

**NOTE:** Guards on the applicator may differ from the guards shown in the illustrations.

Figure 1

## 1. INTRODUCTION

Side-Feed and End-Feed Through-Splice Applicators (Figure 1) for G II Through-Splice Terminators apply strip terminals to pre-stripped wires. Each applicator accepts the strip form of certain terminals, which are identified on the applicator parts list and exploded view drawing (Applicator Log) for each applicator. The terminal listed on the applicator data plate is the one that was specified when the applicator was ordered. Some terminals have two carrier strips, others just one.

Additionally, these instructions cover the differences between the G II through-splice terminator PN 2217002-[ ] for through-splice terminals (Figure 1) and the G II Terminator PN 2217000-[ ] for end of wire applications.

Refer to Customer Manual [409-32035](#) for general machine information about the G II Terminating Machines.

This instruction sheet, the parts list and the exploded view drawing packaged with the applicator and Customer Manual 409-32035 provide all the information required to operate and maintain the applicator and machine.

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



**DANGER**

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



**CAUTION**

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



**NOTE**

Highlights special or important information.



**NOTE**

Dimensions in this document are in metric units [with U.S. customary units in brackets]. Figures and illustrations are for reference only and are not drawn to scale.

G II TERMINATOR	
TERMINATOR PART NUMBER	DESCRIPTION
2217002-1	Machine (Base)
2217002-2	Machine w/ CQM II

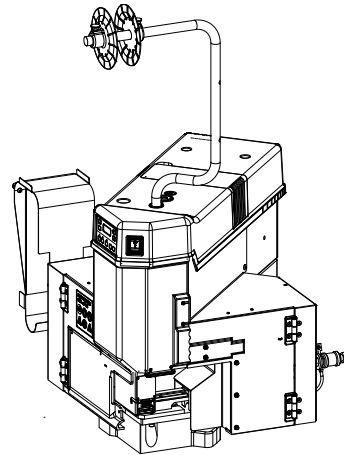


Figure 2

## 2. DESCRIPTION

### 2.1. Terminator Description

The G II Through-Splice Terminator (Figure 2) was designed to be used as a stand-alone semi-automatic bench machine. The modifications described below allow application of through-splice terminals and other terminals that require access to both sides of the wire crimper.

The guards of the standard G II Terminator have been modified to allow access to both sides of the crimper for through-splice type applications (refer to Figure 3). These guards work together with the applicator guards to protect the operator. The right guard door includes an additional metal applicator guard and safety switch. The terminator will not cycle without the applicator guard in place.

The front guard has been modified to remove the guard insert. The front guard works together with the applicator guarding to protect the operator. The front guard retains its keyed interlock to actuate the guard safety switch when closed.

The modified guards on the G II through-slice terminator will work with side-feed and end-feed through-splice applicators.

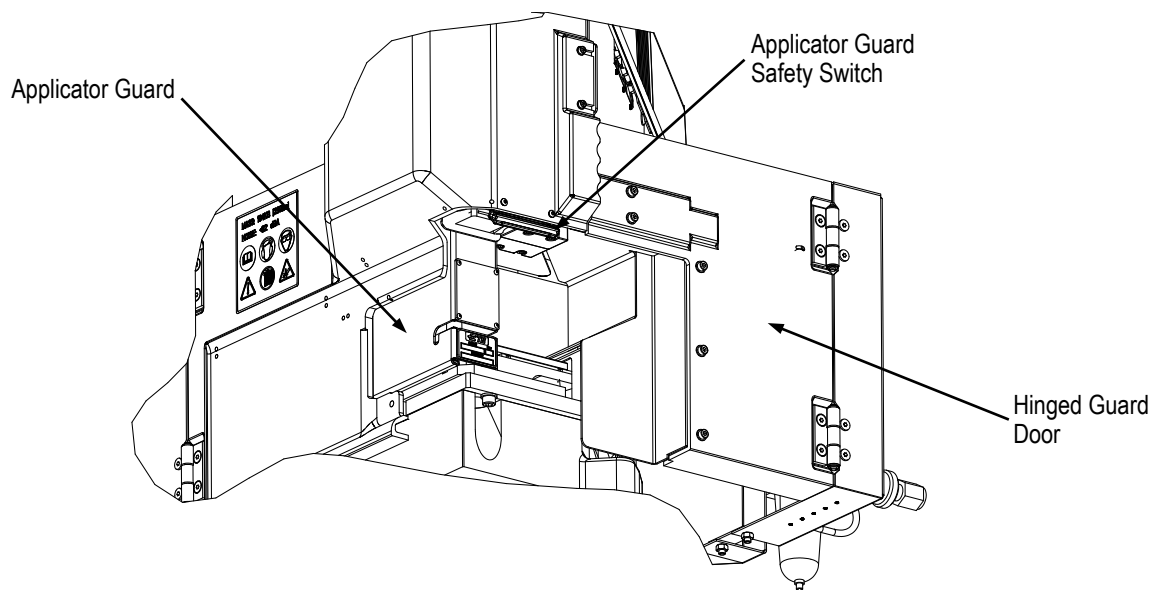


Figure 3

## 2.2. Applicator Description

End-Feed and Side-Feed applicators used with G II through-splice terminators are two-piece applicators consisting of a tool holder and applicator base.

The tool holder is secured to the ram of the G II Through-Splice Terminating Machine with two screws. The tool holder contains locating pins (Figure 4) to facilitate its location on the terminator ram. The locating pins allow an easier tooling changeover.

The wire crimper, insulation crimper, and the front shear depressor are located in a pocket in the tool holder, and are secured by a crimper bolt. The front shear depressor pushes the front floating shear down to cut the crimped terminal from the strip.

The wire crimp is easily adjusted, providing an array of different wire crimp sizes.



**NOTE**

All G II Through-Splice Terminators are equipped with a "precision adjust" feature.

The hold-down bracket (see Figure 4) is attached to the ram and, with bracket attached, holds the terminal in place during the crimping and shearing process.

The applicator's mounting surface is its base plate. The base plate attaches to the base of the terminator. The anvil, shear tooling and strip guide plates are all located on the base plate.

Since the upper tooling is permanently located, the lower tooling can be adjusted to the correct position and locked (screwed) into place.

End-Feed and Side-Feed Through-Splice Applicators can withstand the high crimping pressures required to apply terminals to the larger CMA ranges (up to approximately 17,000 CMA). Although these applicators accept only certain terminals, they provide valuable application flexibility. The design optimizes accessibility which aids in more precise wire placement, and increased production throughput.

For end-feed terminals, the strip is fed into the applicator with the barrel (wire) end first, between the front (outer) and rear (inner) strip guides. It passes the stock drag, and the LEAD terminal is positioned over the anvil. The feed pawl feeds one terminal during each cycle of the machine. The terminals are fed by the action of the air cylinder that is controlled by a valve on the terminator.



**NOTE**

Some applicators have a solid metal hold-down that may require adjustment when changing the wire size and/or crimp height.

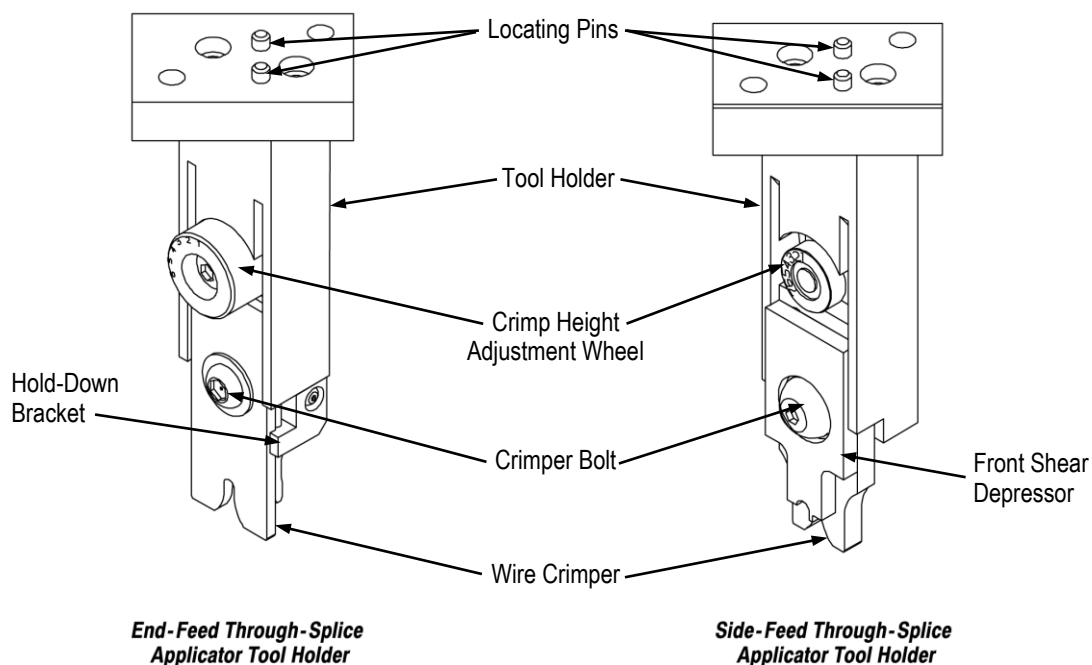


Figure 4

Terminals with dual-carrier strips require a shear depressor, spacer, and terminal holder. These parts are also attached to the tool holder assembly. The rear shear depressor pushes the rear floating shear down to cut the terminal from the rear carrier strip, and the terminal holder keeps the terminal from raising during the crimping and shearing process.

The anvil, the front shear holder, the rear shear holder (if used), the terminal support, and the strip guide adjustment block are mounted on the base plate, as well as the rear floating shear and rear shear holder.

The strip guide plate (Figure 5) is fastened to the strip guide adjustment block. The stock drag, the front and rear strip guides are mounted on the strip guide plate.

The applicators used for the through-splice application are PRE-FEED Applicators. This means that the lead terminal is over the anvil when the machine is at rest.

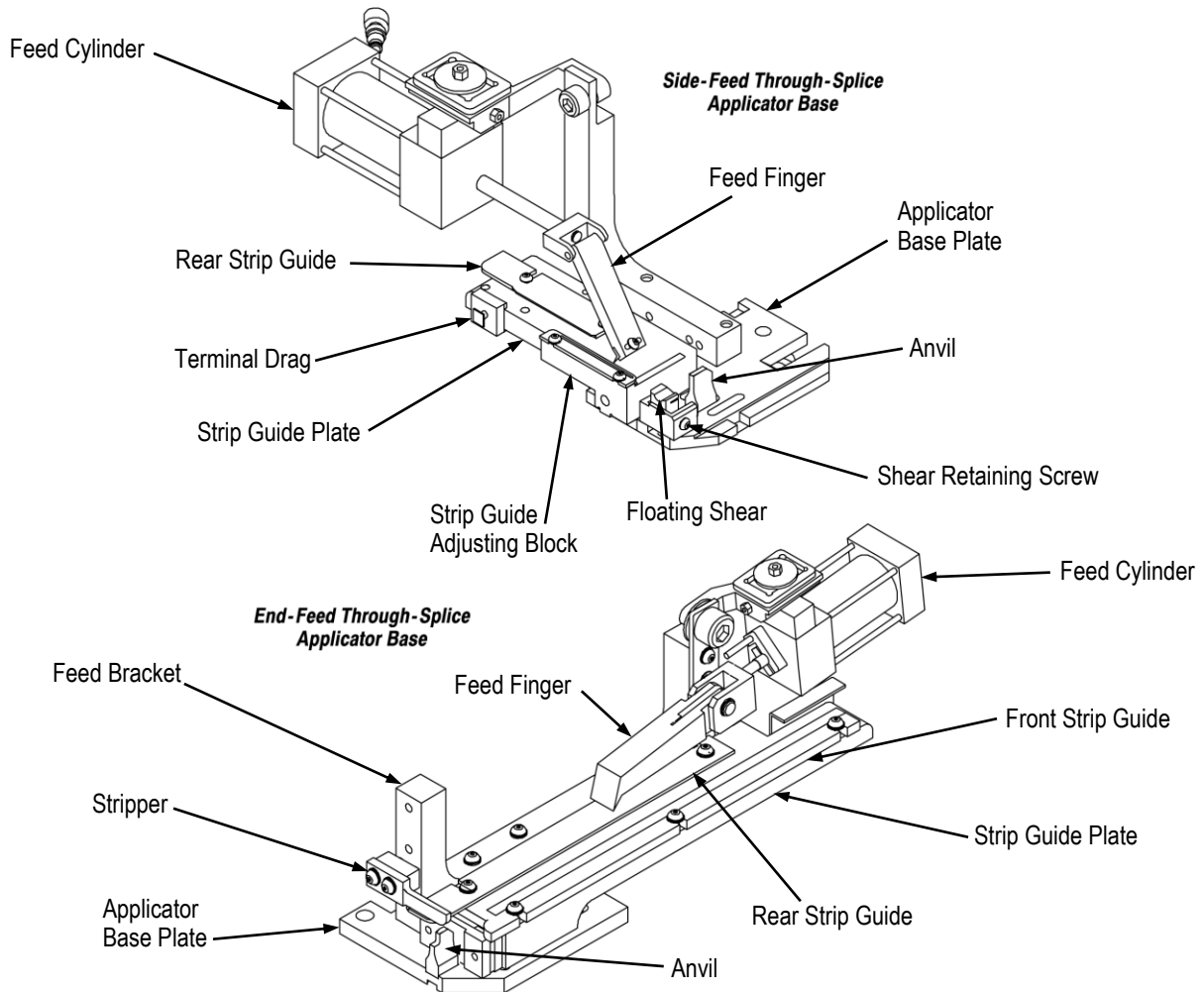


Figure 5

### 3. APPLICATOR INSTALLATION AND REMOVAL



**CAUTION**

With the applicator in the machine, NEVER attempt to cycle machine under power WITHOUT terminals properly loaded, as described in Section 4; otherwise, the tooling may be damaged.

#### 3.1. Applicator Installation



**DANGER**

To avoid personal injury, be SURE the terminator is turned “off”, and power to the machine is disconnected BEFORE installing or removing the applicator.

### A. Tool Holder Installation

To properly install Through-Splice Applicator first install the tool holder.

1. Position the tool holder on the bottom of the terminator ram using the two locating pins shown in Figure 4.
2. Secure the tool holder into position with two cap screws.

### B. Applicator Base (Lower Tooling) Installation

Align the applicator base to the terminator and the tool holder and secure the base plate to the terminator base as follows:

1. Align the lower tooling to the upper tooling (tool holder with the crimper installed) in the side-to-side direction.



#### **DANGER**

*To avoid personal injury, be SURE the terminator is turned "off", and power to the machine is disconnected BEFORE installing or removing the applicator. Refer to Customer Manual 409-32035 form instructions on manually lowering the ram.*

- a. Place the base plate of the applicator onto the base portion of the terminator and loosely install two 6 mm screws.
- b. Double a piece of paper over the anvil and lower the terminator ram and tool holder so that the crimper engages with the anvil.
- c. Try to rotate the lower portion of the applicator. It should not have any movement. If side-to-side movement is present, lower the ram and crimper until the base plate does not move.

If the ram is at the bottom-dead-center position and there is still movement, the crimper must be adjusted (refer to Paragraph 5.1., Crimp Height Adjustment).

If the lower portion has no movement then it is properly located side to side.

2. Align the lower tooling to the upper tooling (tool holder with the crimper installed) in the **front-to-back** direction.



#### **NOTE**

*The lower tooling on the base plate is located properly when the bellmouth on the product is within the specified range.*

3. Tighten two 6 mm screws securing the applicator base to the terminator base.
4. Install the wrap-around guard to the applicator with two mounting screws.
5. Be sure the appropriate plexi-glass guard is installed on the terminator.

Refer to Customer Manual 409-32035 for hand-cycling instructions.

### 3.2. Applicator Removal



#### **DANGER**

*To avoid personal injury, be SURE power to the machine is turned "off", (or power cord is disconnected) and turn off main air and disconnect air line to applicator BEFORE installing or removing the applicator.*

1. Turn machine "off" and disconnect power cord.
2. Remove the wrap-around guard by removing the two mounting screws (refer to Figure 6).
3. Remove the product strip from the applicator.
4. Remove two 6 mm screws that secure the applicator base to the terminator.
5. Slide the applicator base clear.
6. Remove two screws that secure the tool holder to the terminator ram.
7. To store the applicator, refer to Section 8, APPLICATOR STORAGE.

#### 4. APPLICATOR LOADING AND UNLOADING



**DANGER**

To avoid personal injury, be SURE the terminator is turned "off", and power to the machine is disconnected BEFORE loading or un-loading the applicator.

##### 4.1. Terminal Strip Loading

Before loading terminal strip in applicator, be SURE the installed applicator is the right one for terminal to be applied. Compare terminal number on reel with numbers listed on applicator parts list.

1. Turn "off" and disconnect power to the terminator.
2. Be sure ram assembly is all the way up. If necessary, hand-cycle machine to raise the ram. (Refer to Customer Manual 409-32035 for hand-cycling instructions).
3. Open the guard doors of the terminator.
4. Raise stock drag by turning terminal drag (drag release lever) upward.
5. With reel of terminals installed on reel support, feed terminal strip into applicator between strip guides.



**NOTE**

Be SURE terminal strip enters strip guides with barrel (wire) end toward the stock drag and the open side up.

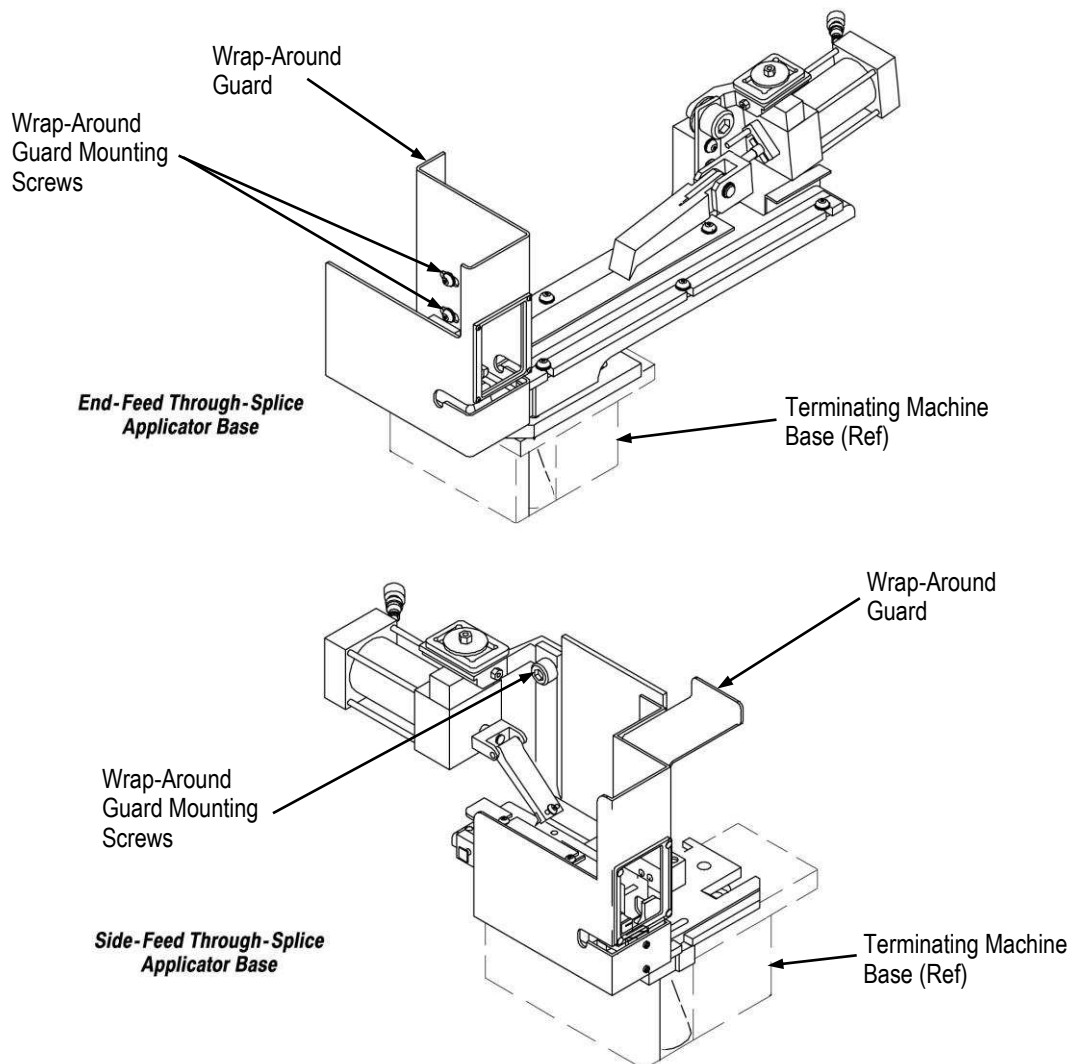


Figure 6



6. Raise feed pawl and continue to feed terminal strip until LEAD terminal is over anvil and feed pawl engages hole in carrier strip.
7. Turn terminal drag downward to lower the stock drag.
8. Be sure tip of feed pawl is in feed hole in carrier strip. Note that some carrier strips have additional holes which are not used for feed purposes.
9. Close the terminator guard doors.

#### 4.2. Terminal Strip Unloading

1. Turn "off" and disconnect power to the terminator.
2. Be sure ram assembly is all the way up. If necessary, hand-cycle machine to raise the ram.  
(Refer to customer manual 409-32035 for hand-cycling instructions.)
3. Open the guard doors of the terminator.
4. Raise stock drag by turning terminal drag (drag release lever) upward. Remove length of terminal strip left in applicator by grasping terminals at the strip guide entry, raising the feed pawl, and pulling strip straight out of applicator.
5. Turn terminal drag downward to lower the stock drag.
6. Close the guard doors of the terminator.

### 5. ADJUSTMENTS

**NOTE**

Refer to the exploded view drawing and parts list packaged with the applicator for identification of parts.

Before setting-up any applicator, set the manual adjust of the terminator to the "zero" position. Then refer to the applicator log sheet for the correct crimp height setting.

**CAUTION**

This setting will get you close to the range to properly crimp a particular terminal. It is highly recommended that you refer to the applicator log for the crimp height setting, or tooling damage may result.

The crimp height range is from 1 to 7, with the smallest crimp height on the "1" setting.

**NOTE**

There is an optional adjustment wheel (for purchase) containing settings from 8 through 11. This adjustment wheel is for the crimp heights above .125 in.

#### 5.1. Crimp Height Adjustments

Make several test cycles and inspect terminations CLOSELY.

- Look for rough or sharp edges around crimped barrels (flash), deformed crimps, bent terminals, or other defects caused by worn or broken tooling. If necessary, replace tooling as described in Section 6, REPAIR AND REPLACEMENT OF PARTS.
- If terminations appear normal, measure crimp height of each termination as described in Instruction Sheet [408-7424](#), packaged with the applicator. Crimp height must agree with measurement specified on parts list for wire size being used. Record crimp height dimensions for reference.
- If crimp height is INCORRECT then a crimp height adjustment is necessary. This is accomplished with the following procedure.

If necessary, make minor or major crimp height adjustments as follows.

##### A. Minor Crimp Height Adjustments

Minor adjustments can be made using the manual adjust that is on the terminator. The total adjustment range using this feature is approximately 0.48 mm [.019 in.]. Refer to the Customer Manual 409-32035 for details concerning this procedure.

## B. Major Crimp Height Adjustment



### NOTE

Before making this adjustment, first try to adjust the minor crimp height adjustment. If this adjustment does not get you the specified crimp height move this adjustment back to the "zero" setting. This will insure that the tooling isn't damaged while making this adjustment.



### DANGER

To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected BEFORE making the crimp height adjustment.

1. Turn machine "off", and disconnect power cord.
2. Open the guard doors of the terminator.
3. Remove the wrap around guard (see Figure 6).
4. Loosen the crimper bolt (see Figure 7).
5. Rotate the crimp height adjustment wheel (Figure 7) one position. If a smaller crimp height is required, decrease the number on the adjustment wheel. If a bigger crimp height is desired, increase the number on the adjustment wheel.



### CAUTION

Do not move the adjustment feature more than one position or tooling damage may result.

6. Apply upward pressure to the crimper so that the top edge of the crimper is tight against the adjustment wheel. Continue to apply this pressure and secure the crimper bolt.
7. Install the wrap around guard and close the guard doors.
8. Crimp additional product and inspect. If the crimp height is not correct repeat the directions in the Paragraphs 5.1.A. and 5.1.B.

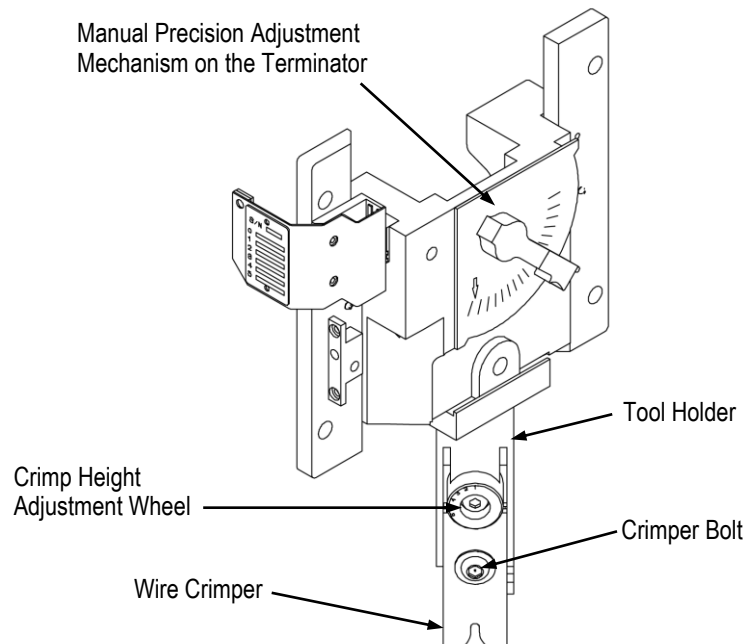


Figure 7

## 5.2. Terminal Strip Feed Adjustment



### DANGER

Part of the Terminal Strip Feed Adjustment is made with the pneumatic power "on." To avoid personal injury, BE SURE to exercise caution around moving machine parts with the machine "on" and the guards open.



1. Turn electrical power “off” to the terminator. Keep the pneumatic power “on”.
2. Open the terminator guards and remove the applicator guard.
3. Raise the terminal drag. Feed in a strip of terminals until the feed finger drops into the first feed hole on side feed applicators or behind the terminal on end feed applicators.
4. Lower the terminal drag.
5. Depress and release the manual over-ride button on the air feed valve located on the back of the terminator until the terminal is located above the anvil (see Figure 8).

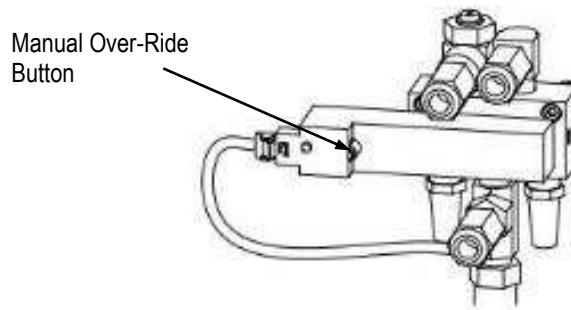


Figure 8

6. Determine the direction of adjustment required to center the terminal over the anvil.
7. Loosen the adjustment locking screw.
8. Turn the adjustment screw to make an adjustment (see Figure 9).
9. Tighten the adjustment locking screw.


**NOTE**

*For side feed applicators: Turning the adjustment screw clockwise will move the terminal to the left on the next feed stroke.  
For end feed applicators: Turning the adjustment screw clockwise will move the terminal toward the rear of the anvil on the next feed stroke.*

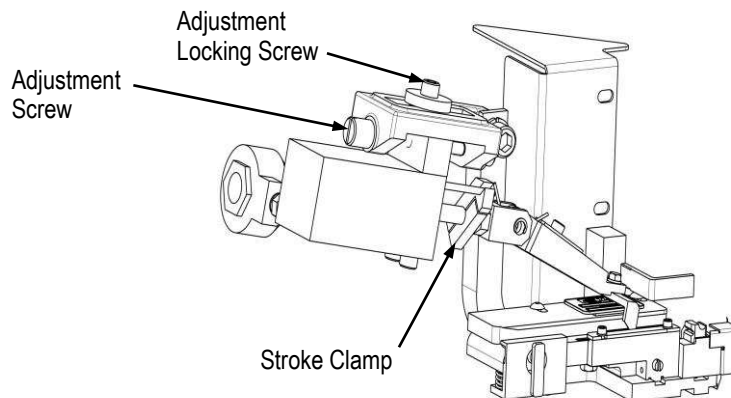


Figure 9

10. Raise the terminal drag, lift the feed finger, and pull the terminal strip back and repeat steps 3 through 7 until the terminal is centered over the anvil.
11. If the feed finger stroke is incorrect, loosen the stroke clamp (see Figure 9) and move the clamp closer to the air cylinder for less stroke and further from the cylinder for more stroke.
12. Tighten the clamp and check the feed.

### 5.3. Strip Guide Plate and Feed Pawl Adjustments (Side-Feed Through-Splice Applicators Only)

This procedure moves the strip guide plate on which the strip guides are mounted. Since the terminal strip is fed into the applicator between the strip guides, it is moved front and back over the anvil as the strip guides are moved.

The adjustment of the feed pawl to match any change in the position of the front strip guide is also described here.

**DANGER**

To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected before removing the applicator.

1. With the power to the terminator "off", and the power cord disconnected, open the terminator guard doors and remove the applicator as described in Paragraph 3.2.
2. From bottom side of strip guide plate, loosen the screw that holds the strip guide adjustment block to the strip guide plate.
3. With the LEAD terminal centered over anvil, lift and hold (or block) the feed pawl up to clear the front strip guide.
4. Turn strip guide plate adjustment screw CLOCKWISE to move strip guide plate TOWARD REAR, or COUNTERCLOCKWISE to move it TOWARD FRONT. The insulation barrel of the lead terminal should be as close as possible to the floating shear.
5. Tighten screw to hold strip guide plate in position.
6. Loosen screw holding feed pawl to feed finger (feed pawl holder). Move feed pawl until its tip drops into slot in front strip guide. Retighten screw.
7. Hand-cycle terminating unit, checking for proper terminal feed and strip guide plate alignment.

**NOTE**

Refer to Customer Manual 409-32035 for hand-cycling instructions.

### 5.4. Rear Strip Guide Adjustment

This adjustment is not used very often, because it is only needed when the rear strip guide is not parallel to the strip guide plate, or there is a variation in strip width.

**NOTE**

The strip guides are correctly positioned on the strip guide plate when the applicator is built, and normally do NOT need adjustment. DO NOT use this procedure for front-to-rear positioning of strip (refer to Paragraph 5.3., Strip Guide Plate and Feed Pawl Adjustments).

**DANGER**

To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected before making adjustments with the guard doors open.

1. With the power to the terminator "off", and the power cord disconnected, open the terminator guard doors.
2. Lift and hold (or block) the feed pawl up to clear the front strip guide, and loosen screws holding strip guides to strip guide plate.
3. Move the rear strip guide in the desired direction, making sure it is parallel to the strip guide plate, and then retighten the holding screws.
4. Align the front strip guide with the holes in the terminal carrier strip, be sure the front strip guide is parallel, and that the terminal strip can move freely with a minimum of side clearance. Retighten the screws.

**NOTE**

If feed pawl is not aligned with the front strip guide, refer to Paragraph 5.3., Step 4.

5. Hand-cycle terminating unit, checking for proper terminal feed and strip guide alignments.

## 5.5. Adjustment of Shear(s) and Shear Holder(s) (Side-Feed Through-Splice Applicators Only)

With lead terminal centered over anvil, check to see if floating shear(s) cuts the terminal from the carrier strip(s) correctly. If necessary, make the following adjustments.



### NOTE

*The lower portion of the applicator must be removed from the terminating unit for this procedure (see removal procedure under Paragraph 3.2.).*

### A. Front Shear Adjustment



### DANGER

*To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected before removing the applicator.*

1. With the power to the terminator "off", and the power cord disconnected, open the terminator guard doors and remove the applicator as described in Paragraph 3.2.
2. From the bottom of the base plate, loosen the two screws that secure the shear holder to the base plate.
3. Move the shear holder and floating shear in the desired direction, and retighten the screws.



### NOTE

*There should be minimal clearance (.002 in.) between the floating shear and the anvil; the shear must move up and down freely, and must be square to the back of the anvil.*

4. Reinstall and re-align the applicator base plate to the terminator base and load it with product so that a terminal is centered over the anvil. Check that the floating shear correctly cuts the terminal from the carrier strip. If shearing action is not correct, repeat Steps 1 and 2 or check for worn or damaged tooling.

### B. Rear Shear Adjustment (Dual Carrier Strip Product Only)

The rear shear is more likely to need adjustment because it is affected by differences in terminal strip widths and strip guide plate adjustments.



### DANGER

*To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected before removing the applicator.*

1. With the power to the terminator "off", and the power cord disconnected, open the terminator guard doors and remove the applicator as described in Paragraph 3.2.
2. From the bottom of the base plate, loosen two screws that hold the rear shear holder to the base plate.
3. With the terminal strip inserted into applicator, and the lead terminal centered over the anvil, move the rear shear holder in the direction required to obtain the proper cutoff tab.
4. Check that the shear is square to the end of the terminal, and then tighten the holding screws.
5. Depress the floating shear and check for proper shearing action and proper cutoff tab.
6. If necessary, repeat Steps 2 through 5 or check for worn or damaged tooling.

## 6. REPAIR AND REPLACEMENT OF PARTS

These procedures cover the applicator parts which most often need repair or replacement because of wear. Remove the applicator from the machine before doing any maintenance work. Refer to the exploded view drawing and parts list packaged with the applicator for identification of parts. Be sure to order replacements for parts used from spare parts stock, so that they will be available when needed.



### NOTE

*Wipe parts with a clean, dry cloth as they are removed from the applicator. Then, when putting them back into applicator, wipe mating surfaces with your fingers to make sure that all lint and other foreign matter have been removed.*

## 6.1. Anvil Replacement

**DANGER**

To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected before removing the applicator.

1. With the power to the terminator "off", and the power cord disconnected, open the terminator guard doors and remove the applicator as described in Paragraph 3.2.
2. Raise the terminal drag, raise feed pawl, and pull strip back so lead terminal is between strip guides.
3. From bottom of base plate, remove screw that holds anvil to base plate.
4. Remove anvil from groove in top of base plate.
5. Install anvil using reversed procedure. If a new anvil is needed, be sure the part number of the new anvil agrees with the number on the applicator parts list.

**NOTE**

When the anvil is replaced, the front shear and holder must be re-aligned (see Paragraph 5.5.A.).

6. Re-align crimpers.

## 6.2. Floating Shear Replacement (Side-Feed Through-Splice Applicators Only)

**NOTE**

It is not necessary to remove shear holder(s) to replace floating shear(s). Before removing floating shear(s), note orientation for re-installation. The floating shears are spring-loaded, so be careful during removal.

**DANGER**

To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected before removing the applicator.

1. With the power to the terminator "off", and the power cord disconnected, open the terminator guard doors and remove the applicator as described in Paragraph 3.2.
2. Raise the terminal drag, raise feed pawl, and pull strip back so lead terminal is between strip guides.
3. Push down on the floating shear, then remove shear retaining screw from side of shear holder.
4. Slowly release pressure on floating shear. Compression spring will push it out of shear holder.
5. After removing floating shear, lift compression spring out of shear holder.
6. Inspect spring for damage and replace it if necessary. Refer to parts list for correct number.
7. Re-install floating shear(s) using reversed procedure. If installing new shear, be sure part number agrees with the number on the parts list.
8. Raise feed pawl and move lead terminal over the anvil. Lower the terminal drag to lower stock drag.
9. Check shear holder adjustment as described in Paragraph 5.5., Adjustment of Shear(s) and Shear Holder(s).

## 6.3. Crimper Replacement

**DANGER**

To avoid personal injury, be SURE power to the machine is turned "off", and the power cord is disconnected BEFORE taking the applicator out of the machine. The machine ram should be in the raised position.

1. Turn "off" the terminator and disconnect power.
2. Open the guard doors to gain access to the applicator.
3. Remove crimper bolt that holds the front shear depressor, front shear depressor spacer, tubular spacer, insulation crimper, crimper spacer, and wire crimper in place on the ram assembly. Note position of parts for purposes of re-installation.
4. Replace parts.

5. Re-install parts in reversed order of removal.

**NOTE**

*The upper end of the wire crimper must be up against the adjustment wheel on the tool holder.*

6. Tighten the crimper bolt ONLY finger tight.

**NOTE**

*Insulation crimpers with legs of equal length, that are identical front and back, may be positioned with either side out. All other insulation crimpers MUST be positioned with part number facing the direction noted during removal. If new parts are used, be SURE part numbers agree with numbers on parts list.*

7. Lift feed pawl and pull terminal strip back until lead terminal is between strip guides.
8. Form a piece of heavy paper over anvil, then slowly hand-cycle machine while watching alignment of crimpers with anvil. When ram assembly has reached bottom of stroke, carefully tighten crimper bolt. Crimpers MUST move freely over anvil after paper is removed.

#### 6.4. Feed Pawl Replacement

**DANGER**

*To avoid personal injury, be SURE power to the terminator is turned "off", and the power cord is disconnected before making replacements with the guard doors open.*

1. With the power to the terminator "off", and the power cord disconnected, open the terminator guard doors.
2. Remove the adjustment screw which holds the feed pawl to the feed finger (feed pawl holder).
3. Replace feed pawl using reversed procedure. If new pawl is installed, be SURE the part number agrees with the number on the parts list.
4. Adjust feed pawl as described in Paragraph 5.3.

#### 7. CLEANING AND LUBRICATION

For best performance and minimum downtime, applicator should be cleaned, inspected, lubricated, and stored as indicated in Instruction Sheet [408-8059](#).

#### 8. APPLICATOR STORAGE

**CAUTION**

*When storing applicator, or taking it out of machine for any reason, be sure to avoid damage to the tooling by preventing the bottoming of the upper tooling on the applicator base.*

1. Remove the terminal strip as described in Paragraph 4.2.
2. Remove the applicator as described in Paragraph 3.2.
3. Clean and lubricate the applicator as described in Section 7, CLEANING AND LUBRICATION.
4. Store the applicator in an area where it cannot be damaged.

#### 9. REVISION SUMMARY

- Updated to most current TE logo (header/footers)
- Replaced Figure 8 image
- Add paragraph 8 (Applicator Storage) and change Revision Summary from paragraph 8 to paragraph 9