscrew the air lubricator bowl, Figure 2-5, and fill with oil to 1/2 inch [12 mm] from top of bowl. **Do not overfill.** Use U.S.P. heavy mineral oil or SAE #5 or #10 non-detergent oil.

Screw bowl snugly back into place.

4. Connect main air supply line.

*Note: The main air supply line and required fittings are to be supplied by customer.*

Turn On/Off valve on S-857 to "Off" position. See Figure 2-4.

Connect main air supply line to main air supply inlet on air regulator. See Figure 2-5.

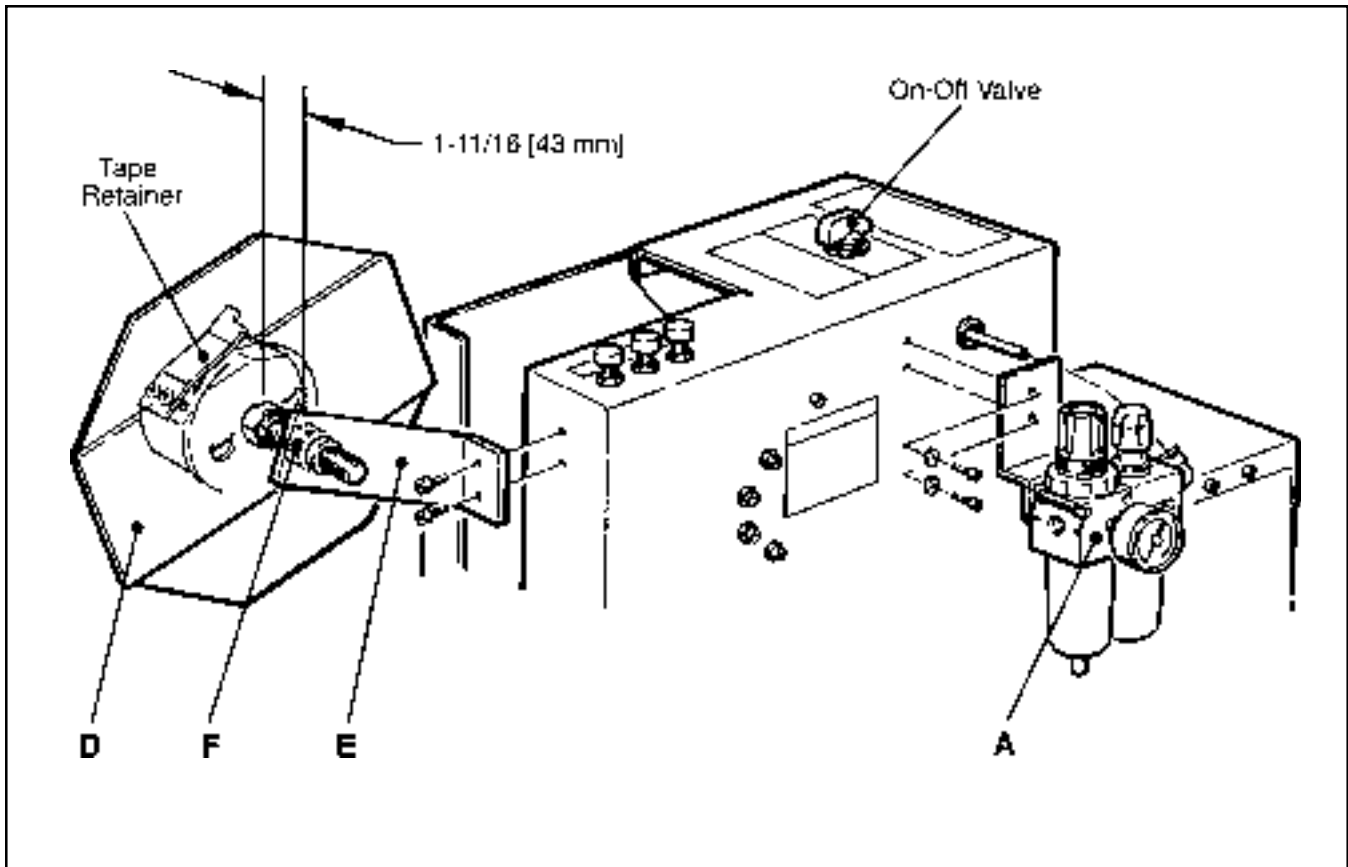


Figure 2-4 – Installation – Air Control – Left Side View

## Installation and Set-Up (Continued)

5. The lubricator oil metering adjustment knob, shown in Figure 2-5, has been preset open two turns. If excessive oil becomes visible at the exhaust mufflers, close adjustment knob clockwise 1/4 turn or until one drop/60cycles is visible in the sight glass, shown in Figure 2-5. If lubricator does not use oil, open adjustment knob counterclockwise 1/4 turn or until one drop/60 machine cycles is visible.

### Tape Drum - Bracket Assembly

The tape drum bracket is supplied with two #10-24 x 1/2 lg mounting screws. Assemble the bracket to the machine and the tape drum to the bracket.

1. Attach the tape drum bracket (E) to the rear of the machine with two #10-24 x 1/2 lg soc hd capscrews as shown in Figure 2-4.
2. Assemble the tape drum/backup plate (D) to the bracket (E) and adjust tape drum/backup plate in or out to obtain the 1-11/16 inch [43 mm] clearance between backup plate and bracket as shown in Figure 2-4. Secure this setting with the 1/2-13 jam nut (F).

### Tape Loading and Threading

See "Operation", page 15.

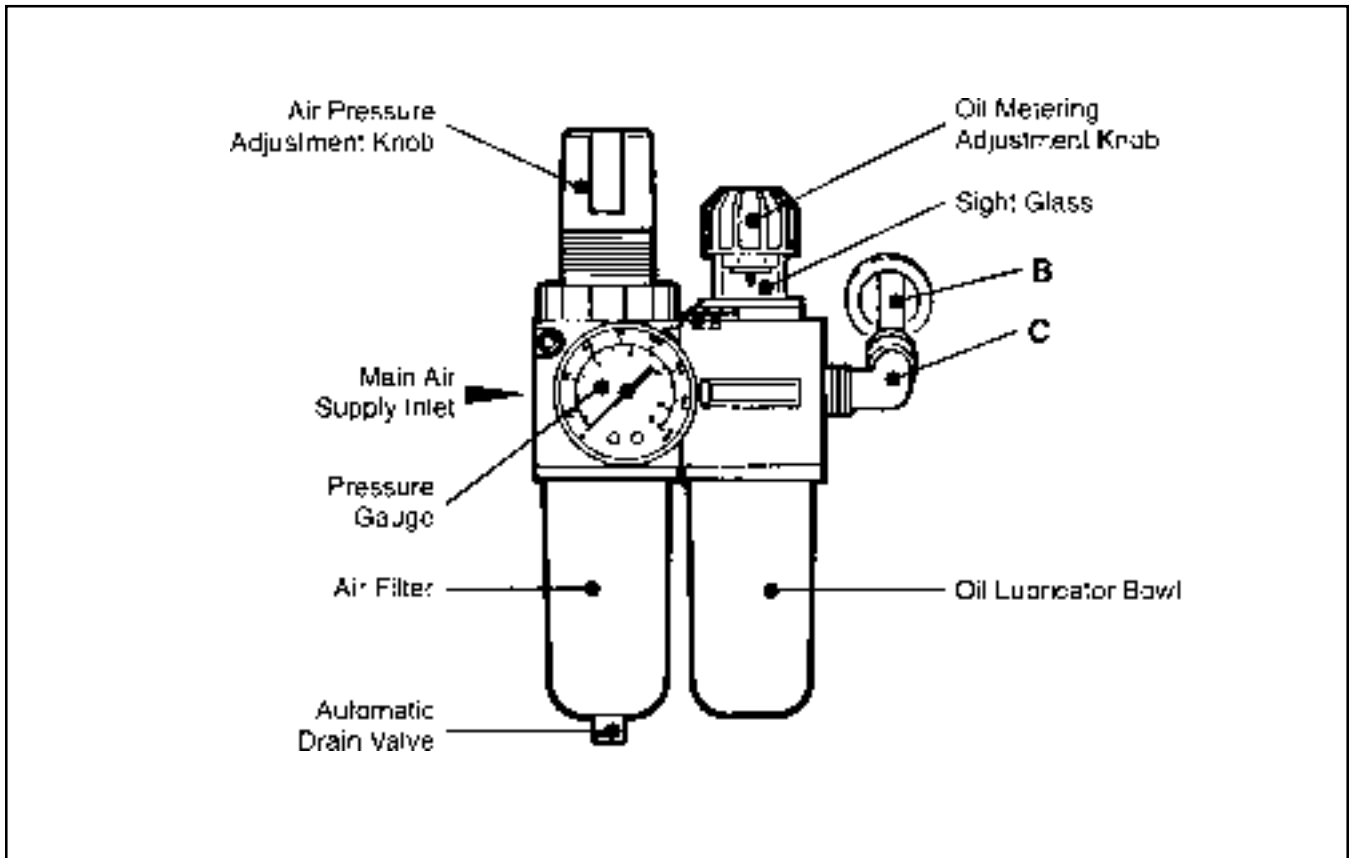


Figure 2-5 – Air Control Unit – Set-Up

# Theory of Operation

This section contains general information about the S-857, a pneumatic schematic, detailed operational explanation and a pneumatic components list.

## General Information

The S-857 is a pneumatically powered machine containing eleven pneumatic valves and six pneumatic cylinders. These components are all listed at the end of this section with a brief description of their function.

The machine consists of four primary assemblies listed below.

- Knife assembly – cuts the section of tape to be applied.
- Buff assembly – applies the section of tape to the box corner.
- Feed assembly – advances the tape between applications.
- Jaw assembly – retains the free end of the tape between applications.

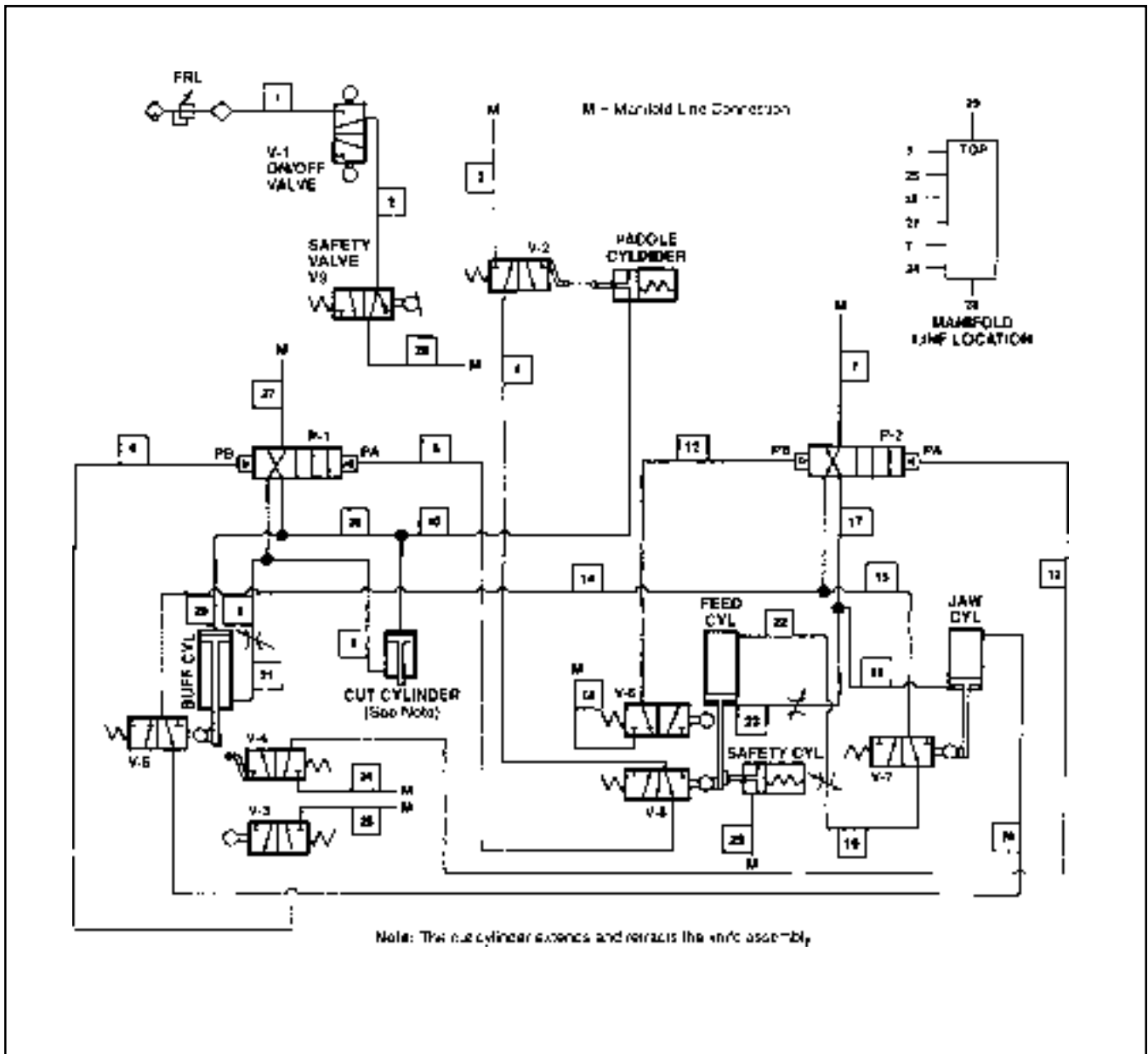


Figure 3-1 – Pneumatic Schematic

## Theory of Operation (Continued)

### Operational Explanation

#### REST POSITION, AIR OFF

When the machine is in rest position with the air off, a spring-actuated air cylinder extends to hold up the feed assembly. See Figure 3-2. This is necessary because the air cylinder is in the fully extended position. Without the spring-actuated air cylinder, the weight of the feed assembly could cause the air cylinder to retract and damage the section of tape ready for application.

#### REST POSITION, AIR ON

When air is applied to the machine, it is routed through the On/Off control valve V-1, through line 2, through safety valve V-9, and into the manifold through line 28. See Figure 3-1. The manifold then routes the air to seven locations. Four of the routes from the manifold direct air to valves that are closed when the machine is in the rest position. These "blocked" air routes are:

- Through line 3 to valve V-2
- Through line 25 to valve V-3
- Through line 24 to valve V-4
- Through line 18 to valve V-6

The remaining three routes direct air to actuate the air cylinders and prepare the machine for the application cycle.

- Air is directed through line 29 to retract the spring-loaded safety cylinder that retains the feed mechanism.
- Air is directed through line 27 to the pilot valve P-1. The air exits the pilot valve and is branched to retract the buff and cut cylinders. The pilot valve directs air through line 9, the buff cylinder retract flow control valve, and line 21 to the rod end of the buff cylinder to retract the cylinder, and through line 8 to the rod end of the cut cylinder and retracts it also.
- Air is also directed through line 7 to pilot valve P-2. The air exits the pilot valve P-2 and is branched to extend the feed and jaw cylinders. Air travels from the pilot valve through line 14, valve V-5, and line 26 to the head end of the jaw cylinder and extends the cylinder. Air is also directed through line 15, valve V-7, line 19, the feed cylinder extend flow control valve, and line 22 to the head-end of the feed cylinder and extends the feed cylinder.

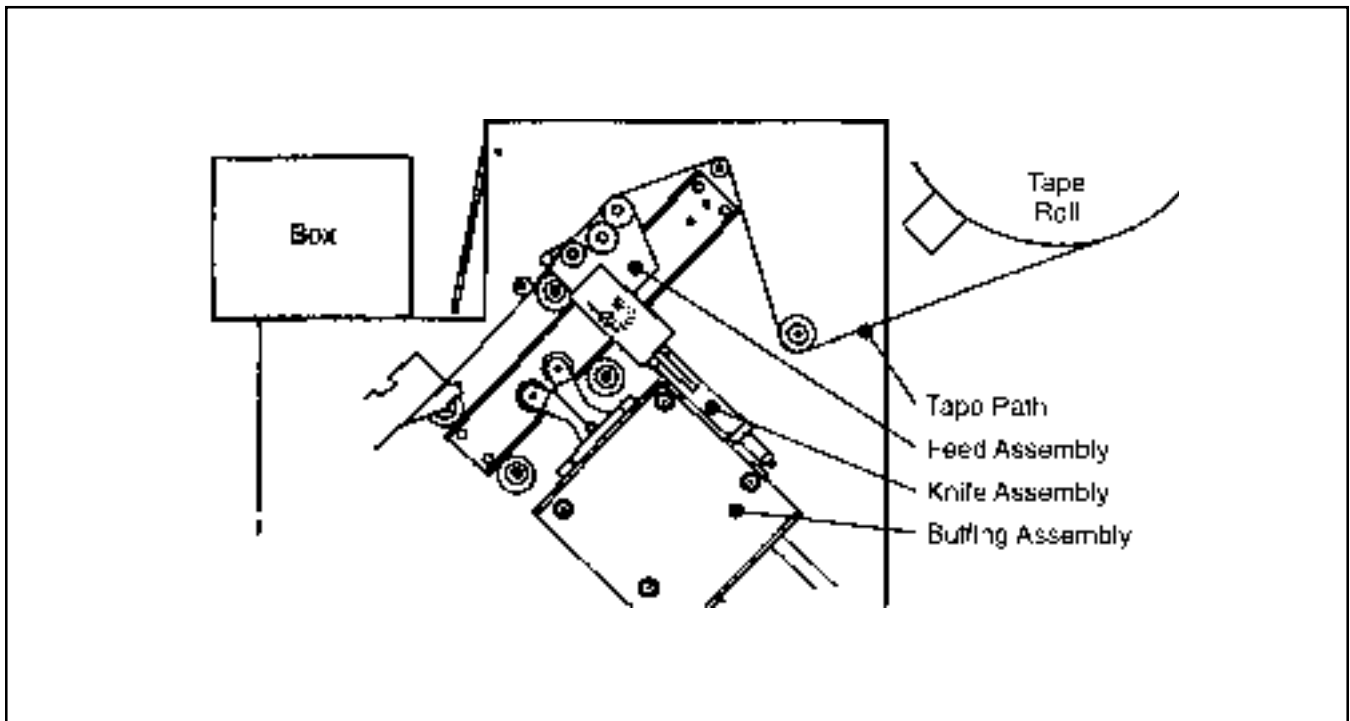


Figure 3-2 – Rest Position

## Theory of Operation (Continued)

### APPLICATION CYCLE, CUT/BUFF SEQUENCE

When the machine is in the powered rest position and a box is placed in the nest area, the box paddle actuates valve V-2. This allows a pulse of air to flow from the manifold through valve V-2, line 4, valve V-8, and line 5 to the PA port of the pilot valve P-1. This shifts the pilot valve P-1. Air is then directed to the paddle cylinder, which holds the paddle to the machine housing, which prevents the additional actuation of paddle valve V-2 before the application cycle is completed.

Air is then directed to the head end of the cut and buff cylinders and causes both to extend at the same time. At full extension, a section of tape is cut by the knife assembly and immediately applied to the box by the buff roller assembly.

As the buff assembly reaches full extension, it actuates valve V-3. This directs a pulse of air to the PB port of the pilot valve P-1 causing it to shift and direct air to the rod end of the cut and buff cylinders. This causes the cut and buff cylinders to retract and return the knife and buff assemblies back to the machine rest position. Shortly before the buff cylinder fully retracts, it actuates valve V-4. This begins the feed sequence.

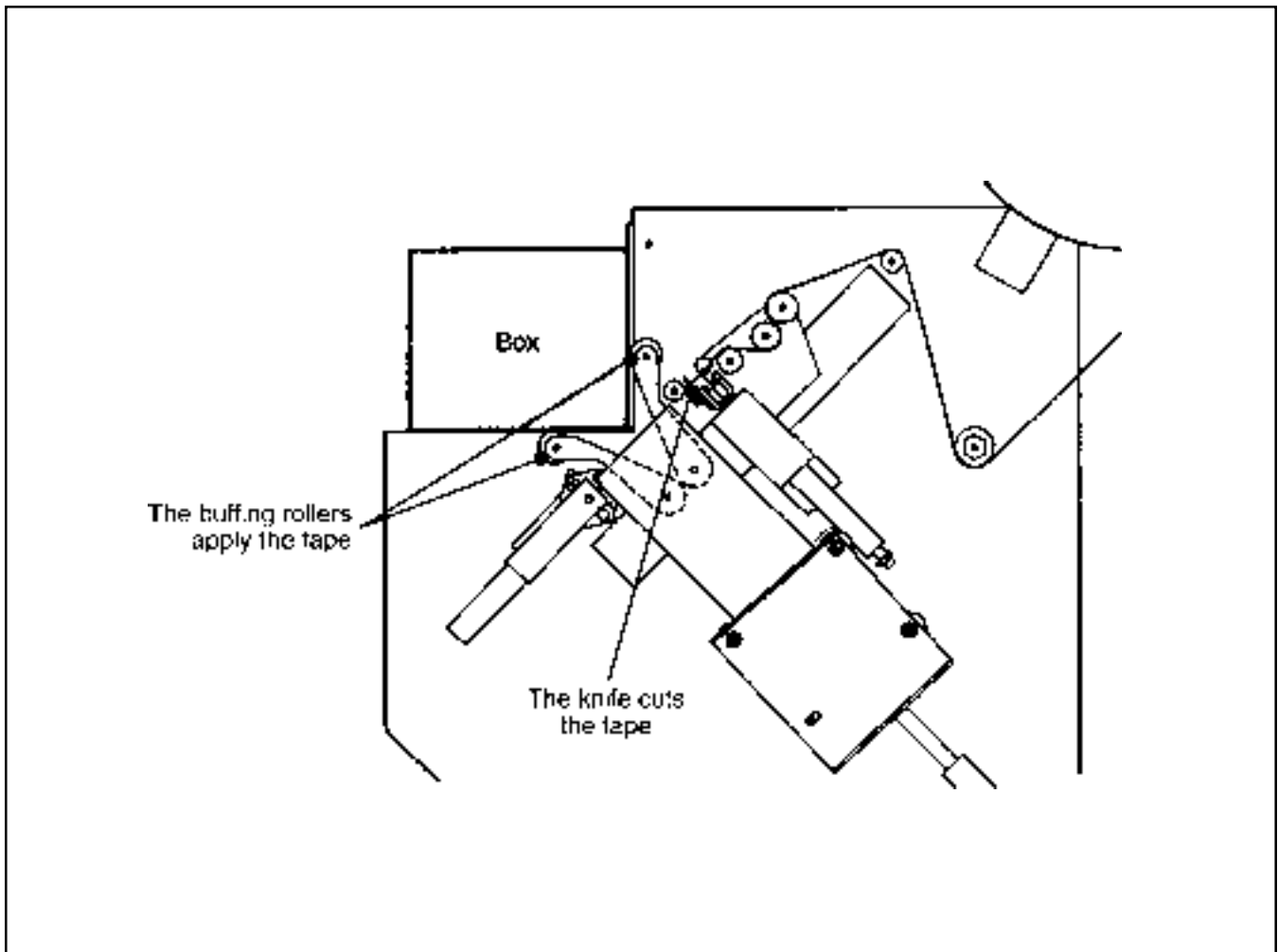


Figure 3-3 – Cut/Buffer Sequence

## Theory of Operation (Continued)

### APPLICATION CYCLE, FEED SEQUENCE

Valve V-4 directs air to the PA port of the pilot valve P-2 causing it to shift and direct air to the rod end of the jaw and feed cylinders. Air travels from the pilot valve P-2 through line 17, the feed cylinder retract flow valve, and line 23 to the rod end of the feed cylinder and through line 16 to the rod end of the jaw cylinder. As the cylinders retract, the jaws on the jaw assembly open to receive the tape that the feed assembly is advancing. As the feed assembly advances, the tape pick up roller pivots upward out of the path of the feed assembly. At the end of its stroke, the feed assembly actuates valve V-6 which directs a pulse of air to the PB port of the pilot valve P-2. This causes valve P-2 to shift and direct air through line 14, valve V-5, and line 26 to the head end of the jaw cylinder. The jaw cylinder extends and the tape holding jaws close to retain the free end of the tape advanced by the feed assembly.

When the jaw cylinder is completely extended, the jaws close and retain the free end of the tape and valve V-7 is actuated. Valve V-7 directs air to the head end of the free cylinder. This causes the feed mechanism to move back to the machine rest position. The machine is now ready for the next cycle.

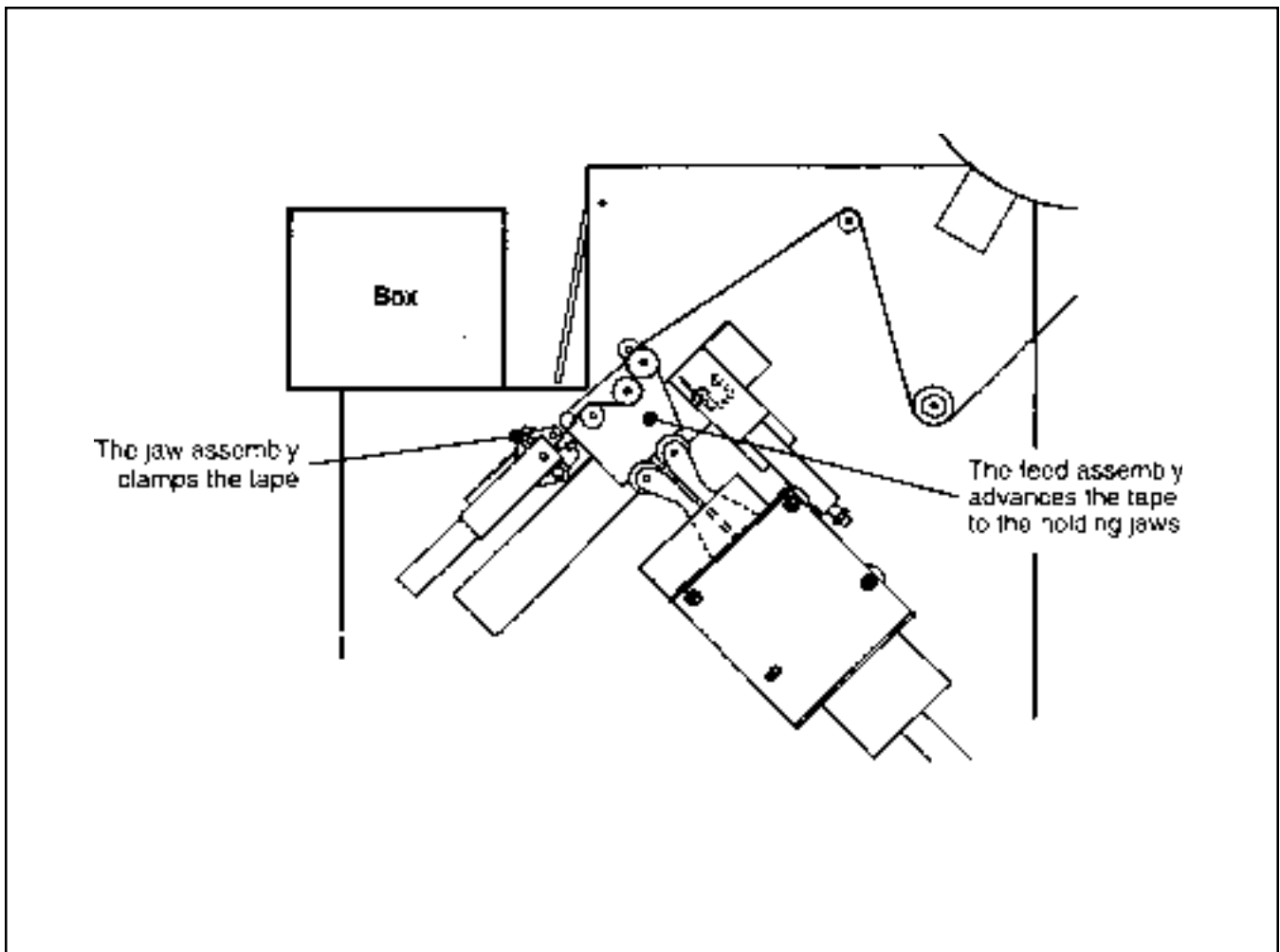


Figure 3-4 – Feed Sequence



## Theory of Operation (Continued)

### Components

Refer to Figure 3-1 for component locations.

#### VALVES

**V-1:** The on/off control valve, actuated by the knob on the top of the machine.

**V-2 Paddle Valve:** A box placed in the paddle area actuates V-2, which directs a pulse of air from the manifold, through valve V-8, to the PA port of pilot valve P-1. This shifts valve P-1 and activates the buff and cut cylinders beginning the application cycle.

**V-3:** This valve is actuated by an actuator on the buff cylinder slide assembly and directs air to the PB inlet of valve P-1, thus causing it to shift and retract the buff and cut cylinders.

**V-4:** This valve is actuated by an actuator on the buff cylinder slide assembly and routes air to the PA port of the pilot valve P-2. This causes valve P-2 to shift and direct power to the feed and jaw cylinders to begin the feed sequence.

**V-5:** Actuated by the buff cylinder slide assembly at the end of the retract stroke, V-5 directs air from the pilot valve V-2 to the jaw cylinder.

**V-6:** Actuated by the feed cylinder slide assembly at the end of the retract stroke, V-6 shifts the pilot valve P-2 and causes extension of the jaw cylinder. This causes the tape holding jaws to close on the free end of the tape.

**V-7:** Valve V-7 is actuated by the actuator mounted on the jaw cylinder rod. When the jaw cylinder fully extends, valve V-7 actuates and directs air to the head-end of the feed cylinder, causing the feed cylinder retract. This completes the feed cycle.

**V-8:** Actuated by the full extension of the feed cylinder assembly, valve V-8 provides a path for air from paddle valve V-2 to pilot valve P-1. This sets up the machine for the application cycle.

**V-9: Safety Valve:** V-9 removes power (air) to the machine when the cover is opened.

**P-1 Pilot Valve:** P-1 controls the buff/cut sequence.

**P-2 Pilot Valve:** P-2 controls the feed sequence.

#### CYLINDERS

**Safety Cylinder:** A spring loaded cylinder that retains the feed assembly when the machine is in the rest position-power off.

**Paddle Cylinder:** A cylinder which is actuated at the beginning of the application cycle. It holds the box paddle beyond the actuation point of paddle valve V-2, to prevent additional actuation of the paddle valve before the application cycle ends.

**Buff Cylinder:** The buff cylinder controls the buff roller assembly the "L" clip of tape to the box corner.

**Cut Cylinder:** The cut cylinder controls the knife assembly that cuts the section of tape applied by the buff roller assembly.

**Feed Cylinder:** The feed cylinder controls the feed assembly that advances the tape and inserts it into the holding jaws immediately following the buff/cut sequence.

**Jaw Cylinder:** The jaw cylinder controls the holding jaws that retain the end of the tape between applications.

## Operation

**Tape Loading and Threading** – The tape drum assembly is set up for dispensing 3/8 inch [9 mm] or 1/2 inch [12 mm] wide tape. For dispensing other tape widths refer to "Adjustments – Tape Width", page 17. A tape threading diagram is located outside the applicator on the top of the nest for quick reference.

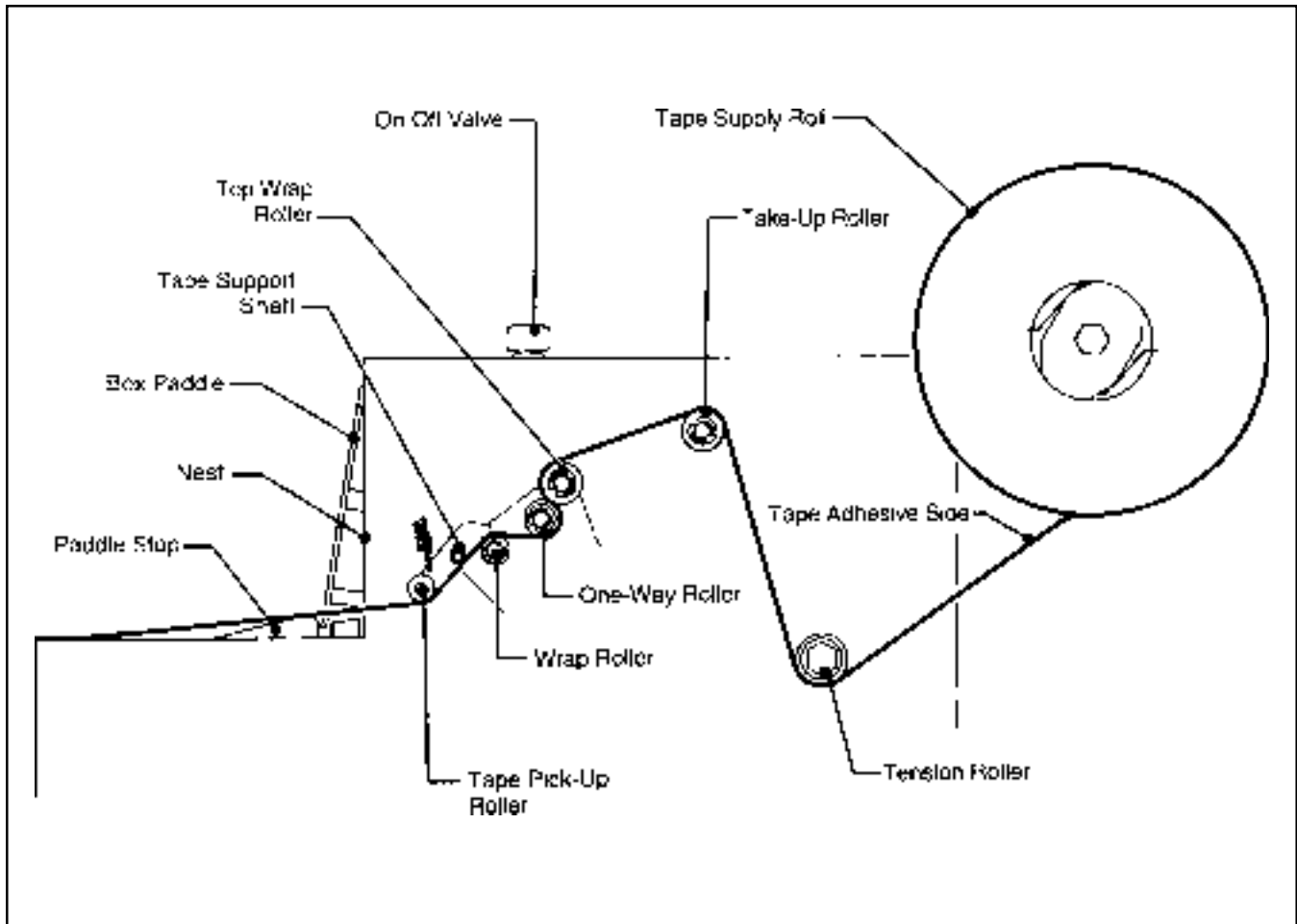


Figure 4-1 – Tape Loading and Threading – Right Side View



**WARNING** – Turn "Off" main air supply at on/off valve before threading tape. Failure to turn air supply "Off" could result in severe personal injury or equipment damage.

For easy access to tape loading and threading, open the cover located on the right side of the S-857. Release the cover latch, shown in Figure 2-1, pull outward on the upper part of the latch, unhook the latch and pivot open the cover.

Refer to Figure 4-1 and thread the tape as follows:

1. Place the tape roll on the tape drum so the tape is dispensed downward, adhesive side forward. The tape roll must be fully against the drum flange.
2. Pull approximately 12 inches [300 mm] of tape from the roll and thread the tape under the tension roller, adhesive side up.

## Operation (Continued)

3. Bring the tape up over the take-up roller, adhesive side up.



**WARNING – Use care when working near knife blade as blade is extremely sharp. If care is not taken, severe injury to personnel could result.**

4. Thread the tape over the top wrap roller, around the one way roller assembly, over the wrap roller, adhesive side toward the nest, begin tape down behind the tape holding roller and also the tape pick-up roll.

**Note:** To simplify the tape threading at the next reloading, replace with a new roll of "Scotch" brand filament tape, and splice the tape web together at the tension roller.

5. Pull out enough tape to tack it to the top of the nest as shown.

6. Close the cover and secure the latch.

**Note:** Remove all work tools, etc. from inside S-857 case before closing cover.

7. Turn "on" the main air supply at the on/off valve.
8. To clear the tape which has been tacked to the nest, manually holding the paddle stop down and push the box paddle in to cycle the unit. The applicator is ready to operate.



**WARNING – Be careful not to put fingers in area of cut out opening in nest. Severe injury to personnel could result.**

### Operating Sequence

1. Move the box forward over the paddle stops, depressing the box paddle and hold it firmly and squarely against the nest vertical surface to apply the tape.
2. The application only takes 1/4 second to apply the tape, then the box can be removed from the nest while the machine continues to complete the cycle.

# Adjustments

**WARNING** – Turn "Off" main air supply at on/off valve and disconnect air supply line before making any adjustments. Failure to disconnect air supply line could result in severe personal injury.

## Tape Width

The tape drum is assembled at the factory for 3/8 inch [9 mm] or 1/2 inch [12 mm] wide tapes. For 5/8 inch [15 mm] tapes the retainers must be moved to the secondary position on the tape drum. This is done by removing the two screws and relocating the retainer, shown in Figure 2-4, then replacing and securing the screws.

## Tape Web Alignment

The tape drum assembly controls tape web alignment in the applicator. Adjust the tape drum assembly so the tape web is dispensed, centered on the buffing rollers.

## Tape Drum Tension

The tape drum assembly provides a preset tape roll tension to control over-travel. The tape drum tension requires no further adjustment.

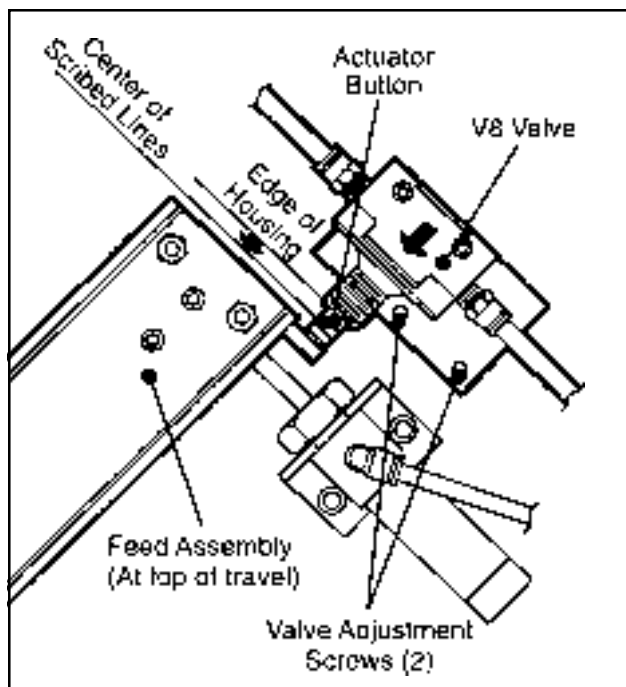


Figure 5-1 – V-8 Valve Adjustment

## Tape Tension Roller

The tension roller assembly, shown in Figure 4-1, provides a preset tension to the tape web. No further adjustment is required. If the tension roller assembly is replaced or comes out of adjustment, make adjustment as follows to obtain tension to the tape web: turn the lock nut, located behind the tension roller assembly, counterclockwise to increase tension, clockwise to decrease tension.

## V-8 Valve Adjustment

There are two lines scribed on the actuator button of the valve. Correct adjustment of valve places the middle of these two lines at the edge of the actuator button housing when feed assembly is at top of travel (see Figure 5-1). Loosen valve adjustment screws (2), slide valve up or down to obtain this adjustment and tighten screws. Be sure feed assembly is held at top of travel when making valve adjustment.

## Air Flow Controls

The flow controls for the tape feed air cylinder and tape buff air cylinder are preset at the factory. The controls are located on the top right hand corner of the S-857. Should adjustment be necessary, turn knob counterclockwise to increase cylinder speed and clockwise to decrease cylinder speed. Factory adjustment was set as shown in Figure 5-2. The flow control, mounted on the jaw cylinder to control speed, has been pre-set three turns open at the factory.

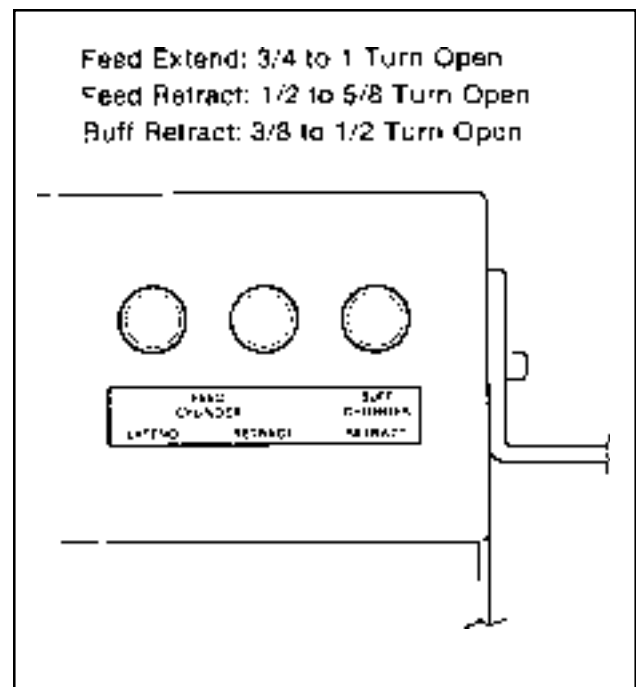


Figure 5-2 – Air Flow Controls – Top View

## Maintenance

**WARNING** – Turn "Off" main air supply at on/off valve and disconnect air supply line before beginning any maintenance. Failure to disconnect air supply line could result in severe personal injury.

### Blade Replacement

Refer to Figure 6-1

**WARNING** – Use care when working near knife blade as blade is extremely sharp. If care is not taken, severe injury to personnel could result.

1. Release latch and open cover on right side of S-857.
2. Remove and retain two screws (A), washers (AA) and blade guard (B).
3. Wrap old blade cutting teeth with tape to help prevent injury.
4. Remove and retain blade screw (C), plain washer (D) and blade and discard old blade.

5. Wrap tape around replacement blade teeth before installing.
6. Install blade as shown with beveled side of blade toward blade guard. Be sure blade is seated fully against blade stop and then tighten screw (C).
7. Remove tape from blade and replace blade guard (B) using screws (A) and plain washers (AA). Tighten screws.
8. Close and secure cover and connect/turn on main air supply.

### Air Line Filter

Refer to Figure 2-5. The air filter supplied with the S-857 is equipped with an automatic drain. No maintenance is required.

### Air Line Lubricator

Refer to Figure 2-5.

Fill air lubricator weekly or as required. Unscrew bowl and fill to 1/2 inch [12 mm] from top of bowl with U.S.P. heavy mineral oil or SAE #5 or #10 non-detergent oil.

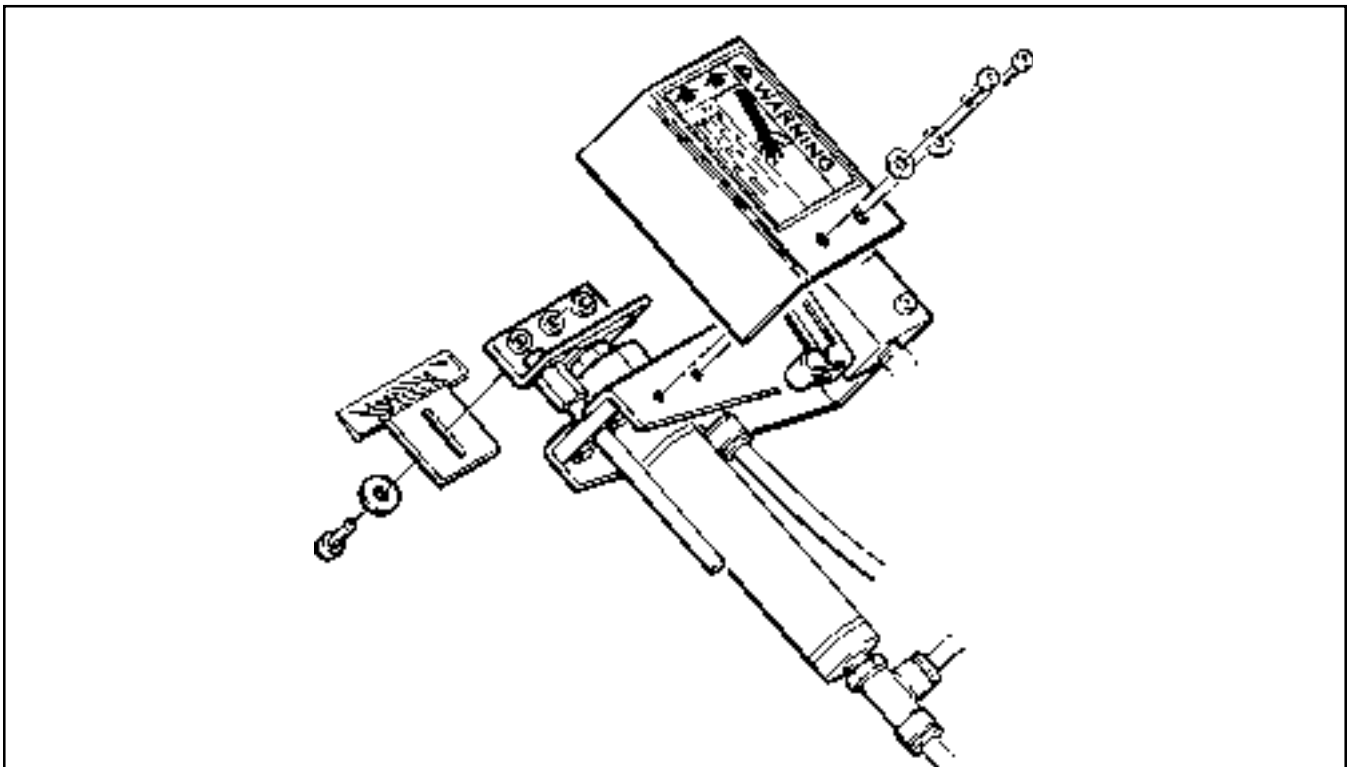
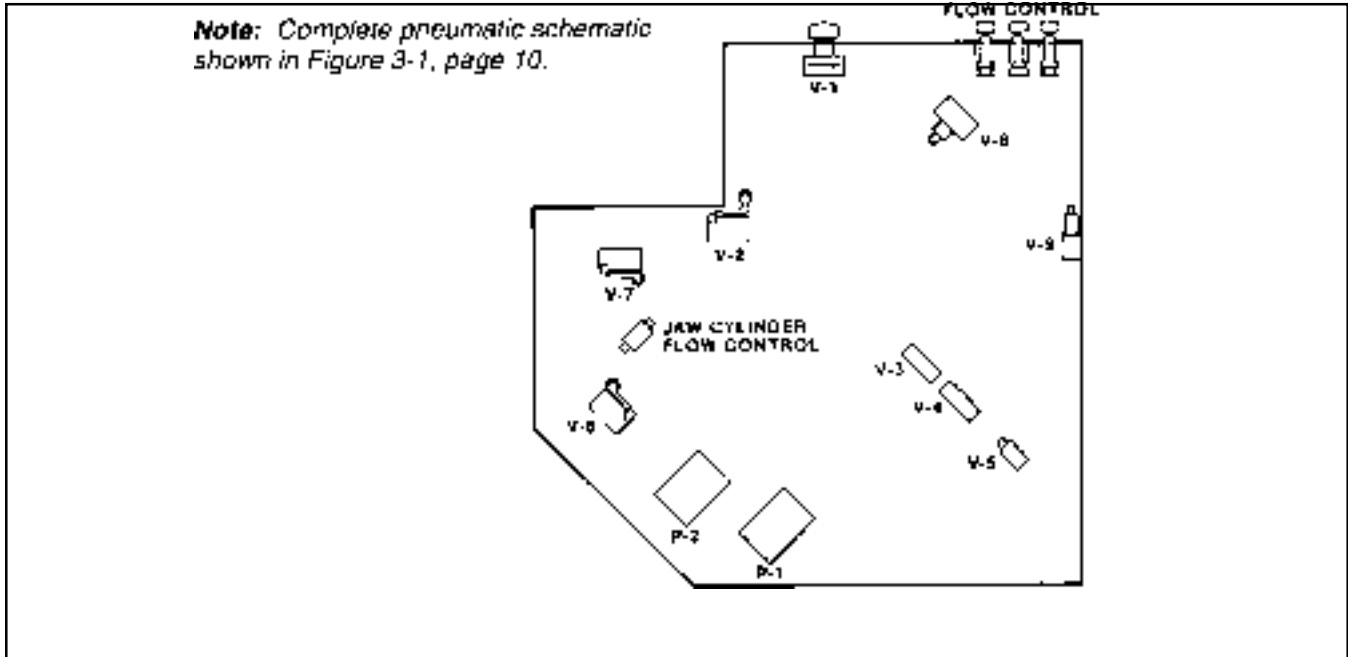


Figure 6-1 – Blade Replacement – Right Side View

# Troubleshooting




**Figure 7-1 – Troubleshooting Valve Locations – S-857 Right Side View**

**Troubleshooting Guide** (arranged in sequence of machine operation)

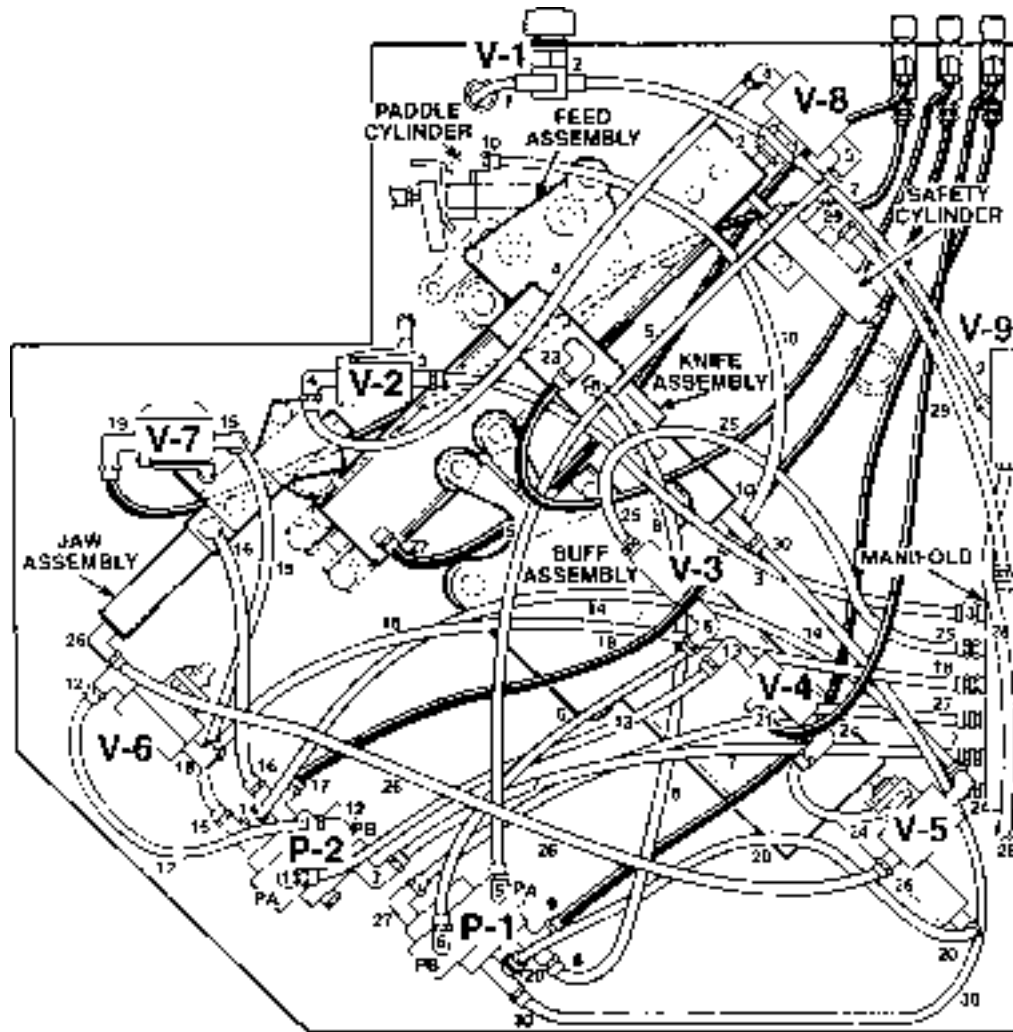
<b>Problem</b>	<b>Possible Cause</b>	<b>Correction</b>
Unit does not cycle.	<ol style="list-style-type: none"> <li>1. Air supply shut off or not connected to unit.</li> <li>2. Cover open.</li> <li>3. Valve V-8 out of adjustment or defective.</li> <li>4. Valve V-9 out of adjustment or defective.</li> <li>5. Valve V-2 out of adjustment or defective.</li> <li>6. Power valve P-1 defective.</li> <li>7. Kinked air lines.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check main air supply line and turn on unit.</li> <li>2. Close cover.</li> <li>3. Adjust or replace valve V-8. (see page 10)</li> <li>4. Adjust or replace valve V-9.</li> <li>5. Adjust or replace valve V-2.</li> <li>6. Replace valve.</li> <li>7. Straightened or replace air lines.</li> </ol>
Cut-off assembly does not retract.	<ol style="list-style-type: none"> <li>1. Valve V-3 out of adjustment.</li> <li>2. Cut-off assembly jammed with tape holding roller on tape feed assembly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust or replace valve V-3.</li> <li>2. Turn off air and retract cut-off assembly. Actuate and hold V-3 valve and turn on air.</li> </ol>
Buffing assembly does not retract.	<ol style="list-style-type: none"> <li>1. Valve V-3 out of adjustment or defective.</li> <li>2. Flow control closed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust or replace valve V-3.</li> <li>2. Adjust retract flow control for buff cylinder.</li> </ol>
Cut-off assembly and buffing assembly cycle extend and retract and unit stops.	<ol style="list-style-type: none"> <li>1. Valve V-4 out of adjustment or defective.</li> <li>2. Flow control closed.</li> <li>3. Power valve P-2 defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust or replace valve V-4.</li> <li>2. Adjust extend flow control for feed cylinder.</li> <li>3. Replace valve.</li> </ol>

## Troubleshooting (Continued)

### Troubleshooting Guide (arranged in sequence of machine operation)

Problem	Possible Cause	Correction
Buffing arm/cut-off blade out of sequence, oscillate back and forth.	<ol style="list-style-type: none"> <li>1. Valve V-3 out of adjustment or defective.</li> <li>2. Valve V-2 out of adjustment or defective, sticks closed when box paddle is actuated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn off air supply adjust valve V-3. Retract cut and buffing cylinder to retracted positions. Actuate and hold V-3 as air is turned on. This should put air circuitry in sequence.</li> <li>2. Adjust or replace valve V-2.</li> </ol>
Feed assembly retracts and stops.	<ol style="list-style-type: none"> <li>1. Valve V-6 out of adjustment or defective.</li> <li>2. Valve V-5 out of adjustment or defective.</li> <li>3. Power valve P-2 defective.</li> <li>4. Valve V-7 out of adjustment or defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust or replace valve V-6.</li> <li>2. Adjust or replace valve V-5.</li> <li>3. Replace valve.</li> <li>4. Adjust or replace valve V-7.</li> </ol>
Feed cylinder extends but does not actuate V-8 valve.	<ol style="list-style-type: none"> <li>1. Valve V-7 out of adjustment or defective.</li> <li>2. Valve V-5 out of adjustment or defective.</li> <li>3. Check for loose cylinder rod connection.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust or replace valve V-7.</li> <li>2. Adjust or replace valve V-5.</li> <li>3. Retighten and adjust V-8 valve if needed.</li> </ol>
Tape not cutting or tape end shredding or buffing rollers stop in mid-stroke and do not apply the tape.	<ol style="list-style-type: none"> <li>1. Dull blade.</li> <li>2. Blade out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade.</li> <li>2. Readjust blade and tighten screw.</li> </ol>
<div style="border: 1px solid black; padding: 5px; display: inline-block;">  <b>WARNING – Use care when working near knife blade as blade is extremely sharp. If care is not taken, severe injury to personnel could result.</b> </div>		
Tape not being held by jaw assembly.	<ol style="list-style-type: none"> <li>1. Bad jaw roller.</li> <li>2. Valve V-6 actuates before tape is in jaw assembly.</li> <li>3. Valve V-7 actuated before tape is clamped.</li> <li>4. Wave washer (Item #81) missing from tape holding roller (Item #27).</li> <li>5. Jaws close too slow.</li> <li>6. Feed cylinder extends too fast.</li> <li>7. Low clamping force on tape. Missing or broken jaw spring (Item #114).</li> <li>8. Bad one-way roller assembly. End of tape is not fed into the jaw assembly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace roller.</li> <li>2. Adjust V-6 valve.</li> <li>3. Adjust or replace V-7 valve.</li> <li>4. Replace wave washer.</li> <li>5. Adjust jaw cylinder flow control.</li> <li>6. Adjust flow control for extending feed cylinder.</li> <li>7. Replace jaw spring.</li> <li>8. Replace one-way roller assembly located on feed assembly.</li> </ol>

## Troubleshooting (Continued)



Air Line Number	From/To	Length	Air Line Number	From/To	Length
1	Air Controls/V-1 Valve	254 mm [10.00 inch]	16	P-2 Pilot/Jaw Cyl. rod end	228,6 mm [9.00 inch]
2	V-1 Valve/V-9 Valve	406,4 mm [16.00 inch]	17	P-2 Pilot/Flow Control Valve	609,6 mm [24.00 inch]
3	Manifold/V-2 Valve	362 mm [14.25 inch]	18	Manifold/V-6 Valve	457,2 mm [18.00 inch]
4	V-2 Valve/V-8 Valve	438,2 mm [17.25 inch]	19	Valve/Flow Control Valve	812,8 mm [32.00 inch]
5	V-8 Valve/P-1 Pilot, PA port	482,6 mm [19.00 inch]	20	P-1 Pilot Valve/Buf. Cyl. head end	355,6 mm [14.00 inch]
6	V-3 Valve/P-1, PB port	254 mm [10.00 inch]	21	Flow Control Valve/Buf. Cyl. rod end	609,6 mm [24.00 inch]
7	Manifold/P-2 Pilot Valve	368,3 mm [14.50 inch]	22	Flow Control Valve/Feed Cyl. head end	558,8 mm [22.00 inch]
8	Pilot Valve/Cut Cyl. rod end	457,2 mm [18.00 inch]	23	Flow Control Valve/Feed Cyl. rod end	533,4 mm [21.00 inch]
9	P-1 Pilot Valve/Flow Control Valve	774,7 mm [30.50 inch]	24	Manifold/V-4 Valve	180,8 mm [7.12 inch]
10	Cut Cyl. head end/Paddle Cyl.	393,7 mm [15.50 inch]	25	Manifold/V-3 Valve	260,4 mm [10.25 inch]
12	V-6 Valve/P-2 Pilot, PB port	228,6 mm [9.00 inch]	26	V-5 Valve/Jaw Cyl. head end	489 mm [19.25 inch]
13	V-4 Valve/P-2 Pilot, PA port	292,1 mm [11.50 inch]	27	Manifold/P-1 Pilot	374,7 mm [14.75 inch]
14	P-2 Pilot/V-5 Valve	482,6 mm [19.00 inch]	28	Manifold/V-9 Valve	241,3 mm [9.50 inch]
15	P-2 Pilot/V-7 Valve	406,4 mm [16.00 inch]	29	Manifold/Safety Cyl.	209,6 mm [8.25 inch]
			30	P-1 Pilot/Cut Cyl. head end	635 mm [25.00 inch]

Figure 7-2 – Air Line Connections/Tubing Length



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## Replacement Parts And Service Information

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### Recommended Spare Parts

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

Qty.	Figure	Ref. No.	Part Number	Description
1	8-6	48	70-8601-0016-6	Blade – Serrated
2	8-7	79	78-8046-8594-5	Roller – Buffing

### How To Order Replacement Parts

1. See Figures 8-1 - 8-9, pages 24 - 32 to determine individual part and reference number.
2. Refer to parts list pages 33 - 39 for part number and description.

**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.

3. Refer to first page of this instruction manual "Replacement Parts and Service Information", for replacement parts ordering information.

**Important** – Not all the parts listed are normally stocked items. Some parts or assemblies shown are available only on a special order basis. Contact 3M/Tape Dispenser Parts to confirm item availability.

### Repair Service

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

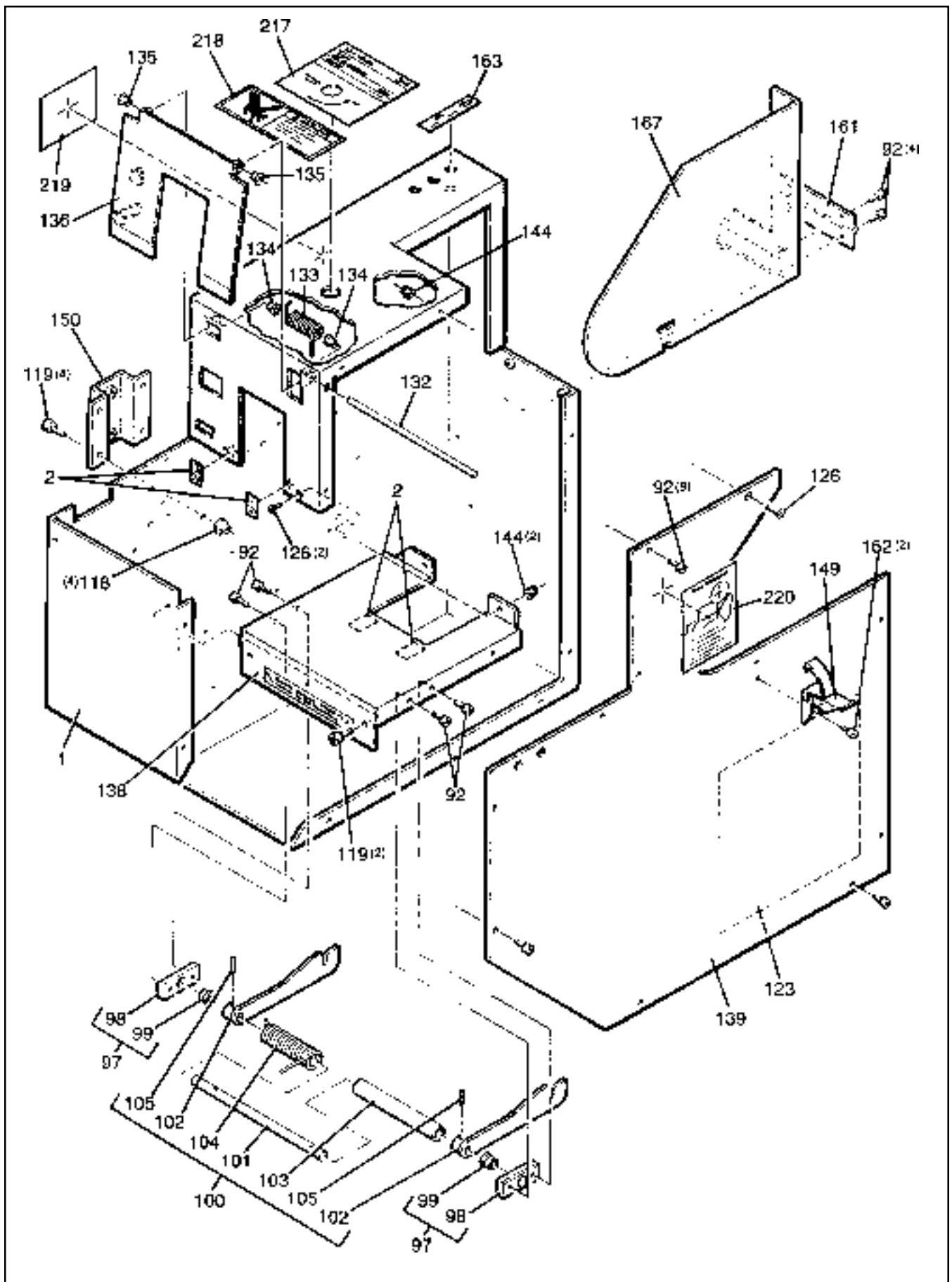


Figure 8-1 – Main Frame, Nest, Covers

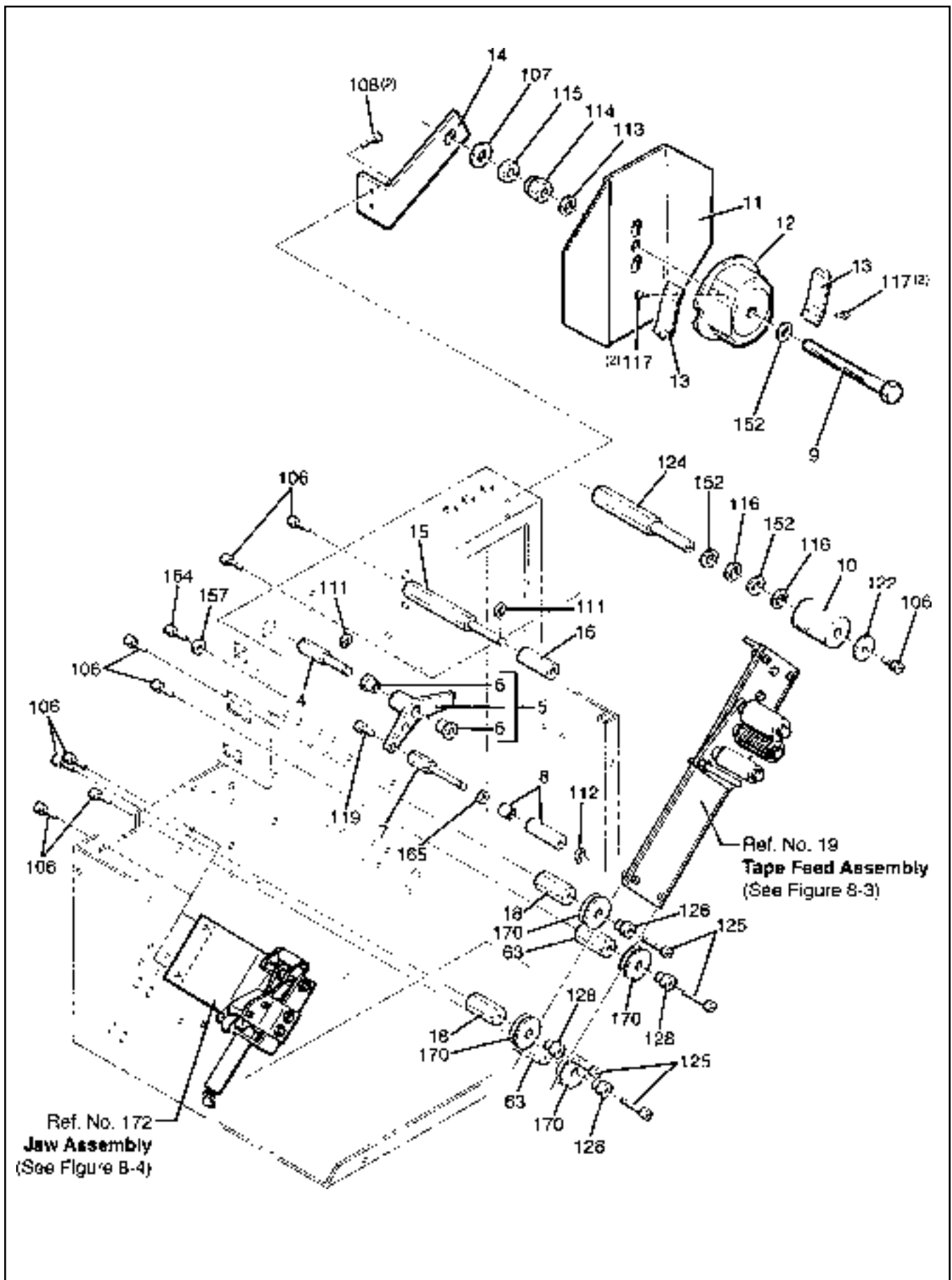


Figure 8 -2 – Tape Drum, Tape Feed, Jaw Assemblies

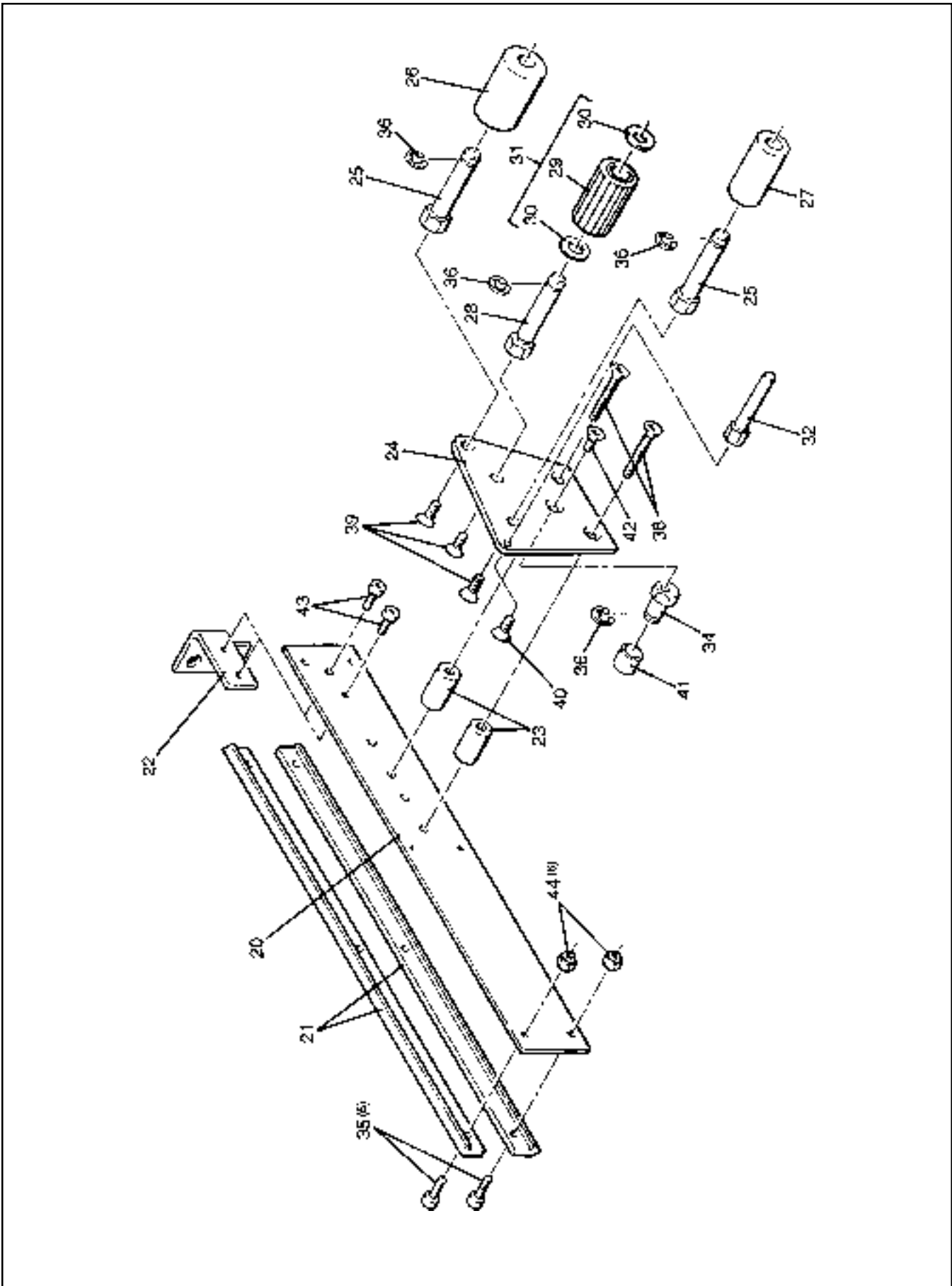


Figure 8-3 – Tape Feed Assembly

Ref. No. 172

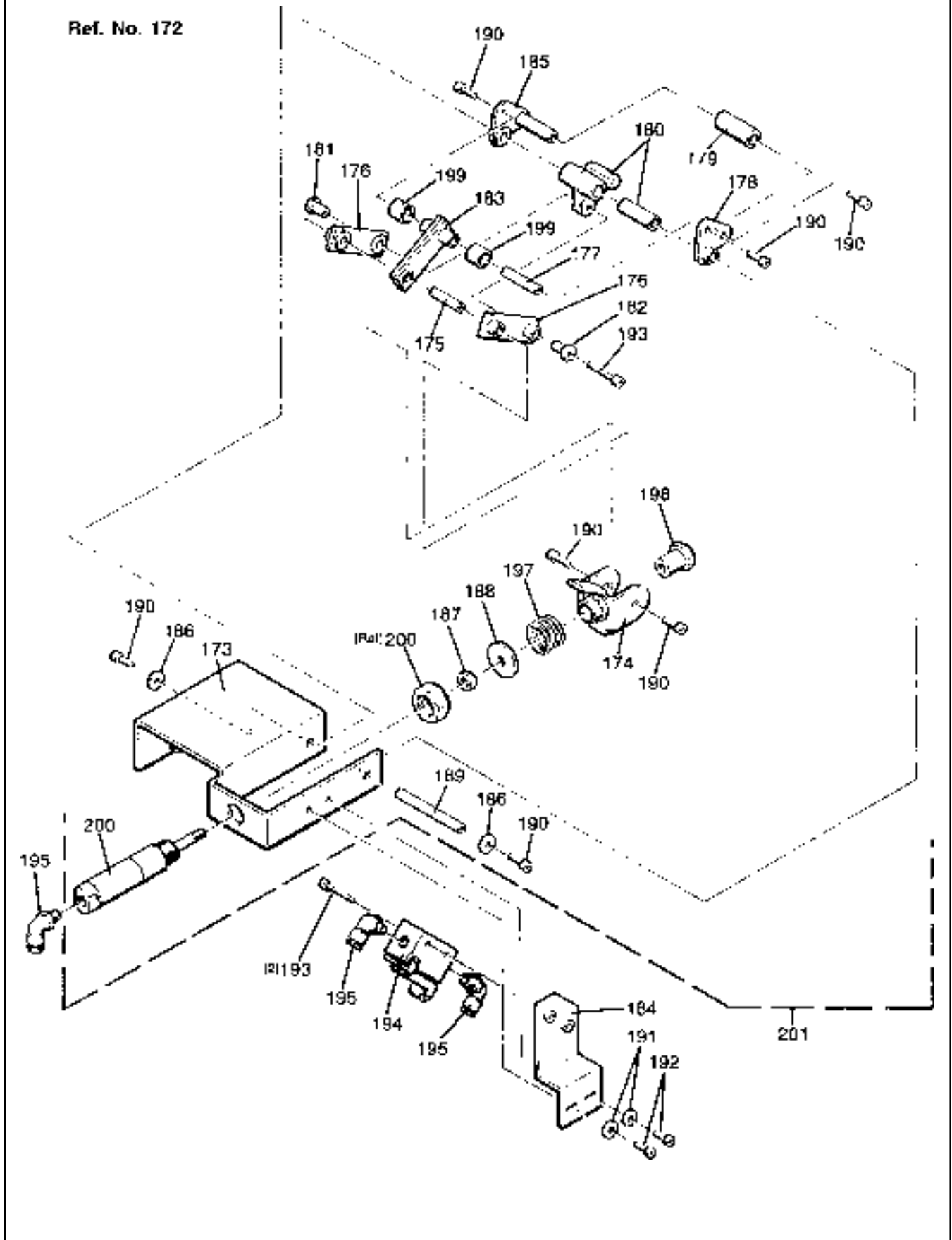


Figure 8-4 – Jaw Assembly

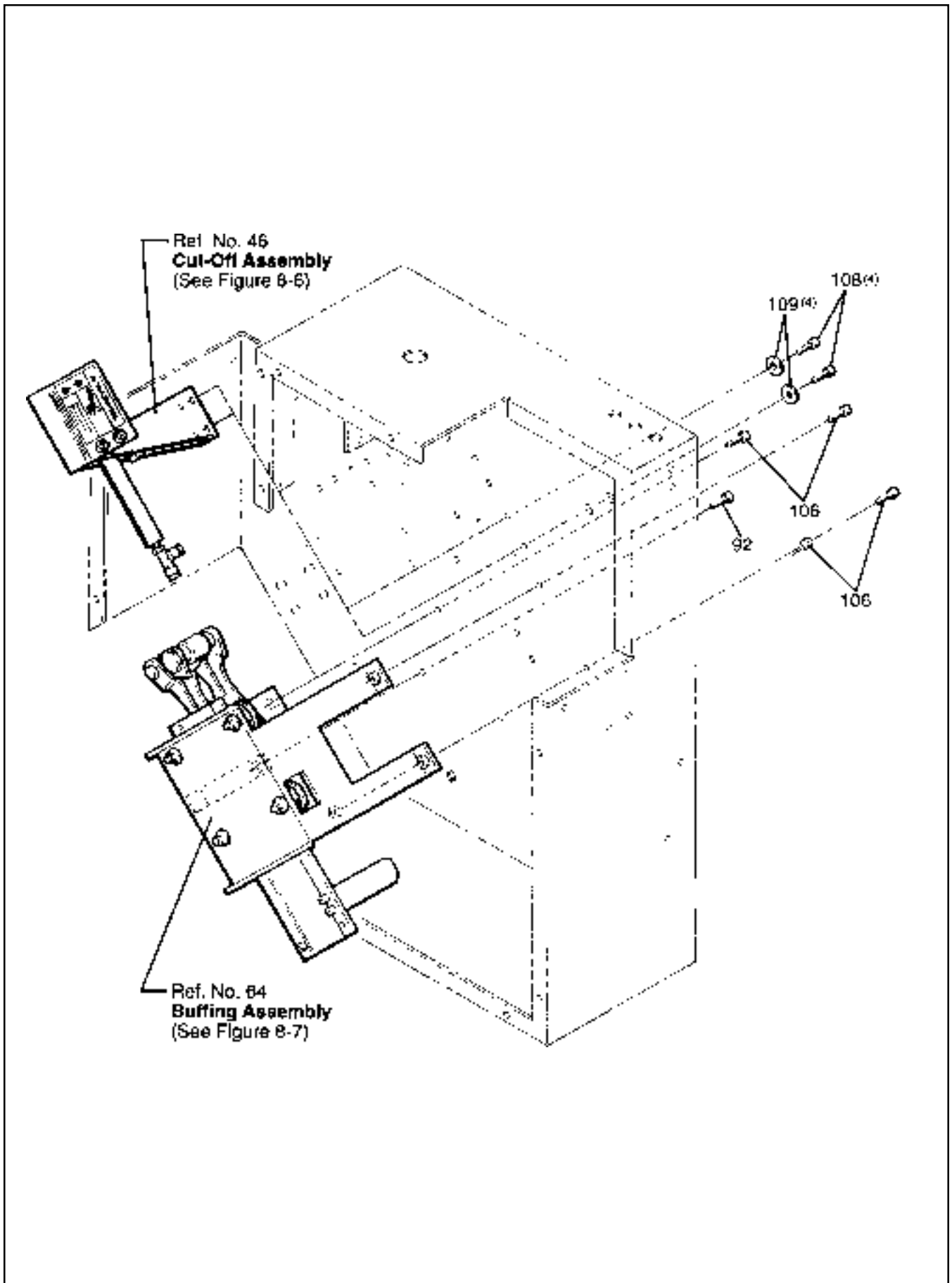


Figure 8-5 – Cut-Off, Buffing Assemblies

Ref. No. 46

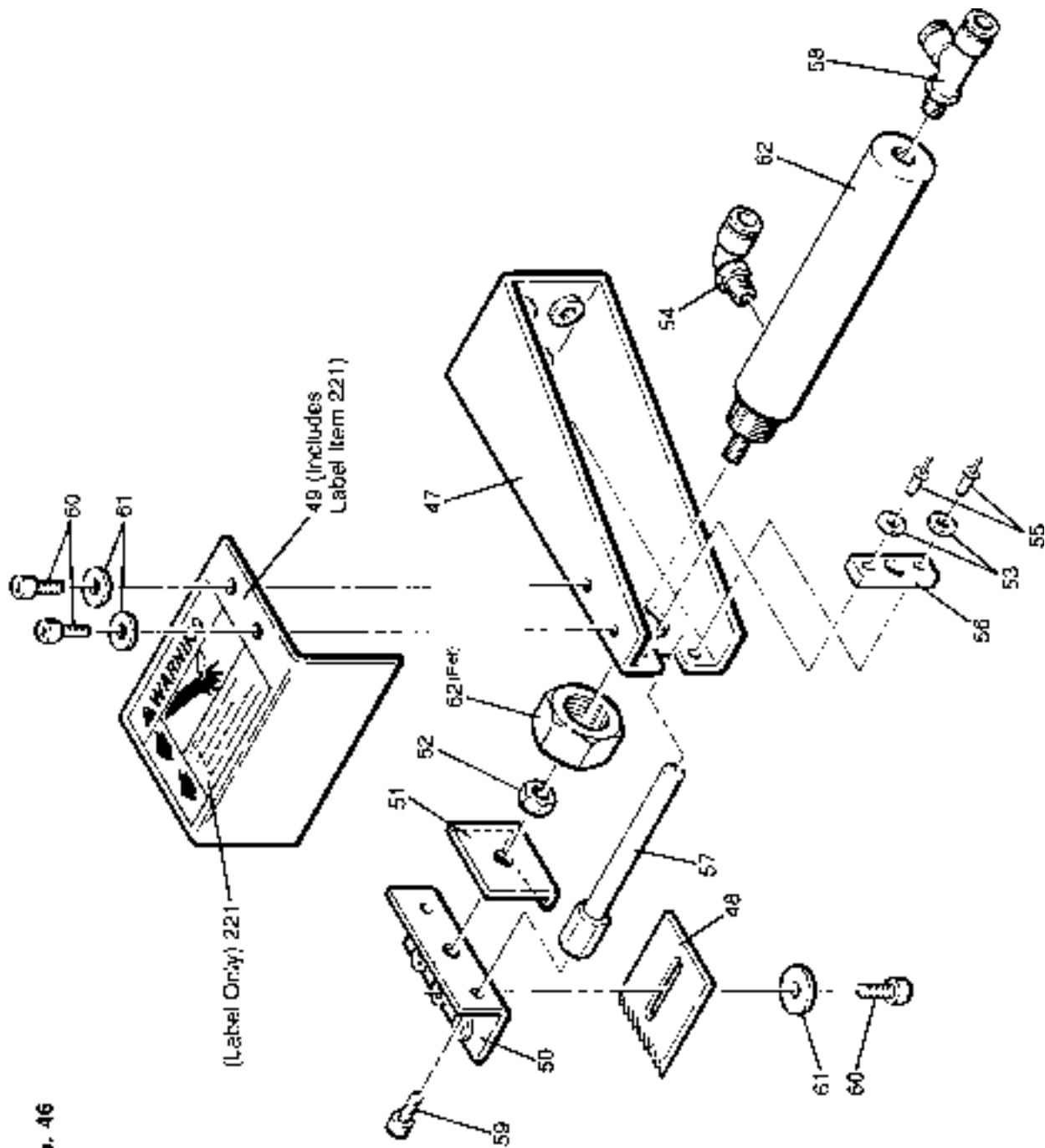


Figure 8-6 – Cut-Off Assembly



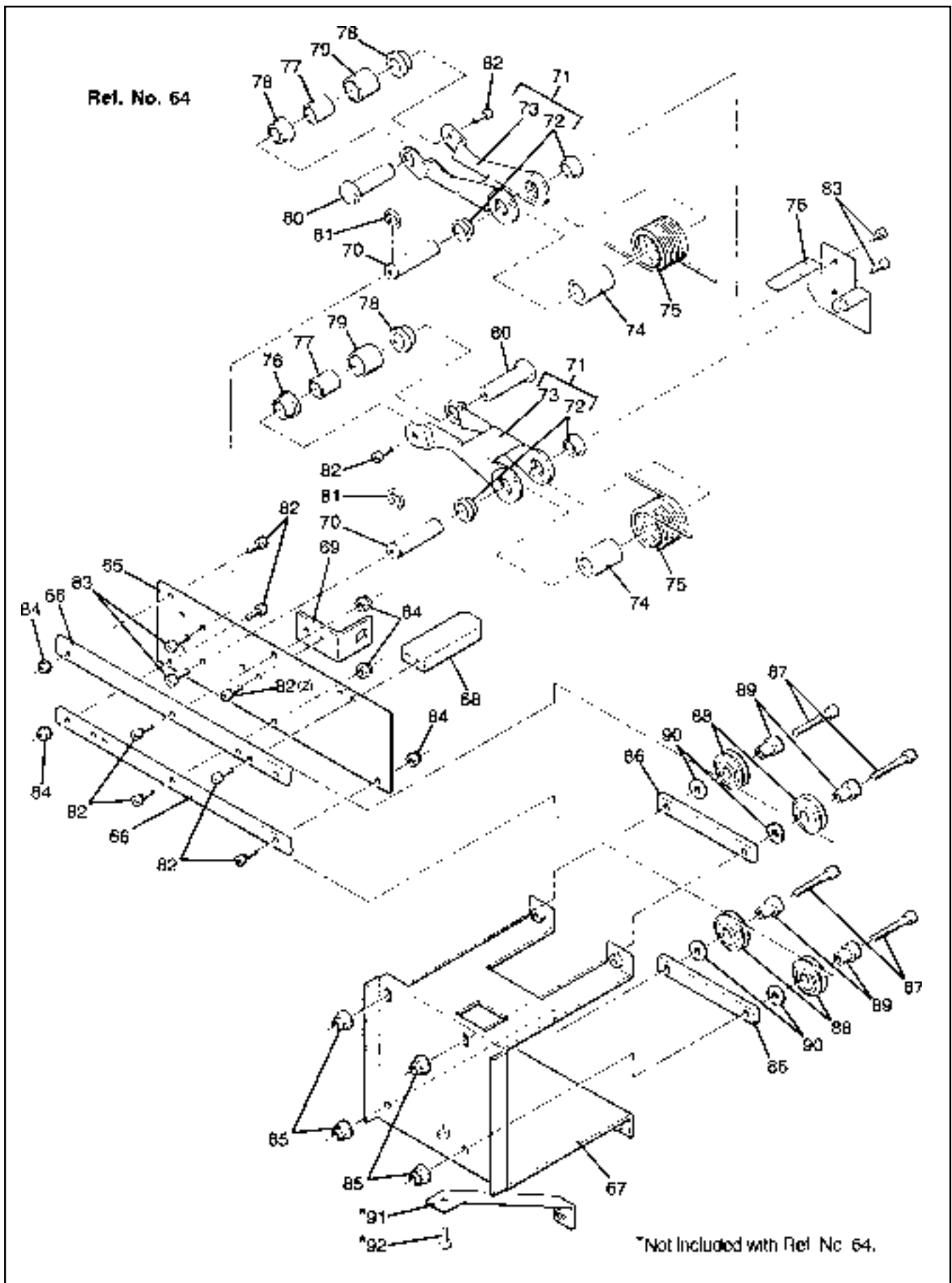


Figure 8-7 – Buffing Assembly

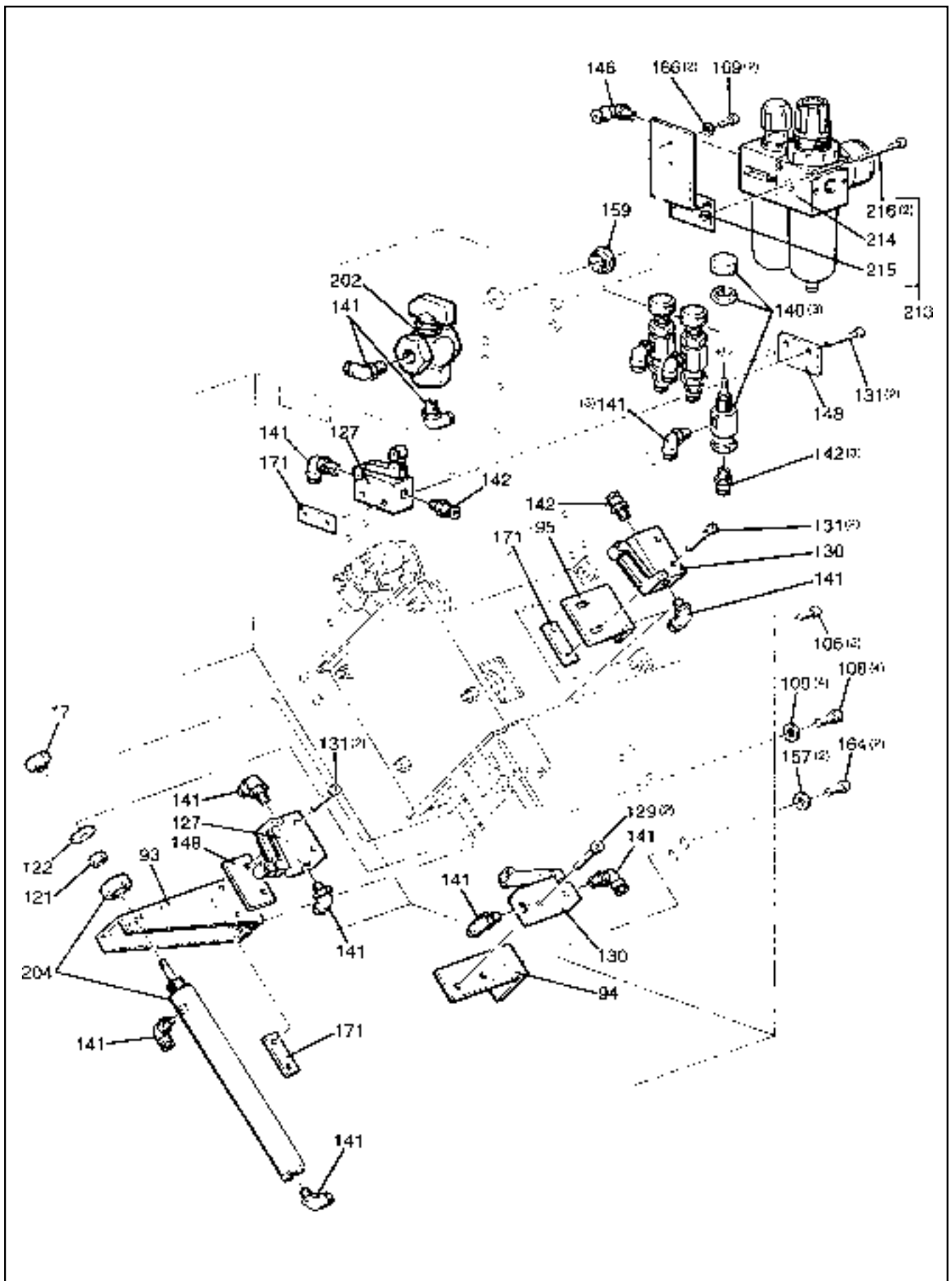


Figure 8-8 – Pneumatic Components

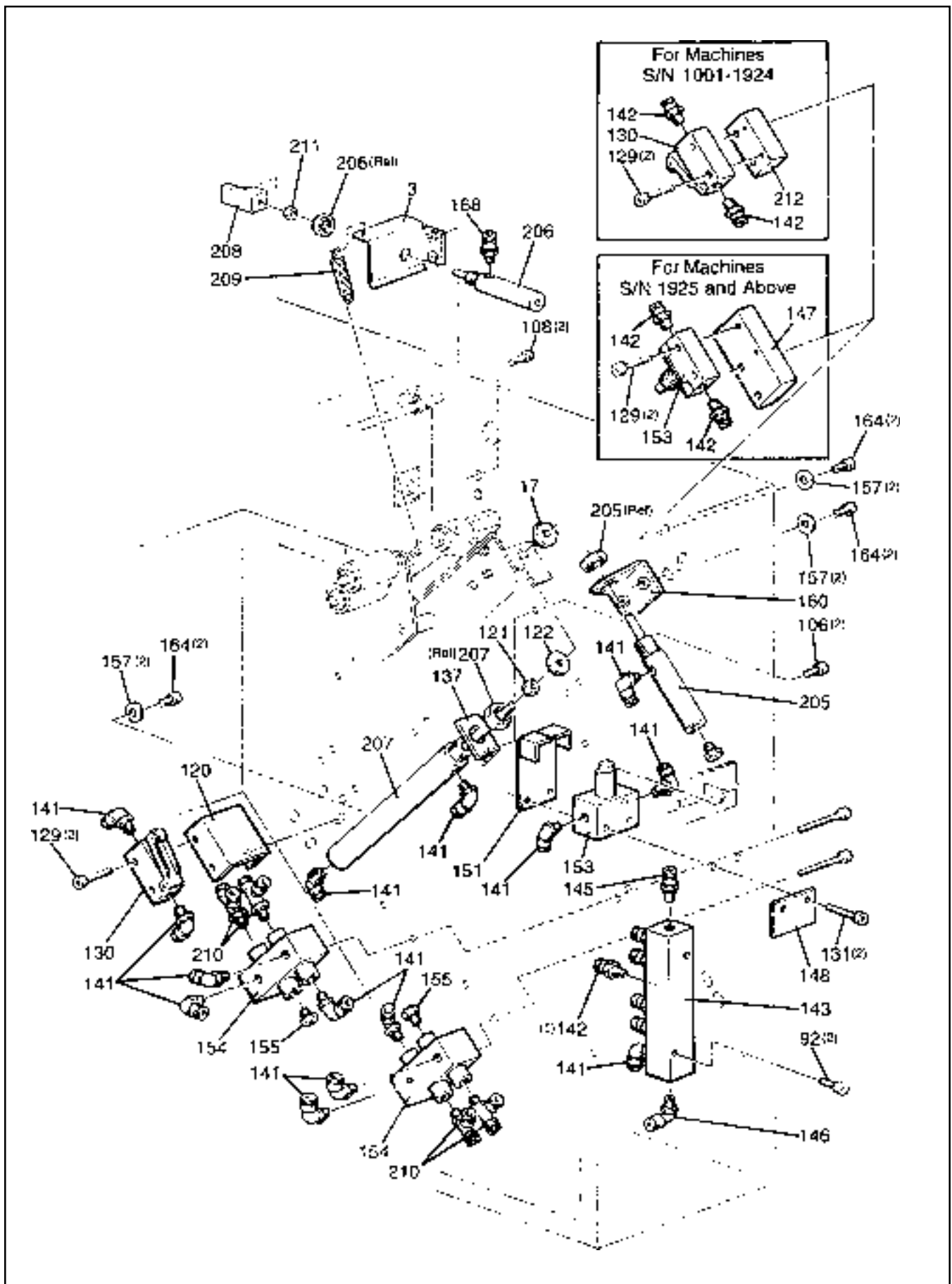


Figure 8-9 – Pneumatic Components

## Replacement Parts List

### S-857 "L" Clip Applicator, Type 29500

Ref. No.	3M Part No.	Description
1	78-8059-5759-0	Frame Weldment
2	78-8059-5785-5	Bumper
3	78-8046-8516-8	Bracket – Roller (Stop)
4	78-8046-8542-4	Shaft – Tape Arm
5	78-8046-8511-9	Tape Arm Assembly (Pickup)
6	78-8161-4227-3	Bearing – Flange, Oilite #FF-520-5
7	78-8052-6371-8	Shaft – Pickup
8	78-8046-8545-7	Pickup Roller Assembly
9	78-8059-5754-1	Bolt – Modified
10	78-8052-6334-6	Roller – Tension
11	78-8046-8549-9	Plate – Tape Backup
12	78-8023-2190-7	Drum – Tape
13	78-8023-2191-5	Retainer – Tape
14	78-8059-5772-3	Support – Tape Drum
15	78-8046-8551-5	Shaft – Roller (Take-up)
16	78-8046-8562-2	Roller – Top Wrap
17	78-8046-8553-1	Mount – Cylinder Rod
18	78-8059-5781-4	Standoff – Wheel
19	78-8111-1289-1	Tape Feed Assembly
20	78-8052-6349-4	Plate – Stripper
21	78-8059-5758-2	Rail – Stripper
22	78-8052-6350-2	Bracket – Stripper Cylinder
23	78-8046-8559-8	Spacer – Stripper
24	78-8046-8560-6	Plate – Stripper (Tape)
25	78-8046-8561-4	Shaft – Wrap Roller
26	78-8046-8562-2	Roller – Top Wrap
27	78-8046-8563-0	Roller – Wrap
28	78-8046-8564-8	Shaft – Roller (Clutch)
29	78-8059-5779-8	Roller Assembly – One-Way
30	78-8163-0109-3	Bearing – Thrust, Oilite #TT-703
31	78-8059-5778-0	Roller Assembly Kit – One-Way (Includes Ref No. 29 and (2) Ref No. 30)
32	78-8111-1284-2	Shaft – Tape Support

## Replacement Parts List

### S-857 "L" Clip Applicator, Type 29500

Ref. No.	3M Part No.	Description
34	78-8046-8569-7	Cam – Hex
35	26-1004-6031-5	Screw – Soc Hd, Hex Soc Dr, 10-24 x 1/2 Lg.
36	78-8656-4003-7	Ring – Retaining E-Ring, Waldes #5133-37
38	26-1006-2403-5	Screw – Flt Hd, Hex Soc Dr, 10-24 x 1-1/2 Lg.
39	70-7023-8090-1	Screw – Flt Hd, Hex Soc Dr, 1/4-20 x 1/2 Lg.
40	70-8000-1289-3	Screw – Flt Hd, Hex Soc Dr, 8-32 x 1/2 Lg.
41	78-8046-8570-5	Bumper – Cam
42	26-1002-2124-6	Screw – Flt Hd, Hex Soc Dr, 10-24 x 1/2 Lg.
43	26-1006-1333-5	Screw – Soc Hd, Hex Soc Dr, 10-24 x 3/8 Lg.
44	26-1004-5847-5	Nut – Nyl Insert, S-Lock, 10x24
46	78-8059-5736-8	Cut-Off Assembly
47	78-8046-8572-1	Bracket – Air Cylinder
48	70-8601-0016-6	Blade
49	78-8046-8575-4	Blade Guard Assembly
50	78-8079-5480-1	Bracket – Blade Mounting
51	78-8098-8747-0	Stop – Blade
52	26-1000-8448-7	Nut – Jam, 1/4-28
53	12-7991-1735-8	Washer – Plain, Type A, #4
54	26-1001-7170-6	Fitting — 90° Elbow, 1/4 0.0 Tube x 1/8 Male NPT, Legris #3109-56-11
55	78-8005-2959-2	Rivet – Pop, 1 /8 Dia, USM #AD-45-ABS
56	78-8046-8577-0	Bracket – Slide
57	78-8046-8578-8	Rod – Slide
58	26-1005-7645-8	Fitting – Male Run Tee, 1/4 0.0 Tube x 1/4 0.0 Tube x 1/8 Male NPT, Legris #3171-56-20
59	70-8000-0864-4	Screw – Soc Hd, Hex Soc Dr, 8-32 x 1/2 Lg.
60	26-1006-1333-5	Screw – Soc Hd, Hex Soc Dr, 10-24 x 3/8 Lg.
61	26-1000-4442-4	Washer – Plain, Type A, #10
62	78-8057-5759-4	Cylinder – Cut
63	78-8059-5755-8	Standoff – Wheel (Eccentric)
64	78-8059-5733-5	Buffing Assembly
65	78-8052-6366-8	Plate – Arm Mounting
66	78-8059-5734-3	Rail – Buffing

# Replacement Parts List

## S-857 "L" Clip Applicator, Type 29500

Ref. No.	3M Part No.	Description
67	78-8059-5735-0	Bracket – Mounting
68	78-8052-6369-2	Cam – Switch
69	78-8046-8585-3	Bracket – Cylinder
70	78-8046-8586-1	Shaft – Buffing Arm
71	78-8046-8587-9	Buffing Arm Assembly
72	78-8032-1206-3	Bearing – Flanged, Oilite #FF-636-3
73	78-8046-8588-7	Arm– Buffing
74	78-8046-8589-5	Mandrel – Spring
75	78-8046-8590-3	Spring – Buffing Roller
76	78-8046-8591-1	Plate – Buff Mounting
77	78-8046-8592-9	Sleeve – Buffing Roller
78	78-8046-8593-7	Spacer – Buffing Roller
79	78-8046-8594-5	Roller – Buffing
80	78-8046-8595-2	Shaft – Buffing
81	78-8656-4012-8	Ring – Retaining E-Ring, Waldes #5133-50
82	26-1006-1770-8	Screw – Soc Hd, Hex Soc Dr, 10-24 x 1/2 Lg.
83	70-8656-5938-0	Screw – Soc Hd, Hex Soc Dr, 1/4-20 x 1/2 Lg.
84	18-1755-2103-0	Nut – Nylon Insert, 10-24
85	26-1002-4389-3	Nut – Flanged, Spirallock, 1/4-20
86	78-8052-6367-6	Spacer – Roller
87	70-8000-1495-6	Screw – Soc Hd, Hex Soc Dr, 1/4-20 x 1-1/2 Lg.
88	26-1004-1506-1	Wheel – Guide, Dua-L-Vee #W2X
89	26-1004-1508-7	Bushing – Adapter, Stationary, Dua-L-Vee #B-2
90	26-1006-1771-6	Washer – Plain, SST, H.K. Metalcraft, #18-8
91	78-8059-5763-2	Brace – Buffing Assembly
92	70-8000-0878-4	Screw – Soc Hd, Hex Soc Dr, 10-24 x 3/8 Lg.
93	78-8046-8572-1	Bracket – Air Cylinder
94	78-8052-6341-1	Mount – Valve V-5
95	78-8046-8597-8	Bracket – Switch
97	78-8046-8599-4	Plate Assembly
98	78-8046-8600-0	Plate – Shaft
99	78-8161-4222-4	Bearing – Flanged, Oilite #FF-520-10

## Replacement Parts List

### S-857 "L" Clip Applicator, Type 29500

Ref. No.	3M Part No.	Description
100	78-8098-8978-1	Paddle Assembly
101	78-8098-8975-7	Shaft – Paddle Stop
102	78-8098-8974-0	Stop – Paddle UH
103	78-8098-8976-5	Mandrel – Spring
104	78-8098-8973-2	Spring – Torsion
105	18-9260-8615-0	Pin – Slotted Spring, Med Duty, IJ8 Dia x 5/8 Lg.
106	70-8656-5938-0	Screw – Soc Hd Hex Soc Dr, 1/4-20 x 1/2 Lg.
107	70-8000-5377-2	Washer – Plain, Type A, 1/2
108	26-1006-1770-8	Screw – Soc Hd, Hex Soc Dr, 10-24 x 1 /2 Lg.
109	26-1007-3472-7	Washer – Plain, Hardened, 13/64 ID x 1/2 OD
111	78-8656-4003-7	Ring – Retaining E-Ring, Waldes #5133-37
112	78-8656-5004-4	Ring – Retaining Grip Ring, Waldes #5555-25
113	78-8014-1001-6	Bearing – Thrust, Oilite #TT-706
114	26-1001-2646-0	Nut – Nyl Insert, 1/2-13
115	70-8000-5374-9	Nut – Jam, 1 /2-13
116	26-1000-0664-7	Washer – Shim, .50 ID x .75 OD x .015 Thk
117	26-1002-4949-4	Screw – Self Tap, Thrd Form, Plastite #6-19 x 3/8 Lg.
118	26-1002-4389-3	Nut – Flanged, Spirallock, 1/4-20
119	26-1006-1986-0	Screw – Soc Hd, Hex Soc Dr, 1/4-20 x 3/4 Lg.
120	78-8052-6340-3	Mount – Valve, V-6
121	26-1000-8448-7	Nut – Jam, 1/4-28
122	26-1002-8745-2	Washer – Plain, Type B, .28 ID x 1.0 OD x .06 Th
123	78-8059-5761-6	Label – Valve
124	78-8052-6390-8	Shaft – Tension
125	26-1006-1981-1	Screw – Soc Hd, Hex Soc Dr, 1/4-20 x 1-1/4 Lg.
126	26-1006-1984-5	Screw – Flt Hd, Hex Soc Dr, Loc-Wel, 8-32 x 1/2 Lg.
127	26-1004-7411 -8	Valve – Air, Internal Check Valve, One-Way Roller 1/8 NPT Ports, SMC #NVM-131-NO1-02-X6
128	26-1004-1508-7	Bushing – Adapter, Stationary, Dua-L-Vee, Bishop-Wisecarver#B-2
129	70-8000-2155-5	Screw – Soc Hd, Hex Soc Dr, 8-32 x 1 Lg.
130	26-1004-7410-0	Valve – Air, 3-Way, Roller Actuator, SMC #VM 131 -01 -01
131	26-1006-1985-2	Screw – Soc Hd, Hex Soc Dr, 8-32 x 1-1/4 Lg.

# Replacement Parts List

## S-857 "L" Clip Applicator, Type 29500

Ref. No.	3M Part No.	Description
132	78-8059-5753-3	Shaft – Paddle
133	78-8046-8510-1	Spring – Paddle
134	78-8161-8389-7	Bearing – Nyliner, Thomson #4L1-FF
135	78-8002-4778-1	Bearing – Nyliner, Thomson #4L2-FF
136	78-8052-6250-4	Paddle – Box
137	78-8052-6338-7	Mount – Cylinder
138	78-8098-9003-7	Nest Assembly
139	78-8059-5756-6	Cover
140	26-1004-7415-9	Flow Control – Flairline #RFC-1/8 PK
141	26-1001-7170-6	Fitting – 90° Elbow, 1/4 0.0 Tube x 1/8 Male NPT, Legris #3109-56-11
142	26-1014-4752-7	Fitting – Straight, 1/4 0.0 Tube x 1/8 Male NPT, Legris #3175-56-11
143	78-8059-5762-4	Manifold – Air
144	26-1006-2447-2	Nut – S-Lock, Nylon Insert, 8-32
145	26-1014-4753-5	Fitting – Straight, 1/4 0.0 Tube x 1/4 Male NPT, Legris #3175-56-14
146	26-1003-7731-1	Fitting – 90° Elbow, 1/4 0.0 Tube x 1/4 Male NPT, Legris #3109-56-14
147	78-8079-5481-9	Mount – Valve, V-8
148	78-8079-5483-5	Spacer – Valve, V-4
149	26-1006-2066-0	Latch – Over Center Draw, Southco #97-50-110-15
150	78-8052-6257-9	Bracket – Mount, R/H
151	78-8046-8509-3	Cover – Switch
152	26-1002-6708-2	Washer – U-Bent, Assoc. Sp #U500-0170
153	26-1004-7412-6	Valve – Air, 3-Way, 1/8 NPT, Plunger, SMC #VM 130-01-05B
154	78-8059-5771-5	Valve – Air, Modified, 4-Way, Pilot Operated, MAC #921ARA
155	26-1003-7738-6	Vent – Breather, 1/8 Pipe, Mosier #BV-1
157	26-1009-3643-9	Washer – Plain, 9/32 ID x 5/8 OD x 1/8 Thk



## Replacement Parts List

### S-857 "L" Clip Applicator, Type 29500

Ref. No.	3M Part No.	Description
159	78-8003-8731-4	Bushing – Snap, Heyco #2096
160	78-8052-6333-8	Mount – Safety
161	78-8059-5746-7	Hinge – Cover
162	70-8656-5934-9	Screw – Soc Hd, Hex Soc Dr, 8-32 x 1/4 Lg.
163	78-8052-6332-0	Label – Flow Control
164	70-8000-2641-4	Screw – Soc Hd, Hex Soc Dr, 1/4-20 x 5/8 Lg.
165	78-8163-0100-2	Bearing – Thrust, Oilite #TT-504
166	12-7991-1737-4	Washer – Plain, Type A, #8
167	78-8059-5741-8	Cover – Safety
168	26-1014-4754-3	Fitting – Male Connector, 1 /4 0.0 Tube x 10-32 Male UNF, Legris #3171-56-20
169	70-8000-0864-4	Screw – Soc Hd, Hex Soc Dr, 8-32 x 1/2 Lg.
170	26-1004-1506-1	Wheel-Guide – Dua-L-Vee Bishop-Wisecarver#W2X
171	26-1005-5133-7	Nut Plate – Ohio #TP1416
172	78-8059-5757-4	Jaw Assembly
173	78-8054-8685-5	Bracket – Jaw Mounting
174	78-8054-8687-1	Clevis – Air Cylinder
175	78-8054-8671-5	Shaft – Clevis
176	78-8054-8672-3	Jaw Link Assembly – Outer
177	78-8054-8673-1	Shaft – Link
178	78-8054-8680-6	Roller Plate Assembly – R/H
179	78-8054-8683-0	Roller – Jaws
180	78-8054-8684-8	Tape Clamp Assembly
181	78-8054-8674-9	Pin – Link Tap
182	78-8054-8675-6	Pin – Link Thru
183	78-8054-8676-4	Jaw – Link Assembly - Inner
184	78-8046-8541-6	Bracket – Valve
185	78-8079-5487-6	Roller Plate Assembly – L/H
186	12-7991-1737-4	Washer – Plain, Type A, #8
187	26-1004-0331-5	Nut – Jam, 5/16 - 24
188	26-1003-3708-3	Washer – Plain, .328 ID x 1.25 OD x .063 Thk
189	78-8054-8677-2	Shaft – Jaws

## Replacement Parts List

### S-857 “L” Clip Applicator, Type 29500

Ref. No.	3M Part No.	Description
190	70-8000-0864-4	Screw – Soc Hd, Hex Soc Dr, 8-32 x 1/2 Lg.
191	26-1000-4442-4	Washer – Soc Hd, Hex Soc Dr, Type A, #10
192	26-1006-1333-5	Screw – Soc Hd, Hex Soc Dr, 10-24 x 3/8 Lg.
193	70-8000-2155-5	Screw – Soc Hd, Hex Soc Dr, 8-32 x 1 Lg.
194	26-1004-7410-0	Valve – Air, 3-Way, Roller Actuated, 1/8 N PT SMC #VM 131 -01 -01
195	26-1001-7170-6	Fitting – 90° Elbow, 1/4 0.0 Tube x 1/8 Male NPT, Legris #3109-56-11
197	78-8054-8691-3	Spring – Jaw
198	78-8111-1279-2	Adapter – Air Cylinder
199	78-8054-8719-2	Spacer
200	78-8111-1280-0	Cylinder – Jaw
201	78-8111-1282-6	Jaw Assembly (Replacement)
202	26-1005-5410-9	Valve – 3-Way, Brass Ball, Manual Actuator, 1/8 NPTF, SMC #701-2F2F2F-BT
204	78-8057-5753-7	Cylinder – Buffing
205	78-8057-5754-5	Cylinder – Safety
206	78-8057-5755-2	Cylinder – Paddle
207	78-8057-5758-6	Cylinder – Feed
208	78-8059-5790-5	Clevis – Rod
209	78-8003-9416-1	Spring – Ext Lee, #LE-037D-5MW
210	26-1005-7645-8	Fitting – Male Run Tee, 1/4 0.0 Tube x 1/4 0.0 Tube x 1/8 Male NPT, Legris #3103-56-11
211	70-7023-5420-3	Nut – Hex, 10-32
212	78-8052-6339-5	Mount – Valve, V-8
213	78-8111-1390-7	Filter/Regulator/Lubricator Kit (Includes items 214, 215, 216)
214	78-8111-1313-9	Filter/Regulator/Lubricator Assembly – Watts Fluidair #AFP-395-0
215	78-8111-1309-7	Regulator Mounting Bracket
216	78-8032-0106-6	Screw – Soc Hd Cap, #8-32 x 1-3/4 Lg.
217	78-8119-6597-5	Label – Information
218	78-8119-6594-2	Label – Warning, Sharp Knife/Rollers
219	78-8119-6596-7	Label – Safety Instructions, Air Supply
220	78-8119-6598-3	Label – Tape Threading
221	78-8119-6595-9	Label – Warning, Sharp Knife

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## Typical Mounting Set-Up

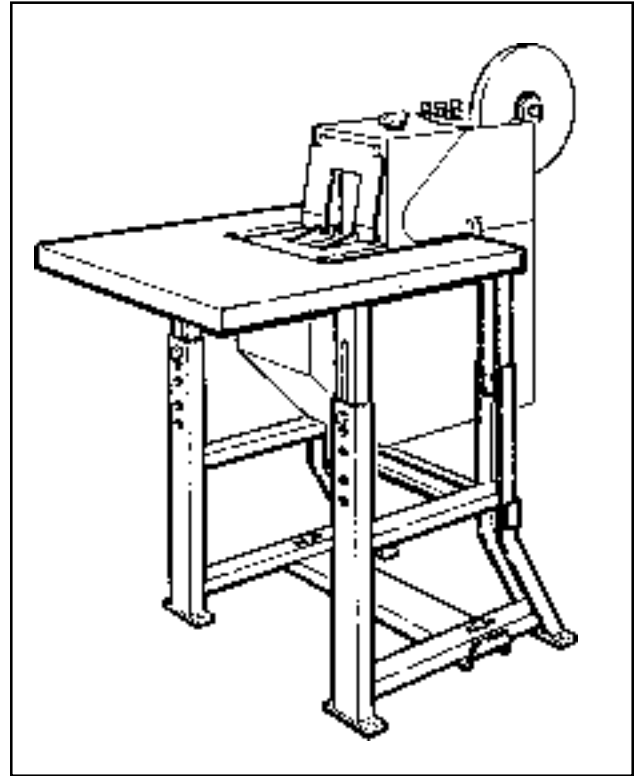
# 3M-Matic™

## S-857 "L" Clip Applicator

Type 29500

### Standard "3M-Matic" Mounting Equipment

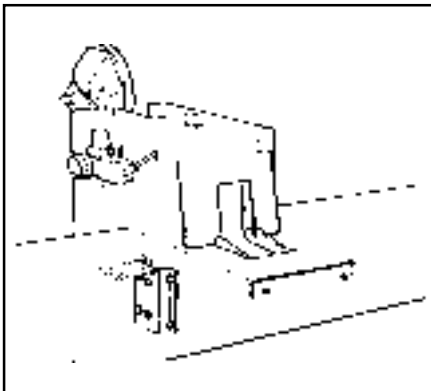
The P/N 78-8079-5535-2 Single Head Stand provides a self-contained system for supporting the S-857 "L" Clip Applicator in the bottom taping position for automatically applying "L" clips of "Scotch" brand Filament Tape to box corners. The single head stand allows vertical adjustment of the top work surface and can be adapted to most conveyor or off line systems.



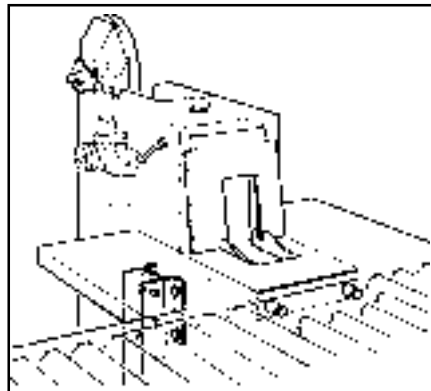
P/N 78-8079-5535-2 Single Head Stand, Type 29300  
(Shown with S-857, Type 29500)

### Suggested Custom Customer Set-Up

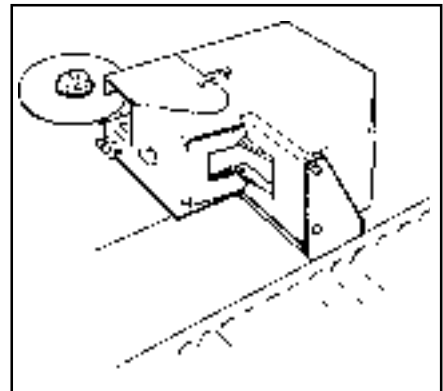
- The S-857 is designed for use with most conveyor or off-line systems.
- The following illustrations show several typical mounting set-ups of the S-857 in bottom taping or top taping positions. To use front two holes for mounting as shown, remove existing retaining screws.
- Refer to the S-857 instruction and parts list manual for installation and set-up information.
- **The following six illustrations denote non-standard mounting and require customer installation. For qualification and additional mounting information, contact your local 3M Masking and Packaging Systems sales representative.**



**Figure 1** – S-857 (Bottom Taping) mounting direct to work surface.



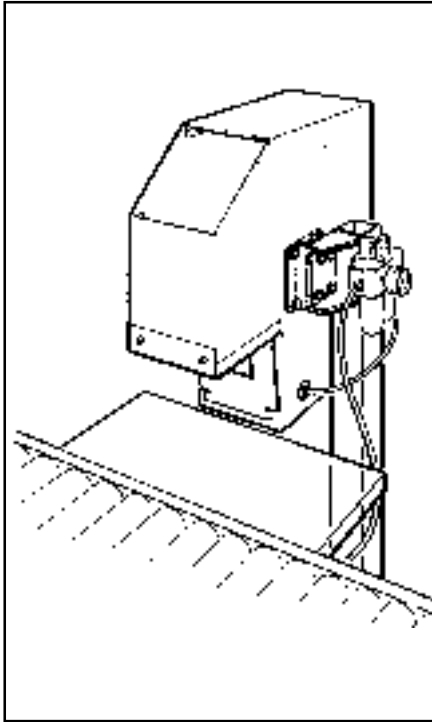
**Figure 2** – S-857 (Bottom Taping) attached to conveyor.



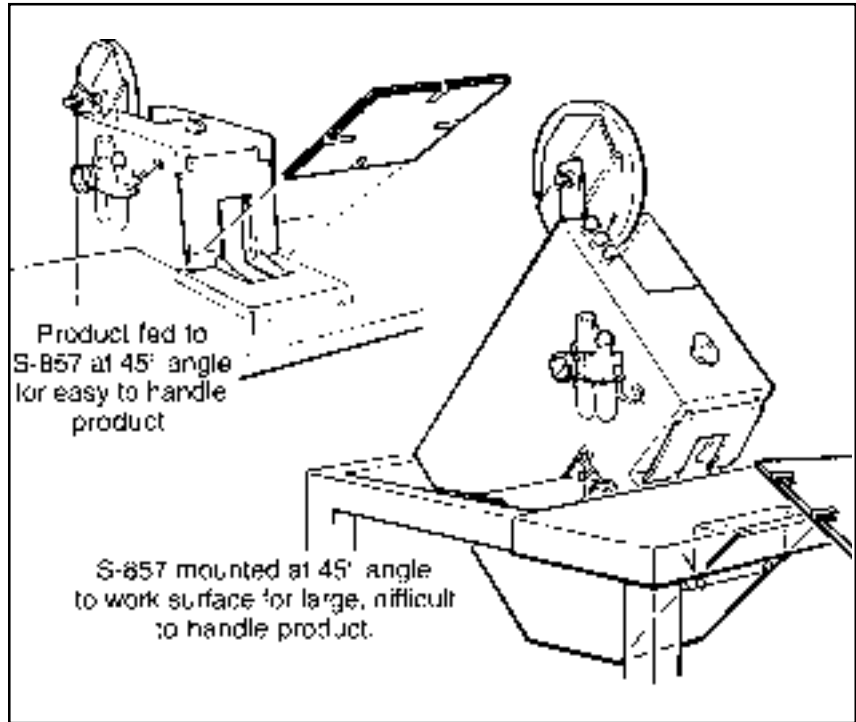
**Figure 3** – S-857 (Side Taping) mounted adjacent to conveyor.

(Continued on back page)

## Custom Customer Set-Up (Continued)



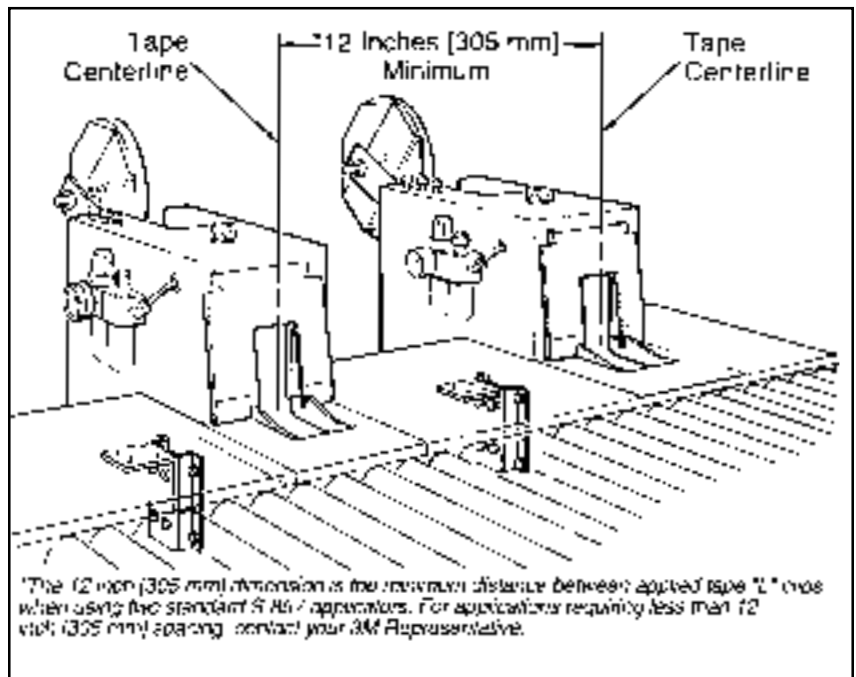
**Figure 4** – S-857 (Top Taping) mounted adjacent to work surface.



**Figure 5** – S-857 typical mounting for "U" clip taping of sleeves and cartons less than 1.0 inch [25 mm] thick.

## Multiple S-857 Installations

Applications, where more than one S-857 will be used, require special attention to alignment of machines so boxes enter all machines squarely. For customer installation of more than two S-857's, engineering assistance is recommended through your 3M Representative.



**Figure 6** – Two S-857 Applicators (Bottom Taping) mounted adjacent to work surface.

**3M**

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