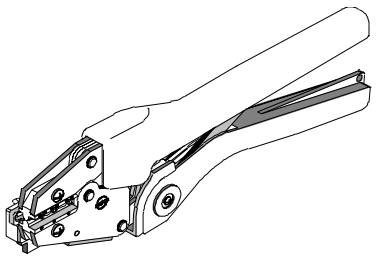
Hand Crimp Tool
Operating Instruction and Specifications Sheet
Part No. 64001-3200
Eng. No. RHT 5770
(Replaces 19285-0050 and 19285-0143)



FEATURES

- A full cycle ratcheting hand tool ensures complete crimps
- Long handles for comfortable crimping with reduced crimping force
- 3-nested tool eliminates the need for additional tools
- A precision user-friendly terminal locator / wire stop holds terminals in the proper crimping position for each of the three nests

SCOPE

Perma-Seal™ Terminals and Splices 10–22 AWG (Rings, Spades, Hooks, 3 and 4-Ways, and Splices).

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 terminal from the conductor.

Wire Size (AWG)	UL – 486 A	UL – 486 C
22	8	8
20	13	10
18	20	10
16	30	15
14	50	25
12	70	35
10	80	40

*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: 18 – 22 AWG 0.80 – 0.35 mm²					
Terminal No.	Terminal Eng No. (REF)	Wire Strip Length		Insul. Dia. Max.	
		In.	mm	In.	mm
19040-0001	19040-0001	.300	7.60	.190	4.83
19164-0003	SA-221-10	.281	7.14	.215	5.46
19164-0004	SA-222-14	.281	7.14	.215	5.46
19164-0005	SA-226-38	.281	7.14	.215	5.46
19164-0006	SA-235-06	.281	7.14	.215	5.46
19164-0007	SA-235-08	.281	7.14	.215	5.46
19164-0008	SA-235-10	.281	7.14	.215	5.46
19164-0011	SA-2YCX	.281	7.14	.215	5.46
19164-0013	SAA-22-18	.281	7.14	.210	5.33
19164-0085	SA-221-06	.281	7.14	.215	5.46
19164-0086	SA-221-08	.281	7.14	.215	5.46

Wire Size: 14 – 16 AWG 2.00 – 1.30 mm²			
Terminal No.	Terminal Eng No. (REF)	Wire Strip Length	Insul. Dia. Max.

		In.	mm	In.	mm
19040-0002	19040-0002	.300	7.60	.200	5.08
19164-0020	SB-218-38	.281	7.14	.235	5.97
19164-0021	SB-219-10	.281	7.14	.235	5.97
19164-0026	SB-225-14	.281	7.14	.235	5.97
19164-0027	SB-225-56	.281	7.14	.235	5.97
19164-0028	SB-227-06	.281	7.14	.235	5.97
19164-0029	SB-227-08	.281	7.14	.235	5.97
19164-0030	SB-227-10	.281	7.14	.235	5.97
19164-0031	SB-237-04	.281	7.14	.235	5.97
19164-0032	SB-237-06	.281	7.14	.235	5.97
19164-0033	SB-237-08	.281	7.14	.235	5.97
19164-0034	SB-237-10	.281	7.14	.235	5.97
19164-0042	SB-2YCX	.281	7.14	.235	5.97
19164-0044	SBB-16-14	.375	9.53	.200	5.08
19164-0141	SB-219-06	.281	7.14	.235	5.97
19164-0142	SB-219-08	.281	7.14	.235	5.97

Wire Size: 10 – 12 AWG 5.00 – 3.00 mm²					
Terminal No.	Terminal Eng No. (REF)	Wire Strip Length		Insul. Dia. Max.	
		In.	mm	In.	mm
19040-0003	19040-0003	.300	7.60	.280	7.11
19164-0056	SC-12-10	.375	9.53	.280	7.11
19164-0058	SC-201-12	.438	11.12	.310	7.87
19164-0060	SC-228-04	.438	11.12	.310	7.87
19164-0061	SC-228-06	.438	11.12	.310	7.87
19164-0062	SC-228-08	.438	11.12	.310	7.87

Wire Size: 10 – 12 AWG 5.00 – 3.00 mm²					
Terminal No.	Terminal Eng No. (REF)	Wire Strip Length		Insul. Dia. Max.	
		In.	mm	In.	mm
19164-0065	SC-230-10	.438	11.12	.310	7.87
19164-0066	SC-230-14	.438	11.12	.310	7.87
19164-0067	SC-230-56	.438	11.12	.310	7.87
19164-0068	SC-240-38	.438	11.12	.310	7.87
19164-0069	SC-241-06	.438	11.12	.310	7.87
19164-0070	SC-241-08	.438	11.12	.310	7.87
19164-0072	SC-268-10	.438	11.12	.310	7.87
19164-0073	SC-268-14	.438	11.12	.310	7.87
19164-0074	SC-2YCX	.438	11.12	.310	7.87

OPERATION

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

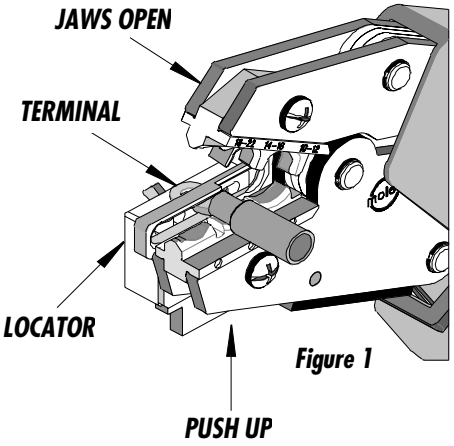


Figure 1

Crimping Terminals

1. *Push up on the locator blade and position the terminal with the barrel facing up into the color-coded nest, centering the barrel in the lower jaw as shown in Figure 1. Release the locator blade to hold the terminal in position.*
   Note: The locator is used to hold the terminal, not to position the terminal.
2. *Partially close the hand tool jaws until the connector is held snug in place. See Figure 2.*
3. *Insert the properly stripped wire into the terminal barrel (See Figure 2 and 3).*
4. *Complete the crimp by closing the hand tool handles until they release.*

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

5. *Lift the locator blade and remove the crimped terminal. Inspect for proper crimp location, and check for insulation closure. Locator is adjustable up and down to keep terminals straight after crimping. Molex offers a Crimp Inspection Handbook for closed barrel industrial product. See our website or contact your sales engineer.*

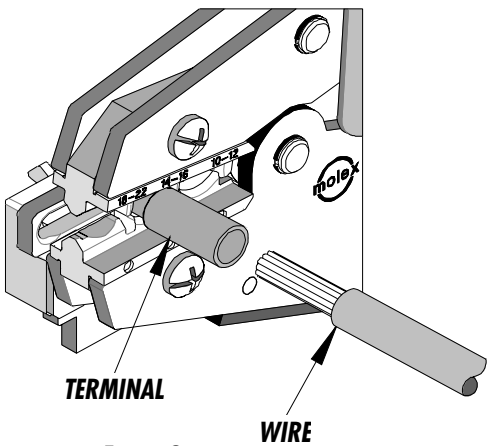


Figure 2

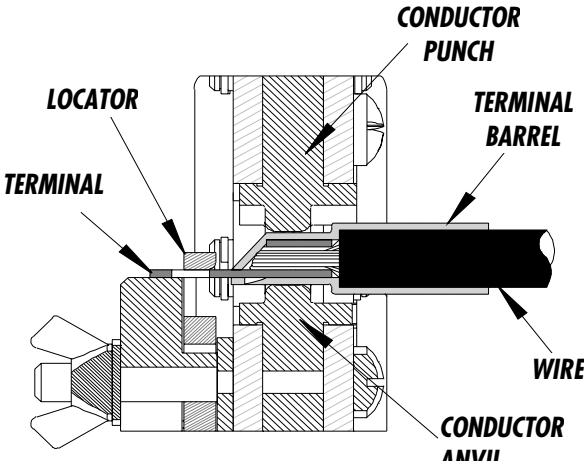


Figure 3

Crimping Butt Splices

When crimping butt splices, or 3-way and 4-way terminals the locator must be removed.

1. Position the splice into the nest.
2. Partially close the tool to hold the splice in place.
3. Insert the properly stripped wire into the splice. The wires end should butt against the tab in the terminal (See Figure 4). Cycle the tool.
4. Remove the crimped splice. Inspect for proper crimp location.
5. Rotate the butt splice terminal 180°, so that the opposite end of splice is in the nest.
6. Repeat steps 2 thru 4.

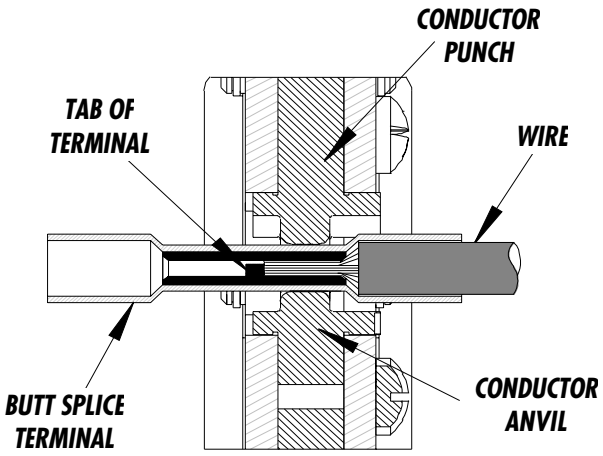


Figure 4

Note: Whenever crimping without the locator, make sure the seam of the terminal is oriented up or down in the tool if using unbrazed product, as this will provide higher pull force values.

Maintenance

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

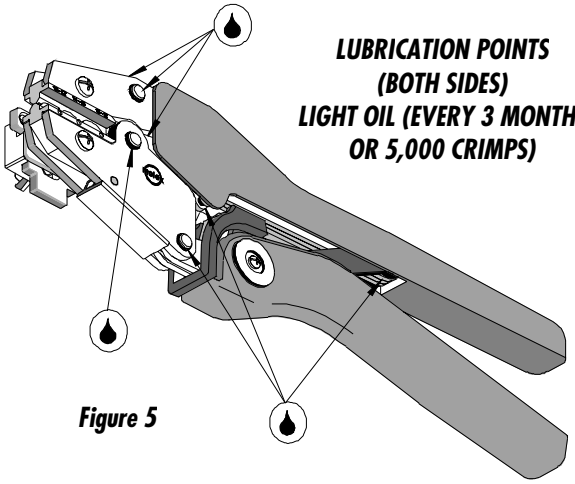


Figure 5

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 64001-3200 (RHT-5770) 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).

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.

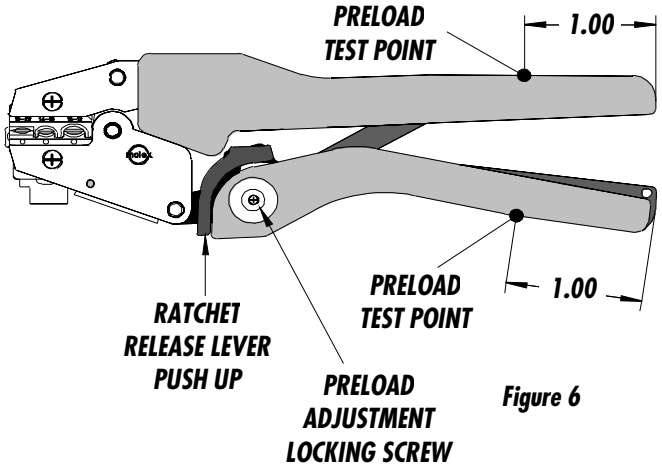
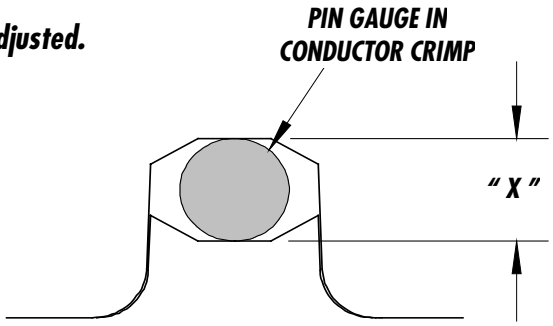


Figure 6

Tool Calibration

A Certificate of Calibration (see last page) was supplied with the tool. To recalibrate this tool, pin gauge measurements should be taken in 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 6) to recalibrate.



" CONFINING" CRIMP

Nest Color Code	Wire Range		"X" Dimension Conductor Crimp			Crimp Inspection Marking
	AWG	mm^2	Mean	Go	No Go	
Red	18 - 22	0.35 - 0.80	.092	.090	.094	---
Blue	14 - 16	1.30 - 2.00	.107	.104	.109	---
Yellow	10 - 12	3.30 - 5.00	.141	.138	.144	---

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 alter, 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.

Caution: Repetitive use of this tool should be avoided.

PARTS LIST

Item	Order No	Description	Quantity
	64001-3200	Hand Crimp Tool	(Fig. 7)
1	64000-0076	Repair Kit (Springs, Pins and E-Rings)	1
2	63810-0000	Handle	1
3	64001-3275	Locator Assembly	1
4	64001-3270	Tooling Kit	1
Tooling Kit Only			
5	64001-3201	Conductor Punch	1
6	64001-3202	Conductor Anvil	1

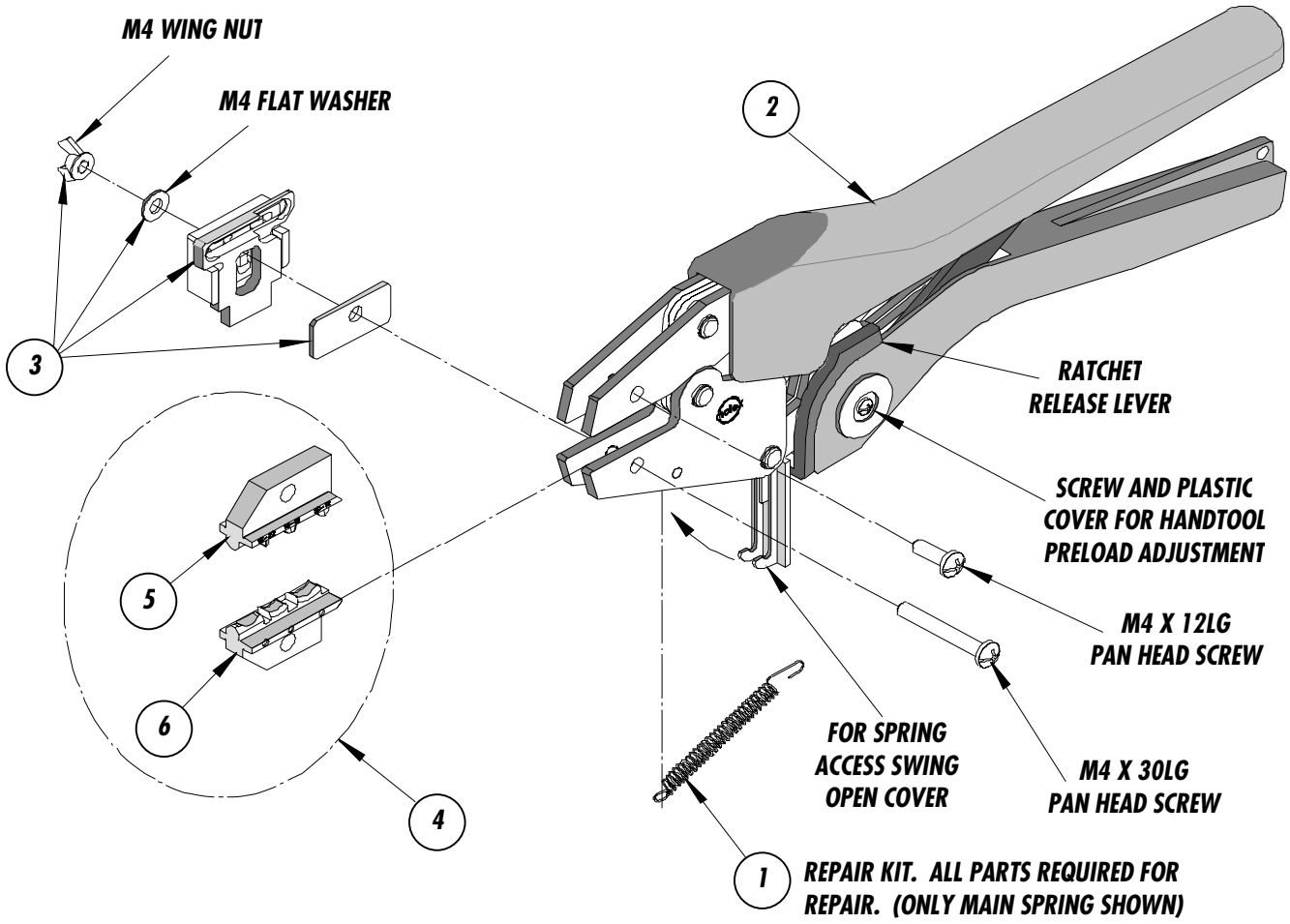
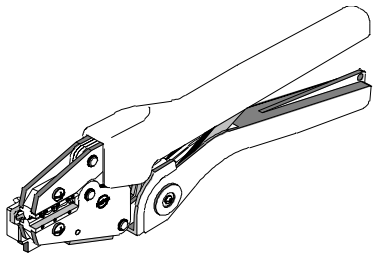


Figure 7



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 Gage 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 Conductor 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.

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