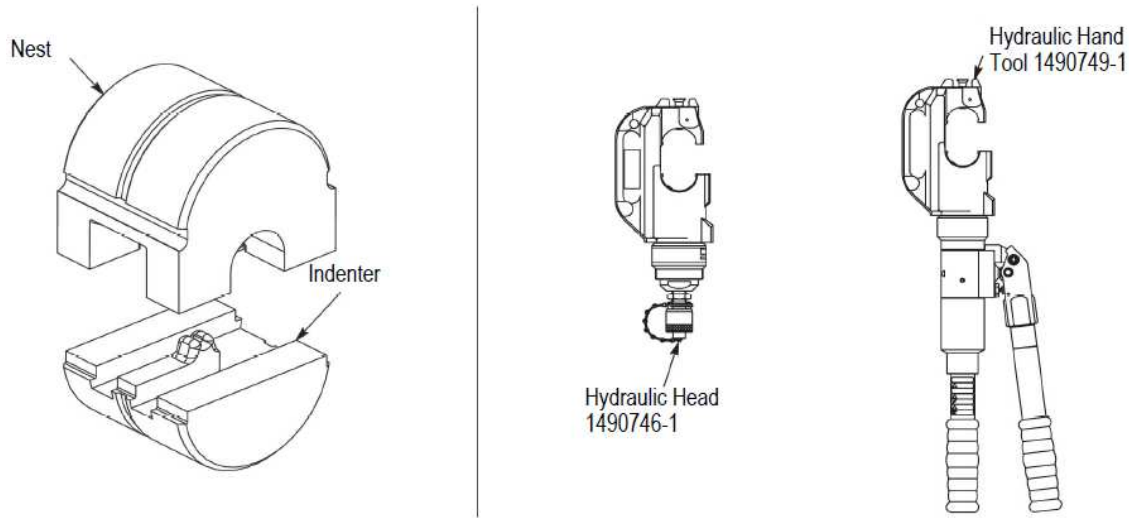


PROPER USE GUIDELINES

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 for extended-use, production operations is available.



Product	Die PN		Nominal Wire Size		MM ² (CMA) Range	Tooling			
	Nest	Indenter	MM ²	AWG		Battery Tool	Hydraulic Head	Hydraulic Hand Tool	
696675-1	1752682-1	1752681-2	7-8	8	6.637 – 10.539 [13,100 – 20,800]	2280308-[]	1490746-1	1490749-1	
696679-1	1752682-2								
322727-[]	1752680-8								
321576	1752680-7	1752681-3	13-15	6	10.539 – 16.771 [20,800 – 33,100]				
321060	1752680-6		21	4	16.771 – 26.653 [33,100 – 52,600]				
321064	1752680-5		34-35	2	26.653 – 42.411 [52,600 – 83,700]				
321066	1752680-4	1752681-1	59-60	1/0	42.411 – 60.511 [83,700 – 119,500]				N/A
321584	1752680-3		67-70	2/0	60.551 – 72.259 [119,500 – 150,500]				
327887	1752680-2		80-95	3/0	72.259 – 96.274 [150,500 – 190,000]				
321259-[]	1752680-1		100-125	4/0	96.274 – 117.049 [190,000 – 231,000]				

Figure 1

1. INTRODUCTION

This instruction sheet provides application instructions, maintenance, and inspection procedures for the dies listed in Figure 1. These dies crimp SOLISTRAND flag terminals to solid or stranded copper wire (also listed in Figure 1).

The dies are used in Hydraulic Head 1490746-1 and Hydraulic Hand Tool 1490749-1 (refer to Figure 1).



NOTE

All dimensions on this document are in metric units [with U. S. customary units in brackets]. Figures and illustrations are for reference only and are not drawn to scale.

Reasons for this revision are given in Section 7, REVISION SUMMARY.

2. DESCRIPTION

Each die assembly consists of a nest and an indenter (ordered separately) which are retained in the crimping head by retainer pins. The nest is positioned in the yoke of the crimping head, and the indenter is positioned in the ram of the tool.

3. DIE INSTALLATION AND REMOVAL

Determine the correct die assembly, wire size, product number, and tool head to be used (refer to Figure 1).



CAUTION

Never operate the tool with the dies removed.

3.1. Die Installation



DANGER

To avoid personal injury, be sure to exercise extreme caution when using the power unit. Avoid depressing the footswitch or trigger control when installing or removing dies.

1. Depress the Die Release Button located in the “C”-head.
2. Slide the nest into place in “C”-head (see Figure 2).

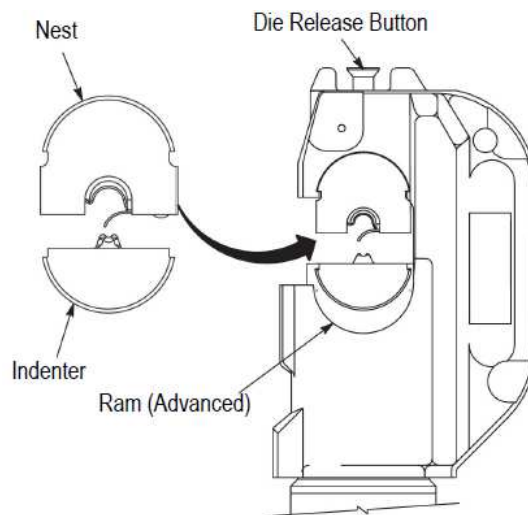


Figure 2

3. Release the button and rock the die back and forth until the nest snaps into position.
4. Activate the power unit until the lower die release button located in the ram is exposed.
5. Depress the release button.
6. Slide the indenter into position in the ram (see Figure 2).
7. Release the button and rock the indenter back and forth until the die snaps into position.
8. Return ram to the down position.

3.2. Die Removal (Figure 2)

1. Depress the upper release button located in the “C”-head and slide the nest out of the head.
2. Activate the power unit until the lower die release button (located in the ram) is exposed.
3. Depress the die release button and slide the indenter out of the ram.

4. WIRE STRIPPING AND CRIMPING PROCEDURES

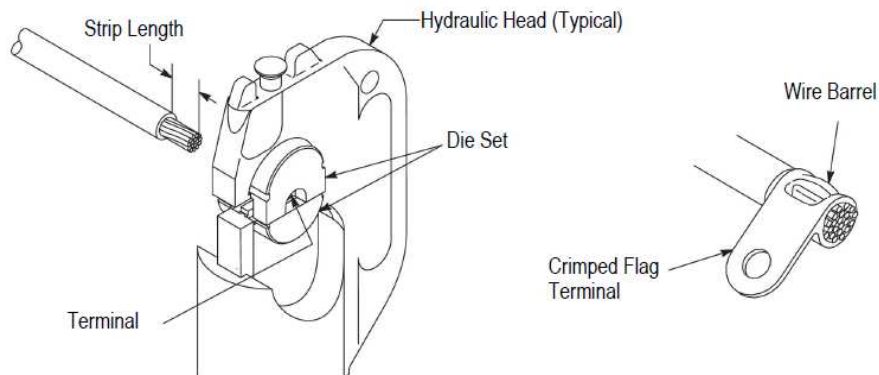


DANGER

Avoid Personal Injury. Exercise extreme caution when operating crimping head and holding terminals or wire near the crimping dies.

4.1. Wire Stripping

Strip wire to the dimensions listed in Figure 3. Do NOT nick or cut the wire strands.



Product	Nominal Wire Size		Strip Length	
	MM ²	AWG	Minimum	Maximum
696675-1	7-8	8	9.53 [.375]	11.18 [.440]
696679-1				
322727-[]				
321576	13 – 15	6	12.70 [.500]	14.27 [.562]
321060	21	4	13.82 [.554]	15.48 [.609]
321064	34 - 35	2	17.06 [.672]	18.65 [.734]
321066	59 – 60	1/0	22.23 [.875]	23.81 [.937]
321584	67 – 70	2/0	23.81 [.937]	25.40 [1.000]
327887	80 – 95	3/0	26.98 [1.062]	28.58 [1.125]
321529-[]	100 – 125	4/0	28.58 [1.125]	30.16 [1.187]

Figure 3

4.2. Crimping Procedure



DANGER

To avoid personal injury, be sure to exercise caution while holding the terminals or wire near the crimping area of power units.

1. Ensure the wire range or size stamped on the flag terminal corresponds with the wire size being used and the wire range or size stamped on the nest and indenter.
2. Center terminal in die nest. When crimping flag terminals, hold tongue of terminal against the nest as shown in Figure 4. If terminal locator is present, slide terminal into locator and press the tongue of the flag against the slope on the nest.
3. Activate power unit so ram advances and holds terminal in place but does NOT deform wire barrel.
4. Insert stripped wire into terminal until end of conductor is flush with or extended slightly beyond end of wire barrel (see Figure 3).
5. Activate power unit to complete the crimp.



NOTE

If terminal sticks in die after crimping, grasp wire close to crimp and apply a rocking motion to remove from die.

6. Refer to Paragraph 4.3, *Crimp Inspection*, for terminal crimp inspection procedure.

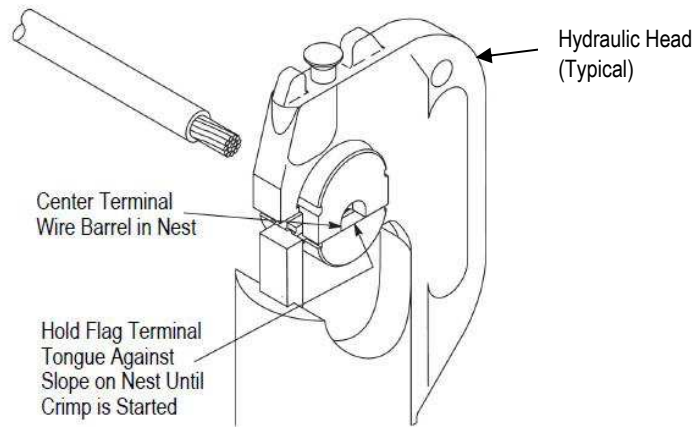


Figure 4

4.3. Crimp Inspection (Figure 5)



NOTE

The accompanying procedure is included as an aid to the tool operator *ONLY*. It is not intended to serve as a quality control procedure for qualifying finished crimps on SOLISTRAND flag terminals.

Inspect crimped terminals by checking the features described in Figure 5. Use only terminals that meet the conditions shown in the ACCEPT column. Terminals displaying the features shown in the REJECT column can be avoided by careful use of these instructions and by performing the maintenance and inspection procedures described in Paragraphs 5.1 and 5.2.

ACCEPT	FLAG TERMINAL	REJECT
<ol style="list-style-type: none"> 1. Crimps centered. Crimps may be off center but NOT off end of wire barrel. 2. Wire size being used matches wire range or size stamped on flag terminals or dies. 3. Insulation does not enter wire barrel. 4. Inserted wire is flush with or extended slightly beyond end of wire barrel. 		<ol style="list-style-type: none"> 1. Crimped off end of terminal. 2. Wire size being used does not match wire size or range stamped on flag terminal. 3. Wire not inserted far enough in terminal. 4. Insulation entered barrel of terminal. CHECK FOR INCORRECT STRIP LENGTH. 5. Nicked or missing conductor strands.

Figure 5

5. MAINTENANCE AND INSPECTION



DANGER

To avoid personal injury, disconnect the power supply before performing maintenance, adjustments, inspections and repairs.

5.1. Daily Maintenance

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

1. Remove dust, moisture, and other contaminants from the dies with a clean brush, or a clean, soft lint-free cloth. DO NOT use objects that could damage the dies.
2. If dies are coated with oil or preservative, wipe clean - particularly in the crimping areas - before placing them in use.
3. When dies are not in use, make certain all surfaces are protected with a THIN coat of any good SAE 20 motor oil, and mate and store them in a clean, dry area.

5.2. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the dies or be made available to supervisory personnel responsible for the dies. Though recommendations call for at least a monthly inspection, the inspection frequency should be based upon the amount of use, working conditions, operator training and skill, and established company standards. These inspections should be performed in the following sequence:

A. Visual

1. Remove all lubrication and accumulated film by immersing the dies in a suitable degreaser that will not affect paint or plastic.
2. Check all surfaces for wear. Inspect the crimp area for flattened, chipped, cracked, worn, or broken areas (see Figure 6). If damage is evident, the die must be replaced.

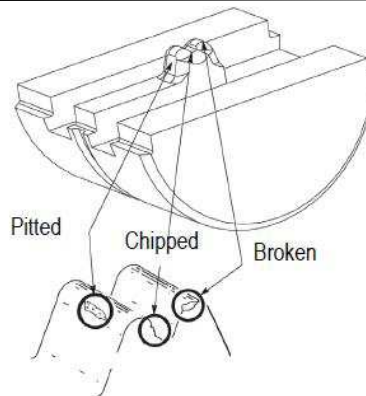


Figure 6

B. Gaging the Crimping Chamber

The inspection requires the use of a plug gage conforming to the dimensions in Figure 7.



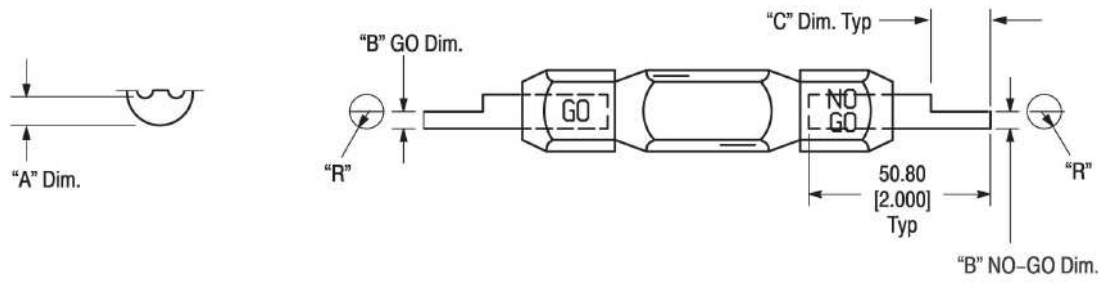
NOTE

TE Connectivity does not manufacture or market these gages.

Proceed as follows:

1. Mate the dies until it is evident that they have bottomed. Hold the dies in this position.
2. Align the GO element with the wire barrel crimping chamber. Push the element straight into the crimping chamber without using force.

The GO element **MUST** pass completely through the crimping chamber (see Figure 8, Detail A).



DIES		DIE CLOSURE DIMENSION "A"		GAGE ELEMENT DIMENSION "B"		"C" DIMENSION	RADIUS "R"
NEST	INDENTER	GO	NO-GO	GO	NO-GO		
1752682-1	1752681-2	2.54 [1.000]	2.692 [.1060]	2.54 - 2.55 [.1000-.1003]	2.689-2.692 [.1059-.1060]	12.70 [.500]	3.58 [.141]
1752682-2							
1752680-8							
1752680-7	1752681-3	3.51 [.1380]	3.708 [.1460]	3.505-3.513 [.1380-.1383]	3.705-3.708 [.1459-.1460]	11.099 [.437]	3.96 [.156]
1752680-6							
1752680-5							
1752680-4	1752681-1	6.172 [.2430]	6.375 [.2510]	6.172-6.179 [.2430-.2433]	6.372-6.375 [.2509-.2510]	14.275 [.562]	7.52 [.296]
1752680-3							
1752680-2							
1752680-1							

Figure 7

3. Align the NO-GO element and try to insert it straight into the same crimping chamber.

The NO-GO element may start entry but **MUST NOT** pass completely through (see Figure 8, Detail B).

If the crimping chamber conforms to the gage inspection, the dies are considered dimensionally correct. If not, they must be replaced. For additional information regarding the use of a plug gage, refer to Instruction Sheet [408-7424](#).

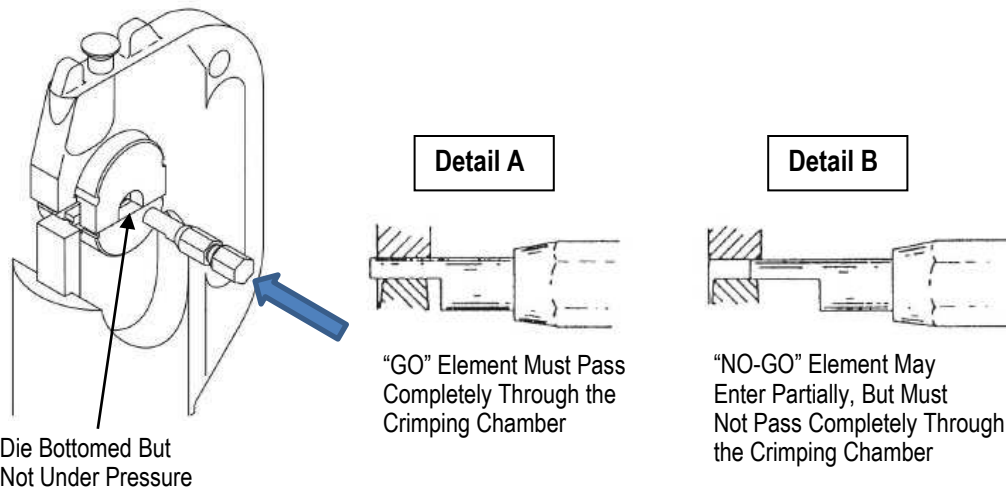


Figure 8

6. REPLACEMENT PARTS

When replacement of a die becomes necessary, contact your local TE representative; call 1-800-526-5142; send a facsimile of your purchase order to 1-717-986-7605; or write to:

CUSTOMER SERVICE (038-035)
TE CONNECTIVITY CORPORATION
PO BOX 3608
HARRISBURG PA 17105-3608

7. REVISION SUMMARY

Revisions to this Instruction Sheet include:

- Added Battery Tool PN 2280308-[]