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.

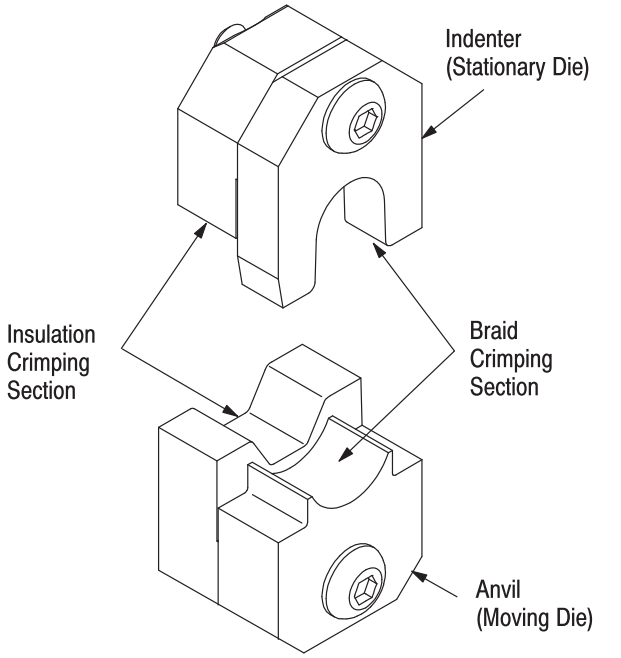


Figure 1

1. INTRODUCTION

This instruction sheet covers the use and maintenance of Crimping Die Assembly 58238–1, which is designed to be used in Hand Crimping Tool Frame Assembly 543344–1, or in Pneumatic Power Unit 312522–3 equipped with Die Holder Assembly 58449–1. The die assembly crimps a ferrule onto round shielded cable used with Shielded AMPLIMITE Connectors.

Tyco Electronics Catalog 82068 provides a guide for cable–to–connector and ferrule selection. Read these and all referenced materials before using the die assembly.

NOTE

Measurements are in millimeters [followed by inches in brackets]. Figures are not drawn to scale.

Reasons for reissue are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION

The die assembly consists of an indenter (stationary die) which has chamfered corners and an anvil (moving die) which has square corners. When mated, the dies form two crimping sections: the braid and the insulation. The braid section crimps the front part of the ferrule onto the cable shield and the cable outlet of the connector shield assembly, and simultaneously, the insulation section crimps the back part of the ferrule onto the cable insulation. See Figure 1.

The ferrule, which is ordered separately from the AMPLIMITE connector, is sized according to the insulation diameter of the cable. The die assembly is marked with the cable insulation diameter range.

3. DIE INSTALLATION

The die assembly is designed to fit securely into the tool by upper and lower die holder plates; each die is held in by a single screw. To install the die assembly, refer to the instructions packaged with the tool:

408–9315	Hand Crimping Tool Frame Assembly 543344–1
408–9721	Die Holder Assembly 58449–1
409–5822	Pneumatic Power Unit 312522–3

4. CRIMPING PROCEDURE

Assemble the connector by referring to instruction sheet 408–9010. Make sure the ferrule is over the connector shield cable outlet and butted against the shield body. Then, proceed as follows:

1. Place the ferrule on the stationary die, with the cable extending out the back side of the die. Make sure that the front part of the ferrule is positioned in the braid section and the back part of the ferrule is positioned in the insulation section. See Figure 2.

CAUTION

Connector body must be clear of dies.

2. If using the hand tool, close and latch the tool head in place.

3. Make certain that the ferrule is maintained in proper position, and close tool handles completely (or actuate dies in pneumatic applicator die holder) to complete the crimp.

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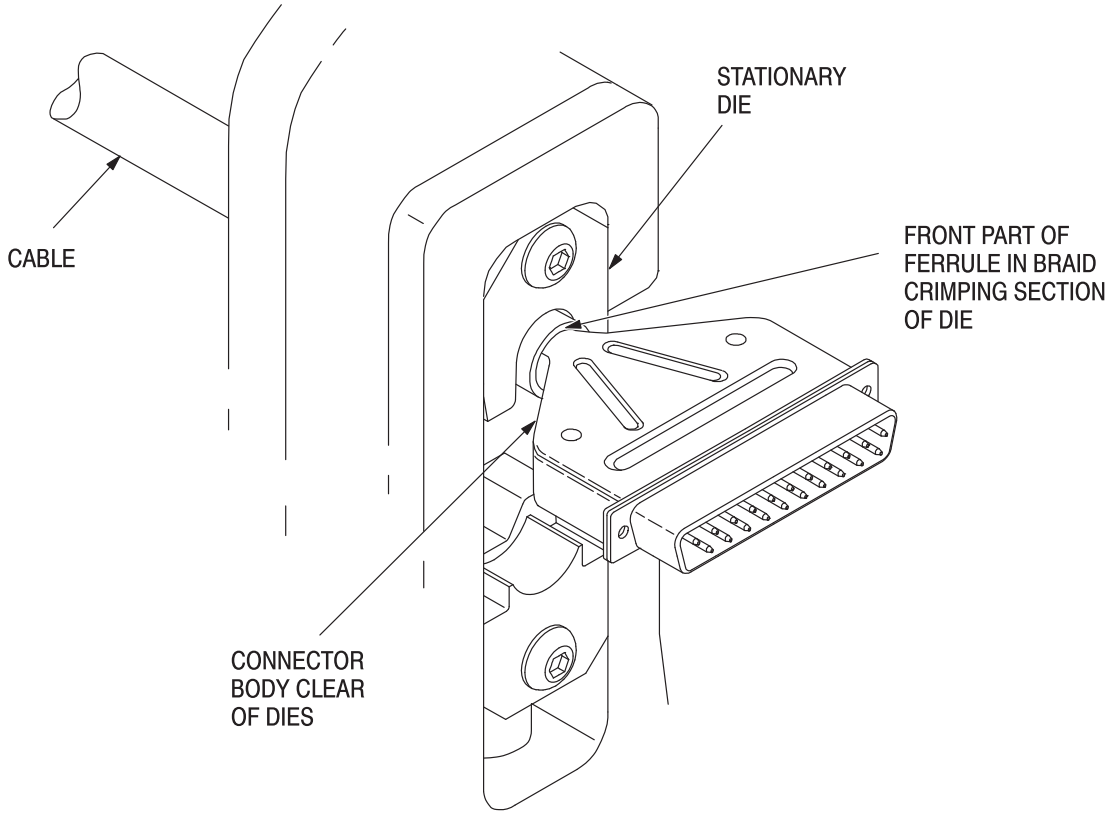


Figure 2

4. Remove connector from die assembly and inspect the crimped ferrule according to the requirements outlined in the appropriate application specification:

114–40008	AMPLIMITE HDE–20 Connector Shielding Hardware Kits With and Without Enclosure
114–40030	AMPLIMITE HDP–20 and Economy Crimp Snap Subminiature D Commercial Connectors

See Figure 3 for a properly crimped ferrule.

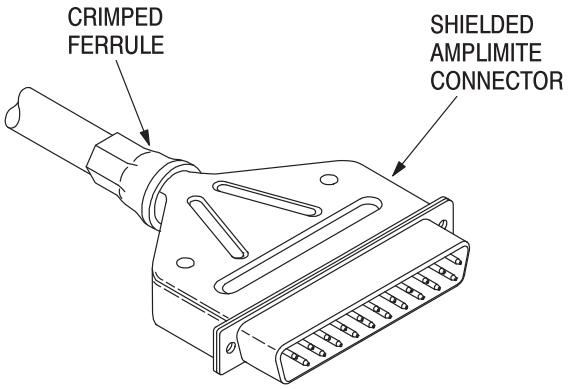


Figure 3

5. MAINTENANCE AND INSPECTION PROCEDURE

The die assembly is inspected prior to shipment, however, Tyco Electronics recommends that the die assembly be inspected immediately upon arrival. Tyco Electronics recommends that a maintenance and inspection program be performed periodically to ensure continued reliability of the die assembly. The inspection frequency should be based on the amount of use, working conditions, operator training and skill, and established company standards.

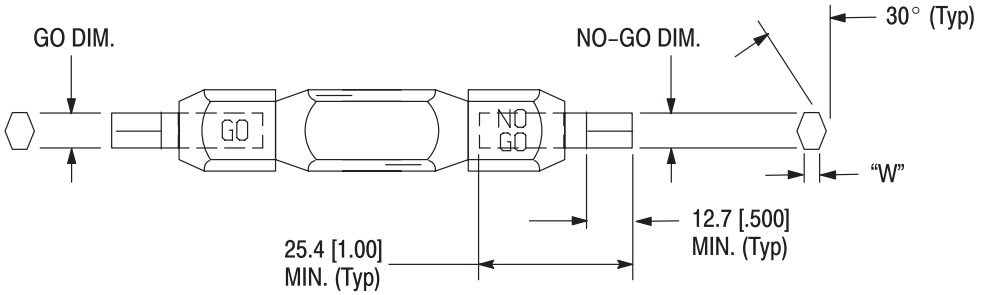
5.1. Daily Maintenance

1. Remove accumulated dust, moisture, and other contaminants with a clean, soft brush or lint–free cloth. Do NOT use hard or abrasive objects that could damage the dies.

2. Make sure dies are protected with a THIN coat of any good SAE No. 20 motor oil. Do NOT oil excessively.

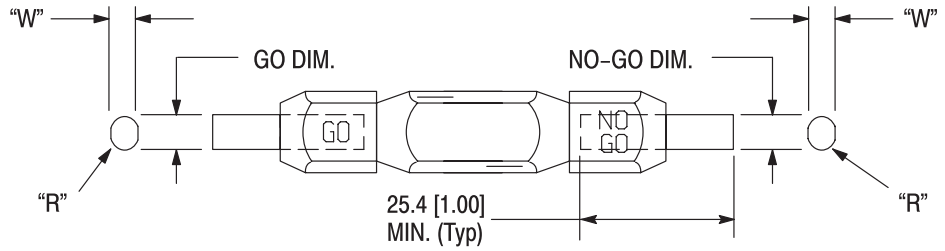
3. When die assembly is not in use, mate and store them in a clean, dry area.

SUGGESTED PLUG GAGE DESIGN FOR INSULATION CRIMPING SECTION



GAGE ELEMENT DIMENSIONS		
GO	**NO–GO**	**WIDTH (Max) "W"**
9.804 – 9.812 [.3860 – .3863]	10.030 – 10.033 [.3949 – .3950]	4.90 [.193]

SUGGESTED PLUG GAGE DESIGN FOR BRAID CRIMPING SECTION



GAGE ELEMENT DIMENSIONS			
GO	**NO–GO**	**WIDTH (Max) "W"**	**RADIUS (Max) "R"**
13.411 – 13.419 [.5280 – .5283]	13.536 – 13.538 [.5329 – .5330]	12.7 [.500]	6.35 [.250]

Figure 4

5.2. Periodic Inspection

A. Visual Inspection

1. Remove all lubrication and accumulated film from the dies by immersing the dies in a suitable commercial degreaser that will not affect paint or plastic material.

2. Make sure that all die retention screws and die components are properly secured.

3. Inspect die assembly for worn, cracked, or broken surfaces. If damage is evident, the dies must be replaced. See Section 6, REPLACEMENT PARTS.

B. Gaging the Crimping Section

This inspection requires the use of plug gages conforming to the dimensions provided in Figure 4. Tyco Electronics does not manufacture or market these gages. For each crimping section, proceed as follows:

1. Remove traces of oil or dirt from the crimping section and plug gage.

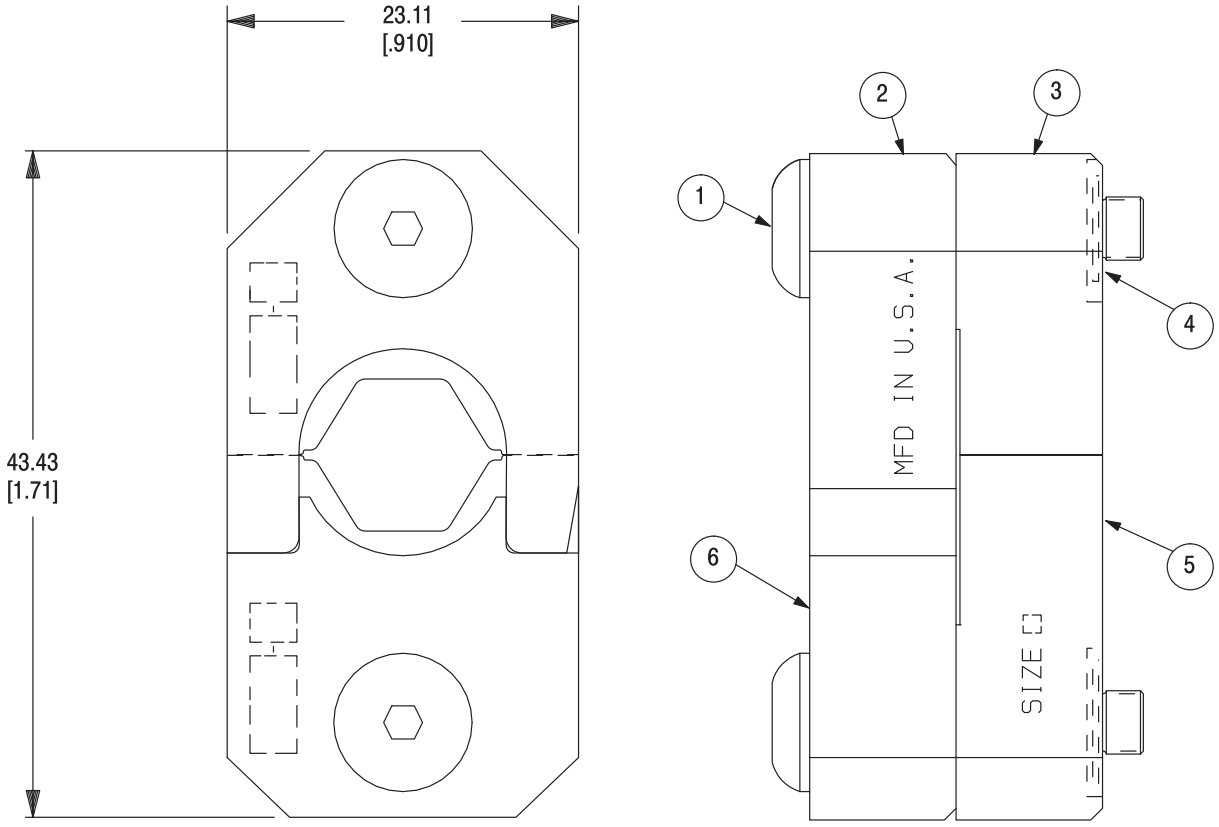
2. Mate the dies until the crimping surfaces have bottomed; then hold in this position. DO NOT force the dies beyond initial contact.

3. Carefully insert GO element into the corresponding crimping section; do not force it. The GO element must pass completely through the crimping section.

4. In the same manner, try to insert the NO–GO element into the same crimping section. The NO–GO element may start entry, but must not pass completely through the crimping section.

If the crimping sections conform to the gage inspection, they are considered dimensionally correct, and should be lubricated with a THIN coat of any good SAE No. 20 motor oil. If not, the die assembly must be replaced. Refer to Section 6, REPLACEMENT PARTS.

For additional information concerning the use of a plug gage, refer to instruction sheet 408–7424.



WEIGHT: 113.4 g [4 oz.]

REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	306105–7	SCREW, Special	2
2	313164–2	INDENTER, Braid	1
3	313172–1	INSERT, Insulation, Upper	1
4	1–21046–3	RING, Retaining, External E–Ring	2
5	313171–1	INSERT, Insulation, Lower	1
6	313170–1	ANVIL, Braid	1

Figure 5

6. REPLACEMENT PARTS

The parts listed in Figure 5 are customer–replaceable. A complete inventory can be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your Tyco Electronics representative, or call 1–800–526–5142, or send a facsimile of your purchase order to 717–986–7605, or write to:

CUSTOMER SERVICE (38–35)
TYCO ELECTRONICS CORPORATION
P.O. BOX 3608
HARRISBURG, PA 17105–3608

7. REVISION SUMMARY

Revisions to this instruction sheet include:

- Replaced obsolete hand tool references with current active tool information.
- Added steps to crimping procedure for clarity.
- Added proper use guidelines.
- Updated document to corporate requirements.