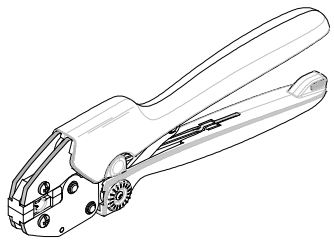
**Hand Crimp Tool**
**VersaKrimp™**

# Application Tooling Specification Sheet



**Order No. 64003-4400**
**Engineering No. RHT 1080**

## FEATURES

- A full cycle ratcheting hand tool ensures complete crimps
- Long handles for comfortable crimping with reduced crimping force
- Dedicated tooling for quality assembly.

## SCOPE

Products: VersaKrimp™ Ring Tongue Terminals and Splices 8 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 UL specifications for various wire sizes. The tensile strength is shown in pounds. It indicates the minimum acceptable force to break or separate the terminal from the conductor.

| Wire Size (AWG) | *UL - 486 A | *UL – 486 C | *UL – 310 |
|---|---|---|---|
| 8 | 90 | 45 | N/A |

*UL - 486 A - Terminals (Copper conductors only)
*UL - 486 C - Butt Splices, Parallel Splices

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.

| Wire Size: 8 AWG 8.50mm² | | | |
|---|---|---|---|
| Terminal Order No. | Terminal | Wire Strip Length | |
| | Eng No. (REF) | In | mm |
| 19193-0143 | D-350-06 | .438 | 11.11 |
| 19193-0144 | D-350-06R90 | .438 | 11.11 |
| 19193-0146 | D-350-08 | .438 | 11.11 |
| 19193-0147 | D-350-08R90 | .438 | 11.11 |
| 19193-0149 | D-350-10 | .438 | 11.11 |
| 19193-0152 | D-350-14 | .438 | 11.11 |
| 19193-0154 | D-350-14R90 | .438 | 11.11 |
| 19193-0157 | D-350-56 | .438 | 11.11 |
| 19193-0159 | D-351-10 | .438 | 11.11 |
| 19193-0161 | D-351-10R90 | .438 | 11.11 |
| 19193-0163 | D-351-14 | .438 | 11.11 |
| 19193-0165 | D-351-14R90 | .438 | 11.11 |
| 19193-0167 | D-351-38 | .438 | 11.11 |
| 19193-0171 | D-351-56 | .438 | 11.11 |

| Wire Size: 8 AWG 8.50mm² | | | |
|---|---|---|---|
| Terminal Order No. | Terminal | Wire Strip Length | |
| | Eng No. (REF) | In | mm |
| 19193-0175 | D-351-76 | .438 | 11.11 |
| 19193-0178 | D-352-10 | .438 | 11.11 |
| 19193-0179 | D-352-12 | .438 | 11.11 |
| 19193-0182 | D-352-14 | .438 | 11.11 |
| 19193-0184 | D-352-38 | .438 | 11.11 |
| 19193-0185 | D-352-56 | .438 | 11.11 |
| 19193-0186 | D-352-58 | .438 | 11.11 |
| 19193-0187 | D-352-76 | .438 | 11.11 |
| 19193-0190 | D-353-12 | .438 | 11.11 |
| 19193-0191 | D-353-14 | .438 | 11.11 |
| 19193-0192 | D-353-34 | .438 | 11.11 |
| 19193-0193 | D-353-38 | .438 | 11.11 |
| 19193-0194 | D-353-56 | .438 | 11.11 |
| 19193-0195 | D-353-58 | .438 | 11.11 |

| Wire Size: 8 AWG 8.50mm² | | | |
|---|---|---|---|
| Terminal Order No. | Terminal | Wire Strip Length | |
| | Eng No. (REF) | In | mm |
| 19193-0196 | D-353-76 | .438 | 11.11 |
| 19193-0198 | D-356-06 | .438 | 11.11 |
| 19193-0200 | D-356-08 | .438 | 11.11 |
| 19193-0202 | D-356-10 | .438 | 11.11 |
| 19193-0204 | D-356-14 | .438 | 11.11 |
| 19193-0506 | D-356-14R90 | .438 | 11.11 |

| Wire Size: 8 AWG 8.50mm² | | | |
|---|---|---|---|
| Terminal Order No. | Terminal | Wire Strip Length | |
| | Eng No. (REF) | In | mm |
| 19193-0527 | D-351-56R90 | .438 | 11.11 |
| 19203-0244 | D-T-350-10 | | |
| 19203-0245 | D-T-350-14 | | |
| 19205-0004 | D-355 | .312 | 7.92 |
| 19215-0034 | D-354 | .375 | 9.53 |
| 19215-0037 | DC-354 | .375 | 9.53 |

# OPERATION

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

## Crimping Terminals

1. Insert the wire into the terminal. Then insert the terminal in the nest with the barrel up and centered in the nest.
2. Push on wire to assure it is still fully seated in the terminal. See Figure 1 and 2. Cycle the tool.
3. When crimping butt splices, insert the wire into the butt splice. Position the splice and the wire into the nest with conductor crimp on the conductor barrel of the splice. The splice should be approximately centered inside the tooling nests. See Figure 3. Cycle the tool.
4. When crimping parallel splices insert the first wire into one end of splice then insert the second wire into the opposite end of the parallel splice. This procedure will crimp both wires at the same time. Make sure the wires are fully seated into the parallel splice. Position the splice and the wires in the nest with conductor crimp on the conductor barrel of the splice. The splice should be approximately centered inside the tooling nests. See Figure 4. Cycle the tool.

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

5. Remove the crimp and inspect for proper crimp location
6. Molex offers a Crimp Inspection Handbook for closed barrel industrial product. See our website or contact your sales engineer.

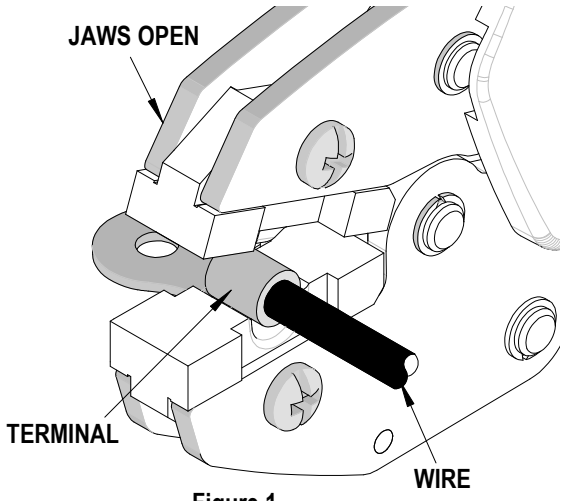


Figure 1

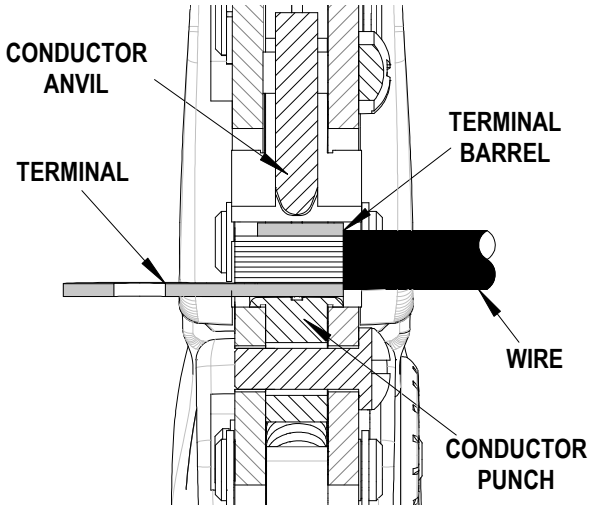


Figure 2

**Note**: Whenever crimping unbrazed product, make sure the seam of the terminal is oriented up or down in the tool. This will provide higher pull force values.

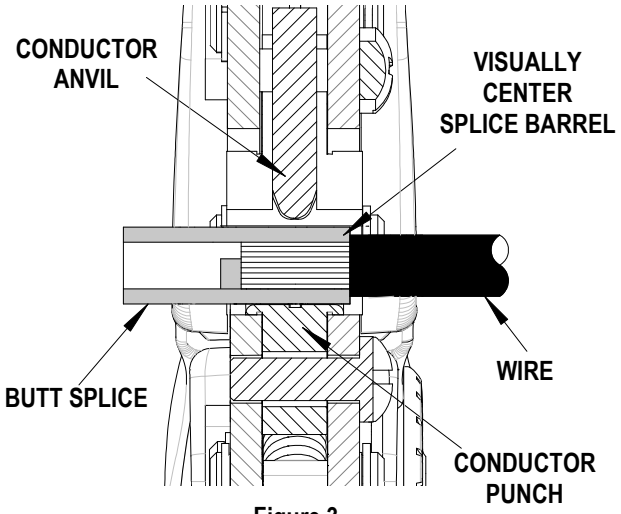



Figure 3

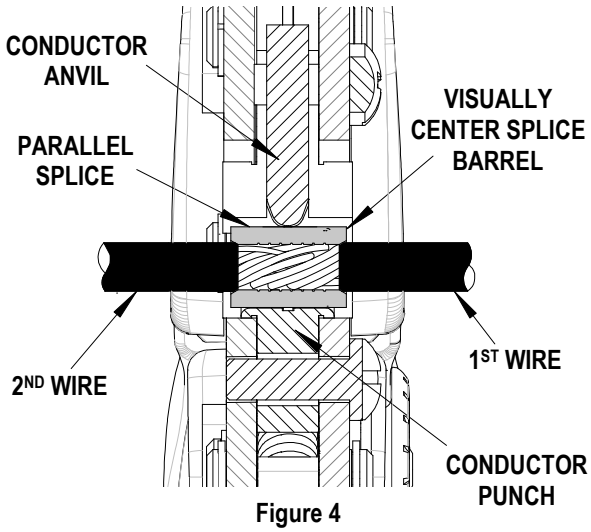



Figure 4

## Maintenance

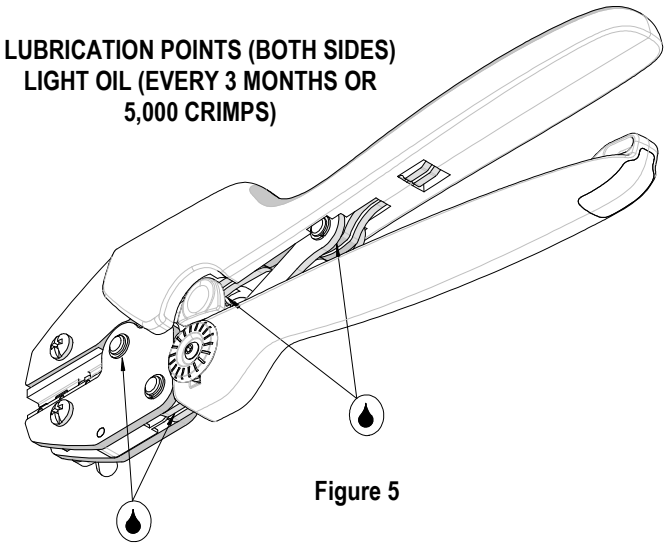



Figure 5

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. This tool 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 5, 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.

## 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 pressing the ratchet release lever. See Figure 6.

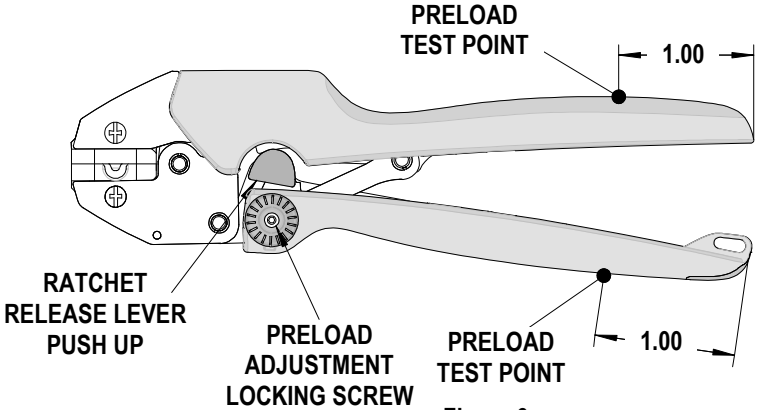



Figure 6

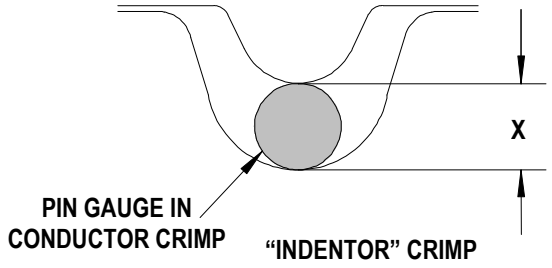
## How to Adjust Tool Preload (See Figure 6)

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 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 crimp force is adjusted.

## Tool Calibration

A Certificate of Calibration (see last page) was supplied with the tool. To recalibrate this tool, pin gauge measurements should be taken in each conductor nest and compared to this chart. The tool should be lubricated prior to recalibration to ensure consistent measurements. Handle preload is factory set to 25-45 LBS. See How to Adjust Tool Preload (See Figure 6) to recalibrate.




| Nest Color Code | Wire Range | | "X" Dimension Conductor Crimp | | | Crimp Inspection Marking |
|---|---|---|---|---|---|---|
| | AWG | mm² | Mean | Go | No Go | |
| N/A | 8 | 13.30 | .115 | .109 | .122 | 8 |

## 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 to be 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.

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

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

**CAUTION**: Molex crimp specifications are valid only when used with Molex terminals, applicators and tooling.

# PARTS LIST

| Item | Order No | Description | Quantity |
|---|---|---|---|
| | **64003-4400** | **Hand Crimp Tool** | **Figure 7** |
| 1 | 64000-0076 | Repair Kit (Springs, Pins and E-Rings) | 1 |
| 2 | 63810-0000 | Handle | 1 |
| 3 | 64003-4470 | Tooling Kit | 1 |
| **Tooling Kit Only** | | | |
| 4 | 64001-4401 | Conductor Punch | 1 |
| 5 | 64001-4402 | Conductor Anvil | 1 |

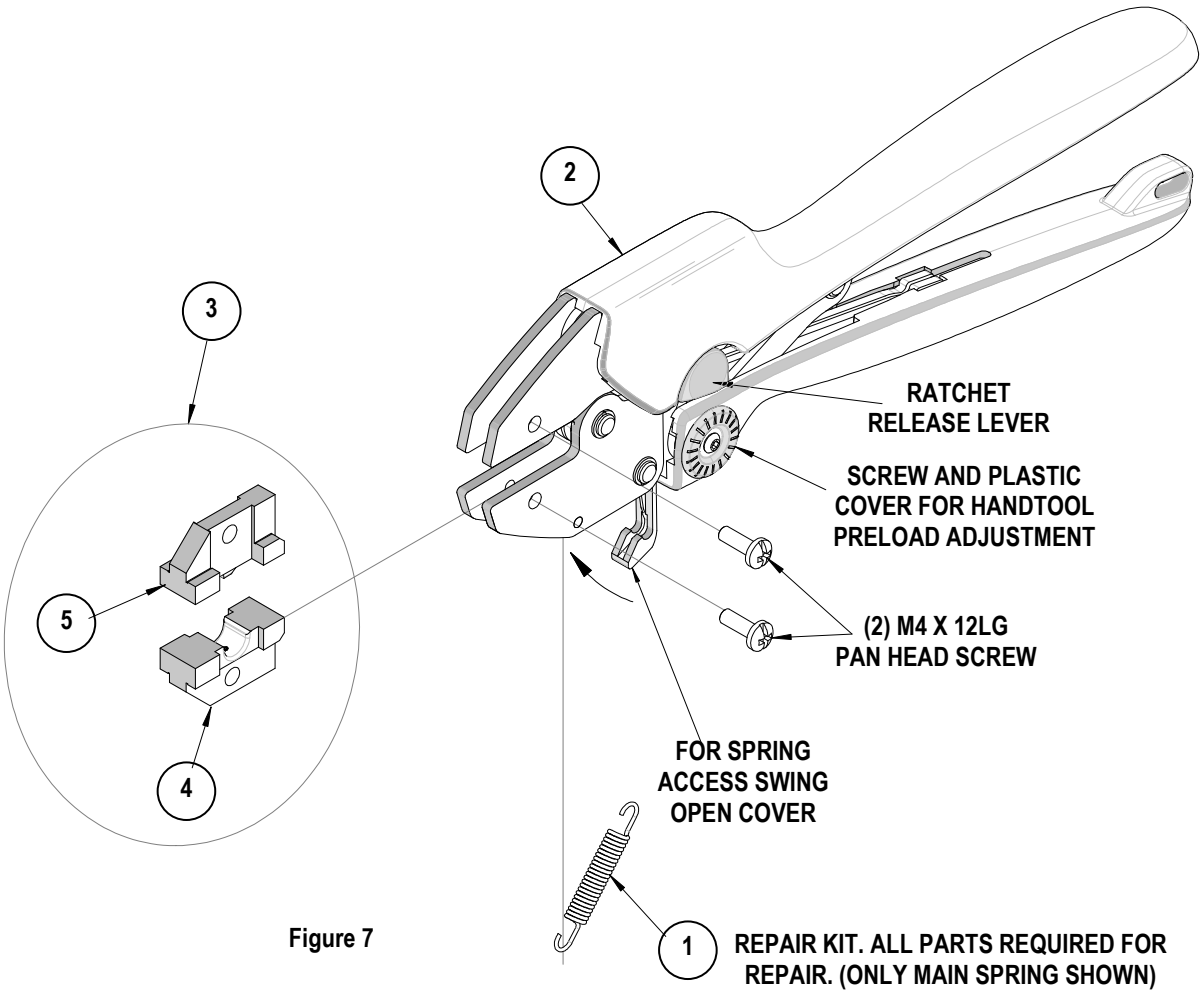
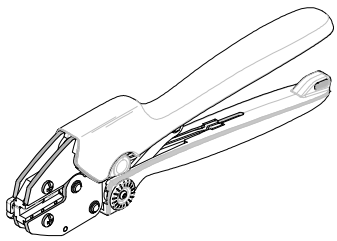



Figure 7

| | | |
|---|---|---|
| **Hand Crimp Tool**<br>**Versakrimp™** | **Certificate of Calibration** |  <br>**Order No. 64003-4400**<br>**Engineering No. RHT 1080** |

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. The nest is the indenter crimp style.

Conductor Nest Range = _____-- Actual = _____

Technician _____

Date of Calibration _____

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

Visit our Web site at http://www.molex.com