

customer manual

SAFETY PRECAUTIONS READ THIS FIRST !	2
1. INTRODUCTION	3
2. DESCRIPTION	5
2.1. Functional Description	5
2.2. Electrical Description	7
3. RECEIVING INSPECTION AND INSTALLATION	8
3.1. Receiving Inspection	8
3.2. Installation	8
3.3. Considerations Affecting the Placement of Bench Machines	9
4. OPERATION	10
4.1. Control Panel Operation	10
4.2. Applicator Installation	10
4.3. Setup	11
4.4. Mode Selection and Operation	11
4.5. End-Feed/Side-Feed Applicator Conversion	14
5. PREVENTIVE MAINTENANCE	15
5.1. Cleaning	15
5.2. Lubrication	15
6. ADJUSTMENTS	16
6.1. Shut-Height Adjustment	16
6.2. Crimp Height Adjustment Using Precision Adjustment Mechanism	17
7. MACHINE OPTIONAL ACCESSORIES	17
7.1. Conversion Adapter Kits 1725156-[]	18
7.2. Lubricator Bowl Assembly 354550-3	19
7.3. Air Feed Kit 1424266-[]	19
8. TROUBLESHOOTING	22
9. REVISION SUMMARY	22



SAFETY PRECAUTIONS AVOID INJURY

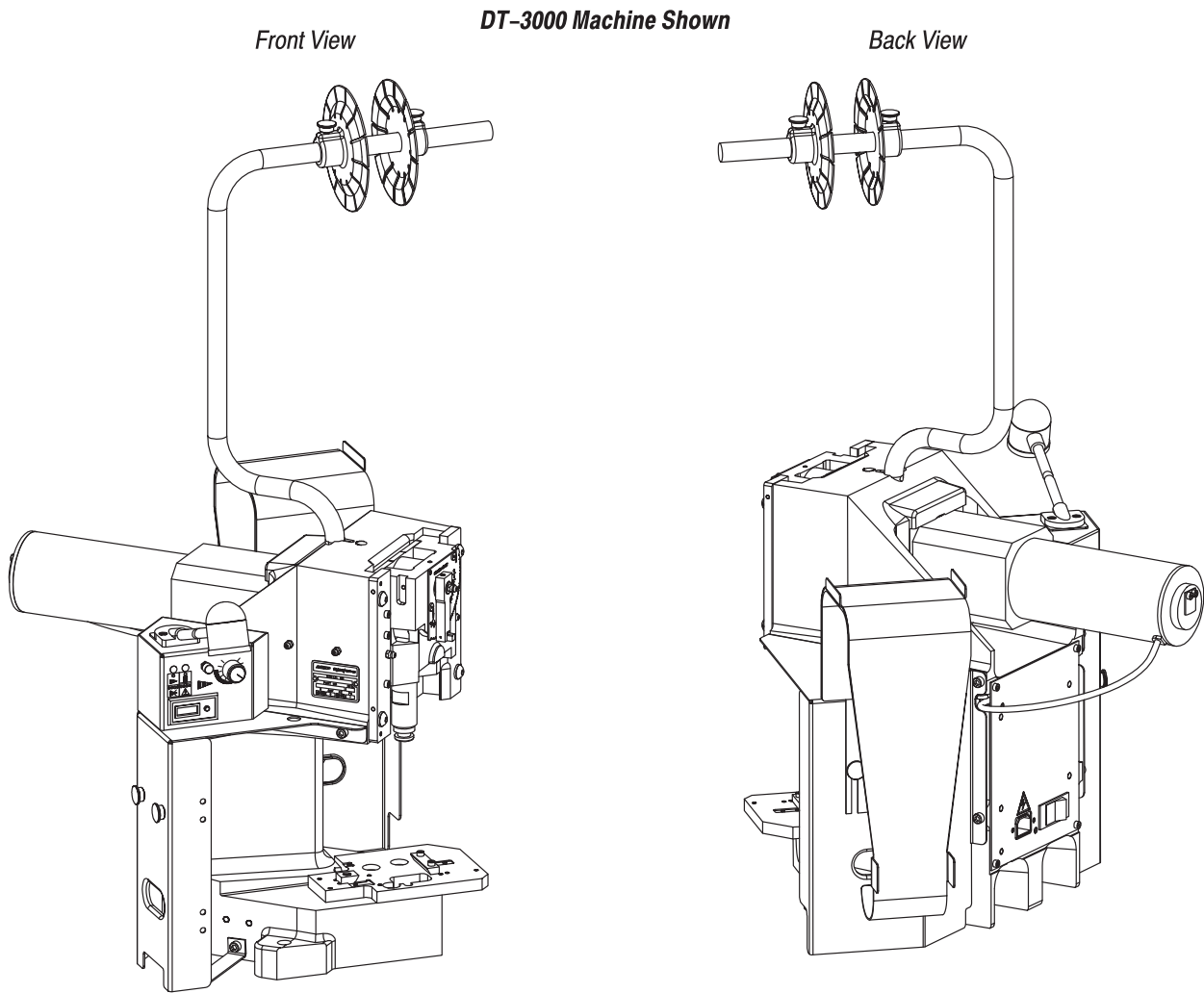
Safeguards are designed into this application equipment to protect operators and maintenance personnel from most hazards during equipment operation. However, certain safety precautions must be taken by the operator and repair personnel to avoid personal injury, as well as damage to the equipment. For 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 021-538318188



DT-3000 or DT-5000 MACHINES	STROKE (mm [in.])	APPLICATOR — MACHINE BASE PLATE
-1	30 [1.181]	JAM — Universal
-2	30 [1.181]	AMP — Quick-Change
-3	41.28 [1.625]	AMP — Quick-Change
-4	30 [1.181]	JAM — Quick-Change
-5	30 [1.181]	JST — Universal
-6	30 [1.181]	AMP — Quick-Change■
-7	41.28 [1.625]	AMP — Quick-Change■

■ Includes Crimp Quality Monitor (CQM) Sensor

Figure 1

1. INTRODUCTION

This manual contains information on operation, preventive maintenance, and adjustments of DT-3000 Machines 1725100-[] (shown in See Figure 1) and DT-5000 Machines 1725800-[]. Descriptions in this manual pertain to the controls and adjustments on these machines *only*.

The machines are intended for use with (AMP) Tyco Electronics applicators, JAM (Toyojamco Ltd.) applicators, and JST (JST Manufacturing Company Ltd.) applicators as indicated in Figure 1. All of these machines are restricted to China.

When reading this manual, pay particular attention to **DANGER**, **CAUTION**, and **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.

Reasons for reissue are in Section 9, REVISION SUMMARY.



The various applicators that can be used in these machines are covered in applicator instruction sheets packaged with each applicator. Applicator instruction sheets provide information on applicator installation, care, and adjustment.



All numerical values are in metric units [with U.S. customary units in brackets]. Some commercial items may contain non-metric hardware.

Figure 2 provides specifications and requirements for these machines.

Capacity (Maximum Crimp Force):	DT-3000 Machines	13.3 kN [3,000 lb]
	DT-5000 Machines	22.2 kN [5,000 lb]
Deflection:	0.13 mm [.0046 in.] Maximum per 4,448 Newtons [1,000 lb] Crimp Force	
Noise:	Less than 76 dBa Typical at Operator Position with Standard Mechanical Feed Applicator	
Weight:	64 Kilograms [143 lb]	
Height:	510 mm [20 in.] Without Reel Supports	
Electrical:	100-240 Vac, 50/60 Hz, Single-Phase Current	
Air:	620-760 kPa [90-110 psi], 2.83 liters/sec (6 scfm) When Required for Use with Air-Feed Applicators	
Physical Environment:	Temperature: 4.4°-40° C [40°-104° F]	
	Altitude: Not Applicable	
	Relative Humidity: Less than 95% (non-condensing)	
	Transportation and Storage: Store in a clean, dry environment after coating all surfaces lightly with a rust-preventing oil.	

Figure 2

2. DESCRIPTION

These machines were designed to be used as a stand-alone semi-automatic bench unit. It is assembled with metric hardware.

A precision adjustment feature on the machine provides quick and accurate crimp height adjustments. The batch counter provides a count of the terminations. A work light is included with the machine.

The base plate of Machines -6 and -7 also include a CQM sensor.

These machines accept a wide variety of miniature (mini) quick-change applicators, with minor adjustments, thus providing a great selection of terminals for many applications. Figure 3 lists changeover cams required to run 30-mm [1.181-in.] stroke cams (for AMP-O-ELECTRIC* Model "K" terminating machines) and 41.28-mm [1.625-in.] stroke cams (for Model "T" and Model "G" terminating machines) in these machines.

NOTE



Some heavy-duty mini applicators require special cams that are not listed in Figure 3. Refer to the applicator logs shipped with the applicators for additional information.

ORIGINAL APPLICATOR	FEED TYPE	CHANGEOVER CAMS FOR DT-3000 AND DT-5000 MACHINES	
		-2 and -6	-3 and -7
30-mm [1.181-in.] Stroke Applicator for Model "K" Terminating Machine	Pre-Feed	—	690602-6
	Post-Feed	—	690501-4
41.28-mm [1.625-in.] Stroke Applicator for Model "T" and Model "G" Terminating Machines	Pre-Feed	690602-5	—
	Post-Feed	690501-3	—
Heavy-Duty Industrial (HD-I) Applicator	Pre-Feed/Post-Feed	Refer to the HD-I Applicator Customer Drawing For Part Numbers	

Figure 3

Quick-Disconnect Coupling 23238-1 is required to run air-feed applicators.

End-feed and side-feed miniature applicators are easily installed and removed without repositioning the applicator mounting plate on the machine.

2.1. Functional Description

These machines provide the force required to crimp terminals in the applicator. A terminal is attached to the wire by placing the wire in the crimp area and pressing the foot switch. The machine consists of four functional areas:

1. The **motor group** includes a dc motor which drives a crankshaft. The motor is activated each cycle and rotates the crankshaft one full revolution. A motor access cover, located on the end of the motor, covers a hex key which allows the motor to be cycled manually. See Figure 4.
2. The **crankshaft-ram group** covers the motor rotational force to the up-and-down action of the ram for driving the applicator during the crimping cycle.
3. The **base plate** provides the mounting surface on which the applicator is installed. The quick-release latching feature on Machines -2, -3, -4, -6, and -7 permits fast, easy installation and removal of the applicator. Note that Machines -1 and -5 do not include the quick-release latching feature. See Figure 5.
4. The **crimp height adjustment group** uses an eccentric located in the ram linkage, along with detented stops in the mechanism to adjust the crimp height. See Figure 5. Indexing the mechanism in either direction will change the crimp height in increments of approximately 0.013 mm [.0005 in.] per step.

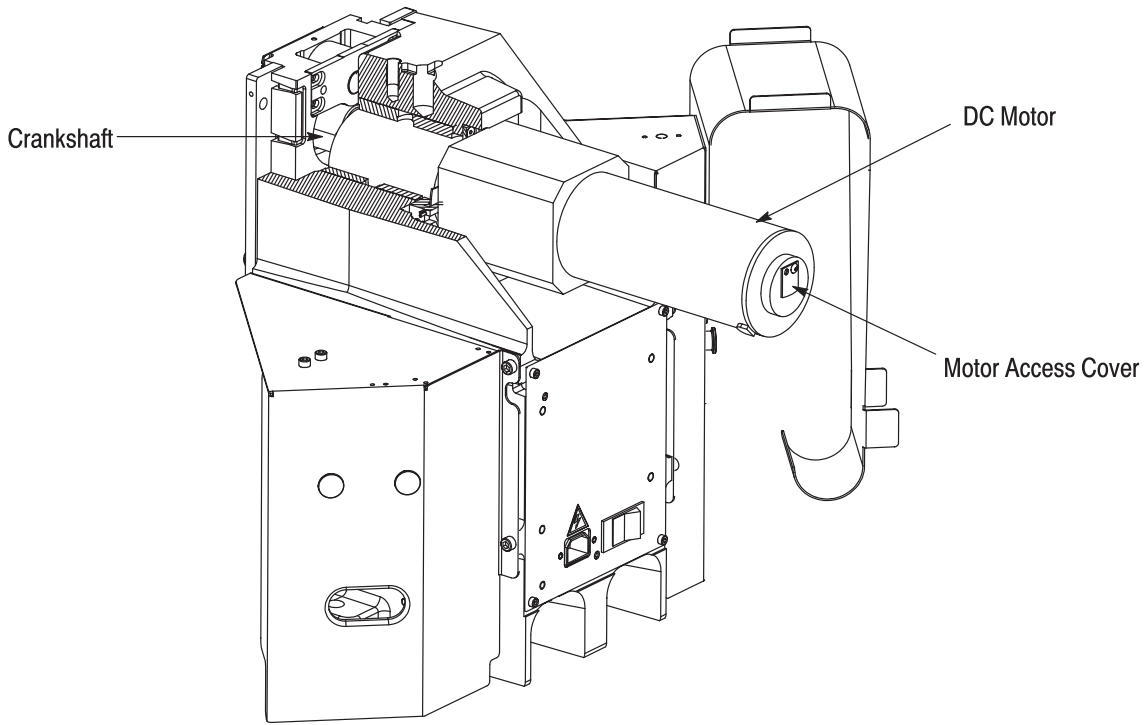


Figure 4

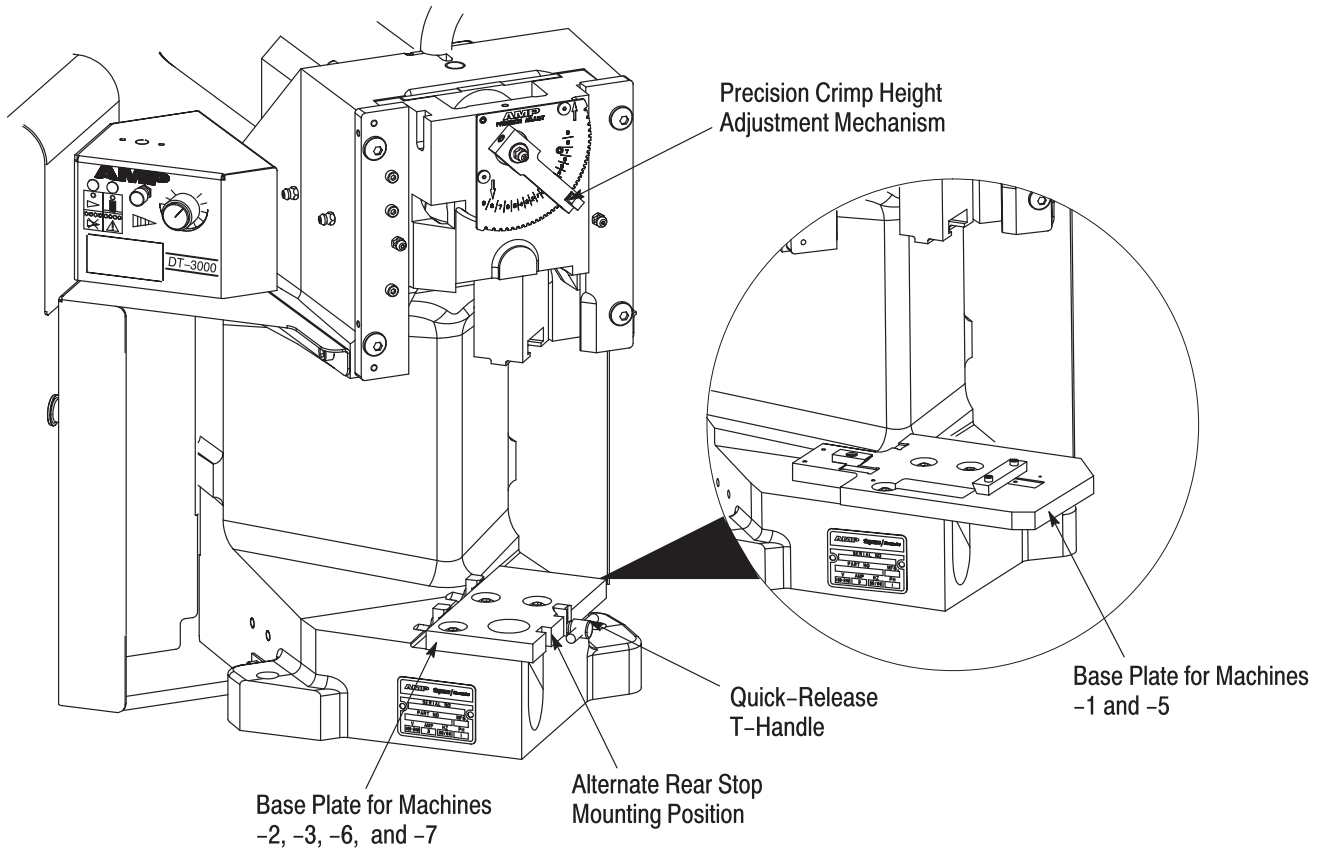


Figure 5 (Cont'd)

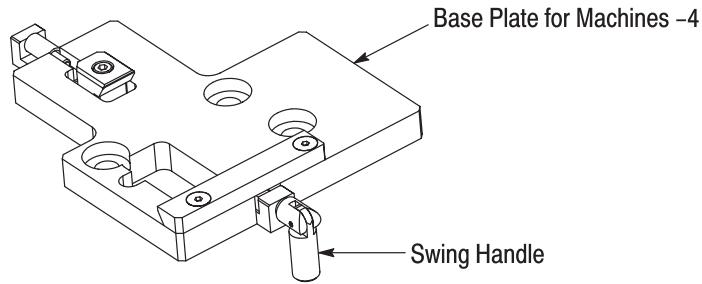


Figure 5 (End)

2.2. Electrical Description

The electrical components of these machines consist of the operator control panel, the motor, and the CPU/motor controller package. The machine operates on 100/240 Vac, 50/60 Hz, single-phase current with ground. The machine will automatically detect the supply voltage and adjust the controller accordingly.

The operator control panel (Figure 6) is mounted on the left side of the machine frame. The control panel consists of an indicator light, a jog button, and a speed control knob, with icons depicting each function. See Paragraph 4.1 for control panel operation.

A main power switch/circuit breaker (Figure 7) is located on the back of the machine. This switch connects ac power to the control system. The CPU/motor controller is located behind the back cover of the machine. It is a modular unit that contains all of the electronics necessary to operate the machine. See Figure 7.

The CPU/motor controller package for the DT-5000 machine includes a motor cooling fan. This fan runs when the main power switch is on.



The CPU/motor controller package contains high voltages which can remain even after power has been removed. Contact the Tooling Assistance Center at the number on the bottom of page 1 for precautionary measures to follow if internal access to the CPU/motor controller is required.

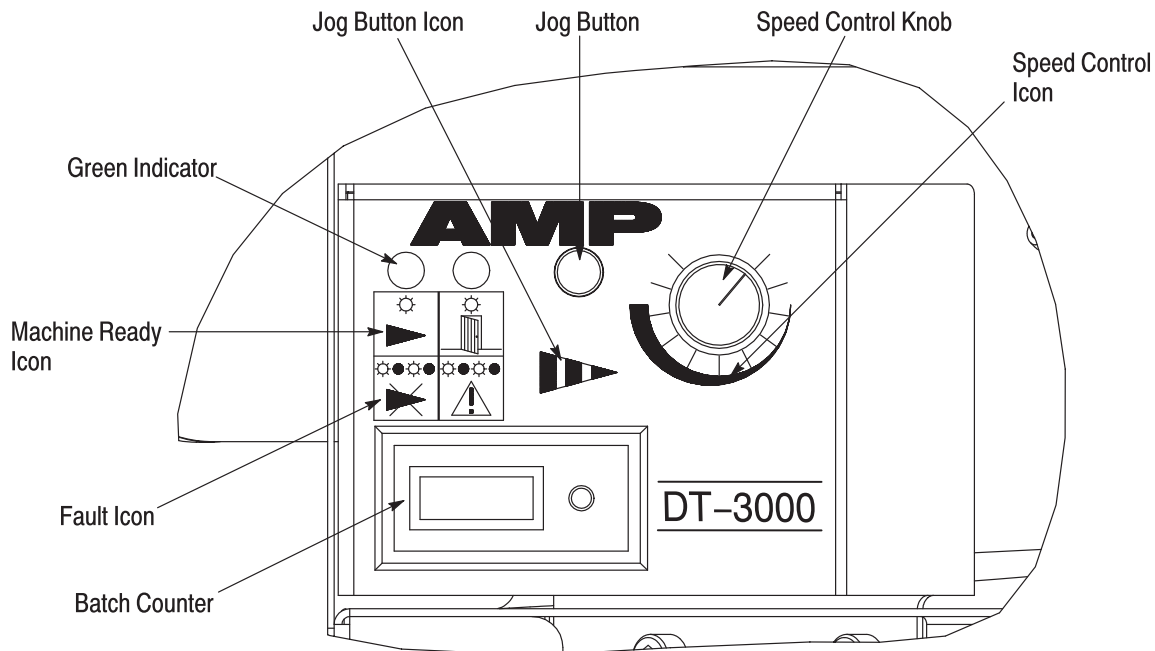


Figure 6

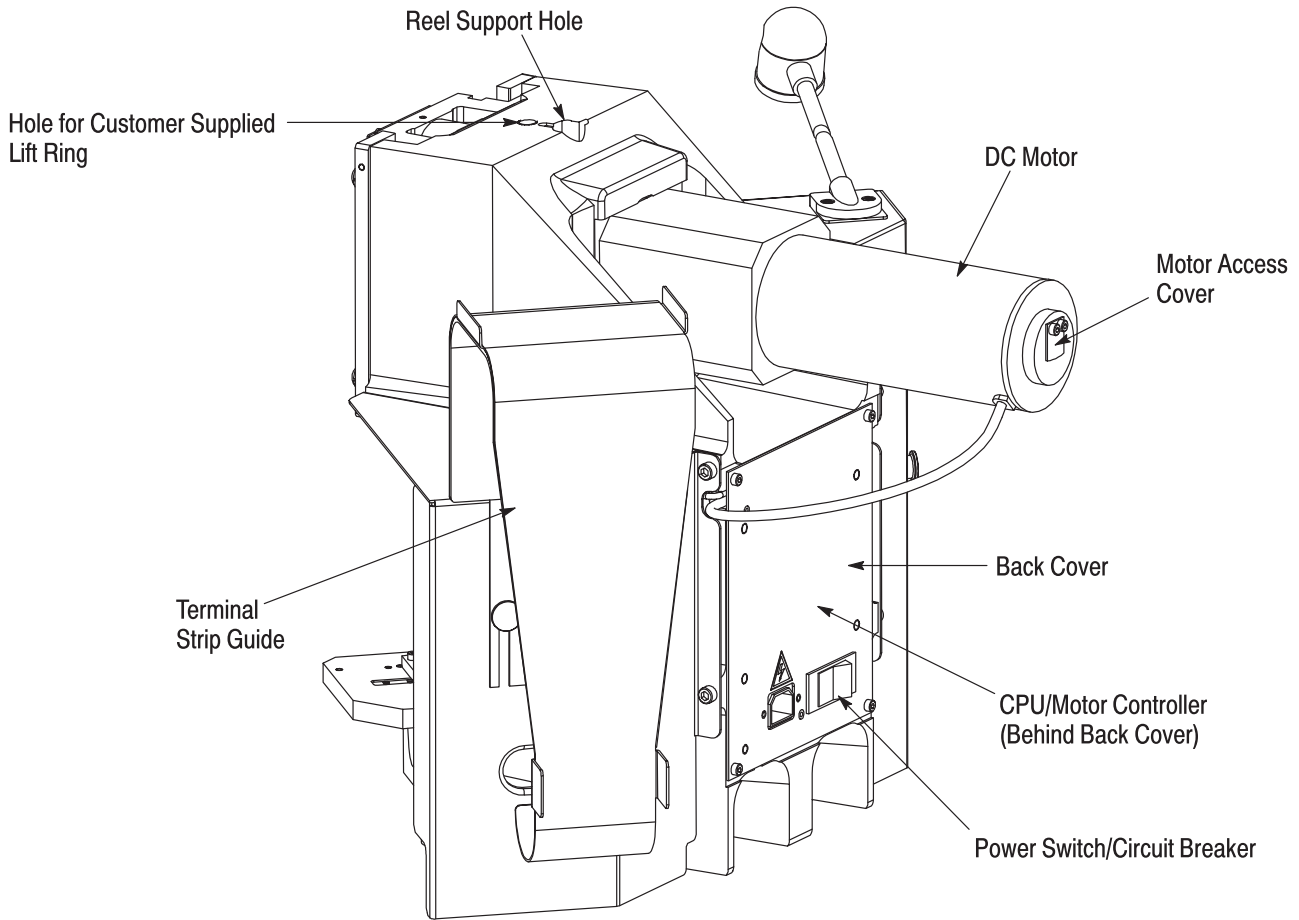


Figure 7

3. RECEIVING INSPECTION AND INSTALLATION

3.1. Receiving Inspection

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

To protect against damage that may have occurred during shipment, remove the machine from the crate (Paragraph 3.2) and carefully inspect the machine for damage. If damage is evident, file a claim against the carrier and notify Tyco Electronics immediately.

3.2. Installation

Remove all mounting bolts securing the machine to the shipping pallet. Install lift ring (refer to Figure 7) on top of the machine.

NOTE

Lift ring (M12 × 20 eye bolt) is customer supplied.



CAUTION

*Install the lift ring **carefully**. A 19.05-mm [.75-in.] thread length engagement is required for the lift ring to support the machine.*



Attach a suitable hoist to the lift ring, lift the machine, and place it in the selected operating location.

Insert the reel support post into the appropriate hole on top of the machine (Figure 7) until the roll pin engages a groove in the machine frame.

Attach the terminal strip guide included with the machine with the two thumbscrews supplied. Mount the guide on the left guard for side-feed applicators. Mount the guide on the right guard for end-feed applicators.

Connect a suitable power cord (not included with the machine) to the machine, then connect the power cord to a suitable electrical supply.

NOTE

The machine will automatically detect the supply voltage and adjust the controller accordingly.



3.3. Considerations Affecting the Placement of Bench Machines

The location of the machine in relation to the operator's position is extremely important in terms of both safety and maximum efficiency. Studies have repeatedly shown that operator fatigue will be reduced, and greater efficiency achieved, if:

1. the bench is of appropriate height, preferably with sound-deadening rubber mounts;
2. the machine is properly located on the bench with ample work areas on both sides to facilitate work flow;
3. the operator uses a swivel chair with padded seat and back rest which are independently adjustable; and
4. the foot switch, on machines so equipped, is placed on a rubber mat to maintain its movability, while preventing it from sliding unintentionally.

Figure 8 illustrates proper machine location and operator position and the following:

A. Bench

The bench to be used should be of sturdy construction, preferably with rubber mounts to minimize noise. A height of 762 to 812.8 mm [30 to 32 in.] is the most suitable for operator comfort and convenience. This height allows the operator to rest both feet on the floor, thereby providing for the shifting of weight and leg position.

B. Machine Location on Bench

The machine should be located near the front of the bench with the "target area" (tooling area where the product is applied) not more than 152.4 to 203.2 mm [6 to 8 in.] from the front edge. This location will eliminate unnecessary operator motion and help to avoid back strain and fatigue.

Orientation of the machine should be such that the "target area" is facing the front of the bench and is parallel to the front edge (access to the back of the machine **MUST** also be provided).

NOTE

The machines have provisions for being bolted to the bench.



C. Operator's Chair

The operator's chair should swivel, and should have independent seat height and back rest adjustments. The seat and back rest should be padded, and the back rest should be large enough to provide support both above and below the waist line.

In use, the chair should be far enough under the bench so that the operator's back is straight and is supported by the back rest.

D. Foot Switch

When the operator is correctly positioned in front of a machine equipped with a foot switch, the foot should rest on the switch comfortably. The foot switch should be movable, so that its location can be readily changed when the operator shifts position to minimize fatigue. Placing the switch on a rubber mat keeps it movable while preventing unintentional sliding.

The preferred foot switch location varies to some extent among operators. Some operators prefer the switch located so that their foot rests on the switch when their feet are in the natural sitting position (calf of leg perpendicular to the foot). Others prefer the leg to be slightly in front of the natural position. The important thing to remember is that the foot should be at approximately 90° (right angle) to the calf when resting on the switch. Those operators who prefer the foot switch slightly in front of the natural position may require a wedge-shaped block placed under it.

E. Scrap Removal

A suggested method of scrap removal: place a tray on the right side of the machine, under the cast slot in the frame, to capture the scrap chips.

Machine Location and Operator Position



Materials Locations—Plan View

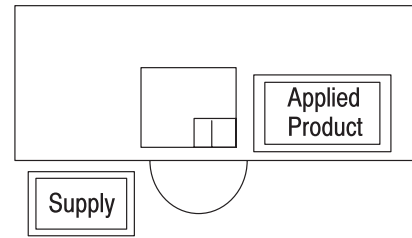


Figure 8

4. OPERATION

4.1. Control Panel Operation

The basic control panel operation is as described in Figure 9. The control panel will be used to set up and operate the machine (see Paragraphs 4.3 and 4.4).

4.2. Applicator Installation

Machines –1 and –5 require the use of a hex wrench to change applicators. Since these machines have a universal base plate, they can be configured to use AMP, JAM, or JST applicators.

Machines –4 (intended for use with JAM applicators and have a quick-change base plate) do not require tools to change applicators. This base plate features a swing handle used to install and remove the applicator.

The following instructions apply to Machines –2, –3, –6, and –7 (intended for use with AMP applicators and have a quick-change base plate). Install the applicator in the base plate as follows:



If the machine is equipped with a precision adjustment feature, make sure that the precision adjustment lever has been returned to the “0” position before installing the applicator. Be sure that the applicator has the proper feed cam prior to installation.



Applicators from AMP-O-LECTRIC Model “K” terminating machine and Model “T” terminating machine can be used in the machine by using a special replacement cam. Refer to Figure 3.

1. Loosen the quick-release T-handle (see Figure 5), and slide the applicator base clamp down.

2. Place the applicator on the quick-change base plate, then slide it back until the two notches in the applicator base engage the stops at the back of the quick-change base plate. At the same time, guide the ram post into the ram post adapter.
3. Slide the applicator base clamp UP and re-tighten the quick-release T-handle to secure the applicator in place.

NOTE

When using Applicator 567200-2 (originally intended for use with AMP-O-LECTRIC Model "K" terminating machine), loosen the quick-release T-handle, slide down the applicator base clamp, and remove the rear stop located on the left side of the base plate. Install the rear stop (PN 354561-1), supplied with the air feed kit (optional accessory), at the alternate mounting position on the base plate. See Figure 5.

4. Set the crimp height and insulation crimp discs so that the letters and numbers on the applicator pad align with the front pad on the ram post adapter.
5. If the applicator is an air-feed type, connect the airlines to the valves located on the back of the machine.

NOTE

Quick Disconnect Coupling 23238-1 is required to run air-feed applicators.

6. Adjust the reel support for side-feed or end-feed product, depending on the applicator being used.
7. Mount the terminal strip guide on the left sheet metal guard for side-feed product, or on the right sheet metal guard for end-feed product, depending on the applicator being used.
8. Mount the terminal reel on the reel support. Thread the terminal strip through the guard and into the applicator according to the instruction sheet included with the applicator. If necessary, adjust the lubricator bowl.
9. Align the product reel to the applicator by adjusting the reel flanges.

4.3. Setup

Install a miniature applicator and terminals according to Paragraph 4.2.

1. Turn on the main power using the switch located on the back of the machine.
2. Jog the machine (as described in Paragraph 4.4, B) through a complete crimp cycle.

NOTE

Machine should be able to jog through the terminal and wire at maximum jog speed to determine crimp capacity.

3. Inspect the crimped terminal to verify that the terminal is being positioned properly within the applicator.
4. Correct for any positioning errors according to the applicator instruction sheet, and repeat Steps 2 and 3 until a terminal is properly positioned.
5. Place a prepared wire in the crimp area and press the foot switch.
6. Inspect the completed crimp and make adjustments as necessary.

4.4. Mode Selection and Operation

The two basic modes of operation for these machines are: Full-Cycle and Jog.

A. Full-Cycle Mode

Depressing the footswitch causes the crankshaft to be rotated (at a speed defined by the speed control knob), through a complete revolution. This completes one full machine cycle.

B. Jog Mode (Figure 9)

Pressing the Jog button causes the crankshaft to be rotated at a default-reduced speed in the forward direction until the Jog button is released or the crankshaft completes the cycle. If the Jog button is

released in mid-cycle and pressed again, the crankshaft will continue to rotate in the forward direction at the default reduced speed. If the machine does not complete the cycle, either adjust the speed control knob (as described below), or complete the cycle using the footswitch (at a speed determined by the speed control knob) after the Jog button has been pressed and released.

Holding the Jog button down for more than five seconds will cause the machine to “err.” To clear the error, “power down” the machine, clear the problem area, and then “power up” the machine again. An alternate method of clearing the error is to hold down the foot pedal until the green status indicator stops flashing. If the motor is stalled, it may be necessary to manually cycle the machine to the home position. Refer to the CAUTION and DANGER statements below for the proper manual cycling procedure.

CAUTION

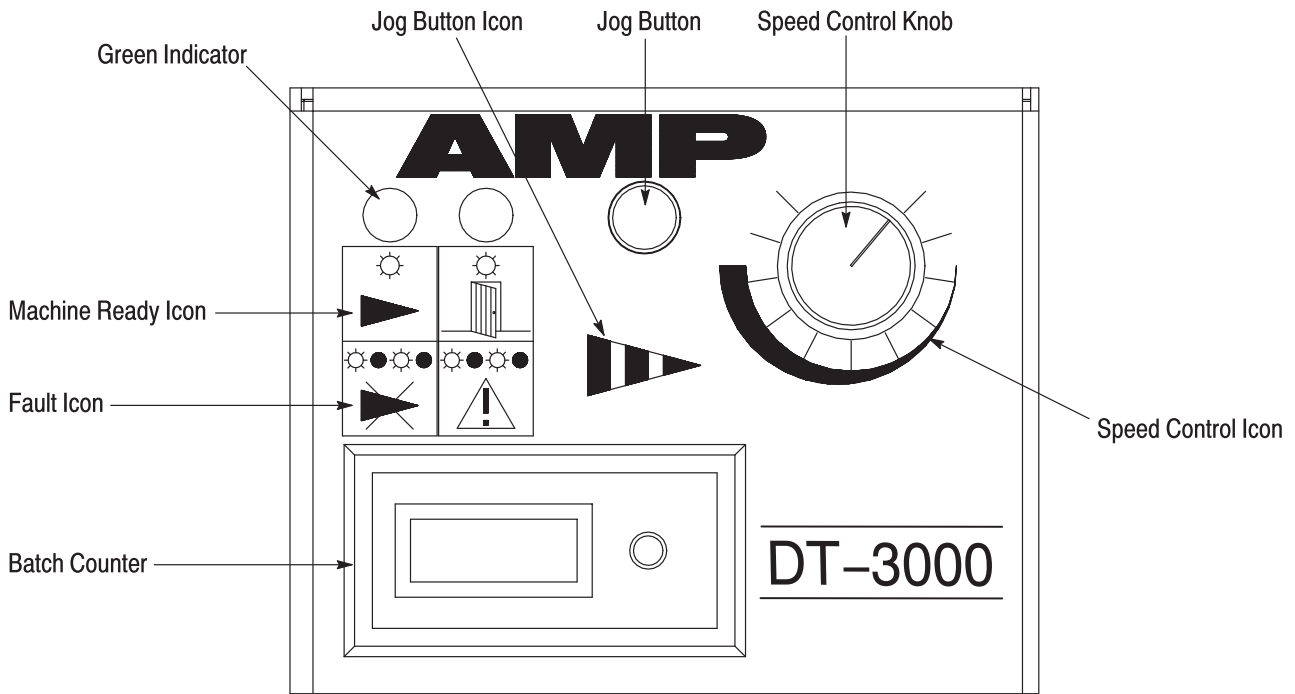
While in the Jog mode, attempting to complete a crimp cycle with terminals and wire in the applicator may cause the motor to stall. Although the machine can terminate some smaller terminals and wire, it may be necessary to turn “off” the machine and manually cycle the machine to the home position. Manually cycle the machine by removing the access cover on the end of the motor (Figure 7), engaging the hex key with a 6-mm hex wrench, and rotating the key to manually rotate the motor.

DANGER

To avoid personal injury, be sure to remove the hex wrench before operating the machine under power. Be sure to replace the access cover.

DANGER

To avoid personal injury, exercise caution when jogging or operating the machine.



The yellow and green indicators on the top of the control panel indicate the machine status.



When the green indicator is "on" and is **not** flashing, the machine is ready for operation.



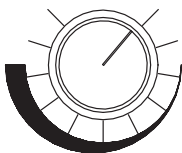
When the green indicator is flashing, a machine fault has been detected. To reset the machine, "power down" the machine, clear the problem area, and then "power up" the machine; or hold down the foot pedal until the green indicator stops flashing.



The Jog button allows the operator to cycle through various stages of the machine cycle.



The Jog button icon indicates intermittent operation at a slower speed when using the Jog button.



The Speed Control knob determines the machine speed (active in both normal operation and Jog operation) Speed increases as the knob is turned **CLOCKWISE**.

Speed Ranges: From 100% to 60% with the foot pedal
From 60% to 25% with the Jog button

Figure 9

Adjusting the Speed Control Knob

The default speed of the crankshaft in the Jog Mode is set to a minimum initial value which is **not** defined by the initial position of the speed control knob. Adjusting the speed upwards enables jogging at speeds greater than the default in case greater speeds are required to complete a cycle. To cause the crankshaft to rotate at other than the initial default speed, the speed control knob must be rotated completely *counterclockwise*, then rotated back *clockwise* to the desired speed setting. If the Jog button is depressed within three seconds of setting the speed control knob, the crankshaft will rotate at the speed defined by the position of the speed control knob. The new speed setting will remain active for a maximum of three seconds after the Jog button is released, or until the crankshaft completes the cycle. If the cycle is not complete and the Jog button is again pressed within three seconds from its release, the crankshaft will rotate at the speed defined by the position of the speed control knob. Failure to push the Jog button within the three seconds of its release will cause the crankshaft jog speed to revert back to the initial minimum default value. After the Jog button is released, the speed control knob can be rotated in either direction to increase or reduce the crankshaft jog speed, but Jog button must be activated again within three seconds of the release or the speed will revert back to minimum default speed. The speed control knob can be reset as many times as desired.

NOTE

The ram may drift downward if the Jog button is released in mid-stroke.


NOTE

The speed control knob (Figure 9) also adjusts the air feed timing. Normally the air feed timing is set at 280 ms. When the speed control is set at less than 50% of its maximum setting (pointing straight down or counterclockwise from pointing straight down), the air feed timing changes to 440 ms. This is done to accommodate applicators that have longer than normal air cylinders.



The green flashing status indicator flashes a specific number of times to represent a corresponding fault. For example, the green status indicator will flash five times (each followed by a one second pause) to indicate that the top-dead-center (TDC) switch was not sensed while the machine was running. Refer to Figure 10.

FAULT INDICATOR CODE (Number of Consecutive Flashes)	MACHINE FAULT
4	Motion from TDC was not detected.
5	The TDC switch was not sensed.
6	A bad PWM IGBT was detected.
7	A bad Jog push button input was detected.
8	A bad footswitch input was detected.
9	A bad DC bus relay was detected.
10	A bad jog enable input was detected.
11	The line voltage is not within specifications.
12	A bad spare input was detected.

Figure 10

4.5. End-Feed/Side-Feed Applicator Conversion

When changing from an end-feed applicator to a side-feed applicator (or from a side-feed applicator to an end-feed applicator), the reel support assembly must be moved to the opposite side of the machine. With the terminal reel removed, lift and rotate the reel support bar to the opposite side of the machine. Mount the terminal reel on the reel support and load the terminal strip into the applicator. Remove the metal terminal lead-in and thumbscrews and move to the opposite side of the machine. If installed, move the lubricator bowl to the opposite side of the machine as required.

NOTE

The lubricator bowl is an optional accessory.



5. PREVENTIVE MAINTENANCE

Preventive maintenance will keep the machine in good working order and ensure maximum reliability and service from all of its components.



To avoid personal injury, electrical and pneumatic power must be DISCONNECTED at the source prior to maintenance.

5.1. Cleaning

Clean any debris from the applicator area daily.



Compressed air used for cleaning must be reduced to less than 207 kPa [30 psi] and effective chip guarding and personal protective equipment (including eye protection) must be used.

If an air-feed assembly is installed, check and replace the air filter element if necessary.

5.2. Lubrication

The moving parts of the machine require regular lubrication to ensure reliable service and long life. Use only CHEVRON Ultra Duty Grease EP National Lubricating Grease Institute (NLGI) 2, PENNZOIL PENNLITH Ultra Grease EP NLGI 2, or CONOCO SYNCON Heavy Duty Grease EP.



For operation in temperatures below 10° C [50° F], it will be necessary to use a No. 1 grease.

Using a grease gun, apply grease every 250,000 cycles to the fittings at the following locations and as shown in Figure 11:

- the left side of the ram assembly;
- the right side of the ram assembly;
- the left side of the frame just behind the ram assembly at two places; and



Give one pump of grease while the ram is near the top of its stroke and one pump of grease while the ram is near the bottom of its stroke for best distribution of grease around the bearing.

- the crimp height adjuster pivot pin.

Chevron is a trademark of Chevron Corporation.

Pennzoil and Pennlith are trademarks of Pennzoil-Quaker State Company Corporation.

Conoco and Syncon are trademarks of Conoco Inc. Corporation.

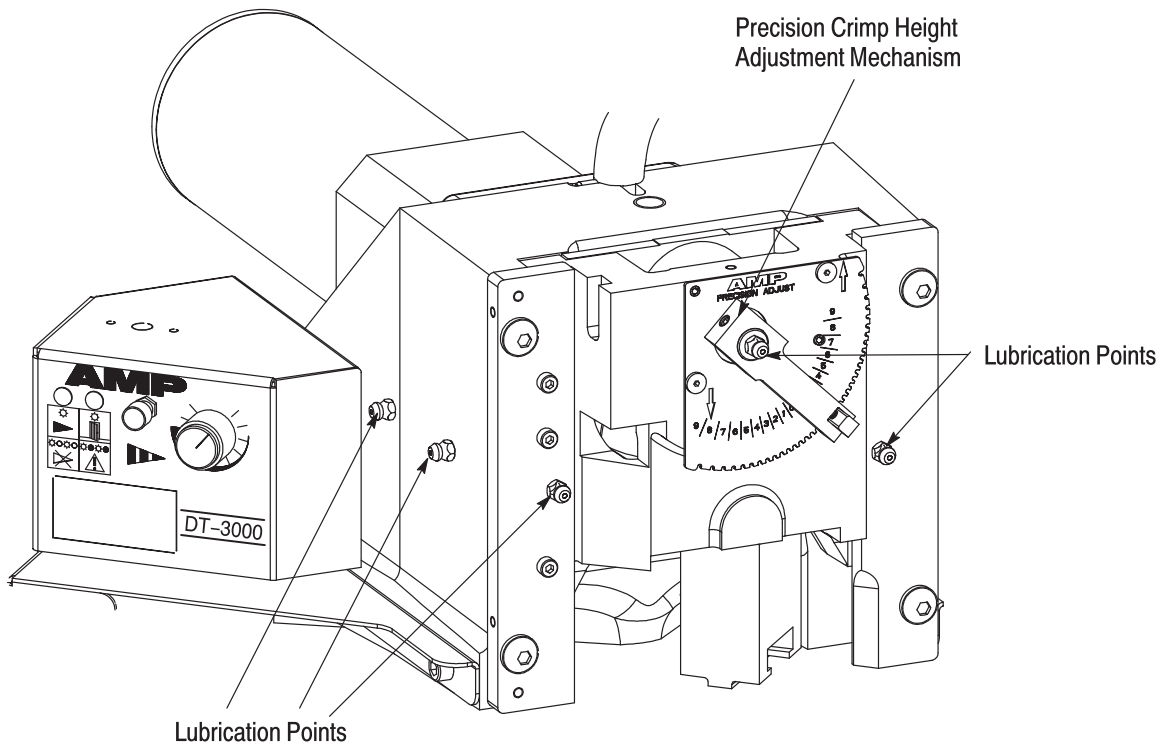


Figure 11

6. ADJUSTMENTS

The following adjustments are necessary to maintain the machine in operating condition, and to set up the machine after replacing parts.

DANGER

To avoid personal injury, ALWAYS disconnect electrical and air supplies before performing adjustments.



6.1. Shut-Height Adjustment

The shut height is pre-set at the factory and should not require further adjustment unless it is necessary to replace parts. In this case, and before making any changes to the machine, contact your local representative, or call the Tooling Assistance Center at the number on the bottom of page 1.

Periodic inspection of the shut height by a field engineer is recommended.

The following information is for Field Service Engineer use only:

MACHINES	SHUT-HEIGHT GAGE (408-8535)	SHUT HEIGHT ±0.025 mm [±.0010 in.] (mm [in.])
-1, -4	679655-2	119.5 [4.705]
-2, -3, -6, -7	679655-3	135.79 [5.346]
-5	679655-2 with Adapter 1725684-1 or 679655-3 with Adapter 1725684-2	160.0 [6.299]

DANGER



To avoid personal injury, ALWAYS turn “off” the machine and disconnect the power supply to the machine before making any adjustments. If applicator is an air-feed type, DISCONNECT air lines to valve located on the right side of the machine.

NOTE

The miniature applicator is an integrated assembly consisting of upper tooling, lower tooling, and adjustment capability. The applicator requires a fixed shut height; that is, the distance between the bottom of the ram and the base mount when the ram is FULLY bottomed. The required adjustments for crimp height are made by using the wire and insulation discs within the applicator. Refer to the instruction sheet supplied with the applicator for adjustment procedures.

6.2. Crimp Height Adjustment Using Precision Adjustment Mechanism (Refer to Figure 12)**CAUTION**

To avoid damaging the applicator, ALWAYS return the precision adjustment lever to the "0" position when finished using the applicator.

1. Adjust the manual precision adjustment lever to "0" by pulling the lever away from the pivot pin. Lock the lever in place by releasing it.
2. Install the applicator into the machine as described in Paragraph 4.2.
3. Cycle the machine to crimp three sample terminations. Check the crimp height of the samples. If the crimp heights are not correct, adjust the crimp height as follows:
 - a. move the precision adjustment lever to the right to increase the crimp height; or
 - b. move the precision adjustment lever to the left to decrease the crimp height.

NOTE

Moving the precision adjustment lever in either direction will change the crimp height by approximately 0.013 mm [.0005 in.] per step.

4. Repeat Step 3 until the appropriate crimp height is obtained.

CAUTION

To avoid damaging the applicator, ALWAYS return the manual precision adjustment lever to the "0" position when finished using the applicator.

7. MACHINE OPTIONAL ACCESSORIES

The following optional accessories are available for these machines:

DANGER

To avoid personal injury when installing optional accessories, be sure to turn "off" the machine, and disconnect it from the power source.

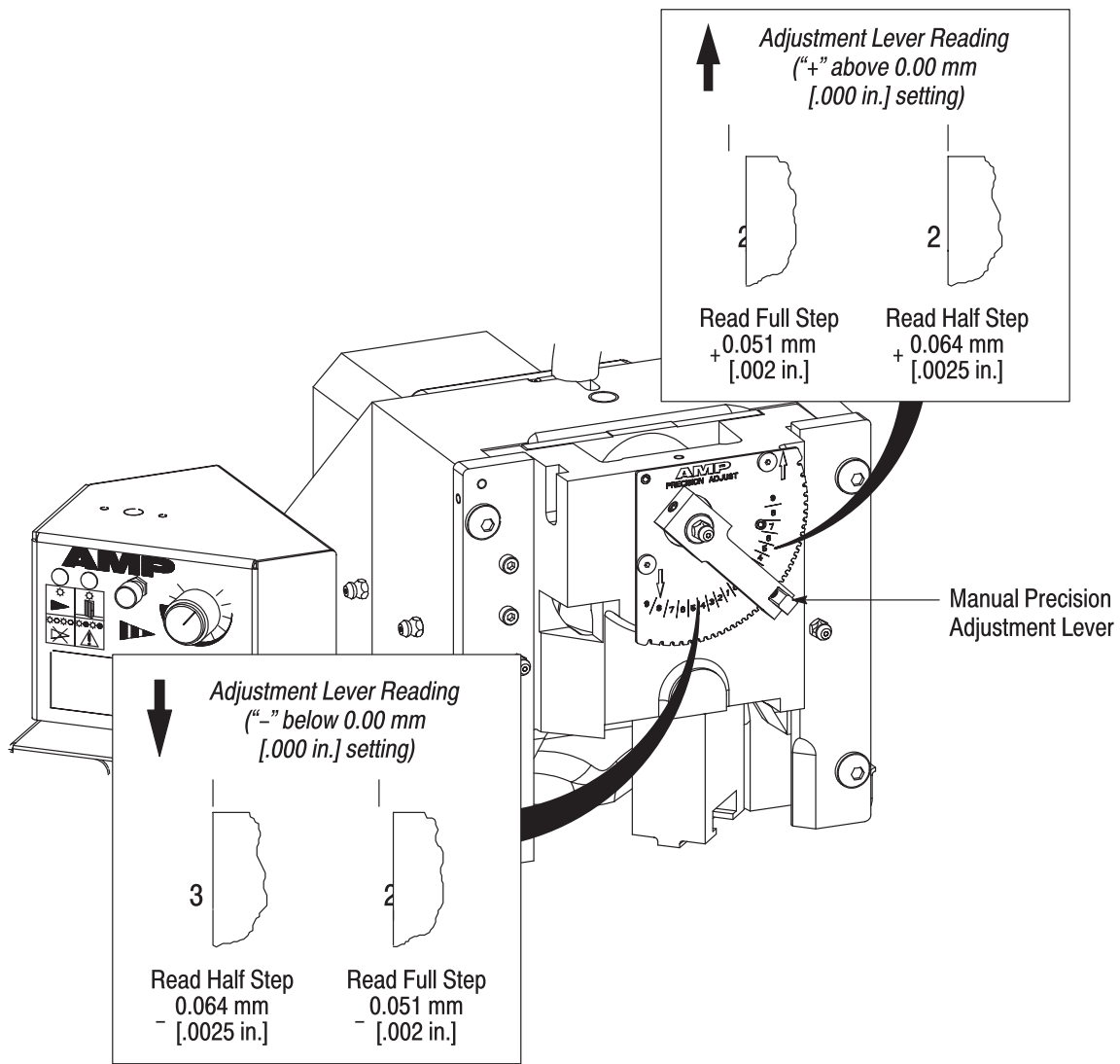


Figure 12

7.1. Conversion Adapter Kits 1725156-[]

The conversion adapter kit is used to modify any of these machines with 30-mm [1.181-in.] stroke length in order to install another type of applicator as indicated below. When using these kits, inspection of the shut height by a field service engineer is recommended.

CONVERSION ADAPTER KIT 1725156	SHUT HEIGHT ±0.025 mm [±.001 in.] (mm [in.])	TO USE APPLICATOR
-1	119.50 [4.705]	JAM (Universal Base Plate)
-2	135.79 [5.346]	AMP
-3	119.50 [4.705]	JAM (Quick-Change Base Plate)
-4	160.00 [6.299]	JST

7.2. Lubricator Bowl Assembly 354550-3 (Figure 13)

The lubricator bowl is used to apply a small amount of lubricant to terminals to prevent them from jamming in the machine after the crimping process.

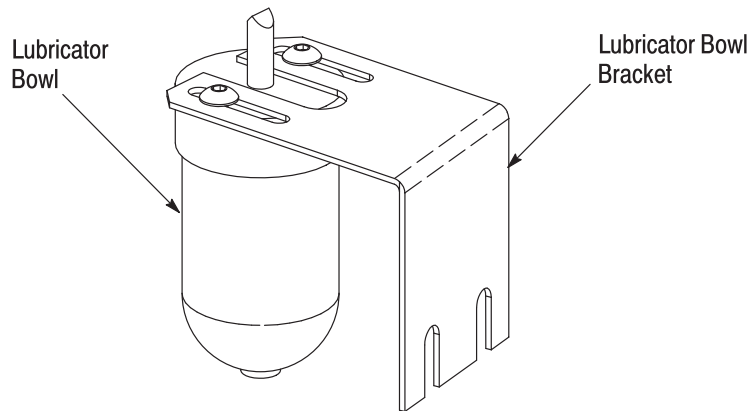


Figure 13

7.3. Air Feed Kit 1424266-[]

Install the optional air feed kit onto the machine as follows:

1. Remove the four mounting bolts securing the rear controller panel to the frame. Refer to Figure 14.
2. Remove the control panel from the machine, and pivot it in order to view the control board.
3. Insert the small end of the air feed cable assembly (see Customer Drawing 1424266) into the J7 socket. See Detail in Figure 14.
4. Install the control panel into the machine with the air feed cable assembly through the upper right hand slot in the machine frame.
5. Remove the two bolts securing the rear of the left sheet metal guard.
6. Install Air Feed Bracket 1338977-1 to the frame (see Figure 16) using the two bolts securing the sheet metal guard (Figure 14).

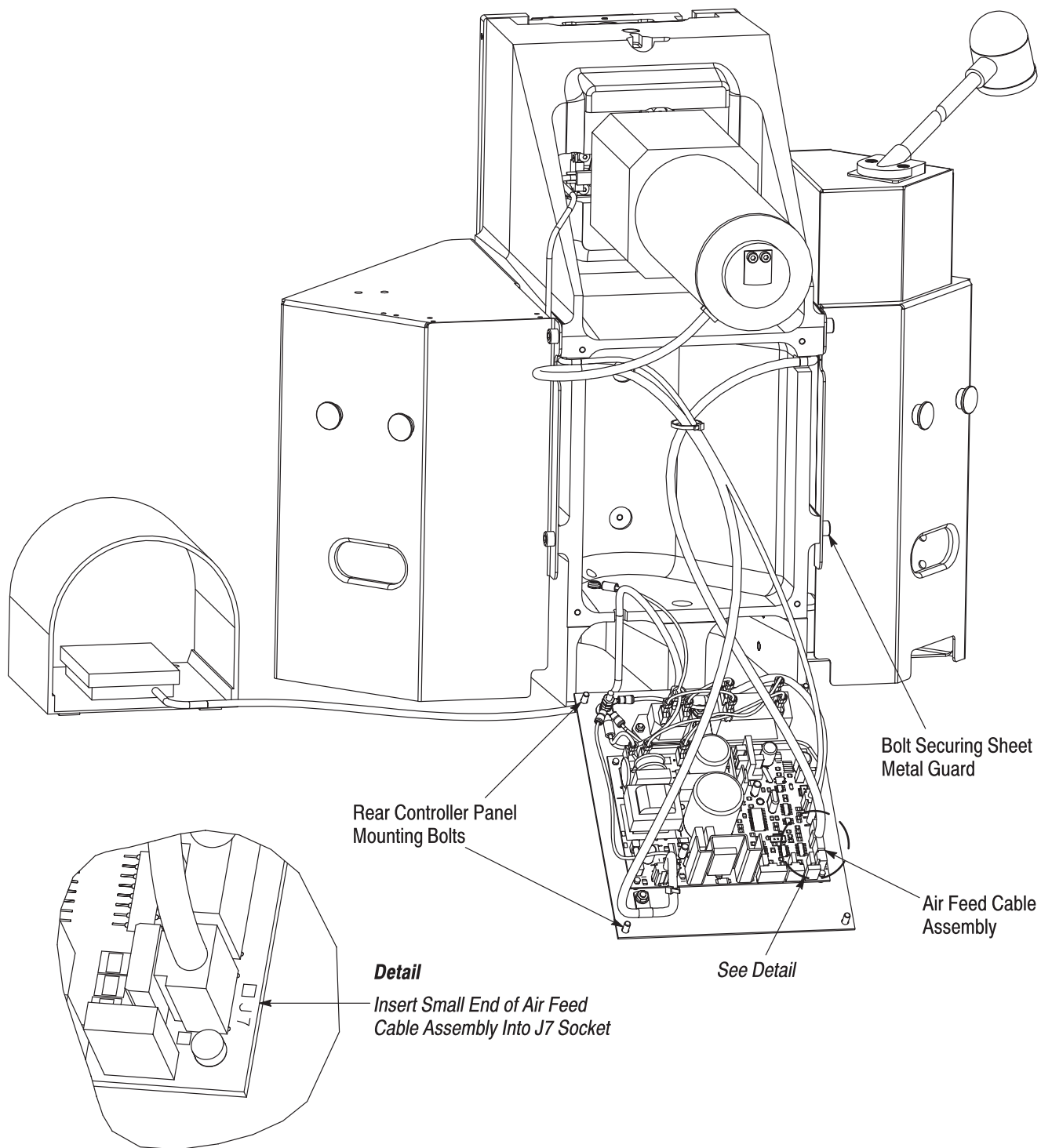


Figure 14

7. Prepare the base plate for Air Feed Kit 1424266-1 (for Machines -2 and -3) as follows: install the socket head screw and rear stop to the base plate, then remove the back left base plate clamp. Refer to Figure 15.

8. Install the air feed applicator onto the base plate.

Base Plate for Machines -2 and -3

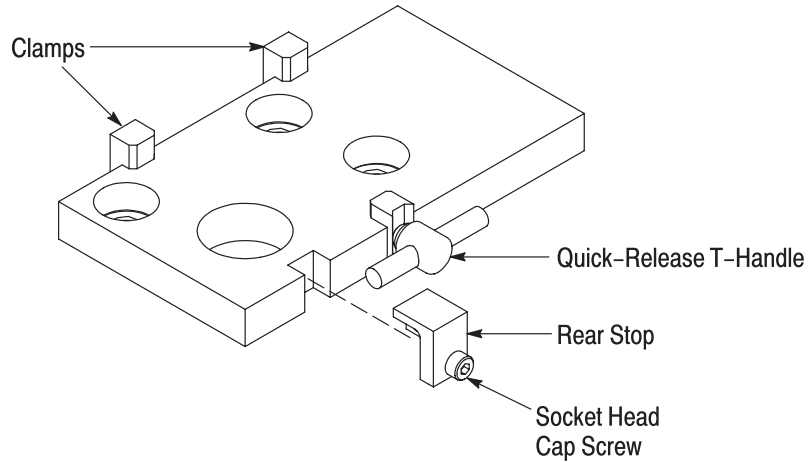


Figure 15

9. Connect the air lines to the applicable ports as shown in Figure 16.

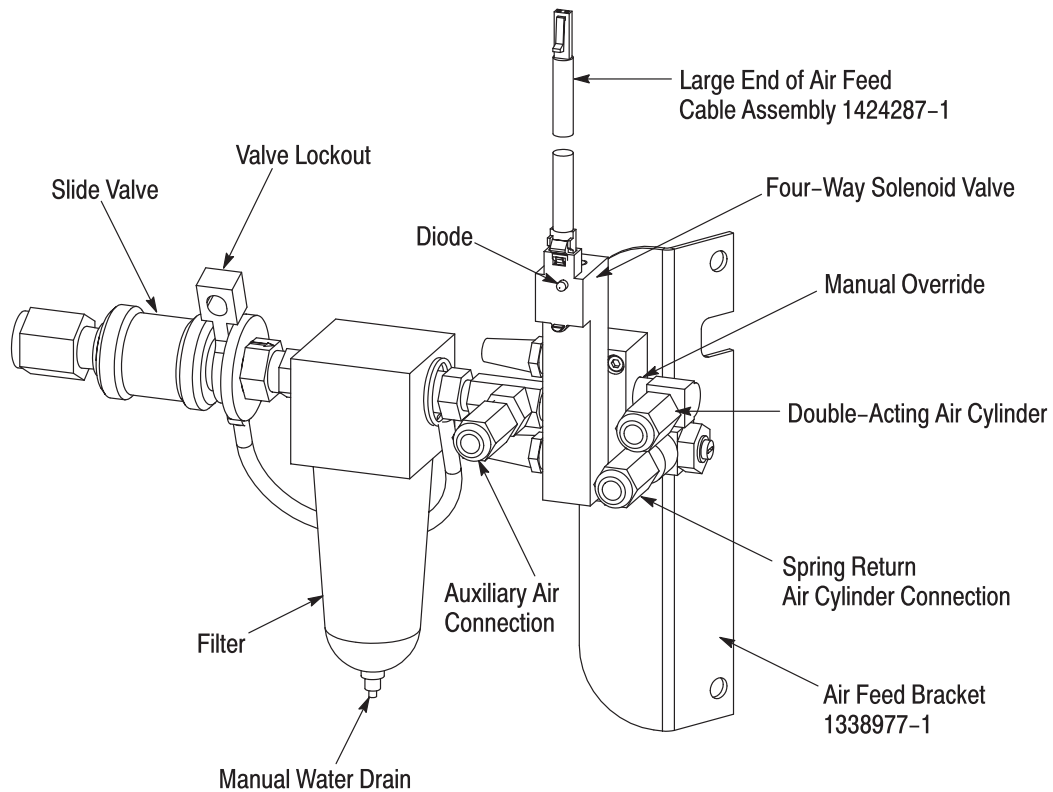


Figure 16

10. Turn the air “on” by moving the slide valve **toward** the filter. See Figure 16.

NOTE

*The air can be turned “off” by moving the slide valve **away** from the filter.*



11. Lock the air in the “off” position. Turn the air “off” and clamp the valve lockout in position as shown in Figure 16.

8. TROUBLESHOOTING

Contact the Tooling Assistance Center at the number on the bottom of page 1.

9. REVISION SUMMARY

Revisions to this customer manual include:

- Updated document to corporate requirements