customer manual

SAFETY PRECAUTIONS AVOID INJURY

Safeguards are designed into this application equipment to protect operators and maintenance personnel from most hazards during equipment operation. However, certain safety precautions must be taken by the operator and repair personnel to avoid personal injury, as well as damage to the equipment. For best results, application equipment must be operated in a dry, dust-free environment. Do not operate equipment in a gaseous or hazardous environment.

- Carefully observe the following safety precautions before and during operation of the equipment:
- ALWAYS wear appropriate ear protection.
- ALWAYS wear approved eye protection when operating powered equipment.
- ALWAYS keep guard(s) in place during normal operation.
- ALWAYS insert power plug into a properly grounded receptacle to avoid electrical shock.
- ALWAYS turn off the main power switch and disconnect electrical cord from the power source when performing maintenance on the equipment.
- NEVER wear loose clothing or jewelry that may catch in moving parts of the application equipment.
- NEVER insert hands into installed application equipment.
- NEVER alter, modify, or misuse the application equipment.

TOOLING ASSISTANCE CENTER

CALL TOLL FREE 1-800-722-1111 (CONTINENTAL UNITED STATES AND PUERTO RICO ONLY)

The **Tooling Assistance Center** offers a means of providing technical assistance when required.

In addition, Field Service Specialists are available to provide assistance in the adjustment or repair of the application equipment when problems arise which your maintenance personnel are unable to correct.

INFORMATION REQUIRED WHEN CONTACTING THE TOOLING ASSISTANCE CENTER

When calling the Tooling Assistance Center regarding service to equipment, it is suggested that a person familiar with the device be present with a copy of the manual (and drawings) to receive instructions. Many difficulties can be avoided in this manner.

When calling the Tooling Assistance Center, be ready with the following information:

1. Customer name
2. Customer address
3. Person to contact (name, title, telephone number, and extension)
4. Person calling
5. Equipment number (and serial number if applicable)
6. Product part number (and serial number if applicable)
7. Urgency of request
8. Nature of problem
9. Description of inoperative component(s)
10. Additional information/comments that may be helpful

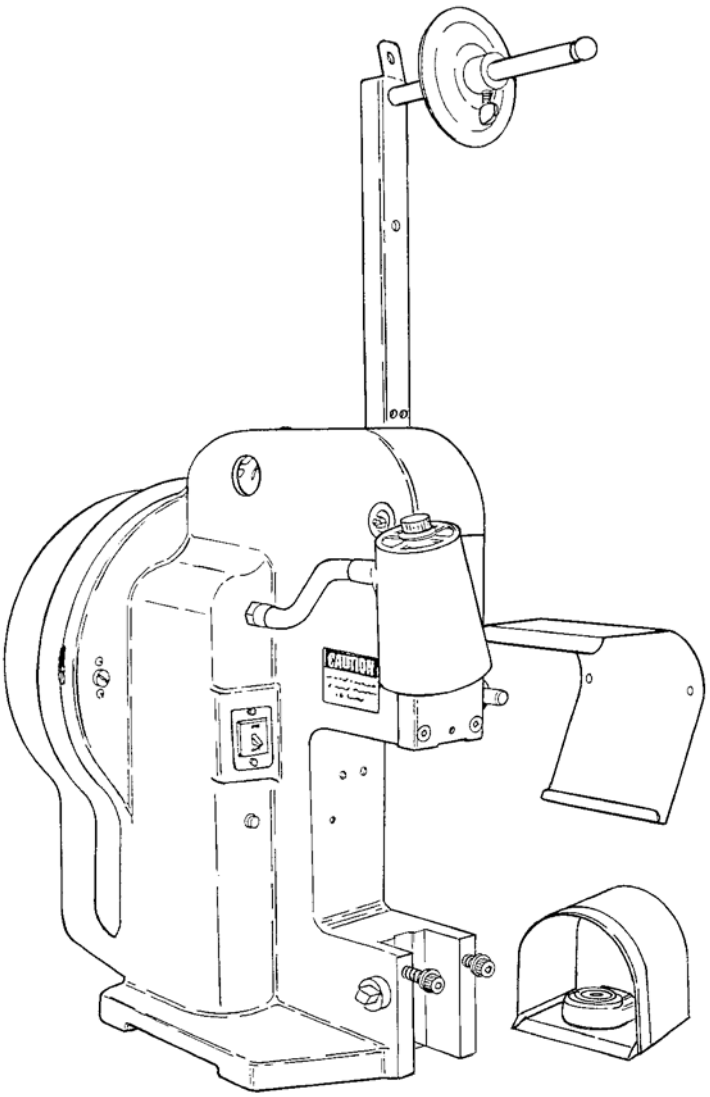


Figure 1

1. INTRODUCTION

This manual covers basic AMP-O-LECTRIC Model "K" Terminating Machine 1-471273-3 and 1-471273-4 (shown in Figure 1), main accessories, and most common modifications.

MACHINE NUMBER	MACHINE DESCRIPTION
1-471273-3	115 Vac, 60 Hz, and comes with Mechanical Feed Option 692140-2 factory installed
1-471273-4	230 Vac, 50 Hz, and does NOT include Mechanical Feed Option 692140-2

The machine is used to power the applicator that applies strip-fed terminals to wire. In addition, the machine is also used as the principal component in other special application equipment covered in separate customer manuals. These manuals refer to this one for basic machine information and parts.

Sections 1 through 9 provide a machine description and information on its installation, operation, maintenance, troubleshooting, adjustment, repair, and parts replacement. Section 10 covers the accessories used to modify the basic machine to a different configuration. When the accessories are factory installed, the machine part number on the nameplate changes from the basic number to one identifying the modified configuration. Section 11 discusses these modified configurations by part number. The accessories are also available as kits for field conversion, in which case the machine part number will no longer identify the configuration.

Packaged with every applicator is a parts list identifying the required machine number for that applicator. The parts list also identifies the accessories necessary to convert the machine to the required configuration.

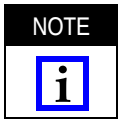
The basic machine is fitted to accept standard applicators, which are semi-permanently mounted to the machine for production of one size and type of terminal without the need for frequent changeover of applicators or changes in the applicator crimp height. The most frequent field conversion is a kit to adapt the machine for miniature quick-change applicators, which are easily installed and removed and allow simple adjustment of the crimp height. Instruction sheet 408-8022 provides a parts list for the kit and the necessary instructions for converting a basic machine for standard applicators to miniature quick-change applicators.

An instruction sheet, packaged with each applicator, provides information on applicator installation, care, and adjustment. The instruction sheet, the applicator parts list, and this manual collectively provide complete documentation for the various production setups involving applicators and the Model "K" terminating machine.

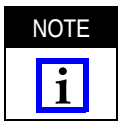
When reading this manual, pay particular attention to DANGER, CAUTION, NOTE statements.

Denotes an imminent hazard which may result in moderate or severe injury.

Denotes a condition which may result in product or equipment damage.



Highlights special or important information.



Dimensions in this manual are in metric units [with U.S. customary units in brackets].

Reasons for reissue of this document are provided in Section 12, REVISION SUMMARY.

See Figure 2 for specifications for the machine.

DIMENSIONSs:	
Height	610 mm [24 in.]
Width	533 mm[21 in.]
Depth	508 mm [20 in.]
WEIGHT	
Basic machine without aplicator	104 Kg [230 lbs]
POWER REQUIREMENTS	
Electrical (1-471273-3)	115 Vac, single phase with separate ground, 60 Hz, 6 Amps
Electrical (!-471273-4)	230 Vac, single phase with separate ground, 50 Hz, 3 Amps
Air (if used)	552-827 kPa [80 - 120 psi]

Figure 2

2. DESCRIPTION

2.1. Physical Description

The basic machine consists of a cast-iron frame with a flywheel guard in back that is hinged to the frame. Inside the guard is a 1/4-hp motor, flywheel assembly, transmission assembly, toggle lever, and feed actuating components. Mounted on the right side of the frame, facing the operator, is the feed arm drive shaft and the

vertical reel bracket assembly. The electrical system consists of a main power switch, work lamp, and panel light located on the left front of the machine; a trip control box assembly inside the back cover; a foot switch; and electrical wiring. The motor is bolted to a mounting plate that is hinged to the machine frame by a support pin. The weight of the motor provides enough tension to the V-belt for driving the flywheel.

The basic machine does not contain a ram or base mount. These are supplied with the applicator or the conversion kit. The ram is mounted behind the ram retaining plate on the front of the frame.

The frame contains holes for bolting the machine to a bench at a height convenient for the operator as described in Section 3.

2.2. Functional Description

The motor-flywheel assembly runs continuously when the control switch is "on." The flywheel turns on the main shaft of the transmission until the foot switch is depressed to actuate the solenoid on the transmission. The energized solenoid pulls up the stop bar (see Figure 3) to release the clutch dog (sliding key), which is then forced toward the flywheel by spring pressure. The end of the clutch dog then slides into the first opening it encounters in the drive plate on the rotating flywheel. This connects the rotating flywheel and the drive shaft to start the machine cycle.

At approximately 270° in the rotation cycle, the beveled forward edge of the notch in the clutch dog encounters the dog wedge ramp on the face of the dog retainer support. As the clutch dog slides up this ramp against spring pressure, it is withdrawn from the flywheel drive plate.

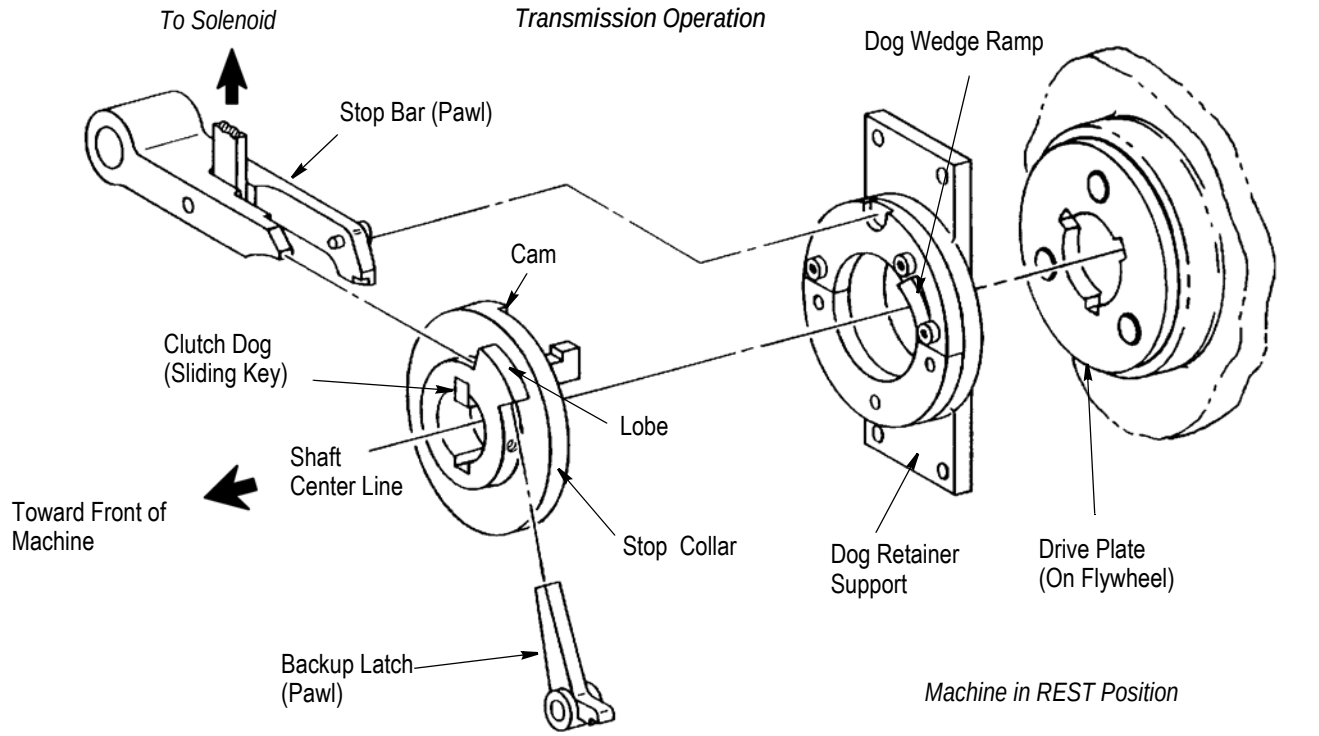


Figure 3

During the cycle, the cam on the rear face of the stop collar rides over the pin on the rear finger of the stop bar, forcing it down to retain the clutch dog in the rest position at the end of the cycle. This brings the end of the front finger of the stop bar in position to contact one side of the lobe on the front of the stop collar to prevent further forward rotation of the drive shaft. At the same time, spring tension forces the backup latch in against the opposite side of the lobe on the stop collar to prevent reverse rotation.

An eccentric arm is keyed to the forward end of the main shaft (see Figure 9). The arm is at TOP-DEAD-CENTER when the machine is in the rest position. Attached to the arm is a spherical bearing link that actuates the toggle lever subassembly.

The toggle lever subassembly is secured in the frame by the toggle arm pin at the front (see Figure 4). This pin acts as the pivot point. Another pin connects the link to the lever, and the opposite end of the link is connected to the ram by a pin.

The feed actuating mechanism (see Figure 13) is driven by the toggle lever. The feed connecting rod is joined to the toggle lever by a pin and clevis. A compression spring is installed over the connecting rod, extending from the clevis to the feed actuating block at its lower end. The spring absorbs the overaction and allows for feed adjustment. The feed actuating arm joins the feed actuating block on its inner end, and the feed arm drive shaft on the outer end, to oscillate the shaft in the bracket attached to the frame. The upward travel of the arm is limited by the forward stop screw and its downward travel by the damper screw.

Toggle Lever Subassembly Operation

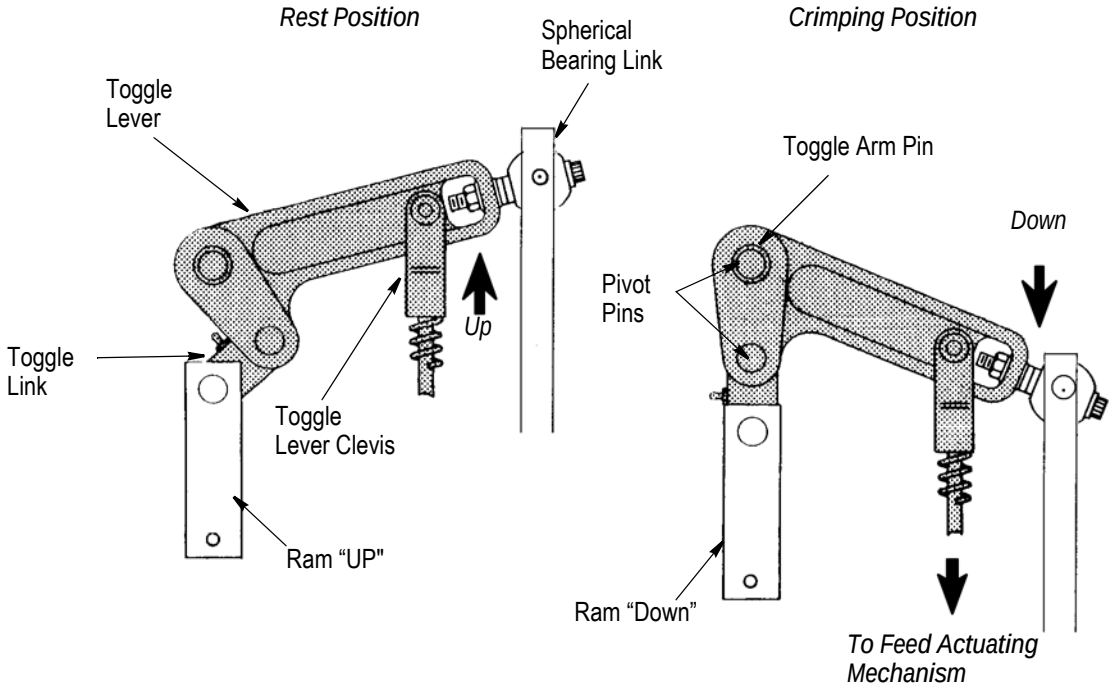


Figure 4

The feed actuating mechanism is used to drive the feed arm assembly when using standard applicators that require a mechanical feed or for operating air valves for air feed and air blasts (when installed). These assemblies are covered in Section 10.

2.3. Vertical Reel Bracket Assembly (Figure 18)

The vertical reel bracket assembly, supplied with the machine, is adaptable to the broadest range of reel bracket requirements. Three locations for the reel shaft on the vertical bracket allow mounting of all sizes of vertically mounted reels. By changing the shaft to the inclined tab on top of the vertical reel support, conical reels can also be installed. From either location of the reel shaft, the terminal strip is fed around the stock guide and into the applicator from the right side of the machine.

When using the vertical reel bracket assembly for feeding miniature end-feed applicators, the stock guide bracket must be tilted downward. This is accomplished by moving the left screw to the upper mounting hole in the vertical reel support.

The assembly also adapts to feed the terminal strips into applicators from the left side of the machine for miniature side-feed applicators, and into applicators mounted at a 30_ angle, with the use of available assemblies (see Section 10).

2.4. Electrical System (Figure 5 and Figure 6)

The electrical system of the basic machine consists of a motor, trip control box, transmission solenoid, foot switch, barrier strip, main power (control) switch, work lamp, panel light, and wiring. The basic electrical system may be modified when adapted for special applications.

The machine must be connected to an adequate electrical outlet. Refer to Figure 2 for machine voltage and current specifications. The electrical current is supplied directly to the double-pole, single-throw main power switch (S2) and to the work lamp (DS1) which contains an integral switch (S1). Power from the main power switch, when placed in the "on" position, is supplied to the barrier strip (TB1) and to the panel light (DS2). From the barrier strip, power is supplied to the motor (B1), which runs continuously when the control (main) switch is "on."

The trip control box (A1) and transmission solenoid (L1) are connected to the barrier strip and are controlled by the foot switch (S3). When the foot switch is depressed, it activates the trip control to provide a pulse of electric current to energize the solenoid. The solenoid will not energize again until the foot switch is released, then depressed again. This prevents double-cycling of the machine.

Some applicators require an interlock switch. The switch is wired in series between the trip control box and the transmission solenoid to prevent the solenoid from being energized until the switch is mechanically actuated.

Basic machine wiring is shown in Figure 5 and the electrical schematic is shown in Figure 6.

NOTE

For accurate, up-to-date drawings, see the drawings shipped with the machine.

3. RECEIVING INSPECTION AND INSTALLATION

3.1. Receiving Inspection

These machines are thoroughly inspected during and after assembly. A final series of inspections is made to ensure the proper functioning of each machine before packaging and shipping.

However, damage may occur during shipment. While unpacking the machine, remove the outer bands from the carton or crate, lift off the outer box, and CAREFULLY inspect the complete machine for damage. If damage is evident, file a claim against the carrier and notify Tyco Electronics Corporation, Harrisburg, Pennsylvania.

3.2. Factors Affecting Machine Placement

The location of the machine in relation to the operator is essential to both safety and efficiency. Studies have repeatedly shown that fatigue will be reduced and efficiency increased if particular attention is paid to the bench, the location of the machine on the bench, the operator's chair, and the placement of the foot switch (see Figure 7).

A. Bench

A sturdy bench 711 to 762 mm [28 to 30 in.] high aids comfort by allowing the operator's feet to rest on the floor and the weight and leg position to be easily shifted. The bench should have rubber mounts to reduce noise. An open area under the bench should allow the chair to slide far enough in for the operator's back to be straight and supported by the chair backrest.

B. Machine Location on the Bench

The machine should be located near the front of the bench and securely bolted to remain stationary. The target area (tooling area where the terminal is applied) should be 152 to 203 mm [6 to 8 in.] from the front edge. This eliminates unnecessary operator motion and helps prevent back strain and fatigue. The target area should face the front of the bench and be parallel to the edge (access to the back of the machine must also be provided).

C. Operator's Chair

The operator's chair should swivel, and the seat and backrest should be padded and independently adjustable. The backrest should be large enough to support the back both above and below the waist. In use, the chair should be pulled far enough under the bench so that the operator's back is straight and supported by the backrest.

Basic Machine Wiring

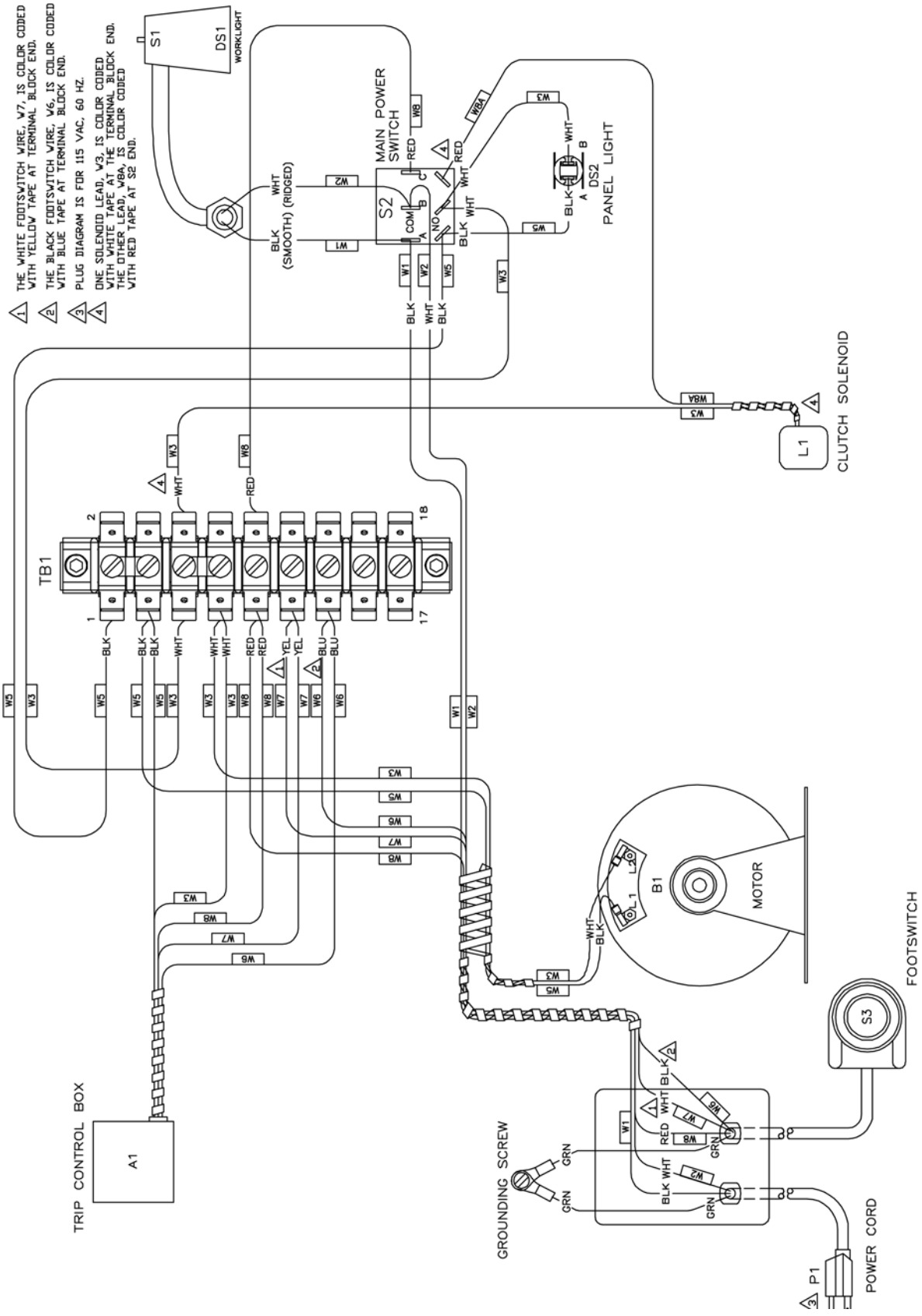


Figure 5

Machine Schematic

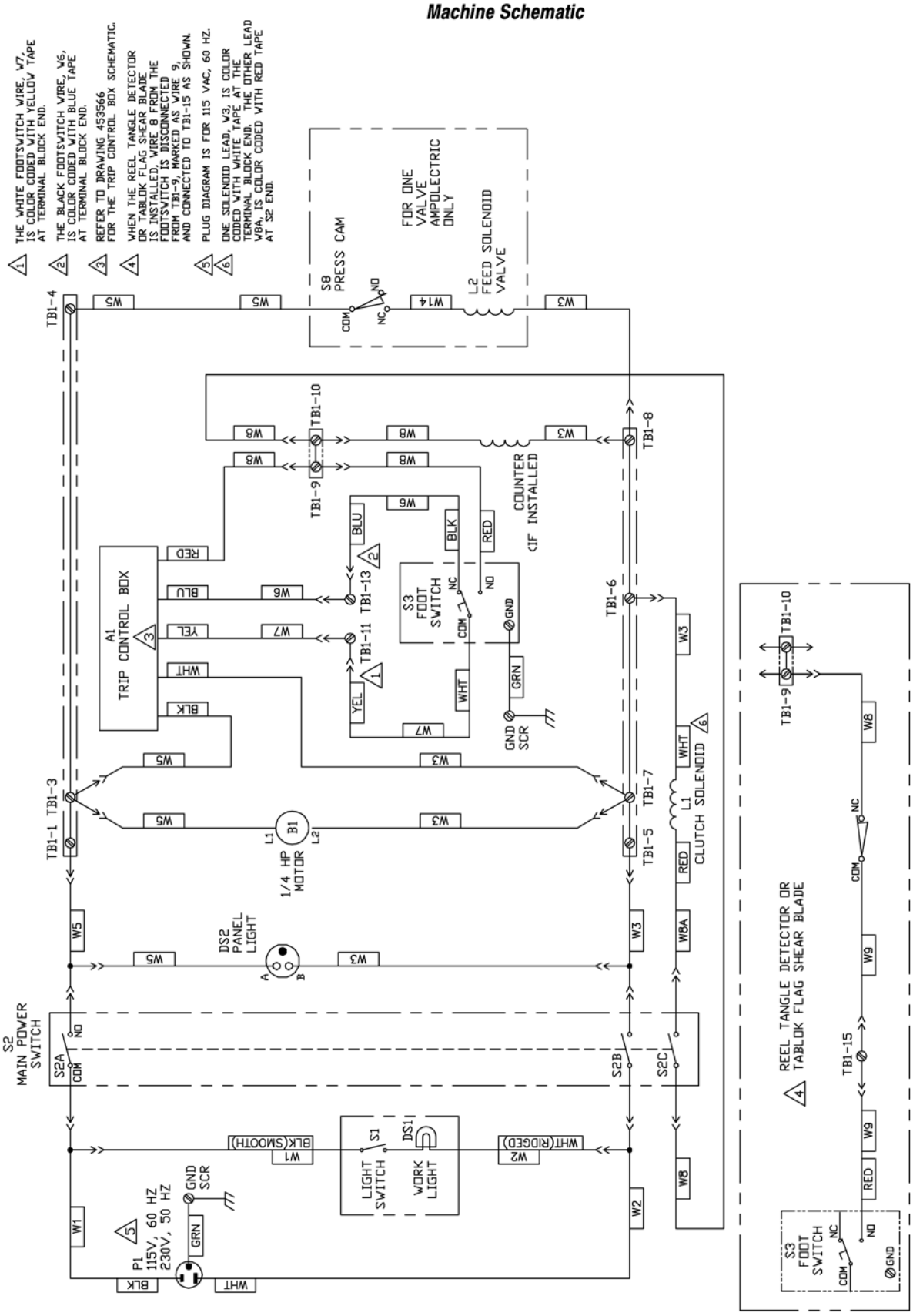
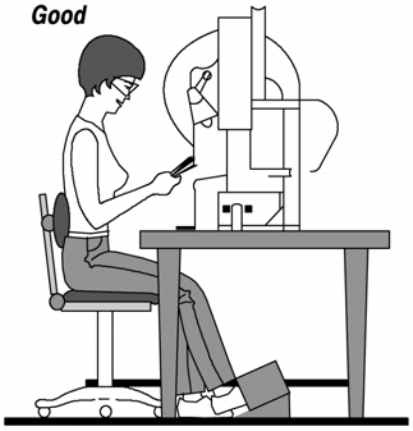


Figure 6

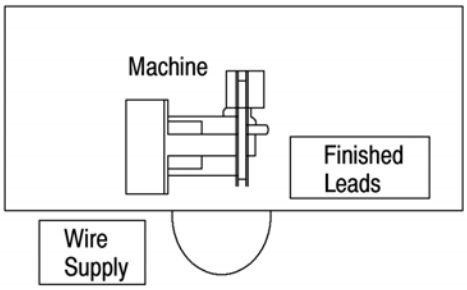
D. Foot Switch

When the operator is correctly positioned in front of the machine, the foot should rest on the switch comfortably and easily. The switch should be placed on a rubber mat: this allows it to be movable and permits the operator to shift positions to reduce fatigue, while at the same time the mat prevents the switch from sliding unintentionally.

The preference for locating the switch varies among operators. Some like the switch located so that their foot rests on the switch when their leg is in the natural sitting position (calf perpendicular to the floor). Others prefer it slightly in front of the natural position. The important thing is that the foot be about 90_ to the calf when resting on the switch. Those who prefer the switch slightly forward may require a wedge-shaped block placed under it.



This illustration shows the physical considerations as recommended and the operator in a desirable position. Note that with the chair height and backrest properly adjusted and the chair properly located, the operator's back is straight and supported by the backrest and the upper arms are in direct line with the torso.



This illustration is a typical plan to illustrate the convenience to handling of materials afforded by the proper setup.

Figure 7

3.3. Installation

The machine is bolted to the shipping pallet. Cut away the remaining carton, remove the bolts securing it to the pallet, then remove the yellow plug and top access hole cover. Attach the hook of an adequate hoist to the machine, as shown in Figure 8, to lift it from the pallet and place it in the selected location. The approximate weight of a complete machine is 123 Kg [272 lb.].

Place the machine on a sturdy bench conforming to the requirements in Paragraph 3.2. The location must have the necessary electrical supply (with a separate ground) and, for air-equipped machines, the necessary air supplies. A 1/4-in. NPT male fitting is required to connect the air to the machine.

CAUTION

Do NOT connect the machine to the electrical outlet, or to the air, until specified. The adequacy of both the electrical power and air supply should be checked at the machine location..

Install a 40-watt appliance bulb, of the proper voltage rating, in the work lamp. A bulb of greater wattage will damage the shade. Position the foot switch on the floor convenient for the operator.

BEFORE connecting the machine to the electric source and air supply, hand-cycle it according to the procedure in Paragraph 4.1 to ensure proper alignment and adjustment of tooling in the applicator (if installed) to prevent damage.

NOTE

When machines are shipped with an applicator installed, an attached package will contain an envelope with crimped product samples which will be to the customer's specifications. These samples should be used as a comparison. All significant test results are recorded on the applicator parts list, included in the envelope, and were made under power.

Examination of the complete machine for evidence of loose screws, bolts, and other components is recommended, after which it should be securely bolted to the bench to prevent movement during operation.

Perform several test cycles under power using the procedure specified for production operation in Paragraph 4.2.

Hoisting Method

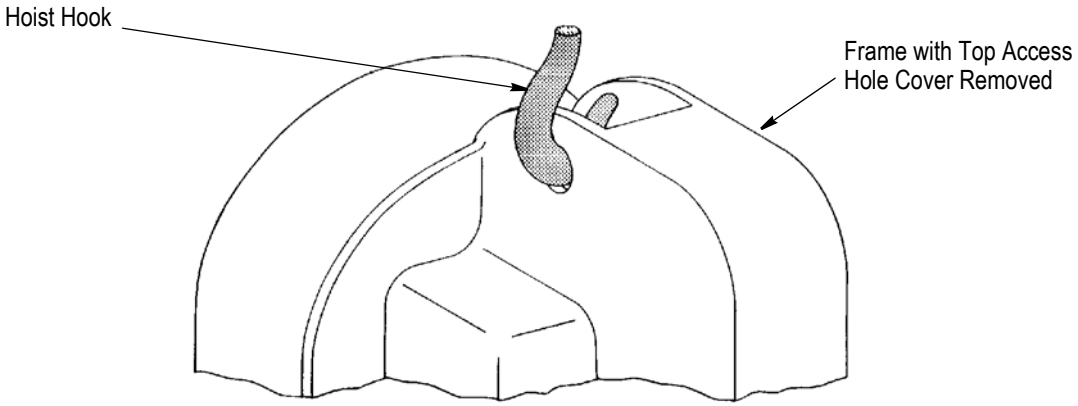


Figure 8

4. OPERATION

The machine is easy to operate, providing it is properly adjusted (see Section 7) and the applicator is also properly adjusted (see applicable instruction sheet).

CAUTION

BEFORE connecting the machine to electrical power, and to the air supply, hand-cycle it to check for proper alignment of tooling to prevent possible damage.

4.1. Hand Cycling (Figure 9)

CAUTION

MAKE SURE main switch is "off" and electrical plug is disconnected, unless otherwise specified.

DANGER

To avoid personal injury, ALWAYS disconnect electrical and air supply before removing flywheel guard.

1. Open flywheel guard to gain access to transmission and flywheel.

2. Manually close solenoid by raising stop bar. This will allow clutch dog to engage in drive plate on flywheel during rotation.

3. By hand, slowly turn flywheel in the direction of the arrow as shown in Figure 9 (clockwise, as viewed from the rear of the machine).

CAUTION

DO NOT ATTEMPT to turn flywheel backward (counterclockwise), since this may damage or jam the applicator.

4. As the machine ram nears the bottom of the stroke, closely observe tooling for proper alignment. If misalignment is evident, STOP rotation of flywheel and determine cause. If adjustment to machine is required, see Section 7. If adjustments to the applicator are required, refer to the appropriate instruction sheet. If machine is for a special application, see the appropriate customer manual.

5. To reset the machine, use a 7/16-in. wrench to turn the grease fitting on the end of the crankshaft in the direction of the arrow as shown in Figure 9. Use a crescent wrench or 7/16-in. box end wrench to turn the grease fitting on the flywheel in the direction of the arrow also shown in Figure 9.

Hand-Cycling of Machine

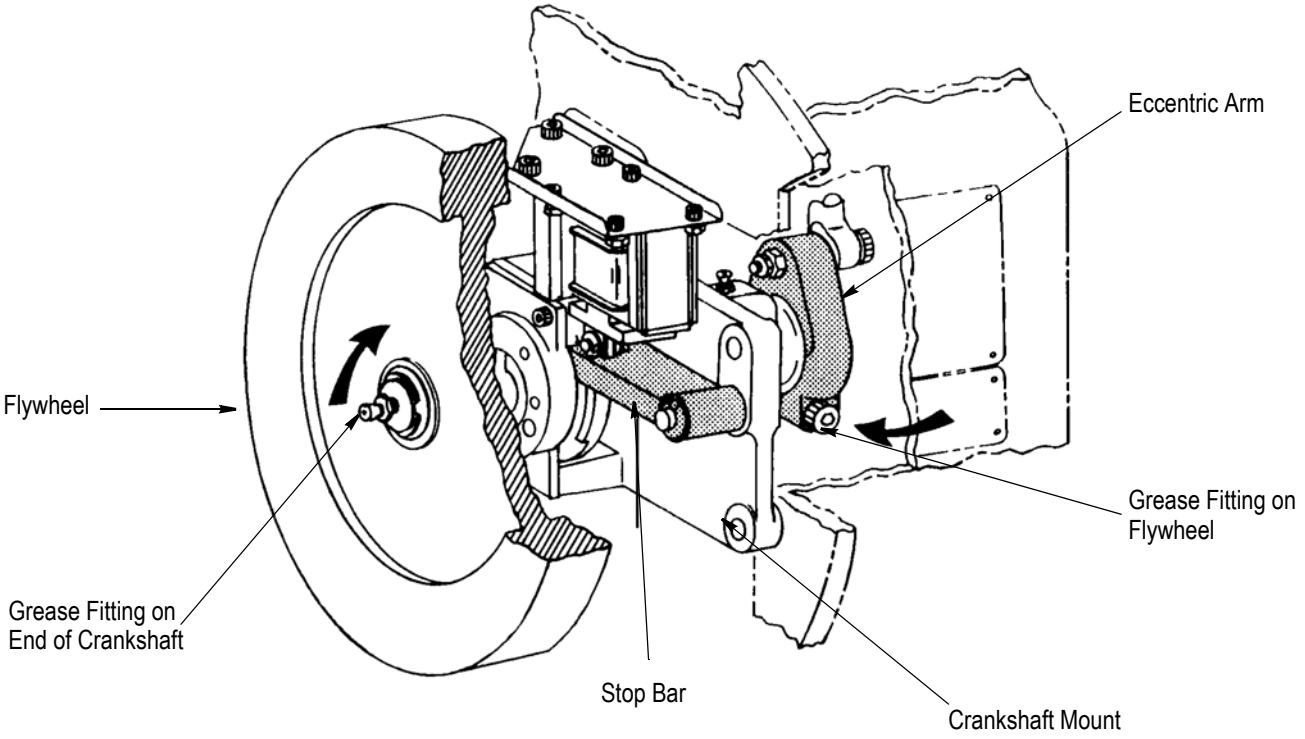


Figure 9

4.2. Production Operation

CAUTION

Operation of the machine may vary slightly depending on the application for which it is used. Should procedures contained in the instructions for the applicator or other customer manuals differ from the following procedure, they shall take precedence over this manual.

1. Connect electrical plug to an outlet with separate ground connection. If an air supply is used, make connection.

2. Make sure machine is at TOP-DEAD-CENTER, and then move main switch (S2) to ON. Motor will start and run continuously.

3. Perform several test cycles to check machine for proper operation. Each cycle is accomplished by depressing the foot switch, and then releasing it before another cycle can be performed.

4. Perform production operation in the same manner as described in Step 3. Take periodic inspection samples to ensure proper crimping of terminals.

5. At end of production operation, move main switch to OFF, and turn air supply OFF (if applicable). Disconnect electrical plug.

5. PREVENTIVE MAINTENANCE

Preventive maintenance is cleaning, inspecting, and lubricating the machine to keep it in continuous operation. It is suggested that a regular maintenance program be established and followed to eliminate the cost of unnecessary repairs. For applicators and special applications of the machine, refer to the publications supplied with them.

To avoid personal injury, ALWAYS disconnect electrical and air supply before performing preventive maintenance.

Re-install ALL dust caps removed during maintenance, to prevent possible injury.

5.1. Cleaning

1. Using a CLEAN, dry cloth, wipe the entire machine to remove any dust or other foreign matter from accessible areas.
2. Using a solvent or similar cleaning fluid, remove any oil or grease from machine.
3. Using an air hose, blow out any chips and metal particles that may be in the machine, especially in the work area.

Compressed air used for cleaning must be reduced to less than 206.8 kPa [30 psi], and effective chip guarding and personal protective equipment (including eye protection) must be used.

5.2. Inspection

1. Inspect entire machine for loose components and hardware.
2. Inspect electrical wiring for loose connections, chafing, and broken wires or insulation.
3. Inspect moving parts for evidence of excessive wear.
4. Inspect machine for proper lubrication. If necessary, lubricate in accordance with Paragraph 5.3.

5.3. Lubrication

Lubricate the machine according to the tabulation and at the points indicated in Figure 10.

GREASE FITTING		LOCATION
Use only NLGI (National Lubricating Grease Institute) Multi-Purpose Grease 2. LUBRICATE ONCE DURING EVERY 40 HOURS OF OPERATION. DO NOT use an excessive amount. Lubricate Fittings 1 through 5 with machine at TOP-DEAD-CENTER.		
1	Ram	Right side of machine
2	Toggle Lever Pin	Left side of machine
3	Upper End of Spherical Bearing Link	Through hole in right side of machine frame just below top access cover (remove plastic dust plug)
4	Drive Shaft Mounting Plate	Remove top access cover on plate beside eccentric
5	Flywheel	On end of drive shaft
Hand-cycle machine to BOTTOM-DEAD-CENTER to lubricate Fittings 6 and 7.		
6	Lower End Of Spherical Bearing Link	Remove right side access cover
7	Toggle Link	Remove dust cap from ram retaining plate
OIL POINT		**LOCATION**
Use SAE 20 non-detergent motor oil. LUBRICATE ONCE DURING EVERY 40 HOURS OF OPERATION, EXCEPT OIL POINT B. Apply only a few drops to the following.		
A	Backup Latch Pivot Pin	On drive shaft mounting plate behind flywheel
B	Motor	Oil hole in each end plate (only at two-year intervals)
C	Feed Arm Drive Shaft	Oil hole in each boss of mounting bracket
D	Stub on Feed Actuating Block	Oil hole in feed arm
E	Bottom of Feed Connecting Rod	Above feed actuating block
F	Toggle Lever Clevis Pin	On each side of toggle lever
Use a good grade, light, rubber lubricant.		
G	Rubber O-Rings in Stop Bar	Apply to top of stop bar pivot at retaining ring

Figure 10 (Cont'd)

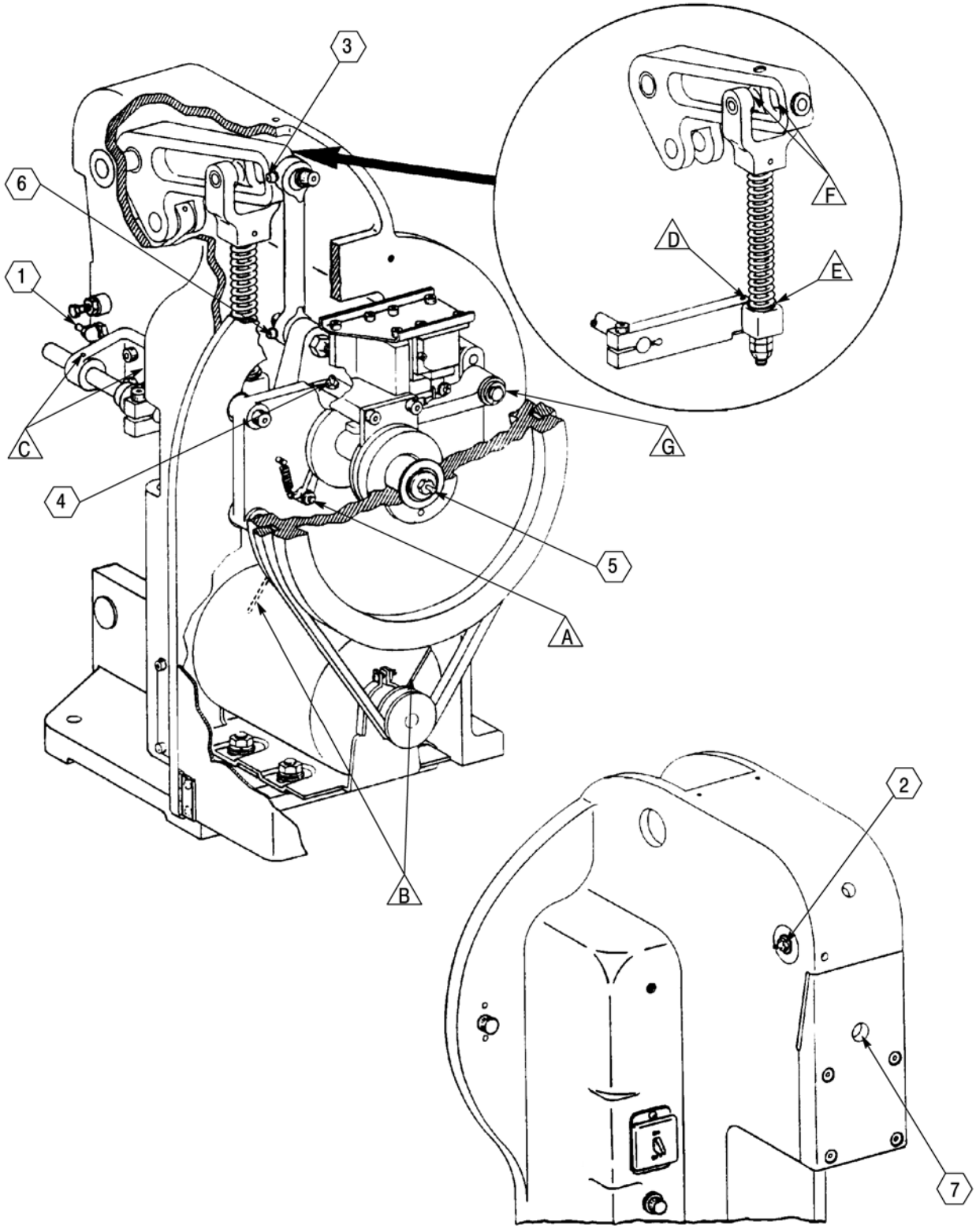


Figure 10 (End)

6. TROUBLESHOOTING

Figure 11 is presented in order of normal sequence. The second column lists the probable causes in the order most likely to occur and be checked. The third column lists the remedy for each of the probable causes and references to other parts of the manual that should be helpful in remedying the problem.

TROUBLE	PROBABLE CAUSE	REMEDY
1.Motor does not run when main switch (S2) is moved to ON.	Electrical plug disconnected or no power to outlet.	Insert plug or check power to outlet.
	If panel light is not illuminated, switch or power cord defective.	Replace switch or power cord. Refer to Section 9.
	If panel light is illuminated, check for loose wiring connections at switch, barrier strip, and motor.	Connect wiring as required. Refer to Figure 5.
	Defective wiring between switch and motor.	Replace wiring as required. Refer to Figure 5.
	Defective motor.	Replace motor. Refer to Section 9.
2.Motor runs, but machine does not cycle when foot switch is depressed.	Machine not at TOP-DEAD-CENTER (rest position).	Hand-cycle to TOP-DEAD-CENTER. Refer to Paragraph 4.1.
	Check for loose wiring connections at barrier strip.	Connect wiring as required. Refer to Figure 5.
	Defective foot switch.	Replace foot switch. Refer to Section 9.
	Defective trip control.	Replace trip control. Refer to Paragraph 8.1.
	Defective solenoid on transmission.	Replace solenoid. Refer to Section 9.
	Defective transmission.	See TROUBLE 4
3.Transmission does not engage when solenoid is energized.	Machine did not return to TOP-DEAD-CENTER (rest position).	Turn power off and hand-cycle machine to TOP-DEAD-CENTER. Refer to Paragraph 4.1.
	Disconnect or broken linkage between solenoid and stop bar.	Repair or replace linkage. Refer to Section 9.
	Clutch dog (sliding key) binding on shaft.	Lubricate machine. Refer to Paragraph 5.3.
	Broken spring behind clutch dog (sliding key).	Replace spring. Refer to Section 9.
4.Machine does not return to TOP-DEAD-CENTER after cycling under power.	Clutch dog (sliding key) in transmission, or drive plate on flywheel excessively worn.	Remove flywheel and inspect parts for rounded edges. If necessary, replace parts. Refer to Section 9.
	If feed arm assembly is installed, forward stop screw is set too low.	Make adjustments as required. Refer to Section 10.
	Binding or defective applicator.	Repair or adjust applicator. Refer to applicator instruction sheet.
	Less than two washers in front of top spherical bearing link.	Add washer(s). Refer to Section 9.
	Seized pins in toggle lever-feed actuating components.	Lubricate machine and if necessary, replace parts. Refer to Paragraph 5.3 and Section 9.
5.Machine continues to cycle with foot switch depressed or released.	Defective O-rings in stop bar.	Replace O-rings. Refer to Section 9.
	Defective or broken stop bar in transmission.	Replace stop bar. Refer to Section 9.
	Loose or worn stop collar in transmission.	Replace stop collar and lubricate. Refer to Section 9.
	Worn dog wedge in transmission.	Replace dog wedge. Refer to Section 9.
6.Transmission does not lock at TOP-DEAD-CENTER when in rest position.	Backup latch or spring disconnected or broken.	Repair or replace latch or spring. Refer to Section 9.
	Stop bar or O-rings worn or broken.	Replace stop bar or O-rings. Refer to Section 9.

Figure 11

7. ADJUSTMENTS

The following adjustments are required to maintain the machine in continuous operation and to set it up after replacement of parts.

DANGER

To avoid personal injury, ALWAYS disconnect the electrical and air supply, before performing any adjustment, unless otherwise specified.

7.1. Crimp-Height/Shut-Height (Base Mount) Adjustment (Figure 12)

Although essential to operation, the base mount is not supplied with the basic machine, but rather with standard applicators, conversion kits, some modified machines (see Section 11), and some for special applications. In all cases, reference is made to this manual for adjustment procedures, thereby eliminating the need to duplicate them in applicator instruction sheets and in other customer manuals.

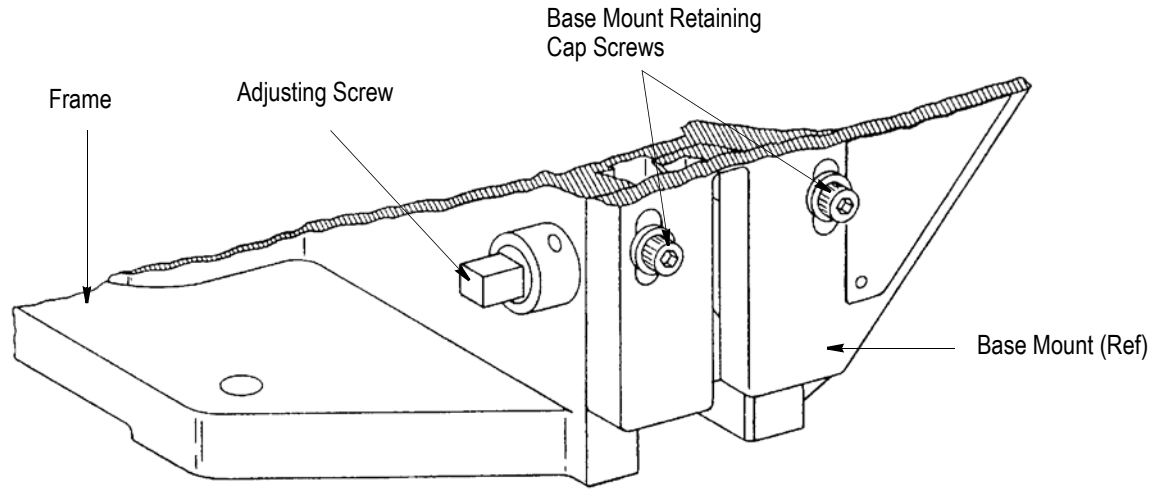


Figure 12

Adjustment of the base mount determines the distance between the base mount and the ram at the bottom of the stroke (half cycle of the machine). This adjustment controls the crimp height of terminations produced in standard applicators, and the shut height of the machine for miniature applicators.

For the standard applicators, the main part, including the lower tooling, is attached to the base mount. The independent upper tooling is attached to the machine ram. Raising or lowering the base mount, then, will change the distance (and the resulting crimp height) between the upper and lower tooling at the bottom of the ram stroke.

Machines shipped from the factory with the base mount installed for a particular application have the base mount adjusted and the two retaining caps screws secured to discourage further adjustment. Only when it is necessary to replace parts, or when converting the machine to another configuration, should adjustment be required.

The miniature quick-change applicator has the upper tooling, lower tooling, and the means for adjusting their relationship all incorporated in an integrated assembly. This type applicator requires a fixed shut height. In other words, the distance between the base mount and ram at the bottom of the stroke is a given dimension not subject to change. The required changes in crimp height are made by using the adjusting means (wire and insulation discs) within the applicator.

CAUTION

If the machine is set up for miniature applicators, NEVER attempt to adjust the shut height without FIRST trying another applicator that is known to produce terminations of the correct crimp height. If this applicator produces correct terminations, the trouble is in the original applicator-and shut height MUST NOT BE CHANGED.

With a properly adjusted applicator installed in the machine, and loaded with terminals as described in the applicator instructions, adjust for correct crimp height/shut height as follows:

CAUTION

When specified to loosen the two base mount retaining cap screws in the following procedure, ALWAYS remove any clearance between the adjustment block and the base mount by turning the adjusting screw COUNTERCLOCKWISE, as viewed from left side of the machine.

NOTE

If the crimp height of the terminal is KNOWN to be GREATER than the specified crimp height, omit Steps 1 and 2; otherwise perform ALL steps.

1. Loosen the two base mount retaining cap screws, and lower the base mount to lowest position by rotating the adjusting screw clockwise, as viewed from left side.

2. After base mount has been lowered, tighten the base mount screws to secure it to frame.

3. Insert a wire of the proper gage into the lead terminal, and hand-cycle the machine through one complete cycle.

4. Check crimp height of termination (for the method of measurement, refer to 408-7424. If crimp height is greater than specified for the type terminal and wire size being used (refer to the data plate on applicator or to the applicator parts list), continue with Step 5. If correct, continue with Step 6.

5. Loosen the two base mount retaining cap screws, then raise base mount by turning the adjusting screw counterclockwise, as viewed from left side, one-quarter turn. This will raise the base mount approximately 0.41 mm [.016 in.]. Tighten the base mount screws, and repeat Steps 3 and 4.

6. After producing terminations of the correct crimp height by hand-cycling machine, produce terminations under power to ensure crimp height is correct. If not, make further adjustment by repeating Steps 3 and 4.

7.2. Feed Connecting Rod Adjustment (Figure 13)

Adjustment of the feed connecting rod is not critical, and should never require adjustment unless it is necessary to replace parts between the feed actuating arm and toggle lever. Adjustment is made by means of the adjusting locknuts under the feed actuating block. When properly adjusted, three threads of the feed connecting rod are exposed below the tightened locknuts.

7.3. Feed Mechanism Damper Screw and Rear Stop Screw Adjustments (Figure 13)

Although the damper screw and rear stop screw are supplied with the basic machine, they are used only with the mechanical feed arm assembly (which is available as an accessory). When the feed arm assembly is not installed, both screws are turned all the way in and secured with their jam nuts.

Should adjustment be required, see Paragraph 10.1.

Feed Actuating Mechanism

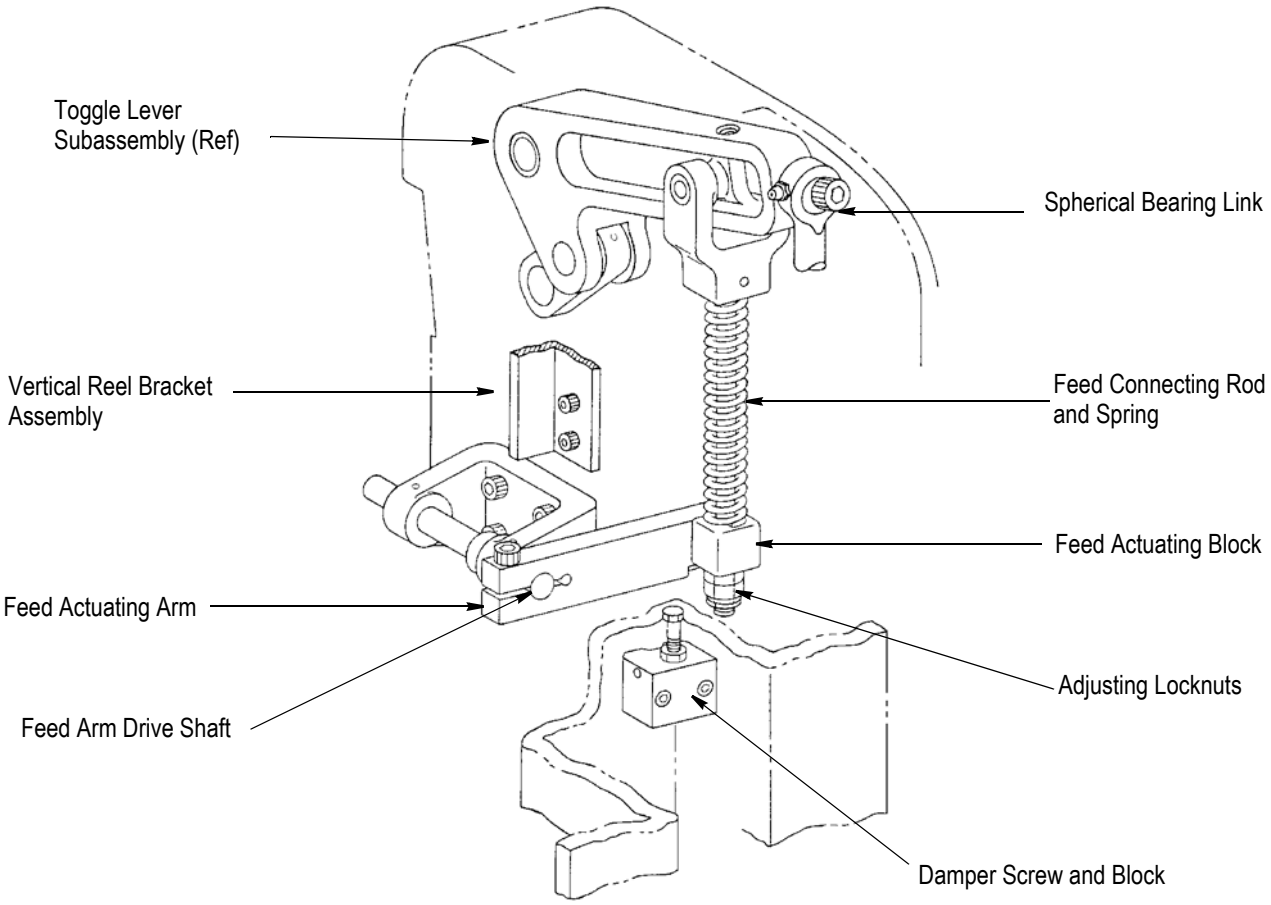
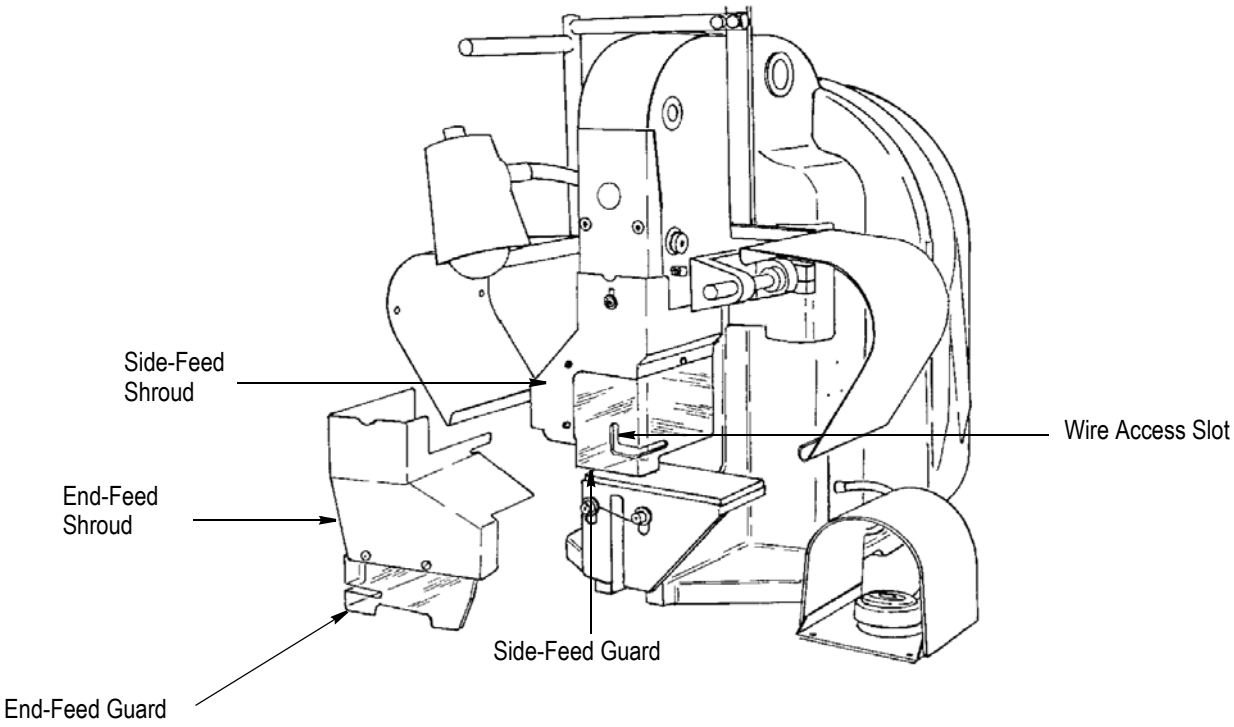


Figure 13

7.4. Guard Installation and Replacement (Figure 14)

The "K" terminator is supplied with guarding for the most popular of AMP's end-feed and side-feed applicators. The guarding consists of a metal shroud and a clear, plastic guard. Some applications require a special guard, which may or may not be shipped with the terminal applicator. In some cases, the applicator log sheet (shipped with the applicator) lists the guard required on the parts list. Check this log first to determine if it is specified. If it is not, refer to the table in Figure 14 for a list of common inserts. If your application falls outside the options listed in Figure 14, contact the Tooling Assistance Center to determine the correct guard required.

To install the correct plastic guard, remove the screws, spacers, washers, and nuts holding the plastic guard to the metal shroud. Take care to note their positions for correct reinstallation. Replace the plastic guard with the correct guard for your application and reinstall the fastener hardware to secure it in position with the access slot aligned to the applicator.



COMMON END-FEED APPLICATOR GUARDS		
INSERT PART NUMBER	OPENING SIZE (mm [In.])	DESCRIPTION
455745-1	6.35 [.250]	Standard guard - insulation diameters up to Ø6.35 [.250]
457352-1	9.53 [.375]	Insulation diameters from Ø6.35 [.250] to Ø9.53 [.375]Ø
457353-1	6.35 [.250]	For terminals taller than 6.35 [.250]
455750-7	9.53 [.375]	Air feed applicators - insulation diameters up to Ø6.35 [.250] Includes new shroud.
455750-8	6.35 [.250]	Air feed applicators - insulation diameters Ø6.35 [.250] to Ø9.53 [.375] Includes new shroud.
COMMON SIDE-FEED APPLICATOR GUARDS		
INSERT PART NUMBER	OPENING SIZE (mm [In.])	DESCRIPTION
455749-1	6.35 [.250]	Standard guard - insulation diameters up to Ø6.35 [.250]
457373-1	9.53 [.375]	Insulation diameters from Ø6.35 [.250] to Ø9.53 [.375]
457910-1	9.53 [.375]	Insulation diameters from Ø6.35 [.250] to Ø9.53 [.375] and terminal heights from 9.65 [.38] to 12.7 [.50]

Figure 14

8. REPLACEMENT AND REPAIR

DANGER

To avoid personal injury, ALWAYS disconnect electrical and air supply before attempting any repairs or replacement of parts.

The procedures in this section cover those items not shown disassembled in Section 9 but which require detailed instructions for repair or replacement of internal parts. Other repairs or replacements can be made by referring to the applicable parts lists and exploded views in Section 9.

Each parts list, and corresponding exploded view, numerically lists all replaceable items in the order of disassembly. The parts lists and exploded views begin with the complete machine in Figure 15, and continue to provide a complete breakdown through referenced figures for subassemblies.

A CAREFUL study of the exploded views will save much time by eliminating the unnecessary removal (and re-installation) of items not required to gain access to items being repaired or replaced.

CAUTION

After replacement of any parts or subassemblies, refer to Section 7 for necessary adjustments before operating the machine under power.

8.1. Trip Control Box Assembly Replacement (Figure 17)

1. Gain access to trip control box assembly (Item 12, Figure 17) by opening flywheel guard.
2. Disconnect wires from trip control box assembly at the barrier strip.
3. Remove assembly from the cover attached to the frame by removing two screws on top. It is not necessary to remove the cover.
4. Install trip control box assembly by reversing removal procedure. If necessary, see Figure 5 for machine wiring.

8.2. Foot Switch (Figure 17)

In the event of a defective foot switch (Item 22), a replacement foot switch can be installed. Refer to the wiring diagram in Figure 5,

9. PARTS LIST AND EXPLODED VIEW DRAWINGS FOR BASIC MACHINE

Figure 15 through Figure 21 list parts and contain exploded views that cover all items on the basic machine. Each parts list is itemized numerically in the order of disassembly. Figure 15 shows the basic machine with references to other figures for subassemblies.

The nomenclature (DESCRIPTION) for subassemblies and detail parts are indented under the next higher assembly on which they are used. The QUANTITY PER ASSEMBLY column indicates the number of items required for the next higher assembly.

Part numbers marked with a (•) indicate wear parts that are recommended spares and are the customer's responsibility to stock and replace. Refer to the INFORMATION REQUIRED WHEN CONTACTING THE TOOLING ASSISTANCE CENTER in the front of this manual.

NOTE

For ordering purposes, please use both the exploded view drawings and the drawings shipped with the machine.

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	1-471273-3	MACHINE ASSEMBLY, Basic Machine (115V 60Hz)	- - -
- - -	1-471273-4	MACHINE ASSEMBLY, Basic Machine (230V 50Hz)	- - -
1	3-21001-3	SCREW, Skt Hd Cap, 3/8-16 X .750 in. L	2
2	694925-1	BRACKET ASSEMBLY, Vertical Reel (See Figure 18 for Components)	1
3	26148-6	PLUG, Hole	2
4	2-21002-5	SCREW, Btn Hd Skt Cap, 10-32 X .250 in. L	4
5	21899-2	WASHER, Flat, No. 10	2
6	473392	COVER, Top Access Hole	1
7	3-21048-3	RING, Retaining	1
8	373069	WASHER	1
9	21009-2	SETSCREW, Slflkg Skt, 1/4-20 X .250 in. L	1
10	1-21048-3	RING, Retaining	1
11	373555-1	PIN, Motor Support	1
12	- - -	MOTOR-FLYWHEEL COMPONENTS (See Figure 19 for Components)	1
13	21022-6	NUT, Slflkg Hex, 3/8-16	1
14	3-21004-4	SCREW, Skt Hd Shldr, .500 Dia X 1.250 in. L Shldr X 3/8-16.625 in. L Thd	1
15	373482	WASHER, Special	2
16	3-21001-7	SCREW, Skt Hd Cap, 3/8-16 X 1.500 in. L	4
17	685169-6	TRANSMISSION ASSEMBLY (Replacement without Solenoid) (See Figure 20 for Detail Parts)	1
18	21021-4	NUT, Slflkg Hex, 10-32	2
19	3-21002-0	SCREW, Btn Hd Cap, 10-32 X .875 in. L	2
20	1655230-1	FASTENER, Pawl Adjusting	1
21	2-21000-6	SCREW, Skt Hd Cap, 8-32 X .375 in. L	4
22	25098-4	NUT, Slflkg Hex, 8-32	4
23	2-21002-2	SCREW, Btn Hd Cap, 8-32 X .500 in. L	4
24	373425	HINGE, Butt Offset	2
25	852312-1	GUARD, Flywheel	1
26	19942-1	TRIM, Edge, 1219 mm [48 in.]	1

Figure 15 (Cont'd)

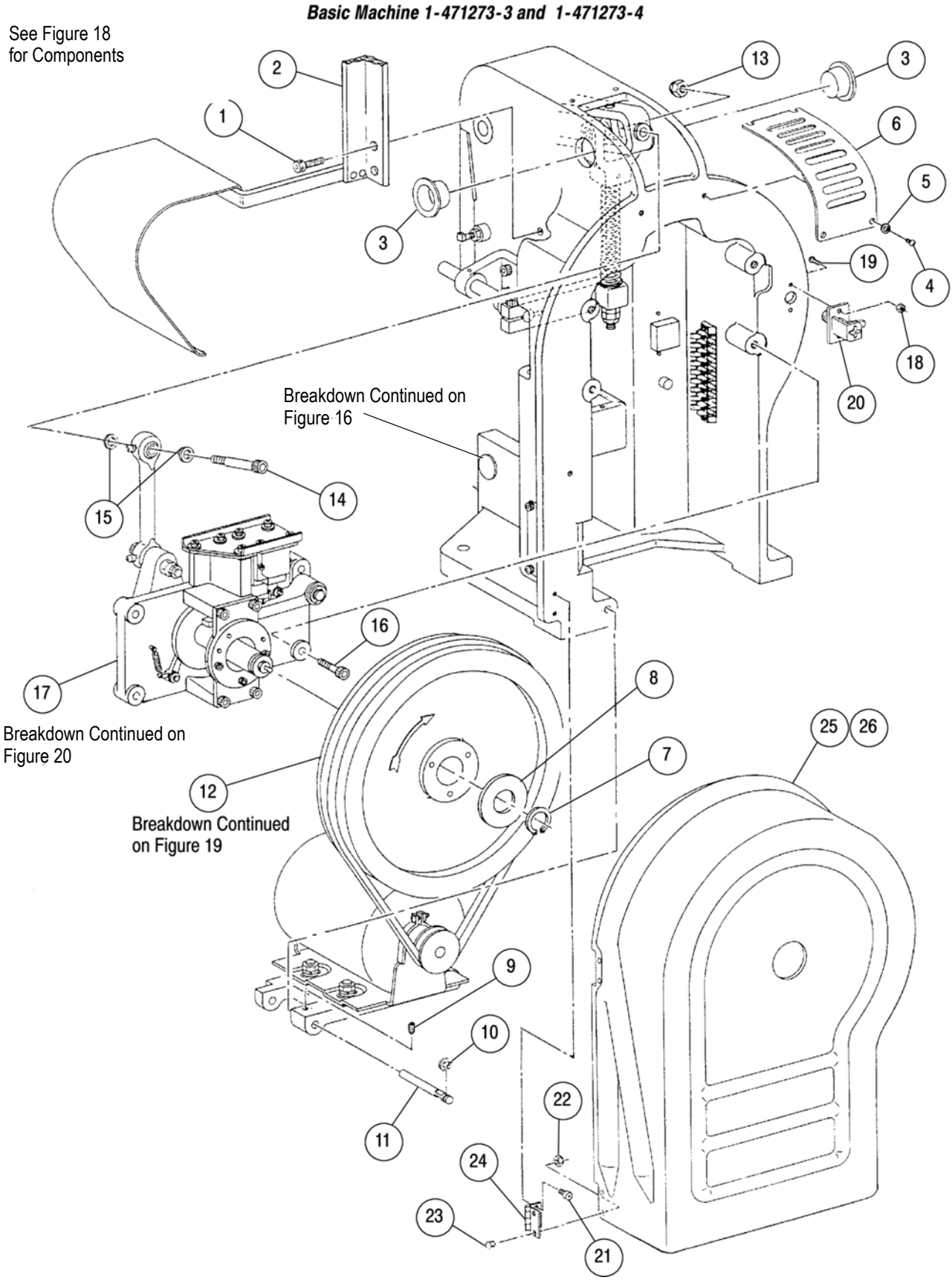


Figure 15 (End)

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	1-471273-3	MACHINE ASSEMBLY, Basic Machine (115V 60Hz)	- - -
- - -	1-471273-4	MACHINE ASSEMBLY, Basic Machine (230V 50Hz)	- - -
1	3-21001-7	SCREW, Skt Hd Cap, 3/8-16 X 1.500 in. L	2
2	371178	WASHER, Special	2
3	223141-3	PLUG, Protective	1
4	3-21001-6	SCREW, Skt Hd Cap, 3/8-16 X 1.250 in. L	4
5	465004-1	PLATE, Ram Retaining	1
6	373543	PIN, Toggle Link	1
7	1-21007-5	SETSCREW, Skt Hd, 5/16-18 X .250 in. L	1
8	370720	COLLAR, Adjusting Screw	1
9	370719	SCREW, Adjustment	1
10	370718	BLOCK, Adjustment	1
11	3-21002-4	SCREW, Btn Hd Cap, 1/4-2 X 0.625 in. L	1
12	21899-3	WASHER, Flat, 1/4 in.	1
13	455740-1	BRACKET, Guard	1
14	2-21002-5	SCREW, Btn Hd Cap, 10-32 X .250 in. L	2
15	473391	COVER, Side Access	1
16	21001-6	SCREW, Skt Hd Cap, 1/4-20 X 1.000 in. L	6
17	1-21007-0	SETSCREW, Slflkg Skt, 1/4-2 X 1.000 in. L	1
18	23142-1	FITTING, Straight Lubrication	1
19	373535-	PIN, Toggle Arm	1
20	- - -	TOGGLE LEVER-FEED ACTUATING COMPONENTS (See Figure 21 for Breakdown)	1
21	23201-1	FITTING, 90° Lubrication	1
22	21077-5	SETSCREW, Sq Hd, 1/4-20 X 1.000 in. L	1
23	1-22202-4	NUT, Hex 1/4-20	1

Figure 16 (Cont'd)

Basic Machines 1-471273-3 and 1-471273-4

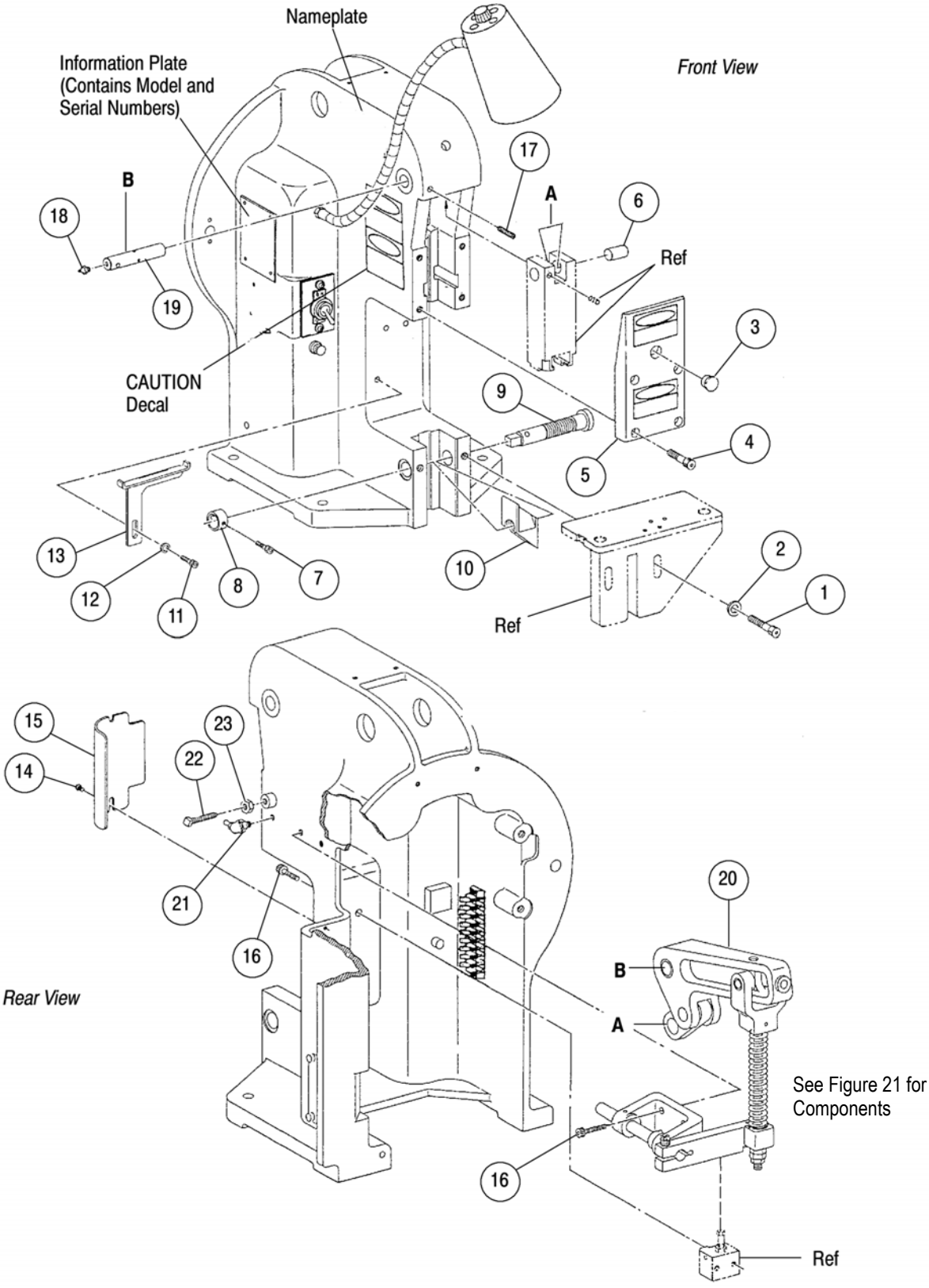


Figure 16 (End)

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	1-471273-3	MACHINE ASSEMBLY, Basic Model "K" Machine (115V 60Hz)	- - -
- - -	1-471273-4	MACHINE ASSEMBLY, Basic Model "K" Machine (230V 50Hz)	- - -
1	20870-2	SWITCH, Toggle	1
2	24195-1	PLATE, Switch	1
3	23403-1	NUT, Speed	1
4	23709-1	LIGHT, Indicator (115 Vac)	1
	23709-2	LIGHT, Indicator (230 Vac)	1
5	691400-7	WIRE, Black, Terminated	1
6	691409-4	WIRE, White, Terminated	1
7	691400-8	WIRE, Black, Terminated	1
8	691409-5	WIRE, White, Terminated	1
9	23430-3 •	LIGHT, Work	1
10	640905-1	TERMINAL, FASTON* .250 Series, Blue	2
11	2-21002-5	SCREW, Btn Hd Skt Cap, 10-3 X 2.250 in. L	2
12	453586-3	BOX ASSEMBLY, Trip Control (115 Vac)	1
	453586-5	BOX ASSEMBLY, Trip Control (230 Vac)	1
13	3-21000-1	SCREW, Skt Hd Cap, 8-32 X 1.00 in. L	2
14	854586-1	BARRIER STRIP, Modified	1
15	21060-7	SCREW, Self-Tapping, 4-24 X .250 in. L	2
16	453866-1	GUARD, Foot Switch	1

Figure 17 (Cont'd)

ITEM	PART NUMBER	DESCRIPTION	QTY
17	1-21002-6	SCREW, Btn Hd Cap, 6-32 X .250 in. L	6
18	1-21899-3	WASHER, Flat, No. 8	2
19	373306-2	PLATE, Switch Adapter	1
20	5-21063-5	SCREW, Brass Rnd Hd, 10-32 X .375 in. L	1
21	21075-5	WASHER, Int Tooth Lock, No. 10	2
- -	551172-1 •	WIRING SUBASSEMBLY	1
22	551170-1 •	SWITCH, Foot (Terminated)	1
23	467516-1 •	PLUG, Line	1
24	810551-1	PLATE, Harness Adapter	1
25	1-22242-9	BUSHING, Strain Relief	1
26	1-23497-0	WIRE, Black, No. 16, 483 mm [19 in.]	1
27	23497-9	WIRE, White, No. 16, 483 mm [19 in.]	1
28	500024-1	WRAP, Cable, SPIRAP*, 1/4 in., 610 mm [24 in.]	1
29	23125-4	TAPE, Blue, 51 mm [2 in.]	1
30	23125-6	TAPE, Yellow, 51 mm [2 in.]	1
31	2-320552-1	TERMINAL, PIDG* Ring Tongue, No. 10	2
32	60279-2	TERMINAL, FASTON Piggyback, .250 Series	2
33	2-50182-2	TERMINAL, FASTON Ultra-Fast, .187 Series, Red	3
34	3-350816-2	TERMINAL, FASTON Ultra-Fast, .187 Series, Blue	2
35	3-520133-2	TERMINAL, FASTON Ultra-Fast Flag Receptacle, .250 Series	2

• Recommended Spare Part

Figure 17 (Cont'd)

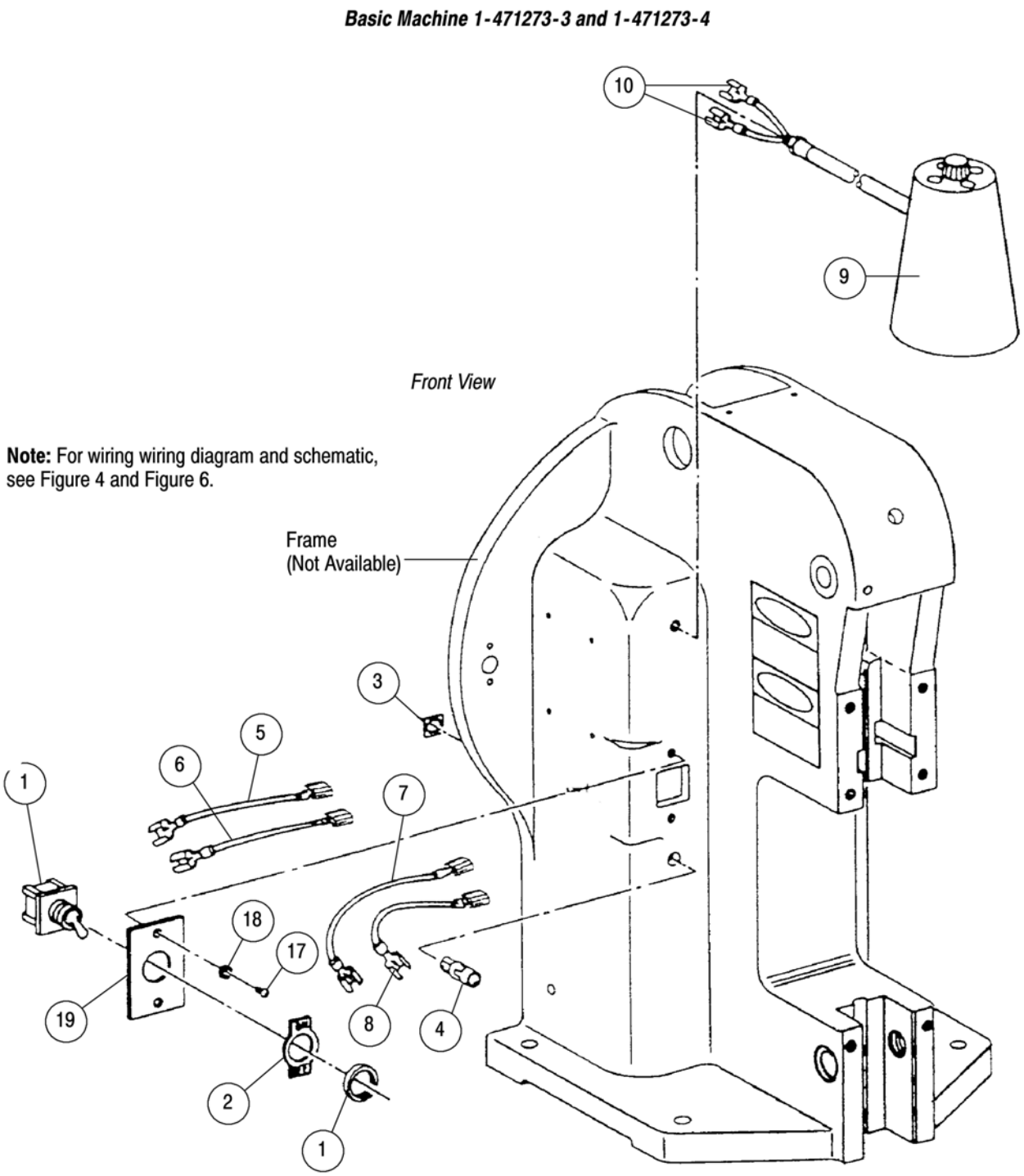


Figure 17 (Cont'd)

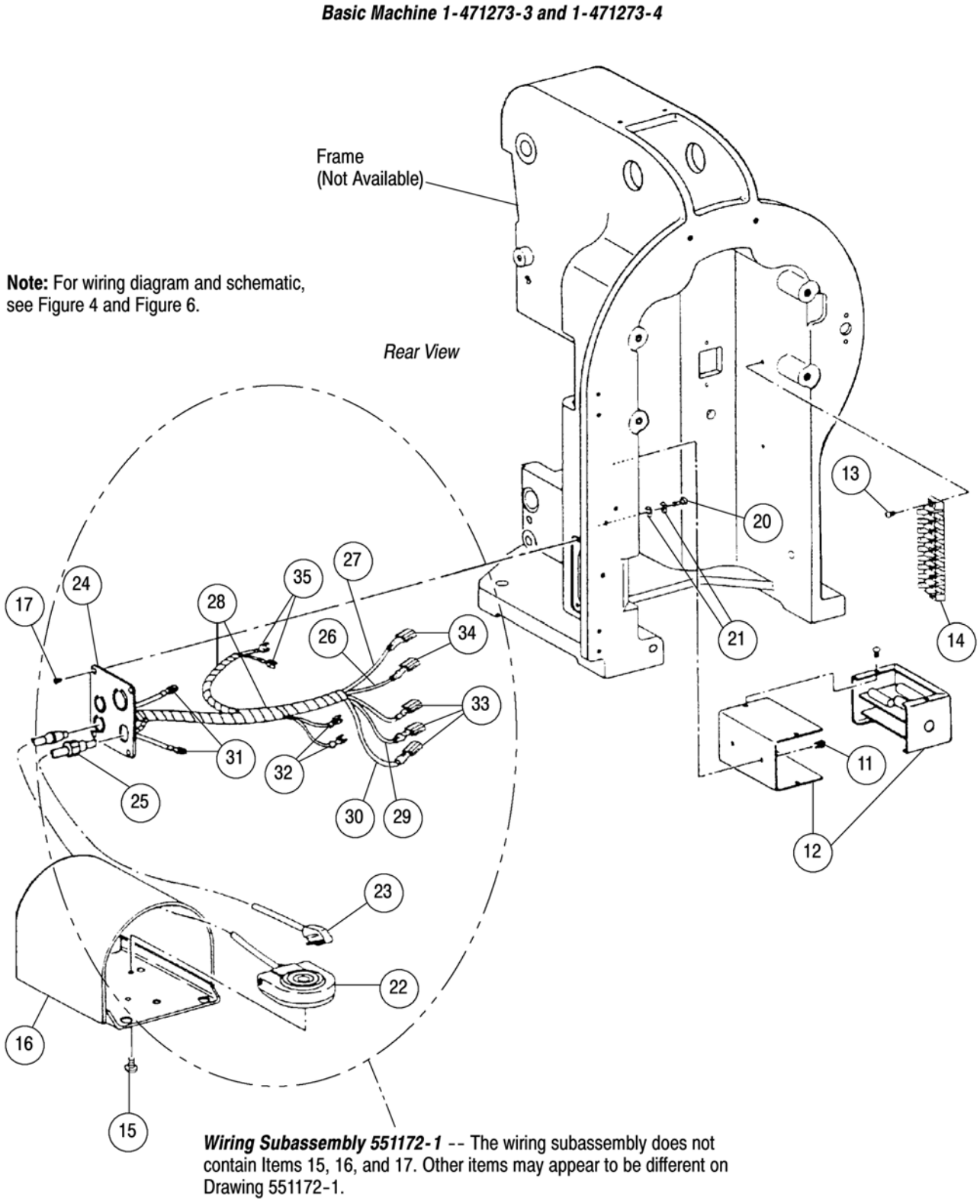
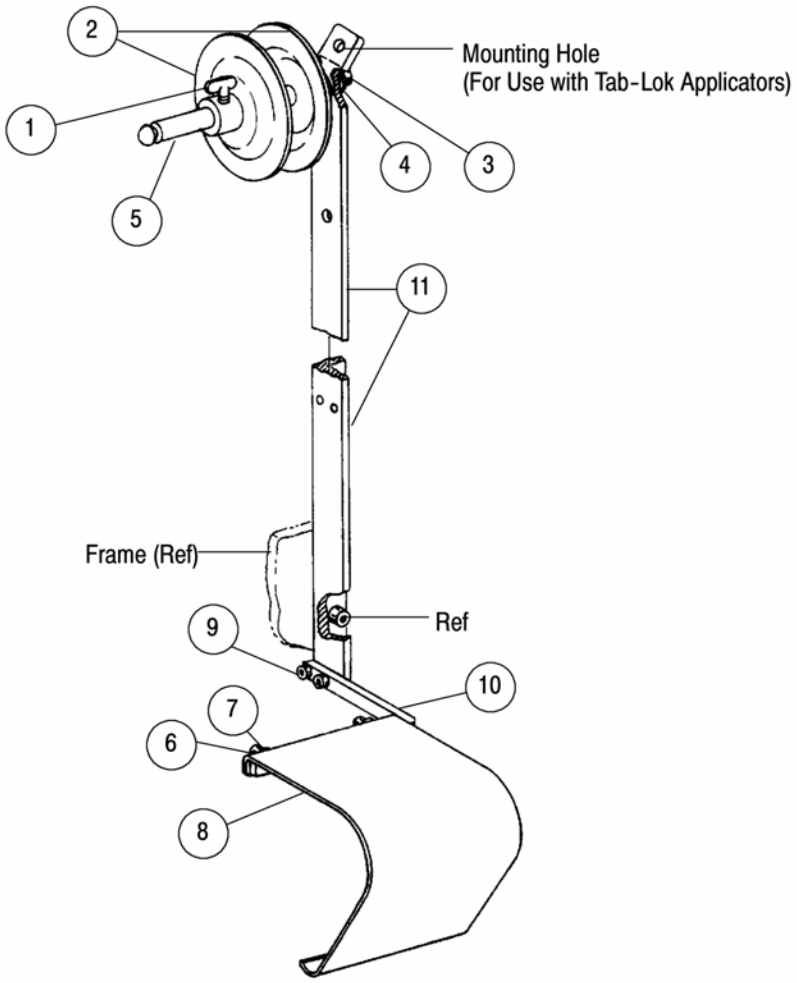


Figure 17 (End)

Vertical Reel (Right-Hand Feed) Bracket Assembly

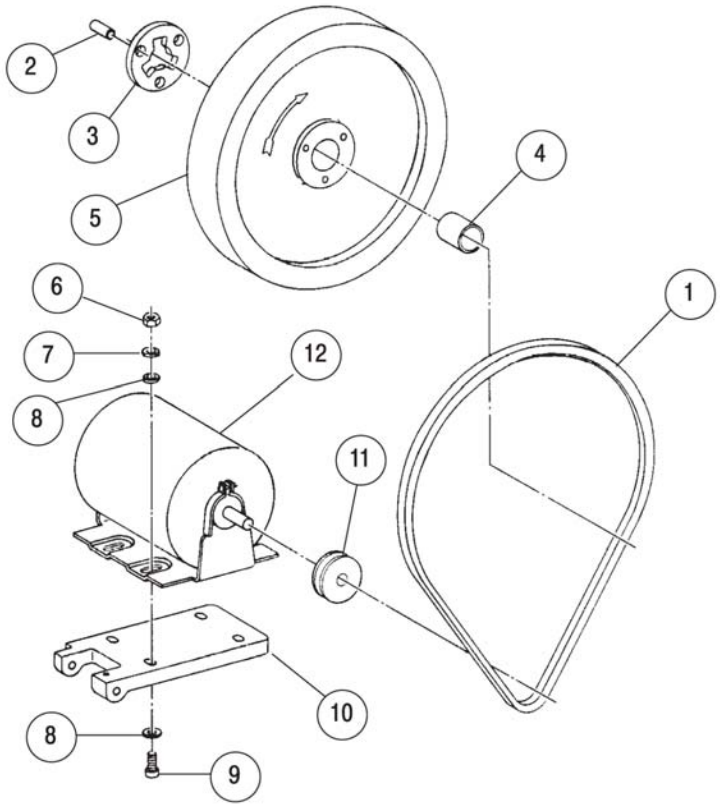


ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	694925-1 •	BRACKET ASSEMBLY Vertical Reel (Right-Hand Feed)	- - -
1	2-22789-6	SCREW, Thumb Wing, 1/4-20 X .500 in. L	2
2	465520-1	FLANGE, Reel	2
3	3-21001-3	SCREW, Skt Hd Cap, 3/8-16. X 750 in. L	1
4	21024-8	WASHER, Spring Lock, 3/8 in.	1
5	465586-2	SHAFT, Reel	1
6	2-21000-5	SCREW, Skt Hd Cap, 8-32. X 500 in. L	2
7	1-21899-3	WASHER, Flat, No. 8	2
8	470268-1	GUIDE, Stock	1
9	2-21000-6	SCREW, Skt Hd Cap, 8-32 X .375 in. L	2
10	694927-1	BRACKET, Stock Guide	1
11	694926-1	SUPPORT, Vertical Reel	1

• Recommended Spare Parts

Figure 18

Motor–Flywheel Components



ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	- - -	MOTOR-FLYWHEEL COMPONENTS	- - -
1	23139-1 •	V-BELT	1
- - -	5570646-1	FLYWHEEL ASSEMBLY	1
2	23143-1	PIN, Dowel, .125 Dia X .500 in. L	3
3	375021	PLATE, Drive	1
4	469766-1	BUSHING, Flywheel, Replacement	1
5	- - -	FLYWHEEL (Not Available Separately; Order Flywheel Assembly)	1
6	21019-2	NUT, Hex, 5/16 in.	4
7	21024-7	WASHER, Spring Lock, 5/16 in.	4
8	21899-4	WASHER, Flat, 4/16 in.	8
9	2-21001-0	SCREW, Skt Hd Cap, 5/16-18 X 1.000 in. L	4
10	570233	MOUNT, Motor (for the 1-471273-3 Machine)	1
	570233-1	MOUNT, Motor (for the 1-471273-4 Machine)	1
11	23876-1	PULLEY, V-Belt, 2.0 in. Outside Diameter (for the 1-471273-3 Machine)	1
	23876-2	PULLEY, V-Belt, 2.25 in. Outside Diameter (for the 1-471273-4 Machine)	1
12	843997-2	MOTOR, AC , 1/4 Hp, 115 Vac 60Hz, (for the 1-471273-3 Machine)	1
	23525-2	MOTOR, AC, 1/4 Hp, 230 Vac, 50Hz, (for the 1-471273-4 Machine)	1

• Recommended Spare Part

Figure 19

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	- - -	TRANSMISSION COMPONENTS, Basic Machine	- - -
1	22140-3	SCREW, Skt Hd Cap, 1/4-20 X .625 in. L	3
2	21899-3	WASHER, Flat, 1/4 in.	3
3	21021-4	NUT, Slflkg Hex, 10-32	4
4	3-21000-7	SCREW, Skt Hd Cap, 10-32.75 in. L	4
5	21899-2	WASHER, Flat, No. 10	4
6	19342-3	GROMMET	4
7	551260-1 ‡	MOUNT, Solenoid	1
8	809891-1	SPACER	1
9	551406-7 •	SOLENOID, (Terminated) Used with 115 Vac and 230 Vac Machine	1
14	22168-8	SCREW, Self-Tapping, 6-32. X 250 in. L	1
15	24077-1	CLIP, Cable	1
16	21022-6	NUT, Slflkg Hex, 3/8-16	1
17	373482	WASHER, Special	2
18	3-21004-6	SCREW, Skt Hd Shldr, 1/2 Dia X 1.750 in. L Shldr 3/8-16 X .625 in. L Thd	1
19	457909-1	LINK, Spherical Bearing	1
- - -	685169-9	TRANSMISSION ASSEMBLY	1
20	23138-2	PIN, Cowling	1
21	21023-7	WASHER, Flat,, No. 10	2
22	811939-2	PIN, Clevis	1
23	5-21909-5	SCREW, Skt Hd Cap, 7/16-14 X 1.500 in. L	1
24	465620-2	ARM, Eccentric	1
25	1-22548-4	KEY, Woodruff	1
26	21001-4	SCREW, Skt Hd Cap, 1/4-20.750 in. L	4
27	2-21000-7	SCREW, Skt Hd Cap, 8-32 X .500 in. L	6
28	551266-1	RETAINER, Dog	1
29	811924-1	WEDGE, Dog, Return	1
30	811921-1	SUPPORT, Dog Retainer	1
31	23716-8	RING, Retaining, .500 in. Dia	1
32	551333-1	WASHER, Nylon	1

• Recommended spare part.

‡ To replace the solenoid mount, and solenoid is not shock-mounted, Items 5, 6, and 8 must be ordered with Item 7.

Figure 20 (Cont'd)

ITEM	PART NUMBER	DESCRIPTION	QTY
33	21009-2	SETSCREW, Slflkg Skt, 1/4-20 X .250 in. L	1
34	21014-5	SCREW, Lkg Type, 1/4-20 X .125 in. L	1
35	21009-3	SETSCREW, Slflkg Skt, 1/4-20 X .312 in. L	1
36	811925-1	COLLAR, Stop	1
37	811938-1	DOG, Clutch	1
38	372687	SPRING, Compression	1
39	551353-1	KEY, Square	1
40	21029-9	PIN, Slotted Spring, 3/16 Dia X 1.000 in. L	1
41	565387-1	LINK, Solenoid	1
42	465622-1	BAR, Stop	1
43	22792-1	FITTING, Straight Lubrication	1
44	551336-1	SHAFT, Main	1
45	5-21085-0	O-RING	12
46	565339-1	SPRING, Extension	1
47	1-21986-5	RING, Ext “E” Retaining, .312 in. Dia	1
48	811926-1	LATCH, Backup	1
49	23142-1	FITTING, Straight Lubrication	1
50	565149-1	MOUNT, Crankshaft (with Bushing and Pins Installed)	1
51	551335-1	PIN, Pivot, .312 Dia X 1.000 in. L	1
52	551335-2	PIN, Pivot, .500 Dia X 2.250 in. L	1
53	2-22183-7	PIN, Grooved, .165 Dia X .875 in. L	1

Figure 20 (Cont’d)

Transmission and Related Components for Basic Machine

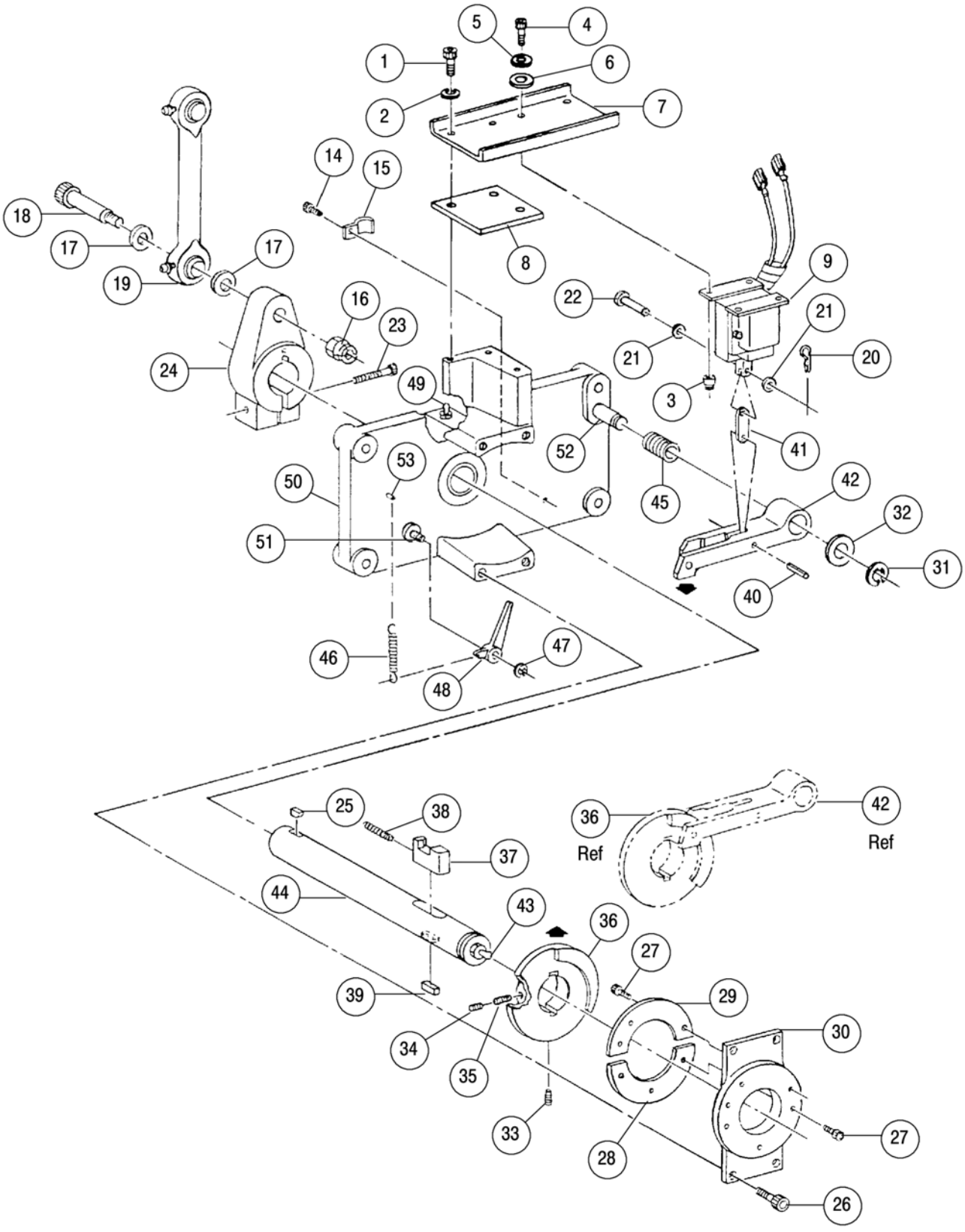


Figure 20 (End)

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	- - -	TOGGLE LEVER-FEED ACTUATING COMPONENTS	- - -
1	23138-3	PIN, Cowling	1
2	21899-7	WASHER, Flat, 1/2 in.	1
3	1-21021-7	NUT, Slflkg Hex, 3/8-24	1
4	22595-6	NUT, Hex Lk, 3/8-24	1
5	373479	COLLAR, Feed Rod	1
6	375092	BLOCK, Feed Actuating	1
7	373475	RETAINER, Spring	1
8	373476	SPRING, Feed Return	1
9	21029-9	PIN, Slotted Spr, .187 Dia X 1.000 in. L	1
10	373477	ROD, Feed Connecting	1
11	21009-7	SETSCREW, Slflkg Skt, 1/4-20 X .625 in. L	1
12	376190	PIN, Clevis	1
13	373339-1	CLEVIS, Toggle Lever	1
14	23142-1	FITTING, Lubrication	1
15	21009-4	SETSCREW, Slflkg Skt, 1/4-20 X .375 in. L	1
16	373543	PIN, Toggle Link	1
17	373542-	LINK, Toggle	1
18	471125	LEVER, Toggle, 11/8 in. Stroke	1
19	452489-1	SCREW, Damper	1
20	21020-3	NUT, Hex Jam, 3/8-16	1
21	452488-3	BLOCK, Damper Mounting	1
22	3-21001-6	SCREW, Skt Hd Cap, 3/8-16 X 1.250 in. L	1
23	373346	ARM, Feed Actuating	1
24	22292-9	COLLAR, Shaft (Supplied with Item 25, Setscrew)	1
25	1-21007-5	SETSCREW, Cup Pt Skt, 5/16-18 X .250 in. L	1
26	373503	SHAFT, Feed Arm Drive	1
27	465006-	BRACKET, Feed Actuating	1
28	21001-6	SCREW, Skt Hd 1/4-20 X 1.000 in. L	1

Figure 21 (Cont'd)

Toggle Lever-Feed Actuating Components

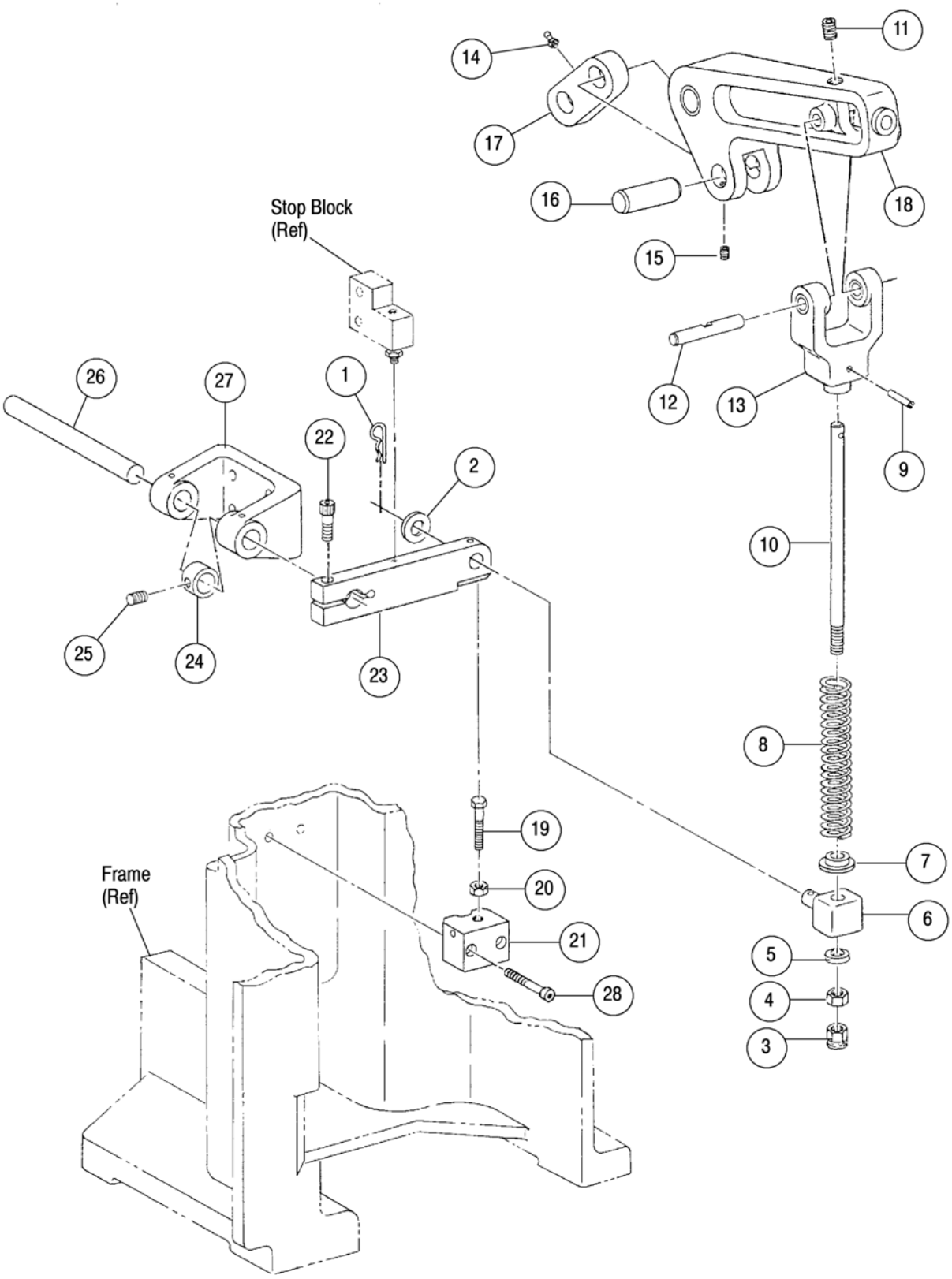


Figure 21 (End)

10. MACHINE ACCESSORIES

This section pertains to those accessories that when factory installed change the basic machine to one of the modified machines presented in Section 11. These same accessories are available for field conversions, making it possible to change a modified machine of one configuration to that of another. The assembly (or assemblies) required, and the parts that will need to be removed, depend on the intended application and the type of applicator to be installed. The applicator parts list and applicator instructions specify the accessories required for the use of that particular applicator.

Following is a list of the assemblies available as accessories, with the paragraph identified that provides the necessary instructions for installation and required adjustments. In cases where the required procedures appear in the instructions for the applicator, they are not repeated in this manual.

- 10.1.Mechanical Feed Arm Assembly
- 10.2.Air Feed Valve Assembly
- 10.3.Air Feed Assemblies
- 10.4.Air Blast Assemblies
- 10.5.Optional Reel Bracket Assemblies and Associated Parts

10.1. Mechanical Feed Arm Assembly

A. Description (Figure 22)

The mechanical feed arm assembly is used with all standard applicators that require a mechanical feed of the terminal strip. The assembly is installed on the front of the feed arm drive shaft, which is a part of the basic machine. The feed finger (supplied with applicator) is attached to the feed adjusting clevis. The stop block, supplied with the assembly, is attached to the machine frame with screws in the same location as the vertical reel bracket assembly.

When the machine is in the rest position (TOP-DEAD-CENTER), the feed finger is fully extended to align the lead terminal on the strip with the applicator tooling. As the machine is cycled and the ram is on the downward stroke, the feed finger is fully retracted by the feed mechanism as the ram nears the bottom of the stroke. This gives a slight overtravel of the feed finger to ensure positive pickup of the terminal strip in the next feed location. In the upward stroke, the feed mechanism advances the feed finger and terminal strip.

B. Adjustment (Figure 22)

To avoid personal injury, ALWAYS disconnect electrical and air supply before attempting any adjustments.

1. Make certain the machine is at TOP-DEAD-CENTER. If necessary, hand-cycle it to obtain this condition.

2. If mechanical feed arm has been removed, install it on feed arm drive shaft. Do not tighten feed arm clamp screw at this time.

3. Install applicator and feed finger as described in the applicator instructions supplied with the applicator.

4. Loosen locknut on feed adjusting clevis, and turn feed adjusting knob so it is near the middle of travel range on clevis.

5. Load terminal strip into applicator (in accord with the instructions for the applicator), and center the lead terminal over anvil.

6. Position feed finger against feed point in terminal strip for lead terminal by rotating arm on drive shaft (if necessary, loosen clamp screw). Maintain this position and tighten clamp screw to secure arm on shaft.

7. Hand-cycle machine until feed finger drips in back of next feed point in terminal strip. If necessary, loosen rear stop screw and damper screw to allow more travel of feed arm. A slight overtravel of feed finger is recommended to ensure proper feeding of terminal strip.

8. With slight overtravel obtained, turn rear stop screw out against feed arm and secure it with locknut.

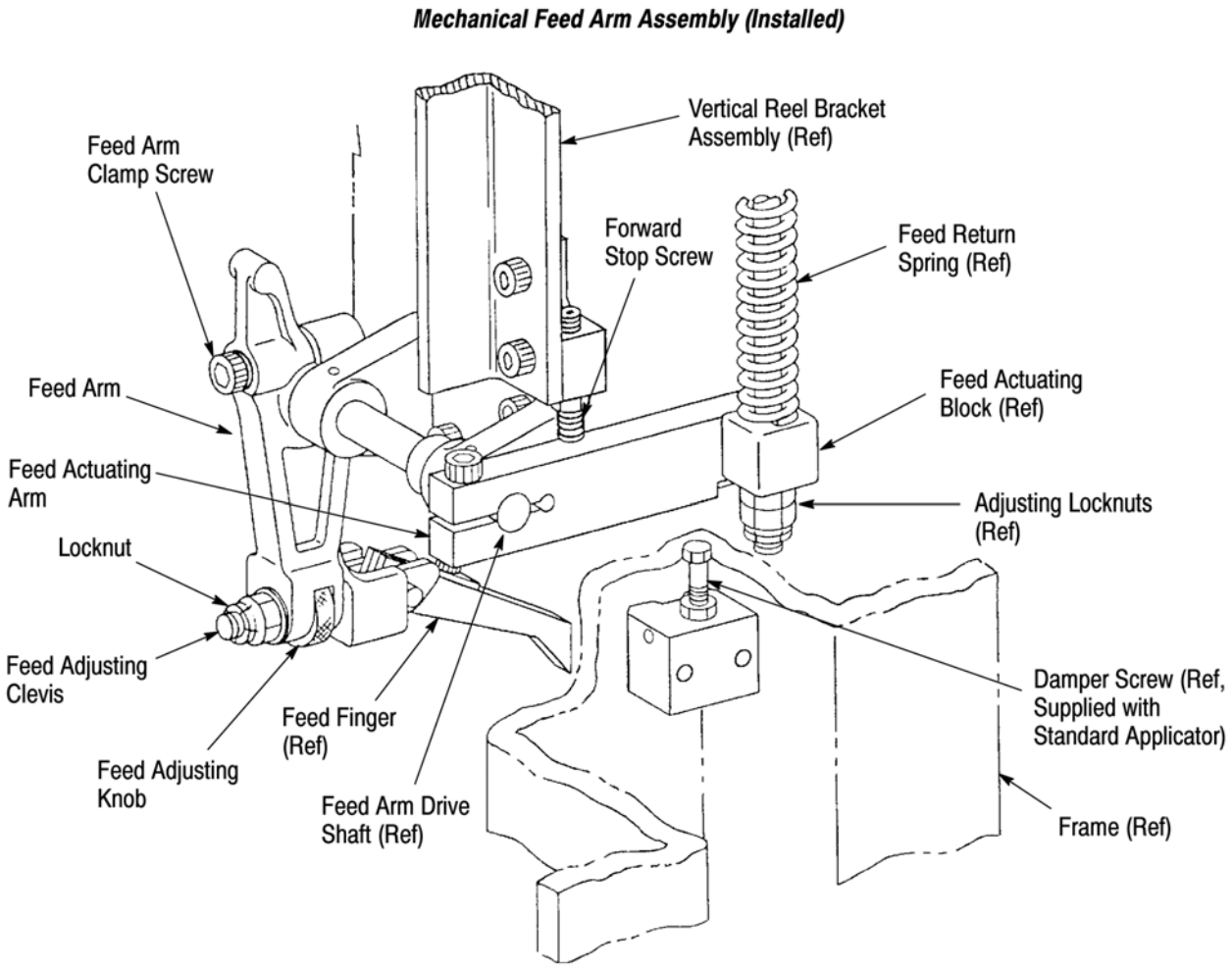


Figure 22

NOTE

It should be noted that the machine is not at BOTTOM-DEAD-CENTER nor is ram at bottom of stroke. This is normal and will be compensated for by the feed return spring.

9. Adjust damper screw until it JUST TOUCHES the feed actuating arm, then tighten locknut to secure it. This adjustment must be correct; otherwise, feed arm will not feed properly.

10. Check to see that approximately three threads are exposed below the adjusting locknuts on feed connecting rod when locknuts are tight.

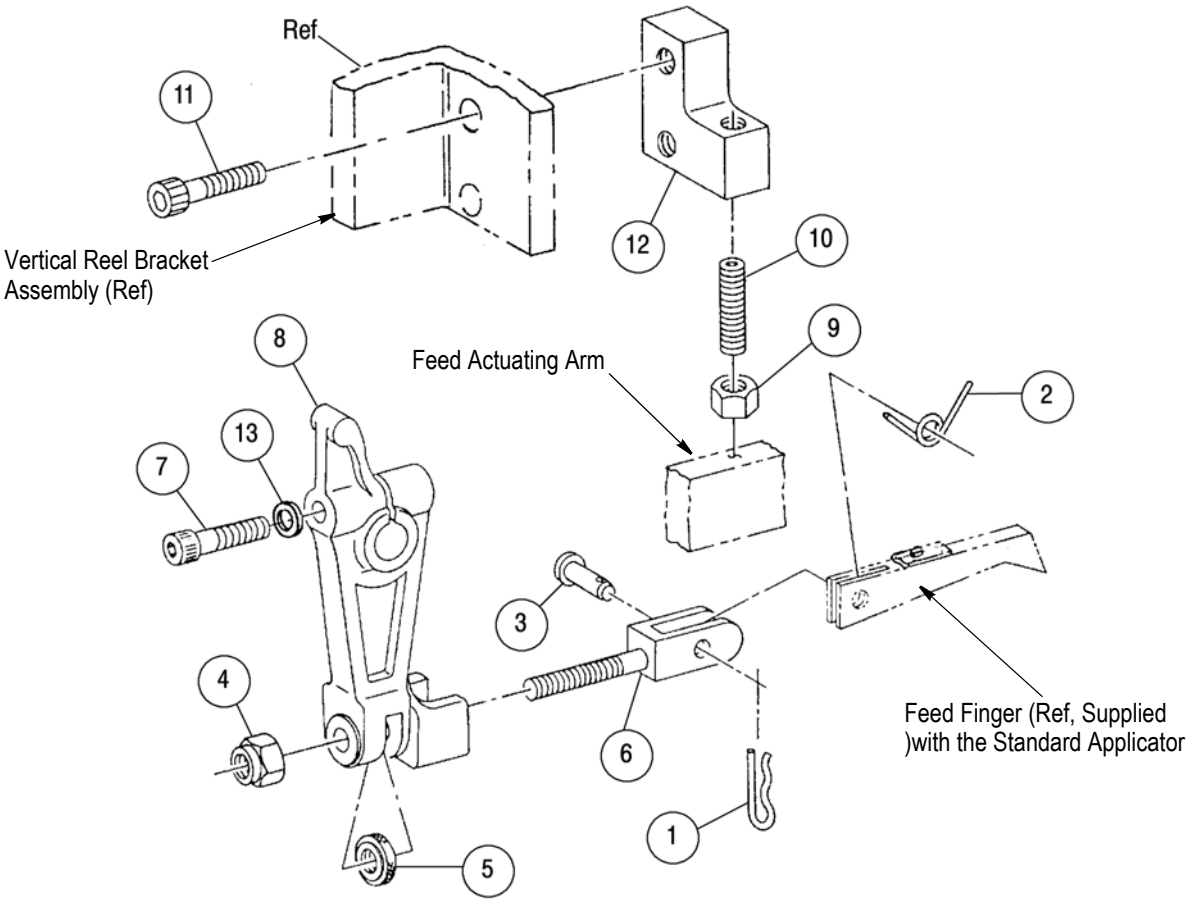
11. Continue to hand-cycle until machine returns to TOP-DEAD-CENTER.

12. Cycle machine under power to check for proper adjustment of feed arm. If necessary, make further adjustment with feed adjusting knob, and then lock feed adjusting clevis by tightening locknut. If necessary, adjust feed finger tension as described in the applicable applicator instructions.

C. Replacement (Figure 23)

Because of the simplicity in design, there are no special procedures required for replacement of parts in the mechanical feed arm assembly.

Mechnical Feed Arm Assembly
(Exploded View)



ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	692140-2 •	ARM ASSEMBLY, Mechanical Feed	1
1	23138-1	PIN, Cowling	1
2	374112	SPRING, Feed Tension	1
3	374651	PIN, Feed Clevis	1
4	1-21021-7	NUT, Slflkg Hex, 3/8-24	1
5	374114	KNOB, Feed Adjusting	1
6	375020	CLEVIS, Feed Adjusting	1
7	3-21001-8	SCREW, Skt Hd Cap, 3/8-16 X 1.750 in. L	1
8	471308-1	ARM, Feed	1
9	21019-8	NUT, Hex Mach, 5/16-24	1
10	7-21011-9	SETSCREW, Fl Pt Skt, 5/16-24 X 2.00 in. L	1
11	3-21001-6	SCREW, Skt Hd Cap, 3/8-16 X 1.250 in. L	2
12	240033-2	BLOCK, Stop	1
13	1-21055-0	WASHER, Flat, 3/8 in.	1

• Recommended Spare Part

Figure 23

10.2. Air Feed Valve Assembly (Figure 24)

A. Description

The air feed valve assembly is used to supply air pressure to all types of applicator air feed arrangements. The assembly consists of a valve bracket, on-off valve, operating arm, flow control valve, quick-exhaust valve, and tubing with fittings.

The operating arm is installed on the front end of the feed arm drive shaft to operate the on-off valve, which is "open" when the machine is at TOP-DEAD-CENTER. This supplies pressure to the air feed cylinder. On the downward stroke, the on-off valve is actuated "closed" to stop pressurization of the cylinder and allow trapped air within the cylinder to exhaust to atmosphere through the quick-exhaust valve. On the upward stroke of the ram, the on-off valve is actuated "open" again to pressure the cylinder. The flow control valve is adjusted to control the speed of the cylinder.

B. Adjustments

DANGER

To avoid personal injury, ALWAYS disconnect electrical and air supply before attempting any adjustments.

Two adjustments can be made to the air feed valve assembly. One is adjusting the operating arm on the mechanical feed arm drive shaft; the other is adjusting the flow control valve.

Adjust the operating arm as follows:

1. Make sure machine is at TOP-DEAD-CENTER. If necessary, hand-cycle it to obtain the condition.

2. Disconnect air line to flow control valve.

3. Apply air pressure to the on-off valve. If the valve is not fully open, loosen two screws in operating arm and rotate arm as necessary to open valve fully, then tighten screws.

NOTE

If the machine has a damper screw and/or forward stop screw (see Figure 22), screws MUST be backed off so that they are not active.

4. Hand-cycle machine through one cycle of operation to be sure valve is closing at bottom of ram stroke. Connect air line that was disconnected in Step 2. Disconnect air supply.

Adjust the flow control valve as follows:

To adjust the flow control valve, an applicator must be installed in the machine and loaded with terminal strip. With the air supply connected, hand-cycle the machine through several complete cycles. During cycling, check the speed of the feed stroke-keeping in mind that the speed of the feed stroke is basically the same whether hand-cycled or operated under power. The feed stroke should be slow enough to prevent overfeeding or deformation of terminals. Note, however, that a feed stroke that is too slow will hinder production by the operator.

1. Loosen locknut on flow control valve.

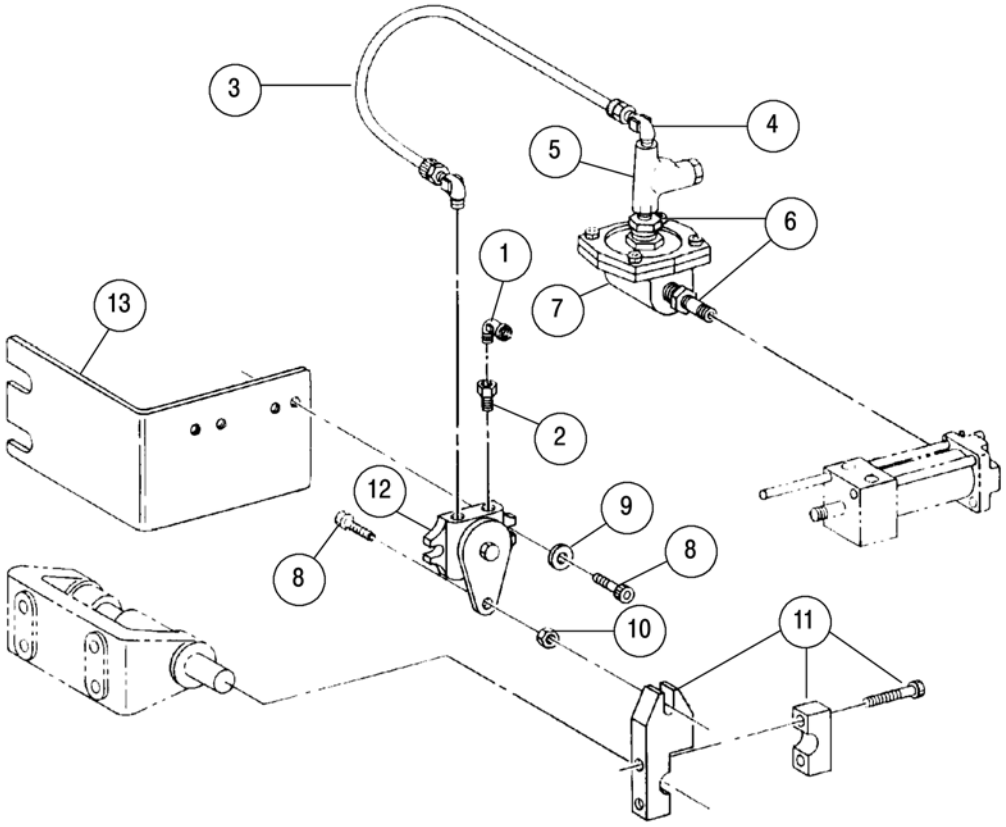
2. To decrease speed, turn adjustment screw clockwise; to increase speed, turn adjustment screw counterclockwise.

3. After adjustment, tighten locknut, then disconnect air supply.

C. Replacement

There are no special procedures required for replacement of parts in the air feed valve assembly. Refer to the exploded view and parts list for detail parts. If it is necessary to repair the quick-exhaust valve (Item 7), install Valve Repair Kit 22989-1 (diaphragm and gasket) as shown in Figure 25.

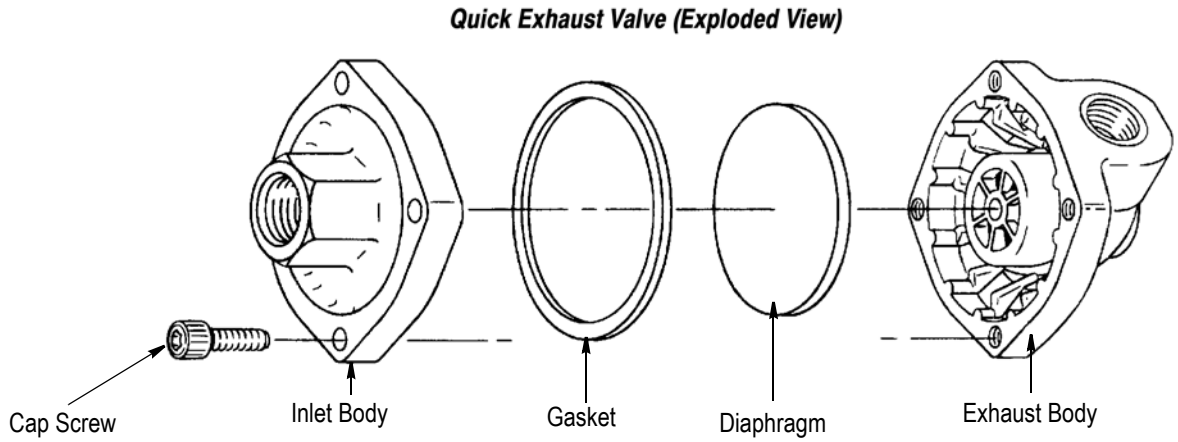
Air Feed Valve Assembly



ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	692655-1 •	VALVE ASSEMBLY, Air Feed	- - -
1	22306-2	ELBOW, Street, 1/4 x 1/4 in. NPT	1
2	22312-4	ADAPTER, Hex, 1/8 X 1/4 in. NPT	1
3	27319-4	TUBING, Plastic, 1/4 in. Outside Diameter, 381 mm [15 in.]	1
4	980285-2	ELBOW, Male, 1/8 in. NPT X 1/4 in. Outside Diameter Tube	2
5	23054-1	VALVE, Flow Control	1
6	22304-1	NIPPLE, Hex, 1/83/8 in. NPT	2
7	22374-7	VALVE, Quick Exhaust	1
- - -	22989-1	KIT, Valve Repair (Includes Diaphragm and Gasket for Schrader Valve 3340)	1
- - -	682469-1	KIT, Valve Repair (Includes Diaphragm and O-Ring for Deltrol Valve EN 375)	1
8	3-21000-5	SCREW, Skt Hd Cap, 10-32 X .500 in. L	3
9	21899-2	WASHER, Flat, No. 10	2
10	21018-7	NUT, Hex, 10-32	1
11	378393	ARM, Operating	1
12	23018-1	VALVE, On-Off	1
13	452899-2	BRACKET, Air Valve	1

• Recommended spare Part

Figure 24



Note: Schrader valve shown, Deltrol valve is similar.

Figure 25

10.3. Air Feed Assemblies

A. Description (Figure 26)

There are three different types of air feed assemblies available, each with a specific purpose, but similar in design and operation. Air pressure is supplied to each assembly by an air feed valve assembly (Paragraph 10.2) connected to either the extension port or retraction port of the cylinder when the machine is in the rest position. On the downward stroke of the ram, the air supply is shut "off" and the piston is moved in the opposite direction by spring pressure; then, on the upward stroke of the ram, the cylinder is again pressurized and the piston returns to its original position. The air feed assemblies are all prefeed, meaning that the terminal is positioned over the anvil when the machine is at TOP-DEAD-CENTER.

The cylinder is mounted on a feed adjusting bracket, which permits horizontal adjustment of the cylinder by the feed adjusting screw, and angle adjustment by means of the swivel screw. The length of the cylinder stroke-whether 25.4 or 50.8 mm [1 or 2 in.]-is adjusted to the desired length by means of the piston positioner. This desired length is equal to one feed length of the terminal strip to be fed.

The air feed assemblies are supplied with the applicator, but are included in this manual to cover the adjustments and the replacement of detail parts.

B. Adjustments (Figure 26)

DANGER

To avoid personal injury, ALWAYS disconnect electrical and air supply before attempting any adjustments.

1. Make certain the machine is at TOP-DEAD-CENTER. If necessary, hand-cycle it to obtain this condition.

2. Install applicator and feed finger as described in the applicator instructions supplied with the applicator. The air feed valve assembly must be installed and adjusted as described in Paragraph 10.2.

3. Load terminal strip into applicator in accord with applicator instructions.

4. Check angle of feed adjusting bracket. It should be positioned so the cylinder and feed finger are in a straight line. If necessary, loosen the swivel screw, and raise or lower the cylinder to obtain the correct position. Tighten the swivel screw.

5. If applicable, check mounting screws in feed swivel bracket. They should be centered in the slotted holes. If not centered, loosen screws and adjust bracket position, and then tighten screws.

6. Check that lead terminal is centered over anvil. If prefeed assembly, leave air supply disconnected.

Typical Air Feed Assembly for Standard Applicators

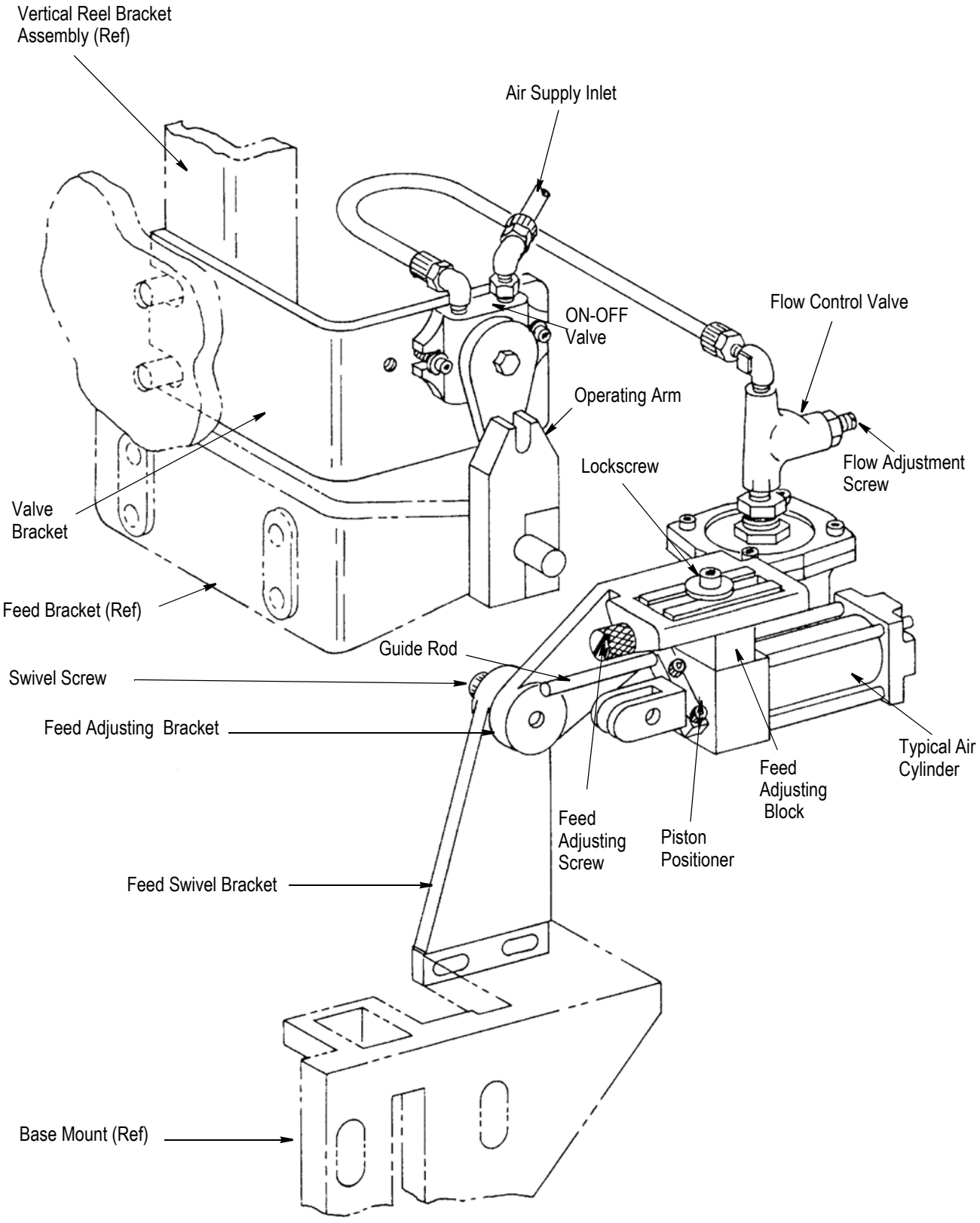


Figure 26

7. Check that feed finger is against feed point in terminal strip for lead terminal. If not, loosen lockscrew securing feed adjusting block, and turn feed adjusting screw, as required, until feed finger is against feed point and lead terminal remains centered over anvil. Tighten lockscrew to secure adjustment.

8. Check position of piston positioner. It must be one feed length (as specified on the applicator parts list) plug enough overtravel on the feed finger retract stroke to drop into the next feed point. If not, loosen two screws securing it to piston rod and slide in the required direction to obtain this dimension, and tighten screws to secure it.

9. Connect air supply. This will retract feed finger to pick up next feed point in terminal strip.

10. Hand-cycle machine to extend-feed finger fully, and then check that terminal is centered on anvil. If not, adjust feed adjusting block as described in Step 7.

11. Continue to hand-cycle machine to return it to the rest position. If necessary, adjust feed finger tension as described in the applicable applicator instructions.

12. Cycle machine under power several times to check for proper adjustment. If necessary, repeat preceding steps as required.

13. With adjustment completed, disconnect air supply.

C. Replacement (Figure 27 through Figure 29)

There are no special procedures required for replacement of parts in the air feed assemblies. Refer to the exploded views and parts lists for detail parts. If it is necessary to repair the air feed cylinder in either assembly, use replacement parts listed in the parts list under the cylinder and as shown in Figure 30.

The cylinder (Item 18, Figure 29) does not have a spring as a replacement part. The cylinder is extended by spring tension within the applicator.

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	690021 •	FEED ASSEMBLY, Air, 2-in. Stroke	1
- - -	690021-1 •	FEED ASSEMBLY, Air, 1-in. Stroke	1
1	692655-1	VALVE ASSEMBLY, Air Feed (See Figure 24)	1
2	3-21001-6	SCREW, Skt Hd Cap, 3/8-16 X 1.250 in. L	1
3	21024-8	WASHER, Lock, 3/8 in	1
- - -	692653-1 •	CYLINDER SUBASSEMBLY, Air Feed, 1-in. Stroke	1
- - -	692653-2 •	CYLINDER SUBASSEMBLY, Air Feed, 2-in. Stroke	1
4	23138-1	PIN, Cowling	1
5	374651	PIN, Clevis	1
6	374112	SPRING, Feed Finger	1
7	376168	CLEVIS, Feed Finger	1
8	22202-4	NUT, Hex, 5/16-24	1
11	21001-9	SCREW, Skt Hd Cap, 1/4-20 X 1.750 in. L	2
- - -	379865	ROD, Guide, 2-in. Stroke	1
14	1490794-1	CYLINDER, Air Feed, 1-in. Stroke	1
	1490794-2	CYLINDER, Air Feed, 2-in. Stroke	1
15	21001-2	SCREW, Skt Hd Cap, 1/4-20 X .500 in. L	1
16	376165	WASHER, Clamp	1
17	22292-2	COLLAR, Adjusting Screw	1
18	376169	SCREW, Feed Adjusting	1
19	376166	BLOCK, Feed Adjusting	1
20	471798	BRACKET, Feed Adjusting	1
21	21001-6	SCREW, Skt Hd Cap, 1/4-20 X 1.00 in. L	2
22	21899-3	WASHER, Flat, 1/4 in.	2
23	471799	BRACKET, Feed Swivel	1
- - -	694927-3 ‡	BRACKET, Stock Guide	1

• Recommended Spare Part

‡ Supplied with 2 inch stroke air feed assembly to replace item 10 in Figure 18 for clearance.

Figure 27 (Cont'd)

Air Feed Assembly for Standard Applicators

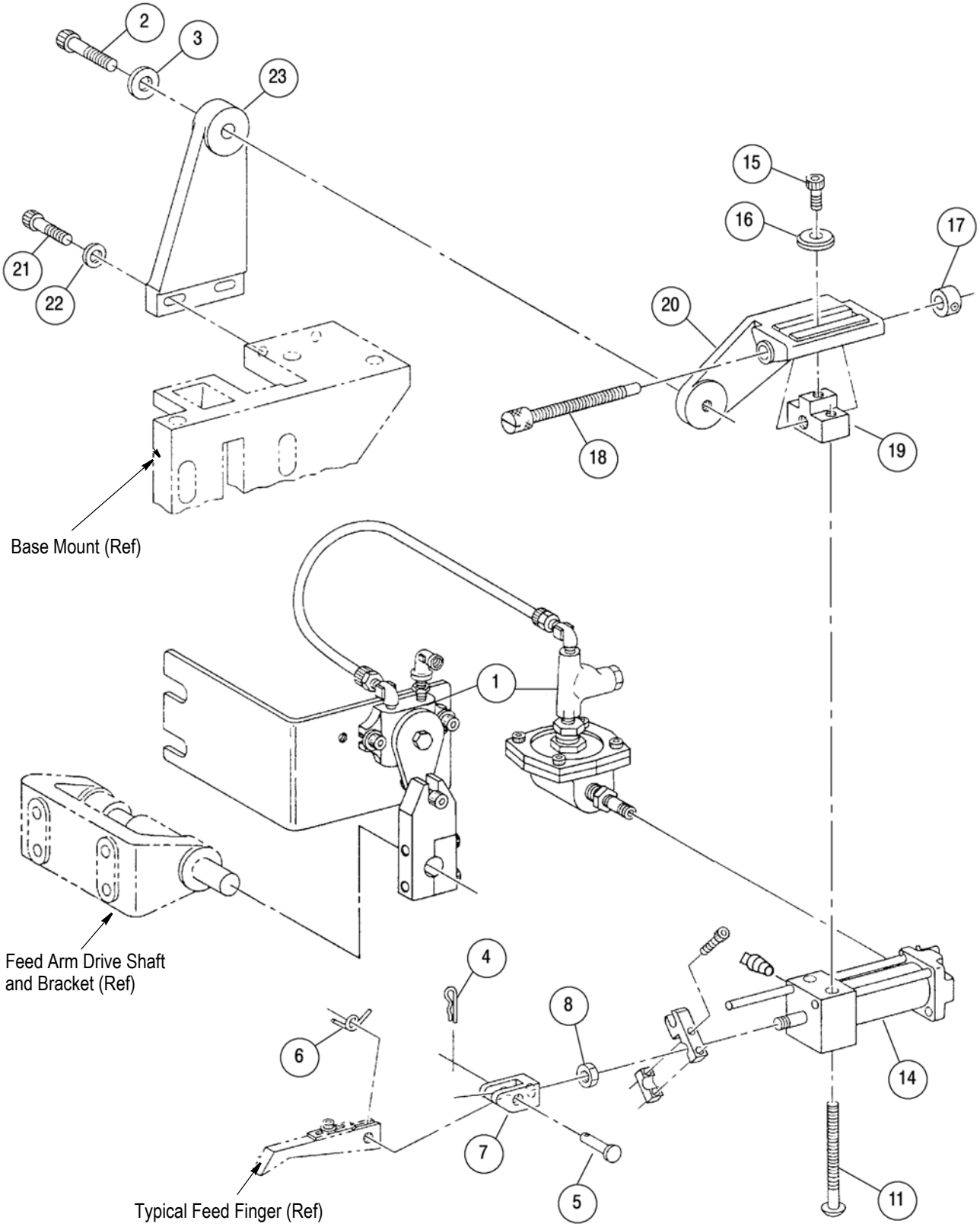


Figure 27 (End)

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	460277-1 •	FEED ASSEMBLY, Air, 1-in. Stroke, Single End-Feed	- - -
- - -	460277-2 •	FEED ASSEMBLY, Air, 2- in. Stroke, Single End-Feed	- - -
- - -	460277-3 •	FEED ASSEMBLY, Air, 1-in. Stroke, Dual End-Feed	- - -
- - -	460277-4 •	FEED ASSEMBLY, Air, 2-in. Stroke, Dual End-Feed	- - -
- - -	461065-1 •	FEED ASSEMBLY, Air, 1-in. Stroke, Side-Feed	- - -
1	22202-4	NUT, Hex, 5/16-24	1
4	21001-9	SCREW, Btn Hd Cap, 1/4-20 X 1.750 in. L (U/W End-Feed)	2
8	1490794-1	CYLINDER, Air, 1-in. Stroke	1
	1490794-2	CYLINDER, Air, 2-in. Stroke	1
9	21001-2	SCREW, Skt Hd Cap, 1/4-20 X .500 in. L	1
10	376165	WASHER, Clamp	1
11	22292-2	COLLAR, Adjusting Screw, .18 in. Inside Diameter	1
12	376169-	SCREW, Adjusting	1
13	376166	BLOCK, Feed Adjusting	1
14	3-21001-5	SCREW, Skt Hd Cap, 3/8-161.000 in. L	1
15	459609-1	BRACKET, Feed Adjusting (U/W End-Feed)	1
	461064-1	BRACKET, Feed Adjusting (U/W Side-Feed)	1
16	459610-1	MOUNT, Feed Bracket (U/W Single End-Feed)	1
	459610-2	MOUNT, Feed Bracket (U/W Dual End-Feed)	1
- - -	▲	MOUNT, Feed Bracket (U/W Side-Feed)	1
17	21024-8	WASHER, Lock, 3/8 in.	1
18	694927-3	BRACKET, Stock Guide (Dual End Feed)	1

• Recommended Spare Part..

▲ See applicator parts list for applicable part number.

Figure 28 (Cont'd)

Air Feed Assembly for Miniature Applicators, End-Feed Type

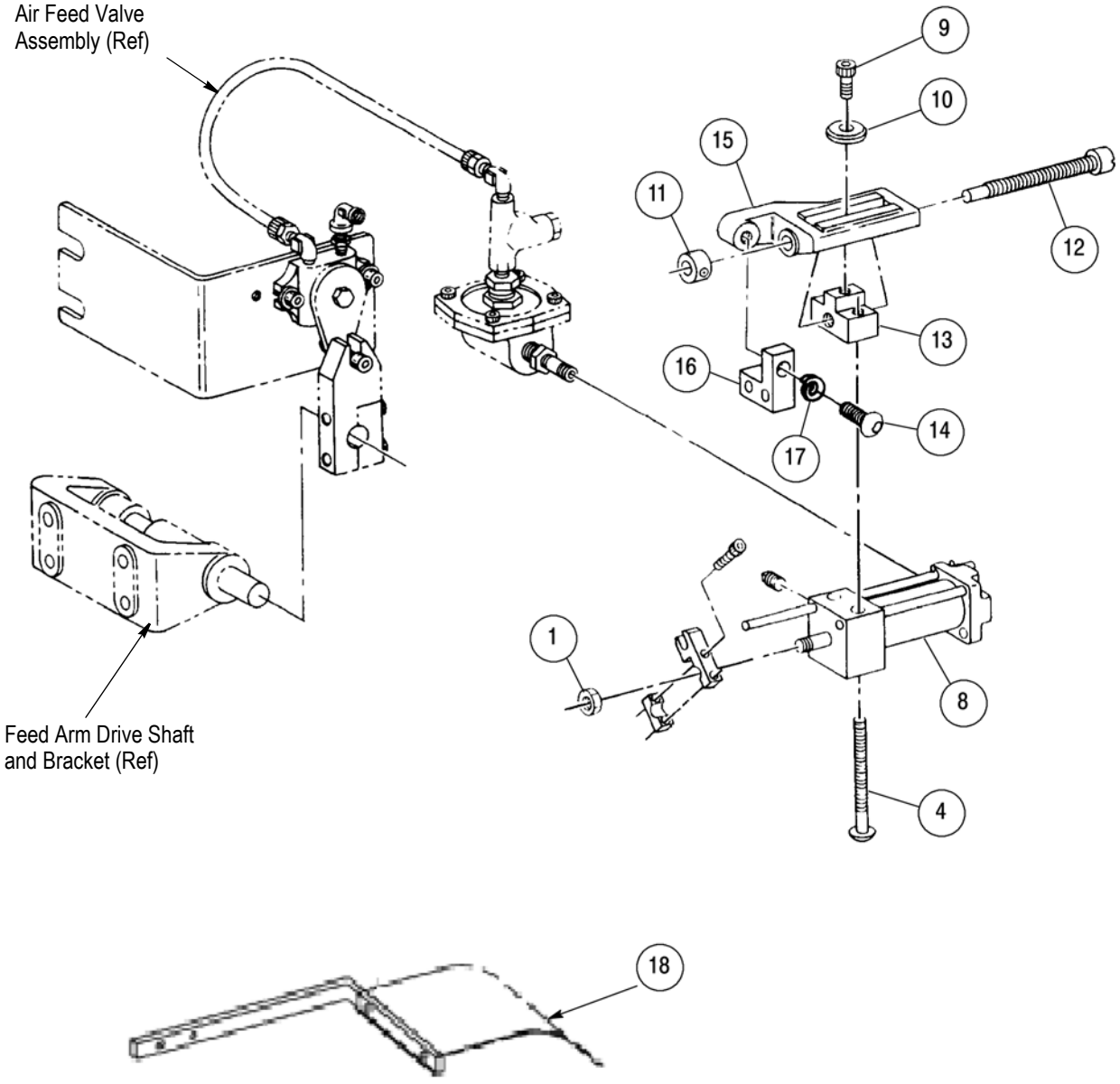


Figure 28 (End)

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	457098-1 •	FEED ASSEMBLY, Air (Used on Tab-Lok Miniature Applicators)	- - -
2	692655-8 •	VALVE ASSEMBLY, Air Feed	1
3	3-21001-5	SCREW, Skt Hd Cap, 3/8-16 X 1.000 in. L	1
4	21024-8	WASHER, Flat, 3/8 in.	1
5	456919-1	PLATE, Air Feed Mounting	1
6	21045-3	RING, Retaining, 3/16 in. Dia	2
7	240624-1	PIN, Pivot	1
8	457056-1	CLEVIS, Feed Finger	1
9	22202-4	NUT, Hex, 5/16-24	1
14	465729-1	PLUG, Cylinder Port	1
15	21001-9	SCREW, Skt Hd Cap, 1/4-20 X 1.750 in. L	2
18	1490875-1	CYLINDER, Air Feed, 1-in. Stroke, Double Action	1
19	3-21002-4	SCREW, Btn Hd Cap, 1/4-20 X .500 in. L	1
20	376165-	WASHER, Clamp	1
21	22292-2	COLLAR, Adjusting Screw	1
22	376169	SCREW, Adjusting	1
23	376166	BLOCK, Feed Adjusting	1
24	471798	BRACKET, Feed Adjusting	1

• Recommend Spare Part

Figure 29 (Cont'd)

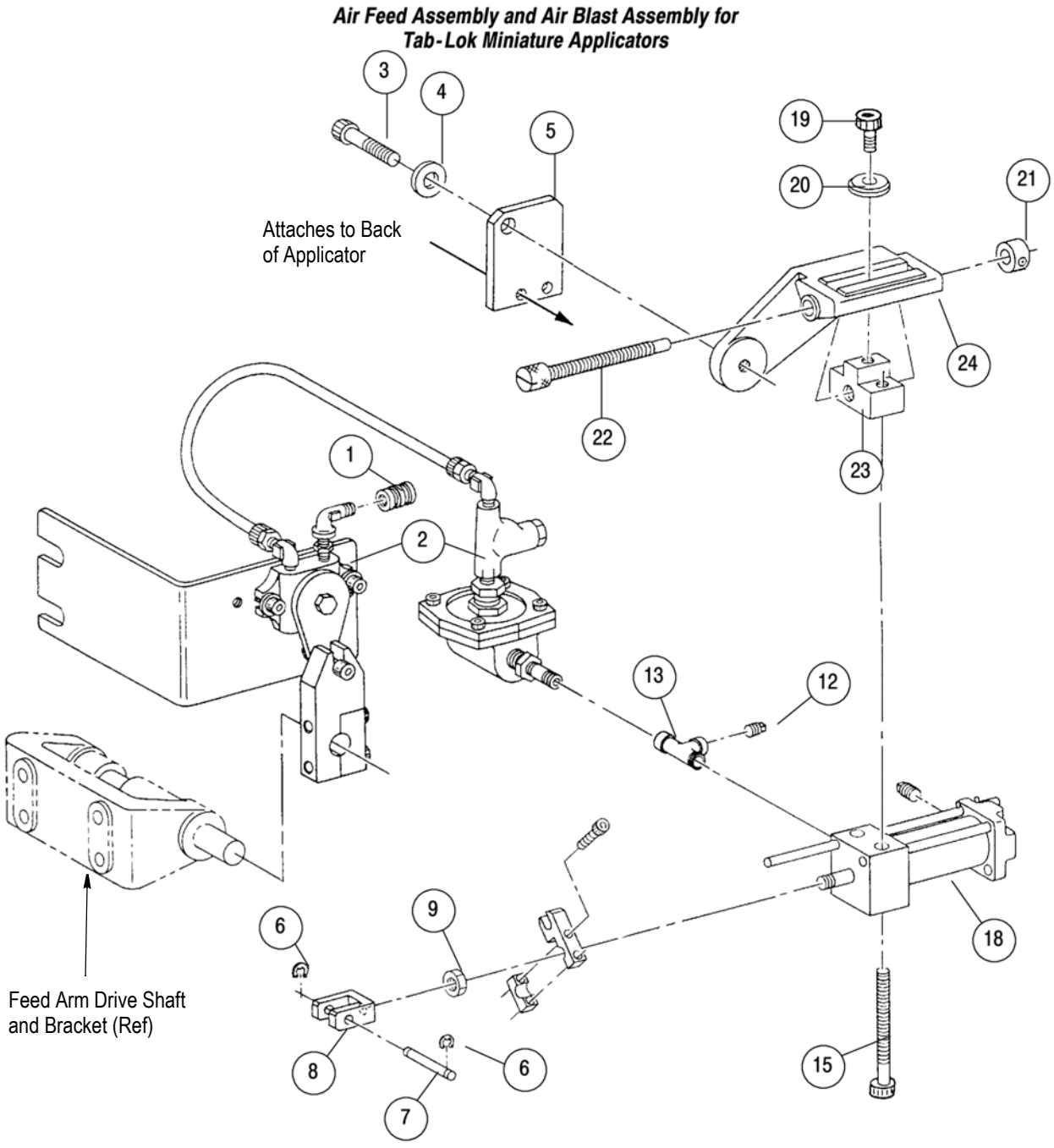


Figure 29 (End)

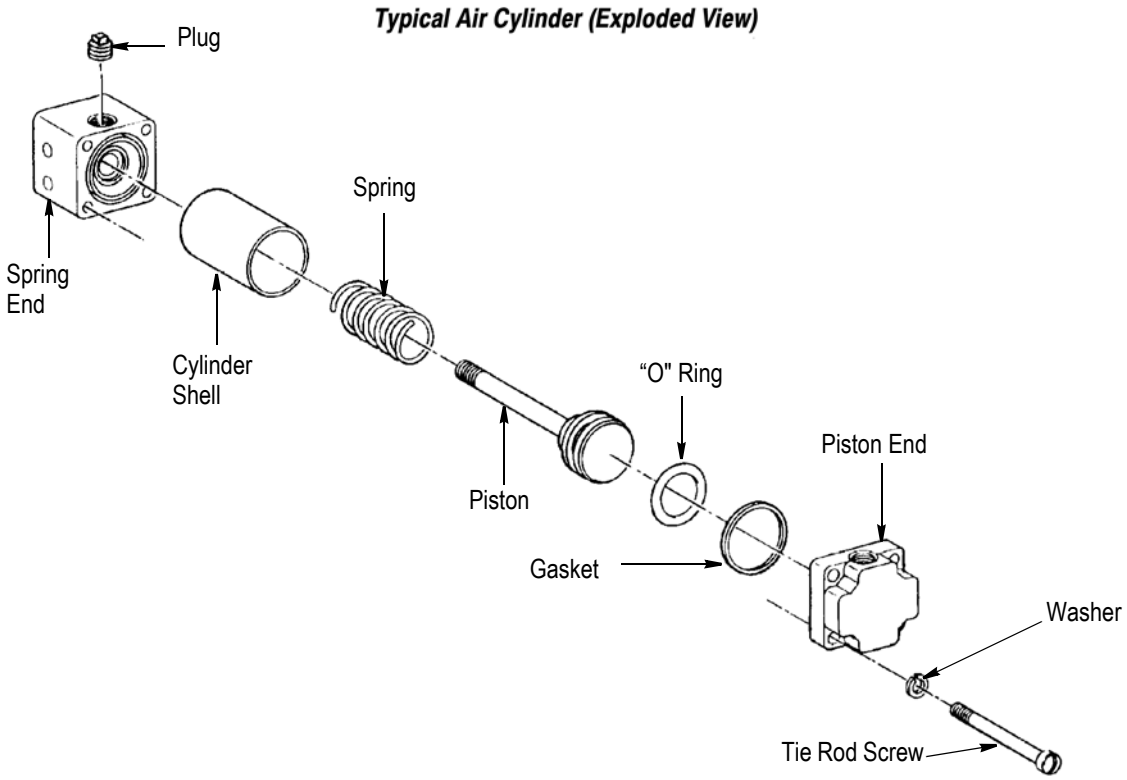


Figure 30

10.4. Air Blast Assemblies (Figure 31)

A. Description

Three air blast assemblies (455350-1 through -3) are available as accessories for use with standard applicators. The -1 assembly is used with air feed applicators, the -2 assembly is used with mechanical feed applicators with 15.87 mm [.625 (5/8) in.] or LESS feed stroke, and the -3 assembly is used with mechanical applicators with 15.87 mm [.625 (5/8) in.] or MORE feed stroke. The on-off valve on either assembly is "closed" when the machine is in the rest position, and is actuated "open," then "closed" again during the machine cycle to supply an air blast to the tooling area of the applicator to remove chips. The valve is actuated by an operating arm installed on the feed arm drive shaft of the machine.

B. Adjustments

DANGER

STOP

To avoid personal injury, ALWAYS disconnect electrical and air supply before attempting any adjustments.

1. Make sure machine is at TOP-DEAD-CENTER. If necessary, hand-cycle it to obtain this condition.

2. Connect air supply. If valve is not closed, loosen two screws in operating arm and rotate arm on feed arm drive shaft until valve closes, and then tighten screws.

3. Hand-cycle machine through one complete cycle. Valve should open to supply an air blast as ram reaches the bottom of its stroke, then close again on the upward stroke. If not, re-adjust arm as required to obtain this condition.

4. If a flow control valve is used, adjust for desired volume of air.

5. At completion of adjustment, disconnect air supply.

C. Replacement

There are no special procedures required for the replacement of parts in the air blast assemblies. Refer to the exploded view and parts list for detail parts.

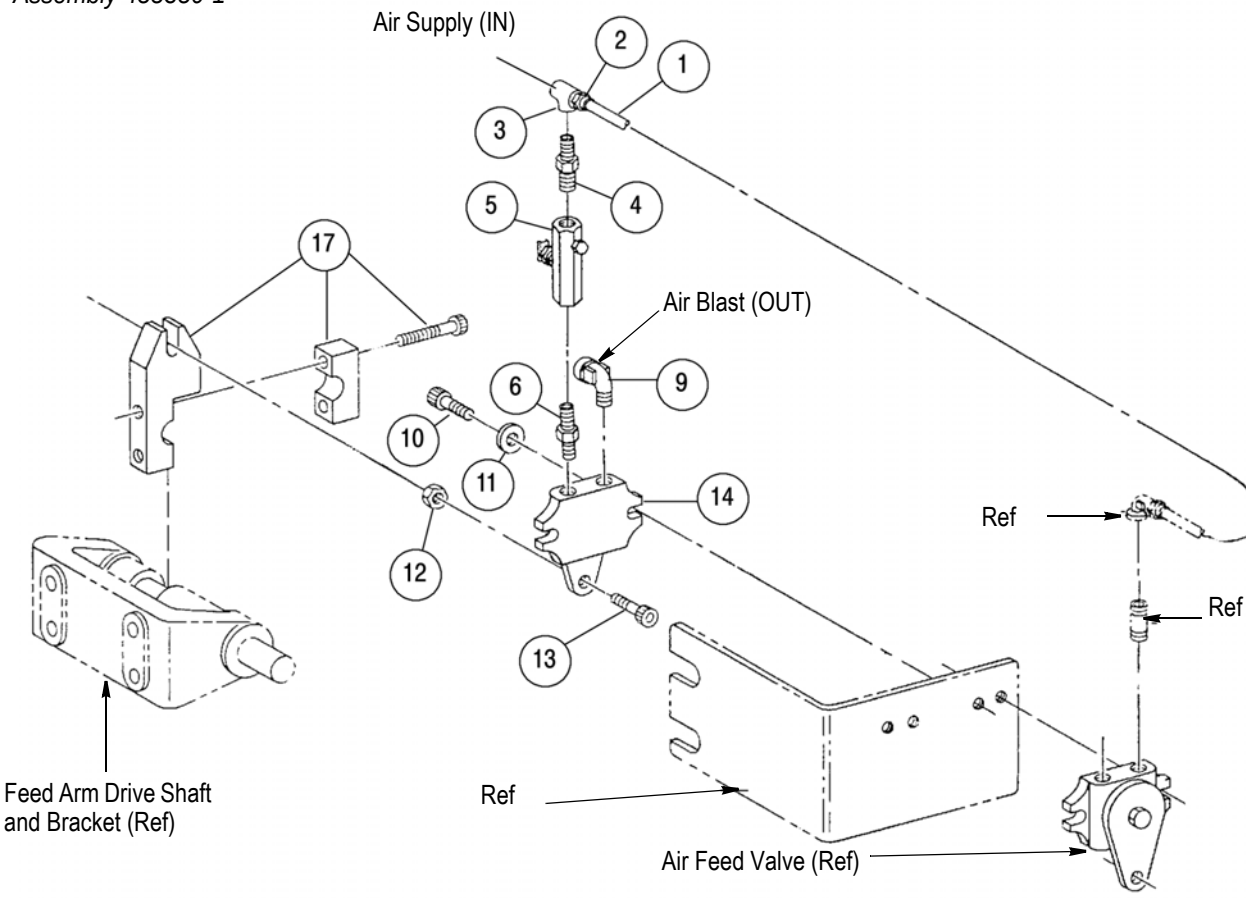
ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	455350-1 •	BLAST ASSEMBLY, Air (For Applicator with Air Feed)	- - -
- - -	455350-2 •	BLAST ASSEMBLY, Air (For Applicator with Mechanical Feed, .625 in. Max)	- - -
- - -	455350-3 •	BLAST ASSEMBLY, Air (For Applicator with Mechanical Feed, .625 in. Min)	- - -
1-	27319-4	TUBING, Plastic, 1/4 in. Outside Diameter, 152 mm [6 in.] (Assembly -1)	1
2	22295-8	FITTING, Male, 1/4 in. NPT X 1/4 in. Tube (Assembly -1)	2
3	22309-2	TEE, Female Branch, 1/4 X 1/4 X 1/4 in. NPT (Assembly -1)	1
4	22304-4	NIPPLE, Hex, 1/4 X 1/8 in. NPT (Assembly -1)	1
5	23054-1	VALVE, Flow Control (Assembly -1)	1
6	22304-1	NIPPLE, Hex, 1/8 in. NPT (Assembly -1)	1
7	22306-2	ELBOW, Street, 1/4 in. NPT (Assemblies -2 and -3)	1
8	22312-4	ADAPTER, 1/8 X 1/4 in. NPT (Assemblies -2 and -3)	1
9	22306-1	ELBOW, Street, 1/8 in. NPT (Assembly -1)	1
10	3-21000-5	SCREW, Skt Hd Cap, 10-32.50 in. L	2
11	21899-2	WASHER, Flat, No. 10	2
12	21018-7	NUT, Hex, 10-32	1
13	3-21000-6	SCREW, Skt Hd Cap, 10-32 X .625 in. L	1
14	23018-1	VALVE, On-Off	1
15	3-21000-4	SCREW, Skt Hd Cap, 10-32 X .375 in. L (Assembly -2)	2
16	811314-1	PLATE, Valve Mounting (Assembly -2)	1
17	378393-	ARM, Operating (Assemblies -1 and -3)	1
	811210-1	ARM, Operating (Assembly -2)	1
18	452899-2	BRACKET, Mounting (Not Supplied with Assembly -1)	1
19	22306-3	ELBOW, Street, 1/8 in. NPT (Assemblies -2 and -3)	1

• Recommended Spare Parts

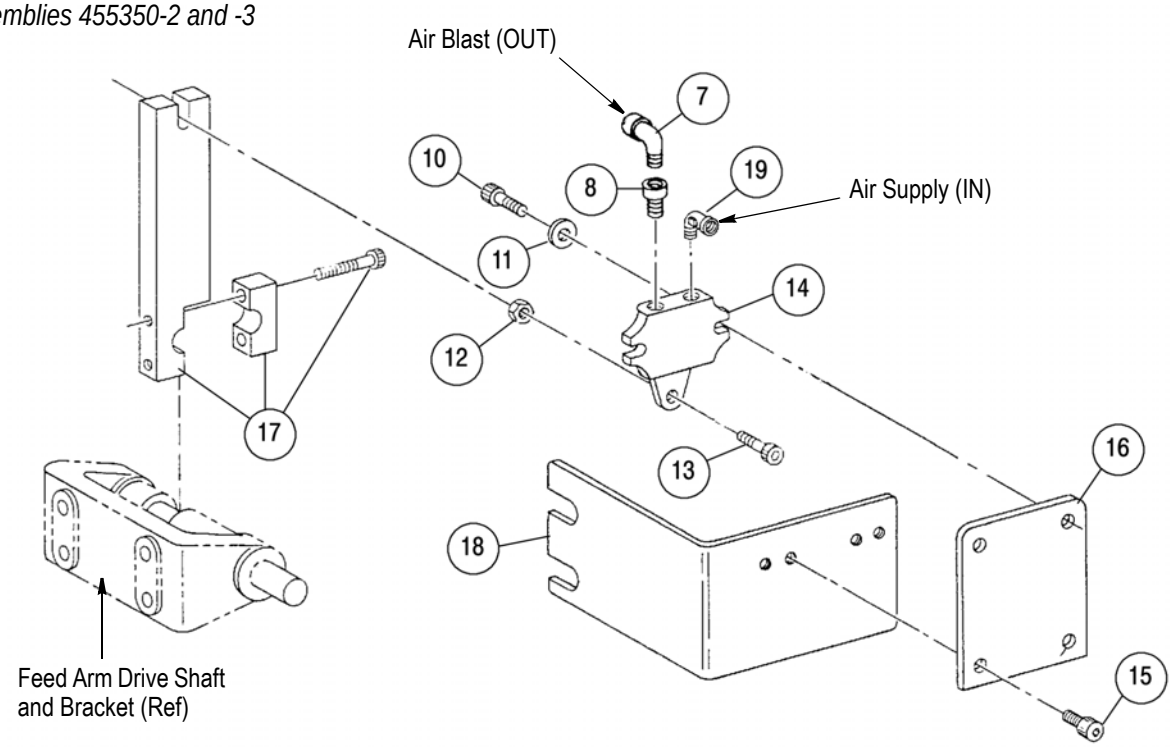
Figure 31 (Cont'd)

Air Blast Assemblies

Assembly 455350-1



Assemblies 455350-2 and -3



10.5. Optional Reel Bracket Assemblies and Associated Parts (Figure 32)

A. Description

Left-Hand Reel Bracket Assembly 694925-2 is used with the vertical reel bracket assembly supplied with the basic machine. This assembly is required when the terminal strip must enter the applicator from the left side of the machine. It is attached to the vertical reel support with two thumbscrew knobs for easy removal and installation. The assembly is included in Conversion Kit 690675-2 covered by 408-8022.

The 30° vertical reel bracket mount is required for mounting the vertical reel bracket assembly to the machine frame when applicators are at a 30° angle on the machine base mount.

Horizontal Reel Bracket Assembly 692613-1 is required when the terminal strip must be fed into the applicator vertically and from the left side of the machine. It may be necessary to drill and tap the machine frame, as shown, to install the assembly. This assembly, supplied as Conversion Kit 692613-1, is also covered in 408-8022.

Dual Conversion Kit 694925-4 is required to convert the vertical reel bracket assembly, supplied with the basic machine, to two-reel capabilities. As noted on the illustration, certain parts on the vertical reel bracket assembly must be removed to install the conversion kit, while other parts are re-installed in the same location but in a different manner. The terminal strips from both reels are fed around and through the dual-stock guide, and into the applicator.

Reel Spreader Assembly 453596-1 is used with the vertical reel bracket assembly. The purpose of the assembly is to spread the sides of the reel to prevent terminals or strip from being deformed as it is being unreeled. Holes for mounting the assembly are predrilled in the vertical reel support.

B. Replacement

There are no special procedures required for the replacement of parts. Refer to the illustration and parts list in the supplied drawings for detail parts when replacement is necessary.

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	694925-2	BRACKET ASSEMBLY, Left-Hand Reel	1
1	27708-3	KNOB, Thumbscrew	2
2	3-21000-1	SCREW, Skt Hd Cap, 8-32 X 1.000 in. L	4
3	21018-6	NUT, Hex, 8-32	2
4	1-21899-3	WASHER, Flat, No. 8	2
5	470268-1	GUIDE, Stock	1
6	694928-2	BRACKET, Left-Hand Stock Guide	1
- - -	692613-1 •	BRACKET ASSEMBLY, Horizontal Reel	1
7	3-21001-8	SCREW, Skt Hd Cap, 3/8-16 X 1.750 in. L	2
8	453602-1	BLOCK, 30° Reel Bracket Mounting	1
9	2-22789-6	SCREW, Wing Thumb, 1/4-20 X .500 in. L	2
10	465520-1	FLANGE, Reel	2
11	21007-6	SETSCREW, Skt, 1/4-20 X .500 in. L	1
12	465586-2	SHAFT, Reel	1
13	21001-3	SCREW, Skt Hd Cap, 1/4-20 X .625 in. L	2
14	386213-	BLOCK, Reel Shaft	1
15	1-21001-6	SCREW, Skt Hd Cap, 5/16-18 X .500 in. L	2
16	452612-2	ARM, Reel Support	1

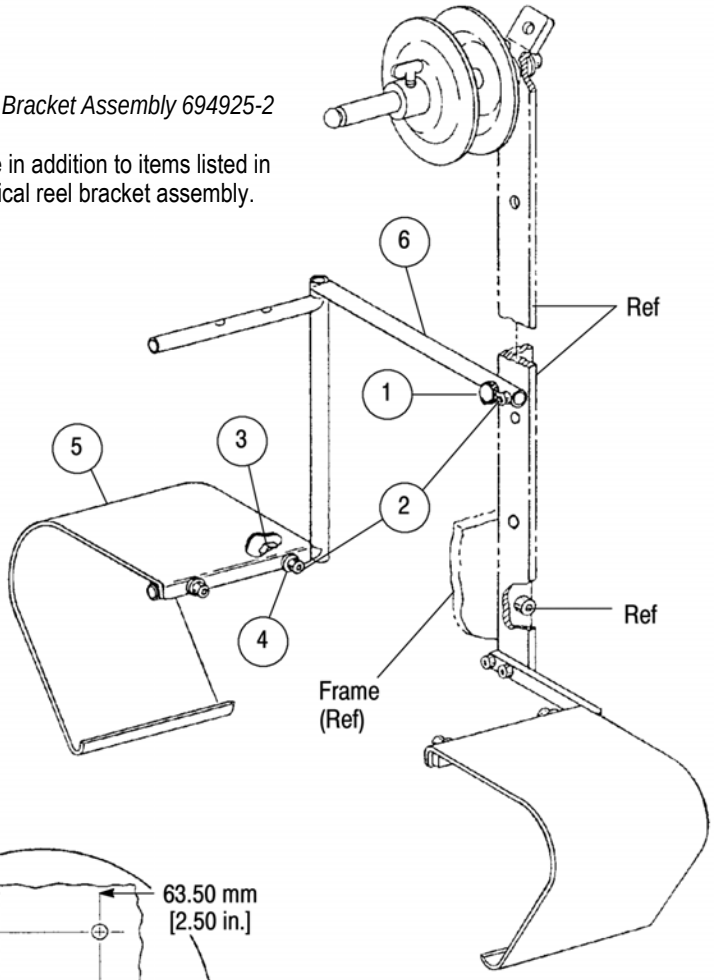
• Recommended Spare Part

Figure 32 (Cont'd)

Optional Reel Bracket Assemblies and Associated Parts

Left-Hand Feed Reel Bracket Assembly 694925-2

Items 1 through 6 are in addition to items listed in Figure 18 for the vertical reel bracket assembly.



Horizontal Reel Bracket Assembly 692613-1

(Items 7 through 16)

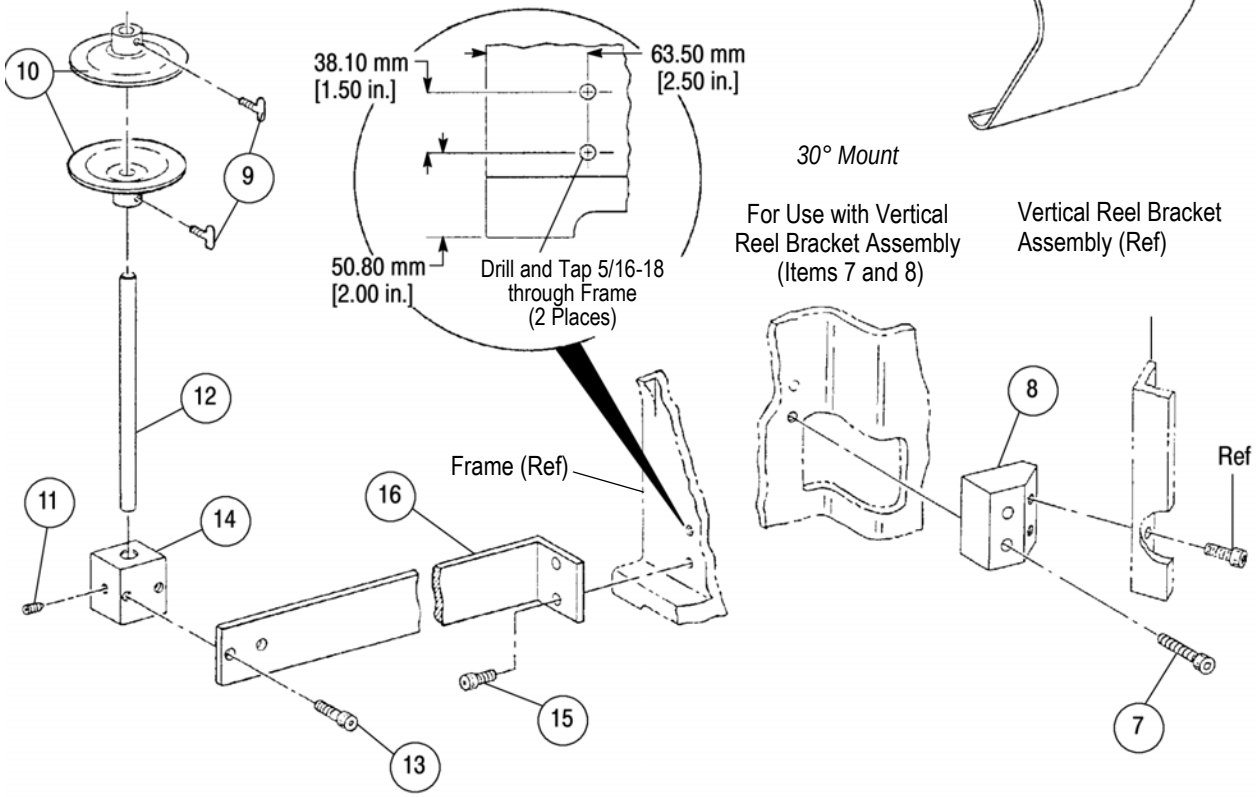


Figure 32 (Cont'd)

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	694925-4	BRACKET ASSEMBLY, Vertical Reel, Dual Conversion Kit (See Illustration)	1
17	2-22789-6	SCREW, Wing Thumb, 1/4-20 X .750 in. L	1
18	457443-1	FLANGE, Reel	1
19	810578-1	FLANGE, Reel	1
20	465586-2	SHAFT, Reel	1
21	388648-5	STUD, Reel	2
22	2-21000-5	SCREW, Skt Hd Cap, 8-32 X .250 in. L	2
23	1-21899-3	WASHER, Flat, No. 8	2
24	465581-1	GUIDE ASSEMBLY, Dual Stock	1
25	2-21000-7	SCREW, Skt Hd Cap, No. 8-32 X .500 in. L	2
26	694927-2	BRACKET, Right-Hand Dual Stock Guide	2
27	3-21001-1	SCREW, Skt Hd Cap, 3/8-16 X .500 in. L	2
28	453601-1	PLATE, Dual Reel Support Mounting	1
- -	453596-1	SPREADER ASSEMBLY, Reel, 24-in.	1
29	21018-8	NUT, Hex, 10-24	1
30	21899-2	WASHER, Flat, No. 10	1
31	21004-2	SCREW, Skt Hd Shldr, .250 X .500 L Shldr X 10-24 X .375 in. L Thd	1
32	25170-1	CATCH, Bullet	1
33	2-21002-1	SCREW, Btn Hd Cap, 8-32 X .375 in. L	2
34	21018-6	NUT, Hex, 8-32	2
35	453597-2	BLOCK, Fulcrum	1
36	453599-1	SHIELD, Roller	1
37	1-21018-2	NUT, Hex, No. 5	6
38	1-21899-4	WASHER, Flat, No. 5	8
39	8-21000-4	SCREW, Skt Hd Cap, 5-40 X 875 in. L	2
40	22498-1	BEARING, Ball	2
41	453598-2	PLATE, Roller	1

• Recommended Spare Part

Figure 32 (Cont'd)

Optional Reel Bracket Assemblies and Associated Parts

Dual Conversion Kit 694925-4

Items 17 through 28 are added to the vertical reel bracket assembly. Refer to Figure 18, and remove Items 3, 4, and 6 through 10 before installing the kit.

Reel Spreader Assembly 453596-1

For Use with Vertical Reel Bracket Assembly (Items 29 Through 41 and Reference)

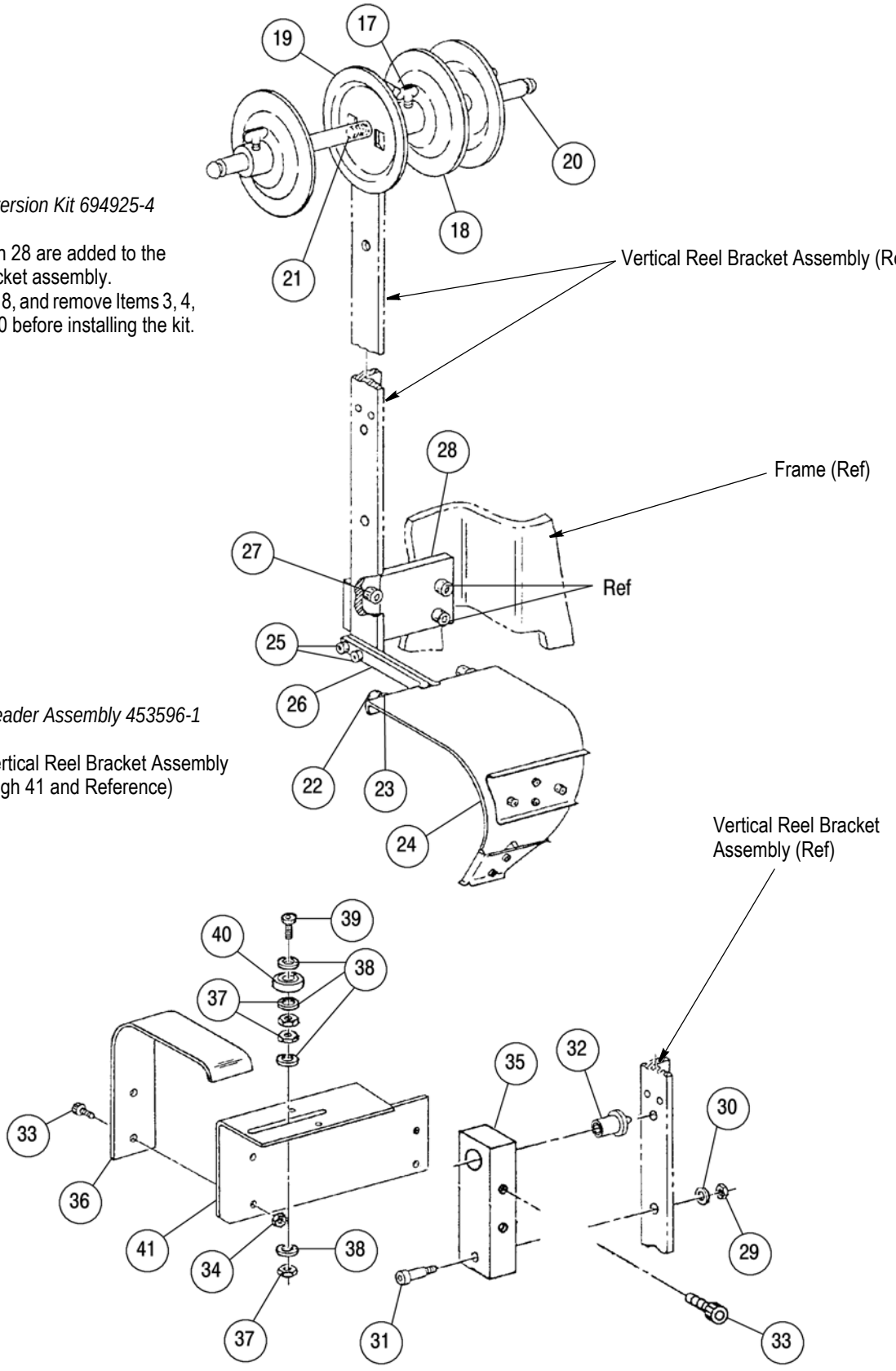


Figure 32 (End)

11. MODIFIED MACHINES

Modified Model "K" machines presented in this section are factory-prepared units that consist of a basic machine (as covered in Sections 1 through 9) plus one or more of the accessories described in Section 10. Each different type of modified machine has its own part number which distinguishes it from the other factory-modified versions and from the basic machine.

A modified machine is not a complete, production-ready unit. Rather, it is a basic power unit, set up to accept a given type of applicator. An applicator parts list is supplied with each applicator used in these Model "K" machines, and this list includes the part number that identifies the modified configuration that the applicator requires.

If a modified machine in the customer's plant carries the part number for the basic machine, or if the modified configuration does not agree with the modified machine part number on the nameplate, this indicates that the machine has been changed (at least once) since it left the factory. These changes could have involved the accessories covered in Section 10 or the available conversion kits.

11.1. Machine 565435-5 and 565435-2 (Figure 33)

These machines accepts both end-feed and side-feed miniature quick-change applicators. Information contained in Sections 1 through 9 for the basic machine is applicable to these machines with one exception. Beginning with machine revision "AD," an adjustable UNIBAL assembly (813725-1) replaces the spherical bearing link (Item 19, Figure 20).

Components and parts added to the basic machine, prior to revision "AD," include a base mount and plate, ram, side-feed and end-feed guards, and left strip guide as listed in 408-8022. Beginning with revision "AD," the base mount and plate have been replaced with a solid base assembly (812286-1) as shown in Figure 33, and the machine frame has been modified. All other parts remain the same as listed in 408-8022.

NOTE

No machines in the field can be converted to the solid base assembly, nor can a machine shipped from the factory with a solid base assembly be converted to another configuration.

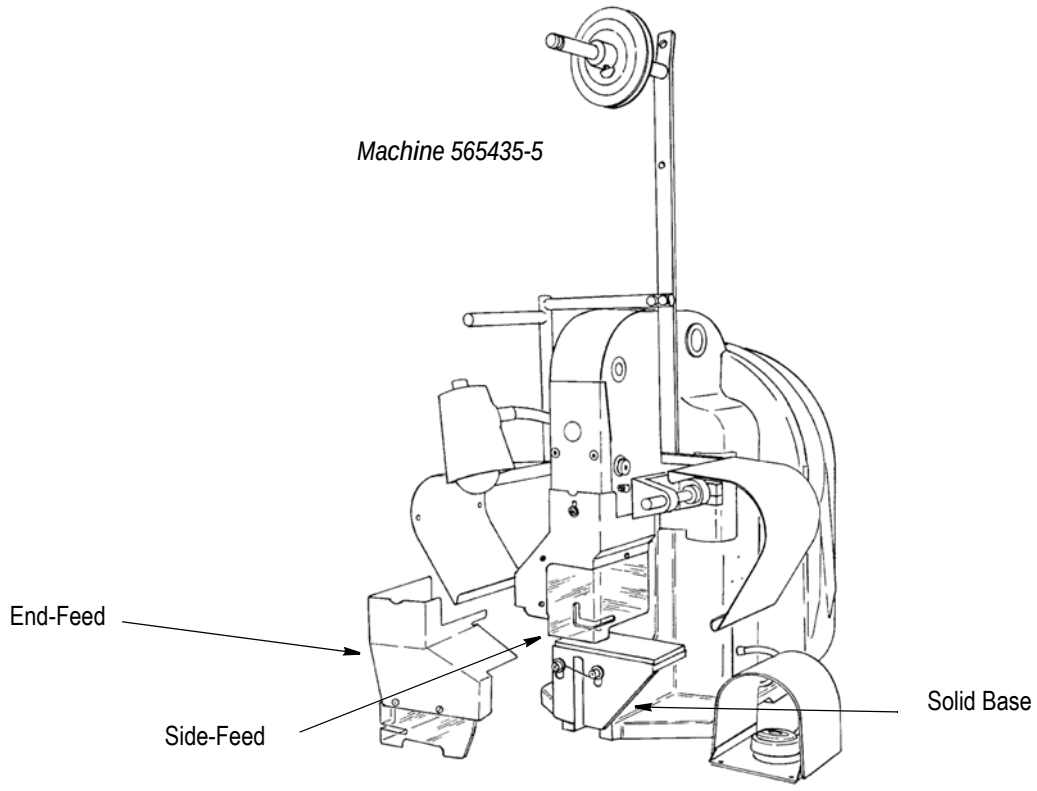


Figure 33

11.2. Machine 1-565435-7 (Figure 34)

This modified machine accepts miniature quick-change applicators that mount on the machine at a 30° angle.The terminal strip enters the applicator from the right, but with the terminals in a vertical position.

Several minor changes have been made to the basic machine, as covered in Section 1 through Section 9. Changes include the deletion of the vertical reel bracket assembly, and the addition of a horizontal reel bracket (on the right side), a base mount and plate for mounting the 30° applicator and ram as shown in the exploded view.

The base mount is adjusted before shipment to the correct shut-height for accepting applicators. If a base mount adjustment is required due to the replacement of parts, refer to Section 7. For information relating to the applicator, refer to the applicator instructions, supplied with the applicator.

ITEM	PART NUMBER	DESCRIPTION	QTY
- - -	1-565435-7	MACHINE ASSEMBLY, Modified Machine	- - -
1	2-22789-6	SCREW, Thumb, 1/4-20 X .500 in. L	1
2	465520-1	FLANGE, Reel	1
3	21007-6	SETSCREW, Ski, 1/4-20 X .500 in. L	1
4	465586-2	SHAFT, Reel	1
5	21001-3	SCREW, Skt Hd Cap, '/4-20 X .625 in. L	4
6	386213	SLEEVE, Shaft	1
7	460815-1	ARM, Reel Support	1
8	3-21000-6	SCREW, Skt Hd Cap, 10-32 X .625 in. L	2
9	690673-2	BRACKET, Hold-Down	1
10	2-21000-7	SCREW, Skt Hd Cap, 8-32 X .500 in. L	2
11	690674-1	STOP, Rear	2
12	4-21002-4	SCREW, Btn Hd Cap, 3/8-16 X .500 in. L	1
13	4-21002-6	SCREW, Btn Hd Cap, 3/8-16 X .750 in. L	1
14	21020-3	NUT, Hex, 3/8-16	1
15	453254-1	PLATE, Base	1
16	453253-1	MOUNT, Base, 30°	1
17	21009-4	SETSCREW, Skt, 14-20 X .375 in. L	1
18	690499-1	RAM	1
19	1-473271-2	MACHINE ASSEMBLY, Basic Model "K" (Refer to Section 9 for Breakdown)	1‘

Note :Item 1, Screw, Skt Hd Cap (2) and Item 2, Bracket Assembly, Vertical Reel (1) have not been installed on this modified machine.

Figure 34 (Cont’d)

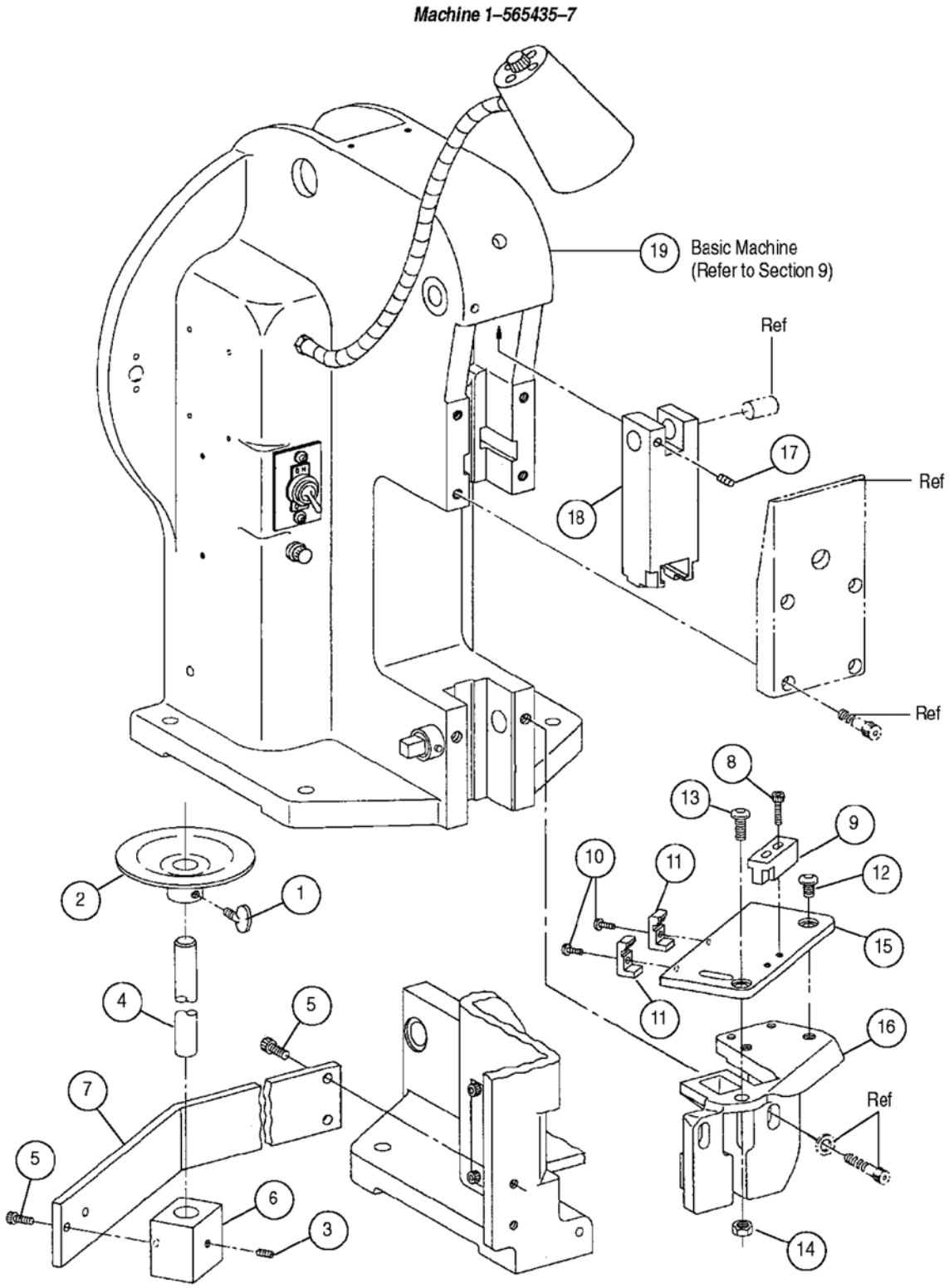


Figure 34 (End)

11.3. Shut-Height Repair

It is very important that the machine has the correct shut-height (ram bottomed) for miniature quick-change applicators to produce the specified crimp height. Each machine is adjusted at the factory prior to shipment and should never require further adjustment unless it is necessary to replace parts.

Shut-height repair should NEVER be attempted without FIRST trying another applicator that is known to produce terminations of the correct crimp height. If this applicator produces correct terminations, the trouble is in the original applicator and the shut-height MUST NOT be changed.

A special gage MUST be used when repairing the machine shut-height, and it is recommended that this be accomplished by a Field Service Engineer, unless a gage is available to maintenance personnel that are qualified to make the repair

After determining that the shut-height is incorrect on a machine with an adjustable base mount (prior to revision "AD"), refer to the adjustment procedure in Section 7. When making the adjustment, place the gage on the base mount and hand-cycle the machine to bottom the ram.

For additional information on setting the shut-height using the gage, refer to 408-9462.

12. ROHS INFORMATION

Information on the presence and location of any substances subject to RoHS (Restriction on Hazardous Substances) can be found at the following website:

http://www.tycoelectronics.com/customersupport/rohssupportcenter/

Click on "Find Compliance Status" and enter equipment part number.

13. REVISION SUMMARY

Revisions to this customer manual include:

- changed logo and company name;
- added machine 1-565435-7