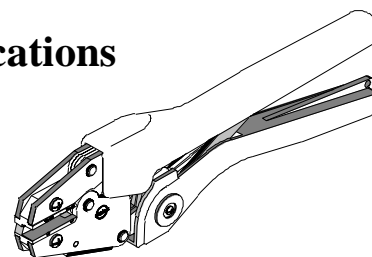




# Hand Crimp Tool

## Operating Instruction Sheet and Specifications

**Part No. 64003-4200**  
**Eng. No. RHT NIFG**  
**(Replaces 19284-0031)**



### FEATURES

- A full cycle ratcheting hand tool ensures complete crimps
- Long handles for comfortable crimping with reduced crimping force

### SCOPE

Flag Krimptite/Vibrakrimp ® Uninsulated Female Quick Disconnect Terminals 14-22 AWG.

#### Testing

##### Mechanical

The tensile test, or pull test, is a means of evaluating the mechanical properties of the crimped connections. The following charts show the specifications for various wire sizes. The tensile strength is shown in pounds and indicates the minimum acceptable force to break or separate the terminal from the conductor.

| Wire Size (AWG) | *UL 310 |
|-----------------|---------|
| 22              | 8       |
| 20              | 13      |
| 18              | 20      |
| 16              | 30      |
| 14              | 50      |

\*UL – 310 – Quick Disconnects, Flags and Couplers

The following is a partial list of the product part numbers and their specifications that this tool is designed to run. We will be adding to this list and an up to date copy is available on [www.molex.com](http://www.molex.com).

| Wire Size: 18 – 22 AWG 0.80 – 0.35 mm <sup>2</sup> |                        |                   |      |                  |      |
|--|------------------------|-------------------|------|------------------|------|
| Terminal No.                                       | Terminal Eng No. (REF) | Wire Strip Length |      | Insul. Dia. Max. |      |
|  |                        | In.               | mm   | In.              | mm   |
| 19008-0001   | AA-1147                | .313              | 7.94 | N/A              | N/A  |
| 19008-0002   | AA-1147-032            | .313              | 7.94 | N/A              | N/A  |
| 19008-0006   | AA-1158                | .313              | 7.94 | N/A              | N/A  |
| 19009-0001   | AA-4168                | .234              | 5.95 | .135             | 3.43 |
| 19009-0003   | AA-4170                | .234              | 5.95 | .135             | 3.43 |

| Wire Size: 14 – 16 AWG 2.00 – 1.30 mm <sup>2</sup> |             |                   |      |                  |      |
|--|-------------|-------------------|------|------------------|------|
| Terminal No.                                       | Terminal    | Wire Strip Length |      | Insul. Dia. Max. |      |
|  |             | In.               | mm   | In.              | mm   |
| 19008-0019   | BB-1148     | .313              | 7.94 | N/A              | N/A  |
| 19008-0024   | BB-1159     | .313              | 7.94 | N/A              | N/A  |
| 19009-0010   | BB-4169     | .234              | 5.95 | .145             | 3.68 |
| 19009-0012   | BB-4171     | .234              | 5.95 | .145             | 3.68 |
| 19009-0013   | BB-4171-032 | .234              | 5.95 | .145             | 3.68 |

## OPERATION

Open the tool by first closing the jaws sufficiently for the ratchet mechanism to release.

### Crimping Terminals

1. To achieve the correct conductor crimp, insert the terminal centered in the proper nest as shown in Figure 1. The crimp should be centered over the serrations (ribs), which are visible on the outside of the flag barrel. The crimp should not fall off the edge of the barrel.
2. Partially close the tool to hold the terminal in place. See Figure 3.
3. Insert the properly stripped wire into the terminal barrel. See Figure 2 and 3.
4. Now close the handle completely and release. The jaws will open when the tool has fully closed.

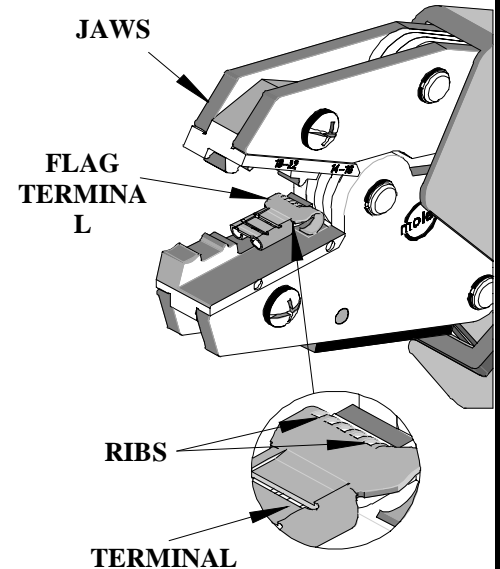


Figure 1  
(Vibrakrimp® Terminal)

**Note:** The tamper proof ratchet action will not release the tool until it has been fully closed.

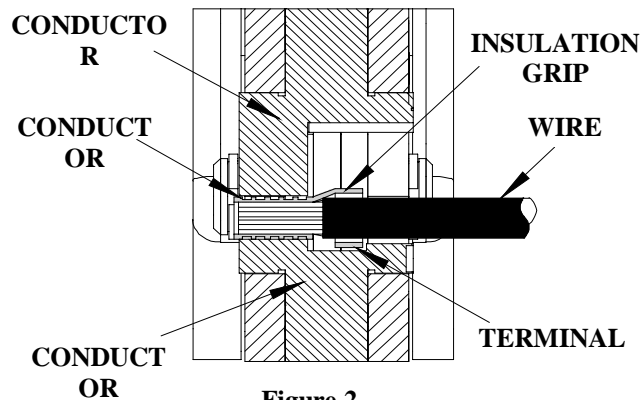


Figure 2

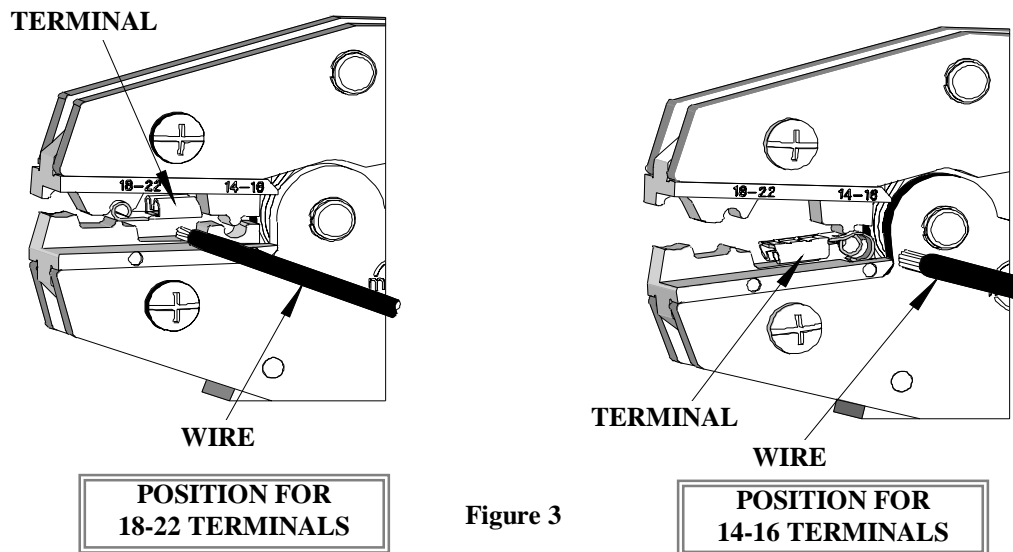


Figure 3

## Crimping Terminals with Insulation Grip Barrel

1. After the conductor barrel crimp has been crimped, load the terminal with the wire into the insulation grip nest, as shown in Figure 4. Make sure the wire is positioned from the opposite side. See Figure 4.
2. Complete the crimp until the insulation grip barrel is wrapped snug around the insulation of the wire.

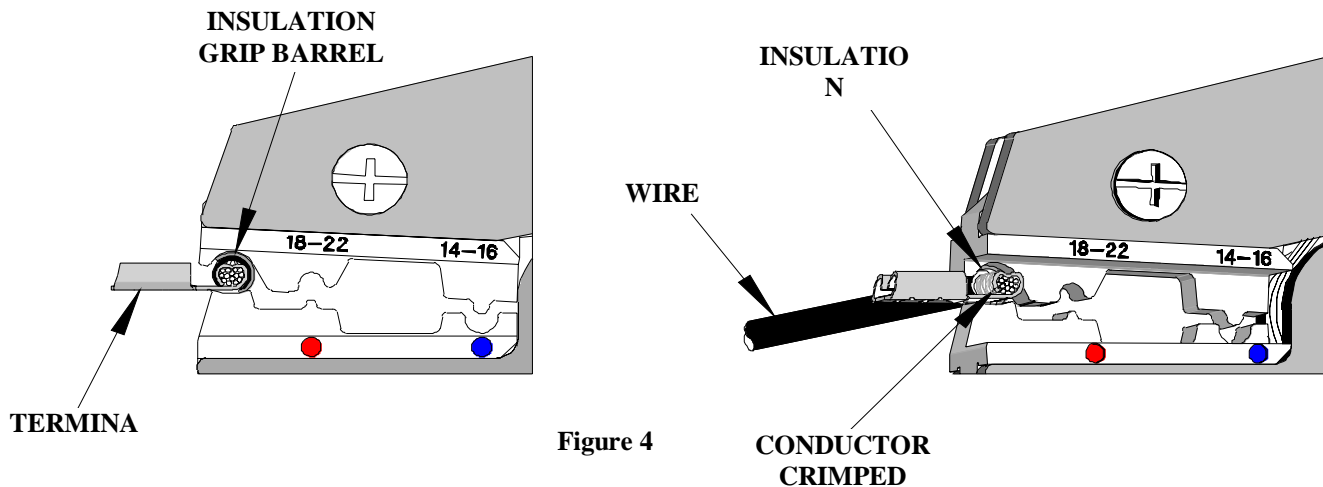


Figure 4

## Maintenance

It is recommended that each operator of the tool be made aware of, and responsible for, the following maintenance steps:

1. Remove dust, moisture and other contaminants with a clean brush, or soft, lint-free cloth.
2. Do not use any abrasive materials that could damage the tool.
3. Make certain all pins; pivot points and bearing surfaces are protected with a thin coat of high quality machine oil. Do not oil excessively. The 64003-4200 (RHT-NIFG) was engineered for durability, but like any fine piece of equipment, it needs cleaning and lubrication for a maximum service life of trouble-free crimping. A light oil, such as 30 weight automotive oil used at the oil points shown in Figure 4, every 5,000 crimps or 3 months will significantly enhance the tool life and ensure a stable calibration.
4. When tool is not in use, keep the handles closed to prevent objects from becoming lodged in the crimping dies, and store the tool in a clean, dry area.

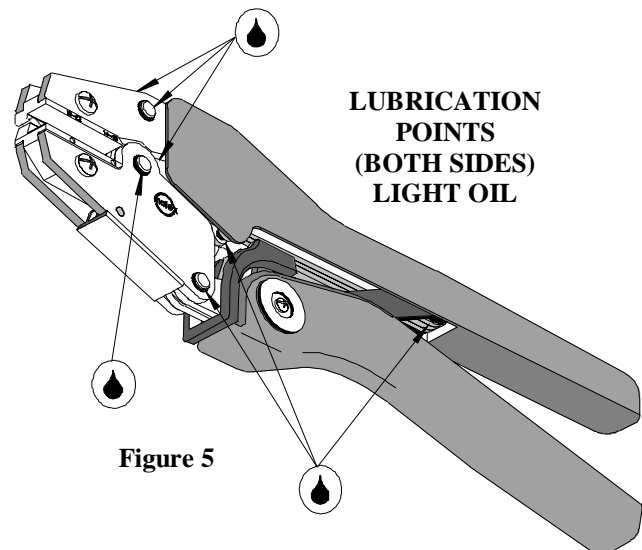


Figure 5

## Miscrimps or Jams

Should this tool ever become stuck or jammed in a partially closed position, **Do Not force the handles open or closed**. The tool will open easily by lifting the ratchet release lever (See Fig.5).

## How to Adjust Tool Preload (See Figure 6)

Over the life of the tool, it may be necessary to adjust tool handle preload force. Listed below are the steps required to adjust the crimping force of the hand tool to obtain proper crimp conditions:

1. Remove the screw and plastic cover washer. Note the setting wheel position.
2. Lift the setting wheel off the axle. Turn the eccentric axle with a screwdriver.
3. Turning the eccentric axle counter-clockwise (CCW) will increase handle force.
4. Replace the setting wheel to the axle, aligning the nearest notch in the setting wheel to the dowel pin.
5. Replace the plastic cover washer and screw.
6. Check the crimp specifications after tool handle preload force is adjusted.

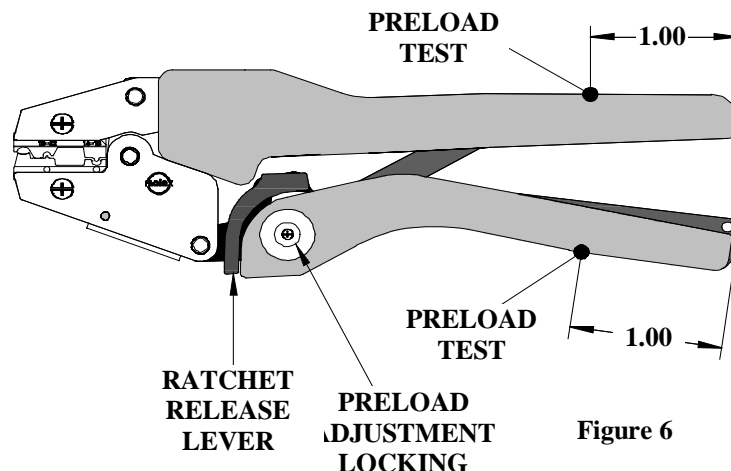
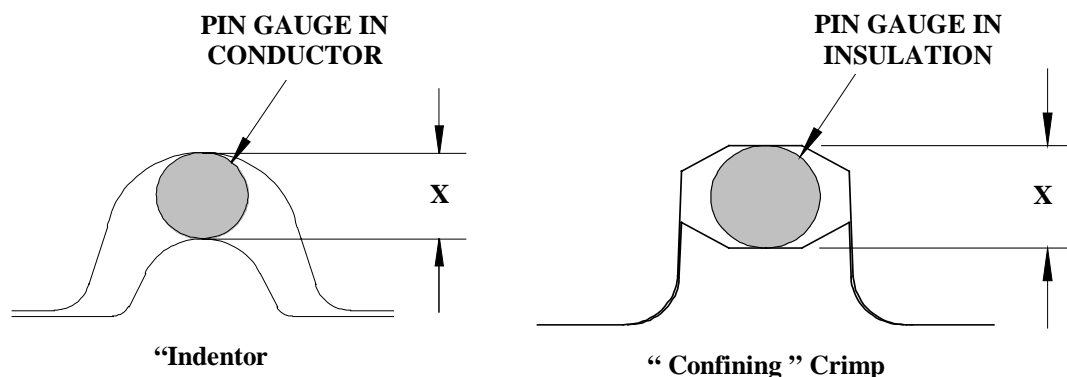


Figure 6

## Tool Calibration

A Certificate of Calibration (see last page) was supplied with the tool. To recalibrate this Tool, measurements should be taken from each conductor nest and compared to this chart. The tool should be lubricated before recalibration to ensure consistent measurements. Handle preload is factory set to 25-45 LBS. See How to Adjust Tool Preload (see Figure 5) to recalibrate.



| Nest Color Code                               | Wire Range |                 | “X” Dimension Conductor Crimp |      |       | Crimp Inspection Marking |
|---|------------|-----------------|-------------------------------|------|-------|--------------------------|
|   | AWG        | mm <sup>2</sup> | Mean                          | Go   | No Go |                          |
| Blue  | 14 - 16    | 2.00 – 1.30     | .050                          | .047 | .052  | ---                      |
| Red   | 18 - 22    | 0.80 - 0.35     | .042                          | .040 | .044  | ---                      |
| <b>Pin Diameter for Insulation Grip Crimp</b> |            |                 |                               |      |       |                          |
| ----  | 14 - 22    | 2.00 – 1.30     | .096                          | .092 | .100  | ---                      |

**Caution:** Repetitive use of this tool should be avoided.

### Warranty

This tool is for electrical terminal crimping purposes only. This tool is made of the best quality materials. All vital components are long life tested. All tools are warranted free of manufacturing defects for a period of **30 days**. Should such a defect occur, we will repair or exchange the tool free of charge. This repair or exchange will not be applicable to altered, misused or damaged tools. This tool is designed for hand use only. Any clamping, fixturing, or use of handle extensions voids this warranty.

Hand held crimping tools are intended for low volume, prototyping, or repair requirements only.

## PARTS LIST

| Item                    | Order No          | Description                            | Quantity        |
|-------------------------|-------------------|--|-----------------|
|                         | <b>64003-4200</b> | <b>Hand Crimp Tool</b>                 | <b>(Fig. 7)</b> |
| 1                       | 64000-0076        | Repair Kit (Springs, Pins and E-Rings) | 1               |
| 2                       | 63810-0000        | Handle                                 | 1               |
| 3                       | 64003-4270        | Tooling Kit                            | 1               |
| <b>Tooling Kit Only</b> |                   |  |                 |
| 4                       | 64003-4201        | Conductor Punch                        | 1               |
| 5                       | 64003-4202        | Conductor Anvil                        | 1               |

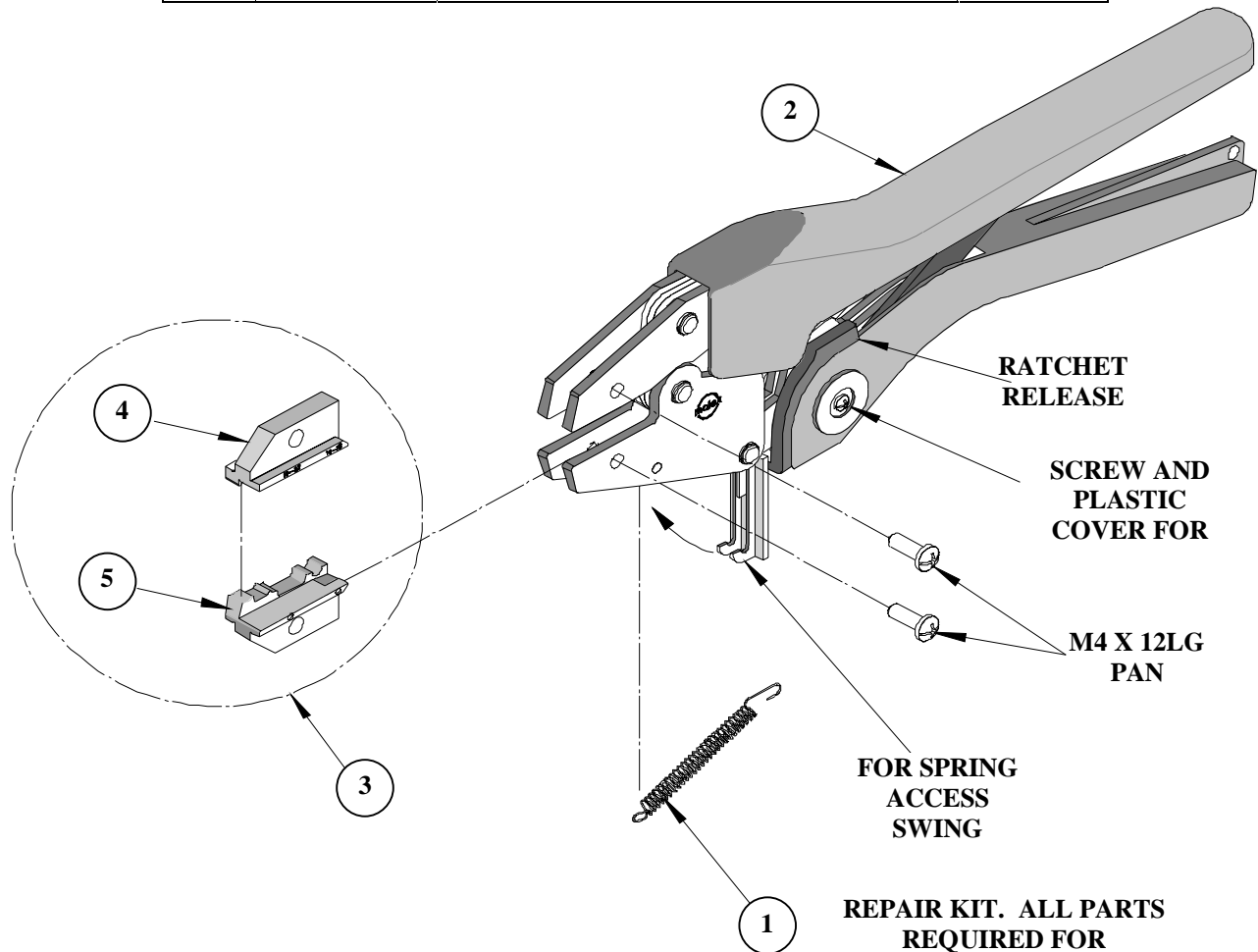
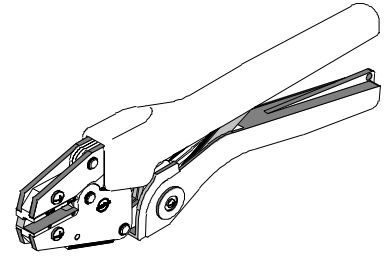


Figure 7



## Certificate of Calibration

Tool Order Number \_\_\_\_\_

Tool Eng. Number \_\_\_\_\_

Tool Revision \_\_\_\_\_

Serial Number \_\_\_\_\_

Date of Manufacture \_\_\_\_\_

Handle Load Range at 1 inch from the Tips = \_\_\_\_\_

Actual = \_\_\_\_\_

Pin Gauge of Conductor Nest/Nests or Slug height if the nest is the "F" Crimp style.

Range Conductor Nest # 1 = \_\_\_\_\_ -- Actual = \_\_\_\_\_

Range Conductor Nest # 2 = \_\_\_\_\_ -- Actual = \_\_\_\_\_

Range Insulation Grip Nest # 3 = \_\_\_\_\_ -- Actual = \_\_\_\_\_

Technician \_\_\_\_\_

Date of Calibration \_\_\_\_\_

Calibration should be done every 5,000 cycles or 3 months.  
Tools should be lubricated during this operation.

### Molex Application Tooling Group

1150 E. Diehl Road  
Naperville, IL 60563  
Tel: (630) 969-4550;  
Fax: (630) 505-0049