ORIGINAL INSTRUCTIONS

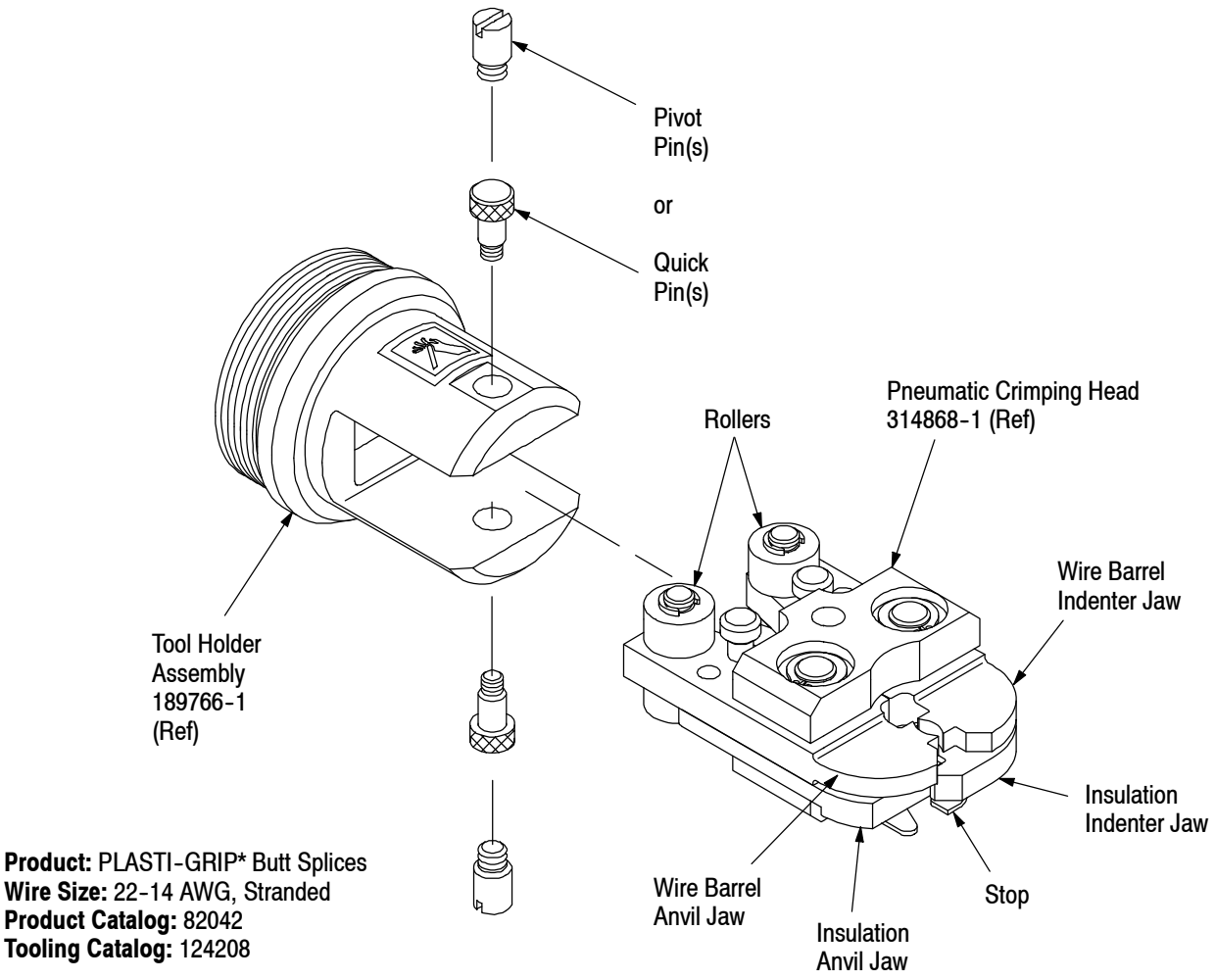


Figure 1

1. INTRODUCTION

Pneumatic Crimping Heads 314868-1 (shown in Figure 1) and 314869-1 are used with 626 Pneumatic Tooling Assemblies 189721-1 and 189722-1 when fitted with Tool Holder Assembly 189766-1 to crimp PLASTI-GRIP butt splices (listed in Figure 2) onto stranded wire sizes 22-14 AWG.

NOTE

The crimping heads can also be used with "2614" Series Pneumatic Tooling Assemblies.

This instruction sheet provides information on head installation and removal, crimping procedures, insulation crimp adjustments, and maintenance and inspection. For setup and operation of the pneumatic tools, refer to Customer Manual 409-5862 packaged with the pneumatic tool.

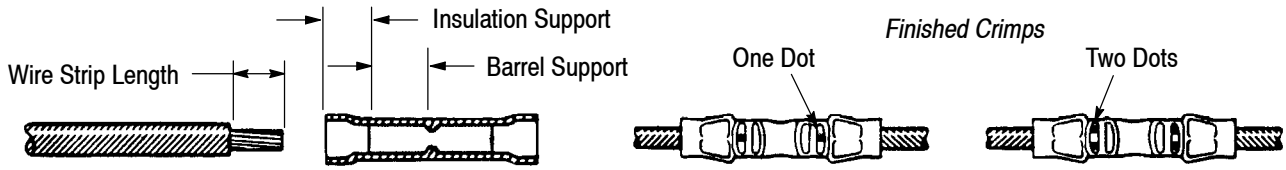
NOTE

Measurements on this instruction sheet 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 reissue are provided in Section 9, REVISION SUMMARY.

2. DESCRIPTION (Figure 1)

The pneumatic crimping head consists of integral jaws which close in an arc-like motion. After the splice is properly positioned between the crimping jaws and the stripped wire is properly inserted, the tool is activated to crimp the splice to the wires.



WIRE SIZE (AWG)	CRIMPING HEAD	SPLICE PART NUMBER	COLOR CODE	DOT CODE	WIRE STRIPPING LENGTH	
					MINIMUM	MAXIMUM
22-16	314868-1	34067, 34070, 34203, 34243, 324138, 55792-1	Red	One Dot	6.35 [.250]	7.14 [.281]
16-14	314869-1	34068, 34071, 34204, 35244, 55785-1, 328427, 696010-1	Blue	Two Dots		

Figure 2

3. HEAD INSTALLATION AND REMOVAL

3.1. Head Selection

The wire barrel anvil and wire barrel indenter are color coded to match the splice insulation color. Refer to Figure 2. Observe the embossed dots on the insulation of finished crimps to ensure that the correct splice and tool combination is being used.

NOTE

Crimping heads are coated with a preservative to prevent rust and corrosion. Wipe this preservative from the heads, particularly from the crimping surfaces.

3.2. Installation

DANGER

To avoid personal injury, ALWAYS disconnect pneumatic tool from air supply before installing or removing the crimping head.

DANGER

DO NOT operate pneumatic tool without the proper crimping head installed. After crimping head is installed, make sure that the pins are FULLY tightened to avoid personal injury and damage to the tool.

1. Remove quick pins from tool holder. Refer to Figure 1.

2. Insert crimping head into tool holder. Refer to Figure 1.

3. After crimping head is properly aligned, insert and tighten quick pins (provided with tool holder assembly) or pivot pins (provided with crimping head). See Figure 1.

NOTE

Tyco Electronics recommends using LOCTITE 242 removable threadlock, or equivalent, to prevent the quick pins or pivot pins from loosening.

4. Connect pneumatic tool to an adequate air supply between 620–690 kPa [90–100 psi]. For specific information on air line requirements and air hose installation, refer to the customer manual packaged with the pneumatic tooling assembly.

3.3. Removal

DANGER

To avoid personal injury, ALWAYS disconnect pneumatic tool from air supply before removing crimping head. Never place anything within the jaws except splices.

Remove quick pins or pivot pins from crimping head; then remove crimping head from tool holder.

4. CRIMPING PROCEDURES

DANGER

To avoid personal injury, exercise caution while holding splices near the crimping area.

1. Strip wire to dimensions shown in Figure 2. DO NOT nick the wire or use wires with nicked or missing conductor strands.

2. Insert stripped wire into the butt splice.

3. Open crimping jaws by squeezing rollers simultaneously; then position splice between crimping jaws so that the end of the splice rests against the stop. See Figure 3. Release rollers.

4. Activate tool to complete the crimp. To remove the splice, open crimping jaws by squeezing rollers simultaneously.

5. To crimp the other half of the butt splice, repeat Steps 1 through 4. If the splice cannot be easily turned, rotate the crimping head. For crimp inspection, refer to Section 6, CRIMP INSPECTION and Figure 6.

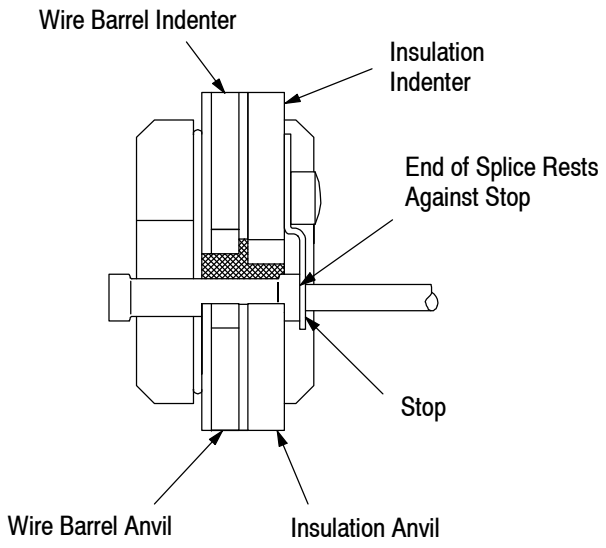


Figure 3

5. INSULATION CRIMP ADJUSTMENT (Figure 4)

The insulation crimping section has three positions: 1–Tight; 2–Medium; and 3–Loose. Position 3 is for wire having a large insulation diameter; Position 2 is for wire having a medium insulation diameter; and Position 1 is for wire having a small insulation diameter.

1. Place both insulation crimp adjustment pins in Position 3, as shown in Figure 4.

2. Crimp butt splice as described in Section 4, CRIMPING PROCEDURES.

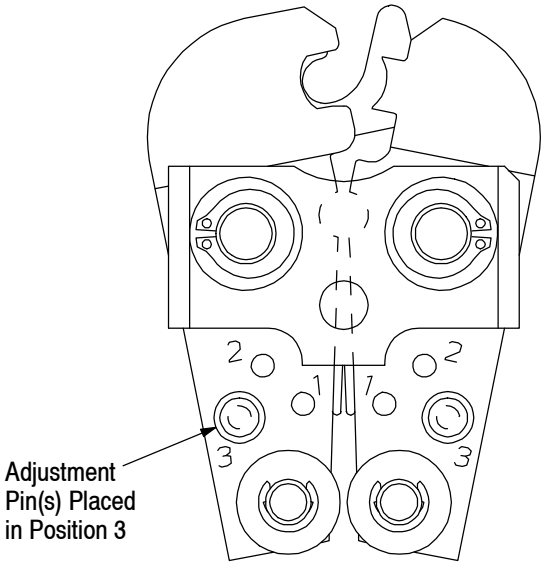


Figure 4

3. Remove crimped splice from crimping jaws and visually inspect the insulation barrel crimp. The insulation barrel crimp should be in contact with and should support the wire insulation.

NOTE

If the insulation barrel crimp does not provide support for the wire insulation, place adjustment pins in Position 2 and repeat the crimping procedure.

4. Repeat adjustment as necessary until desired insulation support is obtained. DO NOT use a tighter setting than required.

6. CRIMP INSPECTION

Inspect crimped splices by checking the features described in Figure 2. Rejected terminations can be avoided through careful use of instructions in Section 4, CRIMPING PROCEDURES, and by performing regular head maintenance, as described in Section 7, MAINTENANCE AND INSPECTION.

7. MAINTENANCE AND INSPECTION

Tyco Electronics recommends that a maintenance and inspection program be performed periodically to ensure dependable and uniform terminations.

DANGER

DISCONNECT AIR SUPPLY for all maintenance and inspection procedures.

7.1. Daily Maintenance

Tyco Electronics recommends that each operator be responsible for the following steps of daily maintenance:

1. Remove dust, moisture, and other contaminants with a clean, soft brush or a soft, lint-free cloth. Do NOT use objects that could damage the head.

2. Make sure that all pins, rings, and other components are in place and secure.

3. When head assembly is not in use, store it in a clean, dry area.

7.2. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the crimping head or be supplied to responsible supervisory personnel. Though recommendations call for a least one inspection a month, the frequency should be based on amount of use, working conditions, operator training and skill, and your established company policies. These inspections should include a visual inspection (Paragraph 7.3, Visual Inspection) and a crimping chamber inspection (Paragraph 7.5, Gaging the Crimping Chamber).

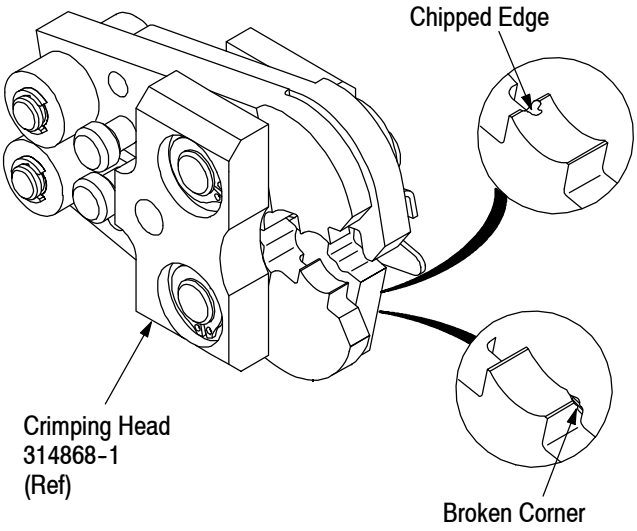


Figure 5

7.3. Visual Inspection

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

2. Make certain all components are in place. If replacements are necessary, refer to Figure 9.

3. Check all bearing surfaces for wear. Replace worn or damaged parts.

4. Inspect the crimp area for flattened, chipped, or broken areas. Replace worn or damaged parts. See Figure 5.

7.4. Lubrication

Lubricate all pins, pivot points, and bearing surfaces with a high quality grease. Tyco Electronics recommends the use of Molykote grease, which is a commercially available lubricant. Lubricate according to the following schedule:

Head used in daily production – lubricate daily
Head used daily (occasional) – lubricate weekly
Head used weekly – lubricate monthly

Wipe excess grease from crimping head, particularly from crimping jaws. Grease transferred from the crimping jaw area onto certain terminations may affect the electrical characteristics of an application.

7.5. Gaging the Crimping Chamber

This inspection requires the use of plug gages conforming to the dimensions shown in Figures 6 and 7. Tyco Electronics does not manufacture or market these gages.

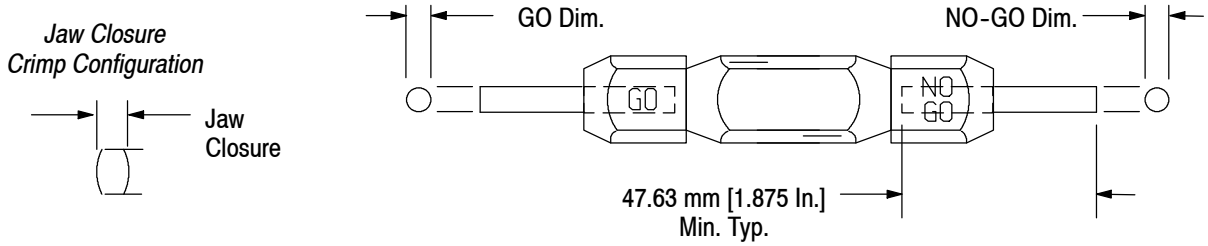
1. DISCONNECT AIR SUPPLY and remove head from tool holder.

2. Remove oil and dirt from jaw bottoming surfaces and plug gage members.

3. Close the wire barrel crimping jaws until they are bottomed.

4. Using the suggested plug gage design, as shown in Figure 6, align the GO element with the wire barrel crimping section. Push the element straight into the crimping chamber without using force. The GO element must pass completely through the crimping chamber as shown in Figure 8, Detail A.

Suggested Plug Gage Design — Wire Barrel Crimping Section

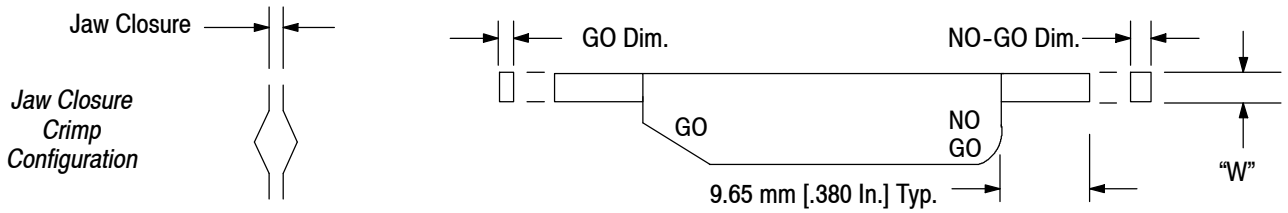


CRIMPING HEAD	GAGE ELEMENT DIMENSION †■■	
	GO	NO-GO
314868-1	2.769- 2.776 [.1090-.1093]	2.918- 2.921 [.1149-.1150]
314869-1	3.023- 3.030 [.1190-.1193]	3.172- 3.175 [.1249-.1250]

† Plug gage dimensions apply when jaws are bottomed, but not under pressure
■■ Material — Tool steel

Figure 6

Suggested Plug Gage Design — Insulation Crimping Section



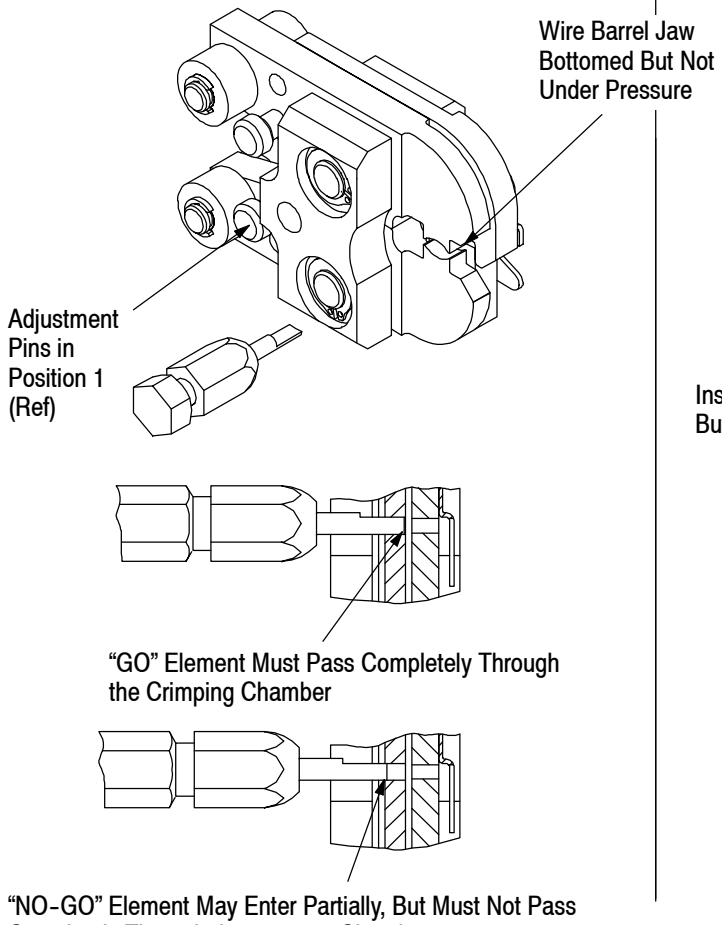
CRIMPING HEAD	GAGE ELEMENT DIMENSION †■■ (Set Insulation Adjustment Pins in Position 1)		WIDTH "W" (Max)
	GO	NO-GO	
314868-1	0.762- 0.770 [.0300-.0303]	1.267- 1.270 [.0499-.0500]	1.91 [.075]
314869-1	1.016- 1.024 [.0400-.0403]	1.521- 1.524 [.0599-.0600]	3.18 [.125]

† Plug gage dimensions apply when jaws are bottomed, but not under pressure
■■ Material — Tool steel

Figure 7

Detail A

Inspection of Wire Barrel Crimping Section With Plug Gage



Detail B

Inspection of Insulation Crimping Section With Plug Gage

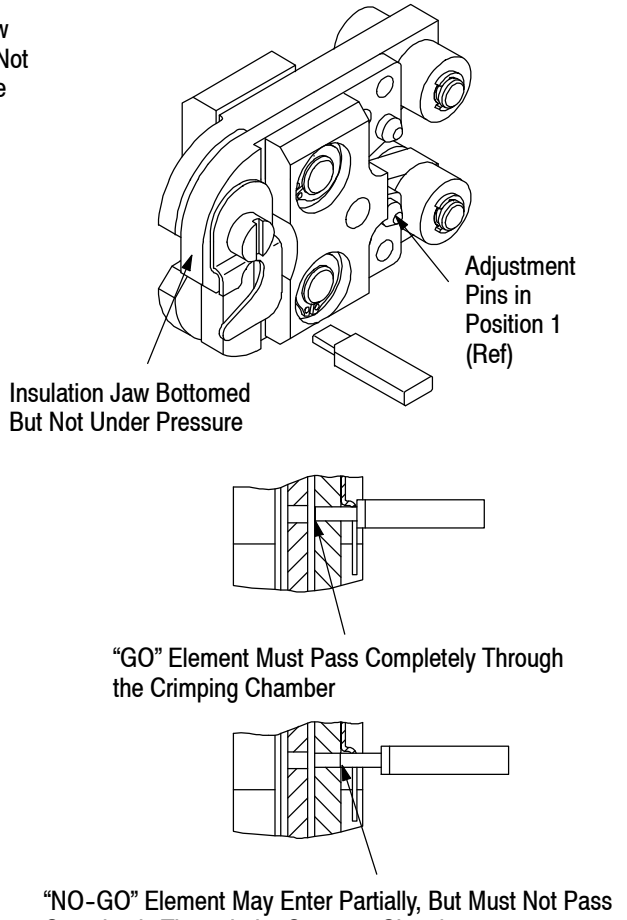


Figure 8

5. Align the NO-GO element and try to insert it into the wire barrel crimping section. The element may start entry, but must not pass completely through the crimping chamber. See Figure 8, Detail A.

6. Repeat this procedure for the insulation crimping section using the suggested plug gage design, as shown in Figures 7 and 8, Detail B.

If the crimping chamber meets the gage inspection criteria, the crimping head is considered dimensionally correct and should be lubricated with a THIN coat of any good SAE 20 motor oil. If the crimping chamber does not conform to the plug gage dimensions, contact your local Tyco Electronics Representative or refer to Section 8, REPLACEMENT AND REPAIR.

For additional information regarding the use of a plug gage, refer to Instruction Sheet 408-7424.

8. REPLACEMENT AND REPAIR

Replacement parts and recommended spares are listed in Figure 9. Parts other than those listed in Figure 9 should be replaced to ensure quality and reliability of the tool. Order replacement parts through your Tyco Electronics Representative or call 1-800-526-5142 , or send a facsimile of your purchase order to 1-717-986-7605, or write to:

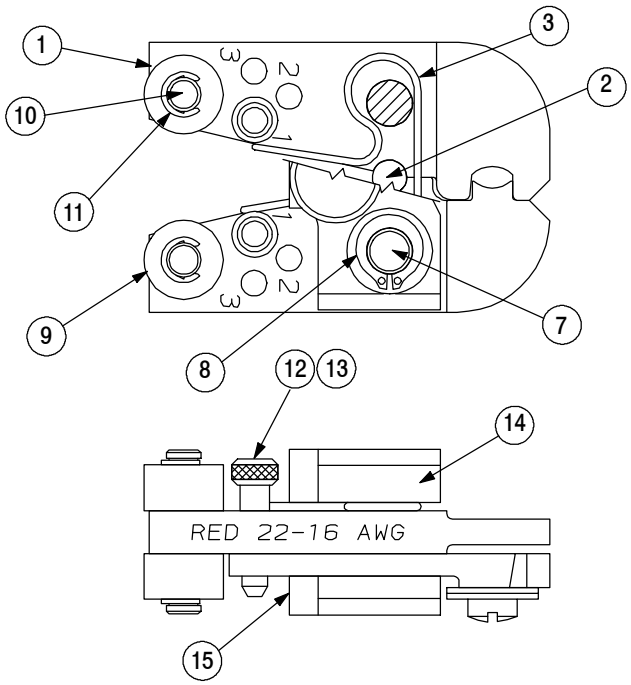
CUSTOMER SERVICE (38-35)
TYCO ELECTRONICS CORPORATION
P.O. BOX 3608
HARRISBURG, PA 17105-3608

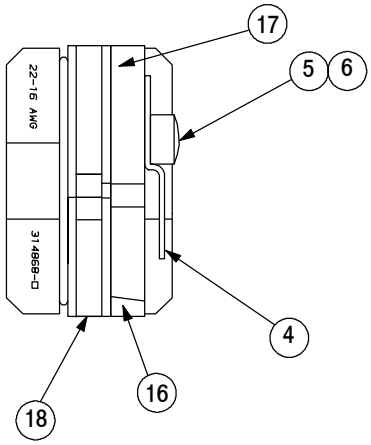
For tool repair service, please contact an Tyco Electronics Representative at 1-800-526-5136.

9. REVISION SUMMARY

Since the previous release of this sheet, the following changes were made:

- Update document to corporate requirements
- Added ORIGINAL INSTRUCTIONS





Crimping Head
314868-1
Shown (Ref)

REPLACEMENT PARTS

ITEM	PART NUMBER FOR CRIMPING HEAD		DESCRIPTION	QTY PER HEAD
	314868-1	314869-1		
1	314560-2	314560-1	INDENTER	1
2	39085	39085	PIN, Pivot	1
3	314253-1	314253-1	SPRING	1
4	305173	305234	STOP	1
5	4-21924-4	4-21924-4	SCREW	1
6	24367-4	24367-4	WASHER, Lock	1
7	3-23628-4	3-23628-4	PIN, Str, Grv, .2500 Dia.	2
8	21048-7	21048-7	RING, Retaining	4
9	314479-1	314479-1	ROLLER	4
10	3-23619-7	3-23619-7	PIN, Str, Grv, .1875 Dia.	2
11	21045-3	21045-3	RING, Retaining	4
12	39208	39208	RING	6
13	39207	39207	PIN, Adjustment	2
14	314477-1	314477-1	LINK	1
15	314477-2	314477-2	LINK	1
16	314563-2	314563-1	ANVIL, Insulation	1
17	314562-6	314562-5	INDENTER, Insulation	1
18	314561-2	314561-1	ANVIL	1

Figure 9

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

TE Connectivity:

314868-1