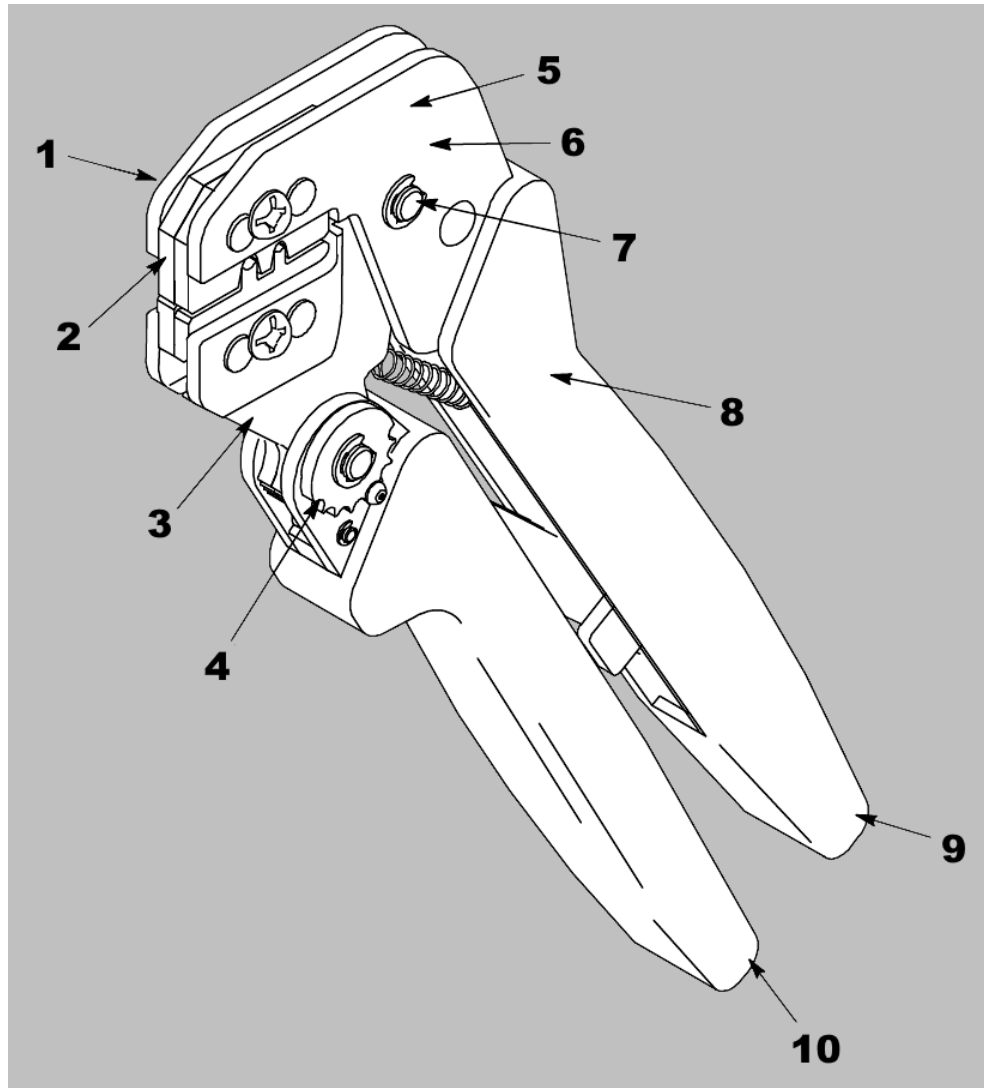


## PROPER USE GUIDELINES

Cumulative trauma disorders can result from the prolonged use of manually powered hand tools. Hand tools are intended for occasional use and low-volume applications. A wide selection of powered application equipment is available for extended-use production operations. The PRO-CRIMPER III Hand Crimping Tool is a commercial-grade tool and is designed primarily for field installation, repair, maintenance work, or prototyping in industrial, commercial, or institutional applications. Product crimped with this tool meets the wire barrel crimp height requirement for hand tools in the appropriate 114 application specification, but might not comply with other feature parameters of the specification.

Figure 1: PRO-CRIMPER III Hand Crimping Tool Assembly 58524-1 with Die Assembly 58524-2



- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| <b>1</b> Front of tool (locator side) | <b>6</b> Back of tool (wire side)   |
| <b>2</b> Die assembly                 | <b>7</b> Pivot pin                  |
| <b>3</b> Moving jaw                   | <b>8</b> PRO-CRIMPER III tool frame |
| <b>4</b> Ratchet adjustment wheel     | <b>9</b> Stationary handle          |
| <b>5</b> Stationary jaw               | <b>10</b> Moving handle             |

## 1. INTRODUCTION

PRO-CRIMPER III Hand Crimping Tool Assembly 58524-1 for the .250 series FASTON™ receptacle is the tool and die set shown in Figure 1. The tool consists of the PRO-CRIMPER III Frame Assembly 354940-1 (instruction sheet [408-9930](#)) and the die assembly listed in Figure 1. This tool is used to crimp the terminal family listed in Table 1. For product part numbers that are in this terminal family, contact TE Product Information by calling the phone number listed at the bottom of page 1.

*Table 1: Crimping specifications*

| TE die assembly | Terminal family               | Wire          |                              |                             |
|-----------------|-------------------------------|---------------|------------------------------|-----------------------------|
|                 |                               | Wire size AWG | Insulation diameter mm [in.] | Strip length mm [in.]       |
| 58524-2         | .250 series FASTON receptacle | 18-16         | 3.05 to 4.32 [.120 to .170]  | 4.75 to 5.59 [.180 to .220] |
|                 |                               | 14            |                              |                             |



### NOTE

*Dimensions in this instruction sheet are in millimeters with [inches in brackets]. Figures are for reference only and are not drawn to scale.*

Read these instructions thoroughly before crimping connectors.

## 2. DESCRIPTION

The tool frame features two jaws, a handle, a ratchet adjustment wheel, and an emergency ratchet release. Each die set consists of a crimper (upper die) and an anvil (lower die). The tool frame holds a die assembly with two crimping chambers (see Figure 2). Die-retaining pins and die-retaining screws are used to secure the dies in the tool frame.

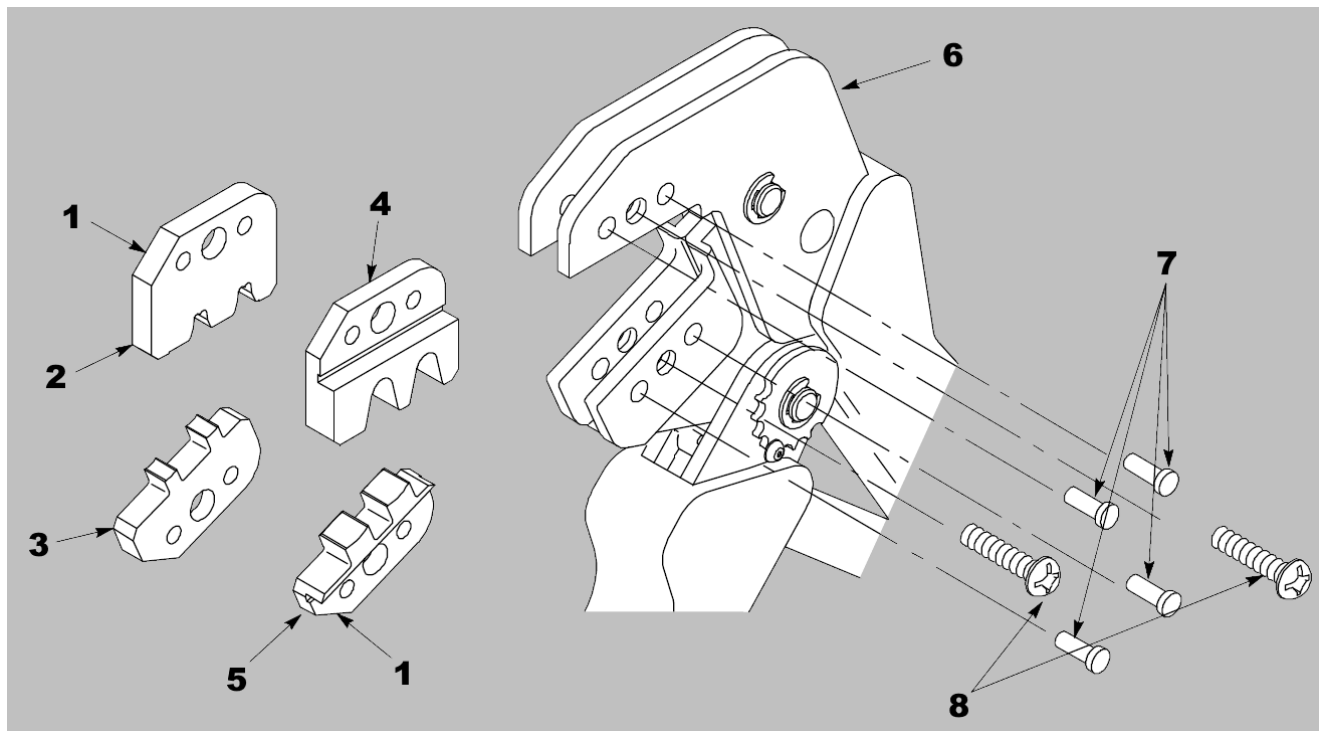
The tool features a ratchet and an adjustment wheel with a range of settings. The ratchet ensures that the tool has completed the cycle and does not release until the handles have been **fully** closed, unless the emergency ratchet release is rotated to manually release the ratchet. The adjustment wheel controls the amount of handle pressure exerted on the dies during the crimping procedure.



### CAUTION

*The dies bottom before the ratchet releases. This feature ensures maximum tensile performance of the crimp. **Do not** re-adjust the ratchet unless you have verified that the crimp height is incorrect (see section 7, ADJUSTING THE RATCHET).*

Figure 2: Parts of the PRO-CRIMPER III Hand Crimping Tool Assembly



- |                      |                        |
|----------------------|------------------------|
| 1 Chamfer            | 5 Insulation anvil     |
| 2 Wire crimper       | 6 Tool frame           |
| 3 Wire anvil         | 7 Die retaining pins   |
| 4 Insulation crimper | 8 Die retaining screws |

### 3. INSTALLING THE DIE SET AND LOCATOR ASSEMBLY

1. Open the tool handles and remove the two die-retaining screws from the tool jaws (see Figure 2).
2. Place the wire anvil and insulation anvil so that their chamfered sides and the marked surfaces face outward when mounted in the moving jaw of the tool frame.
3. Insert the two die-retaining pins.
4. Insert a die-retaining screw through the jaw and through the anvil dies. Tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely.
5. Place the wire crimper and insulation crimper so that the chamfered sides and the marked surface face outward when mounted in the stationary jaw of the tool frame.
6. Insert the two die-retaining pins.
7. Insert a die-retaining screw through the jaw and through the crimper dies. Tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely.
8. Carefully close the tool handles, making sure the anvil and crimper align properly. Continue closing the tool handles until the ratchet in the tool frame engages sufficiently to hold the anvil and crimper in place.
9. Tighten both die-retaining screws.

### 4. REMOVING THE DIE SET AND LOCATOR ASSEMBLY

1. Close the tool handles until the ratchet releases.
2. Remove the two die-retaining screws and the four die-retaining pins.
3. Slide the anvils and crimpers out of the tool jaws.

**NOTE**

*The ratchet release has detents with audible clicks as the handles are closed. The ratchet releases on the sixth click.*

## 5. CRIMPING



### NOTE

The tool is provided with a crimp adjustment feature. Initially, the crimp height should be verified as specified in Table 2. Refer to section 6, *INSPECTING THE CRIMP HEIGHT*, and section 7, *ADJUSTING THE RATCHET*, to verify crimp height before using the tool to crimp contacts and wire sizes.

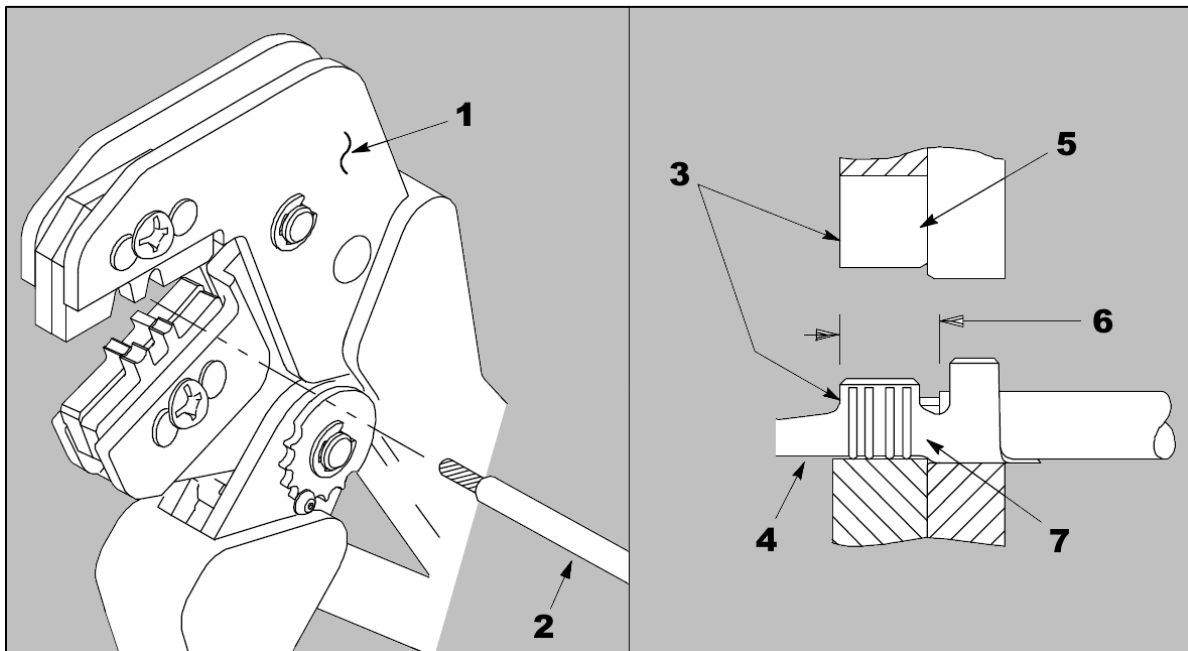
1. Refer to Table 1 and select wire of the specified size and insulation diameter.
2. Strip the wire to the length indicated. **Do not nick or cut wire strands.**
3. Select an applicable contact and identify the appropriate crimp section according to the wire size markings on the tool.
4. Hold the tool so that the back (wire side) is facing you. (See Figure 3.) Squeeze the tool handles together and allow them to open fully.
5. While holding the contact by the mating end, insert the contact through the front of the tool and into the appropriate crimp section.
6. Position the contact so that the mating end of the terminal is on the front side of the tool, and the U of the wire and insulation barrels faces the top of the tool.
7. Place the contact up into the nest.
8. Rotate the tool so that you can see the front side of the wire crimper.
9. Position the terminal so that the front edge of the wire barrel is even with the front edge of the wire crimper (Figure 3).



### CAUTION

Make sure that both sides of the wire barrel are started evenly into the crimping section. **Do not** attempt to crimp an improperly positioned contact.

Figure 3: Crimping



1 Back of tool (wire side)

2 Wire

3 Front of wire barrel (even with edge of wire crimper)

4 Terminal (typical)

5 Wire crimper

6 Strip length

7 Wire barrel

10. While holding the terminal in position, squeeze the tool handles together until ratchet engages sufficiently to hold the terminal in position. Do **not** deform insulation barrel or wire barrel.

11. Rotate the tool so that the back (wire side) faces you.
12. Insert the stripped wire into the terminal insulation and wire barrels until the end of the wire is even with the edge of the wire barrel and wire crimper (Figure 3).
13. While holding the wire in place, fully cycle the tool until the ratchet releases and allows the handle to open.
14. Remove the crimped terminal.


**NOTE**

If the crimped terminal sticks in the crimping area, remove it by pushing downward on the mating end of the terminal.

15. Check the terminal's crimp height as described in section 6, INSPECTING THE CRIMP HEIGHT. If necessary, adjust the crimp height as described in section 7, ADJUSTING THE RATCHET.

## 6. INSPECTING THE CRIMP HEIGHT

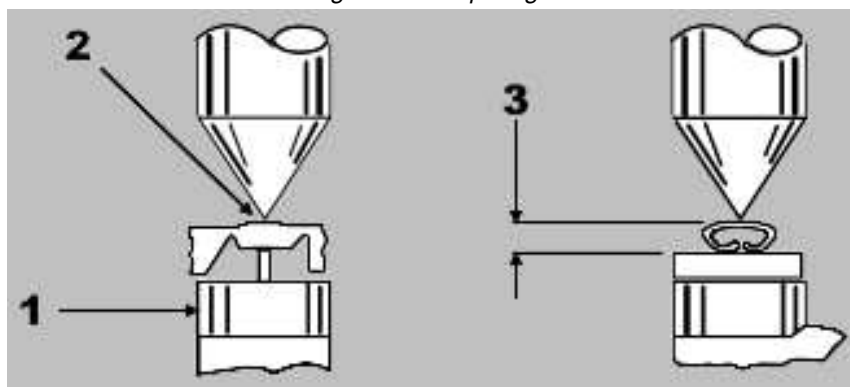
Crimp height inspection is performed using a micrometer with a modified anvil, commonly referred to as a crimp-height comparator. TE Connectivity does not manufacture or market crimp height comparators. Detailed information on obtaining and using crimp-height comparators can be found in instruction sheet [408-7424](#).

1. Refer to Table 2 and select a wire (maximum size) for each crimp section listed.
2. Refer to section 5, CRIMPING, and crimp the contacts accordingly.
3. Using a crimp height comparator, measure the wire barrel crimp height listed in Table 2.
  - If the crimp height conforms to that shown in the table, the tool is considered dimensionally correct.
  - If not, adjust the tool. Refer to section 7, ADJUSTING THE RATCHET.


**CAUTION**

Do not use damaged product. If a damaged contact is evident, replace it. Do not re-terminate contacts.

Figure 4: Crimp height



- 1 Modified anvil
- 2 Position point on center of wire barrel opposite seam
- 3 Crimp height (see Table 2)

Table 2: Crimp height specifications

| Die assembly | Wire size max<br>mm <sup>2</sup> [AWG] | Crimp section<br>(wire size markings) | Crimp height mm [in.] |
|--------------|----------------------------------------|---------------------------------------|-----------------------|
| 58524-2      | 18-16                                  | 18-16                                 | 1.55±0.05 [.061±.002] |
|              | 14                                     | 14                                    | 1.83±0.05 [.072±.002] |

## 7. ADJUSTING THE RATCHET

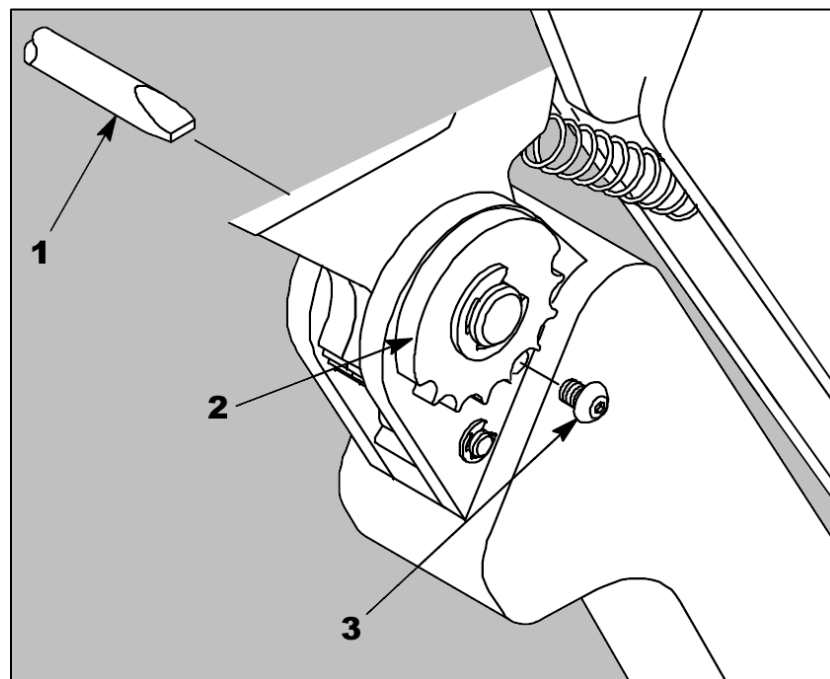
The ratchet is preset prior to shipment, but it is important to verify the crimp height using a micrometer or caliper. Use and wear can cause the tool to go out of adjustment. Inspect the crimp height and adjust the ratchet, if necessary, on a regular basis.

To adjust the ratchet, complete the following steps.

1. Remove the ratchet wheel lock screw (Figure 5).
2. With a screwdriver, adjust the ratchet wheel from the front side of the tool.
  - If the crimp height is larger than recommended, rotate the adjustment wheel counter-clockwise (+) to a higher setting.
  - If the crimp height is smaller than recommended, rotate the adjustment wheel clockwise (–) to a lower setting.
3. Reinstall the lock screw.
4. Make a sample crimp and measure the crimp height.
5. Repeat as required.

If the crimp height cannot be made to conform to the recommended crimp height, replace the tool or die set. See section 9, REPLACEMENT AND REPAIR.

Figure 5: Ratchet adjustment



- 1 Screwdriver
- 2 Ratchet adjustment wheel
- 3 Lock screw (typical)

## 8. MAINTENANCE AND INSPECTION

### 8.1. Maintenance

- Remove dust, moisture, and other contaminants with a clean, soft brush or soft, lint-free cloth. **Do not** use hard or abrasive objects that could damage the dies or tool.
- When the tool is not in use, keep the handles closed to prevent objects from becoming lodged in the dies. Store the tool in a clean, dry area.
- Remove all lubrication and accumulated film by immersing the dies in a suitable commercial degreaser.

### 8.2. Visual inspection

- Inspect the tool and dies on a regular basis to ensure that they are not worn or damaged.
- Make sure that the die retaining screws are properly secured.
- Inspect the crimping chambers of the die assembly for flattened, chipped, worn, or broken areas. If damage or abnormal wear is evident, replace the dies. Refer to section 9, REPLACEMENT AND REPAIR.

## 9. REPLACEMENT AND REPAIR

Customer-replaceable parts are listed in Table 1.

Repair Kit 679221-1 (available separately) includes a replacement nut and a variety of pins, rings, screws, and springs.

If the dies are damaged or worn excessively, they must be replaced. Order replacement dies through your TE representative. You can also order parts by any of the following methods:

- Go to [TE.com](https://www.teconnectivity.com) and click the **Shop TE** link at the top of the page.
- Call 800-522-6752.
- Write to:  
CUSTOMER SERVICE (038-035)  
TE CONNECTIVITY CORPORATION  
PO BOX 3608  
HARRISBURG PA 17105-3608

For customer repair services, call 800-522-6752.

## 10. REVISION SUMMARY

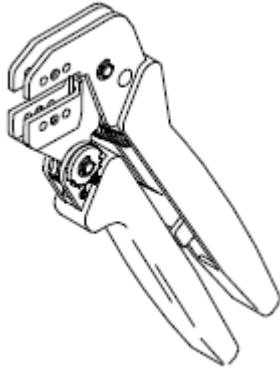
Revisions to this instruction sheet include:

- Updated Table 2: Crimp height specifications
- Reformatted to conform to current standard for instruction sheets

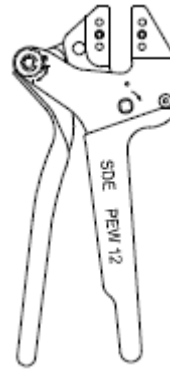


Figure 6: Tools that can use Die Assembly 58524-2

**PRO-CRIMPER III Hand Tool 354940-1**  
(instruction sheet [408-9930](#))



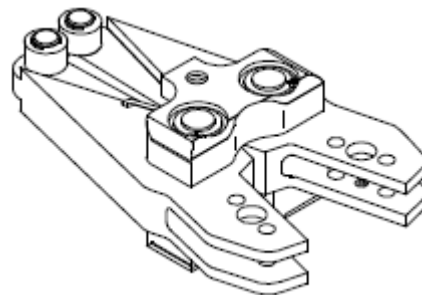
**SDE PEW-12 Hand Tool 9-1478240-0**  
(instruction sheet [408-8851](#))



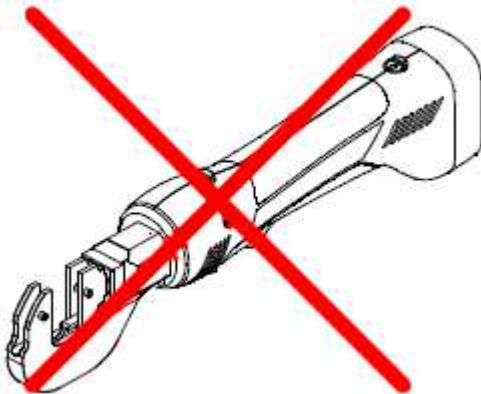
**SDE Bench Terminator 1490076-2**  
(customer manual [409-10052](#))



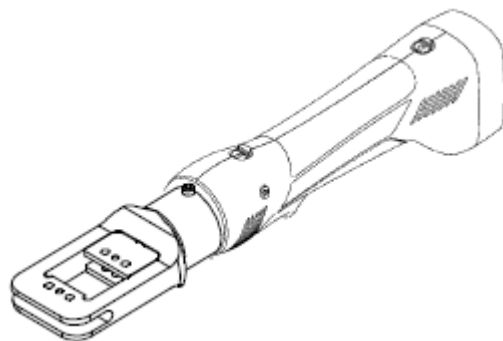
**626 Adapter 679304-1**  
(instruction sheet [408-4070](#))



**Battery Tool (Shouldered Die) 1725837-1, -2**  
(customer manual [409-10053](#))



**Battery Tool (Pin Die) 1213890-1, -2**  
(customer manual [409-10065](#))



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