



Instructions and Parts List

3M-Matic™

CTS Continuous Taping System

Type 19500

Serial No. _____

For reference, record machine serial number here.

3M Masking and Packaging Systems Division

3M Center Bldg. 220-8W-01
St. Paul, MN 55144-1000



Important Safety Information

Read "Safeguards" pages
3-6 and also operating
"Warnings", page 24
**BEFORE INSTALLING
OR OPERATING THIS
EQUIPMENT.**

Spare Parts

It is recommended you
immediately order the
spare parts listed on
page 35. These parts
are expected to wear
through normal use,
and should be kept on
hand to minimize
production delays.

"3M-Matic" is a Trademark of 3M,
St. Paul, MN 55144-1000

Litho in U.S.A.

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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.

Replacement Parts

Order parts by part number, part description and quantity required. Also 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.

Service

3M National Service Center – 1-800/328 1390 (Twin Cities Metro Area call 737 6507). Please provide the customer support coordinator with the machine number and serial number. If you have a technical question that does not require an immediate response, you may Fax it to 612/737 7121.



3M Masking and Packaging Systems Division

**3M Center Bldg. 220-8W-01
St. Paul, MN 55144-1000**

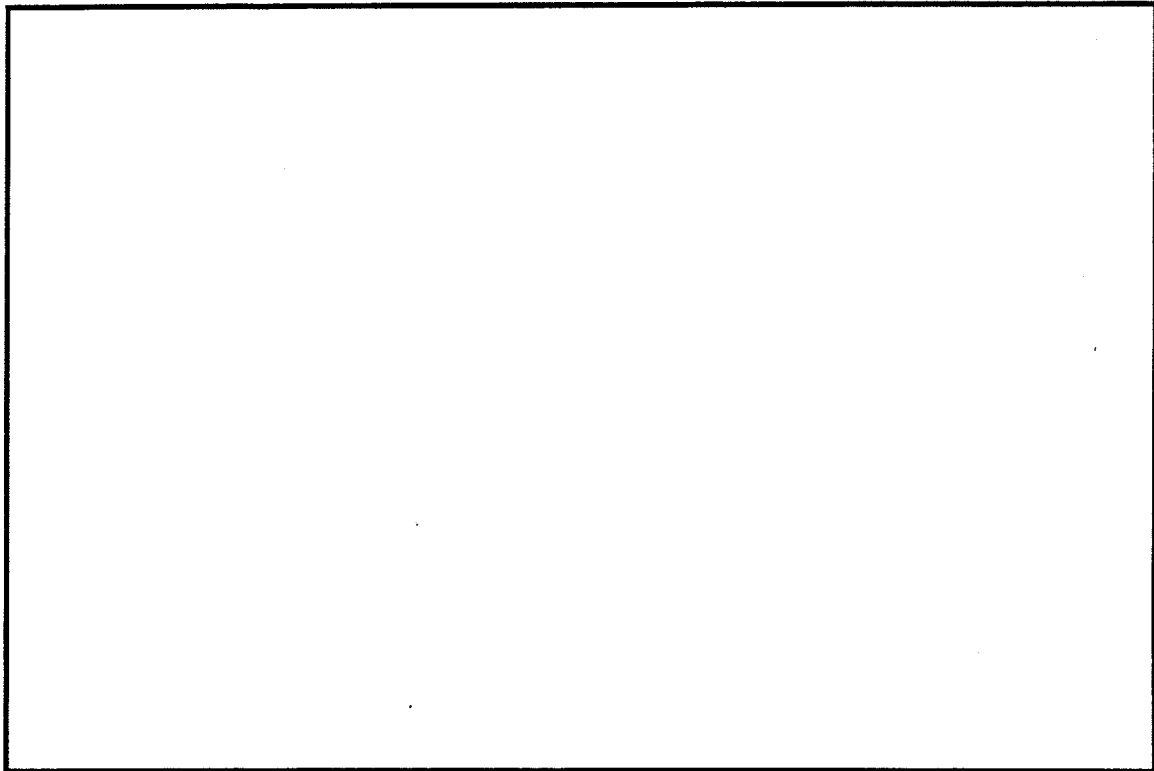
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SERVICE AND PARTS AVAILABLE DIRECT FROM:



Order parts by part number, part description and quantity required. Also include machine name, number and type.



3M Masking and Packaging Systems Division

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

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Instruction Manual

CTS Continuous Taping System Type 19500

| Table of Contents | Page |
|---|---------|
| Description | 1 |
| Equipment Warranty and Limited Remedy | 2 |
| CTS Contents | 2 |
| Important Safeguards | 3 - 6 |
| Specifications | 7 |
| CTS Machine | 7 |
| CTS Tape | 7 |
| Installation and Set-Up | 9 - 21 |
| Receiving and Handling | 9 |
| Basic Installation Guidelines | 9 |
| Taping Head Set-Up On 12AF/800af Case Sealers | 10 - 12 |
| 12AF/800af Upper Taping Head Set-Up | 10 |
| 12AF Lower Taping Head | 11 |
| 800af Lower Taping Head | 12 |
| Taping Head Set-Up On Other Case Sealers | 12 |
| AccuGlide™ II STD Upper/Lower Taping Heads | 13 |
| AccuGlide™ II HST Upper/Lower Taping Heads | 13 |
| CTS Machine Installation | 14 - 21 |
| Positioning the CTS Machine | 14 - 17 |
| Tape Width | 17 |
| Pneumatic Connection | 18 |
| Tape Loading and Threading – Initial Start-Up | 18 - 19 |
| CTS To Taping Head Tape Threading | 20 |
| Tape Alignment | 21 |
| Operation | 23 - 25 |
| Maintenance | 27 - 28 |
| Lubrication | 27 |
| Cleaning the Machine | 27 |
| Tape Cut-Off Blade Replacement | 28 |
| Standby Tape Cut-Off Blade | 28 |
| Working Tape Cut-Off Blade | 28 |
| Adjustments | 29 - 30 |
| Tape Drum Friction Brake | 29 |
| Tape Web Alignment | 29 |
| Turret Brake | 30 |
| Tape Holder | 30 |
| Troubleshooting | 31 - 32 |
| Troubleshooting Chart | 31 |
| CTS Fuses | 32 |

Table of Contents (Continued)

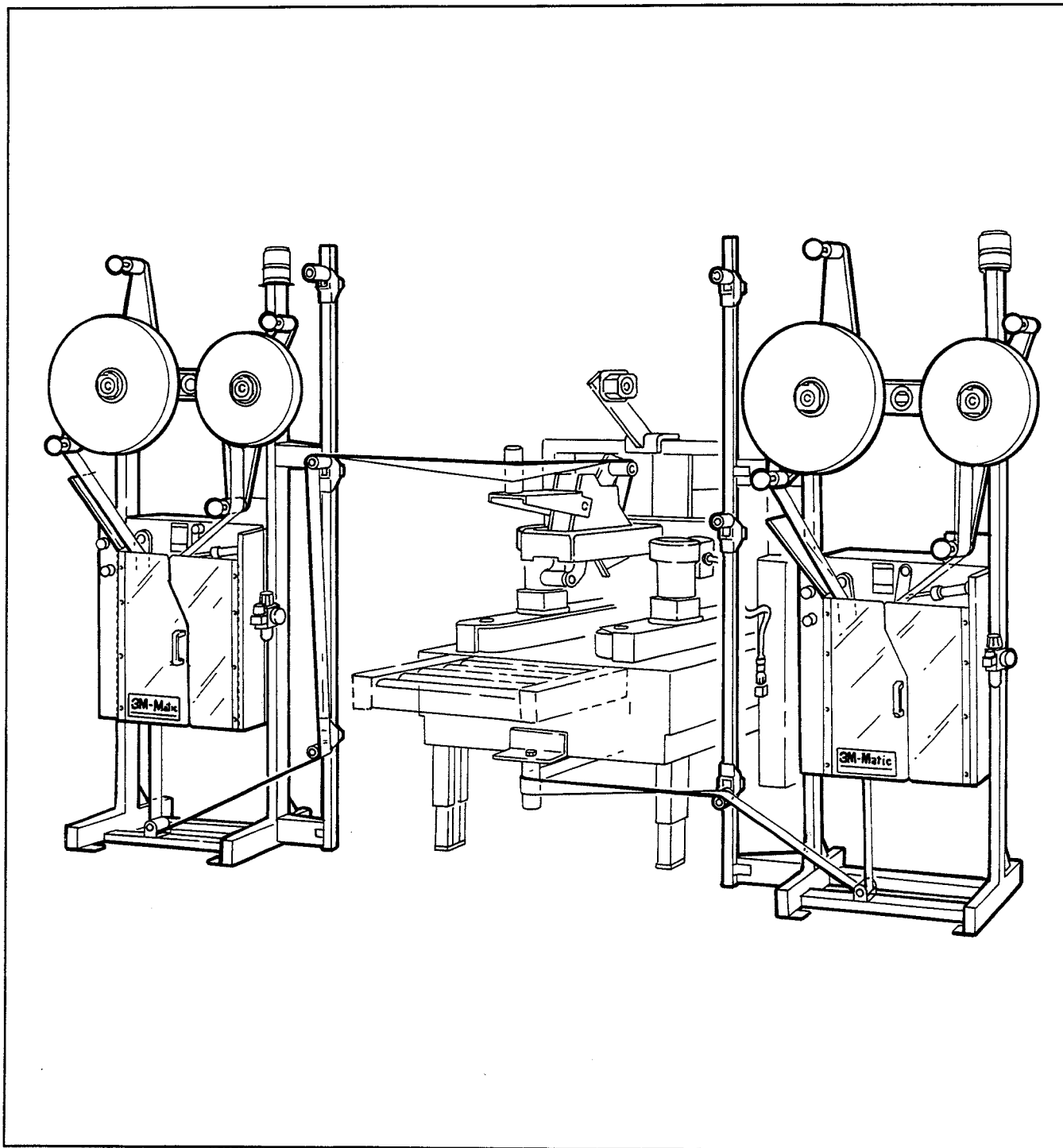
| | |
|--|---------|
| Electrical/Pneumatic Diagrams | 33 - 34 |
| Electrical Diagram | 33 |
| Pneumatic Diagram | 34 |
| Recommended Spare Parts | 35 |
| Options/Accessories | 35 |
| Replacement Parts Illustrations and Parts List | 36 - 44 |
| Parts Illustrations..... | 36 - 42 |
| Parts List | 43 - 44 |

Description

The **3M-Matic™ CTS Continuous Taping System** holds two rolls of **Scotch™** or **Highland™** brand CTS box sealing tape. When the first roll runs out, the second roll is automatically spliced in and the old tape is cut off. This is done while the downstream case sealing equipment is running. No line shut down is required.

The CTS splicer is placed next to case sealing equipment to provide tape "on demand". One unit is required for each taping head.

The tape is pulled from the supply roll using a dancer arm/gearmotor system to provide uniform low tension at line speeds up to 135 feet [41 m] per minute.



3M-Matic™ CTS Continuous Taping System, Type 19500 (Shown with 800af case sealer)

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™ CTS Continuous Taping System, Type 19500** 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.

CTS Contents

CTS Continuous Taping System includes:

(1) CTS Machine, Type 19500

(1) Unassembled Parts Kit includes:

- (1) Blade – Toothed
- (1) Blade – Corrugated
- (1) Fuse – 0.5 Amp
- (1) Fuse – 3AB, 0.75 Amp, 250V
- (1) Fuse – 2 Amp
- (1) Fuse – 4 Amp, 250V
- (2) Bracket – Side Mount, Exit Roller Post
- (2) Brace – Angle, Exit Roller Post
- (8) Capscrew – Hex Hd, 1/4-20 x 3/4 Lg
- (8) Washer – Plain, Type A, 1/4

(1) Tape Infeed Kit, 12AF, 800af, HST includes:

- (1) Bracket – Tape Infeed
- (1) Bracket – Tape Roller
- (1) Roller – Vertical, 5-1/2 Inch
- (1) Shaft Assembly – Vertical Roller
- (1) Roller – Horizontal, 3 Inch
- (1) Shaft Assembly – Horizontal Roller
- (1) Bracket – Lower Tape Infeed
- (2) Capscrew – Hex Hd, 3/8-16 x 5/8 Lg
- (2) Washer – Plain, Type A, 3/8
- (2) Capscrew – Hex Hd, M8 x 16 mm Lg
- (2) Washer – Plain, M8
- (2) Capscrew – Hex Hd, M6 x 12 mm Lg

(1) Instruction and Parts Manual

Important Safeguards

Important – In the event the following warning or information labels are damaged or destroyed, they must be replaced to ensure operator safety. See Parts Illustrations/Parts List, pages 37-48 for replacement labels.

There are four different warning labels and one caution label used on the CTS splicer. For operator safety, read and observe these warnings.

The "**Warning – Sharp Knife**" label, shown in Figure 1-1, is attached to the standby tape blade holder just under the applying roller. Keep away from this knife except as necessary to trim standby tape and then with extreme care.



Figure 1-1 – Knife Warning Label

The "**Warning – Sharp Knife**" label, shown in Figure 1-2, is attached to the lower end of the applying arm and points out the sharp cut-off blade used for trimming the standby tape to length when it is threaded. As with all blades, operator must keep away except as necessary to trim standby tape and then with extreme care.



Figure 1-2 – Knife Warning Label

The "**Caution – Sharp Knife**" label, shown in Figure 1-3, is attached to the working tape roll cut-off bracket just below the tension roller. This blade is saw toothed and extremely sharp – keep away from this blade to prevent serious injury.

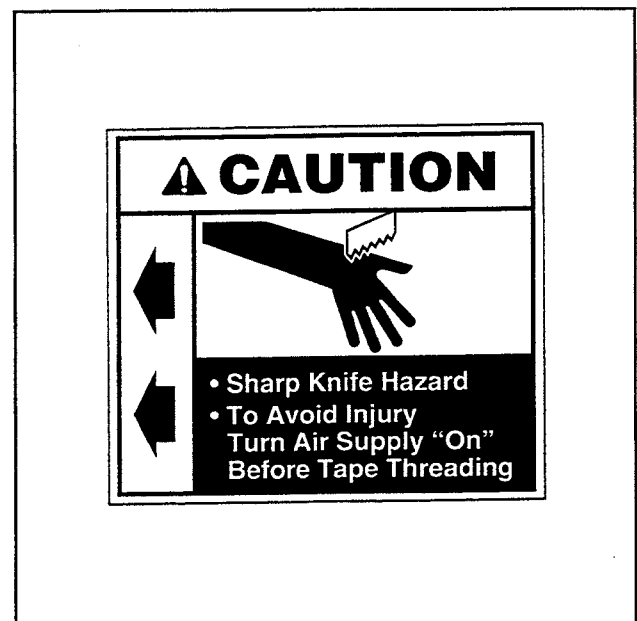


Figure 1-3 – Knife Warning Label

Important Safeguards (Continued)

The "**Warning – Moving Mechanism**" label, shown in Figure 1-4, is attached to the upper front of the main plate. The label warns operator of the applying arm movement when standby tape is spliced to working tape. **Keep away from this area of the machine!**

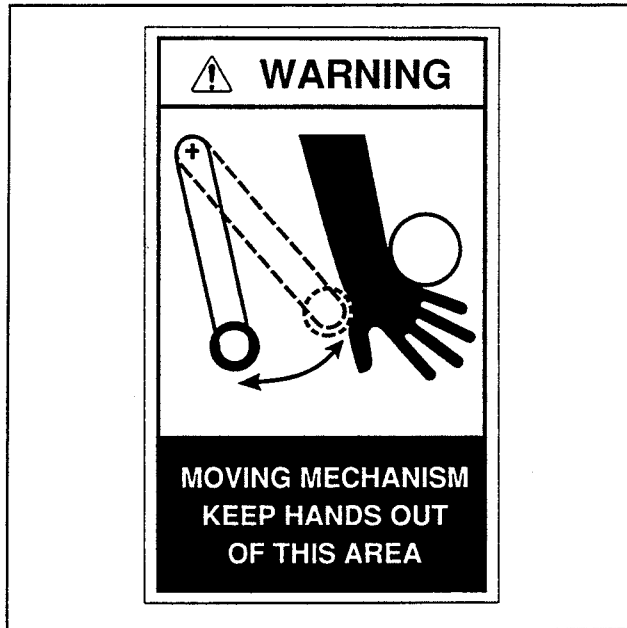


Figure 1-4 – Pinch Point Warning Label

The "**Warning – Hazardous Voltage**" label, shown in Figure 1-5, is attached to the lower left corner of the back cover plate. The label warns service personnel to unplug the power supply before removing cover to service the CTS splicer.



Figure 1-5 – Electrical Warning Label

In addition to the warning and caution labels, there are ten different operating labels attached to the machine. These labels remind the operator of correct operating procedures.

The "**Tape Threading**" label, shown in Figure 1-6, is a quick visual reference for tape threading procedure.

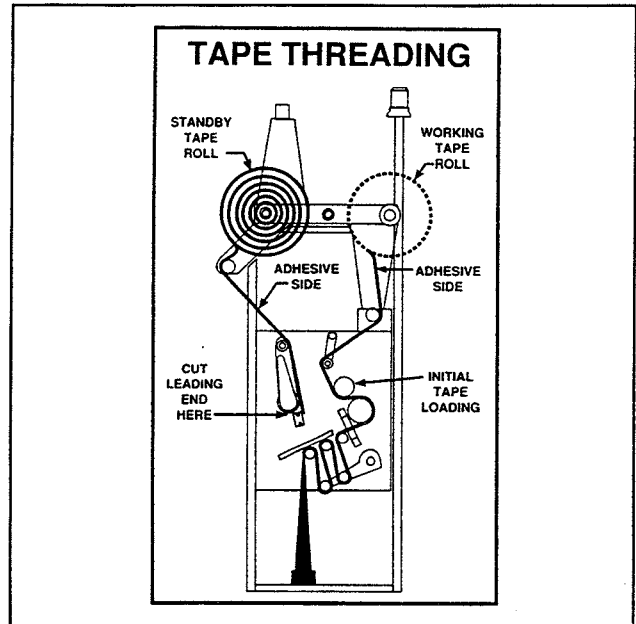


Figure 1-6 – Tape Threading Label

The "**Operating Instructions**" label, Figure 1-7, gives the operator step by step operating procedures.

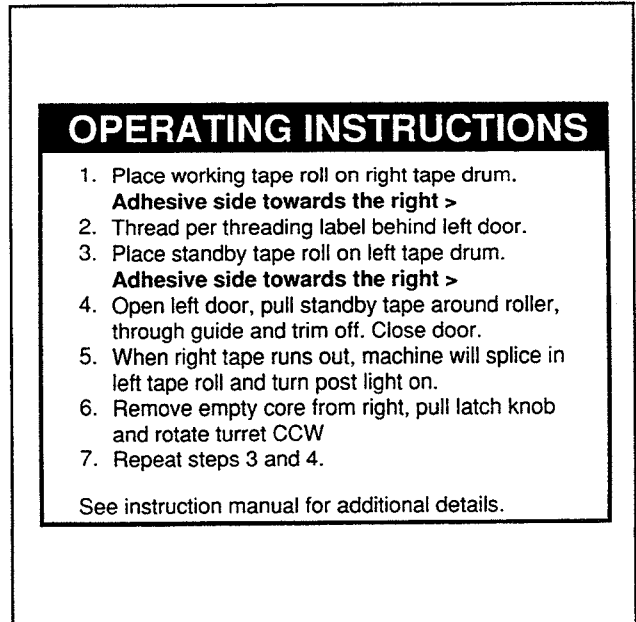


Figure 1-7 – Operating Instructions Label

Important Safeguards (Continued)

The "**Stop Start**" label, shown in Figure 1-8, points out the stop/start switch. To start machine, turn switch clockwise, to stop machine, push switch in.

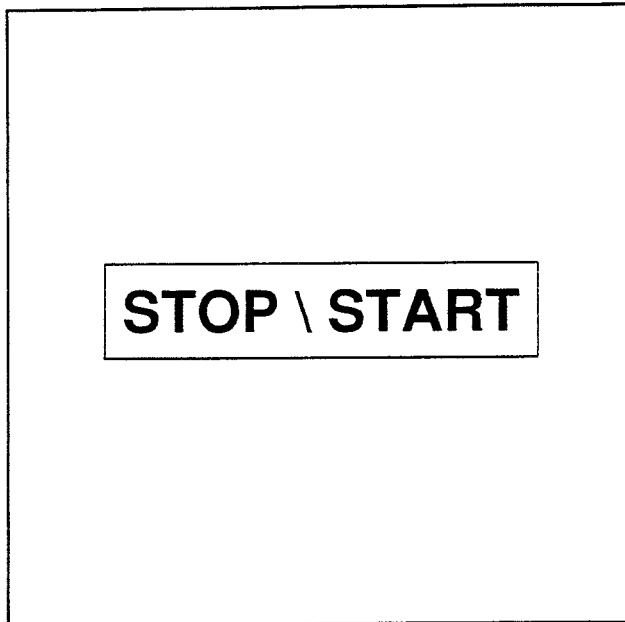


Figure 1-8 – Machine Stop/Start Label

The "**Safety Instructions**" and "**Air Pressure**" labels, shown in Figure 1-9, reminds operator or service personnel of the recommended air pressure required and location of On/Off air valve.

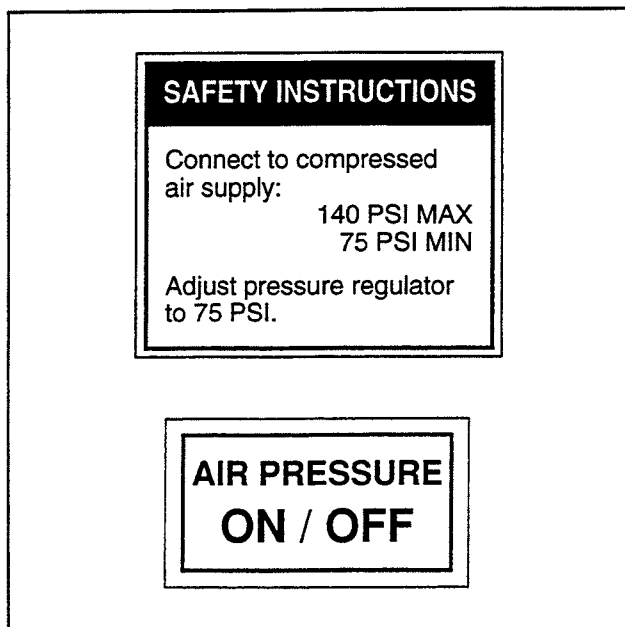


Figure 1-9 – Air Pressure Labels

The "**Operating Instructions**" label, shown in Figure 1-10, is attached to the left door and reminds operator that this is the door to open for tape loading and threading.

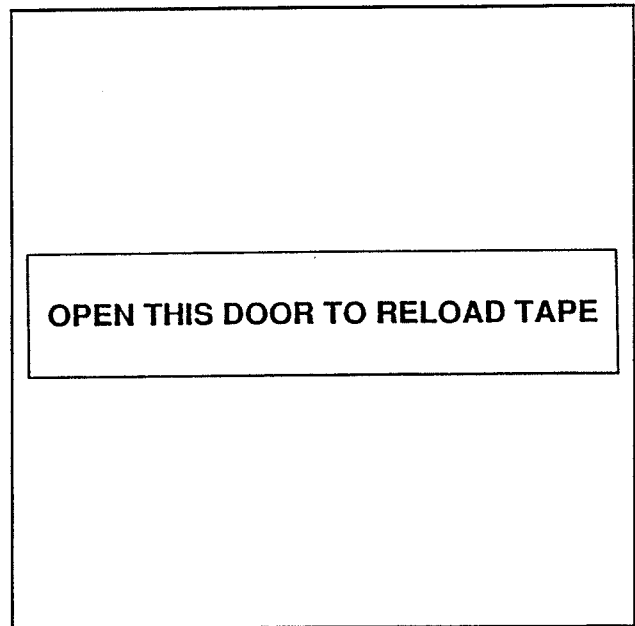


Figure 1-10 – Operating Instructions Label

The "**Operating Instructions**" label, shown in Figure 1-11, is attached to the right door and reminds the operator not to open this door when tape is feeding to taping head or the machine will shut down.

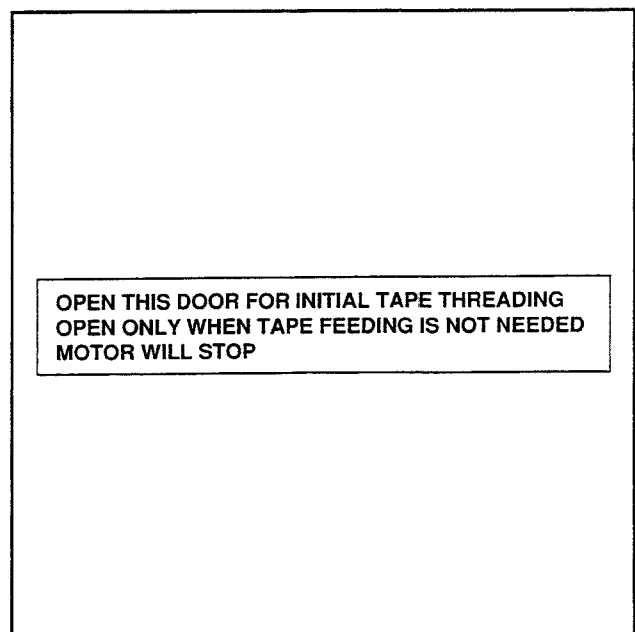


Figure 1-11 – Operating Instructions Label

Important Safeguards (Continued)

The "**Operating Instructions**" label, shown in Figure 1-12, reminds the operator of correct rotation of turret when standby tape roll is loaded.

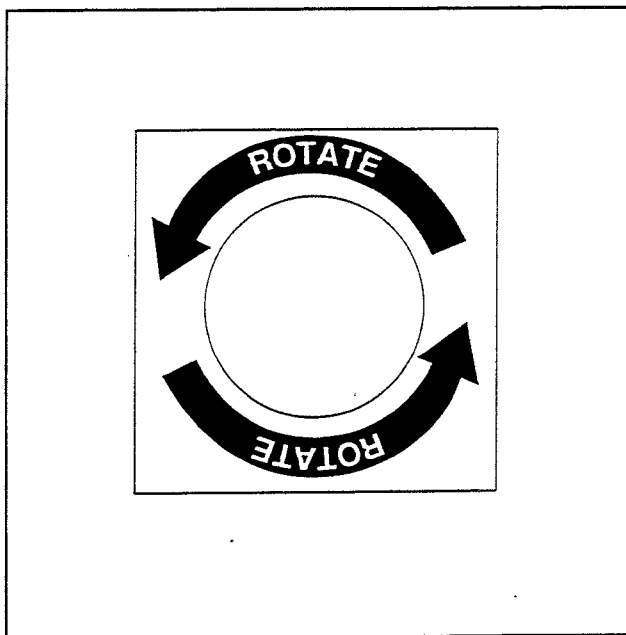


Figure 1-12 – Operating Instructions Label

Two "**Operating Instructions**" labels shown in Figure 1-14, are attached to the turret assembly. These labels remind the operator that only 3M CTS tape can be used with this machine.

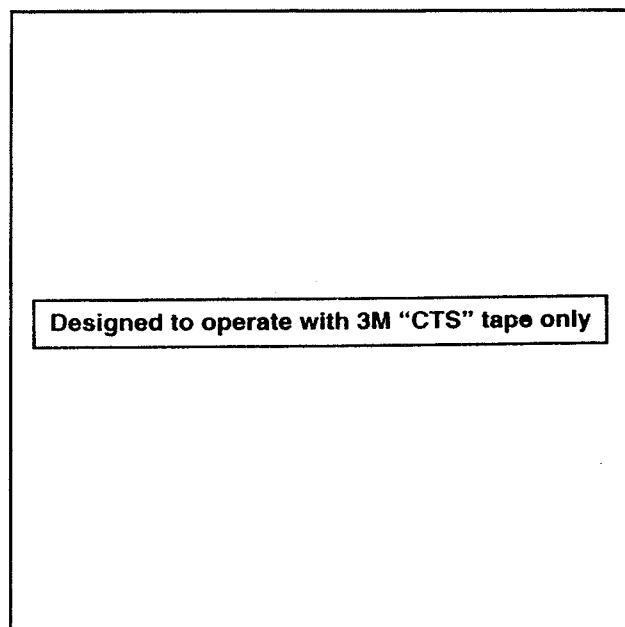


Figure 1-14 – Operating Instructions Label

The "**Operating Instructions**" label, shown in Figure 1-13, reminds the operator of the threading path after loading a new roll of tape.

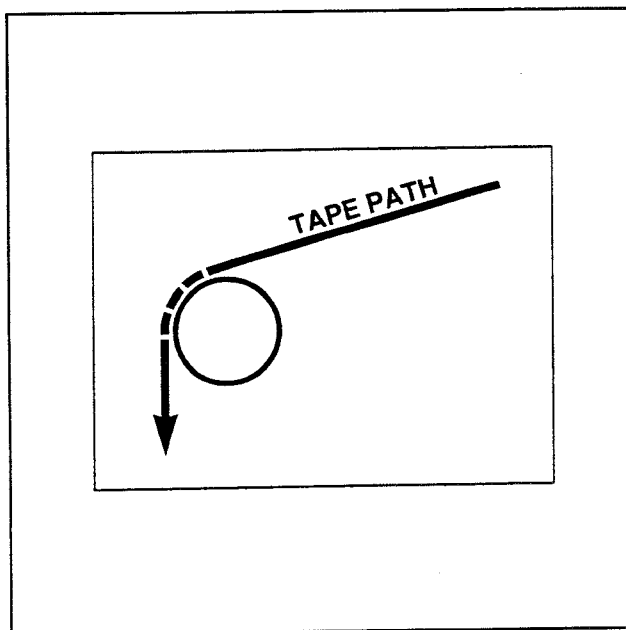
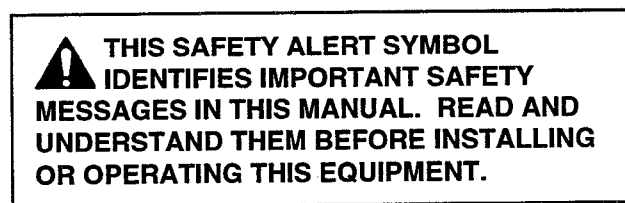


Figure 1-13 – Operating Instructions Label



Specifications

CTS Machine

Power Requirements:

Electrical – 115 VAC, 60 Hz, 2.0 A (250 watts)
Includes power cord with grounded plug

Pneumatic – 75 to 140 PSIG [5.2 to 9.7 bar gauge pressure] minimum, 0.1 SCF [2.8 litre @ 21°C, 1.01 bar] per cycle, compressed air supply

Operating Rate:

Up to 135 feet [41 m] per minute

Operating Conditions:

Use in dry, relatively clean environments at 40° to 120° F [5° to 50° C]

Weight:

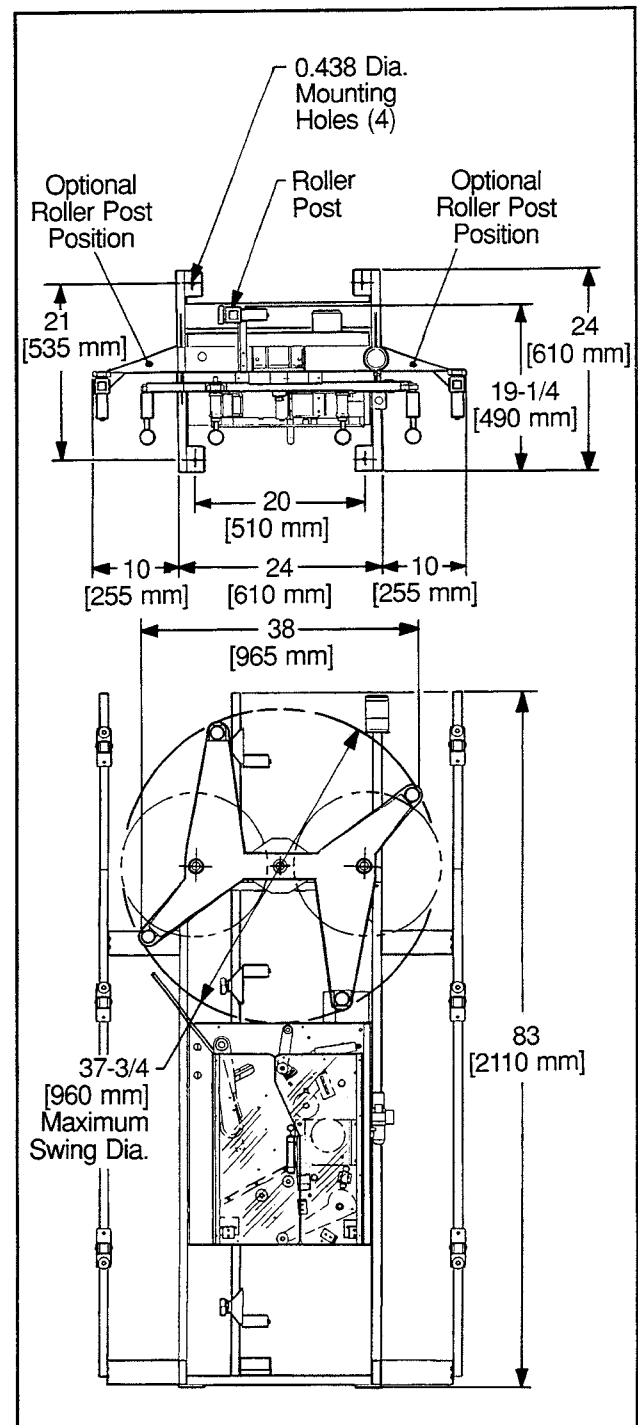
255 pounds [116 kg] crated (approximate)
215 pounds [98 kg] uncrated (approximate)

CTS Tape

This machine operates only with "**Scotch**" or "**Highland**" brand CTS box sealing tape.

Tape Roll Diameter:

Up to 18 inches [455 mm] maximum
on a 3 Inch [76.2 mm] diameter core.



Dimensional Drawing

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Installation and Set-Up

The CTS tape splicer can be used with most case sealers that use 3M AccuGlide™ II or AccuGlide™ HST taping heads. Installation on other case sealers or taping heads may require special brackets that must be provided by customer.

Also, because of the variety of case sealers and the variables associated with each different production line, providing exact instructions for each application is not possible. Instead, the following explanations and illustrations present specific instructions only for installing the CTS on 3M-Matic™ 12AF and 800af case sealers and AccuGlide™ taping heads. Refer to these instructions and the "Basic Installation Guidelines", on this page, as a general guide for installation on other equipment.

Receiving and Handling

After the machine has been uncrated, examine it for 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.

Remove four (4) bolts holding machine to pallet.

Remove the three cable ties that secure the door dancer arm and applying arm during shipment.



WARNING – Machine weighs 215 pounds [97.6 kg]. Use extreme caution when lifting and moving the machine to prevent tipping and possible injury to personnel.

The separate carton contains rollers, brackets, and miscellaneous hardware for use with 3M-Matic™ 12AF or 800af case sealers and AccuGlide™ II or AccuGlide™ HST taping heads.

Note – For future reference (parts ordering or service information), record CTS serial number on front cover of this instruction manual in the space provided.

Basic Installation Guidelines

1. The CTS machine should be bolted to the floor or otherwise securely fastened to the case sealer.

Note – Do not bolt down until after machine is fine tuned for tape tracking at end of installation.

2. Position the CTS in a location that provides the shortest, most direct tape path to the taping head.
3. For any guide rollers used to direct tape to taping head:
 - a. Rollers in contact with the adhesive surface of the tape must be of the low tack (textured) type.
 - b. Minimum distance between tape guide rollers when tape is twisted 90° is 10 times the tape width. (Example: With 2 inch [50 mm] tape, 2 [50 mm] x 10 = 20 inches [500 mm] minimum.)

If no twist in tape occurs, there is no minimum roller to roller distance.
4. Installation on case sealers other than the 3M-Matic™ 12AF or 800af may require special guide roller brackets and must be provided by customer.
5. Some case sealers may require a cut-out in the frame to provide a direct tape path from the CTS to the taping head.

Installation and Set-Up (Continued)

Taping Head Set-Up on 12AF (Type 59300) and 800af (All Types) Case Sealer

12AF/800af UPPER TAPING HEAD (Refer to Figure 2-1)

1. Remove (2) M6 x 12 hex hd screws and spacer from upper rear of taping head.
2. Attach vertical roller bracket to taping head with screws and spacer previously removed.
3. Install 5-1/2 inch [140 mm] vertical roller/shaft assembly in slotted hole at end of vertical roller bracket with 3/8-16 x 5/8 hex hd screw and 3/8 plain washer as shown.

Position of roller in slot is determined by location of CTS machine. (Which side of taping head tape will be coming from determines location of roller in slot. Roller must be adjusted

so tape tracks to center of horizontal roller on taping head.)

4. 12AF – Remove existing tape drum bracket assembly from taping head and install horizontal roller bracket with previously removed screws and spacer as shown.

800af – Attach horizontal roller bracket to taping head with (2) M6 x 12 hex hd screws (supplied) as shown.

Note – Horizontal roller bracket must be installed tipped forward at 45° angle.

5. Install 3 inch [75 mm] horizontal roller/shaft assembly in slot with 3/8 plain washer and 3/8-16 x 5/8 hex hd screw as shown. Adjust roller in slot so top of roller is aligned horizontally with center of 5-1/2 inch vertical roller.

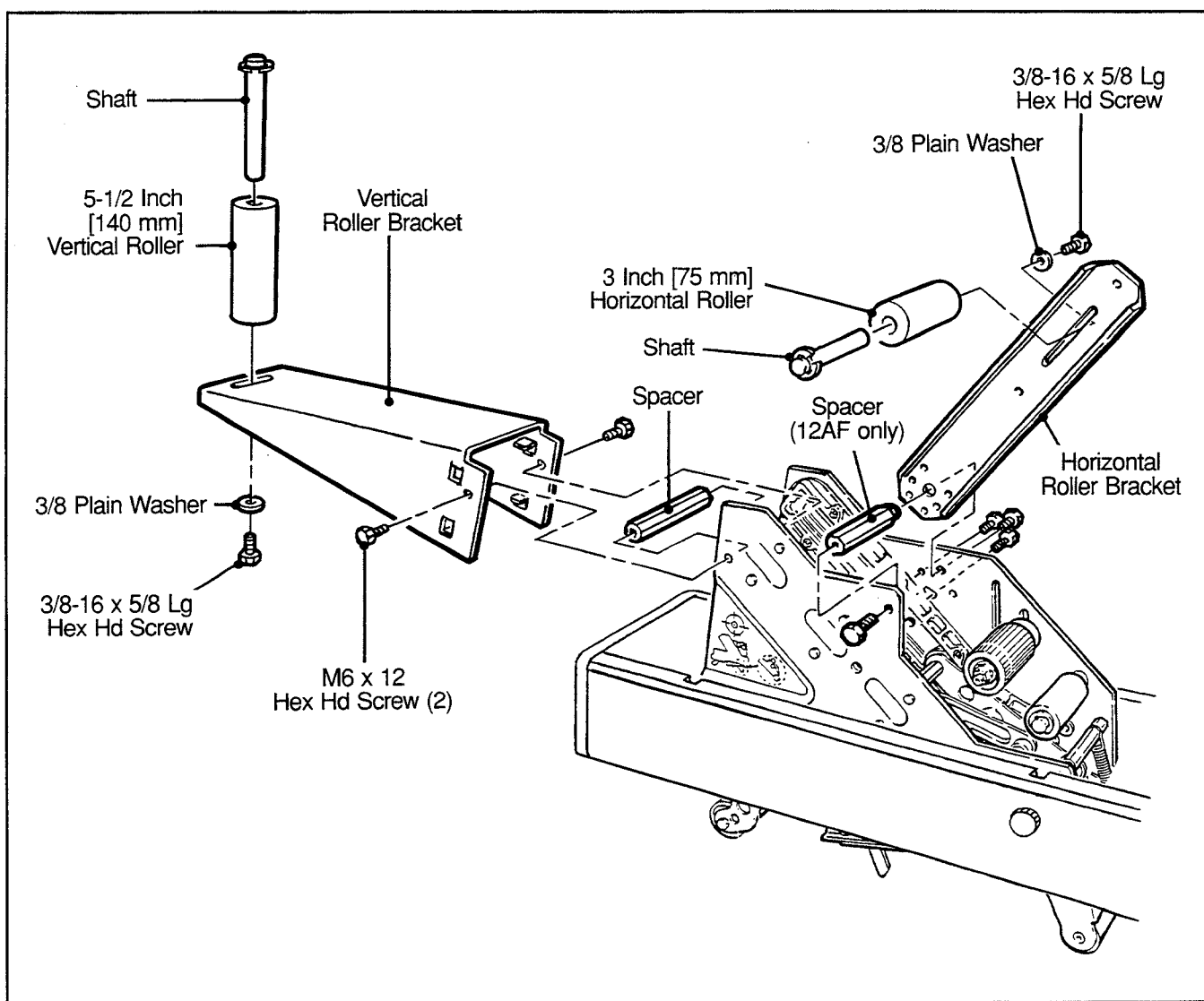


Figure 2-1 – 12AF/800af Upper Taping Head

Installation and Set-Up (Continued)

12AF LOWER TAPING HEAD (Refer to Figure 2-2)

1. Remove lower taping head from case sealer.
2. Remove (2) M6 x 12 hex hd screws and spacer from lower rear of taping head.
3. Attach vertical roller bracket to taping head with screws and spacer previously removed.
4. Install 5-1/2 inch [140 mm] vertical roller/shaft assembly in slotted hole at end of vertical roller bracket with 3/8-16 x 5/8 hex hd screw and 3/8 plain washer as shown.

Position of roller in slot is determined by location of CTS machine. (Which side of taping head tape will be coming from determines location of roller in slot. Roller must be adjusted

so tape tracks to center of horizontal roller on taping head.)

5. Remove existing tape drum/bracket assembly from taping head and install horizontal roller bracket with previously removed screws and spacer as shown.

Note – Horizontal roller bracket must be installed tipped forward at 45° angle.

6. Install 3 inch [75 mm] horizontal roller/shaft assembly in slot with 3/8 plain washer and 3/8-16 x 5/8 hex hd screw as shown. Adjust roller in slot so bottom of roller is aligned horizontally with center of 5-1/2 inch vertical roller.
7. Reinstall taping head in case sealer.

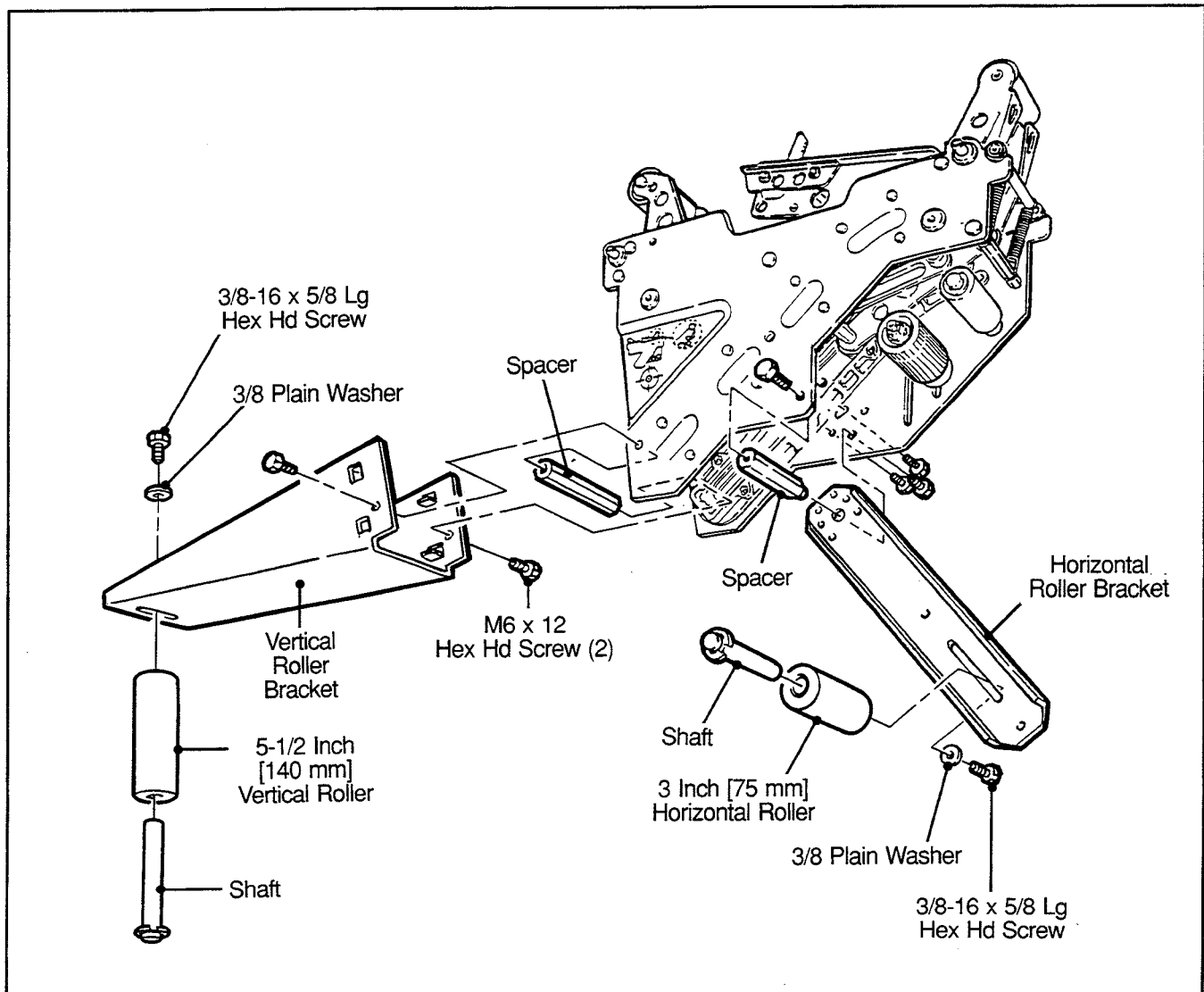


Figure 2-2 – 12AF Lower Taping Head

Installation and Set-Up (Continued)

800af LOWER TAPING HEAD

(Refer to Figure 2-3)

1. Remove lower taping head from case sealer.
 2. Remove tape drum bracket assembly or roller bracket assembly from taping head (if so equipped), and replace with horizontal roller bracket using (2) M6 x 12 hex hd screws as shown.
- Note** – If spacer (shown in Figure 2-3) was used with existing tape drum or roller bracket assembly, use it with new horizontal roller bracket as shown.
3. Install 3 inch [75 mm] horizontal roller/shaft assembly in hole **farthest** from taping head with 3/8 plain washer and 3/8-16 x 5/8 hex hd screw.

4. Reinstall taping head in case sealer.
5. Remove lower outboard tape roll bracket from exit end of frame.
6. Attach vertical roller (angle) bracket to case sealer frame with (2) each, M8 plain washers and M8 x 16 hex hd screws as shown.
7. Install 5-1/2 inch [140 mm] vertical roller/shaft assembly in slotted hole of vertical roller bracket with 3/8-16 x 5/8 hex hd screw and 3/8 plain washer as shown.

Position of roller in slot is determined by location of CTS machine. (Which side of taping head tape will be coming from determines location of roller in slot. Roller must be adjusted so tape tracks to center of horizontal roller on taping head.

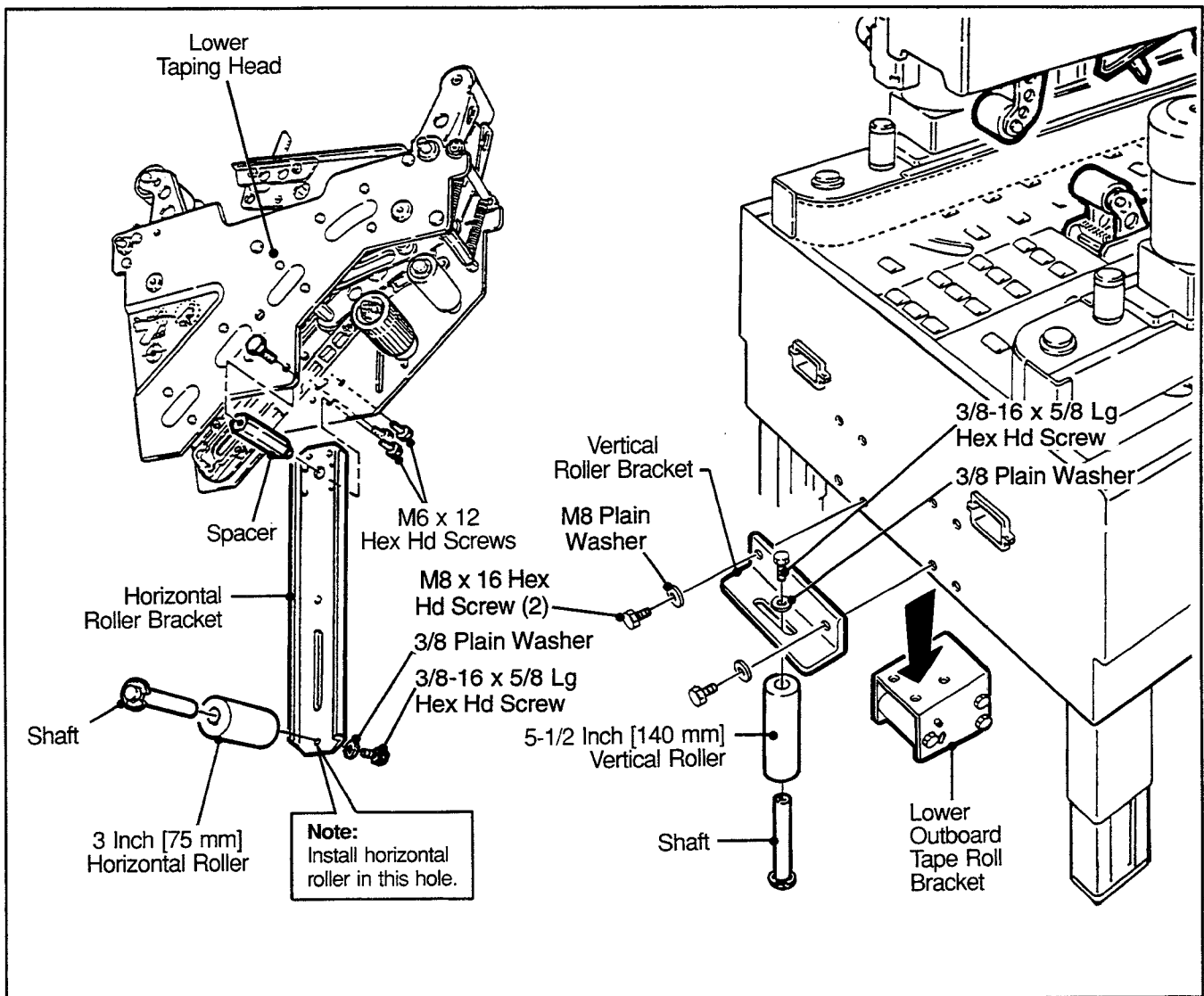


Figure 2-3 – 800af Lower Taping Head

Installation and Set-Up (Continued)

Taping Head Set-Up on other Case Sealers

The following instructions give specific information regarding the set-up of various AccuGlide™ taping heads used on case sealers other than the 3M-Matic™ 12AF or 800af.

Note – Special brackets may have to be provided by customer for installation of 5-1/2 inch vertical and 3 inch horizontal rollers that turn and direct tape to taping head.

ACCUGLIDE™ II STD UPPER/LOWER TAPING HEADS

See 12AF/800af set-up instructions (pages 10-12) as these case sealers are equipped with AccuGlide™ II STD taping heads.

ACCUGLIDE™ HST UPPER/LOWER TAPING HEADS (Refer to Figure 2-4)

1. Remove existing tape drum/bracket assembly and install horizontal roller bracket with same (4 each) screws and nuts.
2. Attach 3 inch [75 mm] shaft/roller assembly to slotted hole in horizontal roller bracket with 3/8 plain washer and 3/8-16 x 5/8 hex hd screw.
3. Install bracket (customer supplied) for 5-1/2 inch [140 mm] vertical roller in convenient location that lines up with taping head horizontal roller.
4. Attach 5-1/2 inch vertical roller to vertical roller bracket with 3/8 plain washer and 3/8-16 x 5/8 hex hd screw.

Vertical roller must be installed with bracket that allows centering of vertical roller (from both top and side views), with 3 inch horizontal roller on taping head. See Figure 2-5.

Note – A Distance of 10 times the tape width is required to make a 90° twist in the tape.

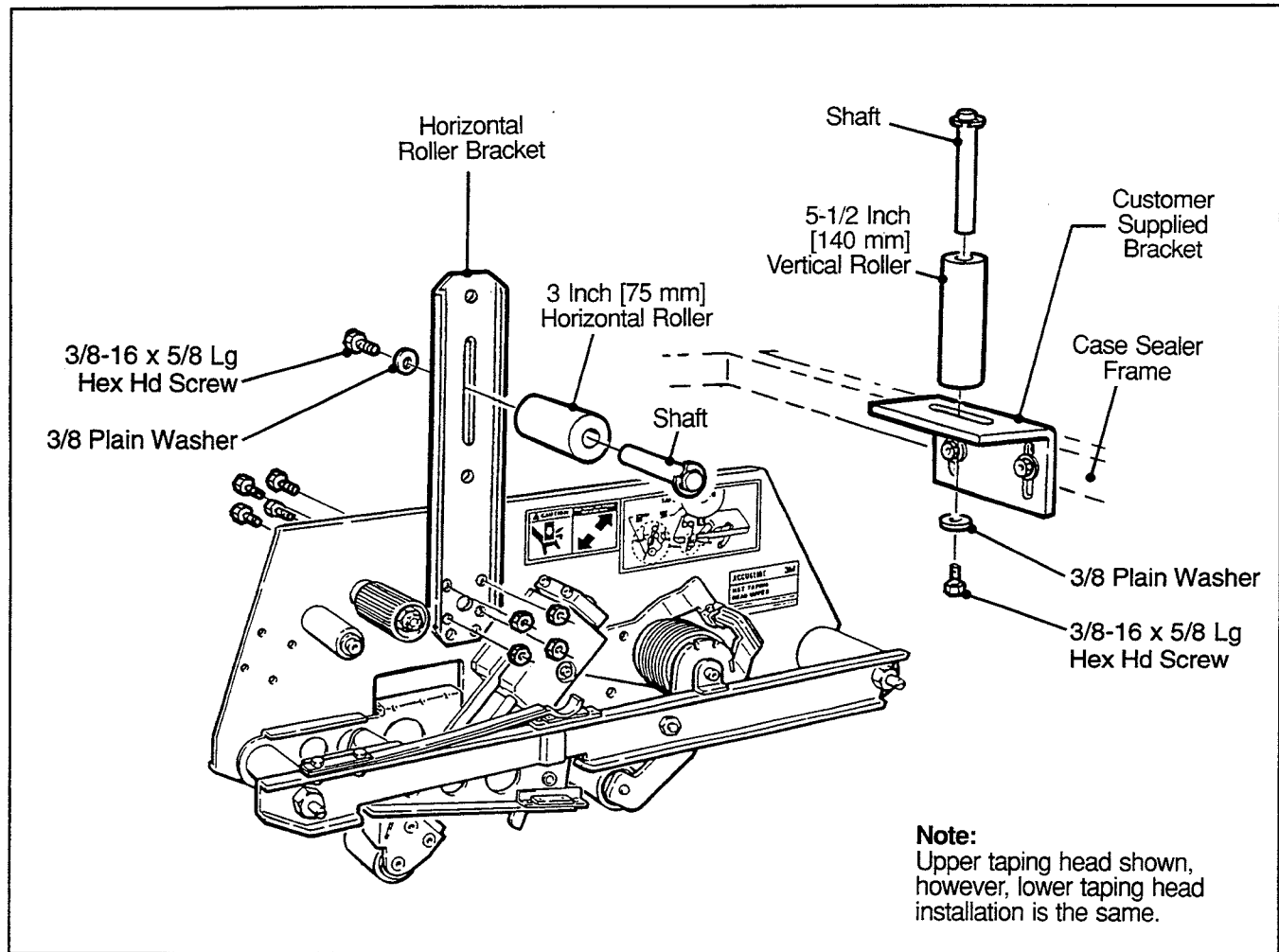


Figure 2-4 – AccuGlide™ HST Taping Heads, Upper/Lower

Installation and Set-Up (Continued)

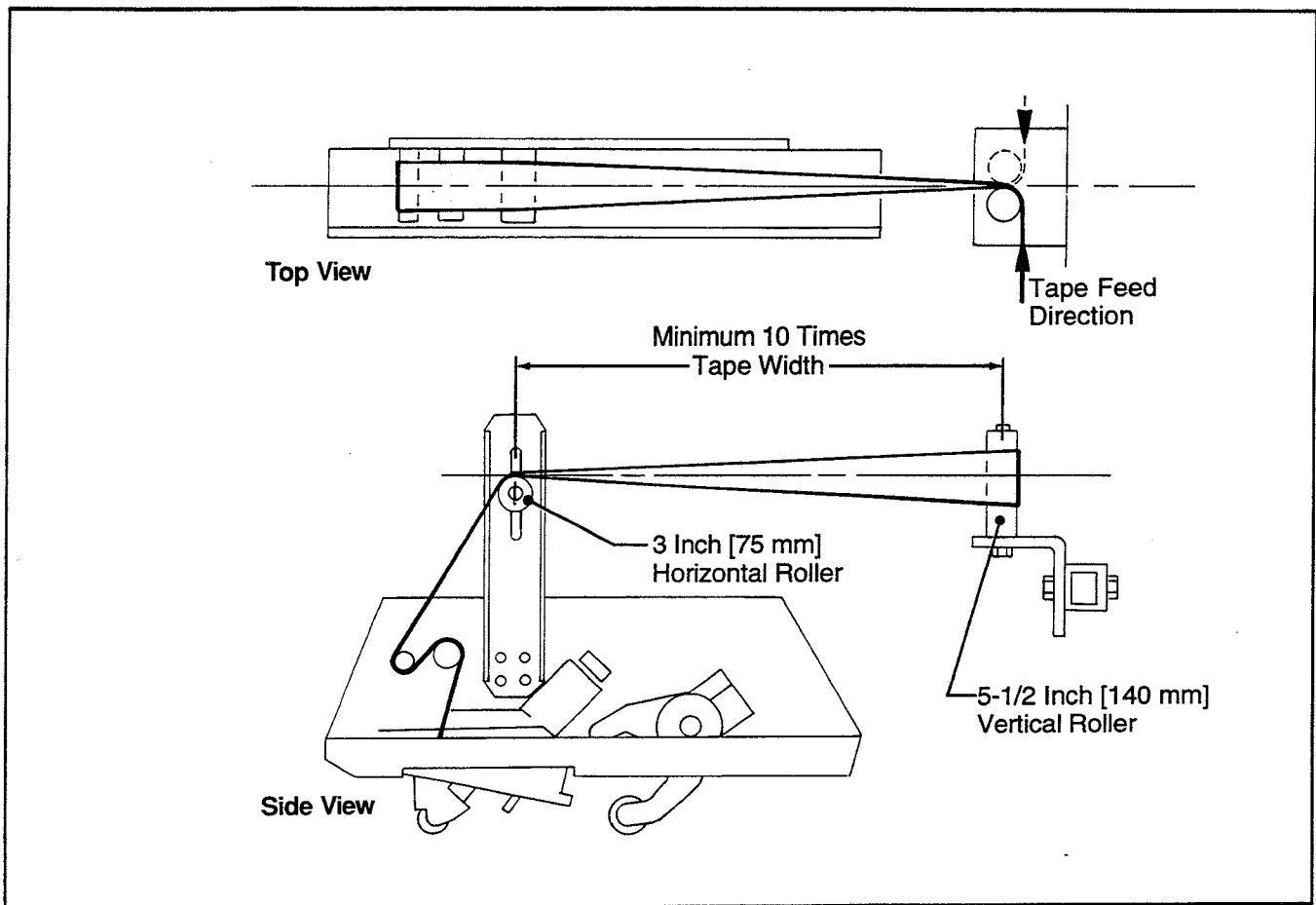


Figure 2-5 – Vertical Roller Position

CTS Machine Installation

Note – Although the following CTS machine installation instructions are specific for the 3M-Matic™ 12AF/800af case sealers, they should also be used as a guide for installing the CTS with other case sealing equipment. Refer also to "Basic Installation Guidelines", page 9.

Location of CTS is recommended in positions A, B, C and D. Positions E and F are not recommended because tape tracking is more critical in these positions. See Figure 2-6.

Note – A Distance of 10 times the tape width is required to make a 90° twist in the tape.

POSITIONING THE CTS MACHINE

1. Determine which is the best location for the CTS by referring to the plan view, Figure 2-6. Position the CTS to provide the shortest, most direct path to the taping head. Servicing access to both the CTS and case sealer should also be a prime consideration when choosing a location for the CTS.

Note – When using two CTS units to feed both upper and lower taping heads, both CTS units may be located on one side of the case sealer or one on each side of the case sealer.

2. After determining the best location for the CTS unit, the next consideration is the orientation of the CTS for operator convenience in tape loading.

The CTS is shipped with the tape feed roller support post mounted for rear delivery of tape from CTS to taping head. The roller support post may be relocated to the right or left side of the CTS to allow right or left side delivery of tape to case sealer. See Figure 2-7.

Installation and Set-Up (Continued)

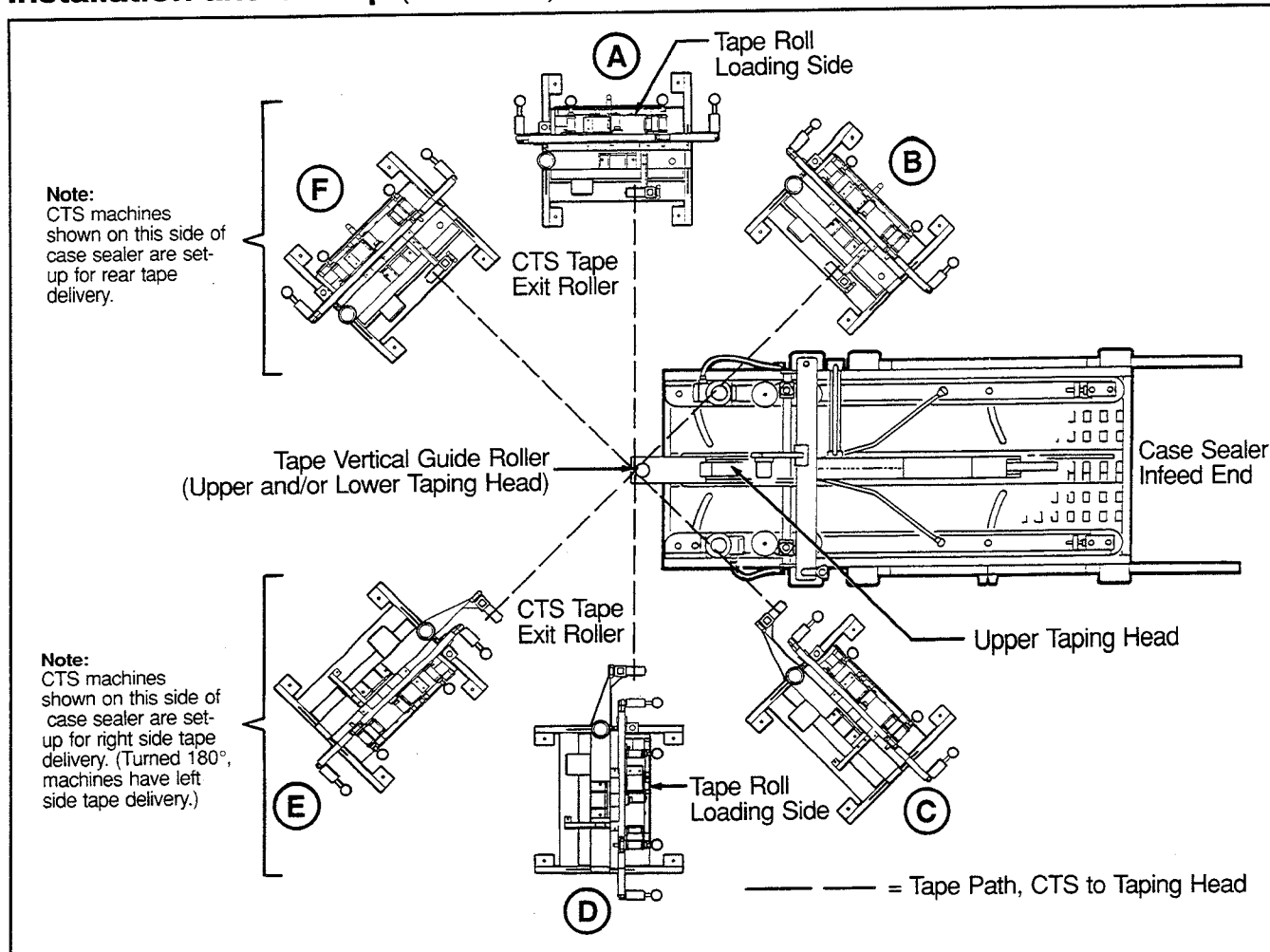


Figure 2-6 – Positioning CTS Machine

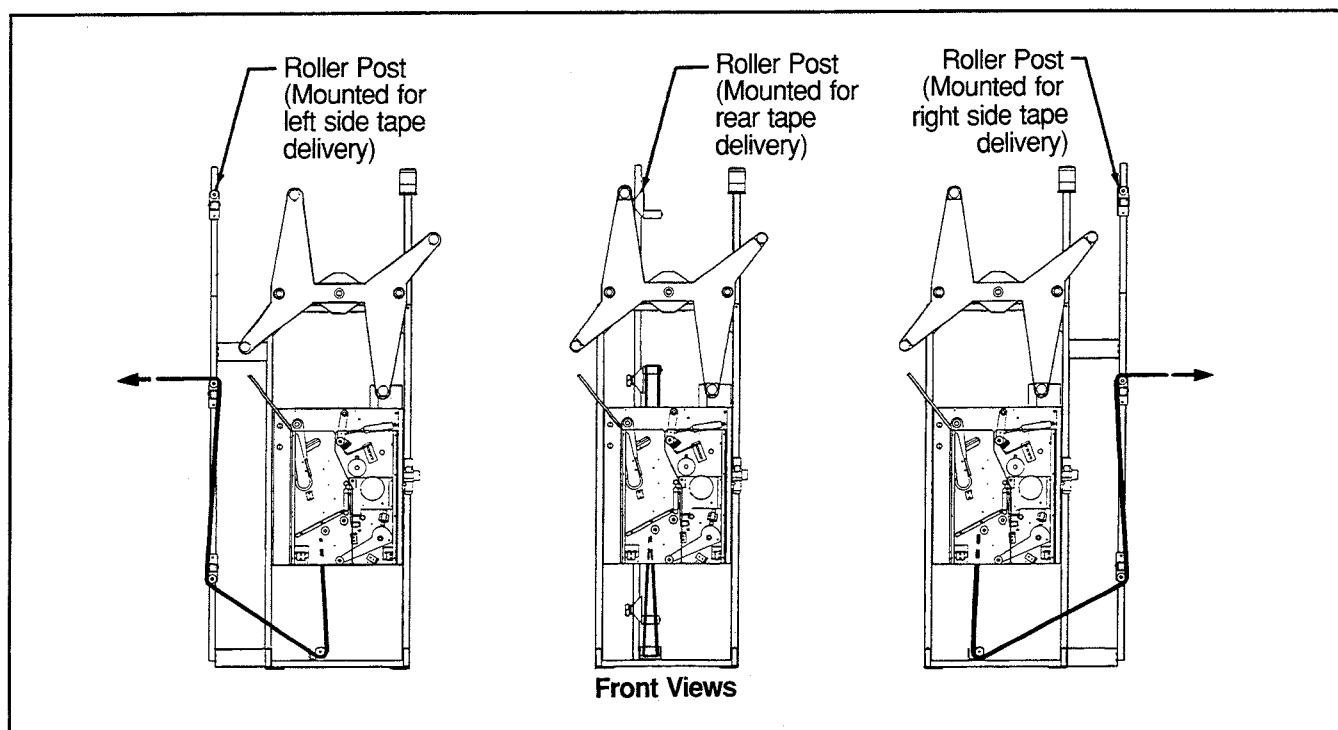


Figure 2-7 – Tape Feed Roller Support Post

Installation and Set-Up (Continued)

3. If right or left side tape delivery is desired, remove roller support post and relocate in desired position using roller support brackets

as shown in Figure 2-8. Also remove and rotate bottom roller/support assembly 90° and reattach to frame.

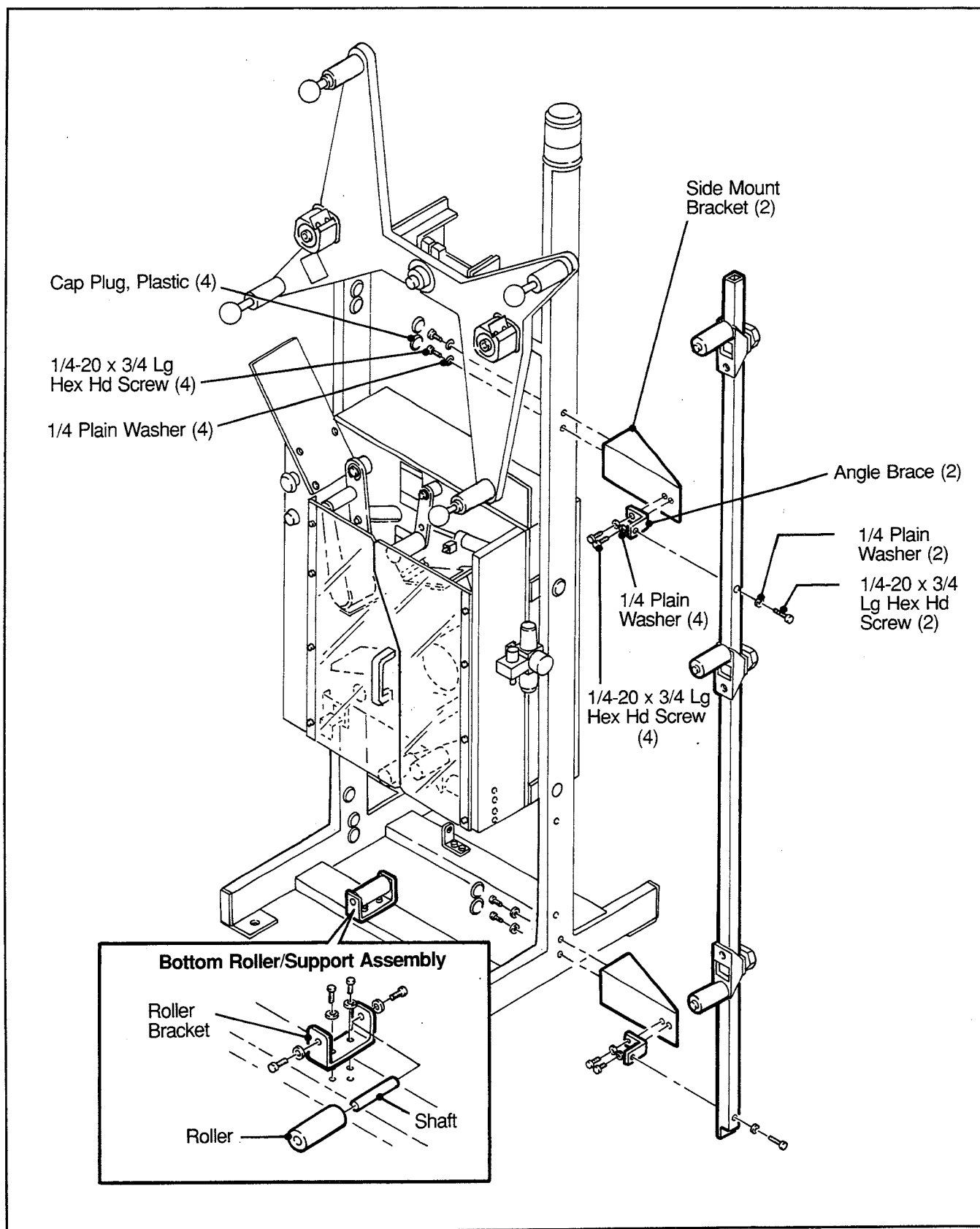


Figure 2-8 – Roller Post Mounting Brackets

Installation and Set-Up (Continued)

4. Measure approximate distance from floor to center of 3 inch [75 mm] horizontal roller on taping head/case sealer. Adjust **center of exit roller** on CTS roller support post to this approximate distance from floor. See Figure 2-9.

Note – Rollers on support post can be used as shown in examples (inset) on Figure 2-9. Use only the rollers that are needed.

TAPE WIDTH

The CTS unit is factory set for 2 inch [48 mm] wide tape. If 1-1/2 inch [36 mm] or 1-3/4 inch [42 mm] tape is to be used, the tape holder on the applying arm must be replaced with the correct width guide shoe.

Also, both tape drums on turret must be adjusted so centerline of tape rolls are in line with centerline of tape guide shoe.

To make these changes, see "Adjustments – Tape Holder", page 30 and "Adjustments – Tape Web Alignment", page 29.

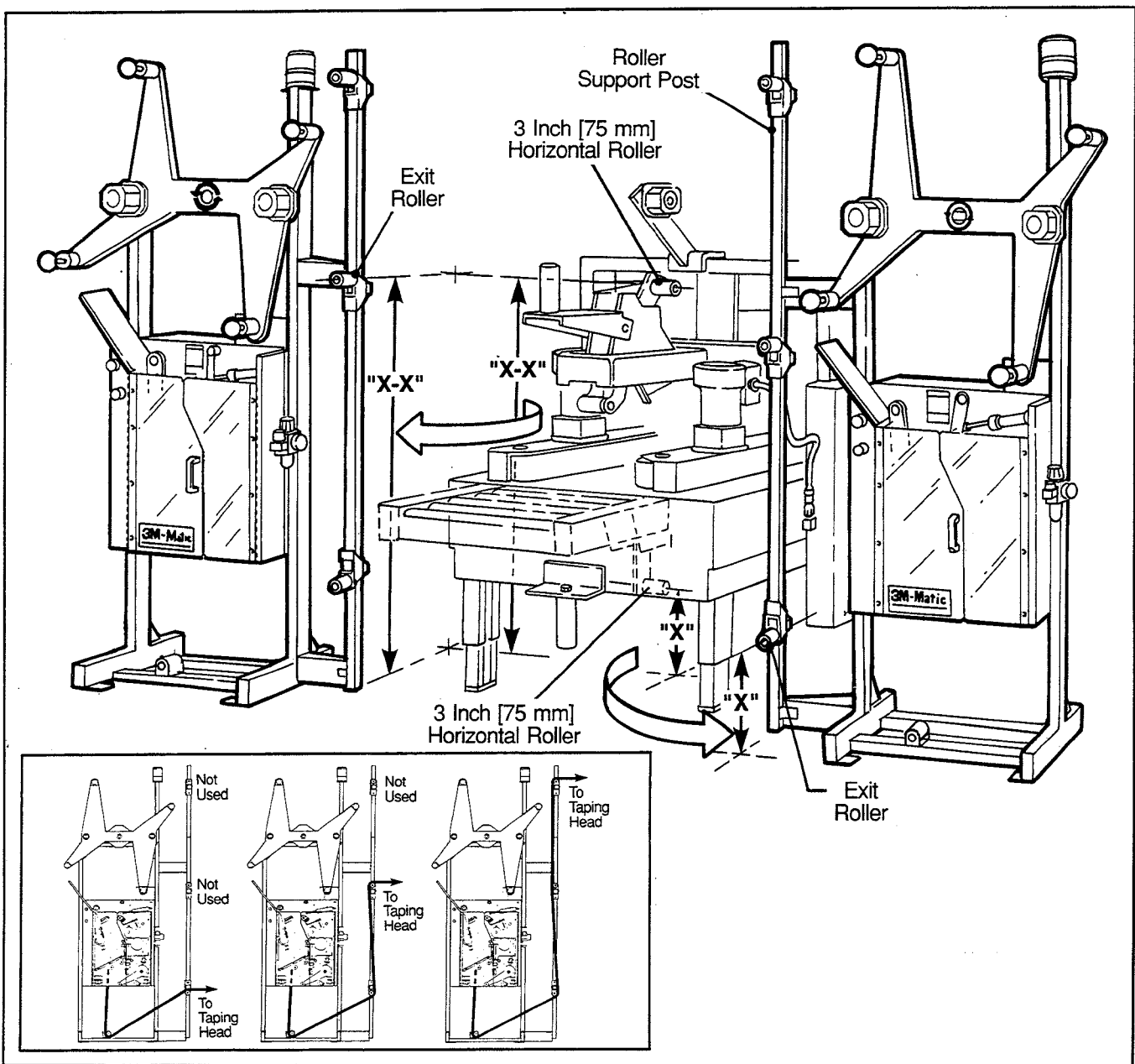


Figure 2-9 – CTS Roller Placement

Installation and Set-Up (Continued)

PNEUMATIC CONNECTION

WARNING – Be careful when working with compressed air or severe injury could result. Always turn air valve OFF (EXH) when air supply line is being connected or disconnected.

The CTS machine requires a 75-140 psig [5.2-9.7 bar gauge pressure], 0.1 SCF [2.8 litre @ 21°C, 1.01 bar] per cycle, compressed air supply. An On/Off valve, pressure regulator and filter are provided to service the air supply. Adjust regulator to 85 psig.

1. Connect the main air supply line to the inlet side of the On/Off valve using the barbed fitting and hose clamp supplied. See Figure 2-10. The customer supplied air hose (5/16 inch [8 mm] ID) must be clamped tightly to the barbed fitting.

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

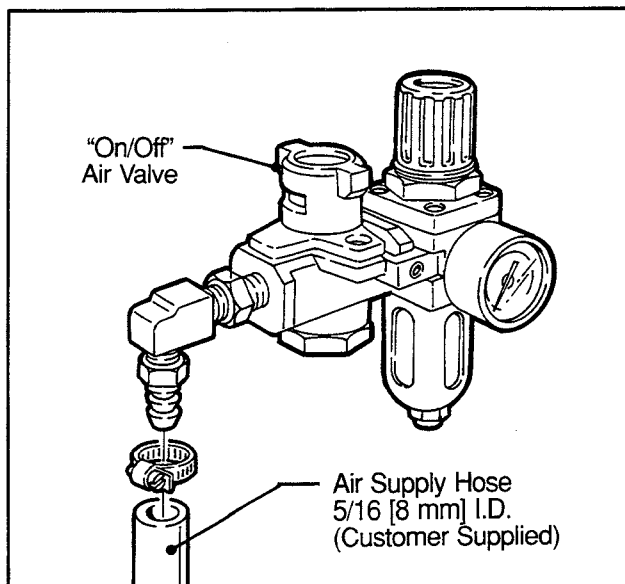


Figure 2-10 – Pneumatic Connection

ELECTRICAL CONNECTION

A standard three conductor power cord with plug is provided for 115 VAC, 60 Hz, 2.0 Amp electrical service. The receptacle providing this service must be properly grounded. Before the power cord is plugged into the outlet, make sure the red "Off" button is depressed and that all tools or loose items are removed from machine. Plug electrical cord into outlet.

TAPE LOADING AND THREADING – INITIAL START-UP (Refer to Figure 2-11)

WARNING – The two tape cut-off knives are extremely sharp. Before attempting to load tape, refer to Figure 2-11 and identify the location of these knives. Keep hands out of this area except to load tape and then use caution to prevent injury.

The right hand tape roll is the "working roll" and the left hand roll is the "standby roll".

Important – Both tape rolls must be loaded with adhesive side to the right.

1. Turn air supply valve "On" (SUP) and adjust air pressure regulator to 85 psig.
2. Turn electrical supply "On" by turning red On/Off switch clockwise. Power "On" indicator below switch will illuminate.

Note – Power "On" will allow CTS tape feed motor to sense pull on the tape and feed tape as required.

3. Place one tape roll on each tape drum adhesive side to the right.
4. Thread tape from the right hand tape roll around the rollers as shown.

Note – The feed motor and splicing mechanism are disabled when the right door is open.

5. Thread tape from the left hand tape roll around the turret roller, through the tape holder and trim it off on the serrated tape cut-off knife.

Note – The splicing mechanism is disabled when the left door is open, however, the tape drive motor will continue to feed tape on demand from the working tape roll.

6. Close left door. The CTS splicer is now ready to supply tape to the taping head on the case sealer.

Installation and Set-Up (Continued)

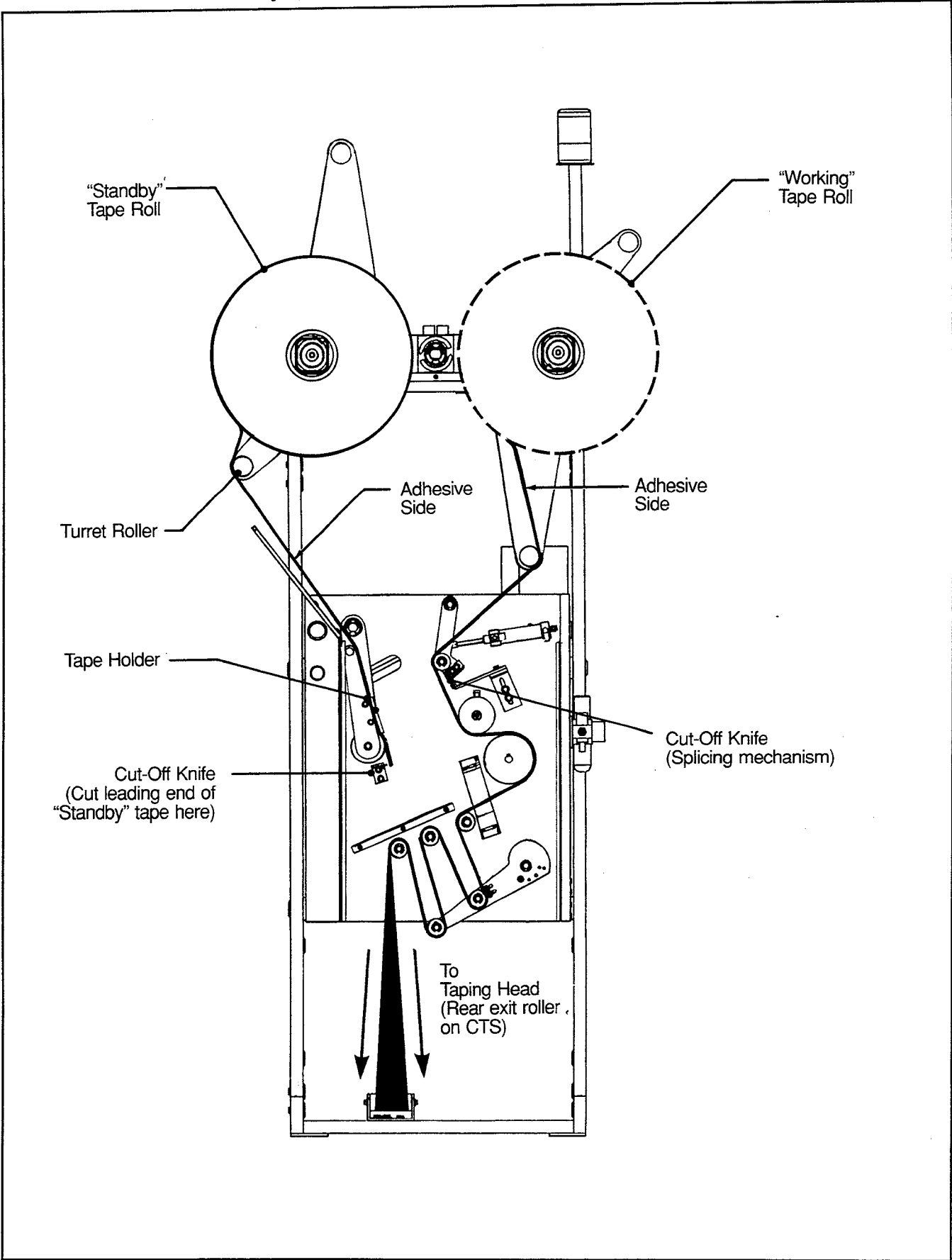


Figure 2-11 – Initial Tape Loading and Threading

Installation and Set-Up (Continued)

CTS TO TAPING HEAD TAPE THREADING

1. Insert tape threading needle through taping head to prepare for tape threading.
2. Pull tape and thread around CTS exit rollers as shown in Figure 2-12. Continue pulling tape and thread around 5-1/2 inch [140 mm] vertical roller on taping head/case sealer. Pull tape over 3 inch [75 mm] horizontal roller (upper taping head) or under horizontal roller (lower taping head) with adhesive side forward and attach to threading needle. Pull tape through taping head with threading needle until taping head is threaded.

3. Remove threading needle and cut threaded tape to correct length.

Note – All rollers on CTS are textured, therefore, tape may be threaded adhesive side in or out except for final horizontal roller on taping head where tape must be threaded adhesive side **away** from roller (adhesive forward).

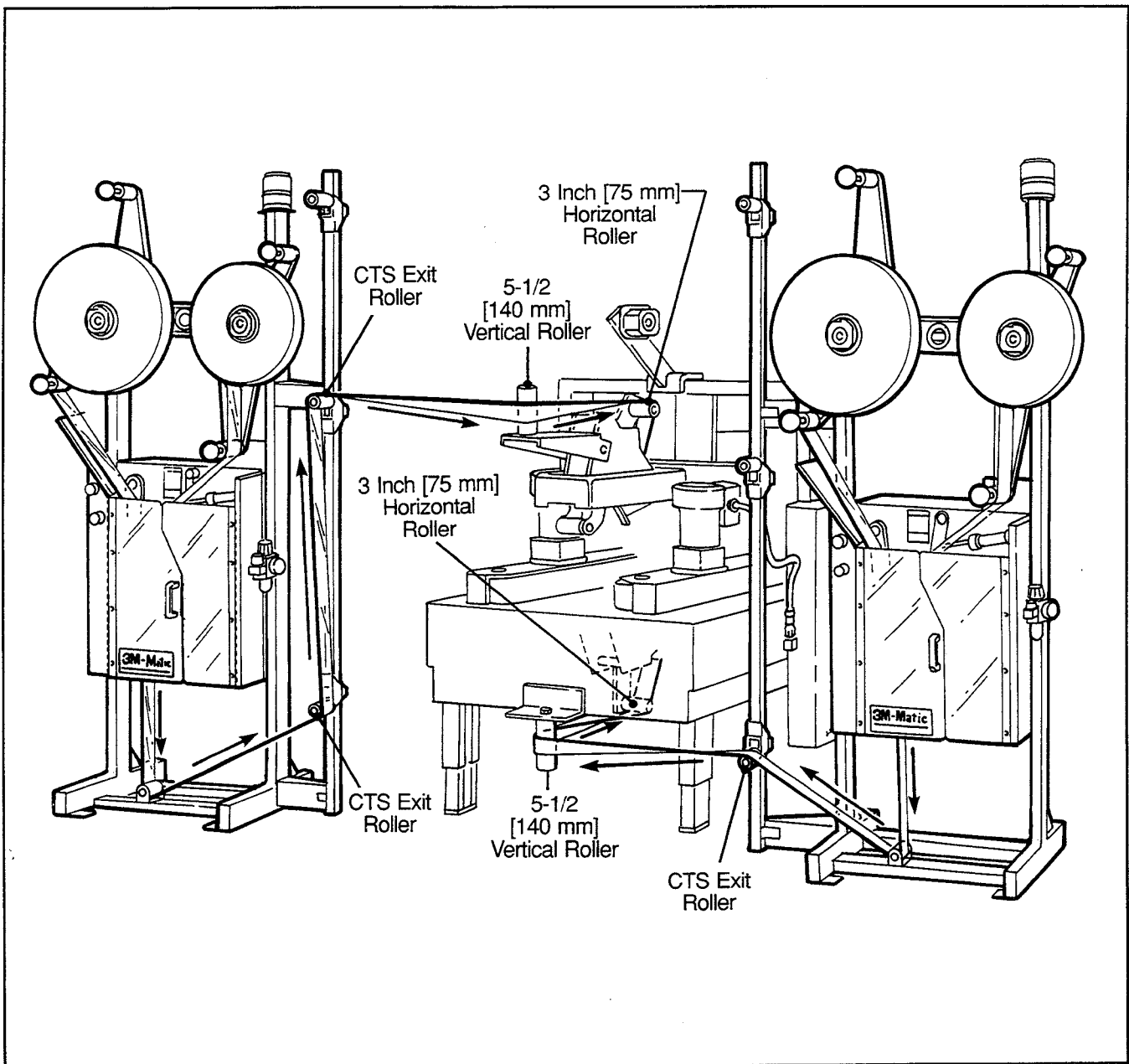


Figure 2-12 – CTS to Taping Head Tape Threading

Installation and Set-Up (Continued)

TAPE ALIGNMENT – Figure 2-13

Fine tune tape alignment by adjusting the angle of the CTS machine and the height of the exit roller on the CTS roller support post.

1. Tape coming off CTS exit roller must have equal tension on both edges of tape. If one edge is loose, adjust angle of CTS machine to correct this condition. See Figure 2-13A.
2. Tape traveling around 5-1/2 inch [140 mm] vertical roller on taping head/case sealer must also have equal tension on both edges of tape. If one edge is loose, adjust height of exit roller on CTS roller support post to correct this condition. See Figure 2-13B.

The CTS is now ready for operation, however, tape alignment (tracking) should be checked after case sealer has run boxes to be sure that tape tracking has stabilized.

After verifying that alignment is correct, CTS unit should be fastened to the floor or case sealer to maintain proper alignment. Be sure not to change angle of CTS or tape feed roller position when fastening CTS down.

Foot pads must be shimmed to floor to prevent warping of CTS frame.

Rubber levelers are available for temporary use. See page 35.

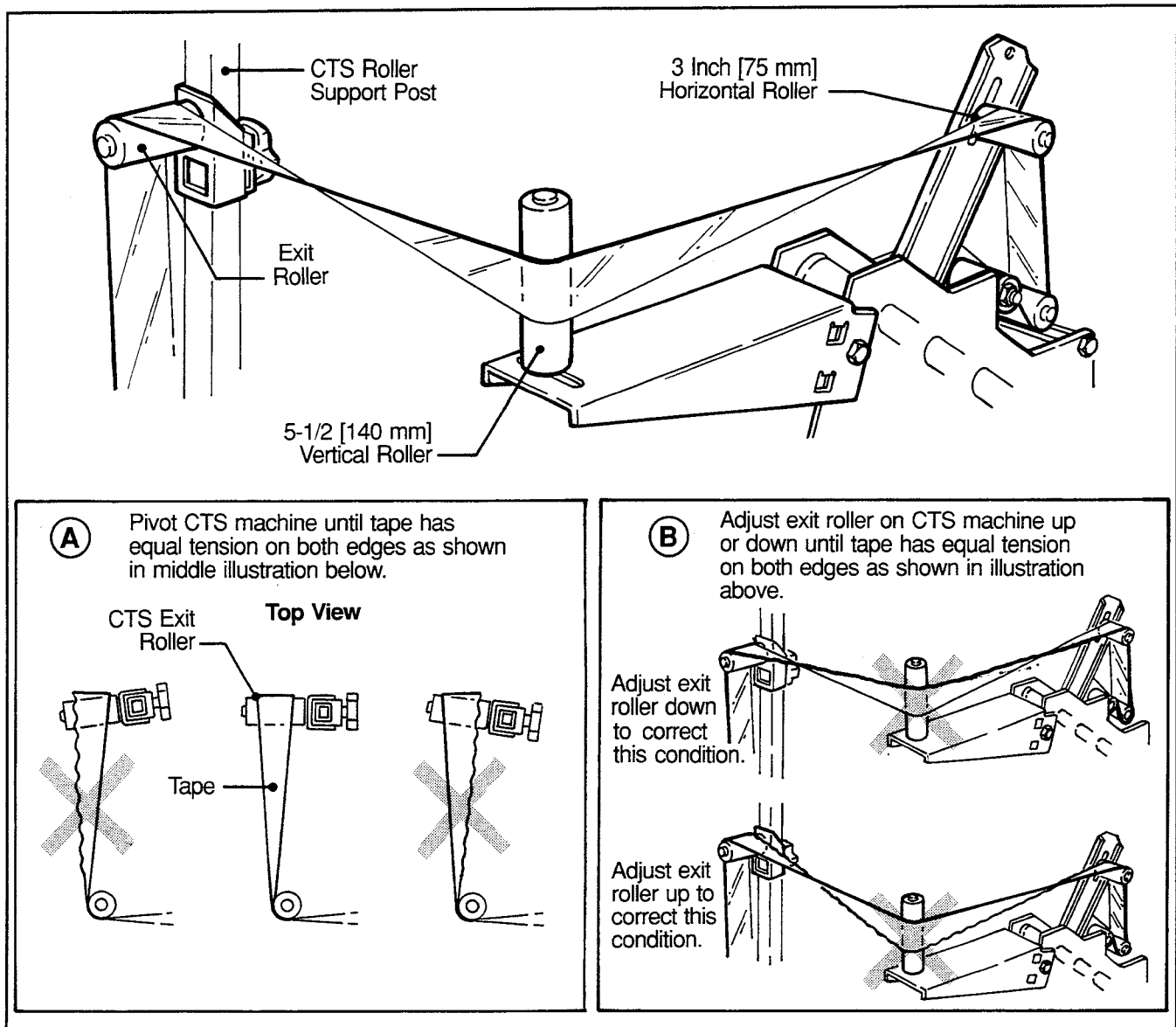


Figure 2-13 – Tape Alignment

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Operation

Important – Before operating CTS splicer, read all the "**Important Safeguards**", pages 3-6 and "**Warnings**", on page 24, as well as all of the "**Operation**" instructions.

Refer to Figure 3-1 to acquaint yourself with the various components of the CTS splicer, especially the location of the two tape cut-off blades.

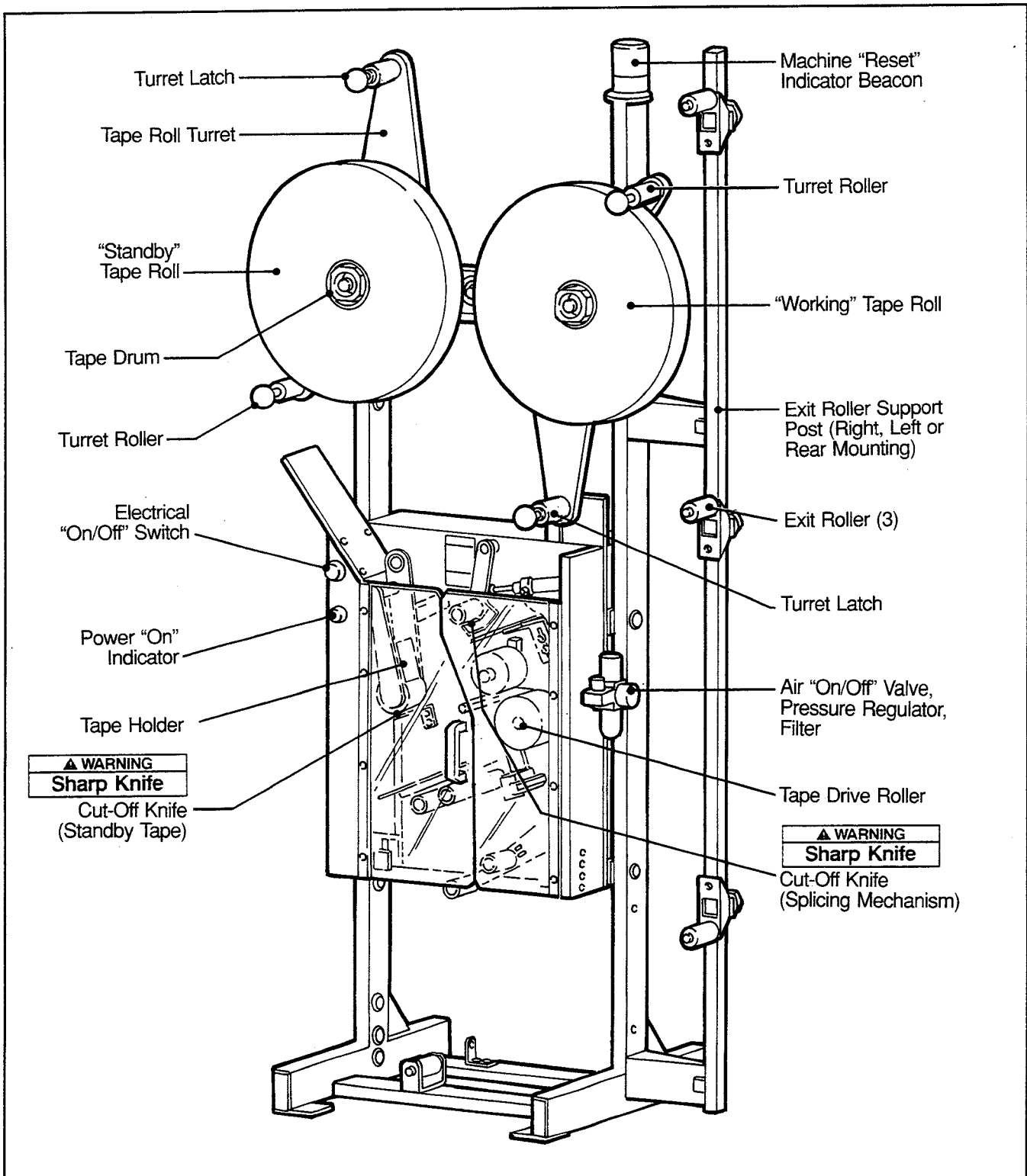


Figure 3-1 – CTS Components

Operation (Continued)



WARNINGS

1. Observe **ALL SAFETY WARNINGS** on machine.
2. The two tape cut-off knives are **extremely sharp**. Before loading or threading tape refer to Figure 3-1 and identify the blade locations. Keep hands out of this area except as necessary to thread tape and then use caution to prevent injury.
3. When right door is opened, a safety interlock disconnects machine electrical power. When left door is opened, a safety interlock disables the splicing mechanism, however, the system continues to supply tape from the "working" tape roll. **DO NOT** attempt to disable these interlocks or operator safety will be in jeopardy.

When the CTS tape splicer is set-up as described in the Installation and Set-Up Section of this manual, it will supply tape as demanded by the taping head.

As the "working" tape approaches the end of the roll (within 10 feet), an indicator on the tape web will be seen by a photo sensor and trigger the splicing mechanism. The "standby" tape will be spliced to the "working" tape and the "working" tape automatically cut off.

At this point, tape is fed from the "standby" roll and the indicator beacon will illuminate. Before the "standby" tape runs out, the operator must rotate the turret, ("standby" tape becomes "working" tape and beacon goes out) and reload/stage new "standby" tape roll.

Note – If the CTS is not "powered up", turn air and electrical supplies "On". Check air pressure and adjust regulator to 85 psig if necessary.

Tape Loading/Staging

1. Remove empty tape roll core from right hand tape drum. Figure 3-2.

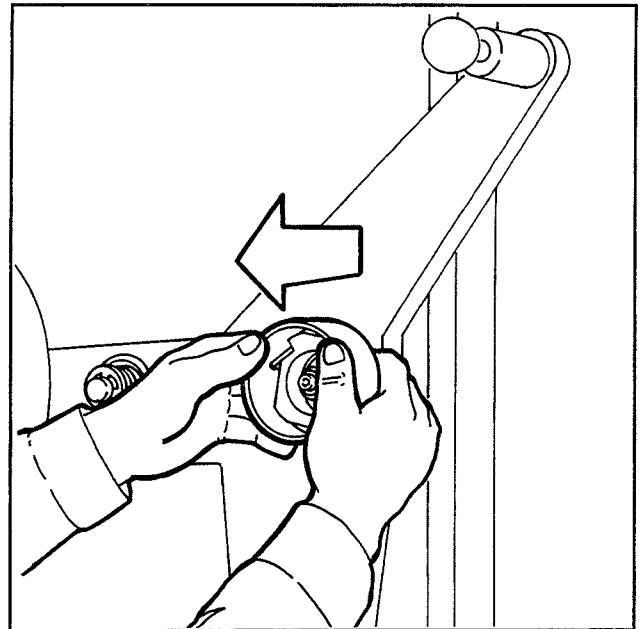


Figure 3-2 – Operation

2. Pull latch knob and rotate turret 180° counter clockwise. Indicator beacon will shut off. See Figure 3-3.

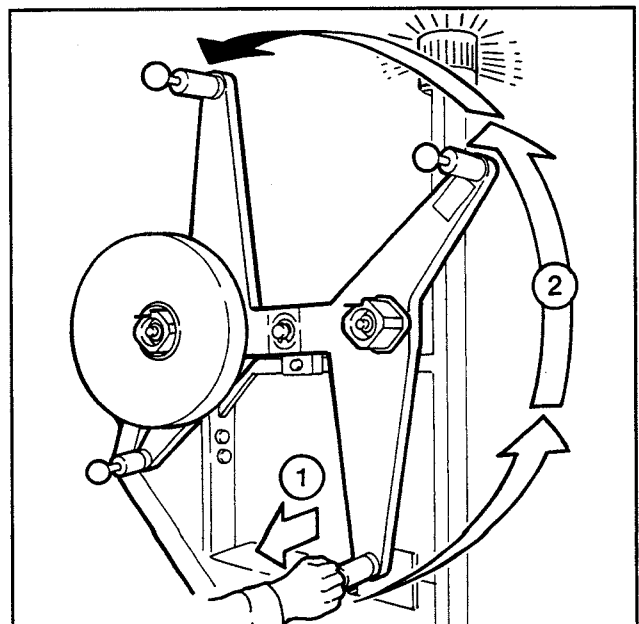


Figure 3-3 – Operation

Operation (Continued)

3. Place new "standby" tape roll on left tape drum with adhesive side of tape facing right. (Tape unwinds from left side of roll.)

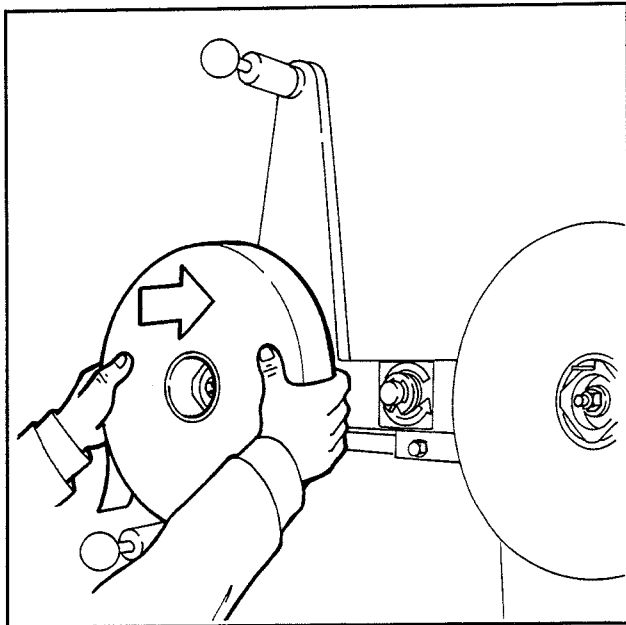


Figure 3-4 – Operation

4. Open left door, pull "standby" tape around turret roller, through tape holder, and trim off excess tape on cut-off blade. Figure 3-5.

Important – adhesive side of tape must be out, away from tape holder.

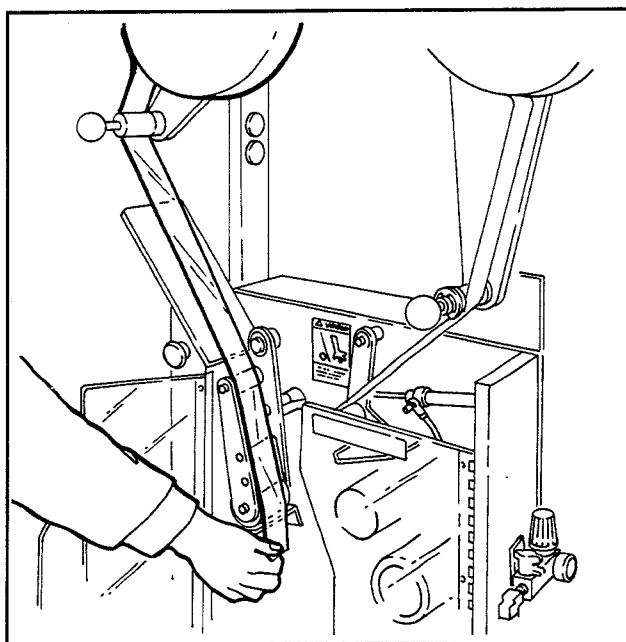


Figure 3-5 – Operation

The sequence above (steps 1 through 4) is repeated for each new tape roll.

Note – In the event that tape is run out of both rolls, refer to "Tape Loading and Threading – Initial Start-Up", page 18.

During extended shutdowns such as weekends or vacation, turn air and electrical supplies "Off".

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Maintenance

The CTS splicer 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.

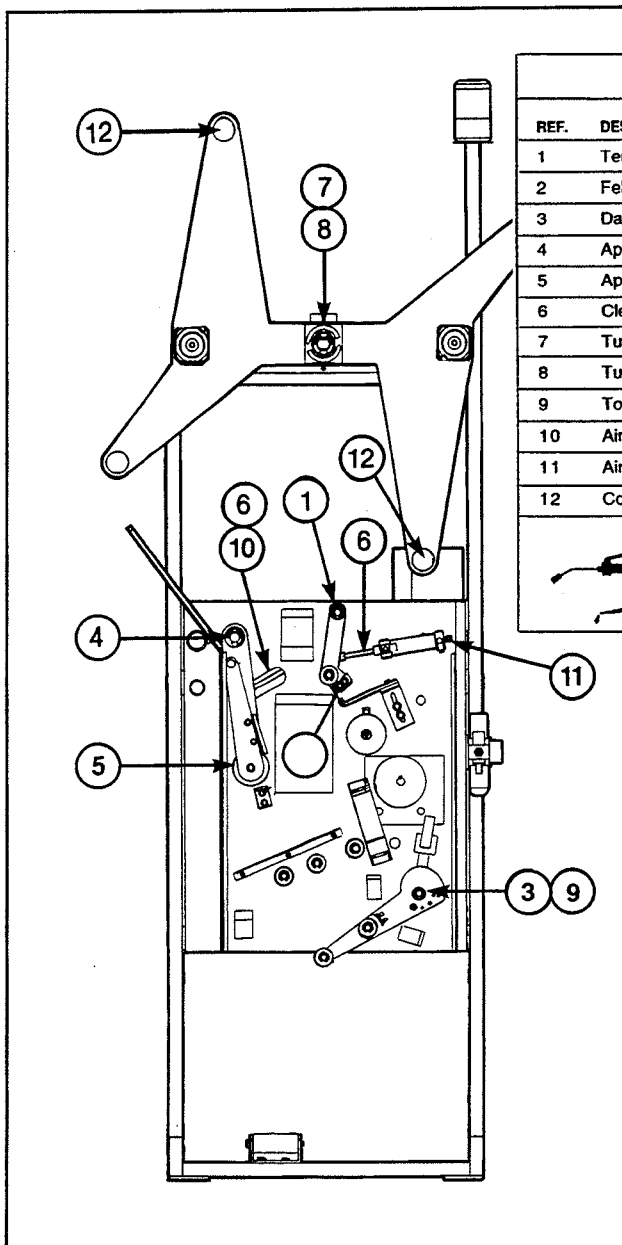
WARNING – Turn air and electrical supplies off and disconnect before beginning maintenance. Failure to comply with this warning could result in severe personal injury and/or equipment damage.

Lubrication

Like most other equipment, the CTS must be properly lubricated to insure long, trouble free service.

The following Lubrication Chart identifies components that require lubrication along with frequency, type of lubricant and lubrication instructions.

Note – Wipe off excess oil and grease. It will attract dust and dirt that can cause premature equipment wear and jamming. Take care that oil and grease are not left on the surfaces of rollers around which tape is threaded, as it can contaminate the tape's adhesive.



Lubrication Chart

| REF. | DESCRIPTION | FREQUENCY (HOURS) | LUBRICANT (SEE BELOW) | DESCRIPTION |
|------|--------------------------|-------------------|-----------------------|----------------------------------|
| 1 | Tension Arm Assembly | 500 | | Lightly coat the I.D. of bearing |
| 2 | Felt Pad Assembly | 80 | | Saturate felt pad |
| 3 | Dancer Arm Assembly | 500 | | Lightly coat the I.D. of bearing |
| 4 | Applying Arm Assembly | 500 | | Lightly coat the I.D. of bearing |
| 5 | Applying Roller Assembly | 500 | | Lightly coat the I.D. of bearing |
| 6 | Clevis Block | 500 | | Lightly coat the I.D. |
| 7 | Turret Assembly | 500 | | Lightly coat the I.D. of bearing |
| 8 | Turret Shaft | 500 | | Lightly coat the turret shaft |
| 9 | Torsion Spring | 500 | | Lightly coat loops on spring |
| 10 | Air Cylinder | 500 | | Lightly coat clevis pivot area |
| 11 | Air Cylinder | 500 | | Lightly coat clevis pivot area |
| 12 | Compression Spring | 500 | | Lightly coat O.D. of spring |

Recommended Lubricants:

Grease – Texaco Marflex Multi-Purpose #2 or equivalent (3M P/N 78-8000-7816-0)
(Note – Grease gun is symbolic, there are no zerk fittings on machine.)

Oil – Light Weight Rated 100 SSU @ 100° F (3M P/N 78-8000-8869-7)

Cleaning the Machine

Excessive dust build-up on machine components should be brushed off with a soft brush or wiped off with a damp cloth. Cleaning should be done at regular intervals depending on dust build-up.

If tape adhesive build-up occurs on tape cut-off blades, carefully wipe clean with an oily cloth.

Note – Never attempt to remove dust from the machine by blowing it out with compressed air. This can cause dirt to be blown onto bearings or other critical areas and cause excessive wear. Never wash down or subject machine to conditions causing moisture condensation on components. Serious equipment damage could result.

Figure 4-1 – Lubrication Chart

Maintenance (Continued)



WARNING – Turn air and electrical supplies off and disconnect before beginning maintenance. Failure to comply with this warning could result in severe personal injury and/or equipment damage.

Tape Cut-Off Blade Replacement



WARNING – Use care when working near cut-off blades as blades are extremely sharp. If care is not taken, severe personal injury could result.

STANDBY TAPE CUT-OFF BLADE (Refer to Figure 4-2A)

1. Loosen, but do not remove, the two hex hd blade screws with a 5/16 inch wrench. Remove and discard old blade.

2. Install new blade between blade clamp and holder with **beveled edge of blade up**. Center and push blade in until it bottoms out on blade screws.
3. Tighten blade screws to secure blade.

WORKING TAPE CUT-OFF BLADE (Refer to Figure 4-2B)

1. Loosen, but do not remove, the two hex hd blade screws with a 5/16 inch wrench. Remove and discard old blade.
2. Saturate blade oiler pad with light weight oil.
3. Install new blade between blade screws/plain washers and blade holder with **beveled edge toward blade oiler pad**. Bottom the blade against screws and then tilt blade approximately 5° (either side) as shown in illustration.
4. Tighten blade screws to secure blade.

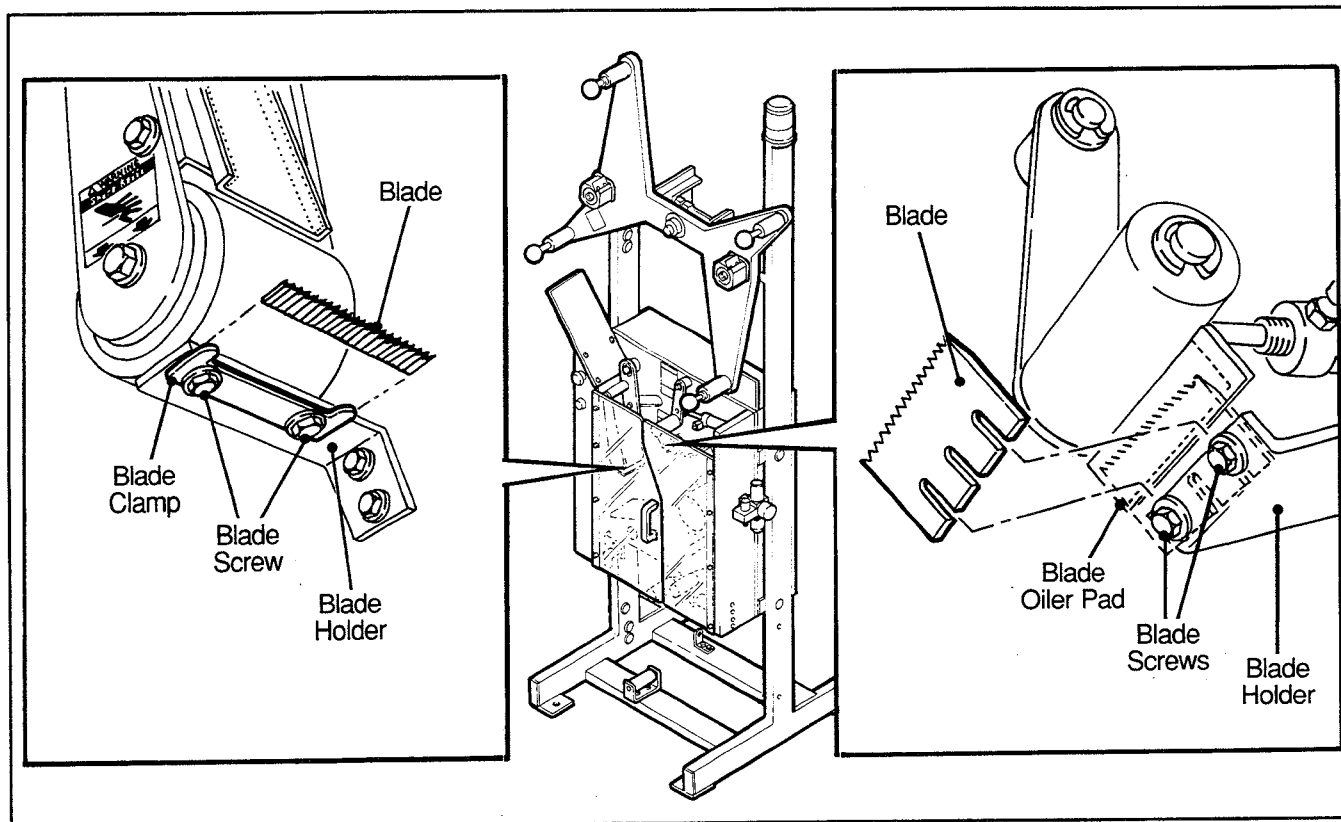


Figure 4-2 – Blade Replacement

Adjustments

WARNING – Turn air and electrical supplies off and disconnect before beginning adjustments. Failure to comply with this warning could result in severe personal injury and/or equipment damage.

Tape Drum Friction Brake – Figure 5-1

The friction brake on each tape drum is pre-set for normal operation to prevent tape roll over travel. Should tension adjustment become necessary, turn the self-locking nut on the shaft to vary compression of the spring. Tighten the nut to increase braking force, or loosen the nut to decrease braking force. Adjust brake to minimum tension to prevent excessive tape roll over travel.

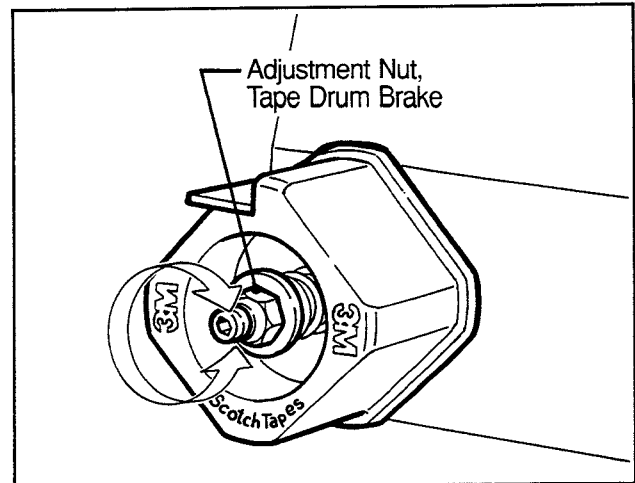


Figure 5-1 – Tape Drum Friction Brake

Tape Web Alignment – Figure 5-2

The two tape drums are pre-set to accommodate 2 inch [48 mm] wide tape. If 1-1/2 inch [36 mm] or 1-3/4 [42 mm] tape is to be used, both tape drums on turret must be adjusted so centerline of tape rolls are in line with centerline of tape guide shoe on applying arm. To adjust tape drums:

1. Measure and make note of the distance from turret to tape drum flange.
2. Loosen the locking hex nut behind tape drum on tape drum shaft. Use an adjustable wrench or 25 mm open end wrench.

3. Turn tape drum shaft out (counterclockwise) 1/8 inch [3 mm] for 1-3/4 inch tape or 1/4 inch [6 mm] for 1-1/2 inch tape.
4. Tighten locking hex nut behind tape drum to secure the adjustment.

Important – Both tape drums must be adjusted the same to maintain tape edge alignment from roll to roll. (Check dimension from turret to tape drum flange, dimension should be the same on both tape drums).

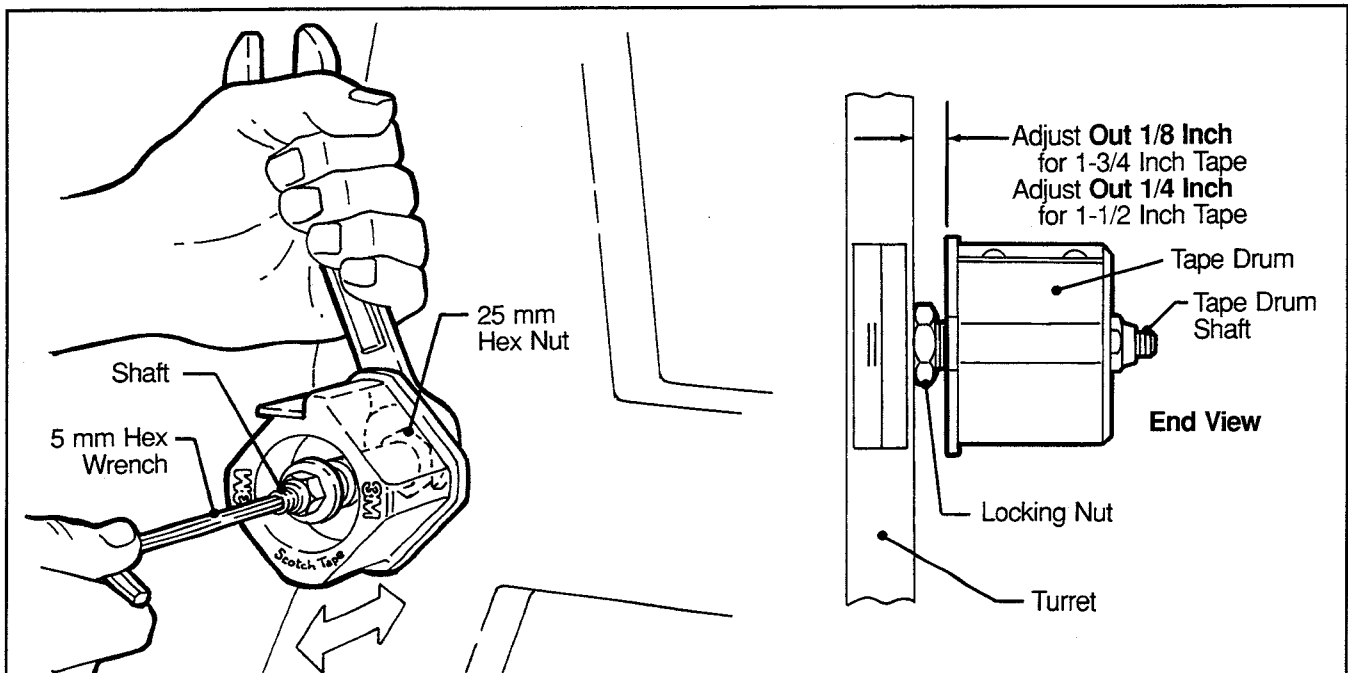


Figure 5-2 – Tape Web Alignment

Adjustments (Continued)



WARNING – Turn air and electrical supplies off and disconnect before beginning adjustments. Failure to comply with this warning could result in severe personal injury and/or equipment damage.

Turret Brake – Figure 5-3

The turret brake is pre-set to allow smooth rotation of the turret with minimum effort. If brake adjustment becomes necessary, tighten brake adjustment nut/bolt to increase brake drag or loosen to decrease brake drag.

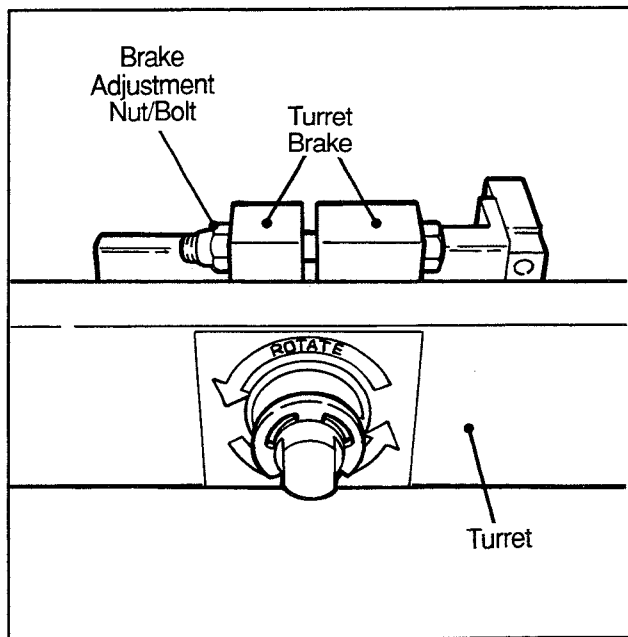


Figure 5-3 – Turret Brake

Tape Holder – Figure 5-4

The CTS unit is factory set for 2-inch [48 mm] wide tape. If 1-1/2 [36 mm] or 1-3/4 inch [42 mm] tape is to be used, locate the correct width tape holder and install in place of existing 2 inch holder.

Important – Mounting studs on back of tape holder are offset, stud **closest to edge** must be installed in upper mounting hole as shown in Figure 5-4.

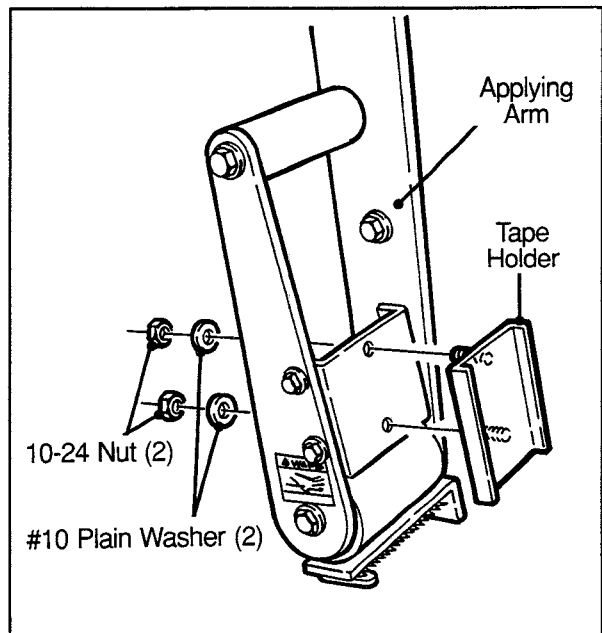


Figure 5-4 – Tape Holder

Troubleshooting

Troubleshooting Chart

| Problem | Possible Cause | Remedy |
|---|------------------------------------|--|
| Tape wraps around drive roller | Adhesive build-up on roller | Clean roller |
| | Low dancer arm tension | Increase spring tension |
| | Low motor deceleration | Set motor controller pot #3 to full CCW position (factory setpoint) |
| Tape doesn't cut | Adhesive build-up on blade | Clean Blade – oil felt pad and/or adjust pad so it contacts blade |
| | Dull blade | Replace blade (bevel towards felt oiler pad). Oil felt pad. |
| | Low tension | Increase tension by tightening tape drum brakes slightly |
| Tape splices are not aligned within 1/16 inch [1.5 mm] | Tape drum alignment | Adjust tape drum alignment (in or out as required to align tape edges) |
| | Turret alignment | Loosen turret mounting bolts, align turret and tighten bolts |
| Tape feed motor does not run | Blown fuse | Check and replace fuse, see "Troubleshooting – CTS Fuses, page 32" |
| | Worn motor brushes | Replace brushes |
| Mechanism does not cycle when photocell blocked | Blown fuse | Check and replace fuse, see "Troubleshooting – CTS Fuses, page 32" |
| | Other causes | Call for service |
| Dancer arm tops out | Line speed too fast | Maximum line speed is 135 ft/min |
| | Proximity sensor out of adjustment | Turn "Gain" pot CW to increase motor speed. Adjust as follows: Turn "Offset" pot full CCW and if necessary, turn "Gain" pot until motor just stops. (Dancer arm must be in down position but not contacting micro switch.) |
| | Drive roller surface contaminated | Brush clean with soap and water |
| Tape feed motor does not stop when dancer arm is down | Proximity sensor out of adjustment | Turn "Offset" pot full CCW and, if necessary, turn "Gain" pot until motor just stops. (Dancer arm must be in down position but not contacting micro switch.) |
| Applying arm stays up. Does not return to home position | Reed switch out of adjustment | Move cylinder reed switch closer to end of cylinder. Switch must remain closed when applying arm is up |

Troubleshooting (Continued)

CTS Fuses

The following chart (Figure 6-1) describes each fuse, its function and gives 3M part number.

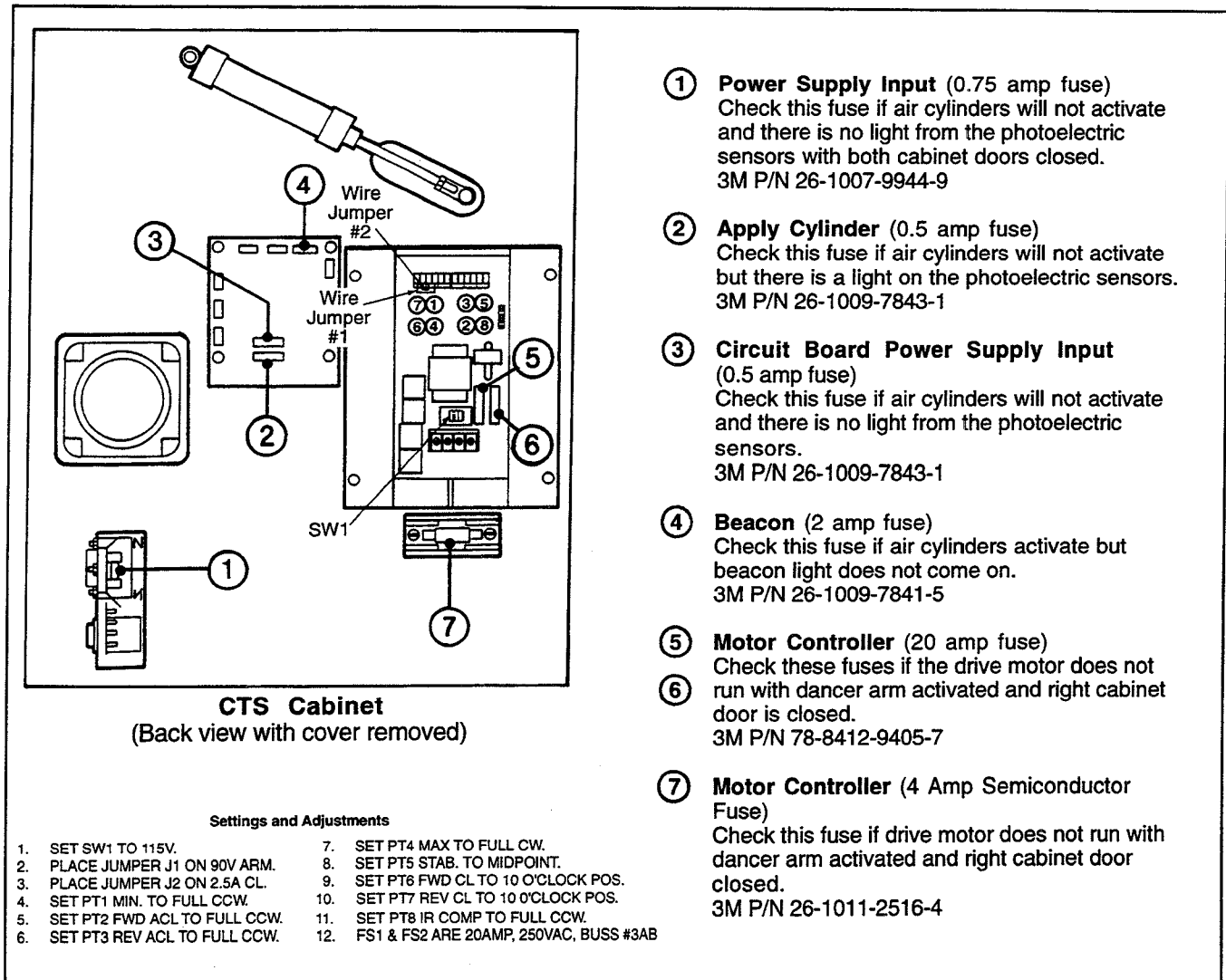


Figure 6-1 – CTS Fuses

Fuse Replacement



WARNING – Electrical service procedures inside CTS cabinet must be performed by a qualified service technician. Before removing back cover, TURN OFF AND DISCONNECT ELECTRICAL POWER – HIGH VOLTAGE COULD BE PRESENT INSIDE CABINET.

1. Remove cover plate from back of CTS cabinet (12 screws/plain washers).

2. Remove and replace fuse with the **same amperage** fuse. Refer to chart above for fuse description, location and part number.
3. Replace cover plate using (12) screws and plain washers.

Note – If fuse continues to blow and reason for electrical overload cannot be diagnosed or repaired, call for service.

Electrical/Pneumatic Diagrams

WARNING – Electrical service procedures must be performed by a qualified electrical technician. Turn off and disconnect electrical and pneumatics before servicing unit. High voltage inside electrical enclosure can cause severe injury or death.

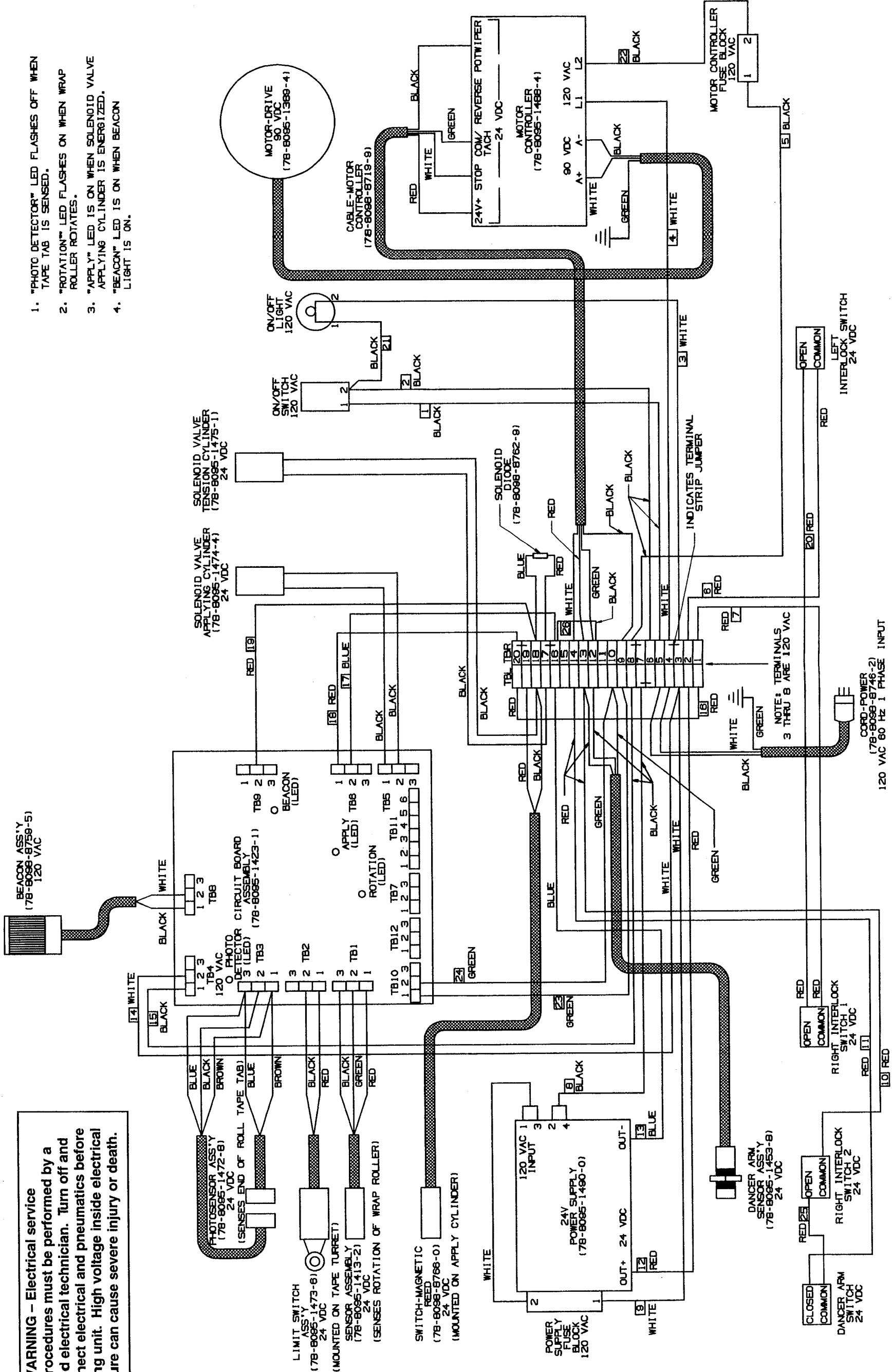


Figure 7-1 – Electrical Diagram

Electrical/Pneumatic Diagrams (Continued)



WARNING – Electrical service procedures must be performed by a qualified electrical technician. Turn off and disconnect electrical and pneumatics before servicing unit. High voltage inside electrical enclosure can cause severe injury or death.

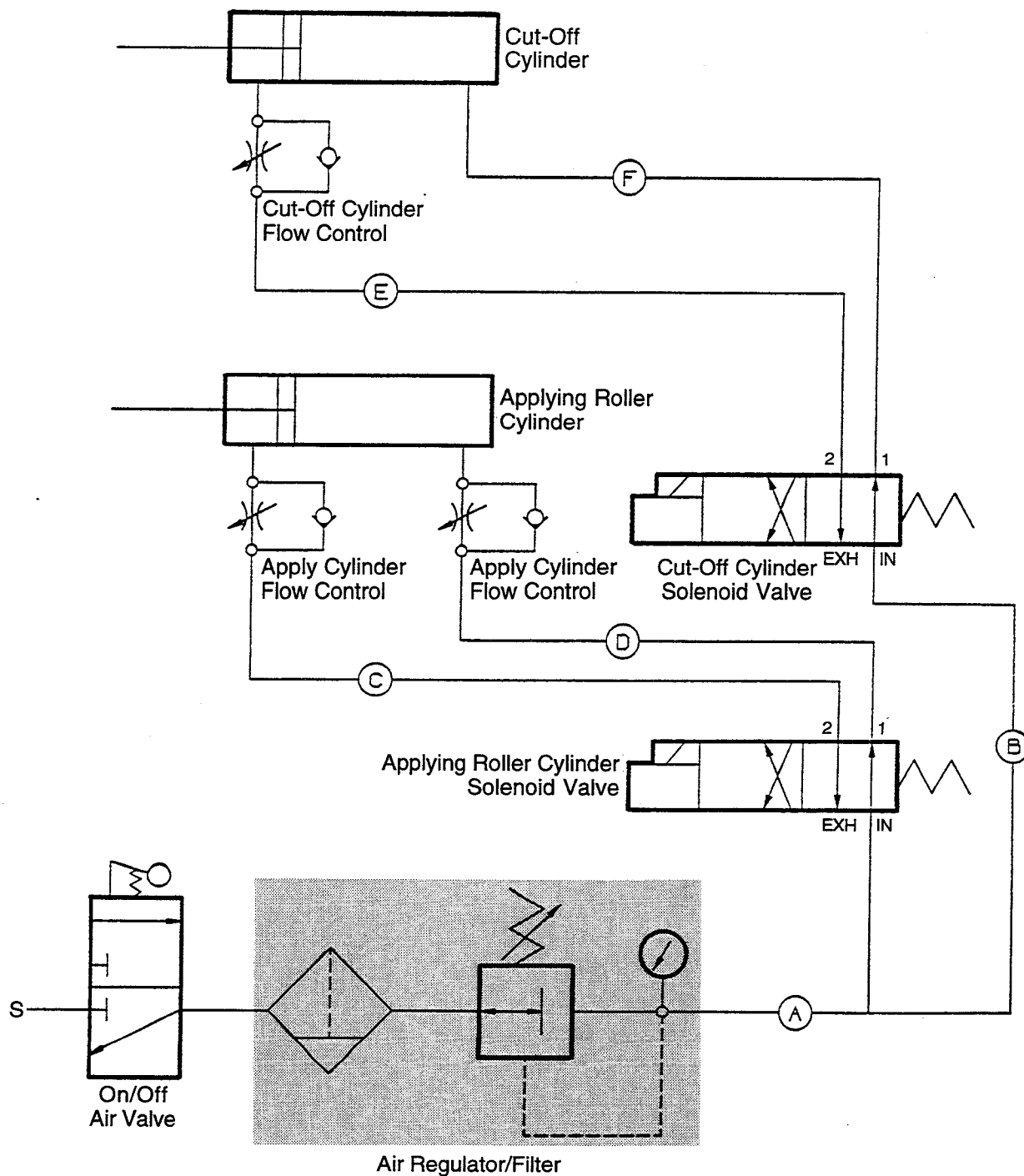


Figure 7-2 – Pneumatic Diagram

Recommended Spare Parts

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

| Qty. | Parts Dwg. Ref. No. | Part Number | Description |
|------|------------------------|----------------|---|
| 1 | 27 | 70-8000-2976-4 | Blade – Corrugated |
| 1 | 29 | 78-8052-6384-1 | Blade – Toothed, 2.56 Inch [65 mm] |
| 2 | * | 26-1011-2516-4 | Fuse – Semi-Conductor, 4 Amp (Motor Controller) |
| 2 | * | 26-1009-7843-1 | Fuse – 0.5 Amp (Apply Cylinder and Circuit Board) Power Supply Input |
| 2 | * | 26-1007-9944-9 | Fuse – 0.75 Amp (Power Supply Input) |
| 2 | * | 26-1009-7841-5 | Fuse – 2 Amp (Beacon) |
| 2 | * | 78-8412-9405-7 | Fuse – 20 Amp (Motor Controller) |
| 1 | — | 26-1011-2558-6 | Bulb – Pilot Indicator |
| 1 | — | 26-1011-2514-9 | Bulb – Post Beacon |
| 2 | — | 26-1011-2559-4 | Brush – Motor, Baldor #BBR-1079 |

* Refer to "CTS Fuses", page 32 for location of fuses.

Replacement Parts and Service

Refer to the first page of this instruction manual for parts ordering and service information.

Options/Accessories

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

| Part Number | Option/Accessory |
|----------------|---|
| 26-101-2642-8 | Leveling Pads, Rubber For temporary use during set-up to level and prevent unit from moving. |
| 78-8098-8866-8 | Pivoting Guide Shoe, 2 Inch Attaches to taping head and guides tape into head. |

Replacement Parts Illustrations and Parts List

1. Refer to CTS Assembly, Figure 8-1 to find the correct parts illustrations to refer to.
2. Refer to Figures 8-2 through 8-6 to find the individual parts required and the parts reference number.
3. Refer to "Parts List" for part number and part description.

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

4. Order parts by part number, part description and quantity required. Also include machine name, number and type.
5. Refer to the first page of this instruction manual for replacement parts ordering information.

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

CTS Continuous Taping System, Type 19500

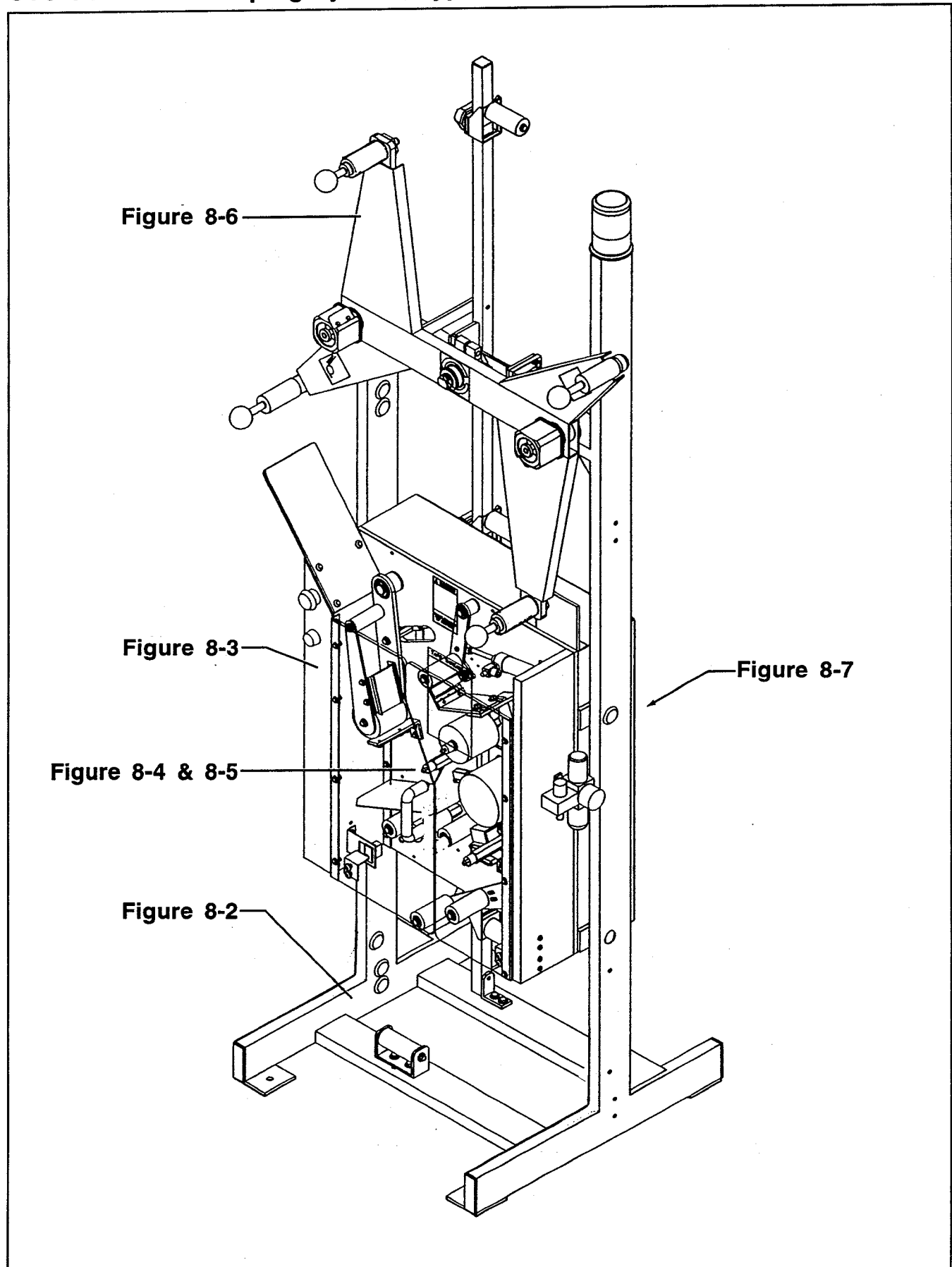


Figure 8-1 – CTS Assembly

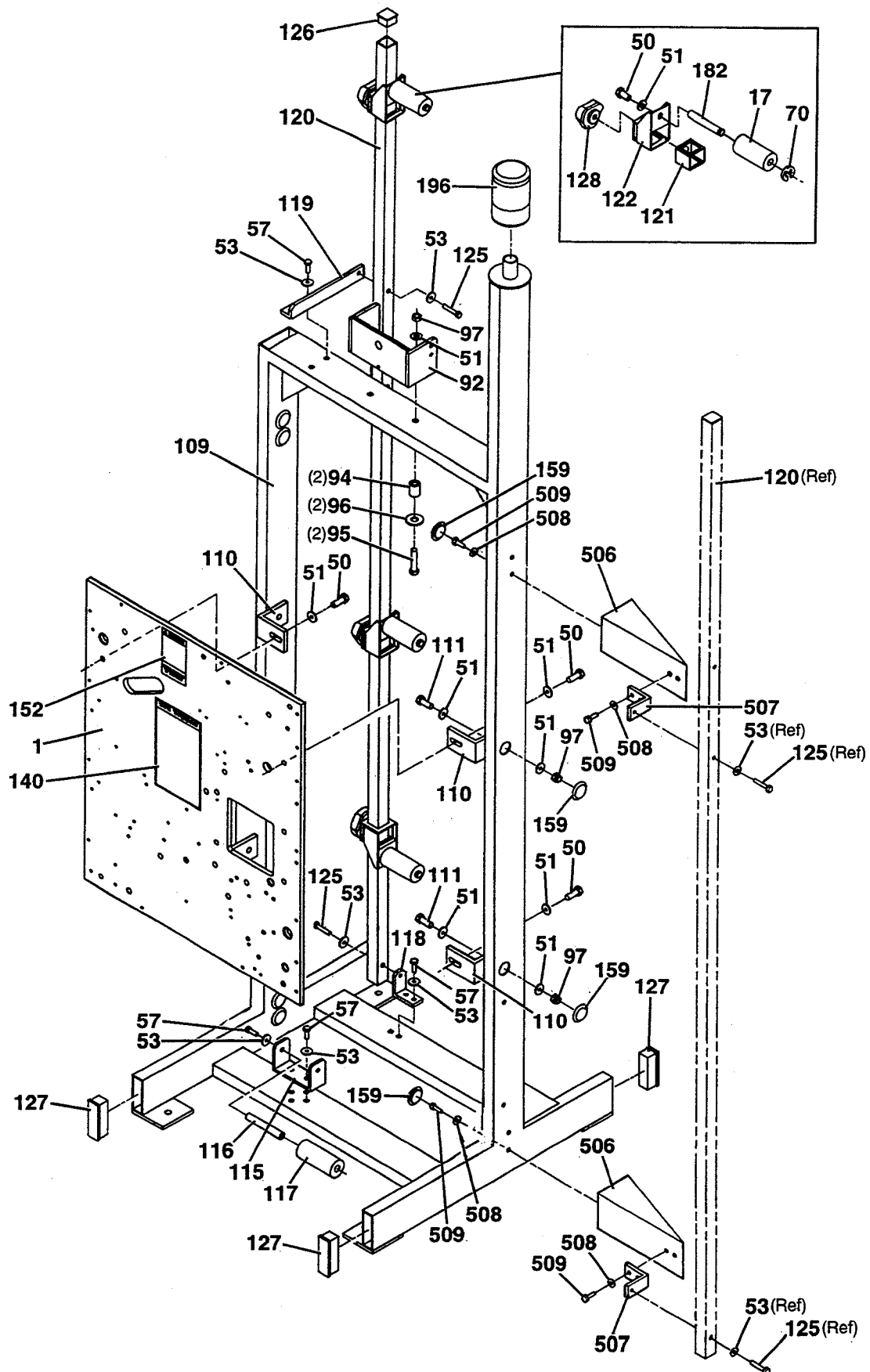


Figure 8-2 – Parts Illustration

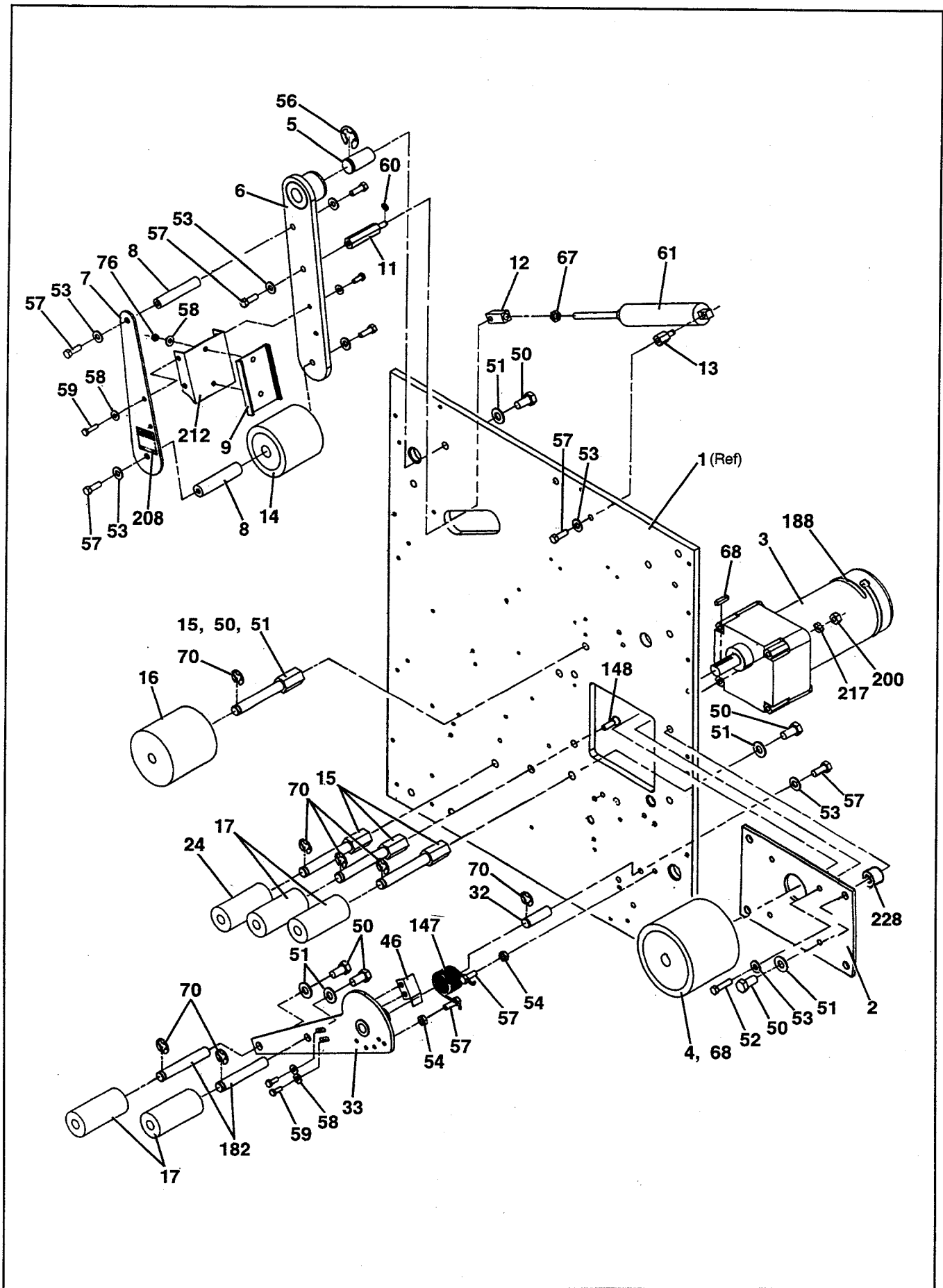


Figure 8-4 – Parts Illustration

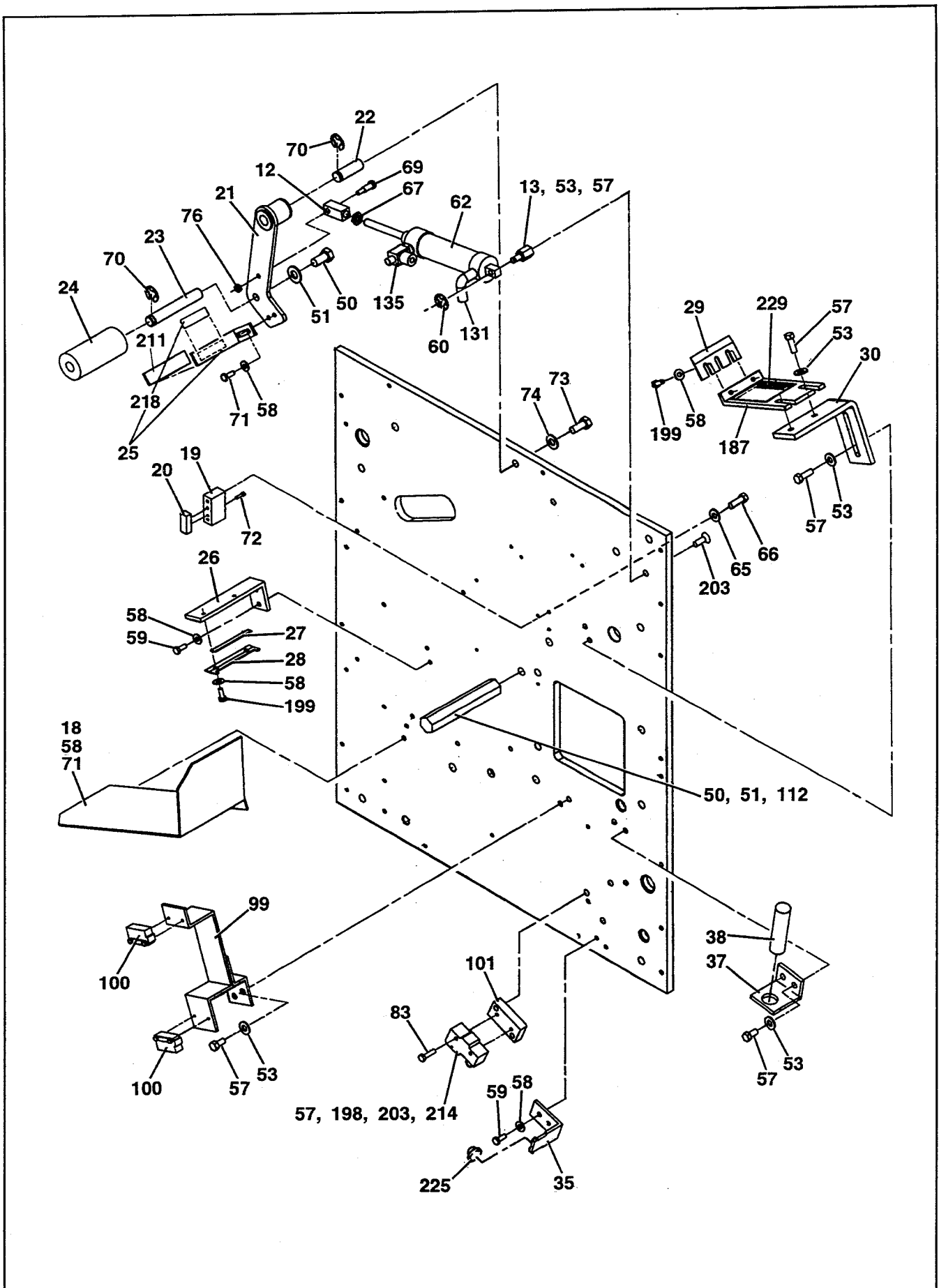


Figure 8-5 – Parts Illustration

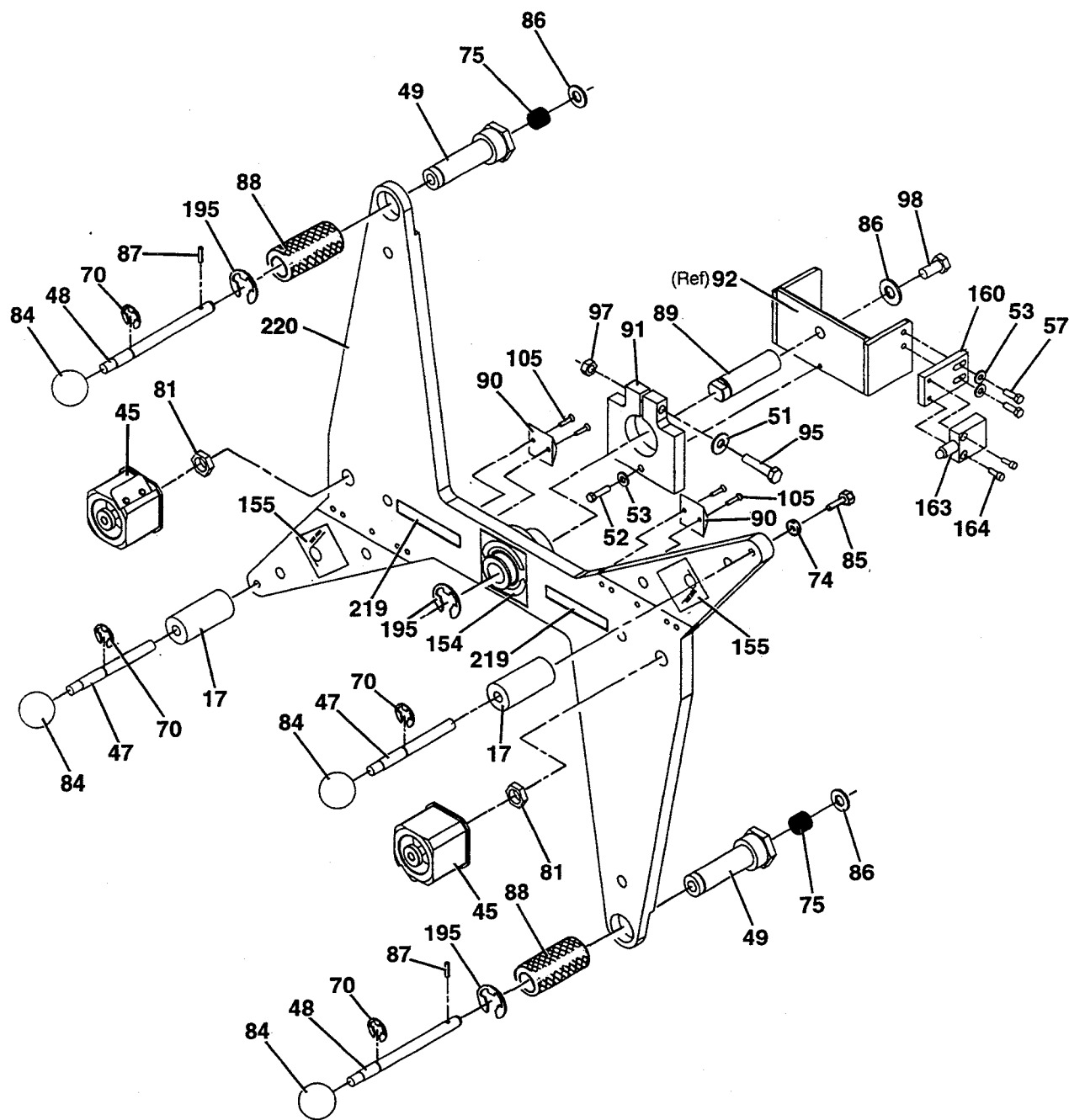


Figure 8-6 – Parts Illustration

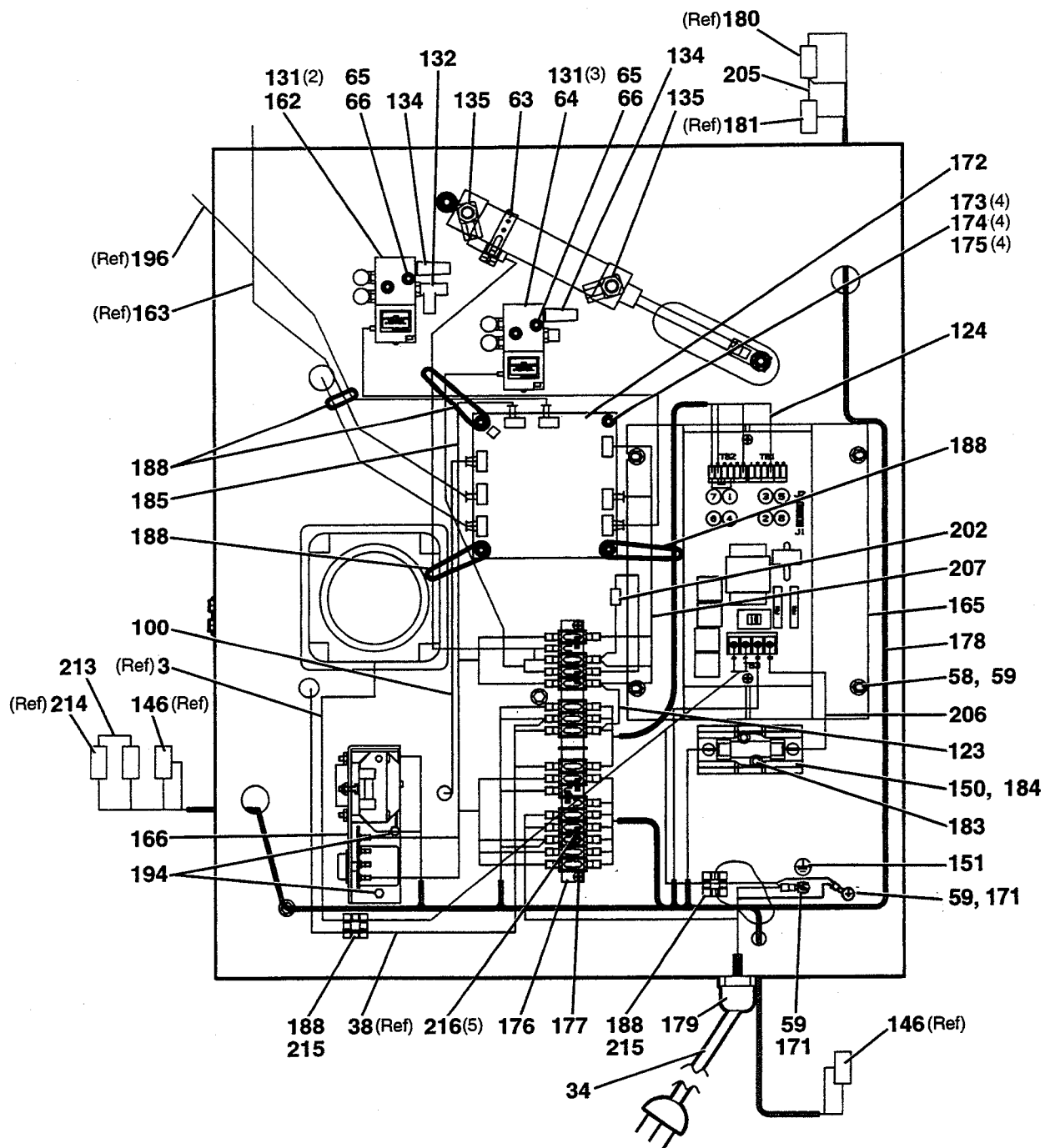


Figure 8-7 – Parts Illustration

Parts List

| Ref. No. | 3M Part No. | Description |
|----------|----------------|--|
| 1 | 78-8095-1387-8 | Plate – Main |
| 2 | 78-8095-1388-6 | Bracket – Motor Mount |
| 3 | 78-8095-1389-4 | Motor – Drive |
| 4 | 78-8095-1390-2 | Roller – Tape Drive |
| 5 | 78-8095-1394-4 | Shaft – Apply Arm |
| 6 | 78-8095-1391-0 | Applying Arm Assembly |
| 7 | 78-8095-1395-1 | Arm – Apply, Small |
| 8 | 78-8095-1396-9 | Spacer – Arm, Apply |
| 9 | 78-8098-8756-1 | Tape Holder Assembly – 2 Inch or 48 mm |
| 11 | 78-8095-1402-5 | Standoff – Hex, Rear Mount |
| 12 | 78-8095-1403-3 | Block – Clevis |
| 13 | 78-8095-1404-1 | Standoff – Hex, Air Cylinder |
| 14 | 78-8095-1405-8 | Applying Roller Assembly |
| 15 | 78-8095-1407-4 | Standoff – Hex, Roller |
| 16 | 78-8095-1408-2 | Idler Roller Assembly |
| 17 | 78-8095-1410-8 | Roller – Guide |
| 18 | 78-8095-1411-6 | Guide – Tape |
| 19 | 78-8095-1412-4 | Block – Sensor |
| 20 | 78-8095-1413-2 | Sensor Assembly |
| 21 | 78-8095-1414-0 | Tension Arm Assembly |
| 22 | 78-8095-1417-3 | Shaft – Tension Arm |
| 23 | 78-8095-1418-1 | Shaft – Tension Roller |
| 24 | 78-8095-1419-9 | Tension Roller Assembly |
| 25 | 78-8095-1430-6 | Felt Bracket Assembly |
| 26 | 78-8095-1439-7 | Holder – Blade, Corrugated |
| 27 | 70-8000-2976-4 | Blade – Corrugated |
| 28 | 78-8095-1441-3 | Blade Guard Assembly |
| 29 | 78-8017-9173-8 | Blade – Serrated, 2.56 Inch [65 mm] |
| 30 | 78-8095-1442-1 | Bracket – Holder, Blade |
| 32 | 78-8095-1448-8 | Shaft – Dancer Arm |
| 33 | 78-8095-1447-0 | Dancer Arm Assembly |
| 34 | 78-8098-8746-2 | Cord – Power |
| 35 | 78-8095-1450-4 | Bracket – Stop |
| 37 | 78-8095-1452-0 | Bracket – Proximity |
| 38 | 78-8095-1453-8 | Dancer Arm Sensor Assembly |
| 39 | 78-8095-1454-6 | Catch – Turret |
| 40 | 78-8095-1458-7 | Guard – Left Turret |
| 41 | 78-8095-1459-5 | Guard – Front, Removable |
| 42 | 78-8095-1460-3 | Hinge – Left |
| 43 | 78-8095-1461-1 | Door – Left |
| 45 | 78-8060-8474-1 | Tape Drum Assembly |
| 46 | 78-8098-8775-1 | Cam – Switch, Actuator |
| 47 | 78-8095-1476-9 | Shaft – Turret, Tapped |
| 48 | 78-8095-1463-7 | Shaft – Turret |
| 49 | 78-8095-1456-1 | Sleeve – Block, Turret |
| 50 | 12-7991-1571-7 | Capscrew – Hex Hd, 3/8-16 x 3/4 Lg |
| 51 | 78-8005-6119-9 | Washer – Plain Type A, 3/8 Inch |
| 52 | 12-7991-1523-8 | Capscrew – Hex Hd, 1/4-20 x 1 Lg |

Parts List (Continued)

| Ref. No. | 3M Part No. | Description |
|----------|----------------|--|
| 53 | 70-8000-4795-6 | Washer – Plain, Type A |
| 54 | 26-1002-4389-3 | Nut – Hex, Flanged, 1/4-20 |
| 55 | 70-7024-0020-4 | Setscrew – Hex Soc Dr, 1/4-20 x 1/2 Lg, Blk Oxide, Loc-Wel |
| 56 | 78-8016-5851-5 | Ring – Retaining, Waldes Tru-Arc #5133-75 |
| 57 | 12-7991-1521-2 | Capscrew – Hex Hd, 1/4-20 x 3/4 Lg |
| 58 | 12-7991-1738-2 | Washer – Plain, Type A, #10 |
| 59 | 26-1002-5389-2 | Screw – Hex Hd, 10-24 x 1/2 Lg |
| 60 | 78-8656-4002-9 | Ring – Retaining, Waldes Tru-Arc #5133-25 |
| 61 | 26-1011-2532-1 | Cylinder – Air, 1-1/16 Bore, 3 Inch Stroke, Magnetic Piston, Humphrey #6DP3BM |
| 62 | 26-1011-2533-9 | Cylinder – Air, 1-1/16 Bore, 2 Inch Stroke, Humphrey #6DP2B |
| 63 | 78-8098-8766-0 | Switch – Magnetic Reed With Mounting Bracket |
| 64 | 78-8095-1475-1 | Solenoid Valve – Tension Cyl. |
| 65 | 12-7991-1736-6 | Washer – Plain, Type A, #6 |
| 66 | 26-1002-5373-6 | Screw – Hex Hd, #6-32 x 1 Lg |
| 67 | 26-1001-4137-8 | Nut – Jam, 5/16-24 |
| 68 | 12-7995-5826-2 | Key – 3/16 Square x 3/4 Lg |
| 69 | 70-8000-0245-6 | Screw – Shoulder, Hex Soc Dr, 1/4 x 5/8 Lg, Blk Oxide, Loc-Wel |
| 70 | 78-8656-4012-8 | Ring – Retaining, Waldes Tru-Arc #5133-50 |
| 71 | 26-1002-5391-8 | Screw – Hex Hd, #10-24 x 3/4 Lg |
| 72 | 18-3171-3715-8 | Capscrew – Hex Soc Dr, #4-40 x 3/8 Lg, Blk Oxide |
| 73 | 12-7991-1546-9 | Capscrew – Hex Hd, 5/16-18 x 3/4 Lg |
| 74 | 70-8000-5390-5 | Washer – Plain, Type A, 5/16 |
| 75 | 26-1011-2539-6 | Spring – Compression, Associated #C0850-074-0875MW |
| 76 | 12-7991-1508-9 | Nut – 10-24 |
| 77 | 26-1011-2531-3 | Handle – Cabinet, Reid #WCH-5 |
| 78 | 18-3104-5815-5 | Capscrew – Butt Hd, Hex Soc Dr, 1/4-20 x 1/2 Lg |
| 79 | 26-1011-2530-5 | Magnet – Permanent, Reid #831NF |
| 80 | 26-1011-2529-7 | Capscrew – Butt Hd, Hex Soc Dr, #10-32 x 1/2 Lg, Blk Oxide |
| 81 | 78-8017-9169-6 | Nut – Jam, M18 x 1 |
| 82 | 70-8000-2642-2 | Ring – Retaining, Waldes Tru-Arc #5100-100 |
| 84 | 26-1011-2534-7 | Knob – Plastic 1-5/8 Dia, Blk, Reid #B-34 |
| 85 | 12-7991-1550-1 | Capscrew – Hex Hd, 5/16-18 x 1-1/2 Lg |
| 86 | 70-8000-5377-2 | Washer – Plain, Type A, 1/2 |
| 87 | 70-8000-4985-3 | Pin – Spring, Slotted, 3/16 x 3/4 Lg, Blk Oxide |
| 88 | 78-8095-1464-5 | Roller – Tape Guide |
| 89 | 78-8095-1465-2 | Shaft – Turret Pivot |
| 90 | 78-8098-8776-9 | Cam – Turret |
| 91 | 78-8095-1467-8 | Brake – Turret |
| 92 | 78-8095-1468-6 | Mount – Turret Pivot |
| 93 | 78-8098-8805-6 | Plate – Tape Infeed |
| 94 | 78-8095-1470-2 | Spacer – Turret Frame |
| 95 | 12-7991-1579-0 | Capscrew – Hex Hd, 3/8-16 x 2-1/2 Lg |
| 96 | 26-1011-2537-0 | Washer – Plain, Type B, 3/8 |
| 97 | 26-1000-9788-5 | Nut – S-Lock, Nylon Insert, 3/8-16 |
| 98 | 12-7991-1595-6 | Capscrew – Hex Hd, 1/2-13 x 1Lg |
| 99 | 78-8095-1471-0 | Bracket – Tape Sensor |
| 100 | 78-8095-1472-8 | Photo Sensor Assembly |
| 101 | 78-8098-8774-4 | Block – Spacer, Micro-Switch |
| 102 | 78-8095-1477-7 | Guard – Right Front |
| 103 | 78-8095-1481-9 | Hinge – Right |

Parts List (Continued)

| Ref. No. | 3M Part No. | Description |
|----------|----------------|--|
| 104 | 78-8095-1482-7 | Door – Right |
| 105 | 26-1011-3174-1 | Screw – Flt Hd, Phil Dr, Thrd Forming, #10-32 x 3/4 Lg |
| 106 | 78-8098-8806-4 | Plate – Nut |
| 107 | 26-1011-2691-5 | Capscrew – Butt Hd, Hex Soc Dr, 5/16-18 x 1/2 Lg |
| 108 | 78-8098-8934-4 | Label – Fuse |
| 109 | 78-8095-1483-5 | Frame – Main Weldment |
| 110 | 78-8095-1485-0 | Mount – Backplate |
| 111 | 12-7991-1573-3 | Capscrew – Hex Hd, 3/8-16 x 2 Lg |
| 112 | 78-8095-1486-8 | Standoff – Magnet |
| 113 | 78-8095-1487-6 | Guard – Back |
| 114 | 78-8095-1489-2 | Cover – Back Guard |
| 115 | 78-8095-1491-8 | Bracket – Bottom Roller |
| 116 | 78-8095-1492-6 | Shaft – Bottom Roller |
| 117 | 78-8095-1493-4 | Roller – Bottom |
| 118 | 78-8095-1495-9 | Brace – Angle |
| 119 | 78-8095-1496-7 | Support – Tube |
| 120 | 78-8095-1494-2 | Upright – Roller Adjustment |
| 121 | 78-8095-1498-3 | Housing – Inner Roller |
| 122 | 78-8095-1497-5 | Housing – Outer Roller |
| 123 | 78-8098-8936-9 | Ground – Jumper |
| 124 | 78-8098-8719-9 | Cable – Motor Controller |
| 125 | 12-7991-1524-6 | Capscrew – Hex Hd, 1/4-20 x 1-1/4 Lg |
| 126 | 26-1007-4442-9 | Plug – 1 Inch Sq, Blk, Caplug #FP165 |
| 127 | 26-1011-2540-4 | Plug – 1 x 3 Inches, Blk, T-Tech Corp #1030-14 |
| 128 | 26-1011-2541-2 | Knob – Three Prong, Phenolic, Blk, Reid #DK-611 |
| 130 | 78-8098-8935-1 | Label – Electric Diagram |
| 131 | 26-1011-2543-8 | Fitting – Elbow, Swivel, 1/8 M x 1/4 Tube, Norgren #12-447-0418 |
| 132 | 26-1011-2544-6 | Fitting – Run Tee, 1/8 M x 1/4 Tube, Norgren #12-468-0418 |
| 134 | 26-1011-2545-3 | Muffler – Air, 1/8 M Pipe, Norgren #MU001A |
| 135 | 26-1011-2546-1 | Fitting – Flow Control, 1/8 Pipe, Bimba #FQP2 |
| 136 | 26-1011-2547-9 | Air Regulator/Filter – 1/8 Ports, 5 Micron Filter, SMC #NAW2000-N01C |
| 137 | 26-1011-2548-7 | Valve – Lock-Out, 1/8 Ports, SMC #NVHS2500-NO1-X116 |
| 138 | 26-1011-2549-5 | Bracket – Spacer, SMC #Y20T |
| 139 | 26-1011-2550-3 | Gauge – Air, 1/8 Pipe, 160 PSIG, SMC #K10 |
| 140 | 78-8098-8703-3 | Label – Tape Threading |
| 141 | 78-8098-8702-5 | Cover – Switch |
| 142 | 78-8098-8704-1 | Finger – Switch |
| 143 | 78-8098-8705-8 | Holder – Double Switch |
| 145 | 78-8070-1329-3 | Label – Warning |
| 146 | 26-1011-2551-1 | Switch – Door Interlock, SPDT, Microswitch #1DM21 |
| 147 | 78-8098-8771-0 | Spring – Torsion |
| 148 | 12-7996-4378-3 | Capscrew – Flt Hd, Hex Soc Dr, 3/8-16 x 3/4 Lg |
| 150 | 26-1011-2516-4 | Fuse – Semi-conductor, 250V, 4 Amp, Buss #FWX-4A |
| 151 | 78-8095-1154-2 | Label – Ground |
| 152 | 78-8098-8711-6 | Label – Mechanism Warning |
| 153 | 78-8098-8712-4 | Label – Stop/Start |
| 154 | 78-8098-8713-2 | Label – Turret |
| 155 | 78-8098-8715-7 | Label – Tape Path |
| 156 | 78-8098-8716-5 | Label – R/H Door |
| 157 | 78-8098-8717-3 | Label – L/H Door |
| 158 | 78-8098-8706-6 | Nameplate – CTS, Type 19500 |

Parts List (Continued)

| Ref. No. | 3M Part No. | Description |
|----------|----------------|--|
| 159 | 78-8005-5044-0 | Plug – Button, 1 Inch, Blk, Caplug #BPF-1 |
| 160 | 78-8098-8777-7 | Plate – Switch Mounting |
| 161 | 26-1011-2554-5 | Grommet – Plastic, 1-1/4 Dia, Blk, Caplug #GRO-1-1/4-UL |
| 162 | 78-8095-1474-4 | Solenoid Valve – Applying Cylinder |
| 163 | 78-8095-1473-6 | Limit Switch Assembly |
| 164 | 26-1001-7295-1 | Capscrew – Hex Soc Dr, 10-24 x 3/4 Lg |
| 165 | 78-8095-1488-4 | Motor Controller |
| 166 | 78-8095-1490-0 | Power Supply Assembly – 24 Volt |
| 171 | 78-8005-7636-1 | Washer – Ext Tooth Lock, Type A, #10 |
| 172 | 78-8095-1423-1 | Circuit Board Assembly – CTS |
| 173 | 26-1003-2974-2 | Stand-off – Male/Female, 1/4 Hex x 1 Lg, #6-32 |
| 174 | 26-1002-6808-0 | Washer – Int Tooth Lock, Type A, #6 |
| 175 | 26-1002-5216-7 | Screw – Pan Hd, Phil Dr, #6-32 x 3/8 Lg |
| 176 | 83-1640-0121-2 | Strip – Terminal Barrier, 20 Term, Cinch Type #20-140 |
| 177 | 26-1002-5228-2 | Screw – Pan Hd, Phil Dr, #8-32 x 1/2 Lg |
| 178 | 78-8098-8710-8 | Wire Harness "A" |
| 179 | 78-8057-5807-1 | Cord Grip – Blk, Heyco #3452 |
| 182 | 78-8095-1449-6 | Shaft – 3 Inch Roller |
| 183 | 70-7023-5040-9 | Capscrew – Hex Soc Hd, #10-24 x 1/2 Lg |
| 184 | 26-1011-2560-2 | Fuseblock – Buss #1976-1 |
| 185 | 78-8098-8714-0 | Wire Harness "B" |
| 186 | 78-8098-8944-3 | Label – Product |
| 187 | 78-8095-1443-9 | Holder – Blade |
| 188 | 26-1001-7035-1 | Tie – Cable, 5-7/8 Inch Lg, 3M #6225 |
| 189 | 26-1011-3175-8 | Screw – Hex Hd, #10-24 x 1/4 Lg |
| 194 | 26-1002-5377-7 | Screw – Hex Hd, #8-32 x 3/8 Lg |
| 195 | 70-8000-1496-4 | Ring – Retaining, Waldes Tru-Arc #5133-98 |
| 196 | 78-8098-8759-5 | Beacon Assembly |
| 198 | 70-7087-0820-4 | Enclosure – Plastic Terminal, Micro #5PA2 |
| 199 | 26-1002-5387-6 | Screw – Hex Hd, #10-24 x 3/8 Lg |
| 200 | 12-7991-1481-9 | Nut – 1/4-20 |
| 201 | 78-8091-0430-6 | Clamp – Hose, 14 mm - 24 mm |
| 202 | 78-8098-8762-9 | Solenoid Diode |
| 203 | 18-3144-6415-9 | Screw – Flt Hd, Hex Soc Dr, 1/4-20 x 3/4 Lg, Blk Oxide |
| 204 | 26-1011-3176-6 | Fitting – Hose, Male, Push-On, 1/4 x 1/8 NPT, Foster #PM-3 |
| 205 | 78-8098-8767-8 | Switch – Light Jumper |
| 206 | 78-8098-8768-6 | Power Jumper |
| 207 | 78-8098-8752-0 | Wire Harness "C" |
| 208 | 78-8098-8748-8 | Label – Warning |
| 209 | 70-7023-3360-3 | Capscrew – Butt Hd, Hex Soc Dr, #10-32 x 3/8 Lg, Blk Oxide |
| 210 | 78-8098-8707-4 | Label – Operating |
| 211 | 78-8070-1451-5 | Felt Pad Assembly |
| 212 | 78-8095-1397-7 | Mount – Tape Holder |
| 213 | 78-8098-8770-2 | Jumper – Dancer Arm |
| 214 | 26-1008-5000-2 | Switch – SPST With NO/NC Contacts, Microswitch #BZRW80147-A2 |
| 215 | 26-1009-2621-6 | Base – Cable Tie, 3M #06292 |
| 216 | 78-8032-1313-7 | Jumper – 140 Series Term Strip, Jones #140J-1 |

Parts List (Continued)

| Ref. No. | 3M Part No. | Description |
|----------|----------------|---|
| 217 | 12-7991-1787-9 | Washer – Lock, Hel Spring, 1/4 |
| 218 | 78-8098-8963-3 | Label – CTS Patent |
| 219 | 78-8098-8964-1 | Label – CTS Tape Only |
| 220 | 78-8098-9044-1 | Tape Turret Assembly (Replaces early weldments) |
| 221 | 26-1011-8619-0 | Switch – Pushbutton, Non-Illuminated, NEMA Type 4/4 x /13, Allen Bradley, #800EP-MT2-3XL01 |
| 222 | 26-1011-8620-8 | Light – Pilot, White, NEMA Type 4/4 x /13, 110/120 Volt W/Bulb, Allen Bradley #800EP-PL1 |
| 223 | 26-1001-7987-3 | Washer – Lock, Ext Tooth, Type A, #6 |
| 225 | 70-0701-8203-8 | Bumper – 3M Bumpon #SJ-5744, Black |
| 226 | 78-8111-1496-2 | Label – Air Pressure, On/Off |
| 227 | 78-8113-6749-5 | Label – Air Pressure, 75 PSI |
| 228 | 78-8113-6736-2 | Spacer – Motor Bracket |
| 229 | 78-8113-6782-6 | Label – Caution, Sharp Knife |

Also includes the following parts (not shown):

| | | |
|-----|----------------|---|
| 000 | 78-8098-8804-9 | Unassembled Parts Kit (Includes 500-510) |
| 500 | 78-8052-6384-1 | Blade – Serrated, 2.56 Inch [65 mm] |
| 501 | 70-8000-2976-4 | Blade – Corrugated |
| 502 | 26-1009-7843-1 | Fuse – 0.5 Amp, 5 x 20 mm, Littlefuse #235.5 |
| 503 | 26-1009-7841-5 | Fuse – 2 Amp, 5 x 20 mm, Littlefuse #235002 |
| 504 | 26-1007-9944-9 | Fuse – 3AB, 0.75 Amp, 250V |
| 505 | 26-1011-2516-4 | Fuse – Semiconductor, 250V, 4 Amp, Buss #FWX-4A |
| 506 | 78-8095-1499-1 | Bracket – Side Mount |
| 507 | 78-8095-1495-9 | Brace – Angle |
| 508 | 70-8000-4795-6 | Washer – Plain, Type A, 1/4 |
| 509 | 26-1001-2661-9 | Capscrew – Hex Soc Dr, 1/4 - 20, x 3/4 Lg |
| 510 | 78-8095-1334-0 | Tape Infeed Kit (Includes Items 511-522) |
| 511 | 78-8095-1364-7 | Bracket – Tape Infeed |
| 512 | 78-8098-8750-4 | Bracket – Tape Roller |
| 513 | 78-8098-8772-8 | Vertical Roller – 5-1/2 Inch [140 mm] |
| 514 | 78-8095-1365-4 | Shaft Assembly – Vertical Roller, 5-1/2 Inch |
| 515 | 78-8098-8751-2 | Bracket – Lower Tape Infeed |
| 516 | 78-8098-8773-6 | Shaft Assembly – Horizontal Roller, 3 Inch |
| 517 | 78-8095-1410-8 | Horizontal Roller – 3 Inch [75 mm] |
| 518 | 26-1000-1117-5 | Capscrew – Hex Hd, 3/8-16 x 5/8 Lg |
| 519 | 78-8005-6119-9 | Washer – Plain, Type A, 3/8 |
| 520 | 26-1003-5841-0 | Capscrew – Hex Hd, M8 x 16 Lg |
| 521 | 26-1009-7367-1 | Washer – Plain, M8 |
| 522 | 26-1003-5829-5 | Capscrew – Hex Hd, M6 x 12 Lg |

3M Parts Order Form

Form 26989 - 3 - D

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| Ship To | | Account No. | | Tax Exempt No. | | Special Instructions | | Account No. | |
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| Charge Back | | Do Not Charge Back | | Via | | Charge To | | | |

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