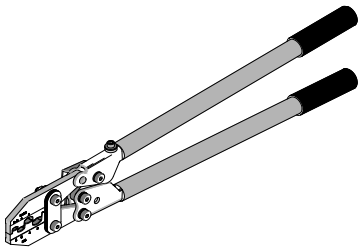
Order No. 64001-3900
Engineering No. MCT-8200
(Replaces 19284-0035)

Application Tooling Specification



FEATURES

- Heavy-duty cable crimping tool with handheld precision
- Tool can be used with insulated and non-insulated terminals in wire sizes 2-8 AWG
- A ratchet feature is standard
- Perfect for maintenance and lower-volume crimping
- Long handles provide maximum mechanical advantage, which reduces operator fatigue

SCOPE

Products: Perma-Seal, InsulKrimp, NylaKrimp, VersaKrimp Terminals and Splices 2-8 AWG. Fully insulated and non-insulated Ring Tongue terminals and Step Down Butt and Parallel 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 UL and Government specifications (MIL-T-7928) 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 486A	*UL 486C	**Military
8	90	45	225
6	100	50	300
4	140	—	400
2	180	—	550

***UL 486A:** Terminals (Copper conductors only)
***UL 486 C:** Butt splices, parallel splices
****Military:** Military-approved terminals only as listed

The following is a partial list of the product part numbers and their specifications that this tool is designed to run:

Wire Size: 8 8.50mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum	
		In.	mm	In.	mm
19067-0003	D-950-08	.375	9.53	.350	8.89
19067-0006	D-950-10	.375	9.53	.350	8.89
19067-0008	D-950-14	.375	9.53	.350	8.89
19067-0012	D-950-56	.375	9.53	.350	8.89
19067-0016	D-951-10	.375	9.53	.350	8.89
19067-0018	D-951-14	.375	9.53	.350	8.89
19067-0022	D-951-38	.375	9.53	.350	8.89
19067-0025	D-951-56	.375	9.53	.350	8.89
19067-0028	D-952-12	.375	9.53	.350	8.89
19067-0030	D-952-38	.375	9.53	.350	8.89
19067-0031	D-952-76	.375	9.53	.350	8.89
19067-0032	D-953-12	.375	9.53	.350	8.89
19067-0033	D-953-34	.375	9.53	.350	8.89
19067-0034	D-953-58	.375	9.53	.350	8.89

Wire Size: 8 8.50mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum	
		In.	mm	In.	mm
19067-0037	D-956-08	.375	9.53	.350	8.89
19067-0039	D-956-10	.375	9.53	.350	8.89
19067-0041	D-956-14	.375	9.53	.350	8.89
19067-0128	D-951-76	.375	9.53	.350	8.89
19067-0129	D-952-58	.375	9.53	.350	8.89
19071-0134	D-650-08X	.315	8.00	.385	9.78
19071-0136	D-650-10X	.315	8.00	.385	9.78
19071-0140	D-650-14X	.315	8.00	.385	9.78
19071-0144	D-650-56X	.315	8.00	.385	9.78
19071-0146	D-651-10X	.315	8.00	.385	9.78
19071-0148	D-651-14X	.315	8.00	.385	9.78
19071-0153	D-651-56X	.315	8.00	.385	9.78
19071-0162	D-652-38X	.315	8.00	.385	9.78
19071-0164	D-652-58X	.315	8.00	.385	9.78
19071-0166	D-652-76X	.315	8.00	.385	9.78

Wire Size: 8 8.50mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum	
		In.	mm	In.	mm
19071-0173	D.-653-58X	.315	8.00	.385	9.78
19071-0176	D-656-06X	.315	8.00	.385	9.78
19071-0178	D-656-08X	.315	8.00	.385	9.78
19071-0180	D-656-10X	.315	8.00	.385	9.78
19071-0182	D-656-14X	.315	8.00	.385	9.78
19071-0334	D-652-12X	.315	8.00	.385	9.78
19154-0041	D-654X	.432	10.97	.385	9.78
19154-0044	DC-654X	.420	10.66	.380	9.65
19154-0047	ED-662X	.500	12.70	.435	11.05
19164-0079	SD-8	.387	9.83	.370	9.40
19164-0080	SD-656-10	.300	7.60	.375	9.54
19164-0081	SD-651-14	.300	7.60	.375	9.54
19164-0082	SD-652-38	.300	7.60	.375	9.54
19164-0083	SD-651-56	.300	7.60	.375	9.54
19164-0457	SD-652-12	.300	7.60	.375	9.54
19164-0458	SD-253-58	.300	7.60	.375	9.54
19164-0459	SD-253-34	.300	7.60	.375	9.54
19164-0833	SDC-354	.300	7.60	.375	9.54
19193-0146	D-350-08X	.315	8.00	—	—
19193-0149	D-350-10	.315	8.00	—	—
19193-0157	D-350-56	.315	8.00	—	—
19193-0159	D-351-10	.320	8.13	—	—
19193-0163	D-351-14	.320	8.13	—	—
19193-0184	D-352-38	.330	8.38	—	—
19193-0186	D-352-56	.330	8.38	—	—
19193-0187	D-352-76	.330	8.38	—	—
19193-0192	D-353-34	.330	8.38	—	—
19193-0195	D-353-58	.330	8.38	—	—
19193-0198	D-356-06	.358	9.08	—	—
19193-0204	D-356-14	.358	9.08	—	—
19202-0054	D-754	.488	12.40	—	—
19205-0004	D-355	.408	10.36	—	—
19215-0034	D-354	.387	9.83	—	—
19215-0037	DC-354	.400	10.16	—	—
19215-0042	ED-362	.500	12.70	—	—

Wire Size: 6 16.0mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum.	
		In.	mm	In.	mm
19063-0050	E-757-10	.368	9.35	.345	8.76
19063-0052	E-757-14	.368	9.35	.345	8.76
19063-0062	E-758-12	.368	9.35	.345	8.76
19063-0066	E-758-58	.368	9.35	.345	8.76
19063-0069	E-760-08	.368	9.35	.345	8.76
19067-0045	E-957-10	.469	11.91	.428	10.87
19067-0047	E-957-14	.469	11.91	.428	10.87
19067-0052	E-957-38	.469	11.91	.428	10.87
19067-0055	E-957-56	.469	11.91	.428	10.87
19067-0059	E-957-76	.469	11.91	.428	10.87
19067-0061	E-958-12	.469	11.91	.428	10.87
19067-0063	E-958-38	.469	11.91	.428	10.87
19067-0065	E-958-76	.469	11.91	.428	10.87
19067-0067	E-960-08	.469	11.91	.428	10.87
19067-0069	E-960-10	.469	11.91	.428	10.87
19067-0071	E-960-14	.469	11.91	.428	10.87
19067-0073	E-960-56	.469	11.91	.428	10.87
19071-0188	E-657-10X	.469	11.91	.440	11.18
19071-0190	E-657-14X	.469	11.91	.440	11.18
19071-0193	E-657-38X	.469	11.91	.440	11.18
19071-0196	E-657-56X	.469	11.91	.440	11.18

Wire Size: 6 16.0mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum.	
		In.	mm	In.	mm
19071-0201	E-658-12X	.469	11.91	.440	11.18
19071-0208	E-658-76X	.469	11.91	.440	11.18
19071-0218	E-660-08X	.469	11.91	.440	11.18
19071-0221	E-660-10X	.469	11.91	.440	11.18
19071-0225	E-660-14X	.469	11.91	.440	11.18
19071-0229	E-660-56X	.469	11.91	.440	11.18
19154-0047	ED-662X	.500	12.7	.435	11.05
19193-0209	E-357-10	.395	9.65	—	—
19193-0212	E-357-14	.395	9.65	—	—
19193-0229	E-358-14	.375	9.52	—	—
19193-0230	E-358-38	.375	9.52	—	—
19193-0233	E-358-58	.375	9.52	—	—
19193-0234	E-358-76	.375	9.52	—	—
19193-0238	E-359-34	.375	9.52	—	—
19193-0243	E-360-08	.392	9.96	—	—
19193-0251	E-360-56	.392	9.96	—	—
19202-0055	E-762	.493	12.51	.345	8.76
19205-0006	E-361	.477	12.12	—	—
19215-0040	E-362	.500	12.70	—	—
19215-0042	ED-362	.500	12.70	—	—

Wire Size: 4 25.0mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum	
		In.	mm	In.	mm
19063-0078	F-766-10	.432	10.97	.432	10.97
19063-0079	F-766-12	.432	10.97	.432	10.97
19063-0080	F-766-14	.432	10.97	.432	10.97
19063-0086	F-767-56	.438	11.11	.432	10.97
19063-0089	F-770-34	.432	10.97	.432	10.97
19067-0076	F-966-12	.501	12.73	.510	12.95
19067-0077	F-966-14	.501	12.73	.510	12.95
19067-0078	F-966-38	.501	12.73	.510	12.95
19067-0079	F-966-56	.501	12.73	.510	12.95
19067-0080	F-966-76	.501	12.73	.510	12.95
19067-0081	F-967-10	.501	12.73	.510	12.95
19067-0082	F-967-14	.501	12.73	.510	12.95
19067-0084	F-967-56	.501	12.73	.510	12.95
19067-0085	F-969-12	.501	12.73	.510	12.95
19067-0087	F-969-58	.501	12.73	.510	12.95
19067-0088	F-970-34	.501	12.73	.510	12.95
19071-0231	F-666-10X	.425	10.80	.515	13.08
19071-0234	F-666-12X	.425	10.80	.515	13.08
19071-0237	F-666-14X	.425	10.80	.515	13.08
19071-0240	F-666-38X	.425	10.80	.515	13.08
19071-0243	F-666-56X	.425	10.80	.515	13.08
19071-0250	F-667-10X	.425	10.80	.515	13.08
19071-0253	F-667-14X	.425	10.80	.515	13.08
19154-0048	F-664X	.745	19.15	.605	15.37
19193-0254	F-366-10	.447	11.35	—	—
19193-0258	F-366-12	.447	11.35	—	—
19193-0261	F-366-14	.447	11.35	—	—
19193-0278	F-367-56	.447	11.35	—	—
19193-0283	F-369-38	.447	11.35	—	—
19193-0285	F-369-58	.447	11.35	—	—
19193-0289	F-370-34	.447	11.35	—	—
19193-0293	F-370-58	.447	11.35	—	—
19202-0056	F-764	.547	13.89	.432	10.97
19205-0007	F-365	.547	13.89	—	—
19215-0045	F-364	.547	13.89	—	—

Wire Size: 2 35.0mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum	
		In.	mm	In.	mm
19063-0094	G-774-14	.495	12.57	.512	13.00
19063-0097	G-774-58	.495	12.57	.512	13.00
19067-0090	G-974-12	.559	14.20	.600	15.24
19067-0092	G-974-38	.559	14.20	.600	15.24
19067-0093	G-974-56	.559	14.20	.600	15.24
19067-0094	G-974-76	.559	14.20	.600	15.24
19067-0095	G-975-10	.559	14.20	.600	15.24
19067-0096	G-975-14	.559	14.20	.600	15.24
19067-0097	G-975-38	.559	14.20	.600	15.24
19067-0098	G-975-56	.559	14.20	.600	15.24
19067-0099	G-977-34	.559	14.20	.600	15.24
19067-0100	G-977-58	.559	14.20	.600	15.24
19071-0272	G-674-12X	.490	12.45	.650	16.51
19071-0273	G-674-14X	.490	12.45	.650	16.51
19071-0277	G-674-58X	.490	12.45	.650	16.51
19071-0279	G-675-10X	.490	12.45	.650	16.51
19071-0281	G-675-14X	.490	12.45	.650	16.51
19071-0283	G-675-38X	.490	12.45	.650	16.51
19071-0285	G-675-56X	.490	12.45	.650	16.51
19154-0049	G-672X	.640	16.25	.650	16.51
19193-0297	G-374-14	.505	12.83	—	—
19193-0298	G-374-38	.505	12.83	—	—
19193-0299	G-374-56	.505	12.83	—	—
19193-0320	G-377-34	.490	12.45	—	—
19205-0008	G-373	.680	17.27	—	—
19215-0046	G-372	.610	15.49	—	—

MILITARY Wire Size: 8 8.50mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum	
		In.	mm	In.	mm
19193-0152	D-350-14	.315	8.00	—	—
19193-0167	D-351-38	.320	8.13	—	—
19193-0171	D-351-56	.320	8.13	—	—
19193-0179	D-352-12	.330	8.38	—	—
19193-0200	D-356-08	.358	9.08	—	—
19193-0202	D-356-10	.358	9.08	—	—

MILITARY Wire Size: 6 16.0mm²					
Terminal No.	Terminal Eng. No. (REF)	Wire Strip Length		Insulation Diameter Maximum.	
		In.	mm	In.	mm
19063-0054	E-757-38	.368	9.35	.345	8.76
19063-0056	E-757-56	.368	9.35	.345	8.76
19063-0071	E-760-10	.368	9.35	.345	8.76
19063-0073	E-760-14	.368	9.35	.345	8.76
19193-0216	E-357-38	.395	9.65	—	—
19193-0219	E-357-56	.395	9.65	—	—
19193-0226	E-358-12	.375	9.52	—	—
19193-0245	E-360-10	.392	9.96	—	—
19193-0248	E-360-14	.392	9.96	—	—

OPERATION

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

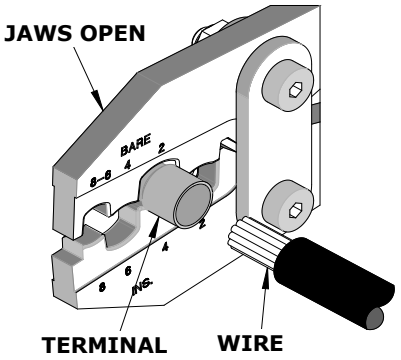


Figure 1

Crimping Terminals

1. Insert the terminal in the proper nest (for insulated or bare terminals) as marked on the tool with the barrel up and centered in the nest.
2. Partially close the tool to hold the terminal securely in place. See Figure 1.
3. Insert the properly stripped wire into the terminal barrel. See Figure 2. Cycle the tool.

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

4. Remove the crimp and inspect for proper crimp location. Molex offers a Crimp Inspection Handbook for closed barrel industrial products.

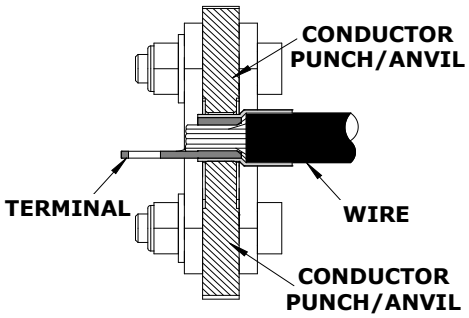


Figure 2

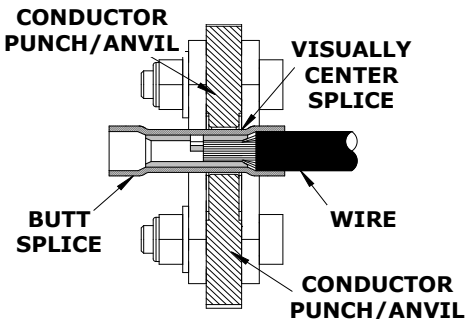


Figure 3

5. When crimping butt splices, insert the wire into the butt splice. Position the splice and the wire in proper nest with the 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.
6. When crimping parallel splices, insert the first wire into one end of splice, and 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 proper nest with the 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: Whenever crimping without the locator, make sure the seam of the terminal is oriented up or down in the tool if using unbrazed product because 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:

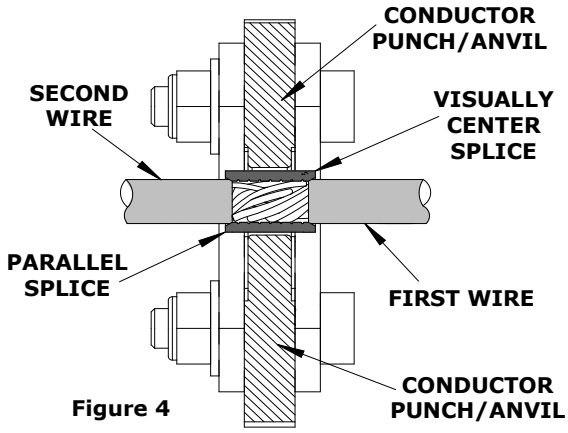


Figure 4

1. Remove dust, moisture and other contaminants with a clean brush or a 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 hand 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 6 every 5,000 crimps or 3 months will significantly enhance the tool life and ensure a stable calibration.
4. When the 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.

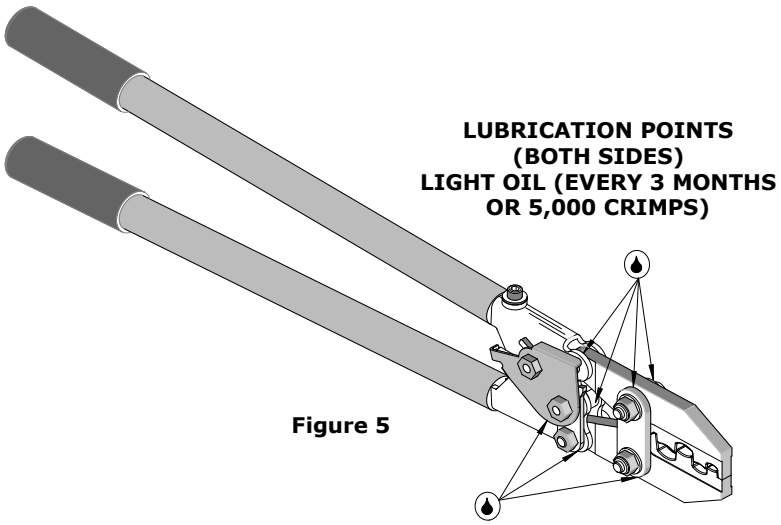


Figure 5

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 pushing the ratchet release lever forward. See Figure 6.

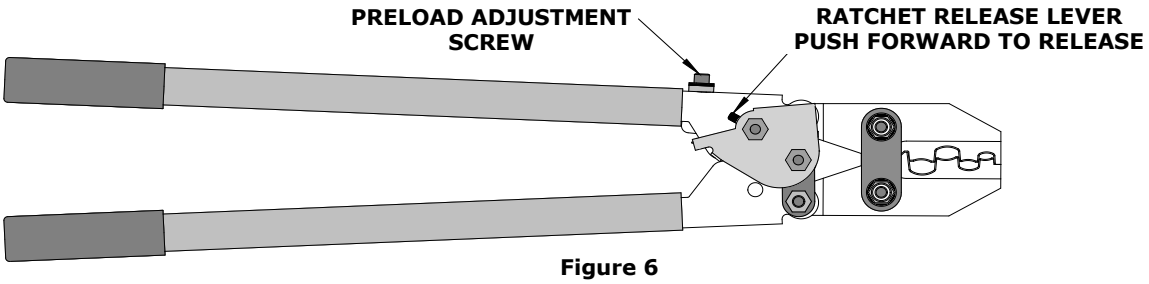


Figure 6

How to Adjust Tool Preload (See Figures 6 and 7)

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:

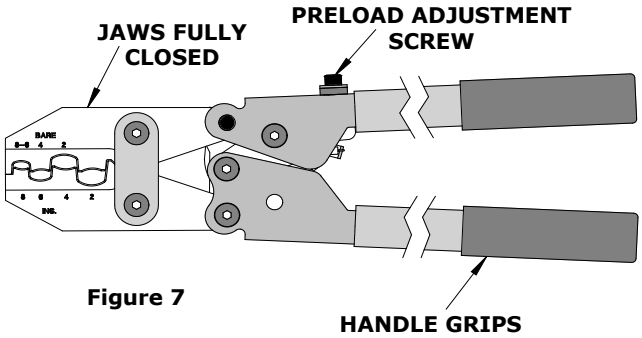


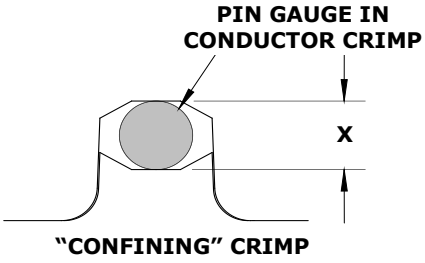
Figure 7

1. Close the tool handles until the jaws are fully closed and not under pressure. Put one handle grip on a weight scale and apply downward pressure against the opposite handle. Observe the highest pressure reading.
2. If tool needs adjustment, turn the preload adjustment screw. To increase the preload setting, tighten the screw slightly (clockwise). To decrease, loosen the screw (counterclockwise). The preload should be 30-35 pounds.
3. Recheck the preload after making a crimp. Check the crimp specifications after the tool handle preload 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 before recalibration to ensure consistent measurements. Handle preload is factory set to 30-35 pounds. See How to Adjust Tool Preload and Figure 7 to recalibrate.

Wire Range		"X" Dimension Conductor Crimp		
× AWG	mm²	Mean	Go	No Go
8	10.00	.170	.165	.176
6	16.00	.240	.235	.246
4	25.00	.330	.325	.336
2	35.00	.378	.373	.384



× AWG pin gauge readings are taken from nests marked "INS."

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, Molex will repair or exchange the tool free of charge. This 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.

Handheld crimping tools are intended for low-volume use, prototyping or repair requirements only.

Caution: Repetitive use of this tool should be avoided.

PARTS LIST

Item	Order No.	Description	Quantity
	64001-3900	**Hand Crimp Tool**	**Figure 8**
1	63810-0600	17” Handle (OPT #HS-HAND-432)	1
2	64001-3970	Tooling Kit	1
Tooling Kit Only			
3	64001-3901	Conductor Punch/Anvil	1
4	64001-3902	Conductor Punch/Anvil	1
5	64001-3910	Link	2
6	64001-3911	Rocker	1
7	63700-3374	Stripper Bolt	2
8	63700-3375	Nut	2
9	—	5/16” - Washer	2*

* The above purchased parts are available from an industrial supply company.

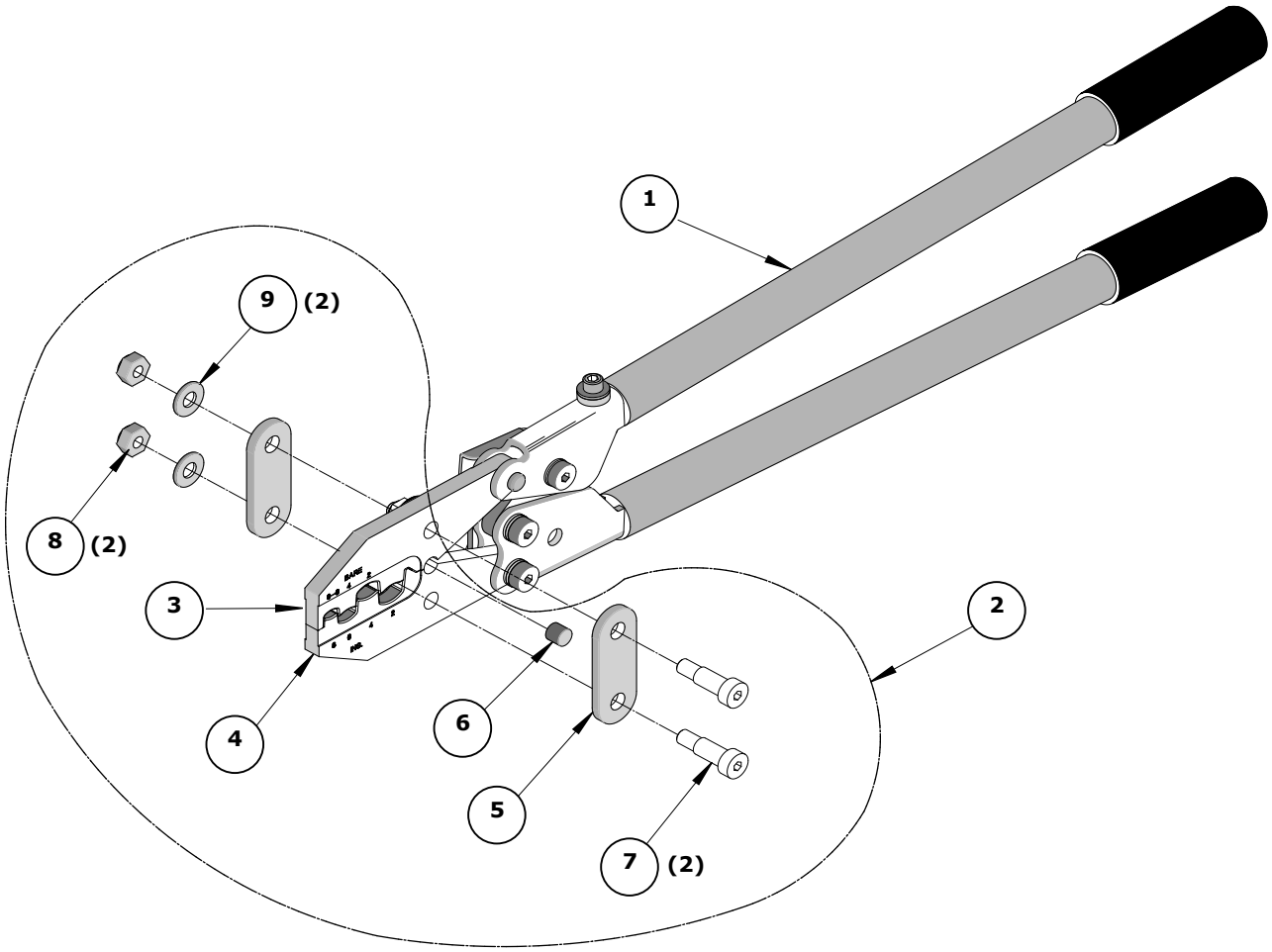
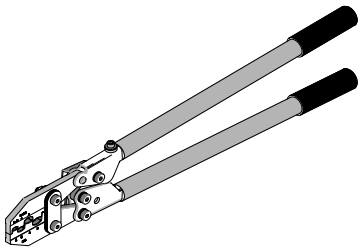


Figure 8



Certificate of Calibration

Tool Order Number: _____

Tool Eng. Number: _____

Tool Revision: _____

Serial Number: _____

Date of Manufacture: _____

Handle Load Range; see Tool Preload (page 6) =_____

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 Conductor Nest #3 =_____ Actual =_____

Range Conductor Nest #4 =_____ Actual =_____

Technician: _____

Date of Calibration: _____

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

Application Tooling Support

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E-Mail: applicationtooling@molex.com
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