# **3M**

**Instructions and Parts List** 

3M-Matic €

**800rks** 

Type 19500

**Random King Size** 

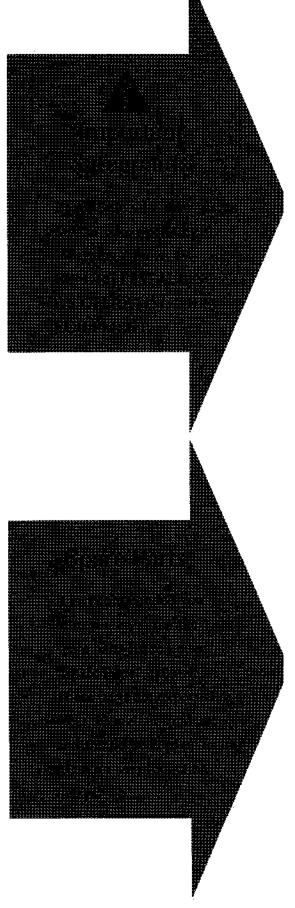
**Case Sealer** 

with

AccuGlide II
Taping Heads

Serial No. \_\_\_\_

For reference, record machine serial number here.



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Litho in U.S.A.

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## **To Our Customers:**

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

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

### **Technical Assistance:**

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

### **Replacement Parts and Additional Manuals**

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

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

1-800/344 9883

FAX# 715/268 8153

Minimum billing on parts orders will be \$25.00. Replacement part prices available on request. \$10.00 restocking charge per invoice on returned parts.

Note: Outside the U.S., contact the local 3M subsidiary for parts ordering information.



## **To Our Customers:**

This is the 3M-Matic<sup>™</sup>/AccuGlide<sup>™</sup>/Scotch<sup>™</sup> 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.

/ICE, REPLACEMENT PARTS AND ADDITIONAL MANUALS LABLE DIRECT FROM:				
)M: 				

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



### **Instruction Manual**

### 800rks Random King Size Case Sealer, Type 19500

### This Instruction manual is divided into two sections as follows:

Section I Includes all information related to installation, operation and parts for the case sealer.
 Section II Includes specific information regarding the AccuGlide™ II STD 3 Inch Taping Heads.

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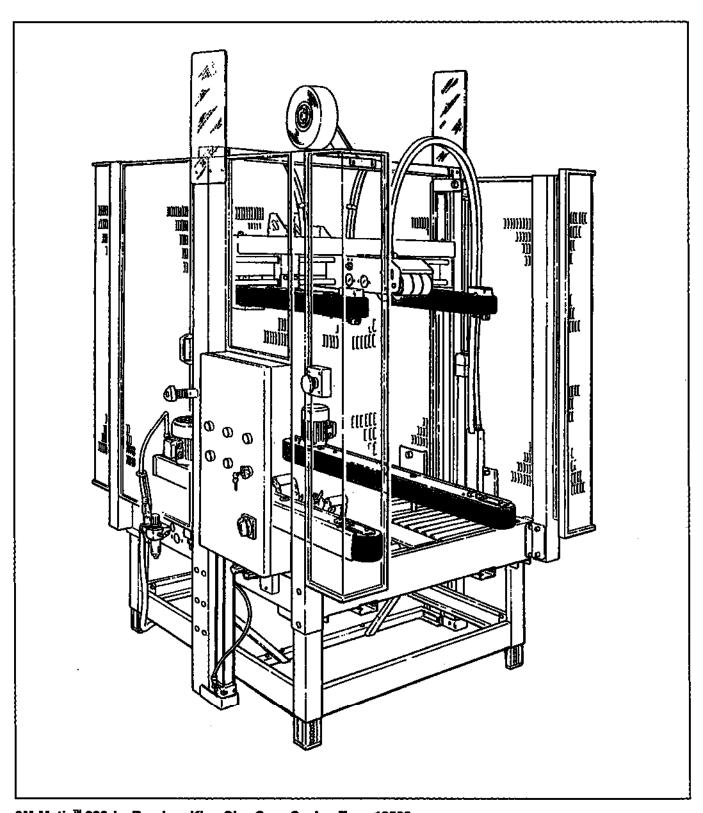
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## Section II – AccuGlide $^{\text{TM}}$ II STD 3 inch Upper and Lower Taping Heads

(see Section  $\Pi$ , page i for Table of Contents)

### **Description**

The 3M-Matic™ 800rks Random King Size Case Sealer with AccuGlide™ II Taping Heads is designed to apply a "C" clip of Scotch™ brand pressure-sensitive film box sealing tape to the top and bottom center seam of regular slotted containers. The case sealer automatically adjusts to a wide range of large box sizes. (See "Box Weight and Size Capacities", page 8.)



3M-Matic™ 800rks Random King Size Case Sealer, Type 19500

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 sells its 3M-Matic™ 800rks Random King Size Case Sealer, Type 19500 with the following warranties:

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

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

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

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

### 800rks Contents

- (1) 800rks Random King Size Case Sealer, Type 19500
- (1) Tool Kit
- (1) Spare Parts Kit
- (1) Instruction and Parts Manual

Important – In the event the following safety labels are damaged or destroyed, they must be replaced to ensure operator safety. A label kit, part number 78-8098-8902-1, is available as a stock item. It contains all the safety labels used on the 800rks Case Sealer. Labels can also be purchased separately, see Parts Drawing/List, pages 70-71.

Two "Warning Sharp Knife" labels, shown in Figure 1-1, are attached to both sides of the upper frame at the location of the cut-off blade on the upper taping head. The labels warn operators and service personnel of the very sharp knife used to cut the tape at the end of the tape application.



Figure 1-1 - Knife Warning Label

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

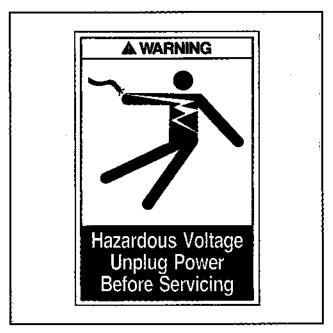


Figure 1-2 - Electrical Warning Label

The 800rks is equipped with two "Red" emergency stop (E-Stop) switches. These push-button switches, shown in **Figure 1-3**, are located (one on either side of the machine), on the side guards at the infeed end of the machine. The "**Stop**" label, reminds operators and casual personnel of the function of these switches.

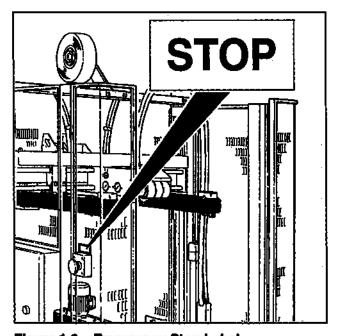


Figure 1-3 -- Emergency Stop Label

### Safety Labels (Continued)

A "Moving Mechanism" label, shown in Figure 1-4, is attached, one on each side of the operator guard, at the infeed end of the machine. These labels warn operators and casual personnel of the down/up movement of the upper assembly and the in/out motion of both upper and lower drive belt assemblies.

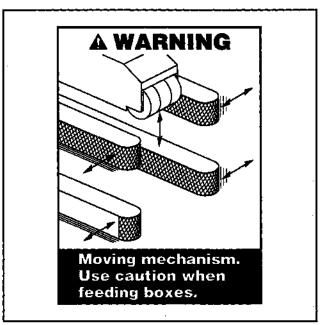


Figure 1-4 - Mechanism Warning Label

A "Moving Mechanism" label, shown in Figure 1-5, is attached, one on each side of the operator guard, at the exit end of the machine. These labels warn operators and casual personnel of the down/up movement of the upper assembly and the in/out motion of both upper and lower drive belt assemblies.

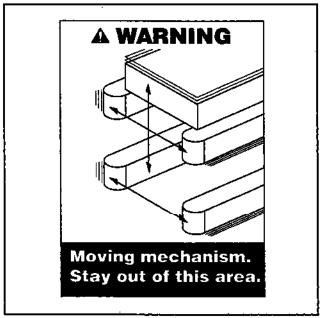


Figure 1-5 - Mechanism Warning Label

A "PLC Warning" label, shown in Figure 1-6, is attached to the inside of the control panel door. This label warns service personnel not to modify the PLC program or a hazardous condition could result.

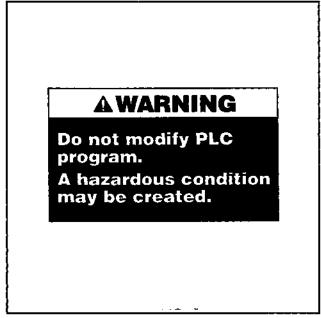


Figure 1-6 - PLC Warning Label

The "Caution – Keep Hands Out Of This Area" label, shown in Figure 1-7, is attached to the upper end of both outer columns on each side of the machine. The label warns operators to keep hands away from this area when machine is operating.



Figure 1-7 - Mechanism Caution Label

### Safety Labels (Continued)

The "Safety Instructions" label, shown in Figure 1-8, is attached to the machine frame above the main air regulator. It alerts installer and operators of minimum/maximum air pressure required to operate the case sealer.

The "Safety Instructions" label, shown in Figure 1-9, is attached to the outer column near the operator control panel. The label provides convenient adjusting, servicing and machine lockout procedures for operators and service personnel.

### SAFETY INSTRUCTIONS

Connect to compressed air supply:

140 PSI MAX 85 PSI MIN

Figure 1-8 - Safety Instructions Label

### SAFETY INSTRUCTIONS

- 1. Before adjusting:
  - set head to min. or max. height position. (refer to manual)
  - rotate/push/rotate door latch full CW to latch upper head ass'y.
  - shut off electric and air supply.
- 2. Before servicing:
  - set head to min. or max. height position. (refer to manual)
  - rotate/push/rotate door latch full
     CW to latch upper head ass'y.
  - unplug electric power and disconnect air supply.
- 3. Do not leave machine running unattended.
- Refer to Instruction manual for complete setup, operating and service Information.

### MACHINE LOCKOUT PROCEDURE

- A. Set head to min. or max. height position. (refer to manual)
- B. Rotate/push/rotate door latch full CW and apply padlock.
- C. Shut off pneumatic exhaust valve and apply padlock.
- Shut off electric main switch and apply padiock.

Figure 1-9 - Safety Instructions Label

### Safety Labels (Continued)

The following two labels are located on the upper and lower taping heads. Replacement part numbers for these labels are listed below each label.

The "Warning-Sharp Knife" label warns operators and service personnel of the extremely sharp knife used to cut the tape at the end of the box sealing operation. The label, shown in Figure 1-10, is located on the orange blade guard between the applying roller assembly and the buffing roller assembly. Never operate taping heads with blade guard removed.

Before working with the taping heads or loading/ threading tape, refer to Figures 3-1 and 3-2 in Section II to identify the knife blade location. **Keep** hands out of these areas except as necessary to service the taping heads or to load/thread tape.



Figure 1-8 - Knife Warning Label

The "Tape Threading Label", shown in Figure 1-11, is attached to the left side of both upper and lower taping heads. This label provides a convenient tape threading diagram. More detailed tape loading and threading information is provided in Section II of this manual.

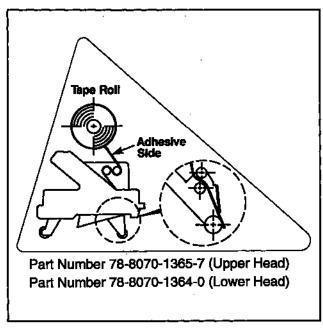


Figure 1-9 - Tape Threading Label

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

### **Specifications**

#### 1. Power Requirements:

Electrical – 208-240 VAC, 60 Hz, 3 phase, 6.6 Amps, 1500 watts
Pneumatic – 5.8 bar gauge pressure [85 PSIG] minimum, 9.5 bar [140 PSIG] maximum, 174 litre/min @ 21° C, 1.01 bar [6.2 SCFM] at 7 boxes per minute

The machine is equipped with four (4) 0.18 HP gearmotors (0.72 HP total) and is supplied with a 2.4 meter [8 foot] standard neoprene covered power cord. Customer must provide desired plug (NEC L15-20P plug recommended).

### 2. Operating Rate:

Dependent on box length, width, height and operator dexterity. Rate can be improved when low height boxes are run by limiting upper assembly/taping head travel.

Box drive belt speed is .45 m/s [88 FPM]

### 3. Operating Conditions:

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

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

#### 4. Tape:

Scotch™ brand pressure-sensitive film box sealing tapes.

### 5. Tape Width:

50 mm [2 inch] minimum to 75 mm [3 inch] maximum

### 6. Tape Roll Diameter:

Up to 405 mm [16 inch] maximum on a 76.2 mm [3 inch] diameter core. (Accommodates all system roll lengths of **Scotch™** brand film tapes.)

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

70 mm ± 6 mm [2.75 inch ±0.25 inch]

**Tape Application Leg Length – Optional:** (See "Special Set-Up Procedure", page 27) 50 mm ± 6 mm [2 inch ±0.25 inch]

### 8. Box Board:

Style – regular slotted containers (RSC) 865 Kpa to 1900 Kpa [125 to 275 PSI] bursting test, single wall or double wall B or C flute.

### Specifications (Continued)

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

### **Box Weight**

Maximum – 90 kg [200 lbs] Minimum – 2.3 kg [5 lb]

Packing — contents must be heavy enough to hold box flat on conveyor bed with bottom flaps fully closed.

Contents must provide support along entire length of top flaps.

Contents must not extend beyond top flap score line.

#### **Box Size**

#### MINIMUM

Length - 380 mm [15 inch] Width - 205 mm [8 inch] Height - 305 mm [12 inch]

### MUMIXAM

Length – Not Limited
Width – 760 mm [30 inch]
Height – 1270 mm [50 inch]

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

**Note:** The case sealer can accommodate most boxes within the size range listed above. However, if the box length (in direction of seal) to box height ratio is .5 of less, then several boxes should be test run to assure the proper machine performance.

## DETERMINE THE BOX LIMITATIONS BY COMPLETING THIS FORMULA:

Box Length In

<u>Direction Of Seal</u> Should Be Greater Than .5

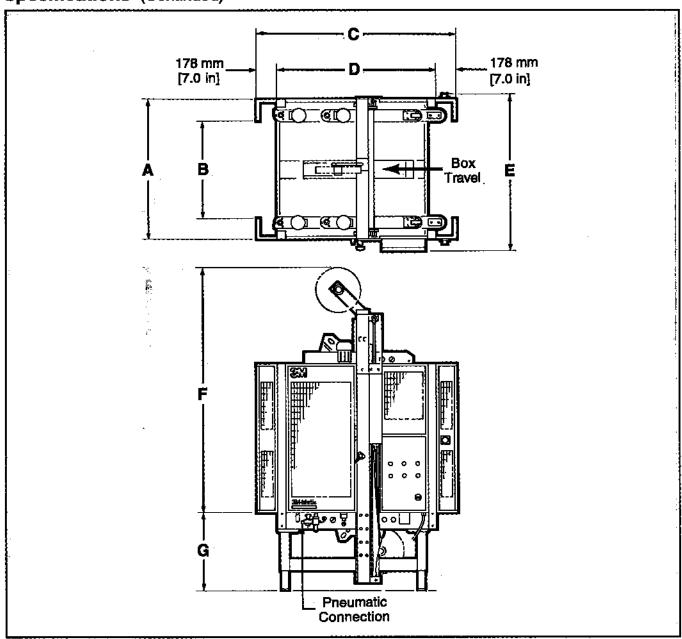
Box Height

Any box ratio approaching this limitation should be test run to assure performance.

### 10. Set-Up Recommendations:

- · Machine must be installed level.
- Customer supplied infeed and exit conveyors must provide straight and level box entry and exit.
- Ball caster infeed conveyor recommended for long or heavy boxes.
- Exit conveyors (powered or gravity) must convey sealed boxes away from machine.

## Specifications (Continued)



### 11. Machine Dimensions:

	A	В	С	D	ε	F	G	
<b>Minimum</b> mm [inches]	1213 [47.75]	840 [33.00]	1720 [67.75]	1365 [53.75]	1417 [55.80]	1745 [68.75]	610 [24.00]	
<b>Maximum</b> mm [inches]	1213 [ <b>47.75</b> ]	840 [33.00]	1720 [67.75]	1365 [53.75]	1417 [55.80]	2756 [108.50]	914 [36.00]	

Weight - 390 kg [860 pounds] crated (approximate) 365 kg [800 pounds] uncrated (approximate)

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### Installation and Set-Up

#### Receiving And Handling

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

### **Machine Set-Up**

Important - Read "Warnings" on page 19 before attempting to set-up the case sealer for operation.

The following instructions are presented in the order recommended for setting up and installing the case sealer. Following them step by step will result in an installation in your production line that best utilizes the many features built into the case sealer. Refer to Figure 3-1 and 3-2 to identify the various components and controls of the case sealer.

Note – A tool kit consisting of metric open end and hex socket wrenches is provided with the machine. These tools should be adequate to set-up the machine, however, other tools supplied by the customer will be required for machine maintenance.

#### PACKAGING AND SEPARATE PARTS

- Follow unpacking instructions attached to outside of fiberboard cover.
- Remove four (4) brackets that secure machine legs to shipping pallet.
- Remove tie-down straps on lower taping head.
- Unpack upper column guards and install as shown in Figure 2-1

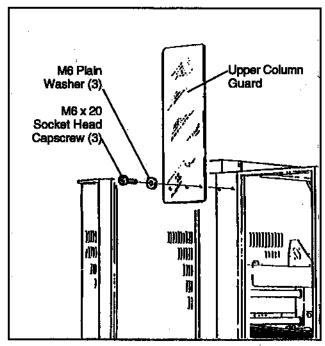


Figure 2-1 - Upper Column Guards

#### MACHINE BED HEIGHT

Adjust machine bed height. The legs can be adjusted to obtain different machine bed heights from 610 mm [24 in] minimum to 855 mm [36 in] maximum.

Refer to Figure 2-2 and set the machine bed height as follows:

 Raise and block up the machine frame to allow adequate leg adjustment.

**Note** – If raising or moving machine with fork lift, be sure forks are long enough to reach across machine (at least 1220 mm [48 in] long).

 Loosen, but do not remove two M8 x 16 socket head screws in one leg. Adjust the leg length for the desired machine bed height. Retighten the two screws to secure the leg. Adjust all four legs equally.

### Installation and Set-Up (Continued)

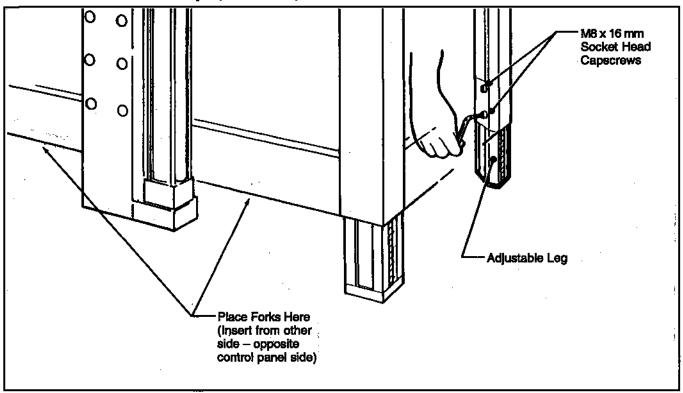


Figure 2-2 - Machine Bed Height

### TAPE DRUM BRACKET (Lower Taping Head)

Check the tape drum bracket assembly to be sure it is mounted at a 45° angle towards the infeed end of the machine as shown in Figure 2-3.

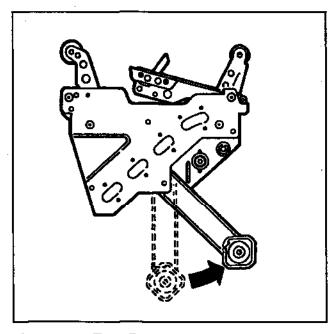


Figure 2-3 - Tape Drum Bracket, Lower

#### **TAPE DRUM ALIGNMENT**

The upper and lower taping heads are factory set for 72 mm [3 in] wide tape. If narrower tape is going to be run, both upper and lower tape drums must be adjusted to maintain tape web alignment through taping heads.

To adjust tape drums fore narrower width tape, see Section II, "Adjustments – Tape Web Alignment", page 11.

#### TAPE LEG LENGTH

Taping heads are pre-set to apply 70 mm [2.75 in], long tape legs. To change tape legs to 50 mm [2 in], see Section II, "Adjustments" – Tape Leg Length", page 13.

### Installation and Set-Up (Continued)

#### PNEUMATIC CONNECTION



WARNING – Use care when working with compressed air.

The case sealer requires approximately 14.5 cubic centimeters [0.87 SCFM] per cycle at 690 Kpa [100 PSIG]; approximately 100 cubic centimeters [6.1 SCFM] at 7 boxes per minute.

Using customer supplied air hose (8 mm [5/16 in] I.D.) and clamp provided with machine, connect plant air to barbed fitting on inlet side of "On/Off" valve. See Figure 2-4. Note: If another type of connector is desired, the barbed fitting can be replaced with the desired 1/4-18 NPT connector.

#### Notes

- Lubricated air is not required. However, if it is used, it should continue to be used as it will have flushed out the original grease installed by the manufacturer.
- The air valve has provisions for lockout/ tagout according to plant regulations.

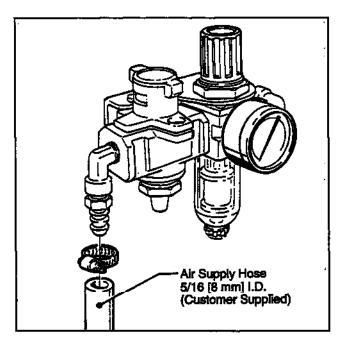


Figure 2-4 - Pneumatic Connection

#### **ELECTRICAL CONNECTION**

Customer must install desired type of plug (NEC-L15-20P, recommended) on the standard three conductor power cord provided at the bottom of the control panel for 208-240 VAC, 60 Hz, 3 phase, 6.6 Amp electrical service. The receptacle providing this service shall be properly grounded. Before the power cord is plugged into outlet, make sure the red main power switch on the lower right of the control panel is turned to "O" (Off) and that all packaging materials/tools are removed from machine (refer to Figure 3-2). Do not plug electrical cord into outlet until ready to run machine.

#### Notes

- If motors run in wrong direction, reverse any two wires at plug.
- The main power switch (on control panel) has provisions for lockout/tagout according to plant regulations.
- Machines outside the U.S. may be equipped with 220/240 Volt, 50 Hz systems, or other electrical requirements compatible with local practice.

#### INSTALLATION IN LINE/INITIAL START-UP

After completing the above "Installation and Set-Up" procedure, continue through "Operation" for tape loading and start-up to be sure case sealer is properly adjusted to run boxes.

After an initial test run off line, install the machine on line using the following guidelines:

- · Machine must be installed level.
- Infeed/exit conveyors must be straight and level with case sealer bed for a distance equal to maximum box size to be sealed.
- A ball caster infeed conveyor is recommended for long or heavy boxes to enable centering of how

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### Operation ·

IMPORTANT – Before operating the case sealer, read all the "Safety Labels", pages 3-6, and "Warnings", on page 19, as well as all of the "Operation" instructions.

Refer to Figure 3-1 and 3-2 to acquaint yourself with the various components and controls of the case sealer. Also see Section II, page 6 for taping head components.

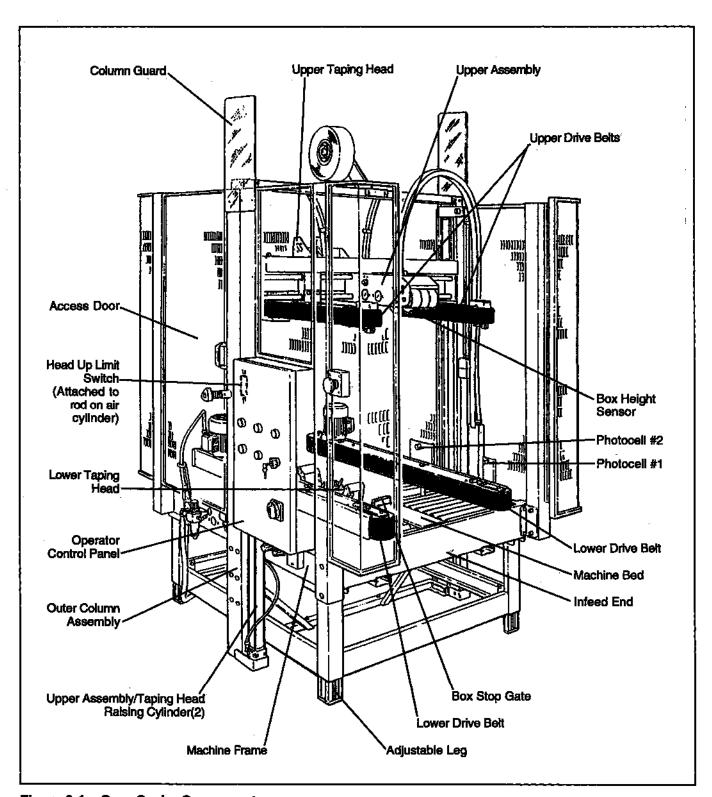


Figure 3-1 - Case Sealer Components

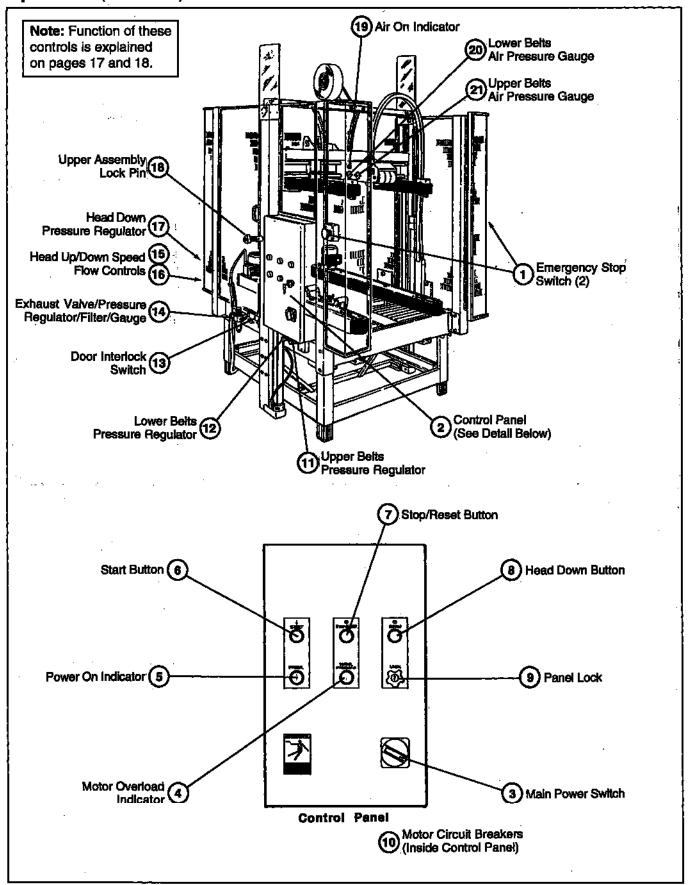


Figure 3-2 - Controls, Valves and Switches

restart.

- 1) Emergency Stop Switch (2)
  The emergency stop switches located on both sides of the infeed end of the case sealer, stops both sets of drive motors/belts. After being actuated, the switch button must be turned counterclockwise (out) to enable
- (2) Operator Control Panel

  The control panel contains all electrical switches and indicators that operate/control the machine except for the emergency stop and door interlock switches.
- (3) Main Power Switch
  Turns electrical power for drive motors/belts
  and solenoid valves on and off. ("0" if off,
  "1" is on.)

**Note** – The main power switch has provisions for lockout/tagout according to plant regulations.

- Motor Overload Indicator
  Illuminates if one or more of the motor circuit breakers has tripped.
- (5) Power On Indicator
  A visual indicator that main electrical power switch is on.
- 6 Start Button
  Pressing start button prepares machine for case sealing cycle, box stop gate goes up.
- Stop/Reset Button Stops motors, raises upper assembly/taping head to full up position.
- 8 Head Down Button
  With main power on, momentarily push to lower upper assembly/taping head for tape loading or other service procedures.
- 9 Panel Lock
  Locks control panel door to keep
  unauthorized personnel away from high
  voltage inside control panel.

WARNING – Keep door locked, high voltage inside control panel is hazardous and could cause severe injury.

10 Motor Circuit Breakers (2)
Protect drive motors from circuit overloads.

If motor overload indicator illuminates, turn off main power (0), determine cause of overload and correct, wait two minutes, then unlock and open control panel door and reset tripped circuit breaker.

- Upper Belts Pressure Regulator
  Adjusts belt pressure against box depending on weight/contents of box. Pressure must be adequate to grip and convey box without crushing box. The air regulator is adjusted by pulling out and rotating to adjust and pushing in to lock the setting as shown in Figure 3-3.
- Lower Belts Pressure Regulator (Same as 11)
- Door Interlock Switch
  Cuts off electric power (drive belts) to stop machine when access door is opened.

WARNING – Do not attempt to override door interlock or serious injury could occur.

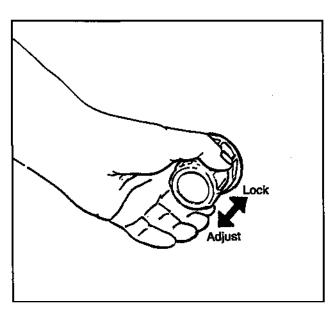


Figure 3-3 - Secondary Air Regulator

14 Exhaust Valve Pressure Regulator/Gauge/Filter – Figure 3-4

This set of pneumatic controls, regulates and filters plant air supply to the separate pneumatic circuits of the case sealer.

Exhaust Valve — On turn to "SUP" (Supply), Off turn to "EXH" (Exhaust). Note: Turning exhaust valve off automatically bleeds air pressure from the case sealer air circuits.

Always turn the air off when machine is not in use, when servicing the machine, or when connecting or disconnecting air supply line.

**Note** – The air valve has provisions for lockout/ tagout according to plant regulations.

Pressure Regulator regulates main air pressure to the machine. To adjust pressure, pull knob up and turn – push down to lock setting. (Adjust to 6-7 bar [90-100 PSIG])

Filter removes dirt and moisture from plant air before it enters the case sealer pneumatic circuits. If water collects at the bottom of the bowl, lift up on the valve at the bottom of bowl to drain.

Head Down Speed Flow Control
Adjust so head down speed is slow enough that box being sealed is not crushed.

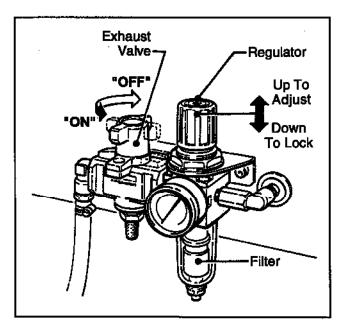


Figure 3-4 - Air Regulator, Drive Belts

- Head Up Speed Flow Control
  Adjusts upper assembly/taping head up speed to prevent it from crashing into stop when reset button is pushed.
- 17) Head Down Pressure Regulator
  Provides regulated air to head up/head down
  flow controls. Adjust in conjunction with the
  flow controls.
- 18 Upper Assembly Lock Pin
  Mechanically locks the upper assembly when
  access door is opened. Upper Assembly
  must be fully up or down to insert lock pin
  and open door.
- (19) Air On Indicator

  The optical indicator located on the upper assembly indicates red when compressed air circuit is on.
- 20 Lower Belts Air Pressure Gauge
  Provides a visual reference of air pressure
  required to adequately center/convey a
  certain size/weight box.
- 21) Upper Belts Air Pressure Gauge
  Provides a visual reference of air pressure
  required to adequately center/convey a
  certain size/weight box.

#### Machine Operating Sequence

- 1. Main power and air supply "On",
- 2. Release Emergency Stop switches.
- Press Stop-Reset.
- Push Start button start button indicator light "On", Box Stop Gate up.
- Feed box into machine when photocell #1 is blocked, 30 second cycle timer starts, box gate lowers, lower side belts come in to center box and upper assembly/taping head descends.
- When upper taping head box height sensing rollers contact box, head stops, upper side belts come in and all belts start.
- Box is conveyed through taping heads.
- After trailing edge of box clears photocell #1, box stop gate raises.
- When box clears photocell #2, upper belts go out, lower belts go out and upper assembly/ taping head goes up.
- When cylinder reed switch is made, or if another box is fed into machine while upper head is still rising, head stops and cycle is reset for next box.

## $oldsymbol{\Lambda}$

### **WARNINGS**

- 1. Turn electrical and air supply off when machine is not in use.
- Turn electrical and air supply off and disconnect before servicing taping heads or performing any adjustments or maintenance on the machine.
- 3. Before turning machine on, be sure no tools or other objects are on the machine bed.
- 4. Be aware of the pneumatically controlled movement of the upper assembly and upper and lower box centering/drive belts. Keep away from these components when air and electrical supplies are on.
- Keep hands and loose clothing away from moving belts.
- DO NOT run boxes less than 380 mm [15 in] in length.
- 7. Never attempt to remove Jammed boxes from the machine while machine is running.
- 8. Machine access door must be closed when machine is running. DO NOT ATTEMPT TO OVERRIDE DOOR INTERLOCK SWITCH.
- 9. Both the upper and lower taping heads utilize extremely sharp knife blades for tape cut-off. The blades are located under the orange blade guard which has the "WARNING SHARP KNIFE" label. Before loading tape, refer to Section II, Figures 3-1 and 3-2 on page 6, to identify the blade location. Keep hands out of this area except as necessary to service the taping heads.
- Fallure to comply with these warnings could result in severe personal injury and/or equipment damage.

### Tape Loading/Threading

#### LOWER TAPING HEAD

- 1. Turn Main Power switch to 1 (on) and Exhaust Valve to SUP (supply).
- Press Stop/Reset button upper assembly/ taping head will go to raised position. Press again if head up position has been limited by moving reed switch down for smaller boxes.
- 3. Unlatch and open access door.
- Remove lower taping head by pulling straight up.

CAUTION - Taping head with full roll of 72 mm (3 in) wide tape weighs approximately 13.6 kg [30 lbs]. Use correct body posture when lifting taping head to prevent injury.

- 5. Load/thread tape as explained in Section II, pages 7 and 8.
- After loading tape and replacing taping head, close door, latch and press Start button.

 Press Start/Reset button – upper assembly/ taping head will go to raised position ready for case sealing.

#### **UPPER TAPING HEAD**

- Turn Main Power switch to 1 (on) and Main Air Valve to SUP (supply).
- Press and hold Head Down button upper assembly/taping head will descend to lowered position.
- 3. Unlatch and open access door.
- Load/thread tape as explained in Section Π, pages 7 and 8.
- 5. After loading/threading tape, close door, latch, and press Start.
- Press Start/Reset button upper assembly/ taping head will go to raised position ready for case sealing.

#### Case Sealing

- 1. Turn Main Power switch to 1 (on) and Exhaust Valve to SUP (supply).
- Check both Emergency Stop switches to be sure they are released, access door is closed securely and upper assembly/taping head Lock Pin is released.
- 3. Press Stop-Reset button.
- Push Start button Start button will illuminate and Box Stop Gate will raise.
- Feed box into machine until box touches Box Stop Gate. Machine will start its cycle. (Operator must keep upper flaps folded and down and also help center box when lower drive belts come in.)

WARNING – Operator must stay away from drive belts or serious injury could occur. DO NOT attempt to run boxes less than 380 mm [15 in] in length.

At end of cycle, Box Stop Gate raises, upper belts retract, lower belts retract and upper assembly/taping head returns to raised position ready for another box.

**Note** – Because the photocells operate on reflected light, product labels or tape should not be placed near the level of the photocells.

- Turn electric and air supplies off when machine is not in use.
- 7. Reload and rethread tape as necessary.
- Be sure machine is cleaned and lubricated according to recommendations in 
  "Maintenance" section of this manual.

#### Notes

- Machine or taping head adjustments are described in "Adjustments", Section I for machine or Section II for taping heads.
- Box drive motors are designed to run at a moderate temperature of 40°C [104°F]. In some cases, they may feel hot to the touch.

#### **Box Jams**

If a box jam occurs:

- Press Stop-Reset drive belts will stop and upper assembly will raise. Press Stop-Reset again if head up position has been limited by moving reed switch down.
- 2. Unlatch and open access door.
- 3. Carefully remove jammed box from machine.
- 4. Determine cause of jam and make corrections to prevent from occurring again.
- Close and latch access door and press Start button to restart machine.

### **Machine Operating Adjustments**

See "Adjustments", page 25 for machine operating adjustments such as:

- a. Upper assembly/taping head maximum height
- b. Side belt pressure upper belts
   lower belts
- c. Head down position

### Maintenance

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

WARNING – Turn off and disconnect air and electrical supplies before beginning maintenance. If electrical power is not disconnected, severe injury to personnel could result.

### Cleaning

Note – Never attempt to remove dirt from taping heads by blowing it out with compressed air. This can cause the dirt to be blown inside the motor and onto sliding surfaces which may cause premature equipment wear. Never wash down or subject equipment to conditions causing moisture condensation on components. Serious equipment damage could result.

Regular slotted containers produce a great deal of dust and paper chips when processed or handled in equipment. If this dust is allowed to build-up on machine components, it can cause component wear and overheating of drive motor. The dust build-up can best be removed from the machine by a shop vacuum. Depending on the number and type of

boxes sealed in the case sealer, this cleaning should be done approximately once per month. If the boxes sealed are dirty, or if the environment in which the machine operates is dusty, cleaning on a more frequent basis may be necessary. Excessive dirt build-up that cannot be removed by vacuuming should be wiped off with a damp cloth.

#### Lubrication

Like most other equipment, the taping head must be properly lubricated to insure long, trouble free service. Most of the machine bearings are permanently lubricated and sealed and do not need to be greased. Drive motors are also permanently lubricated and do not require additional lubrication.

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

#### MACHINE LUBRICATION

Refer to Figure 4-1 for machine lubrication requirements.

#### TAPING HEAD LUBRICATION

See Section II, "Maintenance-Lubrication", page 10.

Lubrication Chart				
REF.	DESCRIPTION	(HOURS)	LUBRICANT (SEE BELOW)	REMARKS
-	Column Assembly	1000	<u>~===</u> ,	Bearings & track
_	Belt Drive Assemblies	500		Chains & sprockets
		500	~==	Support levers & shalls
_	Column Lock Pin	A/A	~~~	Pin & support
<u>(A)</u>	Upper Orive Support Rails	500	~~~	Use needle point gun at thing
		500	~~~	Chain & aprockets
₿	Upper Head Wheel Actuato	or 500	<b>ک</b> م	Pivot points
Recommended Lubricante:  Grease - Texaco Martex Multi-Purpose #2 or equivalent (3M P/N 78-8000-7816-0) (Note - Grease gun is symbolic, there are no zerk littings on mechine.)  Oil - Light Weight Rated 100 SSU 9 100° F (3M P/N 78-8000-8869-7)				

Figure 4-1 - 800rks Lubrication Points

### Maintenance (Continued)

WARNING - Turn off and disconnect air and electrical supplies before beginning maintenance. If electrical power cord is not disconnected, severe injury to personnel could result.

### Blade Replacement, Taping Head

See Section II, "Maintenance-Blade Replacement", page 9.

### **Drive Belts, Upper**

Note – 3M recommends the replacement of drive belts in pairs, especially if belts are unevenly worn.

## REPLACEMENT - SEE STEPS 1 THRU 7 TENSION ADJUSTMENT - SEE STEPS 1, 2, 6 & 7

- Push Down button to lower upper assembly, latch and open access door.
- 2. Remove screw (A), washer (B), and belt tensioner cover (C), Figure 4-2.

- Turn belt adjustment screws (D)
   counterclockwise on both upper and lower
   tension assemblies until belt is loose. See
   Figure 4-2. Slip belt down off drive rollers and
   discard belt.
- Insert pin in new belt and install belt up onto drive rollers. Pin must not extend beyond edge of belt.

Important - Before installing new drive belt, check the inside surface of the belt for drive direction arrows and install belt accordingly. If no arrows are shown, the belt may be installed either way.

 To adjust drive belt tension, turn adjustment screws (D) equally on both the upper and lower tension assemblies. Turn screws clockwise to increase tension or counterclockwise to decrease tension. See Figure 4-3.

Use a force gauge to pull the belt outward 25 mm [1 in] at midspan, as shown in Figure 4-6, with a pulling force of 3.5 kg [7 lbs].

- Replace belt tensioner cover and repeat the above procedure on other belt.
- Close and latch door and turn on air and electrical supplies. Push Stop-Reset button and upper assembly will return to its raised position.

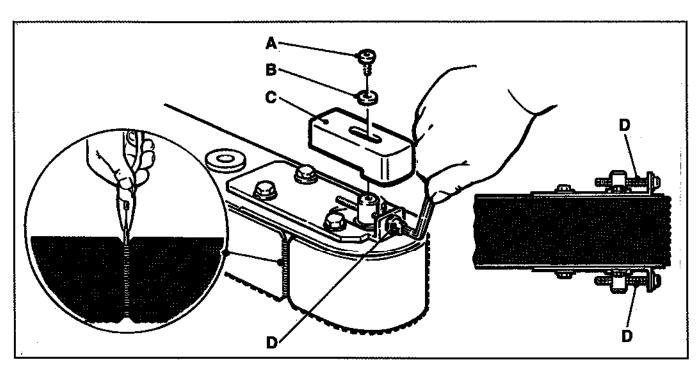


Figure 4-2 - Drive Belt, Upper

### **Maintenance** (Continued)

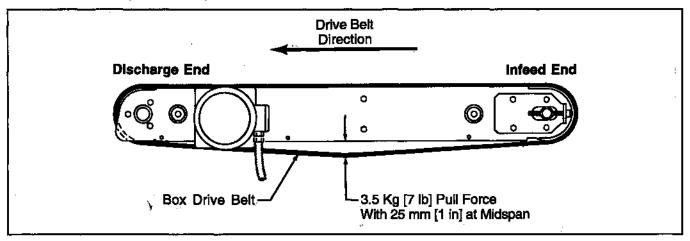


Figure 4-3 - Drive Belt Tension Adjustment, Upper

### **Drive Belts, Lower**

Note – 3M recommends the replacement of drive belts in pairs, especially if belts are unevenly worn.

REPLACEMENT - SEE STEPS 1 THRU 11 TENSION ADJUSTMENT - SEE STEPS 1-5 & 9-11

- With upper assembly/taping head in raised position, latch and open access door.
- Remove screw (A) and special washer (B) from front and rear arm assembly pivots. Figure 4-4.

 Lift belt drive assembly (C) up off pivots and place on 100-150 mm [4-6 in] blocks on machine bed.

**WARNING** – Each drive assembly weighs approximately 20.4 kg [45 lbs]. To prevent injury, drive assembly should be lifted by two people, one at the front and one at the rear.

 Remove five screws (D) and side cover (E) from drive assembly. Figure 4-4.

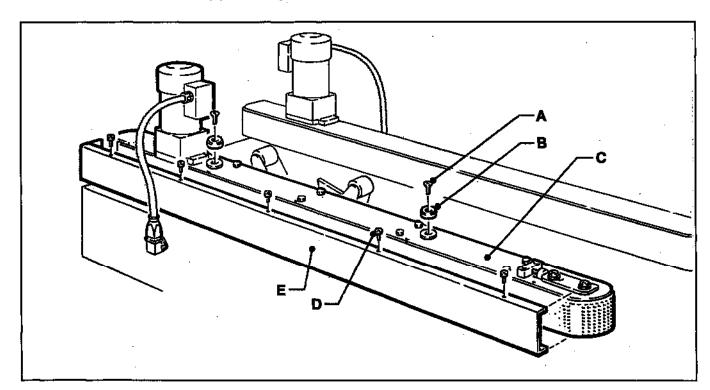


Figure 4-4 - Drive Belt, Upper

### Maintenance (Continued)

- Loosen, but do not remove the lock nut (F) on both upper and lower belt tension assemblies. See Figure 4-5.
- Turn belt adjustment screws (G) clockwise on both the upper and lower tension assemblies to loosen belt.
- Remove and discard old drive belt.
- Install new drive belt around drive rollers and install pin as shown in Figure 4-5. Pin must not extend beyond edge of belt.

Important – Before installing new drive belt, check the inside surface of the belt for drive direction arrows and install belt accordingly. If no arrows are shown, the belt may be installed either way.

- To adjust drive belt tension, turn adjustment screws (G) equally on both the upper and lower tension assemblies. Turn screws counterclockwise to increase tension or clockwise to decrease tension.
  - Use a force gauge to pull the belt outward 25 mm [1 in] at midspan, as shown in Figure 4-6, with a pulling force of 3.5 kg [7 lbs].
- Tighten lock nut (F) on both tension assemblies to secure the tension setting.
- Replace side cover and screws, place drive assembly on pivots and secure in place with special washers and screws.

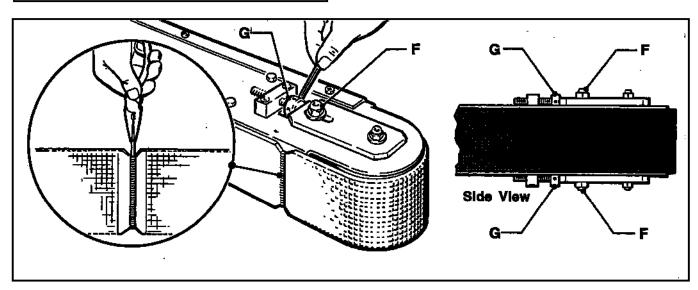


Figure 4-5 - Box Drive Belt, Lower

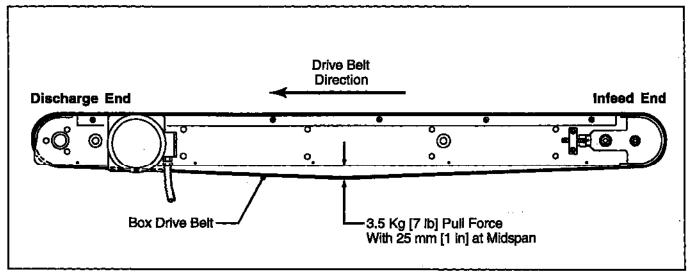


Figure 4-6 - Drive Belt Tension Adjustment, Lower

### Adjustments

WARNING - Turn off and disconnect air and electrical supplies before beginning adjustments. If power cord is not disconnected, severe injury to personnel could result.

#### **Drive Belt Tension**

Tension adjustment of the drive belts may be required during normal operation. Belt tension must be adequate to positively move the box through the machine and belts should run fully on the surface of the pulleys at each end of the drive assembly. The idler pulleys on the infeed end are adjusted in or out to provide proper belt tension. Each belt is adjusted separately.

To adjust belt tension, see "Maintenance - Drive Belts", pages 22 thru 24.

#### **Drive Belt Side Pressure**

Adjust so box is conveyed securely without crushing.

### Upper Assembly/Taping Head, Down Position

Adjust so taping head is flush to 6 mm [0.25 in] above the box. This can be influenced by:

- a. Sensor adjustment inside upper assembly.
- b. Head down flow control.
- c. Head balancing pressure.

### Upper Assembly/Taping Head, Maximum Height

Use when all boxes are below machine maximum box height capacity.

- a. Measure height of tallest box (flaps closed).
- Subtract this dimension from 1145 mm. [45 in].
- c. Loosen and slide the reed switch down by this amount.
- d. Test run boxes to ensure proper performance.

WARNING - Use care when working near tape cut-off blades on taping heads as blades are extremely sharp. If care if not taken, severe injury could result

### **Taping Head Adjustments**

TAPE WEB ALIGNMENT -Section II, Page 11

TAPE DRUM FRICTION BRAKE -Section II, Page 11

APPLYING MECHANISM SPRING -Section II, Page 11

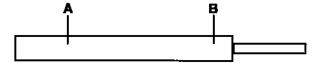
ONE-WAY TENSION ROLLER -Section II, Page 12

TAPE LEG LENGTH ADJUSTMENT -Section II, Page 13

### Adjustments (Continued)

### **Factory Set Points**

Upper side drive cylinder flow controls: A – "drives in speed" full open, B – "drives out speed" 3 turns from closed.



Lower side drive flow controls: A – "drives out speed" turn out 5-1/2 turns from closed, B – "drives in speed" turn out 12 turns from closed.

Upper cylinder port balance pressure set to 2.4 bar [35 psi].

Upper side belt pressure set to 2.8 bar [40 psi]. Lower side belt pressure set to 2.8 bar [40 psi].

Flow control "head down speed" 7 turns from closed.

Flow control "head up speed" 7-1/2 turns from closed.

Box height sensor set to actuate when wheel is 15.9 mm [0.62 in] below frame. Total height is 25 mm [1 in]. (9.5 mm [0.38 in] travel causes actuation.)

Reed switch set at 25 mm [1 in] below lower edge of upper cylinder head. Measure to reed switch clamp bracket. Results in 1295 mm [51 in] opening.

All cylinder cushions set to 1/8 - 1/4 turn from full closed.

### **Special Set-Up Procedure**

WARNING – Turn off and disconnect air and electrical supplies before beginning Special Set-Up Procedure. If power cord is not disconnected, severe injury to personnel could result.

### Changing the Tape Leg Length (From 70 to 50 mm [2.75 to 2 in])

No adjustments are necessary on the machine frame, only the taping heads must be adjusted.

Remove taping heads from machine and follow instructions given in Section II, "Adjustments-- Tape Leg Length", page 13.

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## **Troubleshooting**

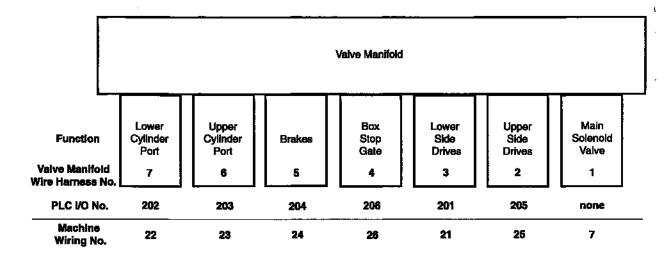
The Troubleshooting Guide lists some possible machine problems, causes and corrections. Also see Section  $\rm II$  "Troubleshooting", pages 15 and 16 for taping head problems.

### **Troubleshooting Guide**

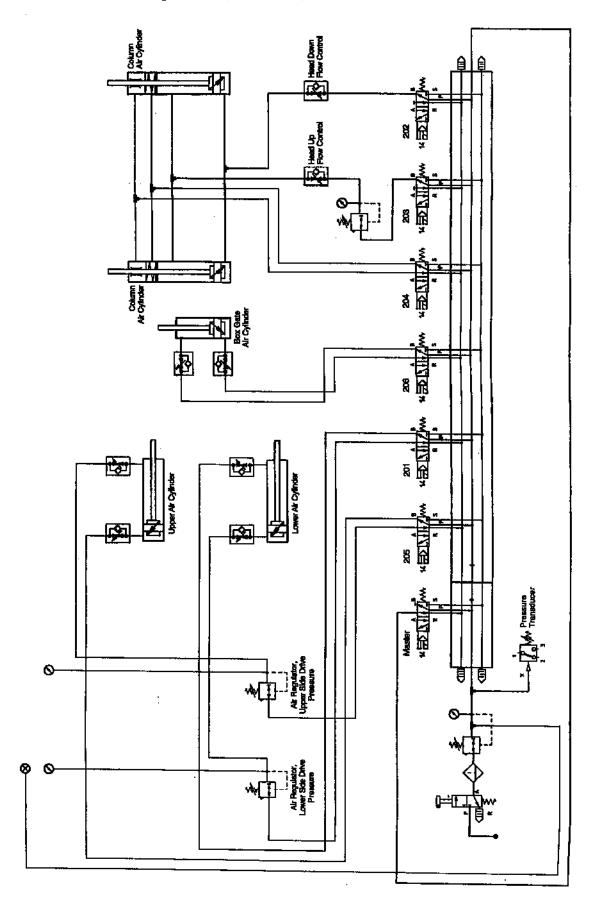
Problem	Cause	Correction	
Drive belts do not convey boxes	Narrow boxes	Check machine specifications. Boxes are narrower than recommended, causing slippage and premature belt wear.	
	Worn drive belts	Replace drive belts	
	Insufficient side belt pressure	Increase pressure regulator setting(s)	
Drive belts do not turn	Worn or missing friction rings	Replace friction rings	
	Drive belt tension too low	Adjust belt tension	
	Electrical disconnect	Check power and electrical plug	
	Circuit breaker tripped out (Motor overload indicator on)	Determine cause, reset circuit breaker	
Drive belts break	Worn belt	Replace belt	
	Excessive belt tension	Adjust belt tension	
The blade does not cut tape or the tape end is jagged or shredded	Upper head is not coming down close enough to box	Head must be 6 mm [0.25 in] maximum from box surface. Adjust head down flow control or box height sensor Upper flaps must be held closed by operator.	
Taping head rollers push into the box and jam	Flaps aren't supporting tape head pressure	Add filler material to packaging. Contents must support flaps.	
Upper head assembly goes up very rapidly and impacts against stop	Incorrect setting of counterpressure and head up flow control	Adjust, See "Adjustments".	
Drive belts track off pulley and jam	Insufficient Belt Tension	If center V-guide is worn, replace belt. Adjust belt tension equally on top and bottom so that 3.5 kg [7 lbs] is required to deflect belt 25 mm [1 in] at midspan	

## **Pneumatic/Electrical Diagrams**

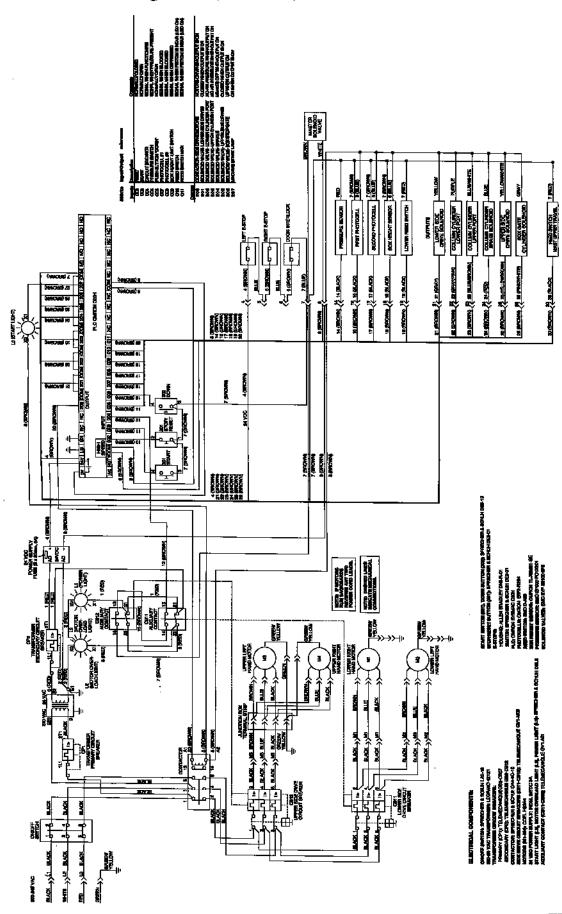
## 800rks Solenoid Valves (Looking at machine from exit end)



## Pneumatic/Electrical Diagrams (Continued)



## Pneumatic/Electrical Diagrams (Continued)



#### **Spare Parts/Tools**

#### **Recommended Spare Parts**

A spare parts kit can be ordered, part number 78-8098-8902-1 which includes the following recommended spare parts. In addition, refer to the parts illustrations to identify other spare parts according to plant policy.

Qty.	Section/Ref. No.	Part Number	Description
2	II/2949-15	78-8057-6181-0	Roller – Applying
2	II/2950-5, 2955-5	78-8057-6180-2	Roller – Buffing
1	II/2950-10	78-8070-1274-1	Spring - Upper Extension (Silver)
2	II/2952-2	78-8028-7899-7	Blade – 89 mm/3.5 Inch
4	II/2952-12	78-8052-6602-6	Spring – Cutter
1	11/2955-10	78-8070-1273-3	Spring - Lower Extension (Black)
2	11/2952-6	78-8070-1390-5	Spring - Torsion
2	1/4955-62	78-8076-5452-6	Belt - Drive, Upper
2	I/4956-66	78-8054-8841-4	Belt - Drive, Lower

#### Label Kit

a stock item.

A label kit, part number 78-8095-1393-6, is available as a stock item. It contains all the safety labels used on the 800rks Case Sealer. Labels can also be purchased separately, see Parts Drawing/List, pages 70-71.

**Tool Kit**A tool kit, part number 78-8098-8883-8, containing the following spare parts and tools listed below is available as

Part Number	Description	Qty.	
78-8028-7899-7	Blade – 89 mm/3.5 Inch	2	
78-8052-6602-6	Spring	8	
78-8070-1274-1	Spring - Upper Extension (Silver)	1	
78-8070-1273-3	Spring - Lower Extension (Black)	1	
78-8076-4726-4	Threading Tool	1	
78-8076-4522-7	Tube Wrench – 17 mm	1	
78-8076-5279-3	Allen Wrench – 6 mm	1	
78-8076-5278-5	Allen Wrench – 5 mm	1	
78-8076-5277-7	Allen Wrench – 4 mm	1	
78-8076-5276-9	Allen Wrench – 3 mm	1	
78-8033-0518-0	Allen Wrench – 2 mm	1	
78-8091-0405-8	Open End Wrench – 25 mm	1	
78-8076-5280-1	Open End Comb. Wrench - 7-8 mm	1	
78-8076-5281-9	Open End Comb. Wrench 10-13 mm	1	

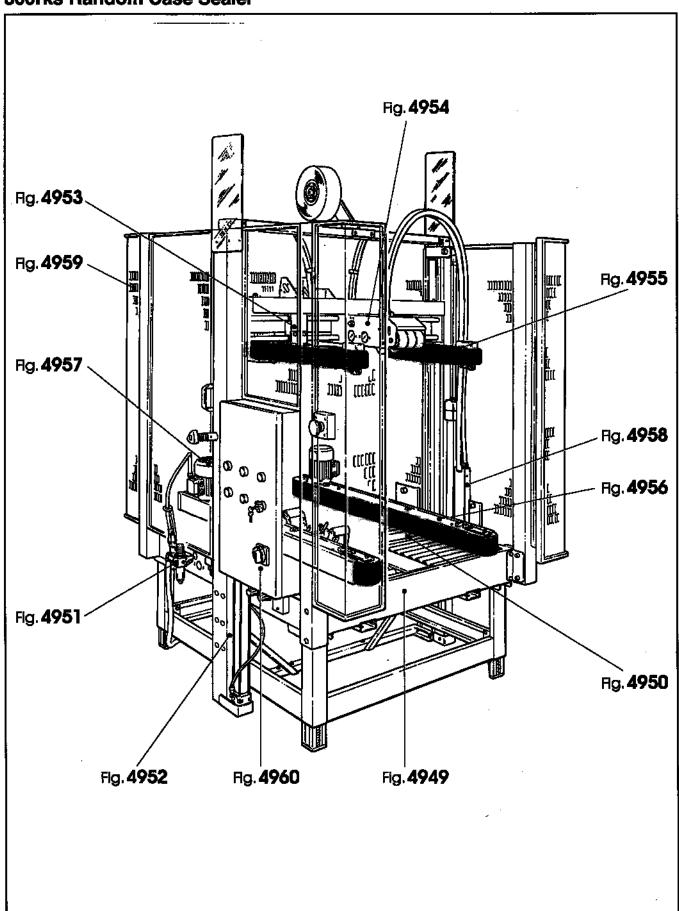
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## Replacement Parts - Illustrations and Parts Lists

#### 800rks Random Case Sealer, Type 19500 With AccuGlide™ II STD (3 Inch) Taping Heads

	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.
4.	Refer to first page inside front cover for replacement parts ordering information.
	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.	The <b>replacement parts list,</b> that follows each illustration, includes the <b>part number</b> and <b>part description</b> for the parts in that illustration.
2.	Refer to the <b>Figure or Figures</b> to determine the <b>individual parts</b> required and the <b>parts reference number.</b>
1.	Refer to first illustration, <b>800rks Assembly</b> , for the <b>Figure Number</b> that identifies a specific portion of the machine.

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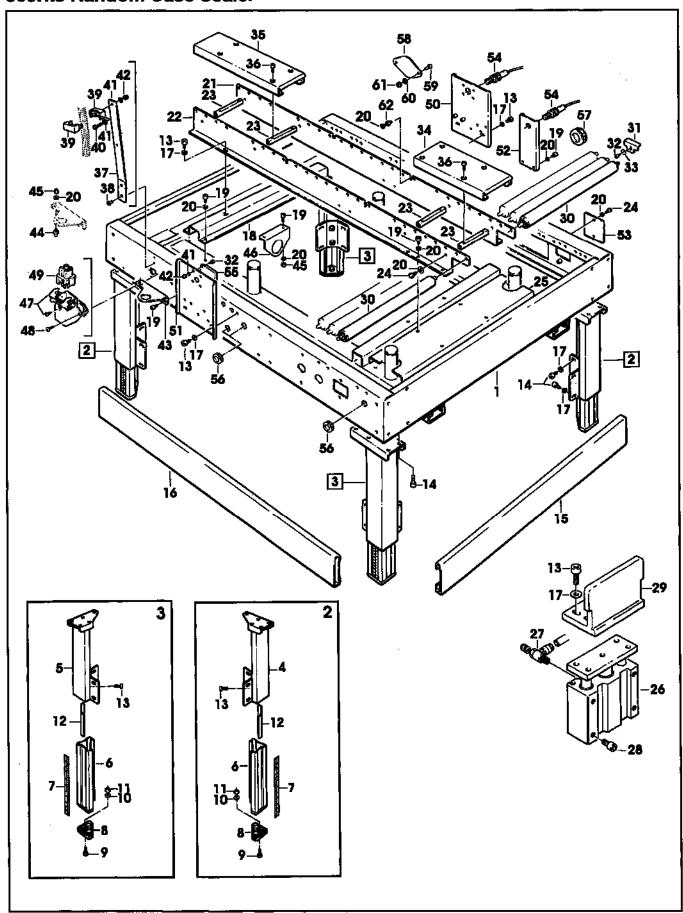


Figure 4949

Ref. No.	3M Part No.	Description
4949-1	78-8094-6281-1	Bed - Conveyor
4949-2	78-8094-6282-9	Leg Assembly – R/H
4949-3	78-8094-6283-7	Leg Assembly – L/H
4949-4	78-8094-6284-5	Leg – R/H
4949-5	78-8094-6285-2	Leg – L/H
4949- <u>6</u>	78-8094-6286-0	Lag Assembly – Inner
4949-7	78-8094-6287-8	Label – Leg Adjustment
4949-8	78-8052-6679-4	Pad - Foot
4949-9	26-1003-5842-8 26-1004-5507-5	Screw – Hex Hd, M8 x 20
4949-10 4949-11	26-1004-5507-5 78-8017-9313-0	Washer – M8 Nut – Self-Locking, M8
4949-12	78-8052-6677-8	Clamp – Inner
4949-13	26-1003-7963-0	Screw - Soc Hd, M8 x 16
4949-14	26-1003-7964-8	Screw - Soc Hd, Hex Soc Dr, M8 x 20
4949-15	78-8094-6288-6	Crossbar – Front/Rear
4949-16	78-8094-6289-4	Crossbar - Side
4949-17	78-8017-9318-9	Washer - Plain, 8 mm
4949-18	78-8094-6290-2	Support - Frame
4949-19	26-1003-7957-2	Scrèw – Soc Hd Hex Hd, M6 x 16
4949-20	26-1000-0010-3	Washer – Flat, M6
4949-21	78-8094-6291-0	Frame – Lower, R/H
4949-22	78-8094-6292-8	Frame – Lower, L/H
4949-23	78-8054-8867-9	Spacer - Valve Holder
4949-24	78-8010-7169-3	Screw – Hex Hd, M6 x 12
4949-25	78-8094-6293-6	Cover - Chain
4949-26	78-8094-6294-4	Cylinder – SMC, MGQM /40 mm Bore Stroke 50 mm
4949-27 4949-28	78-8091-0509-7 78-8091-0656-6	Regulator – Speed Screw – Hex Soc Hd, M8 x 12
4949-29	78-8094-6295-1	Gate - Stop
4949-30	78-8094-6296-9	Roller Assembly
4949-31	78-8094-6297-7	Plate – Roller
4949-32	78-8094-6210-0	Screw – Soc Hd Hex Hd, M4 x 10
4949-33	78-8017-9018-5	Washer - Plain, SPEC, M4
4949-34	78-8094-6298-5	Conveyor - Front
4949-35	78-8094-6299-3	Conveyor – Rear
4949-36	26-1003-794 <del>9</del> -9	Screw - Soc Hd Hex Soc, M5 x 12
4949-37	<u>78-8076-5059-9</u>	Strap – Wire
4949-38	78-8060-7803-2	Rivet – /4
4949-39	78-8060-7630-9	Tube Lock
4949-40	78-8010-7157-8	Screw – Hex Hd, M4 x 10
4949-41	78-8005-5740-3	Washer – Plain, 4 mm
4949-42	26-1003-6914-4	Nut Plastic Insert, M4
4949-43 4949-44	78-8091-0612-9 78-9001-0613-7	Plate – L/H Shaft – Valve
4949-45	78-8091-0613-7 26-1003-6916-9	Nut – Valve Nut – Locking, Plastic Insert, M6
4949-46	78-8094-6300-9	Plate - Filter Mount
4949-47	78-8060-7876-8	Cover Plug - Lateral
4949-48	78-8028-8208-0	Screw – 6PX9.5
4949-49	78-8060-7873-5	Plug - Female
4949-50	78-8094-6301-7	Support – Switch, R/H
4949-51	78-8094-6302-5	Support – Switch, L/H
4949-52	78-8094-6303-3	Support – Photocell
4949-53	78-8094-6304- <u>1</u>	Plate - Wire
4949-54	78-8076-5056-5	Photocell – Omron, PNP E3F R2 B4 /18
4949-55	78-8076-5057-3	Reflector Omron, E39-R1
4949-56 4040-57	78-8060-7758-8	Fairlead /20
4949-57 4949-58	78-8094-6177-1 78-8094-6305-8	Cap Blete - Cause
4949-59	78-8060-8087-1	Plate – Gauge Screw – M5 x 10
4949-60	78-8005-5741-1	Washer – Plain, M5
4949-61	26-1005-6859-6	Nut - Self-Locking, M5
4949-62	78-8070-1665-0	Stud - Hex, "AccuGlide" II 3 Inch
· - ·		The complete was made

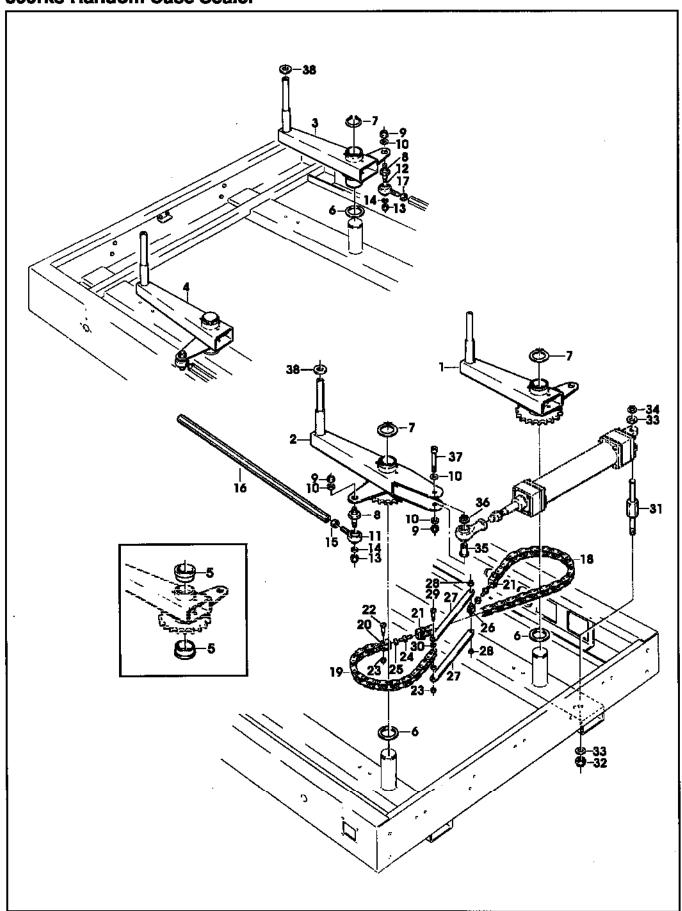


Figure 4950

Ref. No.	3M Part No.	Description
4950-1	78-8094-6180-5	Arm Assembly - Front, R/H
4950-2	78-8094-6181-3	Arm Assembly- Front, L/H
4950-3	78-8094-6182-1	Arm Assembly – Rear, R/H
4950-4	78-8094-6183-9	Arm Assembly – Rear, L/H
4950-5	78-8060-7522-8	Bushing
4950-6	78-8060-7534-3	Washer
4950-7	78-8060-7521-0	Lock Ring
4950-8	78-8060-7524-4	Stud – Tension Rod
4950-9	26-1003-6918-5	Nut - Plastic Insert, Hex Flange, M10
4950-10	78-8052-6566-3	Washer - Friction
4950-11	78-8076-4793-4	Ball Joint – KA 10 D
4950-12	78-8076-4794-2	Ball Joint - KAL 10 D
4950-13	78-8017-9313-0	Nut - Self-Locking, M8
4950-14	78-8017-9318-9	Washer - Plain, 8 mm
4950-15	78-8060-7525-1	Nut – Right Flat, M10
4950-16	78-8094-6184-7	Rod
4950-17	78-8060-7546-7	Nut – Left Flat, M10
4950-18	78-8094-6185-4	Chain – 3/8, 80 Pitch Long
4950-19	78-8055-0718-9	Chain - 3/8 Inch Pitch, 55 Pitch Long
4950-20	78-8054-8788-7	Chain Connector
4950-21	78-8054-8786-1	Chain Connector
4950-22	78-8060-7520-2	Screw - M3 x 20
4950-23	78-8059-5517-2	Nut - Self-Locking, M3
4950-24	78-8054-8785-3	Rod - Threaded, Right/Left
4950-25	78-8010-7418-4	Nut – Hex, M6
4950-26	78-8054-8784-6	Block - Chain
4950-27	78-8054-8787-9	Chain Link
4950-28	78-8056-3945-3	E-Ring - M4
4950-29	78-8060-7519-4	Screw - M3 x 25
4950-30	78-8054-8783-8	Washer – Special
4950-31	78-8060-7531-9	Stud - Cylinder
4950-32	78-8060-7532-7	Nut - Self-Locking, M12
4950-33	78-8017-9059-9	Washer – Flat For M12 Screw
4950-34	78-8056-3965-1	E-Ring – M8
4950-35	78-8060-7538-4	Bushing – Cylinder
4950-36	78-8060-7533-5	Lock Ring
4950-37	78-8060-7535-0	Screw - Soc Hd Hex Soc, M10 x 60
4950-38	78-8060-7541-8	Washer

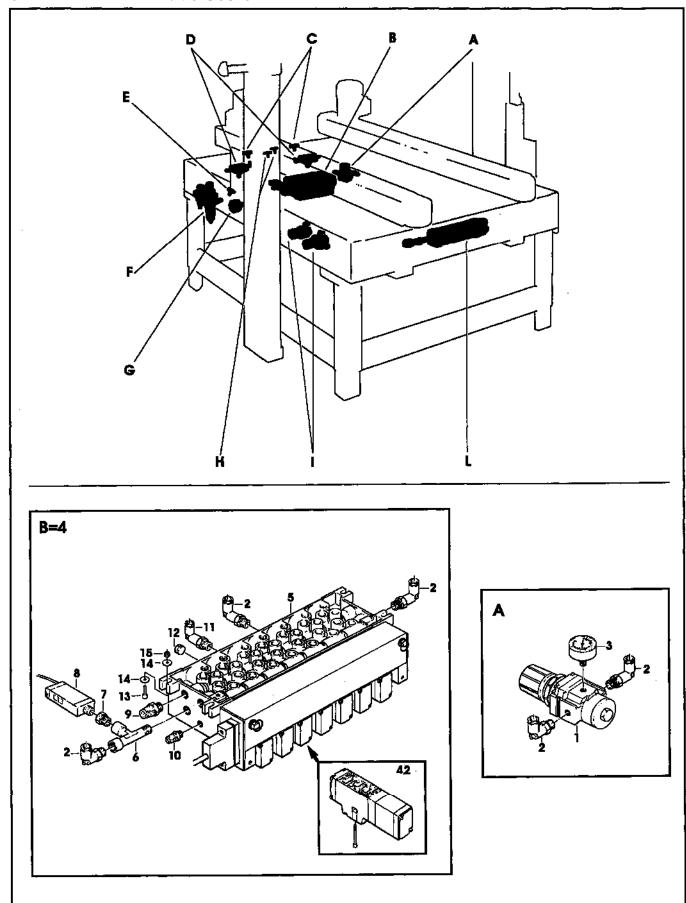


Figure 4951/1 of 2

## Figure 4951 (page 1 of 2)

Ref. No.	3M Part No.	Description
4951-1	78-8094-6178-9	Regulator – Pressure, SMC, EAR 3060
4951-2	78-8091-0315-9	Elbow – Legris, 3199.08.13
4951-3	78-8054-8838-0	Gauge – Wika, Air
4951-4	78-8094-6179-7	Valve Assembly
4951-5	78-8094-6273-8	Valve Assembly - SMC, EVV-5F2-01FD1
4951-6	78-8060-7753-9	Elbow - Aerpress, T Mff-RA-025-1/4 Inch - 1/4 Inch
4951-7	78-8094-6274-6	Reducer RA 014 1/4-1/8
4951-8	78-8094-6275-3	Pressure Switch - SMC, IS1000 FO1X201
4951- <del>9</del>	78-8076-4886-6	Muffler - General Sint, 1/4 Inch
4951-10	26-1005-6890-1	Muffler - General Stint, 1/4 Inch
4951-11	78-8055-0756-9	Union – Rotating, Legris, MR41-06-14
4951-12	78-8094-6276-1	Cap – Aerpress, 1/4 Inch
4951-13	78-8010-7165-1	Screw - Flat Hd Soc, M5 x 25
4951-14	78-8028-8214-8	Washer
4951-15	26-1005-6859-6	Nut - Self-Locking, M5
4951-16	78-8094-6277-9	Union Legris, TE, 31040800
4951-17	78-8060-7530-1	Speed Regulator – Festo
4951-18	78-8060-7529-3	Nut - Festo, GRM 3/8 Inch
4951-19	78-8094-6075-7	Union – Legris, Straight
4951-20	78-8076-4679-5	Union – Legris, Tee
4951-21	78-8091-0424-9	Filter/Regulator Assembly – SMC
4951-22	78-8076-4668-8	Filter – SMC, Pressure Regulator

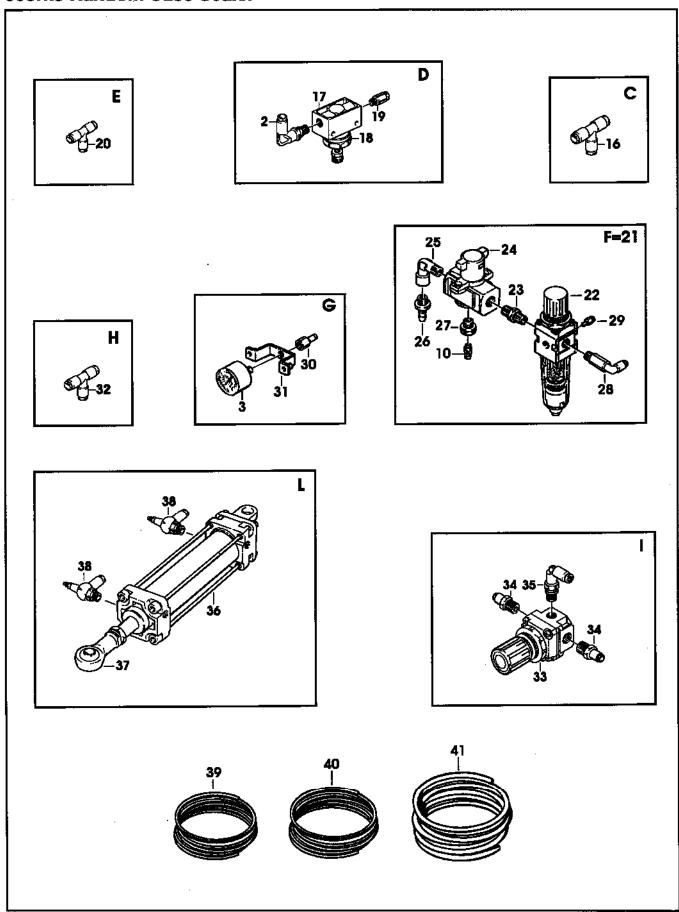


Figure 4951/2 of 2

## Figure 4951 (page 2 of 2)

Ref. No.	3M Part No.	Description
4951-23	78-8060-7899-0	Nipple – Aerpress, RA 012, 1/4 Inch-1/4 Inch
4951-24	78-8091-0715-0	Valve - SMC, EVHS-4500 F02-X116
4951-25	78-8060-7900-6	Union Aerpress, RA 022, 1/4 Inch-1/4 Inch
4951-26	26-1005-6897-6	Hose Connector – Aerpress
4951-27	78-8076-4670-4	Reducer – Aerpress, 3/8 Inch-1/8 Inch
4951-28	78-8091-0422-3	Elbow - SMC, KQW08-02S
4951-29	78-8076-4891-6	Union – SMC, Straight KQH04-01S
4951-30	78-8076-4672-0	Union Legris, Straight, Fernale
4951-31	78-8076-4535-9	Bracket
4951-32	78-8057-6170-3	Tee - Legris, Tubing 6 mm
4951-33	78-8094-6278-7	Pressure Reducer – SMC, 1/4 EAR
4951-34	26-1005-6901-6	Union - Legris, Straight
4951-35	26-1005-5909-0	Elbow – Legris
4951-36	78-8094-6279-5	Cylinder – SMC, C95, 50 mm Bore x 210 mm Stroke
4951-37	78-8060-7724-0	Nut - M22X1,5
4951-38	78-8091-0510-5	Regulator – Legris, Speed
4951-39	78-8060-8033-5	Tubing – Mazzer, 5M Skein, D4/3
4951-40	78-8060-8034-3	Tubing – Mazzer, 5M Skein, D6/4
4951-41	78-8076-4911-2	Tubing – Mazzer, 5 MT, D8X6
4951-42	78-8094-6280-3	Solenoid Valve - SMC, EVF S2100-5F2

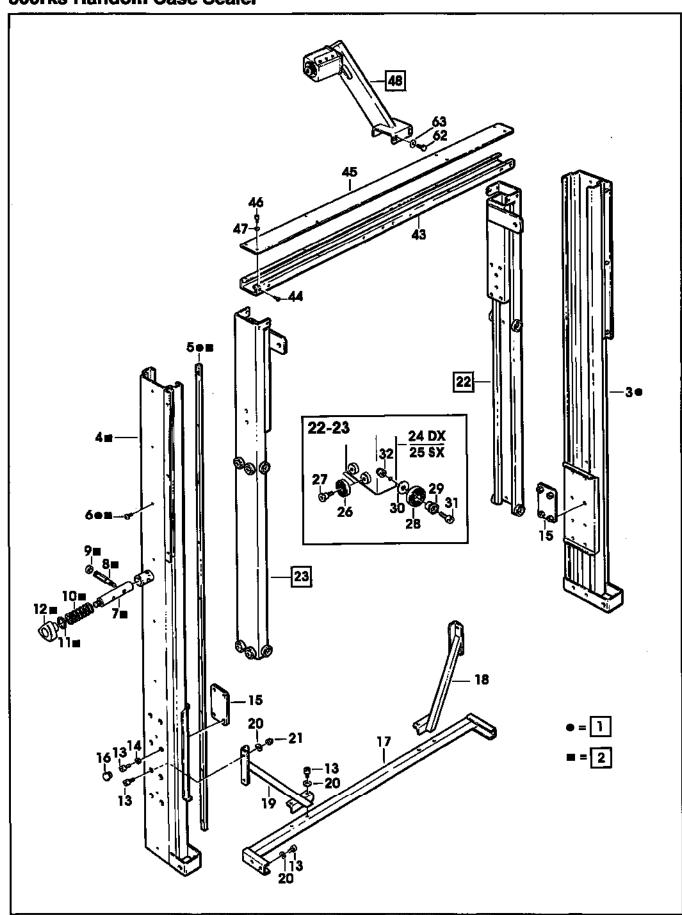


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## Figure 4952 (page 1 of 2)

Ref. No.	3M Part No.	Description
4952-1	78-8094-6319-9	Column Assembly – R/H
4952-2	78-8094-6320-7	Column Assembly – L/H
4952-3	78-8094-6321-5	Column - R/H
4952-4	78-8094-6322-3	Column – L/H
4952-5	78-8094-6323-1	Guide - Column
4952-6	78-8076-4503-7	Screw - M6 x 12
4952-7	78-8094-6324-9	Stud - Blocking
4952-8	78-8094-6325-6	Stroke End - Blocking
4952-9	78-8070-1269-1	Bumper
4952-10	78-8094-6326-4	Spring – Blocking
4952-11	78-8094-6327-2	Washer
4952-12	78-8070-1549-6	Knob – VTR-B-M10
4952-13	26-1003-7964-8	Screw - Soc Hd Hex Soc Dr, M8 x 20
4952-14	78-8094-6227-4	Washer - Special, /8
4952-15	78-8076-5474-0	Plate Assembly - Column Mount
4952-16	78-8054-8821-6	End – Cap
4952-17	78-8094-6328-0	Crossbar - Column
4952-18	78-8094-6329-8	Reinforcement – R/H
4952-19	78-8094-6330-6	Reinforcement L/H
4952-20	78-8017-9318-9	Washer – Plain, 8 mm
4952-21	78-8017-9313-0	Nut - Self-Locking, M8
4952-22	78-8094-6331-4	Column Assembly - Inner, R/H
4952-23	78-8094-6332-2	Column Assembly – Inner, L/H
4952-24	78-8094-6333-0	Column – Inner, R/H
4952-25	78-8094-6334-8	Column – Inner, L/H
4952-26	78-8059-5625-3	Bearing
4952-27	78-8076-4815-5	Screw - Bearing
4952-28	26-1000-4350-9	Bearing – 6002-2RS
4952-29	78-8076-4816-3	Bushing – Eccentric
4952-30	78-8076-5070-6	Spacer
4952-31	26-1003-7957-2	Screw - Soc Hd Hex Hd, M6 x 16
4952-32	26-1003-6916-9	Nut - Locking, Plastic Insert, M6
4952-33	78-8094-6335-5	Stud - Cylinder
4952-34	78-8076-5086-2	Spacer
4952-35	78-8056-3965-1	E-Ring — M8

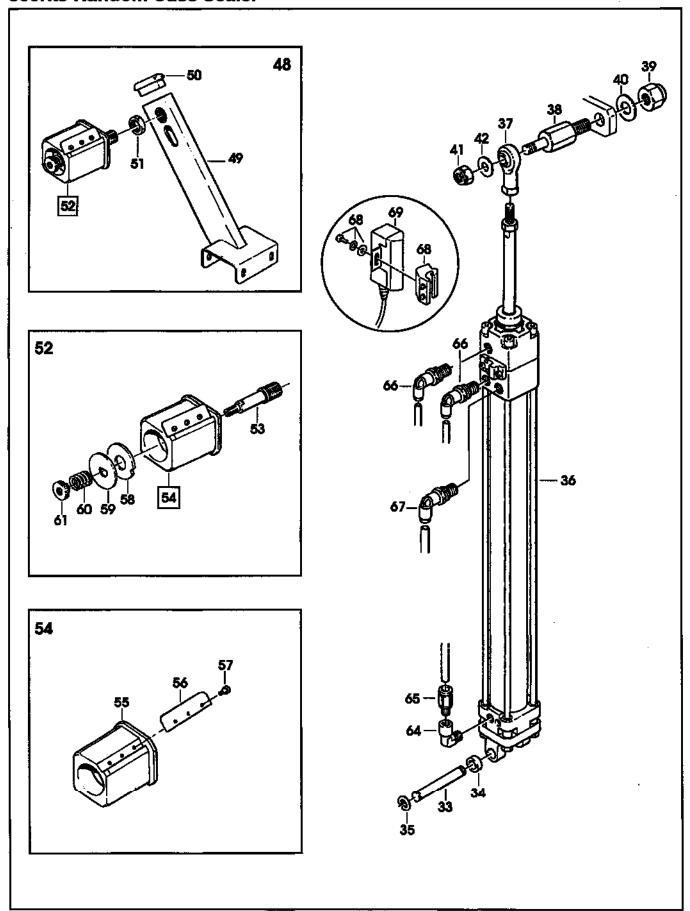


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## Figure 4952 (page 2 of 2)

Ref. No.	3M Part No.	Description
4952-36	78-8094-6336-3	Air Cylinder – SMC, C92LADB-40-1000
4952-37	78-8057-5747-9	Mount - Cylinder Rod End
4952-38	78-8094-6337-1	Stud - Threaded
4952-39	78-8094-6338-9	Nut Self-Locking, M16
4952-40	78-8094-6339-7	Washer – Flat, M16
4952-41	78-8060-7532-7	Nut Self-Locking, M12
4952-42	78-8017-9059-9	Washer - Flat For M12 Screw
4952-43	78-8094-6340-5	Crossbar - Column
4952-44	26-1001-9843-6	Screw - Flat Soc Hd, M6 x 16
4952-45	78-8094-6341-3	Cover
4952-46	78-8076-5255-3	Screw Phillips Hd, M4 x 12
4952-47	78-8005-5740-3	Washer – Plain, 4 mm
4952-48	78-8094-6342-1	Bracket Assembly – Tape Drum
4952-49	78-8091-0605-3	Bracket - Core Holder
4952-50	78-8070-1568-6	Cap – Bracket
4952-51	78-8017-9169-6	Nut – M18 x 1
4952-52	78-8076-4732-2	Tape Drum Assembly – 3 Inch Head
4952-53	78-8060-8462-6	Shaft - Tape Drum 3 Inch Head
4952-54	78-8076-4731-4	Tape Drum Assembly – 3 Inch Wide
4952-55	78-8054-8815-8	Tape Drum Assembly
4952-56	78-8054-8816-6	Leaf Spring
4952-57	26-1002-5753-9	Screw - Self-Tapping
4952-58	78-8060-8172-1	Washer - Friction
4952-59	78-8052-6271-0	Washer - Tape Drum
4952-60	78-8054-8826-5	Spring
4952-61	78-8060-7851-1	Ring Nut – Adjusting
4952-62	78-8032-0375-7	Screw Hex Hd, M6 x 16
4952-63	26-1000-0010-3	Washer - Flat, M6
4952-64	78-8060-7900-6	Union - Aerpress, RA 022, 1/4 Inch-1/4 Inch
4952-65	78-8094-6075-7	Union – Legris, Straight
4952-66	78-8094-6343-9	Elbow Legris, 32990613
4952-67	78-8094-6344-7	Elbow - Legris, 32990813
4952-68	78-8094-6345-4	Clamp Kit – SMC, F.M.C. BT-03
4952-69	78-8094-6346-2	Limit Switch - SMC, 24V CC 5-5-D A53L

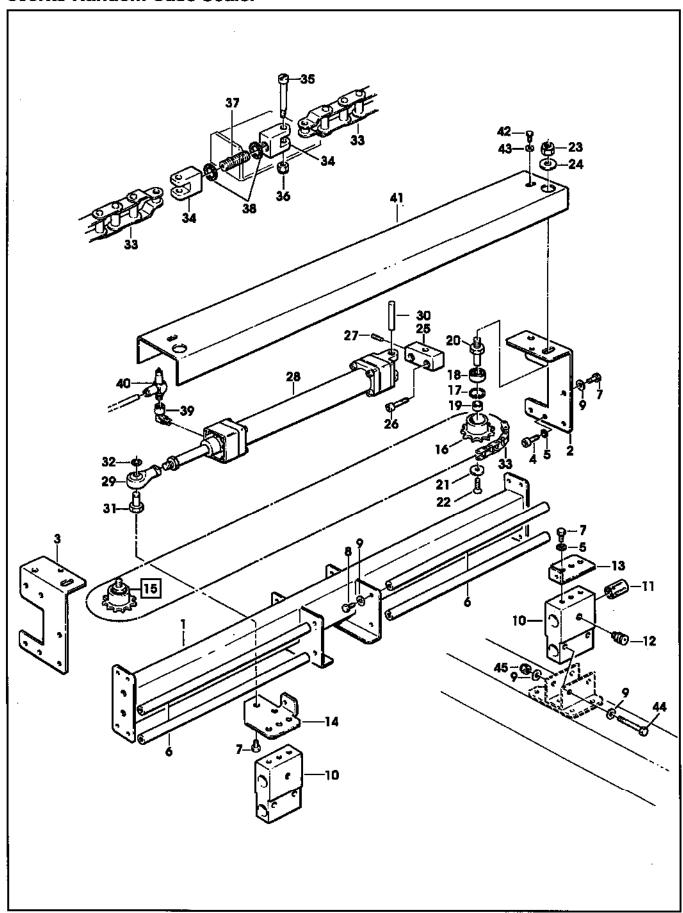


Figure 4953

4953-1 78-8094-6224-1 Cross Bar Assembly 4953-2 78-8094-6225-8 Bracket — R/H 4953-3 78-8094-6225-6 Bracket — R/H 4953-4 26-1003-7965-5 Screw — Soc Hd Hex Soc, M8 x 25 4953-5 78-8094-6227-4 Washer — Special, /6 4953-6 78-8094-6228-1 Screw — Soc Hd Hex Soc, M8 x 25 4953-7 26-1003-5841-0 Screw — M8 x 16 4953-8 26-1003-5841-0 Screw — Hex Hd, M8 x 20 4953-9 78-8017-9318-9 Washer — Plalin, 6 mm 4953-10 78-8094-6229-0 Support — Bushing 4953-11 78-8094-6220-8 Bushing — Ball, KH2030/P 4953-12 78-8094-6232-8 Bushing — Ball, KH2030/P 4953-13 78-8094-6232-4 Plate — Chain 4953-15 78-8094-6234-0 Sprocket Assembly 4953-16 78-8094-6234-0 Sprocket Assembly 4953-17 78-8096-789-5 Lock Ring — /28 4953-18 78-8094-6235-7 Spacer — Sprocket 4953-19 78-8094-6235-7 Spacer — Sprocket 4953-19 78-8094-6235-7 Spacer — Sprocket 4953-21 78-8094-6235-7 Spacer — Sprocket 4953-22 78-8094-6235-7 Washer — Plast ic Hd Hex, M6 x 20 4953-22 78-8094-6235-7 Washer — Ring M10 4953-24 78-806-8452-7 Washer — Ring M10 4953-25 78-8094-6235-7 Spacer — Sprocket 4953-26 78-8094-6235-7 Surve — Flat Hd Hex, M6 x 20 4953-21 78-806-8452-7 Washer — Ring M10 4953-22 78-808-8179-6 Screw — Flat Hd Hex, M6 x 20 4953-23 78-808-8452-7 Washer — M10 4953-24 78-806-8452-7 Washer — M10 4953-27 78-8017-9174-6 Screw — Flat Hd Hex, M6 x 30 4953-29 78-8094-6234-5 Sincer — Soc Hd Hex Soc, M8 x 45M 4953-29 78-8094-6234-5 Sincer — Soc Hd Hex Soc, M8 x 45M 4953-29 78-8094-6234-5 Sincer — Soc Hd Hex Soc, M8 x 45M 4953-29 78-8094-6242-3 Chain — 705, M3 4953-30 78-8069-6242-3 Chain — 705, M3 4953-31 78-8094-6241-5 Ring — Stop, /8 4953-33 78-8094-6241-5 Ring — Stop, /8 4953-34 78-8059-5617-2 Nut — Self-Locking, M3 4953-34 78-8059-5617-2 Nut — Self-Locking, M3 4953-34 78-805-50871-6 Screw — Hex Hd, M6 x 10 4953-44 28-1002-5949-3 Screw — Hex Hd, M6 x 10 4953-44 28-1002-5949-3 Screw — Hex Hd, M8 x 60 4953-44 28-1002-5949-3 Screw — Hex Hd, M8 x 60 4953-44 78-805-60871-6 Screw — Hex Hd, M8 x 60 4953-44 78-805-60871-6 Screw — Hex Hd, M8 x 60 4953-44 78-805-60871-6 Screw — Hex Hd, M8 x 60	Ref. No.	3M Part No.	Description
4953-3	4953-1	78-8094-6224-1	Cross Bar Assembly
4953-4 4953-5 78-8094-6228-2 4953-7 4953-7 26-1003-5841-0 Screw — M8 x 16 4953-8 26-1003-5841-0 Screw — M8 x 16 4953-8 26-1003-5842-8 4953-9 78-8017-99318-9 Washer — Plain, 8 mm 4953-10 78-8094-6229-0 Support — Bushing 4953-11 78-8094-6229-0 Support — Bushing 4953-13 78-8094-6230-8 4953-14 78-8094-6231-2 Plate — Chain/Cylinder 4953-15 78-8094-6234-0 Sprocket Assembly 4953-16 78-8094-6234-0 Sprocket Assembly 4953-17 78-806-7830-5 Lock Ring — /28 4953-18 78-8094-6235-3 Bearing 4953-19 78-8094-6236-5 Stud 4953-21 78-8094-6236-5 Stud 4953-21 78-8094-6236-5 Stud 4953-21 78-8060-8179-6 Screw — Flat I de Ex Sup M10 4953-24 78-8094-6237-3 Block — Cylinder 4953-25 78-8094-6237-3 Block — Cylinder 4953-27 78-8060-8452-7 Washer — Special /6.5X20X4 4953-22 78-8094-6236-5 Stud 4953-23 78-8094-6236-5 Stud 4953-24 78-8060-8452-7 Washer — Special /6.5X20X4 4953-25 78-8094-6237-3 Block — Cylinder 4953-27 78-8017-9174-6 Screw — Soc Hd Hex Soc, M8 x 45M 4953-27 78-8094-6238-1 Air Cylinder — C95 /40X3304-50 4953-32 78-8094-6238-1 Air Cylinder — C95 /40X3304-50 4953-32 78-8094-6238-1 Air Cylinder — C95 /40X3304-50 4953-32 78-8094-6241-5 Stud 4953-33 78-8094-6241-5 Ring — Stop, /8 4953-34 78-8094-6243-1 Washer — M10 4953-35 78-8094-6241-5 Ring — Stop, /8 4953-36 78-8094-6240-7 Stud 4953-37 78-807-5809-7 Screw — Soc Hd Hex Soc, M8 x 45M 4953-39 78-8094-6240-7 Stud 4953-30 78-8094-6240-7 Stud 4953-31 78-8094-6240-7 Stud 4953-32 78-8094-6241-5 Ring — Stop, /8 4953-33 78-8094-6241-5 Ring — Stop, /8 4953-33 78-8094-6241-5 Ring — Stop, /8 4953-34 78-8094-6243-1 Washer — Special, /6 4953-34 78-8094-6243-1 Washer — Special, /6 4953-34 78-8094-6244-9 Cover Hex Hd, M6 x 10 4953-44 4953-44 26-1002-5949-3 Screw — Hex Hd, M6 x 10 4953-44 4953-44 26-1002-5949-3 Screw — Hex Hd, M6 x 10 4953-44 4953-49 4953-49 495	4953-2	78-8094-6225-8	Bracket – R/H
4953-5 78-8094-6228-2 Rod - /20X453.5 4953-6 78-8094-6228-2 Rod - /20X453.5 4953-8 26-1003-5842-8 Screw - Hex Hd, M8 x 20 4953-9 78-8017-9318-9 Washer - Plain, 8 mm 4953-11 78-8094-6229-0 Support - Bushing 4953-11 78-8094-6223-4 Plate - Chain 4953-12 78-8094-6232-4 Plate - Chain 4953-14 78-8094-6232-4 Plate - Chain 4953-15 78-8094-6232-4 Plate - Chain 4953-16 78-8094-6232-4 Plate - Chain 4953-16 78-8094-6233-2 Plate - Chain 4953-17 78-8094-6233-2 Plate - Chain 4953-17 78-8094-6233-2 Plate - Chain 4953-18 78-8094-6233-2 Plate - Chain 4953-19 78-8060-7830-5 Lock Ring - /28 4953-19 78-8060-7830-5 Lock Ring - /28 4953-19 78-8094-6236-5 Bearing 4953-19 78-8094-6236-5 Sbud 4953-2 78-8094-6238-1 Air Cylinder 4953-2 78-8014-6296-7 Screw - Soc Hd Hex Soc, M8 x 45M 4953-2 78-8014-6238-1 Air Cylinder Rod End 4953-3 78-8094-6238-1 Air Cylinder Rod End 4953-3 78-8094-6238-1 Air Cylinder Rod End 4953-3 78-8094-6238-1 Air Cylinder Rod End 4953-3 78-8094-6240-7 Sbud 4953-3 78-8094-6241-5 Ring - Stop, /8 4953-3 78-8094-6242-3 Chain - 3/6, 105 Pitch Long 4953-3 78-8095-5517-2 Nut - Self-Locking, M3 4953-3 78-8095-5517-2 Nut - Self-Locking, M3 4953-3 78-8095-5517-2 Roll 4953-3 78-8095-5519-3 Screw - Hex Hd, M6 x 10 4953-44 26-1002-5949-3 Screw - Hex H	4953-3	78-8094-6226-6	Bracket – L/H
4953-6 78-8094-6228-2 Rod - /20X453.5 4953-7 26-1003-5842-8 Screw - MB x 16	4953-4	26-1003-7965-5	Screw - Soc Hd Hex Soc, M8 x 25
4953-7 26-1003-5841-0 Screw – M8 x 16 4953-8 26-1003-5842-8 Screw – Hex Hd, M8 x 20 4953-9 78-8017-9318-9 Washer – Plain, 8 mm 4953-10 78-8094-6220-0 Support – Bushing 4953-11 78-8094-6230-8 Bushing – Ball, KH2030/P 4953-12 78-8094-6231-6 Grease Nipple 4953-13 78-8094-6233-2 Plate – Chain 4953-14 78-8094-6233-2 Plate – Chain 4953-15 78-8094-6233-2 Plate – Chain/Cylinder 4953-16 78-8076-5368-4 Sprocket Assembly 4953-17 78-8080-7830-5 Lock Ring – /28 4953-18 78-8058-6525-3 Bearing 4953-19 78-8094-6235-7 Spacer – Sprocket 4953-20 78-8094-6236-7 Spacer – Sprocket 4953-21 78-8076-5477-3 Washer – Special /6.5X20X4 4953-22 78-8080-8179-6 Screw – Flat Hd Hex, M6 x 20 4953-23 26-1003-6818-5 Nut – Plastic Insert, Hex Flange, M10 4953-24 78-8094-6237-3 Block – Cylinder 4953-27 78-8017-9174-6 Screw – Soc Hd Hex Soc, M8 x 45M 4953-27 78-8017-9174-6 Screw – Soc Hd Hex Soc, M8 x 45M 4953-29 78-8094-6238-1 Air Cylinder – C95 /40X330+50 4953-32 78-8094-6238-1 Air Cylinder – C95 /40X330+50 4953-33 78-8094-6238-1 Ring – Stop, /8 4953-31 78-8094-6238-1 Air Cylinder – C95 /40X330+50 4953-33 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-34 78-8094-6242-1 Ring – Stop, /8 4953-35 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-37 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-37 78-8095-5517-2 Nut – Self-Locking, M3 4953-38 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-39 78-8057-5509-7 Set Screw – M3 x 20 4953-30 78-8095-5517-2 Nut – Self-Locking, M3 4953-31 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-30 78-8095-5517-2 Nut – Self-Locking, M3 4953-31 78-8094-6242-1 Washer – Special, /6 4953-34 78-8094-6244-9 Cover 4953-44 26-1000-5949-3 Screw – Hex Hd, M6 x 10 4953-44 26-1000-5949-3 Screw – Hex Hd, M6 x 60	4953-5	78-8094-6227-4	Washer – Special, /8
4953-8	4953-6	78-8094-6228-2	Rod - /20X453.5
4953-9 78-6017-9318-9 Washer – Plain, 8 mm 4953-10 78-8094-6229-0 Support – Bushing 4953-11 78-8094-6231-6 Grease Nipple 4953-12 78-8094-6231-6 Grease Nipple 4953-13 78-8094-6232-4 Plate – Chain 4953-14 78-8094-6233-2 Plate – Chain 4953-15 78-8094-6233-2 Plate – Chain 4953-16 78-8076-5368-4 Sprocket Assembly 4953-17 78-8060-7830-5 Lock Ring – /28 4953-18 78-8094-6235-5 Spacer – Sprocket 4953-19 78-8094-6236-5 Stud 4953-20 78-8094-6236-5 Stud 4953-21 78-8060-7818-5 Nut – Plastic Insert, Hex Flange, M10 4953-22 78-8060-8179-6 Screw – Flat Hd Hex Mo x 20 4953-23 26-1003-6918-5 Nut – Plastic Insert, Hex Flange, M10 4953-25 78-8094-6237-3 Block – Cylinder 4953-26 28-1003-7969-7 Screw – Soc Hd Hex Soc, M8 x 45M 4953-27 78-8017-9174-6 Screw – Set, Allen, M6 x 30 4953-28 78-8094-6238-1 All Cylinder – C95 /40X330+50 4953-30 78-8094-6239-9 Stud – Cylinder Fod End 4953-31 78-8094-6240-7 Stud 4953-32 78-8094-6241-5 Ring – Stop, /8 4953-33 78-8094-6242-3 Chain – 2/8, 105 Pitch Long 4953-34 78-8054-7588-7 Chain – 2/8, 105 Pitch Long 4953-37 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-39 78-8094-6242-1 Washer – Special / 6 4953-30 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-31 78-8094-6242-3 Screw – M3 x 20 4953-32 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-37 78-8095-5517-2 Nut – Self-Locking, M3 4953-39 78-8096-750-0 Screw – M3 x 20 4953-39 78-8096-750-0 Screw – M6 x 25 4953-30 78-8097-580-7 Set Screw – M6 x 25 4953-31 78-8094-6243-1 Washer – Special, /6 4953-34 78-8094-6244-9 Cover 4953-34 78-8094-6244-9 Cover 4953-44 78-8094-6244-9 Cover 4953-44 78-8094-6244-9 Cover 4953-44 26-1002-5949-3 Screw – Hex Hd, M6 x 10	4953-7	26-1003-5841-0	Screw - M8 x 16
4953-10         78-8094-6229-0         Support – Bushing           4953-11         78-8094-6230-8         Bushing – Ball, KH2030/P           4953-12         78-8094-6231-6         Grease Nipple           4953-13         78-8094-6232-2         Plate – Chain           4953-14         78-8094-6233-2         Plate – Chain/Cylinder           4953-15         78-8094-6233-2         Sprocket Assembly           4953-16         78-8076-5368-4         Sprocket Assembly           4953-17         78-8056-7830-5         Lock Rling – /28           4953-18         78-8059-5625-3         Bearing           4953-19         78-8094-6235-7         Spacer – Sprocket           4953-21         78-8076-5477-3         Washer – Special /6.5X20X4           4953-22         78-8068-8179-6         Screw – Flat Hd Hex, M6 x 20           4953-23         26-1003-6918-5         Nut – Plastic Insert, Hex Flange, M10           4953-24         78-8068-8452-7         Washer – M10           4953-25         78-8094-6237-3         Block – Cylinder           4953-26         28-1003-7969-7         Screw – Soc Hd Hex Soc, M8 x 45M           4953-27         78-8017-9174-6         Screw – Soc Hd Hex Soc, M8 x 45M           4953-28         78-8094-6233-1         Air Cylinder – C95 /40	4953-8	26-1003-5842-8	Screw - Hex Hd, M8 x 20
4953-11         78-8094-6230-8         Bushing – Ball, KH2030/P           4953-12         78-8094-6231-6         Grease Nipple           4953-13         78-8094-6232-4         Plate – Chain           4953-14         78-8094-6233-2         Plate – Chain/Cylinder           4953-15         78-8094-6234-0         Sprocket Assembly           4953-16         78-8078-5388-4         Sprocket – Z=15, 3/8 Inch           4953-17         78-8060-7830-5         Lock Ring – /28           4953-18         78-8059-5625-3         Bearing           4953-19         78-8094-6236-5         Stud           4953-20         78-8094-6236-5         Stud           4953-21         78-8060-8179-6         Screw – Flat Hd Hex, M6 x 20           4953-22         78-8060-8179-6         Screw – Flat Hd Hex, M6 x 20           4953-23         28-1003-7969-7         Washer – M10           4953-24         78-8094-6237-3         Block – Cylinder           4953-25         78-8017-9174-6         Screw – Set Hex Soc, M8 x 45M           4953-26         28-1003-7969-7         Screw – Set, Allen, M6 x 30           4953-27         78-8017-9174-6         Screw – Set, Allen, M6 x 30           4953-29         78-8037-5747-9         Mount – Cylinder Fod End	4953-9	78-8017-9318-9	Washer Plain, 8 mm
4953-12         78-8094-6231-6         Grease Nipple           4953-13         78-8094-6232-4         Plate – Chain           4953-14         78-8094-6233-2         Plate – Chain/Cylinder           4953-15         78-8094-6234-0         Sprocket Assembly           4953-16         78-8076-5368-4         Sprocket – Z=15, 3/8 Inch           4953-17         78-8059-5625-3         Bearing           4953-19         78-8094-6236-5         Stud           4953-20         78-8094-6236-5         Stud           4953-21         78-8076-5477-3         Washer – Special /6.5X20X4           4953-22         78-806-8179-6         Screw – Flat Hd Hex, M6 x 20           4953-23         26-1003-6918-5         Nut – Plastic Insert, Hex Flange, M10           4953-24         78-806-8452-7         Washer – M10           4953-25         78-8094-6237-3         Block – Cylinder           4953-26         26-1003-7969-7         Screw – Set, Allen, M6 x 30           4953-27         78-8017-9174-6         Screw – Set, Allen, M6 x 30           4953-29         78-8057-5747-9         Mount – Cylinder Rod End           4953-30         78-8094-6238-9         Stud           4953-31         78-8094-6241-5         Ring – Stop, /8           4953-32	4953-10	78-8094-6229-0	Support – Bushing
4953-13 78-8094-6232-4 Plate - Chain/Cylinder 4953-14 78-8094-6233-2 Plate - Chain/Cylinder 4953-15 78-8094-6234-0 Sprocket Assembly 4953-17 78-8060-7830-5 Lock Ring - /28 4953-18 78-8059-5625-3 Bearing 4953-19 78-8094-6236-7 Spacer - Sprocket 4953-20 78-8094-6236-5 Stud 4953-21 78-8076-5368-5 Stud 4953-22 78-8060-8179-6 Screw - Flat Hd Hex, M6 x 20 4953-23 26-1003-6918-5 Nut - Plastic Insert, Hex Flange, M10 4953-24 78-8064-8237-3 Block - Cylinder 4953-25 78-8017-9174-6 Screw - Soc Hd Hex Soc, M8 x 45M 4953-27 78-8017-9174-6 Screw - Set, Allen, M6 x 30 4953-28 78-8094-6238-1 Air Cylinder Rod End 4953-29 78-8094-6239-9 Stud - Cylinder 4953-30 78-8094-6240-7 Stud 4953-31 78-8094-6241-5 Fling - Stop, /8 4953-35 78-8094-6241-5 Fling - Stop, /8 4953-36 78-8054-5878-7 Chain - 3/8, 105 Pitch Long 4953-37 78-8057-5572-2 Screw - M3 x 20 4953-37 78-8094-6241-5 Fling - Stop, /8 4953-38 78-8094-6241-5 Fling - Stop, /8 4953-39 78-8057-550-2 Screw - M3 x 20 4953-30 78-8094-6241-5 Fling - Stop, /8 4953-31 78-8094-6241-5 Fling - Stop, /8 4953-35 78-8094-6241-5 Fling - Stop, /8 4953-36 78-8057-5509-7 Set Screw - M6 x 25 4953-37 78-8094-6243-1 Washer - Special /6.5 Valence - Mass - M	4953-11	78-8094-6230-8	Bushing – Ball, KH2030/P
4953-14         78-8094-6233-2         Plate – Chain/Cylinder           4953-15         78-8094-6234-0         Sprocket Assembly           4953-16         78-8076-5368-4         Sprocket Z=15, 3/8 Inch           4953-17         78-8060-7830-5         Lock Ring – /28           4953-18         78-8059-5625-3         Bearing           4953-19         78-8094-6236-5         Stud           4953-21         78-8094-6236-5         Stud           4953-21         78-8076-5477-3         Washer – Special /6.5X20X4           4953-22         78-8060-8179-6         Screw – Flat Hd Hex, M6 x 20           4953-23         26-1003-6918-5         Nut – Plastic Insert, Hex Flange, M10           4953-24         78-8060-8452-7         Washer – M10           4953-25         78-8094-6237-3         Block – Cylinder           4953-26         26-1003-7969-7         Screw – Soc Hd Hex Soc, M8 x 45M           4953-27         78-8017-9174-6         Screw – Set, Allen, M6 x 30           4953-28         78-8094-6238-1         Air Cylinder – C95 /40X330-50           4953-29         78-8057-5747-9         Mount – Cylinder Rod End           4953-30         78-8094-6239-9         Stud – Cylinder           4953-31         78-8094-6240-7         Stud	4953-12	78-8094-6231-6	Grease Nipple
4953-15         76-8094-6234-0         Sprocket Assembly           4953-16         76-8076-5368-4         Sprocket – Z=15, 3/8 Inch           4953-17         78-8060-7830-5         Lock Ring – /28           4953-18         78-8095-5625-3         Bearing           4953-19         78-8094-6236-5         Stud           4953-20         78-8094-6236-5         Stud           4953-21         76-8076-5477-3         Washer – Special /6.5X20X4           4953-22         78-8080-8179-6         Screw – Flat Hd Hex, M6 x 20           4953-23         26-1003-6918-5         Nut – Plastic Insert, Hex Flange, M10           4953-24         78-8080-8452-7         Washer – M10           4953-25         78-8094-6237-3         Block – Cylinder           4953-26         26-1003-7969-7         Screw – Set, Allen, M6 x 30           4953-27         78-8017-9174-6         Screw – Set, Allen, M6 x 30           4953-28         78-8094-6238-1         Air Cylinder Rod End           4953-29         78-8057-5747-9         Mount – Cylinder Rod End           4953-30         78-8094-6249-5         Stud           4953-31         78-8094-6241-5         Ring – Stop, /8           4953-32         78-8094-6241-5         Ring – Stop, /8           4953-33<	4953-13	78-8094-6232-4	Plate – Chain
4953-16	4953-14	78-8094-6233-2	Plate – Chain/Cylinder
4953-17	4953-15	78-8094-6234-0	Sprocket Assembly
4953-18 78-8059-5625-3 Bearing 4953-19 78-8094-6235-7 Spacer – Sprocket 4953-20 78-8094-6236-5 Stud 4953-21 78-8076-5477-3 Washer – Special /6.5X20X4 4953-22 78-8060-8179-6 Screw – Flat Hd Hex, M6 x 20 4953-23 26-1003-6918-5 Nut – Plastic Insert, Hex Flange, M10 4953-24 78-8060-8452-7 Washer – M10 4953-25 78-8094-6237-3 Block – Cylinder 4953-26 26-1003-7969-7 Screw – Soc Hd Hex Soc, M8 x 45M 4953-27 78-8017-9174-6 Screw – Set, Allen, M6 x 30 4953-28 78-8094-6238-1 Air Cylinder – C95 /40X330+50 4953-29 78-8057-5747-9 Mount – Cylinder Rod End 4953-30 78-8094-6240-7 Stud 4953-31 78-8094-6240-7 Stud 4953-32 78-8094-6241-5 Ring – Stop, /8 4953-33 78-8094-6241-5 Ring – Stop, /8 4953-34 78-8054-8788-7 Chain – 3/8, 105 Pitch Long 4953-35 78-8060-7520-2 Screw – M3 x 20 4953-36 78-8059-5517-2 Nut – Self-Locking, M3 4953-37 78-8057-5809-7 Set Screw – M6 x 25 4953-38 78-8094-6243-1 Washer – Special, /6 4953-30 78-8094-6243-1 Washer – Special, /6 4953-31 78-8094-6244-9 Cover 4953-42 78-8055-0871-6 Screw – Hex Hd, M6 x 10 4953-43 26-1000-010-3 Washer – Flat, M6 4953-44 26-1002-5949-3 Screw – Hex Hd, M6 x 10	4953-16	78-8076-5368-4	Sprocket - Z=15, 3/8 Inch
4953-19         78-8094-6235-7         Spacer – Sprocket           4953-20         78-8094-6236-5         Stud           4953-21         78-8076-5477-3         Washer – Special /6.5X20X4           4953-22         78-8060-8179-6         Screw – Flat Hd Hex, M6 x 20           4953-23         26-1003-6918-5         Nut – Plastic Insert, Hex Flange, M10           4953-24         78-8060-8452-7         Washer – M10           4953-25         78-8094-6237-3         Block – Cylinder           4953-26         26-1003-7969-7         Screw – Soc Hd Hex Soc, M8 x 45M           4953-27         78-8017-9174-6         Screw – Set, Allen, M6 x 30           4953-28         78-804-6238-1         Air Cylinder – C95 /40X330+50           4953-29         78-8057-5747-9         Mount – Cylinder Rod End           4953-29         78-8094-6239-9         Stud – Cylinder           4953-30         78-8094-6240-7         Stud           4953-31         78-8094-6241-5         Ring – Stop, /8           4953-32         78-8094-6242-3         Chain – 3/8, 105 Pitch Long           4953-33         78-8094-6242-3         Chain Connector           4953-35         78-806-7520-2         Screw – M3 x 20           4953-36         78-8057-5809-7         Set Screw – M6 x 25	4953-17	78-8060-7830-5	Lock Ring - /28
4953-20	4953-18	78-8059-5625-3	Bearing
4953-21       78-8076-5477-3       Washer – Special /6.5X20X4         4953-22       78-8060-8179-6       Screw – Flat Hd Hex, M6 x 20         4953-23       26-1003-6918-5       Nut – Plastic Insert, Hex Flange, M10         4953-24       78-8060-8452-7       Washer – M10         4953-25       78-8094-6237-3       Block – Cylinder         4953-26       26-1003-7969-7       Screw – Soc Hd Hex Soc, M8 x 45M         4953-27       78-8017-9174-6       Screw – Set, Allen, M6 x 30         4953-28       78-8094-6238-1       Air Cylinder – C95 /40X330+50         4953-29       78-8057-5747-9       Mount – Cylinder Rod End         4953-30       78-8094-6239-9       Stud – Cylinder         4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6240-7       Stud         4953-33       78-8094-6241-5       Ring – Stop, /8         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-39       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       <	4953-19	78-8094-6235-7	Spacer - Sprocket
4953-22       78-8060-8179-6       Screw – Flat Hd Hex, M6 x 20         4953-23       26-1003-6918-5       Nut – Plastic Insert, Hex Flange, M10         4953-24       78-8060-8452-7       Washer – M10         4953-25       78-8094-6237-3       Block – Cylinder         4953-26       26-1003-7969-7       Screw – Soc Hd Hex Soc, M8 x 45M         4953-27       78-8017-9174-6       Screw – Set, Allen, M6 x 30         4953-28       78-8094-6238-1       Air Cylinder – C95 /40X330+50         4953-29       78-8057-5747-9       Mount – Cylinder Rod End         4953-29       78-8094-6239-9       Stud – Cylinder         4953-30       78-8094-6240-7       Stud         4953-31       78-8094-6241-5       Ring – Stop, /8         4953-32       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-33       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-806-7520-2       Screw – M6 x 25         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4963-39       78-8094-6243-1       Washer – Special, /6         4953-40       78-8091-0510-5       <	4953-20	78-8094-6236-5	Stud
4953-23	4953-21	78-8076-5477-3	Washer – Special /6.5X20X4
4953-24       78-8060-8452-7       Washer – M10         4953-25       78-8094-6237-3       Block – Cylinder         4953-26       26-1003-7969-7       Screw – Soc Hd Hex Soc, M8 x 45M         4953-27       78-8017-9174-6       Screw – Set, Allen, M6 x 30         4953-28       78-8094-6238-1       Air Cylinder – C95 /40X330+50         4953-29       78-8057-5747-9       Mount – Cylinder Rod End         4953-30       78-8094-6239-9       Stud – Cylinder         4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6241-5       Ring – Stop, /8         4953-33       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4963-39       78-8090-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-43       26-1000-010-3       Washer – Flat,	4953-22	78-8060-8179-6	Screw - Flat Hd Hex, M6 x 20
4953-25       78-8094-6237-3       Block – Cylinder         4953-26       26-1003-7969-7       Screw – Soc Hd Hex Soc, M8 x 45M         4953-27       78-8017-9174-6       Screw – Set, Allen, M6 x 30         4953-28       78-8094-6238-1       Air Cylinder – C95 /40X330+50         4953-29       78-8057-5747-9       Mount – Cylinder Rod End         4953-30       78-8094-6239-9       Stud – Cylinder         4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6241-5       Ring – Stop, /8         4953-33       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-23	26-1003-6918-5	Nut – Plastic Insert, Hex Flange, M10
4953-26 26-1003-7969-7 Screw – Soc Hd Hex Soc, M8 x 45M 4953-27 78-8017-9174-6 Screw – Set, Allen, M6 x 30 4953-28 78-8094-6238-1 Air Cylinder – C95 /40X330+50 4953-29 78-8057-5747-9 Mount – Cylinder Rod End 4953-30 78-8094-6239-9 Stud – Cylinder 4953-31 78-8094-6240-7 Stud 4953-32 78-8094-6241-5 Ring – Stop, /8 4953-33 78-8094-6242-3 Chain – 3/8, 105 Pitch Long 4953-34 78-8054-8788-7 Chain Connector 4953-35 78-8060-7520-2 Screw – M3 x 20 4953-36 78-8059-5517-2 Nut – Self-Locking, M3 4953-37 78-8057-5809-7 Set Screw – M6 x 25 4953-38 78-8094-6243-1 Washer – Special, /6 4953-39 78-8060-7900-6 Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch 4953-40 78-8091-0510-5 Regulator – Legris, Speed 4953-41 78-8094-6244-9 Cover 4953-43 26-1000-0010-3 Washer – Flat, M6 4953-44 26-1002-5949-3 Screw – Hex Hd, M8 x 60	4953-24	78-8060-8452-7	Washer – M10
4953-27       78-8017-9174-6       Screw – Set, Allen, M6 x 30         4953-28       78-8094-6238-1       Air Cylinder – C95 /40X330+50         4953-29       78-8057-5747-9       Mount – Cylinder Rod End         4953-30       78-8094-6239-9       Stud – Cylinder         4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6241-5       Ring – Stop, /8         4953-33       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-30       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-25	78-8094-6237-3	Block - Cylinder
4953-28       78-8094-6238-1       Air Cylinder — C95 /40X330+50         4953-29       78-8057-5747-9       Mount — Cylinder Rod End         4953-30       78-8094-6239-9       Stud — Cylinder         4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6241-5       Ring — Stop, /8         4953-33       78-8094-6242-3       Chain — 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw — M3 x 20         4953-36       78-8059-5517-2       Nut — Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw — M6 x 25         4953-38       78-8094-6243-1       Washer — Special, /6         4953-39       78-8060-7900-6       Union — Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator — Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw — Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer — Flat, M6         4953-44       26-1002-5949-3       Screw — Hex Hd, M8 x 60	4953-26	26-1003-7969-7	Screw - Soc Hd Hex Soc, M8 x 45M
4953-29       78-8057-5747-9       Mount – Cylinder Rod End         4953-30       78-8094-6239-9       Stud – Cylinder         4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6241-5       Ring – Stop, /8         4953-33       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-27	78-8017-9174-6	Screw - Set, Allen, M6 x 30
4953-30	4953-28	78-8094-6238-1	Air Cylinder C95 /40X330+50
4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6241-5       Ring – Stop, /8         4953-33       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-29	78-8057-5747-9	Mount - Cylinder Rod End
4953-31       78-8094-6240-7       Stud         4953-32       78-8094-6241-5       Ring – Stop, /8         4953-33       78-8094-6242-3       Chain – 3/8, 105 Pitch Long         4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-30	78-8094-6239-9	Stud - Cylinder
4953-33	4953-31	78-8094-6240-7	_
4953-34       78-8054-8788-7       Chain Connector         4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-32	78-8094-6241-5	Ring – Stop, /8
4953-35       78-8060-7520-2       Screw – M3 x 20         4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-33	78-8094-6242-3	Chain – 3/8, 105 Pitch Long
4953-36       78-8059-5517-2       Nut – Self-Locking, M3         4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-34	78-8054-8788-7	Chain Connector
4953-37       78-8057-5809-7       Set Screw – M6 x 25         4953-38       78-8094-6243-1       Washer – Special, /6         4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-35	78-8060-7520-2	Screw - M3 x 20
4953-38 78-8094-6243-1 Washer – Special, /6 4953-39 78-8060-7900-6 Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch 4953-40 78-8091-0510-5 Regulator – Legris, Speed 4953-41 78-8094-6244-9 Cover 4953-42 78-8055-0871-6 Screw – Hex Hd, M6 x 10 4953-43 26-1000-0010-3 Washer – Flat, M6 4953-44 26-1002-5949-3 Screw – Hex Hd, M8 x 60	4953-36	78-8059-5517-2	Nut - Self-Locking, M3
4953-39       78-8060-7900-6       Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch         4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-37	78-8057-5809-7	Set Screw - M6 x 25
4953-40       78-8091-0510-5       Regulator – Legris, Speed         4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-38	78-8094-6243-1	Washer - Special, /6
4953-41       78-8094-6244-9       Cover         4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-39	78-8060-7900-6	Union – Aerpress, RA 022, 1/4 Inch-1/4 Inch
4953-42       78-8055-0871-6       Screw – Hex Hd, M6 x 10         4953-43       26-1000-0010-3       Washer – Flat, M6         4953-44       26-1002-5949-3       Screw – Hex Hd, M8 x 60	4953-40	78-8091-0510-5	Regulator – Legris, Speed
4953-43 26-1000-0010-3 Washer – Flat, M6 4953-44 26-1002-5949-3 Screw – Hex Hd, M8 x 60	4953-41	78-8094-6244-9	Cover
4953-44 26-1002-5949-3 Screw – Hex Hd, M8 x 60	4953-42	78-8055-0871-6	Screw - Hex Hd, M6 x 10
	4953-43	26-1000-0010-3	Washer - Flat, M6
4953-45 78-8017-9313-0 Nut – Self-Locking, M8	4953-44	26-1002-5949-3	Screw - Hex Hd, M8 x 60
	4953-45	78-8017-9313-0	Nut – Self-Locking, M8

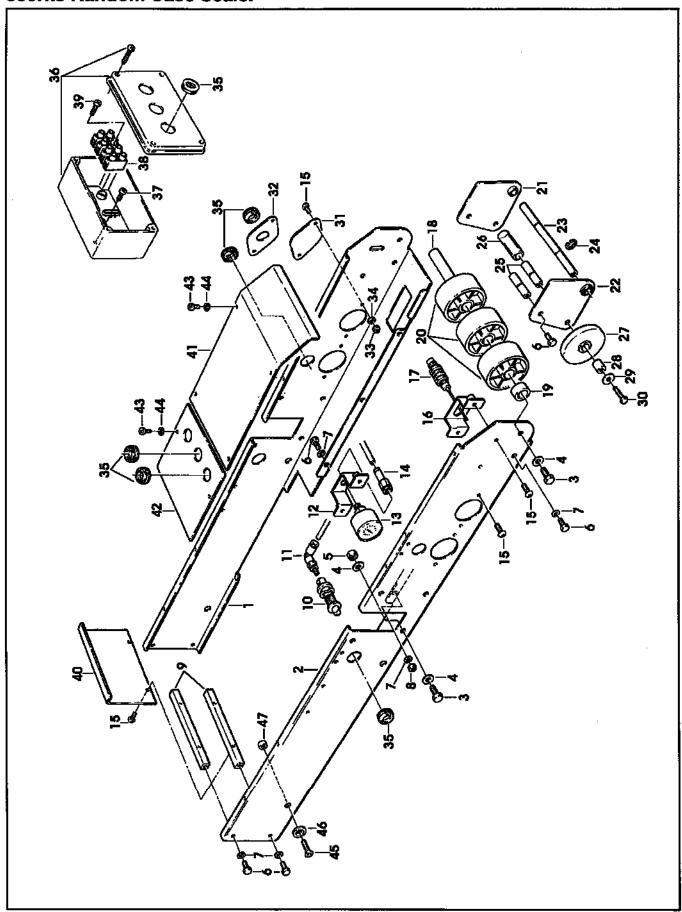


Figure 4954

Ref. No.	3M Part No.	Description
4954-1	78-8094-6245-6	Frame – Upper, R/H
4954-2	78-8094-6246-4	Frame – Upper, L/H
4954-3	26-1003-5841-0	Screw - M8 x 16
4954-4	78-8017-9318-9	Washer - Plain, 8 mm
4954-5	26-1000-1347-8	Nut - Hex, M8
4954-6	78-8010-7169-3	Screw - Hex Hd, M6 x 12
4954-7	26-1000-0010-3	Washer - Flat, M6
4954-8	78-8010-7418-4	Nut - Hex, M6
4954-9	78-8094-6247-2	Spacer
4954-10	78-8076-4665-4	Indicator - SMC, Visual, VR 3100-1
4954-11	26-1005-5909-0	Elbow
4954-12	78-8076-4535-9	Bracket
4954-13	78-8054-8838-0	Gauge – Wika, Air
4954-14	78-8076-4672-0	Union – Legris, Straight, Female
4954-15	78-8060-8087-1	Screw - M5 x 10
4954-16	78-8094-6248-0	Support - Sensor
4954-17	78-8094-6249-8	Proximity Switch – Omron TL-X5MB1-GE
4954-18	78-8094-6250-6	Shaft – Roller
4954-19	78-8094-6251-4	Spacer
4954-20	78-8052-6641-4	Roller
4954-21	78-8094-6252-2	Plate – R/H
4954-22	78-8094-6253-0	Plate – L/H
4954-23	78-8094-6254-8	Shaft - 10X150
4954-24	78-8060-8035-0	E-Ring – 7DIN6799
4954-25	78-8094-6255-5	Shaft 10X46
4954-26	<b>78-8094-6256-3</b>	Sleeve
4954-27	78-8094-6257-1	Wheel
4954-28	78-8094-6258-9	Bushing
4954-29	78-8042-2919-9	Washer – Triple, M6
4954-30	26-1003-5832-9	Screw – Hex Hd, M6 x 25
4954-31	78-8094- <del>6</del> 259-7	Plate
4954-32	78-8094-6260-5	Plate – W/Hole
4954-33	26-1005-6859-6	Nut - Self-Locking, M5
4954-34	78-8005-5741-1	Washer – Plain, M5
4954-35	78-8060-7785-1	Fairlead – /22
4954-36	78-8076-4881-7	Pull Box
4954-37	26-1003-5707-3	Screw - Phillips Dr, M4 x 16
4954-38	78-8076-4968-2	Terminal
4954-39	78-8091-0434-8	Screw – Self-Tapping, 4.2X19
4954-40	78-8094-6261-3	Cover – Rear
4954-41	78-8094-6262-1	Cover - Front
49 <del>54-42</del>	78-8094-6263-9	Cover – Central
4954-43 4954-44	26-1002-5753-9	Screw – Self-Tapping
4954-44 4954-45	78-8005-5740-3	Washer – Plain, 4 mm
4954-45 4954-46	78-8060-7918-8	Screw – Flat Soc Hd, M6 x 25
4954-46 4954-47	78-8076-5477-3	Washer – Special, /6.5X20X4
4954-47	78-8094-6264-7	Spacer

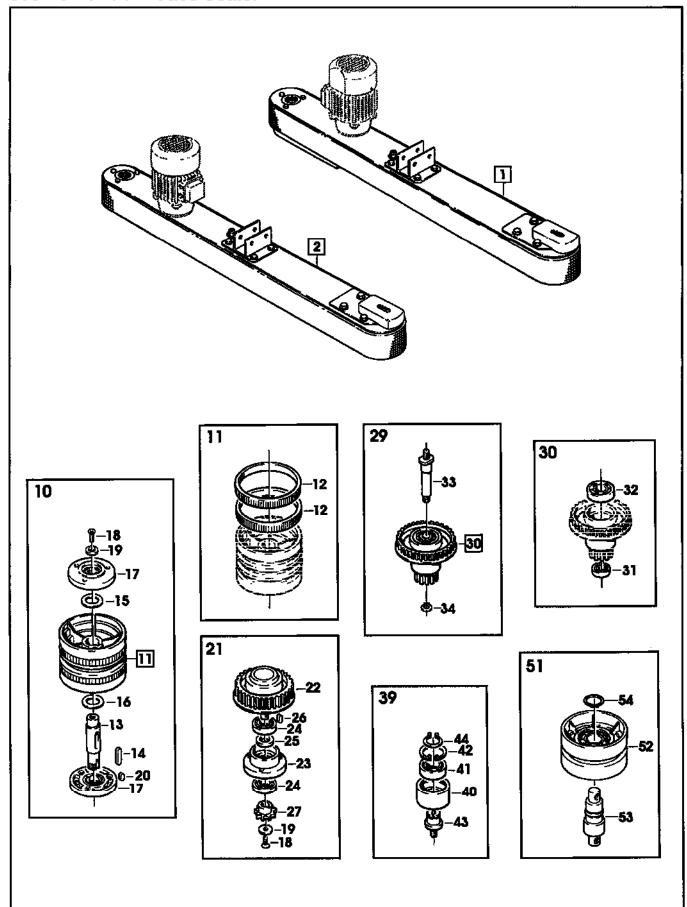
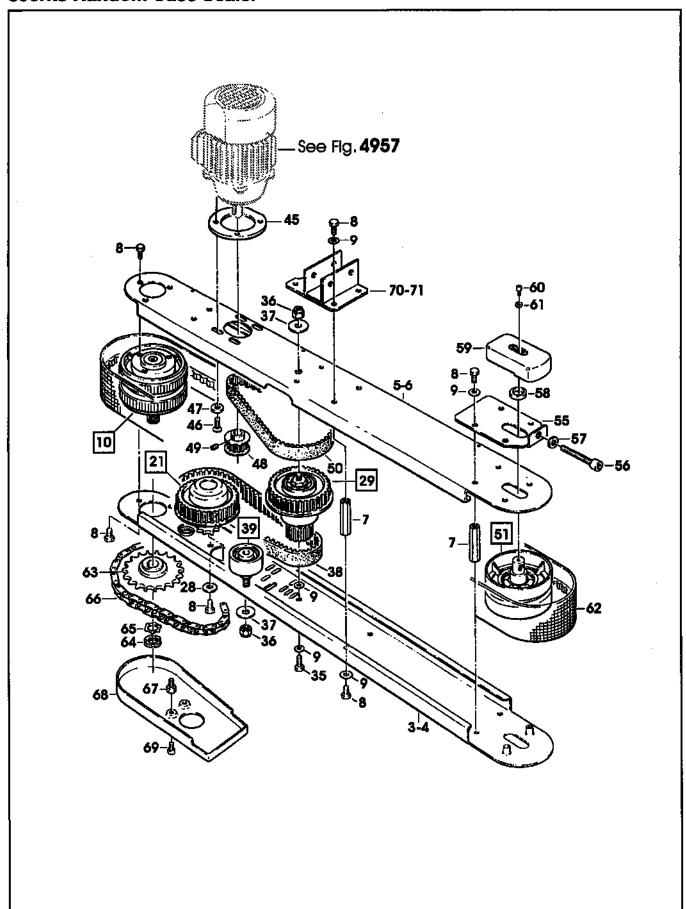


Figure 4955/1 of 2

## Figure 4955 (page 1 of 2)

Ref. No.	3M Part No.	Description
4955-1	78-8094-6265-4	Drive – Upper, R/H, W/O Motor
4955-2	78-8094-6266-2	Drive – Upper, L/H, W/O Motor
4955-3	78-8094-6267-0	Guide – Lower, R/H
4955-4	78-8094-6268-8	Guide – Lower, L/H
4955-5	78-8094-6269-6	Guide – Upper, R/H
4955-6	78-8094-6270-4	Guide – Upper, L/H
4955-7	78-8055-0661-1	Spacer
4955-8	26-1003-5828-7	Screw - Hex Hd, M6 x 12
4955-9	26-1000-0010-3	Washer - Flat, M6
4955-10	78-8091-0714-3	Roller – Drive, 800a-E
4955-11	78-8076-5441-9	Roller – Drive
4955-12	78-8052-6713-1	Ring – Polyurethane
4955-13	78-8055-0669-4	Shaft - Pulley Keyed
4955-14	78-8057-5739-6	Key – M5 x 5 x 30 mm
4955-15	78-8091-0382-9	Washer – Belleville, /16
4955-16	78-8055-0668-6	Washer - 15/26X1
4955-17	78-8076-5442-7	Flange Assembly
4955-18	26-0001-5862-1	Screw - Flat Hd Soc, M5 x 12
4955-19	78-8054-8877-8	Washer - 5,5/20X4
4955-20	78-8046-8135-7	Key - 5 x 5 x 12 mm
4955-21	78-8060-8136-6	Drive Pulley Assembly – Keyed
4955-22	78-8054-8886-9	Pulley – Keyed
4955-23	78-8054-8889-3	Support – Pulley Keyed
4955-24	26-1000-6036-2	Bearing – 6003-2RS
4955-25	78-8060-7547-5	Spacer
4955-26	78-8028-8244-5	Key - 4 x 4 x 10 mm
4955-27	78-8060-8005-3	Sprocket - 3/8 Inch, 11 Teeth
4955-28	78-8042-2919-9	Washer – Triple, M6
4955-29	78-8060-8134-1	Wrap Pulley Assembly
4955-30	78-8060-8135-8	Pulley – Wrap 12A
4955-31	78-8023-2410-9	Bearing – 6000-2RS
4955-32	78-8023-2544-5	Bearing – 6203-2RS
4955-33	78-8055-0665-2	Shaft - Pulley Wrap
4955-34	78-8016-5855-6	E-Ring – 10 mm
4955-35	78-8032-0375-7	Screw – Hex Hd, M6 x 16
4955-36	78-8017-9313-0	Nut - Self-Locking, M8



# Figure 4955 (page 2 of 2)

Ref. No.	3M Part No.	Description
4955-37	26-1004-5507-5	Washer – M8
4955-38	78-8018-7881-6	Belt Timing – 21 L050
4955-39	78-8091-0523-8	Pulley Assembly – Jockey
4955-40	78-8091-0524-6	Pulley – Jockey
4955-41	78-8060-8008-7	Bearing - 6004-2RS
4955-42	78-8060-8010-3	Snap Ring – 42 mm Shaft
4955-43	78-8091-0525-3	Shaft - Pulley
4955-44	78-8017-9061-5	Snap Ring - For 20 mm Shaft
4955-45	78-8094-6050-0	Spacer - Motor
4955-46	26-1005-4758-2	Screw - Flat Hd, M5 x 20
4955-47	78-8060-8073-1	Washer - Motor
4955-48	78-8060-8015-2	Pulley – 17XL050
4955-49	26-1003-8816-9	Screw - Set, M5 x 6
4955-50	78-8060-8016-0	Belt – Timing 190XL050
4955-51	78-8076-5443-5	Pulley Assembly – Idler
4955-52	78-8055-0660-3	Roller – Idler
4955-53	78-8076-5444-3	Shaft – Idler Pulley
4955-54	12-7997-0272-0	E-Ring - M-25
4955-55	78-8076-5445-0	Tensioning – Belt
4955-56	78-8076-5447-6	Screw - Special, M8 x 70
4955-57	78-8017-9318-9	Washer – Plain, 8 mm
4955-58	78-8076-5446-8	Washer - Shaft
4955-59	78-8076-5448-4	Cover – Belt Tensioning
4955-60	78-8055-0850-0	Screw – Cap, M4 x 6
4955-61	78-8005-5740-3	Washer - Plain, 4 mm
4955-62	78-8076-5452-6	Belt – Box Drive
4955-63	78-8060-8019-4	Sprocket – 3/8 Inch, 28 Teeth
4955-64	78-8057-5835-2	Centering Washer
4955-65	78-8057-5834-5	Tab Washer
4955-66	78-8060-8020-2	Chain – 3/8 Inch Pitch L=50
4955-67	78-8054-8891-9	Screw - Special
4955-68	78-8076-5258-7	Cover - Chain
4955-69	26-1003-7948-1	Screw - Soc Hd Hex Soc, M5 x 10
4955-70	78-8094-6271-2	Support – Upper Drive, R/H
4955-71	78-8094-6272-0	Support – Upper Drive , L/H

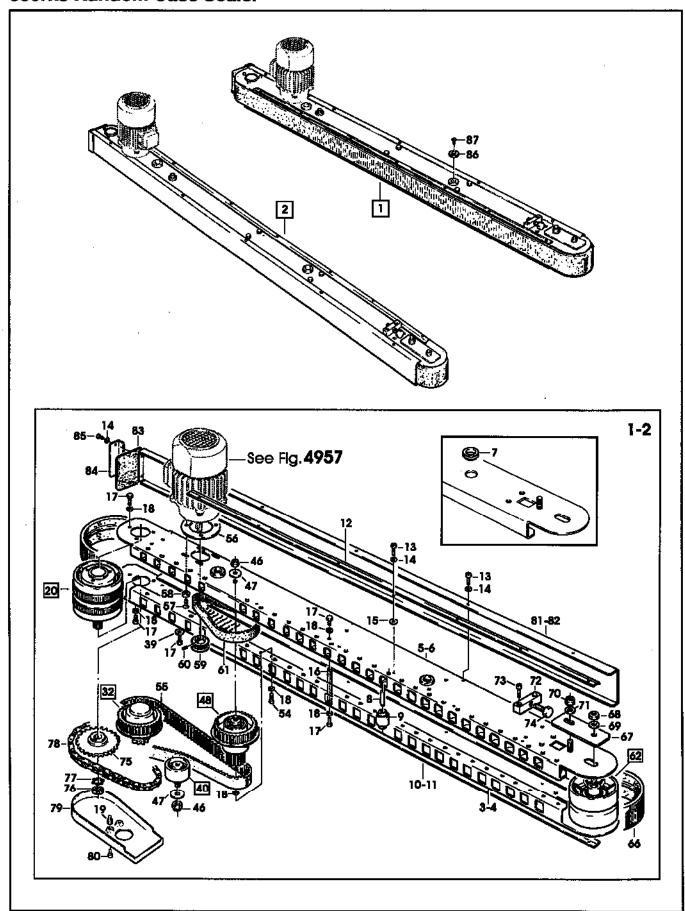


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## Figure 4956 (page 1 of 2)

Ref. No.	3M Part No.	Description
4956-1	78-8094-6306-6	Drive - BTM, R/H, W/O Motor
4956-2	78-8094-6307-4	Drive – BTM, L/H, W/O Motor
4956-3	78-8094-6308-2	Guide – Lower, R/H
4956-4	78-8094-6309-0	Guide - Lower, L/H
4956-5	78-8094-6310-8	Guide – Upper, R/H
4956-6	78-8094-6311-6	Guide – Upper, L/H
4956-7	78-8091-0500-6	Bushing – Side Drive
4956-8	78-8060-7995-6	Pin - Roller
4956-9	78-8060-7996-4	Roller
4956-10	78-8094-6312-4	Plate – Roller, R/H
4956-11	78-8094-6313-2	Plate – Roller, L/H
4956-12	78-8076-5109-2	Plate – Roller
4956-13	26-1002-5753-9	Screw – Self-Tapping
4956-14	78-8005-5740-3	Washer - Plain, 4 mm
4956-15	78-8076-4855-1	Washer - Special, /4.5-9X1.5
4956-16	78-8054-8910-7	Spacer – Hexagonal
4956-17	78-8010-7169-3	Screw - Hex Hd, M6 x 12
4956-18	26-1000-0010-3	Washer - Flat, M6
4956-19	78-8054-8891-9	Screw - Special
4956-20	78-8060-8000-4	Drive Pulley Assembly
4956-21	78-8076-5105-0	Pulley Assembly – Drive
4956-22	78-8052-6713-1	Ring – Polyurethane
4956-23	78-8054-8878-6	Shaft - Pulley Keyed
4956-24	78-8057-5739-6	Key - M5 x 5 x 30 mm
4956-25	78-8054-8879-4	Washer /20,5 mm
4956-26	78-8017-9096-1	Nut - Special, M18 x 1
4956-27	78-8060-7648-1	Bearing – Flanged
4956-28	26-0001-5862-1	Screw - Flat Hd Soc, M5 x 12
4956-29	78-8054-8877-8	Washer - 5,5/20X4
4956-30	78-8060-8037-6	Cap – Flange
4956-31	78-8046-8135-7	Key – 5 x 5 12 mm
4956-32	78-8060-8003-8	Drive Pulley Assembly – Keyed
4956-33	78-8055-0825-2	Pulley – Keyed
4956-34	78-8054-8889-3	Support – Pulley Keyed
4956-35	78-8060-7547-5	Spacer
4956-36	26-1000-6036-2	Bearing - 6003-2RS
4956-37	78-8028-8244-5	Key - 4 x 4 x 10 mm
4956-38	78-8060-8005-3	Sprocket – 3/8 Inch, 11 Teeth
4956-39	78-8042-2919-9	Washer – Triple, M6
4956-40	78-8094-6314-0	Jockey Pulley Assembly
4956-41	78-8094-6176-3	Roller – Belt Tensioning
4956-42	26-1000-4350-9	Bearing - 6002-2RS
4956-43	78-8094-6315-7	Spacer
4956-44	78-8094-6316-5	Stud

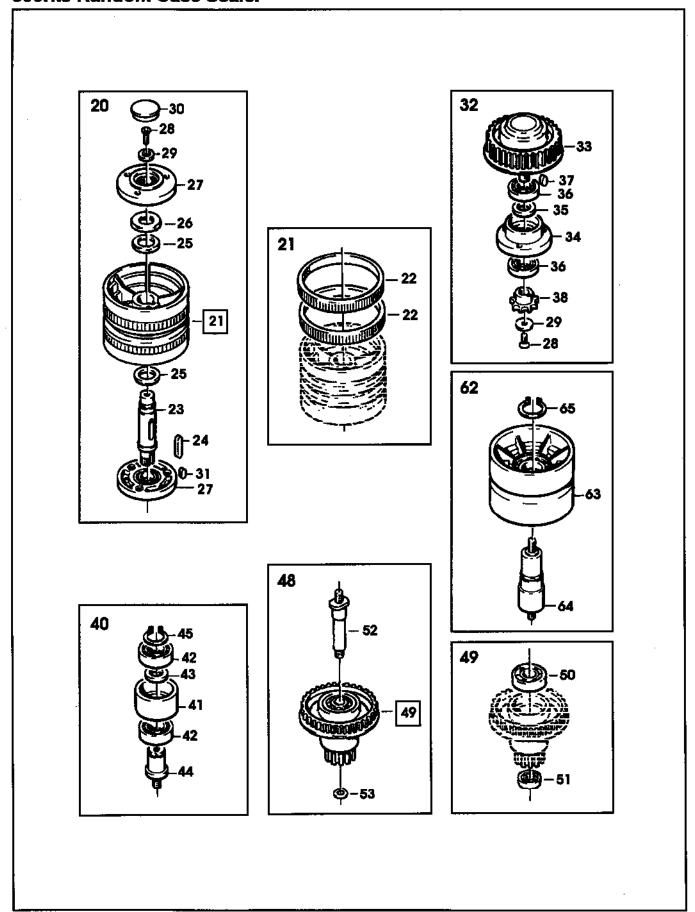


Figure 4956/2 of 2

## Figure 4956 (page 2 of 2)

Ref. No.	3M Part No.	Description
4956-45	78-8017-9079-7	Ring – Snap For 15 mm Shaft
4956-46	78-8017-9313-0	Nut - Self-Locking, M8
4956-47	26-1004-5507-5	Washer - M8
4956-48	78-8060-8011-1	Wrap Pulley Assembly
4956-49	78-8076-5106-8	Pulley Assembly – Idler
4956-50	78-8023-2544-5	Bearing - 6203-2RS
4956-51	78-8023-2410-9	Bearing - 6000-2RS
4956-52	78-8054-8887-7	Shaft - Pulley Wrap
4956-53	78-8016-5855-6	E-Ring – 10 mm
4956-54	78-8032-0375-7	Screw Hex Hd, M6 x 16
4956-55	78-8094-6317-3	Belt - Timing, 225 LO75
4956-56	78-8094-6050-0	Spacer - Motor
4956-57	26-1005-4758-2	Screw - Flat Hd, M5 x 20
4956-58	78-8060-8073-1	Washer - Motor
4956-59	78-8060-8015-2	Pulley – 17XL050
4956-60	26-1003-8816-9	Screw - Set, M5 x 6
4956-61	78-8094-6318-1	Belt - Timing, 210XL050
4956-62	78-8060-8014-5	Idler Roller Assembly
4956-63	78-8052-6710-7	Roller – Idler
4956-64	78-8054-8913-1	Shaft - Roller
4956-65	12-7997-0272-0	E-Ring - M-25
4956-66	78-8054-8841-4	Drive Belt
4956-67	78-8076-4864-3	Tensioning - Belt
4956-68	26-1000-1347-8	Nut – Hex, M8
4956-69	78-8017-9318-9	Washer - Plain, 8 mm
4956-70	26-1003-6918-5	Nut - Plastic Insert, Hex Flange, M10
4956-71	78-8052-6566-3	Washer - Friction
4956-72	78-8054-8903-2	Block – Beit
4956-73	78-8010-7210-5	Screw - Soc Hd Hex Soc, M6 x 20
4956-74	78-8054-8904-0	Screw - Belt Adjustment
4956-75	78-8060-8019-4	Sprocket - 3/8 Inch, 28 Teeth
4956-76	78-8057-5835-2	Centering Washer
4956-77	78-8057-5834-5	Tab Washer
4956-78	78-8060-8020-2	Chain – 3/8 Inch Pitch, L=50
4956-79	78-8076-5112-6	Cover - Chain
4956-80	26-1003-7948-1	Screw - Soc Hd Hex Soc, M5 x 10
4956-81	78-8076-5110-0	Cover - Right
4956-82	78-8076-5111-8	Cover – Left
4956-83	78-8054-8897-6	Guard - Belt
4956-84	78-8076-4870-0	Plate
4956-85	26-1002-4955-1	Screw - Self Tap, 8PX13
4956-86	78-8054-8577-4	Washer Special
4956-87	26-1001-9843-6	Screw - Flat

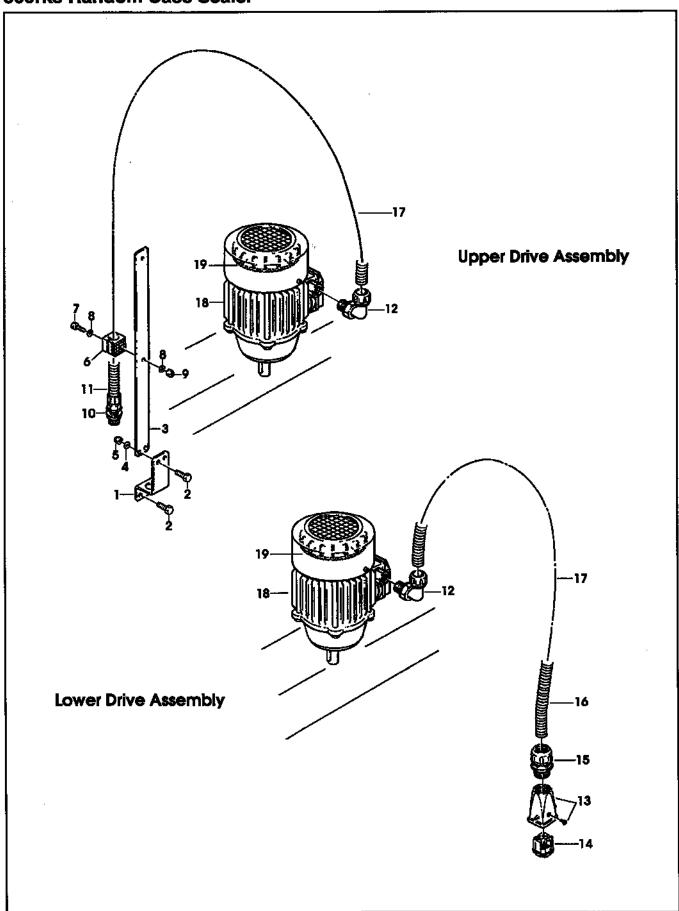


Figure 4957

Ref. No.	3M Part No.	Description
4957-1	78-8054-8955-2	Clamp – Bracket
4957-2	26-1003-5820-4	Screw - Hex Hd, M5 x 12
4957-3	78-8094-6186-2	Spring - Strap
4957-4	78-8005-5741-1	Washer - Plain, M5
4957-5	26-1005-6859-6	Nut - Self-Locking, M5
4957-6	78-8060-7630-9	Tube Lock
4957-7	78-8010-7157-8	Screw - Hex Hd, M4 x 10
4957-8	78-8005-5740-3	Washer – Plain, 4 mm
4957-9	26-1003-6914-4	Nut - Plastic Insert, M4
4957-10	78-8060-7631-7	Connector – 3/8 Inch
4957-11	78-8060-8028-5	Sleeving - /12, 0,930 M
4957-12	78-8076-5113-4	Union – PG11, /12
4957-13	78-8060-7877-6	Plug Housing – Vertical
4957-14	78-8060-7875-0	Plug – Male
4957-15	78-8060-7626-7	Connector – PG 11/12
4957-16	78-8060-8181-2	Sleeving - 0,710 MT
4957-17	78-8060-8052-5	Cable – 4X1,5 5MT 3PH
4957-18	78-8094-6187-0	Motor – 220V, 60HZ, 3 Phase, H63
4957-19	78-8076-5226-4	Fan - Motor, F.63

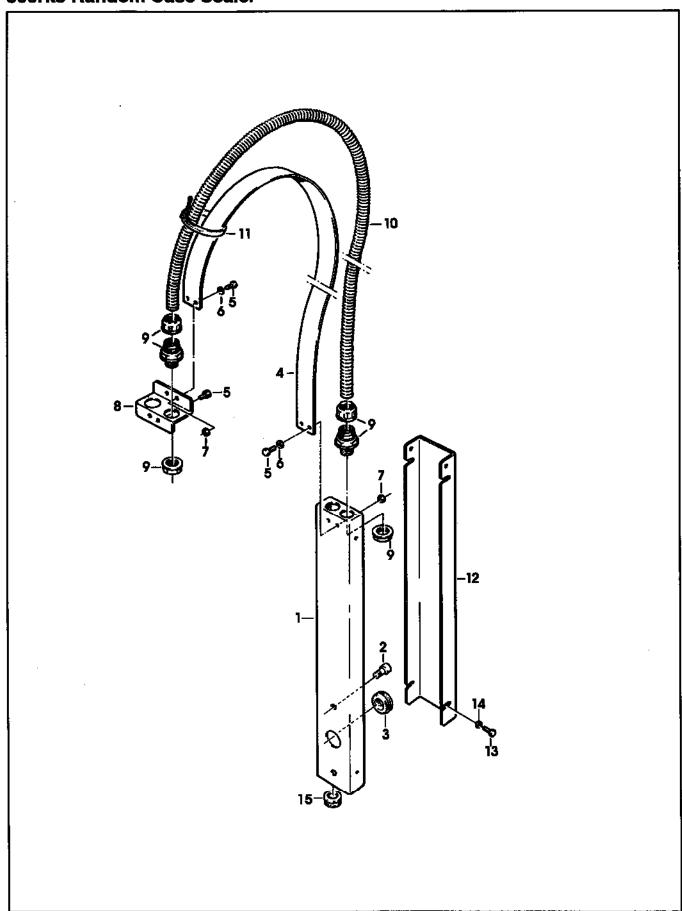


Figure 4958

Ref. No.	3M Part No.	Description
4958-1	78-8091-0600-4	Housing – Wire
4958-2	26-1003-7963-0	Screw - Soc Hd, M8 x 16
4958-3	78-8094-6177-1	Cap
4958-4	78-8094-6188-8	Spring – Strap
4958-5	78-8010-7163-6	Screw – Hex Hd, M5 x 10
4958-6	78-8005-5741-1	Washer – Plain, M5
4958-7	78-8010-7417-6	Nut — Hex, M5
4958-8	78-8094-6189-6	Bracket – Clamp
4958-9	78-8076-4520-1	Union – PG13, Sleeve /16
4958-10	78-8094-6190-4	Sleeving – Wire
4958-11	78-8060-8029-3	Clamp – 140X3,5
4958-12	78-8076-5118-3	Cover – Channel
4958-13	26-1003-5810-5	Screw – Hex Hd, M4 x 8
4958-14	78-8017-9018-5	Washer - Plain, SPEC M4
4958-15	78-8052-6659-6	Grommet

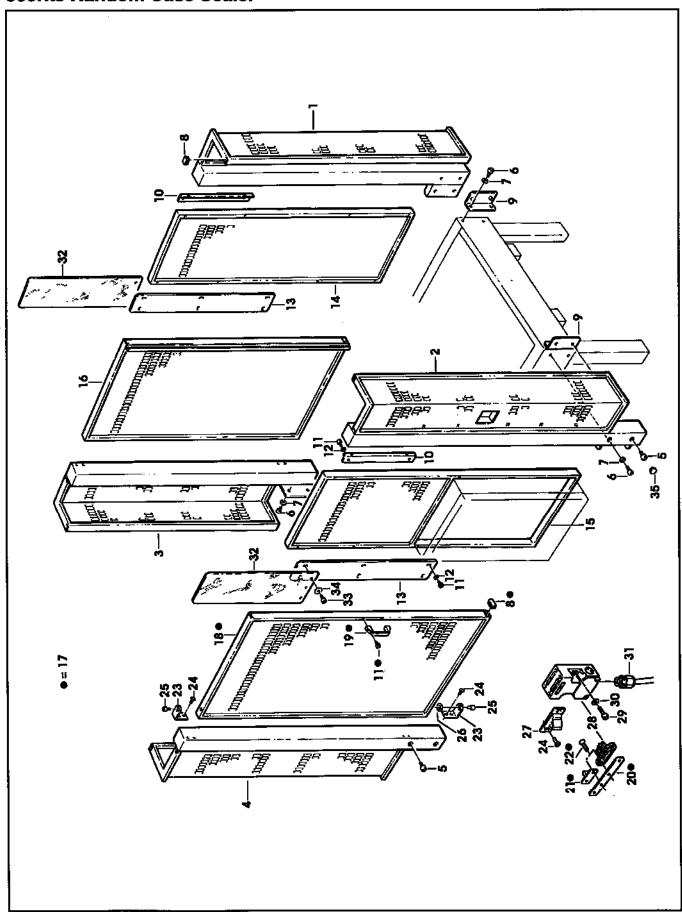


Figure 4959

Ref. No.	3M Part No.	Description
4959-1	78-8094-6191-2	Jamb Assembly – Front, R/H
4959-2	78-8094-6192-0	Jamb Assembly – Front, L/H
4959-3	78-8094-6193-8	Jamb Assembly – Rear, R/H
4959-4	78-8094-6194-6	Jamb Assembly - Rear, L/H
4959-5	26-1003-7963-0	Screw - Soc Hd, M8 x 16
4959-6	26-1003-7964-8	Screw - Soc Hd Hex Soc Dr, M8 x 20
4959-7	78-8017-9318-9	Washer – Plain, 8 mm
4959-8	78-8094-6195-3	Сар
4959-9	78-8094-6196-1	Plate - Front
4959-10	78-8094-6197-9	Plate - Side
495 <del>9</del> -11	26-1003-7957-2	Screw - Soc Hd Hex Hd, M6 x 16
4959-12	26-1000-0010-3	Washer – Flat, M6
4959-13	78-8094-6198-7	Plate - Clamp
4959-14	78-8094-6199-5	Panel Assembly
4959-15	78-8094-6200-1	Panel Control, Board
4959-16	78-8094-6201-9	Panel Assembly - Rear
4959-17	78-8094-6202-7	Door Assembly
4959-18	78-8094-6203-5	Door
4959-19	78-8060-7807-3	Handle
4959-20	78-8094-6204-3	Plate
4959-21	78-8076-4931-0	Drawbar – Lock
4959-22	26-1005-5316-8	Screw – Flat Hd Hex Dr, M5 x 16
4959-23	78-8076-4916-1	Hinge
4959-24	26-0001-5862-1	Screw - Flat Hd Soc, M5 x 12
4959-25	78-8010-7209-7	Screw - Soc Hd, M6 x 12
4959-26	78-8017-9074-8	Washer – Nylon, 15 mm
4959-27	78-8076-4932-8	Lock - Wing
4959-28	78-8076-4929-4	Security Switch - Schmersal AZ15ZVR
4959-29	26-1003-7951-5	Screw - Soc Hd Hex Soc, M5 x 20
4959-30	78-8005-5741-1	Washer – Plain, M5
4959-31	78-8076-4532-6	Union
4959-32	78-8094-6205-0	Cover
4959-33	78-8010-7210-5	Screw - Soc Hd Hex Soc, M6 x 20
4959-34	78-8042-2919-9	Washer – Triple, M6
4959-35	78-8076-4547-4	Cap - /18

## 800rks Random Case Sealer

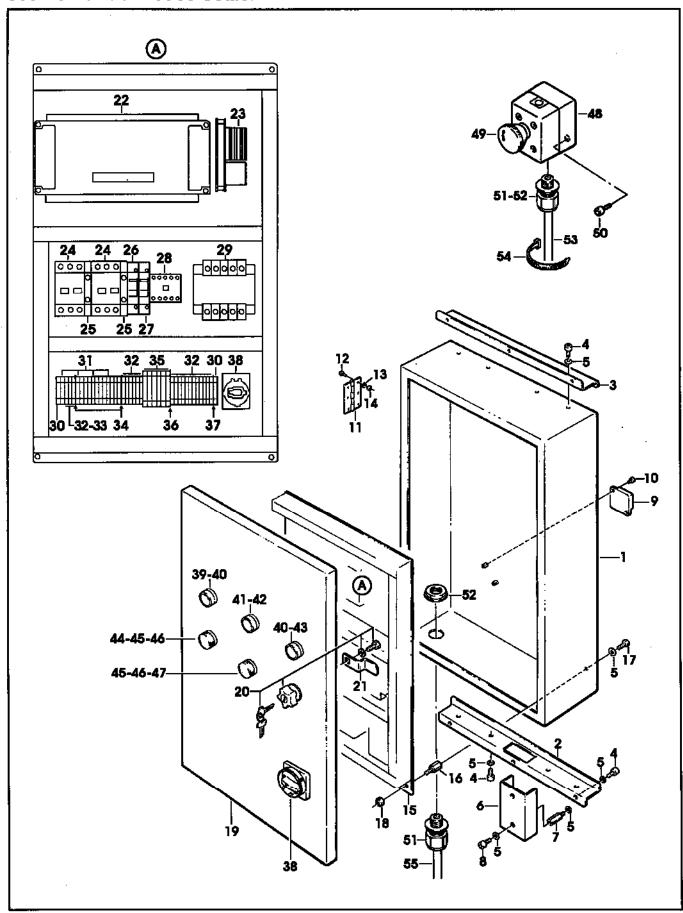
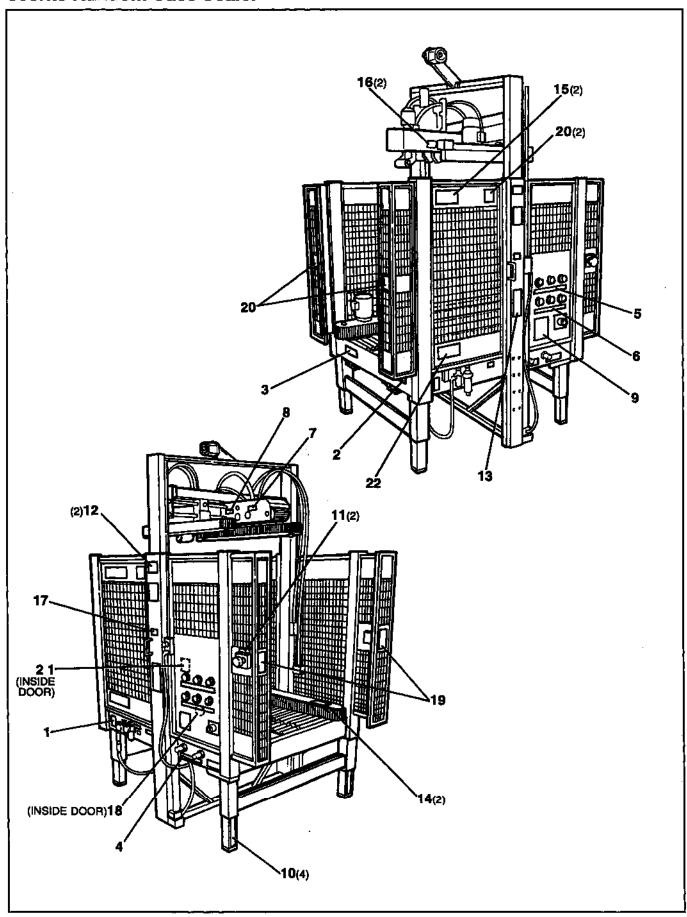


Figure 4960

## Figure 4960

Ref. No.	3M Part No.	Description
4960-1	78-8094-6206-8	Box – Control Board
4960-2	78-8094-6207-6	Plate – Mounting, BTM
4960-3	78-8094-6208-4	Plate - Mounting, Top
4960-4	26-1003-7957-2	Screw - Soc Hd Hex Hd, M6 x 16
4960-5	26-1000-0010-3	Washer – Flat, M6
4 <del>96</del> 0-6	78-8094-6209-2	Bracket
4960-7	78-8076-5356-9	Spacer - Mounting
4960-8	78-8010-7209-7	Screw - Soc Hd, M6 x 12
4960-9	78-8076-5057-3	Reflector – E39-R1
4960-10	78-8094-6210-0	Screw Soc Hd Hex Hd, M4 x 10
4960-11	78-8094-6211-8	Hinge
4960-12	78-8060-8087-1	Screw – M5 x 10
4960-13	78-8005-5741-1	Washer – Plain, M5
4960-14	26-1003-6916-9	Nut - Locking, Plastic Insert, M6
4960-15	78-8094-6212-6	Plate - Mounting
4960-16	78-8060-7814-9	Spacer – Electric Box
4960-17	78-8010-7169-3	Screw - Hex Hd, M6 x 12
4960-18	78-8010-7418-4	Nut – Hex, M6
4960-19	78-8094-6213-4	Cover – Control Board
4960-20	78-8094-6214-2	Bolt – Door
4960-21	78-8094-6215-9	Bolt - Door
4960-22	78-8094-6216-7	Omron PLC C20H-C6DR-DE
	26-1011-8612-5	Output Relay Repl - Omron, G6B-1174-P-FD-US (not shown)
4960-23	78-8076-5218-1	Feeder - Indel, 24V CC 3A
4960-24	78-8076-4877-5	Switch - TLM, On/Off, 2,5-4 A
4960-25	78-8094-6217-5	Block - TLM, Contacts
4960-26	78-8094-6218-3	Switch - TLM, GB2-CB07
4960-27	78-8094-6219-1	Switch - TLM, GB2-CB12
4960-28	78-8094-6220-9	Contactor - Allen-Bradley, CA4-9C-10 24V AC
4960-29	78-8076-5217-3	Transformer – Legrand, 63VA
4960-30	78-8091-0410-8	Lock - Allen-Bradley
4960-31	78-8091-0414-0	Terminal – Allen-Bradley, VUPE 4-4
4960-32	78-8091-0412-4	Terminal – Allen-Bradley, VU 4-2.5
4960-33	78-8091-0415-7	Cover – Allen-Bradley Terminal
4960-34	78-8091-0413-2	Plate - Allen-Bradley, VT 4-2.5/4
4960-35	78-8091-0416-5	Terminal - Allen-Bradley, VUET 4-4L
4960-36	78-8091-0417-3	Plate – Allen-Bradley, VAET 4-4
4960-37	78-8091-0411-6	Plate - Allen-Bradley, VA 4-2.25/4
4960-38	78-8091-0777-0	Switch - Allen-Bradley, On/Off, LA2-16
4960-39	78-8076-5199-3	Push Button - Allen-Bradley, DT 3-L-G
4960-40	78-8076-5230-6	Contact - Allen-Bradley, DE3-10
4960-41	78-8094-6221-7	Button - Allen-Bradley, DT3-L-Y, Yellow
4960-42	78-8076-5195-1	Contact - Allen-Bradley, DE 3-01
4960-43	78-8094-6222-5	Button - Allen-Bradley, DT3-L-B Blue
4960-44	78-8076-5202-5	Cap - Allen-Bradley, Lamp, White
4960-45	78-8076-5203-3	Contact - Allen-Bradley, Lamp
4960-46	78-8060-7611-9	Lamp - Allen-Bradley, BA9S 36V 2W
4960-47	78-8076-5204-1	Cap - Allen-Bradley, Lamp, Red
4960-48	78-8076-5194-4	Box – Allen-Bradley
4960-49	78-8076-5193-6	E-Stop, Allen-Bradley, DN3-R-01
4960-50	26-1003-7943-2	Screw - Soc Hd, M4 x 12
4960-51	78-8076-4715-7	Cord Grip
4960-52	78-8076-5211-6	Set Nut – GMP13.5
4960-53	78-8076-4605-0	Cable - 2X1, 5M
4960-54	78-8060-8029-3	Clamp - 140X3,5
4960-55	78-8094-6223-3	Cable – SJT0 16/4

#### **800rks Random Case Sealer**



Safety and Information Labels

## 800rks Safety and Information Labels

A label kit, part number 78-8095-1393-6, is available as a stock item. It contains all the safety and information labels used on the case sealer, or labels can be ordered separately from the following list.

Ref. No.	3M Part No.	Description	Qty.
	78-8095-1393-6	Label Kit (Includes items 1-22)	
1	78-8095-1140-1	Label – Air Supply, 85 PSI	1
2	78-8098-8834-6	Label – Head Down Speed	1
. 3	78-8098-8835 <b>-</b> 3	Label – Head Up Speed	1
4	78-8098-8833-8	Label - Upper/Lower Belt Pressure	1
5	78-8098-8836-1	Labei – Control Panel #1	1
6	78-8098-8837-9	Label - Control Panel #2	1
7	78-8098-8838-7	Label – Upper Belt Pressure	1
8	78-8098-8839-5	Label - Lower Belt Pressure	1
9	78-8070-1329-3	Label - Warning	1
10	78-8094-6287-8	Label – Leg	4
11	78-8095-1141-9	Label – Stop	2
12	78-8070-1421-8	Label Caution	2
13	78-8098-8915-3	Label - Safety Information	1
14	78-8070-1629-6	Label Belt Tensioning	2
15	78-8098-8983-1	Label – 3M	2
16	78-8070-1336-8	Label Waming	2
17	78-8068-3859-1	Label - Service and Spares	1
18	78-8068-3852-6	Label - Ground Symbol	1
19	78-8098-9121-7	Label – Warning	2
20	78-8098-8914-6	Label – Warning	4
21	78-8098-8913-8	Label - Warning	1
22	78-8062-4266-1	Label – Product	1

## **3M**

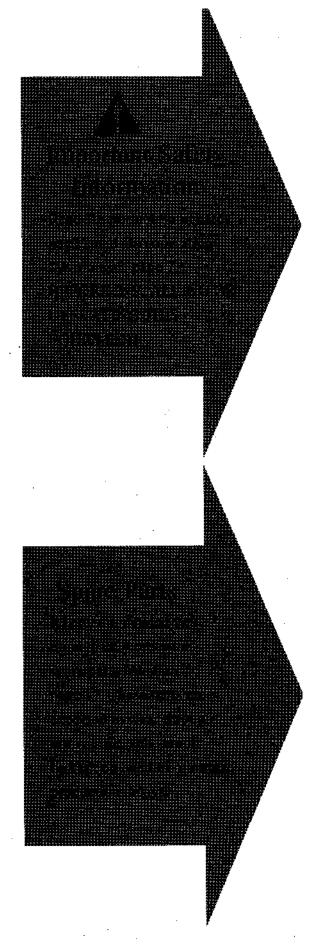
## **Instructions and Parts List**

## **AccuGlide** II STD 3 Inch **Upper and Lower Taping Heads**

Type 39600

Serial No.

For reference, record taping head(s) serial number(s) here.



3M, St. Paul, MN 55144-1000

## **To Our Customers:**

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

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

#### **Technical Assistance:**

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

#### **Replacement Parts and Additional Manuals**

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

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

1-800/344 9883

FAX# 715/268 8153

Minimum billing on parts orders will be \$25.00. Replacement part prices available on request. \$10.00 restocking charge per invoice on returned parts.

Note: Outside the U.S., contact the local 3M subsidiary for parts ordering information.



## **To Our Customers:**

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

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

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



@ 3M 1999 44-0009-1852-2(D79.0)

### Instruction Manual

AccuGilde™ II STD 3 Inch Upper and Lower Taping Heads Type 39600

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

3M sells its AccuGlide™ II STD 3 Inch Upper and Lower Taping Heads, Type 39600 with the following warranties:

- The Taping Head knife, springs, and rollers will be free from all defects for ninety (90) days after delivery.
- 2. All other Taping Head parts will be free from all defects for three (3) years after delivery. If any part is proved to be defective within its warranty period, then the exclusive remedy and 3M's and seller's sole obligation shall be, at 3M's option, to repair or replace the part, provided the defective part is returned immediately to 3M's factory or an authorized service station designated by 3M. A part will be presumed to have become defective after 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.

#### **Taping Head Contents**

#### AccuGlide™ II STD 3 Inch Upper and Lower Taping Heads consist of:

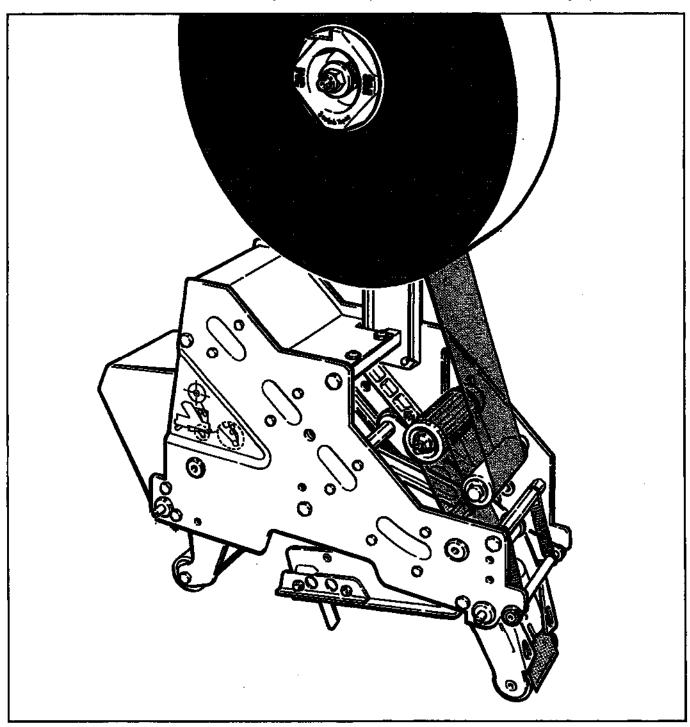
Qty.	Part Name	
1	Taping Head Assembly	
1	Tape Drum and Bracket Assembly	
1	Hardware and Spare Parts Kit	
1	Threading Tool	

#### Intended Use

The intended use of the AccuGlide<sup>TM</sup> II STD 3 Inch Upper and Lower Taping Heads is to apply a "C" clip of Scotch<sup>TM</sup> brand pressure-sensitive film box sealing tape to the top and/or bottom center seam of regular slotted containers.

These taping heads are incorporated into most standard 3M-Matic™ case sealers. The compact

size and simplicity of the taping head also makes it suitable for mounting in box conveying systems other than **3M-Matic™** case sealers. This includes replacement of other types of taping, gluing or stapling heads in existing case sealing machines. The **AccuGlide™ II STD Taping Heads** have been designed and tested for use with **Scotch™** brand pressure-sensitive film box sealing tape.



AccuGlide™ II STD 3 Inch Upper Taping Head, Type 39600

#### Important Safeguards

This safety alert symbol identifies important safety 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 18-35 for label part numbers.

The "Warning-Sharp Knife" label warns operators and service personnel of the extremely sharp knife used to cut the tape at the end of the box sealing operation. The label shown in Figure 1-1 is located on the orange knife guard between the applying roller assembly and the buffing roller assembly.

Never operate taping heads with knife guard removed.

Before working with the taping heads or loading/ threading tape, refer to Figures 3-1 and 3-2 (page 6) to identify the knife location. **Keep hands out of these areas except as necessary to service the taping heads or to load/thread tape.** 

The "Tape Threading Label", shown in Figure 1-2, is attached to the left side of both the upper and lower taping heads. This label provides a convenient tape threading diagram. More detailed tape loading and threading information is provided in the "Operation" section this manual.

Turn air and electrical supplies "Off" before servicing the taping heads.

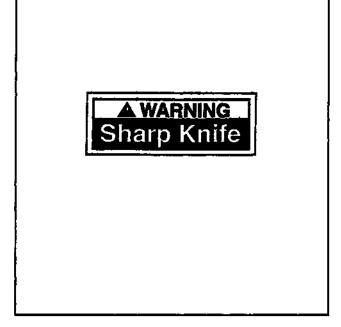


Figure 1-1 - Knife Warning Label

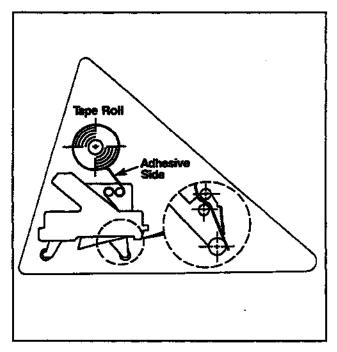


Figure 1-2 - Tape Threading Label

#### **Specifications**

#### 1. Tape:

For use with "Scotch" brand pressure-sensitive film box sealing tapes.

#### 2. Tape Width:

48 mm [2 inches] minimum to 72 mm [3 inches] maximum.

#### 3. Tape Roll Diameter:

Up to 405 mm [16 inches] maximum on a 76.2 mm [3 inch] diameter core. (Accommodates all system roll lengths of "Scotch" brand film tapes.)

#### 4. Tape Application Leg Length - Standard:

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

Adding to the same

#### Tape Application Leg Length - Optional:

50 mm ± 6 mm [2 inches ± 1/4 inch] (See "Adjustments - Tape Leg Length", page 13.)

#### 5. Box Size Capacities:

For use with center seam regular slotted containers.

Mari dia ta	uiii		MIGARITUTI
Length Height	150 mm [6 inches] 120 mm [4-3/4 inches] (most "3M-Matic" Case Sealers)	$\neg$	Unlimited Limited by
	90 mm [3-1/2 inches] (with optional 2 inch leg length)		Case Sealer
Width -	150 mm [6 inches]		

Marrian

When upper and lower taping heads are used on "3M-Matic" case sealers, refer to the respective instruction manual specifications for box weight and size capacities.

#### 6. Operating Rate:

Conveyor speeds up to 0.40 m/s [80 FPM] maximum.

#### 7. Operating Conditions:

Use in dry, relatively clean environments at 5° to 40° C [40° to 105° F] with clean dry boxes.

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

#### 7. Taping Head Dimensions:

Length – 457 mm [18 inches]

Height – 560 mm [22 inches] (with tape drum)

Width – 130 mm [5-1/8 inches] (without mounting spacers)

Weight – Packaged: 8.6 kg [19 lbs.] Unpackaged: 7.7 kg [17 lbs.]

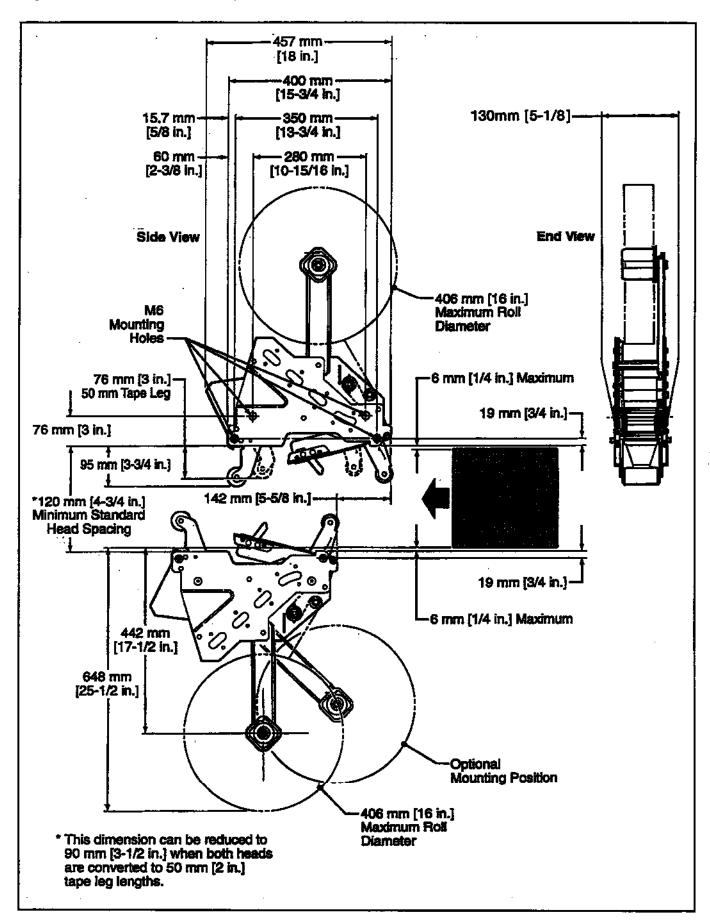


Figure 2-1 - Dimensional Drawing

#### Installation

WARNING – Taping Heads are equipped with an extremely sharp tape cut-off knife. The knife is located under the orange knife guard which has the "Warning – Sharp Knife" label. Before working with the taping heads or loading tape, refer to Figures 3-1 and 3-2 on page 6 and identify the knife location. Keep hands out of these areas except as necessary to service the taping heads.

#### Receiving And Handling

After the taping head assembly has been unpackaged, examine the unit for damage that might have occurred during transit. If damage is evident, file a damage claim immediately with the transportation company and also notify your 3M Representative.

#### Installation Guidelines

The taping head assembly can be used in converting existing or in custom made machinery. It can be mounted for top taping or bottom taping. Refer to box size specifications on page 3, and Figure 2-1 on page 4, for the following points in making such installations:

CAUTION - Taping head weighs approximately 7.7 kg [17 lbs] without tape. Remove tape roll before removing taping head from machine to minimize weight. Use proper body mechanics when installing or removing taping head.

- The box conveying system must positively propel the box in a continuous motion, not exceeding 0.40 m/s [80 feet per minute], past the taping head assembly since the box motion actuates the taping mechanism.
- If a pusher or cleated conveyor is being used, steps should be taken in the conveyor design to prevent the pusher from contacting the applying or buffing roller arms resulting in damage to the taping head.

3. Figure 2-1 illustrates the typical mounting relationship for opposing taping head assemblies to allow taping of box heights down to 90 mm [3-1/2 inches]. To tape box heights down to 70 mm [2-3/4 inches], the taping heads must be completely staggered so only one tape seal is being applied at one time.

Note – AccuGlide™ II STD taping Heads are supplied with a buffing arm guard. This guard may have to be removed to install the taping head into some older design 3M-Matic™ case sealers. If this is the case, remove the four guard mounting screws, remove the guard and then install the taping head.

- Mounting studs are provided with the taping head, but special installations may require alternate means for mounting.
- Box hold-down or guide skis should be provided and the taping head mounted so that the side plates are 6 mm [1/4 inch] maximum away from the ski surface on which the box rides.

#### Tape Leg Length

Taping heads are factory set to apply standard 70 mm [2-3/4 inch] tape legs. The heads can be converted to apply 50 mm [2 inch] tape legs if desired but both upper and lower heads must be set to apply the same tape leg length. See "Adjustments – Changing Tape Leg Length From 70 to 50 mm [2-3/4 to 2 inches]", page 13.

Also, the conveyor speed at which the product moves through the taping heads, affects the leading and trailing tape leg length. See, "Adjustments – Leading Tape Leg Length Adjustment", page 13.

#### Tape Width Adjustment

Taping heads are factory set to apply 72 mm [3 inch] wide tape. If it is necessary to align the tape or to apply narrower tapes, refer to \*Adjustments - Tape Web Alignment\*, page 11 for set-up procedure.

### **Operation**

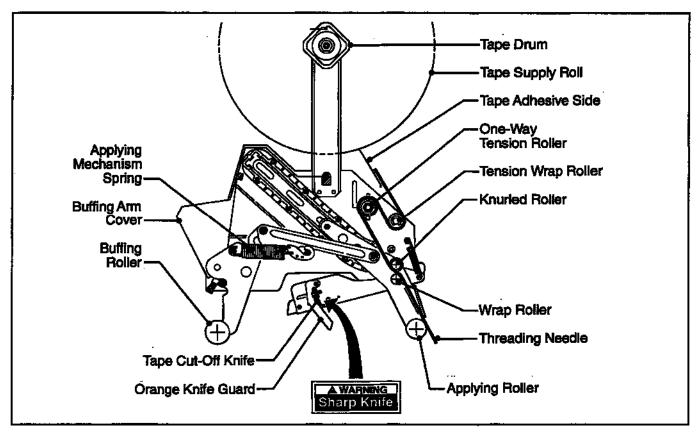


Figure 3-1 - Taping Head Components/Threading Diagram, Upper Head (Left Side View)

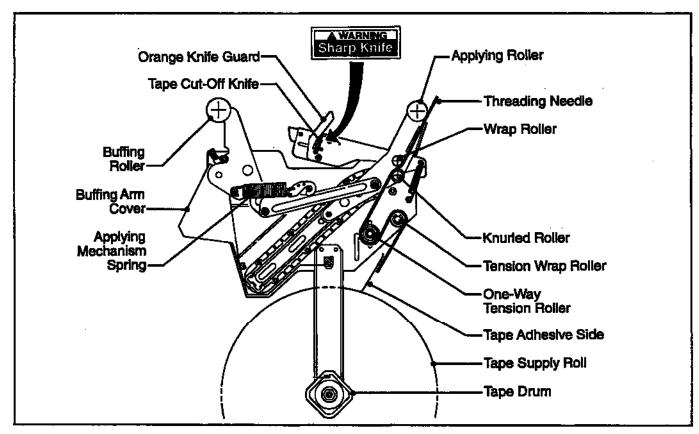


Figure 3-2 - Taping Head Components/Threading Diagram - Lower Head (Left Side View)

#### **Operation** (Continued)



#### **WARNINGS**

- Turn air and electrical supplies off and disconnect before servicing taping heads.
- 2. Never attempt to work on the taping heads or load tape when the box drive system is running.
- Taping heads are equipped with an extremely sharp cut-off knife. Before working with the taping heads or attempting to load/thread tape, refer to Figures 3-1 and 3-2 and identify the knife location. Keep hands out of these areas except as necessary to service the taping heads.
- Failure to comply with these warnings can result in severe personal injury and/or equipment damage.

It is recommended that the detailed instructions and sketches in this manual be referred to the first few times the taping head is loaded/threaded until the operator becomes thoroughly familiar with the tape loading operation.

CAUTION – Taping head weighs approximately 7.7 kg [17 pounds] without tape. Use proper body mechanics when removing or installing taping head.

#### Tape Loading - Upper Taping Head

- Raise the upper taping head to a convenient working position.
- Use the plastic threading needle (provided) and follow the loading procedures (Figures 3-3 to 3-5) to complete the tape threading.

If threading needle is not available, install tape roll and fold a tape tab approximately 455 mm [18 in] long on leading edge of tape for threading.

#### Tape Loading - Lower Taping Head

1. For ease in loading, first remove the lower taping head from the conveyor bed.

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

Figure 3-3

insert threading needle through rollers in direction indicated by arrows.

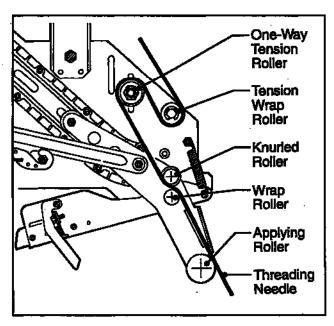


Figure 3-3 - Tape Loading/Threading

#### **Operation** (Continued)

#### Figure 3-4

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

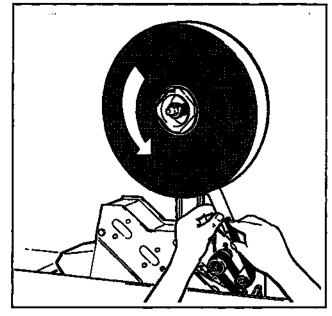


Figure 3-4 - Tape Loading/Threading

Figure 3-5

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

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

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

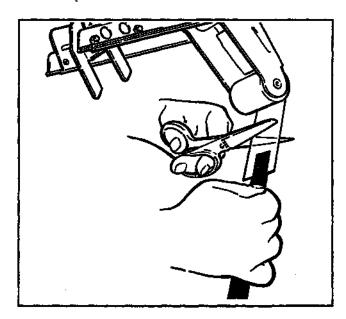


Figure 3-5 - Tape Loading/Threading

#### Maintenance



#### **WARNINGS**

- 1. Turn air and electrical supplies off and disconnect before beginning maintenance.
- 2. Use care when working near tape cut-off knife as knife is extremely sharp.
- Failure to comply with these warnings could result in severe personal injury or equipment damage.

The AccuGlide™ STD II 3 Inch Taping Head has been designed for long, trouble free service. The taping head will perform best when it receives routine maintenance and cleaning. Taping head components that fail or wear excessively should be promptly repaired or replaced to prevent damage to other portions of the head or to the product.

**Knife Replacement**, Upper and Lower Taping Heads – Figure 4-1

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

Note - Check the knife position to insure proper clearance between knife and guard by slowly pivoting the knife guard back.

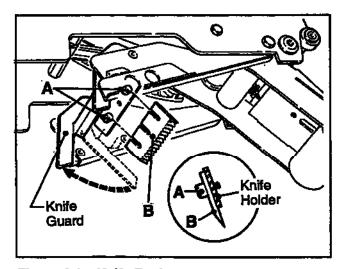


Figure 4-1 – Knife Replacement

#### **Knife Guard**

The knife guard covers the knife whenever a box is not being taped. Periodically check to be sure the knife guard is functioning properly and returning to cover the knife. Replace any defective parts.

#### Knife Oller Pad

The taping heads are equipped with a felt oiler pad that has been pre-tubricated at the factory to provide a film of oil on the cutting edge of the knife to reduce adhesive build-up. Apply SAE #30 non-detergent oil as needed. **Saturate felt oiler pad.** 

Should tape adhesive build-up occur on knife, carefully wipe clean with an oily cloth.

#### Cleaning

Regular slotted containers produce a great deal of dust and paper chips when conveyed through taping heads. If this dust is allowed to build-up on the heads, it can cause wear on the moving parts. Excessive dirt build-up should be wiped off with a damp cloth. Cleaning should be done **once per month**, depending on the number and type of boxes used. If the boxes used are dirty, or if the environment in which the heads operate is dusty, cleaning on a more frequent basis may be necessary.

Note – Never attempt to remove dirt from taping heads by blowing it out with compressed air. This can cause the dirt to be blown inside the components onto sliding surfaces. Dirt in these areas can cause serious equipment damage. Never wash down or subject taping heads to conditions causing moisture condensation on components. Serious equipment damage could result.

#### **Maintenance** (Continued)



#### **WARNINGS**

- 1. Turn air and electrical supplies off and disconnect before beginning maintenance.
- 2. Use care when working near tape cut-off knife as knife is extremely sharp.
- Fallure to comply with these warnings could result in severe personal injury or equipment damage.

#### Lubrication

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

Figure 4-2 illustrates points which should be lubricated every 3 months or 150,000 machine cycles, whichever comes first. Lubricate the rotating and pivoting points noted by the arrows ( ) with SAE #30 non-detergent oil. At the same time, a small amount of multipurpose grease should be applied to the guides and to the end of each spring where the loop is secured at an eyelet, post, or hole noted by arrows ( ).

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

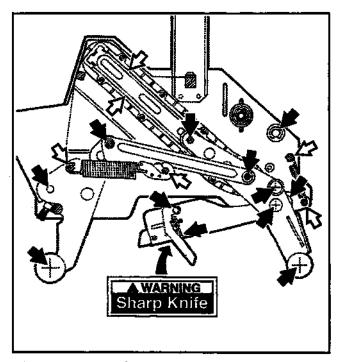


Figure 4-2 – Lubrication Points, Upper and Lower Taping Heads

#### Applying/Buffing Roller Replacement

Replacing roller requires removal of shaft and mounting screws. With no area on the shaft to grip, the shaft often turns when attempting to remove the second screw.

To ease removal of second screw, a 4 mm hex socket has been provided at the bottom of the threads in both ends of the shaft. Insert a 4 mm hex key wrench into this socket after removing one screw to hold the shaft for removal of the second screw. See Figure 4-3.

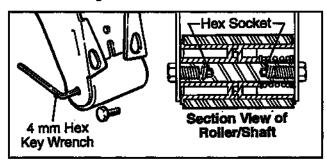


Figure 4-3 - Section View of Roller Shaft

#### **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 Web Alignment - Figure 5-1

The STD tape drum assembly is pre-set to accommodate 72 mm [3 inch] wide tape. The tape drum assembly is adjustable to provide alignment of narrower tapes. If adjustment is necessary to center the tape width on the centerline of the taping head, (and therefore box center seam), make adjustment as follows:

 Loosen the locking hex nut behind tape drum bracket on tape drum shaft. Use an adjustable wrench or 25 mm open end wrench.

> Note - To set up 72 mm tape drum for 48 mm tape, disassemble tape drum from bracaket and install lock nut between tape drum and bracket as shown in inset, Figure 5-2.

- Turn tape drum shaft in or out to center the tape web (use 5 mm hex wrench).
- Tighten locking hex nut to secure the adjustment.

No other components require adjustment for tape web alignment.

#### Tape Drum Friction Brake - Figure 5-2

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

**Note** — Excess braking force will cause poor tape application and may lead to tape tabbing on the trailing tape leg.

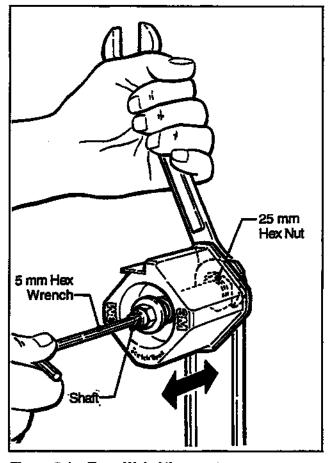


Figure 5-1 - Tape Web Alignment

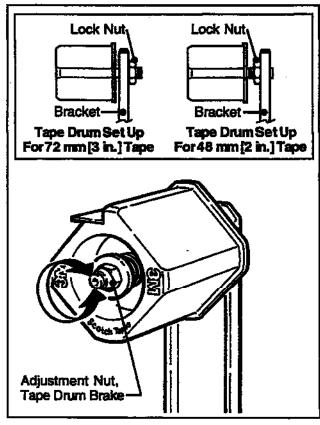


Figure 5-2 - Tape Drum Friction Brake

#### Adjustments (Continued)

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

#### **Applying Mechanism Spring**

To obtain access to the spring, remove the taping head cover (four mounting screws). Replace cover when finished.

The applying mechanism spring, shown in Figures 3-1 and 3-2, controls applying and buffing roller pressure on the box and returns the mechanism to the reset position. The spring pressure is pre-set, as shown in Figure 5-3A for normal operation, but is adjustable.

If a tape gap appears on the trailing surface of the box increase spring pressure. If the front of the box is being crushed by the applying roller decrease spring pressure.

Removing the spring end loop from the spring holder and placing loop in other holes provided, as shown in Figure 5-3B, will adjust the spring pressure.

#### **One-Way Tension Roller**

#### Figure 5-4

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

#### To Adjust Tension:

- Wrap a cord or small strap (non-adhesive) 4-6 turns around the tension roller.
- Attach a spring scale to the end of the cord or strap.
- Turn the adjusting nut with the socket wrench provided, until a force of approximately 0.5 kg to 0.9 kg [1 to 2 lbs.] is required to turn the roller by pulling on the spring scale.

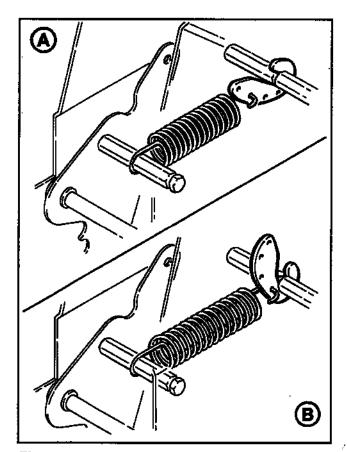


Figure 5-3 – Applying Mechanism Spring

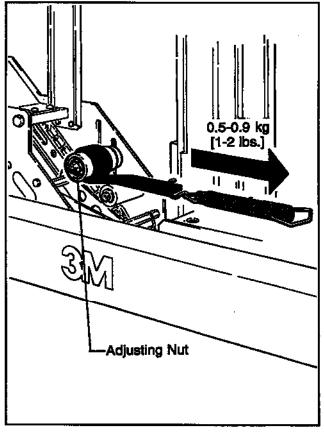


Figure 5-4 - One-Way Tension Roller

#### Adjustments (Continued):

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

#### Tape Leg Length

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

## LEADING TAPE LEG LENGTH ADJUSTMENT - Figure 5-5

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

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

CHANGING TAPE LEG LENGTH FROM 70 to 50 mm [2-3/4 TO 2 INCHES] – Figure 5-6

Note – When changing tape leg length, both upper and lower heads must be adjusted to apply the same leg lengths.

- Remove and retain two hex head screws and remove the brush from normal position "A" on side frame.
- Remount and secure brush in position "A-A" on side frame forward of normal location using original fasteners.
- 3. Remove cut-off bracket extensions from position "B".
- 4. Remount cut-off bracket extensions in forward position "B-B".
- 5. Remove and retain the one-way tension roller assembly from slot "C" in frame.
- 6. Remount tension roller assembly near top of slot "C-C" in frame using original fasteners.
- Adjust tension roller according to "Leading Tape Leg Length Adjustment" above.

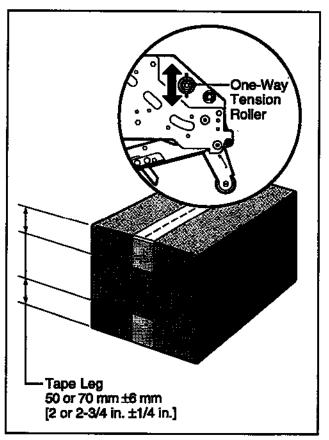


Figure 5-5 - Leading Tape Leg Length

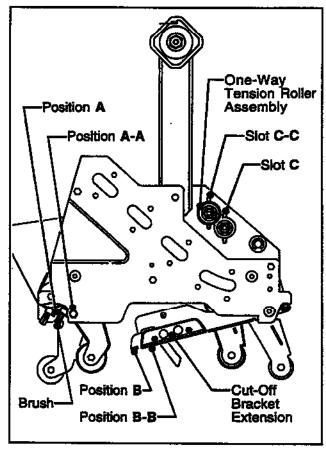


Figure 5-6 - Changing Tape Leg Length

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## **Troubleshooting**

#### **Troubleshooting Guide**

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

## Troubleshooting (Continued)

#### Troubleshooting Guide

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

#### **Spare Parts/Service Information**

#### **Recommended Spare Parts**

A set of spare parts that will periodically require replacement due to normal wear is supplied with the taping heads. The set includes the following which should be reordered when used to keep the taping heads in production:

Qty.	Ref. No.	Part Number	Description
4	2948-22	78-8076-4500-3	Stud - Mounting
1	2950-10	78-8070-1274-1	Spring – Upper Extension (Silver)
1	2952-2	78-8028-7899-7	Knife – 89 mm/3.5 Inch
2	2952-12	78-8052-6602-6	Spring - Cutter
1	<del>-</del> .	78-8076-4726-4	Tool – Tape Threading

#### AccuGlide™ II STD 3 Inch Lower Taping Head

Qty.	Ref. No.	Part Number	Description	
1	2952-2	78-8028-7899-7	Knife - 89 mm/3.5 Inch	
2	2952-12	78-8052-6602-6	Spring Cutter	
4	2954-22	78-8076-4500-3	Stud - Mounting	•
1	2955-10	78-8070-1273-3	Spring - Lower Extension (Black)	
1	_	78-8076-4726-4	Tool - Tape Threading	

In addition to the above set of spare parts supplied with the taping head, it is suggested that the following spare parts be maintained which will require replacement under normal wear of the taping head.

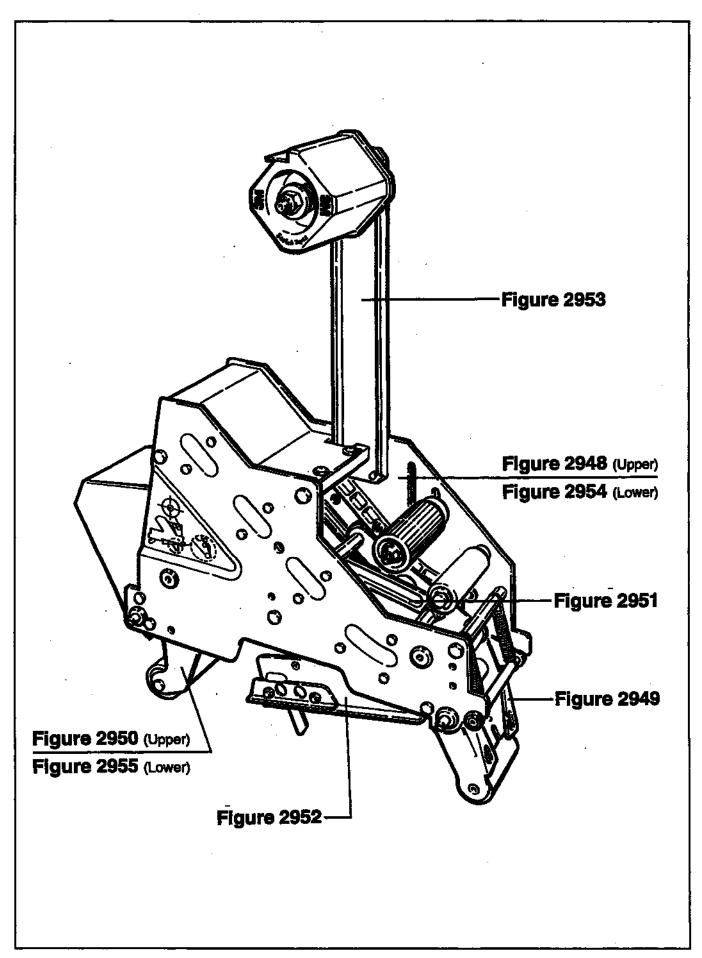
Qty.	Ref. No.	Part Number	Description
1	2949-15	78-8057-6181-0	Roller – Applying
1	2950/2955-5	78-8057-6180-2	Roller – Buffing
1	2952-18	78-8113-7030-9	Spring – Torsion

#### Replacement Parts and Service

Refer to the first page of this instruction manual "Replacement Parts and Service Information".

# Replacement Parts Illustrations and Parts Lists AccuGlide™ II STD 3 Inch Upper Taping Head, Type 39600 AccuGlide™ II STD 3 Inch Lower Taping Head, Type 39600

1.	Refer to <b>Taping Head Assemblies</b> Figure, page 19 to find all the parts illustrations identified by <b>figure</b> numbers.
2.	Refer to the figure or figures to determine the <b>individual parts</b> required and the <b>parts reference number.</b>
3.	The <b>replacement parts list</b> , that follows each illustration, includes the <b>part number</b> and <b>part description</b> for the parts in that illustration.
	Note – The complete description has been included for standard fasteners and some commercially available components. This has been done to allow obtaining these standard parts locally, should the customer elect to do so.
	Customer elect to do so.
4.	Refer to the first page of this instruction manual *Replacement Parts and Service Information* for replacement parts ordering information.
4.	Refer to the first page of this instruction manual *Replacement Parts and Service Information* for



Taping Head Assemblies – AccuGlide™ II STD 3 Inch

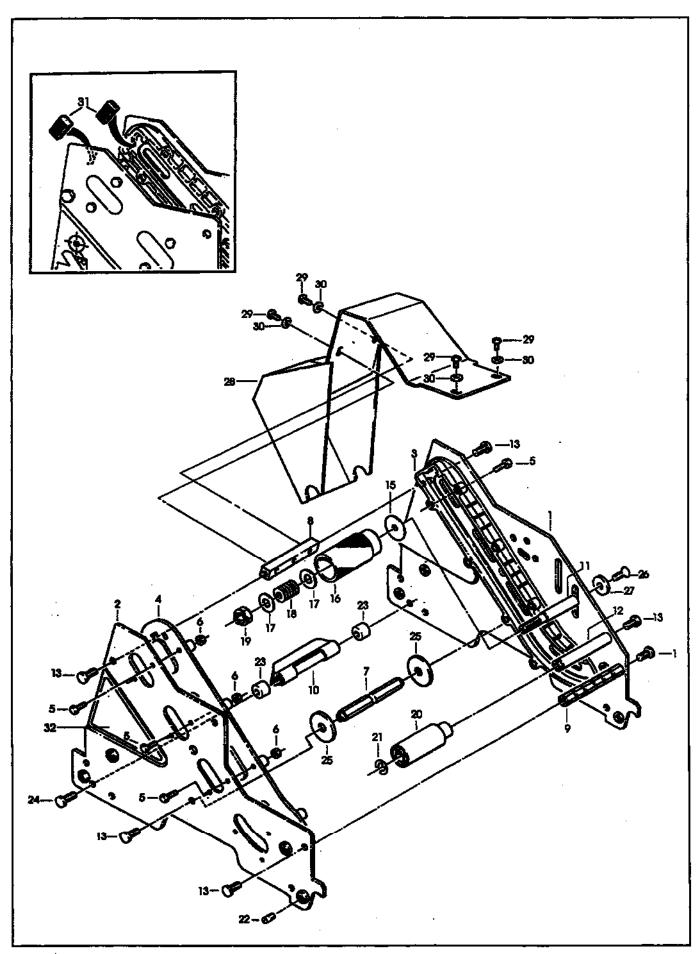


Figure 2948 – Upper Head

## Figure 2948 - Upper Head

Ref. No.	3M Part No.	Description
2948-1	78-8070-1386-3	Frame - Tape Mount Upper Assembly
2948-2	78-8070-1387-1	Frame - Front Upper Assembly
2948-3	78-8068-4143-9	Guide — #1
2948-4	78-8068-4144-7	Guide #2
2948-5	83-0002-7336-3	Screw - Hex Hd, M4 x 14
2948-6	78-8010-7416-8	Nut – Hex Jam, M4
2948-7	78-8076-4735-5	Spacer - Spring
2948-8	78-8055-0694-2	Spacer - 10 x 10 x 115 mm
2948-9	78-8060-7939-4	Spacer – 10 x 115 W/Slots
2948-10	78-8060-7936-0	Brush Assembly
2948-11	78-8054-8796-0	Shaft - Tension Roller
2948-12	78-8054-8798-6	Shaft – Wrap Roller
2948-13	26-1003-5829-5	Screw - Hex Hd, M6 x 12
2948-15	78-8100-1009-6	Washer - Special
2948-16	78-8054-8797-8	Roller - Top Tension
2948-17	78-8052-6566-3	Washer - Friction
2948-18	78-8052-6567-1	Spring – Compression
2948-19	78-8017-90 <b>7</b> 7-1	Nut - Self Locking, M10 x 1
2948-20	78-8054-8799-4	Roller – Wrap
2948-21	26-1000-1613-3	Ring - Retaining, Tru-Arc #1-420-0120-100
2948-22	78-8076-4500-3	Stud - Mounting
2948-23	78-8060-7937-8	Spacer - 6,5/14 x 12,5
2948-24	78-8060-7938-6	Screw - Low Profile, M6 x 25
2948-25	78-8076-5242-1	Stop - Cut-Off Frame
2948-26	78-8060-8179-6	Screw - Flat Head Hex, M6 x 20
2948-27	78-8076-5477-3	Washer - Special, 6.5 x 20 x 4
2948-28	78-8100-1049-2	Guard – Head
2948-29	<b>78-8060-8087-1</b>	Screw - M5 x 10
2948-30	78-8005-5741-1	Washer - Flat, M5
2948-31	78-8076-4734-8	Bumper
2948-32	78-8070-1365-7	Label Threading, English Language

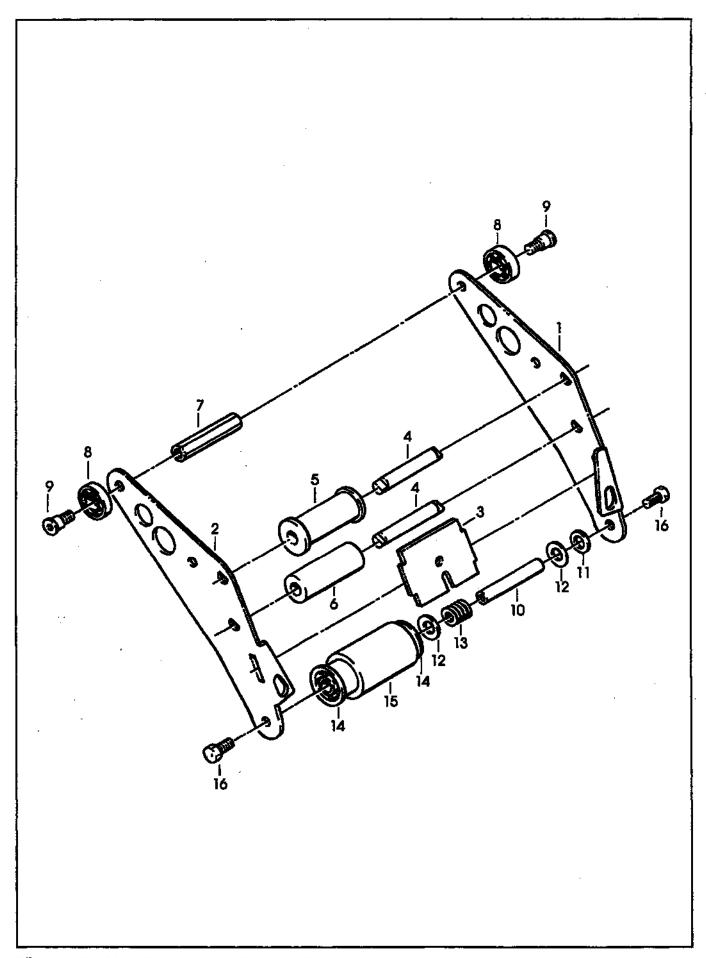


Figure 2949 – Upper and Lower Heads

Figure 2949 – Upper and Lower Heads

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Ref. No.	3M Part No.	Description
2949-1	78-8100-0982-5	Arm – Applying, R/H
2949-2	78-8100-0983-3	Arm – Applying, L/H
2949-3	78-8070-1292-3	Plate – Back-Up
2949-4	78-8076-4736-3	Shaft Roller
2949-5	78-8076-4737-1	Roller Assembly Knurled
2 <del>9</del> 4 <del>9-</del> 6	78-8076-4738-9	Roller – Wrap
2949-7	78-8054-8806-7	Spacer
2949-8	78-8017-9082-1	Bearing – Special, 30 mm
2949-9	78-8017-9106-8	Screw - Bearing Shoulder
2949-10	78-8054-8801-8	Shaft – 10 x 85, W/Hexagon
2949-11	78-8017-9074-8	Washer – Nylon, 15 mm
2949-12	78-8052-6566-3	Washer Friction
2949-13	78-8052-6567-1	Spring - Compression
2949-14	78-8060-8396-6	Bushing – Applying Roller
2949-15	78-8057-6181-0	Roller – Applying
2 <del>949-</del> 16	26-1003-5829-5	Screw - Hex Hd, M6 x 12

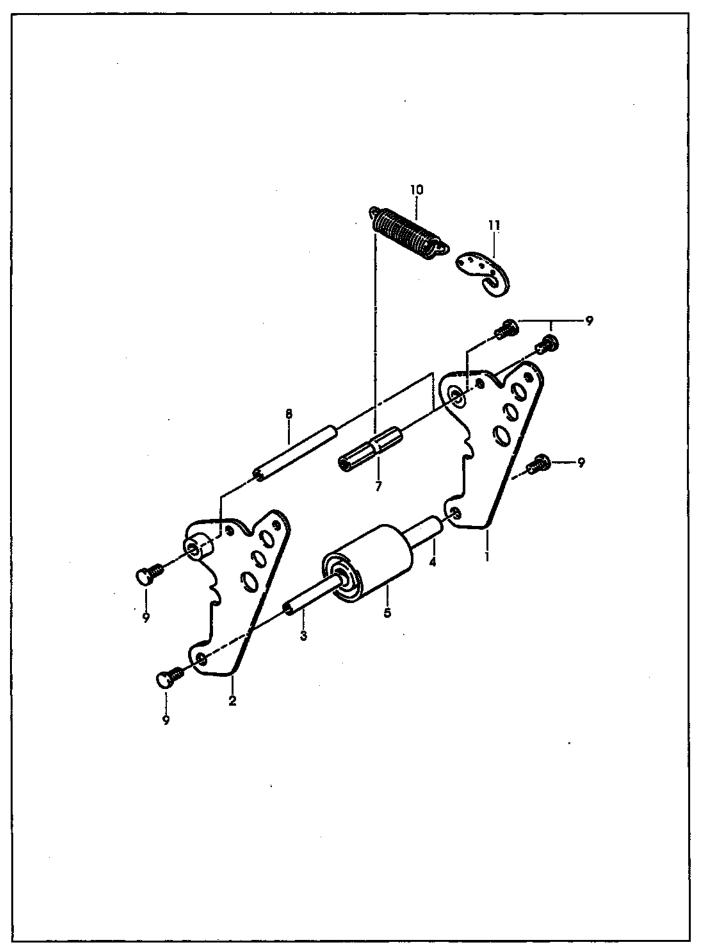


Figure 2950 - Upper Head

Figure 2950 - Upper Head

Ref. No.	3M Part No.	Description	
2950-1	78-8070-1392-1	Buffing Arm – Sub Assembly	
2950-2	78- <del>8</del> 070-1391-3	Buffing Arm - Sub Assembly	
2950-3	78-8091-0799-4	Shaft - 10 x 85, W/Hexagon	
2950-4	78-8054-8807-5	Bushing - Buffing Roller	
2950-5	78-8057-6180-2	Roller – Buffing	
2950-7	78-8076-4739-7	Spacer - Spring	
2950-8	78-8028-7885-6	Shaft – 10 x 115 mm	
2950-9	26-1003-5829-5	Screw Hex Hd, M6 x 12	
2950-10	<b>78-8</b> 070-1274-1	Spring – Upper (Silver)	
2950-11	78-8070-1244-4	Holder – Spring	

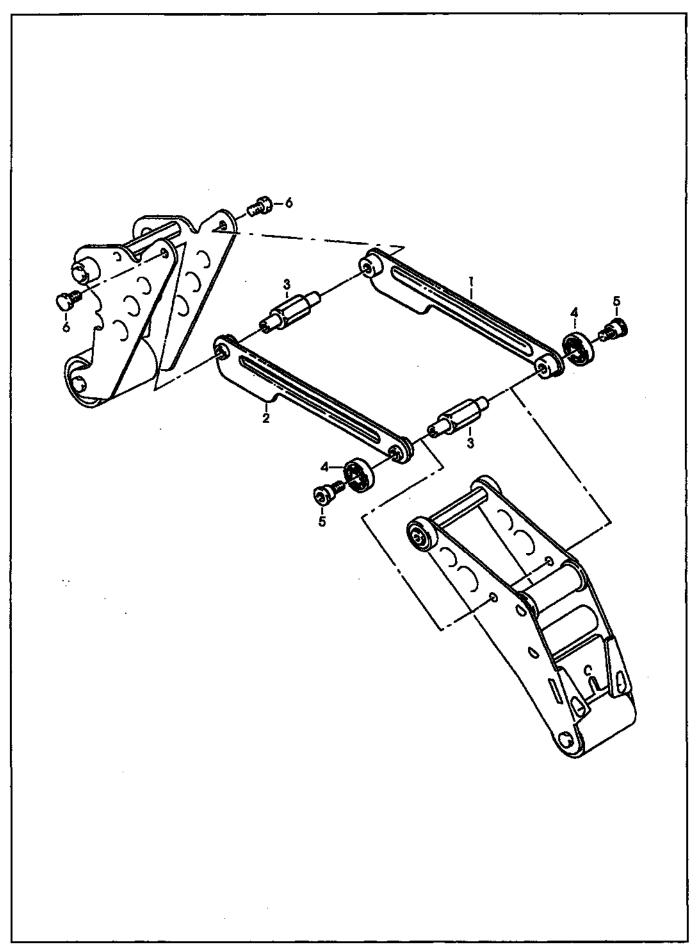


Figure 2951 – Upper and Lower Heads

Figure 2951 - Upper and Lower Heads

Ref. No.	3M Part No.	Description		
2951-1	78-8070-1388-9	Link - Arm Bushing Assembly		
2951-2	78-8070-1389-7	Link – Arm Bushing Assembly		
2951-3	78-8076-4740-5	Shaft - Pivot		
2951-4	78-8017-9082-1	Bearing Special 30 mm		
2951-5	78-8017-9106-8	Screw – Bearing Shoulder		
2951-6	26-1003-5829-5	Screw - Hex Hd, M6 x 12		

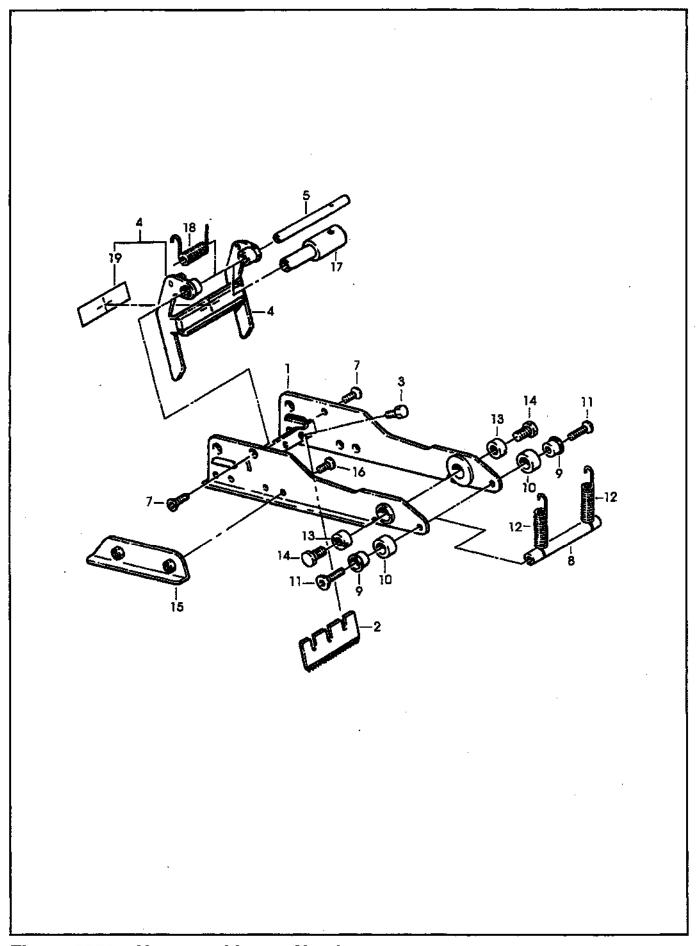


Figure 2952 - Upper and Lower Heads

Figure 2952 – Upper and Lower Heads

Ref. No.	3M Part No.	Description
2952-1	78-8070-1283-2	Frame - Cut-Off
2952-2	78-8028-7899-7	Knife – 89 mm/3.5 Inch
2952-3	26-1002-5817-2	Screw - Hex Hd, M5 x 8
2952-4	78-8076-4741-3	Knife Guard Assembly – W/English Language Label
2952-5	78-8054-8813-3	Shaft - Knife Guard
2952-7	26-1005-4758-2	Screw - Flat Hd, Soc Dr, M4 x 10
2952-8	78-8060-7941-0	Pin – Spring Holder W/Slots
2952-9	78-8052-6600-0	Spacer
2952-10	78-8070-1269-1	Bumper
2952-11	26-1005-4757-4	Screw - Flat Hd, Soc Dr, M5 x 20
2952-12	78-8052-6602-6	Spring Cutter
2952-13	78-8017-9132-4	Pivot – Cutter Lever
2952-14	26-1003-5828-7	Screw - Spec, Hex Hd, M6 x 10
2952-15	78-8070-1216-2	Slide – Extension
2952-16	26-1008-6574-5	Screw - Flat Hd, Phil Dr, M4 x 10
2952-17	78-8113-7060-6	Bushing 83.7 mm Long
2952-18	78-8113-7030-9	Spring – Torsion
2952-19	78-8070-1335-0	Label Warning, English

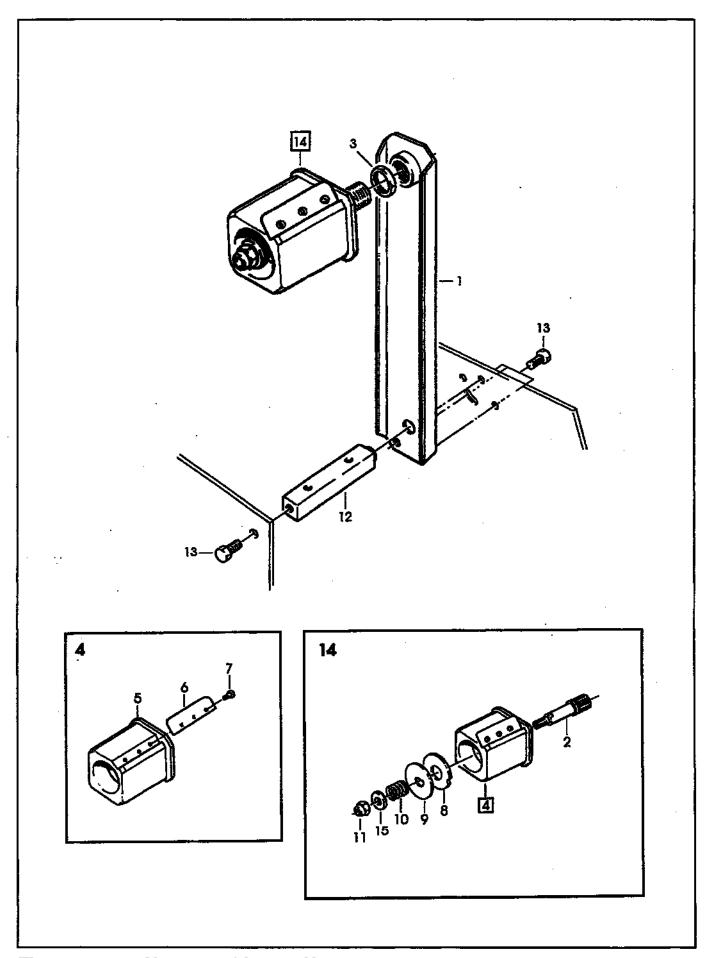


Figure 2953 - Upper and Lower Heads

## Figure 2953 – Upper and Lower Heads

Ref. No.	3M Part No.	Description
2953-1	78-8070-1395-4	Bracket Bushing Assembly
2953-2	78-8060-8462-6	Shaft - Tape Drum, 3 Inch Head
2953-3	78-8017-9169-6	Nut - M18 x 1
2953-4	78-8076-4731-4	Tape Drum Assembly - 3 Inch Wide
2953-5	78-8054-8815-8	Tape Drum Assembly
2953-6	78-8054-8816-6	Leaf Spring
2953-7	26-1002-5753-9	Screw – Self Tapping
2953-8	78-8060-8172-1	Washer - Friction
2953- <del>9</del>	78-8052-6271-0	Washer - Tape Drum
2953-10	78-8100-1048-4	Spring – Core Holder
2953-11	78-8017-9077-1	Nut - Self Locking, M10 x 1
2953-12	78-8100-1050-0	Spacer – Bracket
2953-13	26-1003-5829-5	Screw - Hex Hd, M6 x 12
2953-14	78-8076-4732-2	Tape Drum Assembly - 3 Inch Head
2953-15	26-1004-5510- <del>9</del>	Washer Plaîn, M10

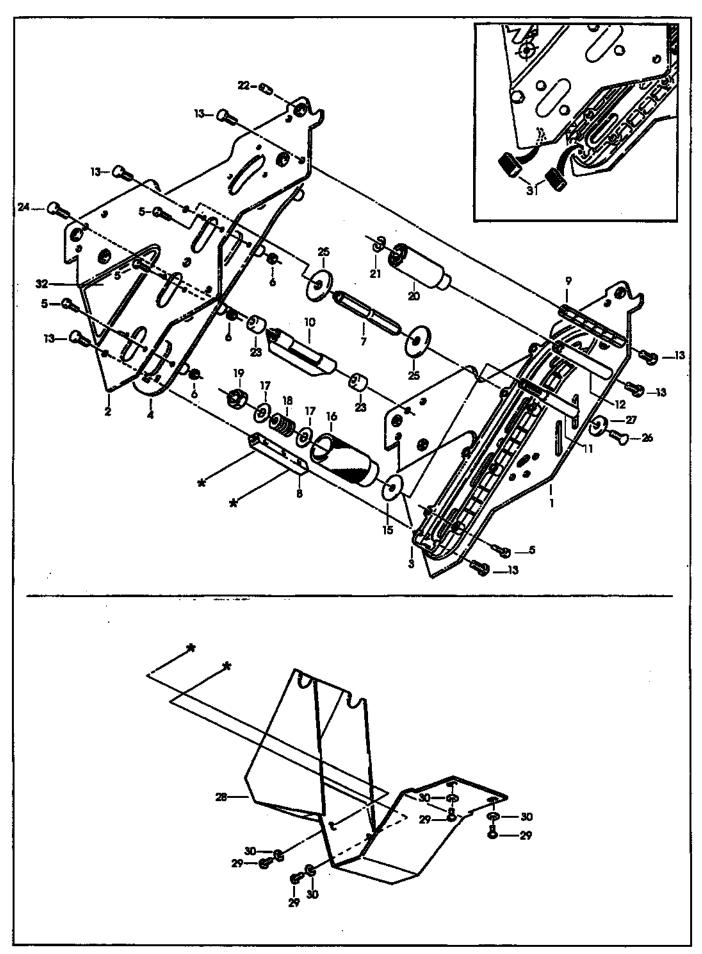


Figure 2954 - Lower Head

## Figure 2954 – Lower Head

Ref. No.	3M Part No.	Description	
2954-1	78-8070-1369-9	Frame - Tape Mount Lower Assembly	
2954-2	78-8070-1370-7	Frame – Front Lower Assembly	
2954-3	78-8068-4144-7	Guide #2	
2954-4	78-8068-4143-9	Guide – #1	
2954-5	83-0002-7336-3	Screw - Hex Hd, M4 x 14	
2954-6	78-8010-7416-8	Nut Hex, M4	
2954-7	78-8076-4735-5	Spacer - Spring	
2954-8	78-8055-0694-2	Spacer - 10 x 10 x 115 mm	
2954-9	78-8060-7939-4	Spacer - 10 x 115, W/Slots	
2954-10	78-8060-7936-0	Brush Assembly	
2954-11	78-8054-8796-0	Shaft - Tension Roller	
2954-12	78-8054-8798-6	Shaft - Wrap Roller	
2954-13	26-1003-5829-5	Screw - Hex Hd, M6 x 12	
2954-15	78-8100-1009-6	Washer - Special	
2954-16	78-8054-8817-4	Roller – Tension Bottom	
2954-17	78-8052-6566-3	Washer - Friction	
2954-18	78-8052-6567-1	Spring - Compression	
2954-19	78-8017-9077-1	Nut - Self Locking, M10 x 1	
2954-20	78-8054-8799-4	Roller Wrap	
2954-21	26-1000-1613-3	Ring - Retaining, Tru-Arc #1-420-0120-100	
2954-22	78-8076-4500-3	Stud - Mounting	
2954-23	78-8060-7937-8	Spacer 6,5/14 x 12,5	
2954-24	78-8060-7938-6	Screw - Low Profile, M6 x 25	
2954-25	78-8076-5242-1	Stop - Cut-Off Frame	
2954-26	78-8060-8179-6	Screw - Flat Head Hex, M6 x 20	
2954-27	78-8076-5477-3	Washer - Special /6.5 x 20 x 4	
2954-28	78-8100-1049-2	Guard – Head	
2954-29	78-8060-8087-1	Screw - M5 x 10	
2954-30	78-8005-5741-1	Washer – Flat, M5	
2954-31	78-8076-4734-8	Bumper	
2954-32	78-8070-1364-0	Label - Threading, English Language	

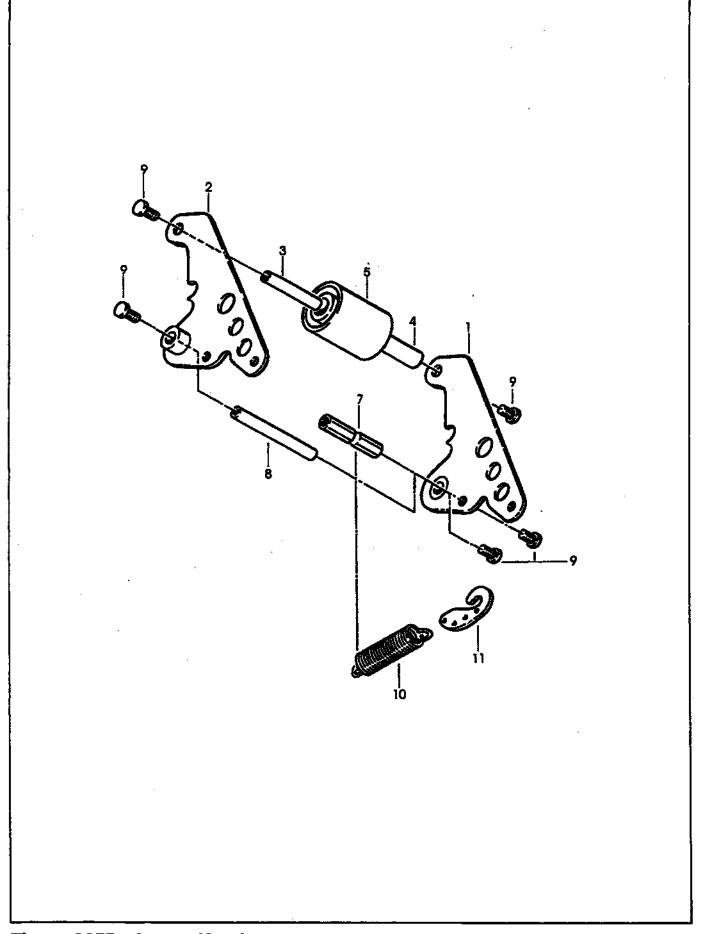


Figure 2955 - Lower Head

## Figure 2955 - Lower Head

Ref. No.	3M Part No.	Description
2955-1	78-8070-1391-3	Buffing Arm Sub Assembly
2955-2	78-8070-1392-1	Buffing Arm Sub Assembly
2955-3	78-8091-0799-4	Shaft - 10 x 85, W/Hexagon
2955-4	78-8054-8807-5	Bushing – Buffing Roller
2955-5	78-8057-6180-2	Roller – Buffing
2955-7	78-8076-4739-7	Spacer - Spring
2955-8	78-8028-7885-6	Shaft - 10 x 115 mm
2955-9	26-1003-5829-5	Screw Hex Hd, M6 x 12
2955-10	78-8070-1273-3	Spring – Lower (Black)
2955-11	78-8070-1244-4	Holder - Spring

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