

Figure 1

## 1. INTRODUCTION

Pneumatic Crimping Head 1338317-1 is designed to crimp terminals and splices listed in Figure 2. The crimping head is used with 626 Tooling Assemblies 189721-1, and 189722-1. For questions concerning the setup and operation of the pneumatic tools, call the Tooling Assistance Center.

This instruction sheet provides recommended procedures for insulation crimp adjustments, wire preparation, crimp head installation, crimping, and maintenance and inspection.

**i** **NOTE**  
*Read these instructions thoroughly before using the hand tool.*

**i** **NOTE**  
*Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures and illustrations are for identification only and are not drawn to scale.*

Reasons for reissue of this instruction sheet are provided in Section 8, REVISION SUMMARY.

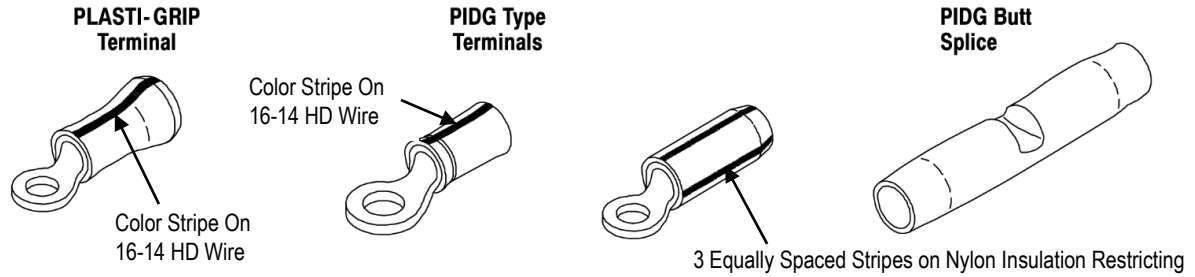
## 2. DESCRIPTION (FIGURE 1)

The pneumatic crimping heads are designed with integral jaws which close in an arc-like motion. After an operator locates the terminal or splice between the crimping jaws and inserts the stripped wire, the tool is activated to crimp the product to the wire.

## 3. HEAD INSTALLATION AND REMOVAL

### 3.1. Head Selection (FIGURE 2)

The crimping heads are color-coded to match the terminal and splice insulation color. Observe the embossed dots on the insulation of finished crimps to ensure that the correct combination of terminal or splice and tool was used.



Product	Crimping Head	Dot Code	Wire Range (AWG)	Insul Dia Range	Terminal /Splice Insulation Color Code	Wire Strip Length			
						Terminal		Splice	
						Min.	Max.	Min.	Max.
PIDG Terminals and Splices and PLASTI-GRIP Terminals	1338317-1	1 Dot	12-10	---	Yellow	7.95 [.313]	8.74 [.344]	8.74 [.344]	9.53 [.375]
			16-14	---	Yellow w/Black Stripe				
PIDG NYLON Insulation Restricting Terminals	1338317-1	1 Dot	12	2.41 - 5.08 [.095-.200]	Yellow w/Yellow Stripe	9.53 [.375]	10.31 [.406]	---	---
			10	3.02 - 5.08 [.119-.200]	Yellow w/Brown Stripe				

NOTE: Refer to Catalog No. 82042 for Product Part Numbers

Figure 2



**NOTE**

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

**3.2. Installation**



**DANGER**

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



**DANGER**

DO NOT operate pneumatic tool without the proper crimping head installed. After crimping head is installed, verify the quick 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 as shown in Figure 1.
3. After crimp head is properly aligned, insert and tighten quick pins provided with the tool holder assembly.



**NOTE**

Use Loctite Threadlocker Blue 242 removable threadlocker, or equivalent, to prevent the quick 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 power unit.

**3.3. Removal**



**DANGER**

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

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

Loctite and Threadlocker Blue 242 are trademarks.

#### 4. CRIMPING PROCEDURE



**DANGER**

To avoid personal injury, ALWAYS keep fingers clear of crimping jaws when operating the tool. Never place anything within the crimping jaws except terminals or splices.



**NOTE**

Crimping Head shown without guard for clarity.

##### 4.1. Terminal Crimping Procedure

1. Strip the wire to the dimension specified in Figure 2. DO NOT nick wire strand or use wires with nicked or missing conductor strands.
2. Open crimping jaws by squeezing rollers together simultaneously; then position terminal between crimping jaws, as shown in Figure 3. The terminal is properly positioned when the tongue of the terminal is under the locator and the wire barrel is against the locator.

#### PIDG and PLASTI-GRIP Terminals

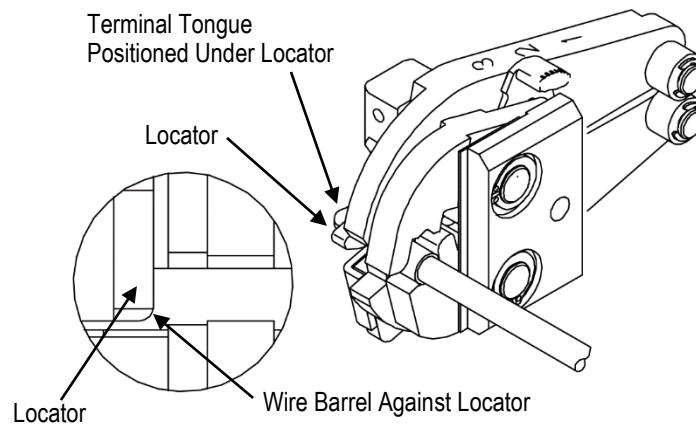
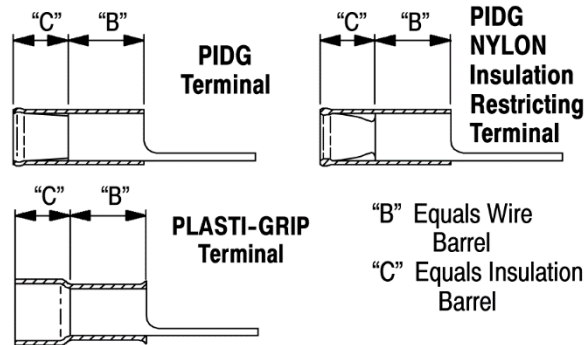


Figure 3

3. After terminal is properly positioned in crimping jaws, release rollers to allow crimping jaws to spring shut, holding terminal in place.
4. Insert stripped wire into terminal until the end of the conductor butts against the locator.
5. Activate the tool to complete the crimp. Open crimping jaws by squeezing the rollers together simultaneously; then remove crimped terminal.
6. Refer to Section 5 and Figure 6 for crimp inspections.

## 4.2. Butt Splice Crimping Procedure

1. Strip wire to dimensions shown in Figure 2. DO NOT nick wire strand or use wires with nicked or missing conductor strands.
2. Open crimping jaws by squeezing rollers together simultaneously. Position splice between crimping jaws so that the window indent slides under the locator of crimp head. See Figure 4, A.
3. After splice is properly positioned in crimping jaws, release rollers to allow crimping jaws to spring shut, holding splice in place.
4. Insert stripped wire into wire barrel of splice until the end of the conductor is against the splice wire stop. See Figure 4, Top View.
5. Activate tool to complete the crimp. Open crimping jaws by squeezing rollers together simultaneously; then remove crimped splice.
6. To crimp the other half of the butt splice, reposition it in the crimping jaws and repeat Steps 1 through 5. If the splice cannot be turned, rotate crimping head.
7. Refer to Section 5 and Figure 6 for crimp inspection.

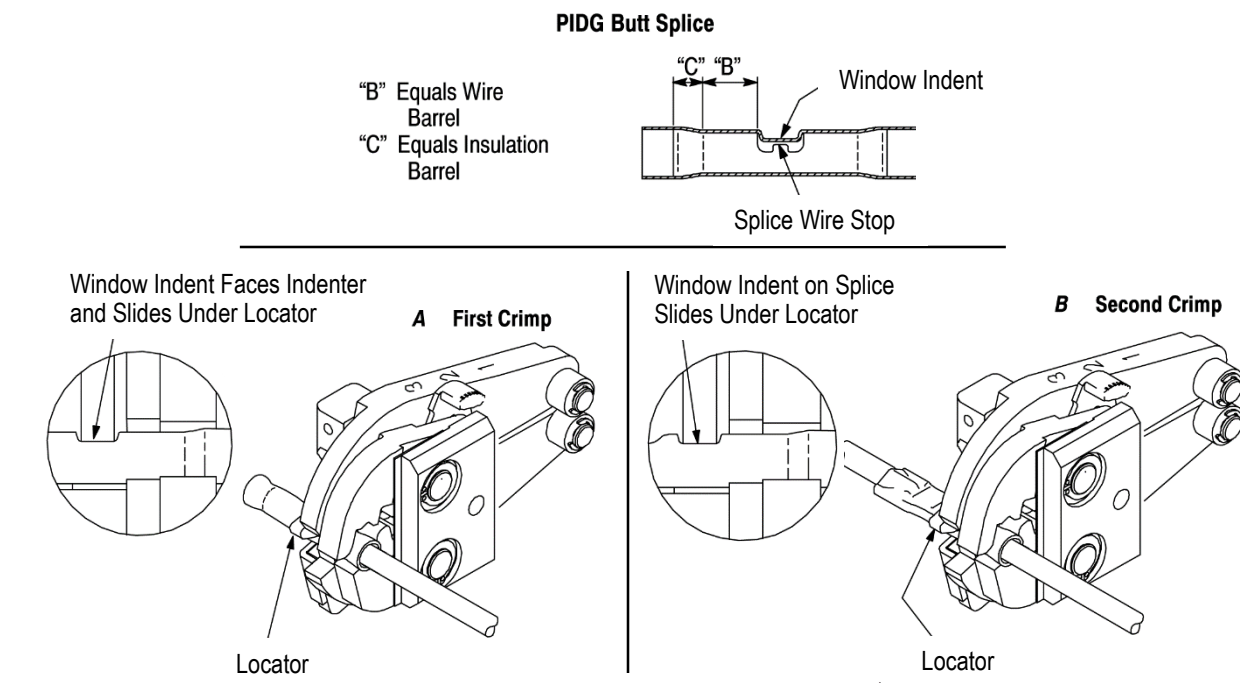


Figure 4

## 4.3. Insulation Crimp Adjustment

### A. PIDG Terminals and Splices



**NOTE**  
PIDG terminals and splices contain a wire insulation “grip”.

The insulation crimping section of the crimping head has three positions: 1-Tight; 2-Medium; and 3-Loose.

1. Adjust the insulation levers to the No. 3 position (see Figure 5).
2. Place terminal or splice in crimping jaws, as shown in Figures 3 and 4.
3. Insert unstripped wire only into the insulation barrel of the terminal or splice (see Figures 3 and 4).
4. Crimp terminal or splice as described in Paragraph 4.1 or 4.2.

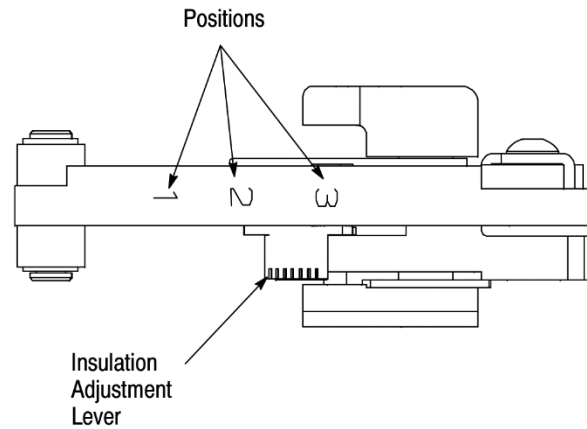


Figure 5

5. Remove terminal or splice. Bend wire forward and then backward. The terminal or splice should retain its grip on the wire. If the wire pulls out, reposition the insulation adjustment levers in the next tighter position (No. 2) and repeat crimp procedure.
6. Repeat adjustment as necessary until desired insulation grip is obtained. DO NOT use a tighter setting than required.



**NOTE**

Always place both adjustment levers in the same position.

## B. PLASTI-GRIP Terminals



**NOTE**

PLASTI-GRIP terminals contain only a wire insulation "support".

The insulation crimping section of the crimping head has three positions: 1-Tight; 2-Medium; and 3-Loose (see Figure 5).

Position No. 3 is for wire having a large insulation diameter; position No. 2 is for wire having a medium insulation diameter; and position 1 is for wire having a small insulation diameter.

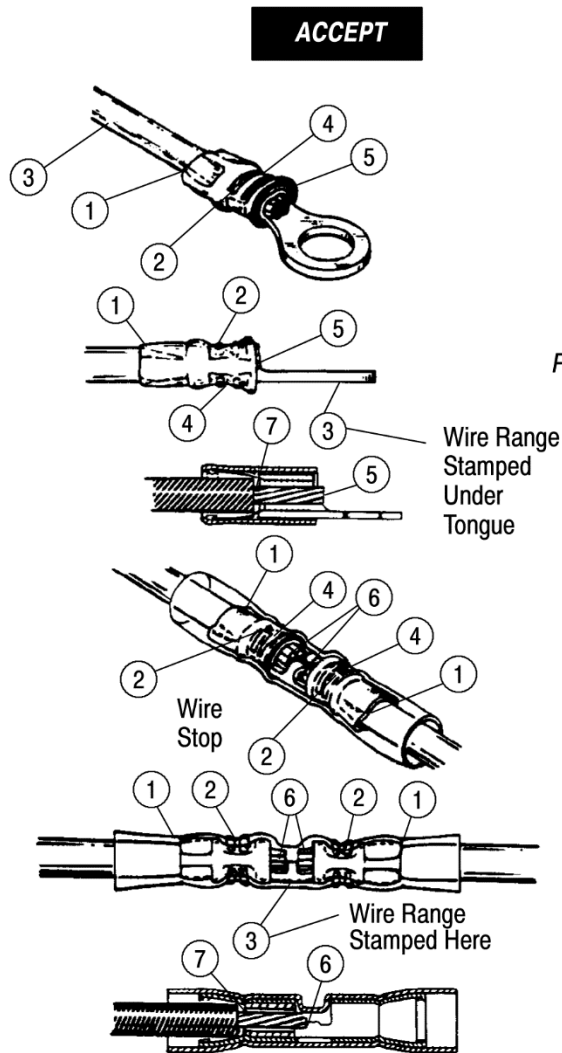
1. Perform insulation crimp adjustment by placing adjustment levers in position No. 3 (loose), as shown in Figure 5.
2. Crimp the terminal as described in Paragraph 4.1, Terminal Crimping Procedure.
3. Remove crimped terminal from crimping jaws and visually inspect the insulation barrel crimp of the terminal. The insulation barrel crimp should be in contact with and should support the wire insulation.

If the insulation barrel crimp does not provide "support" for wire insulation, place adjustment levers in position No. 2 (medium) and repeat the crimp procedure.

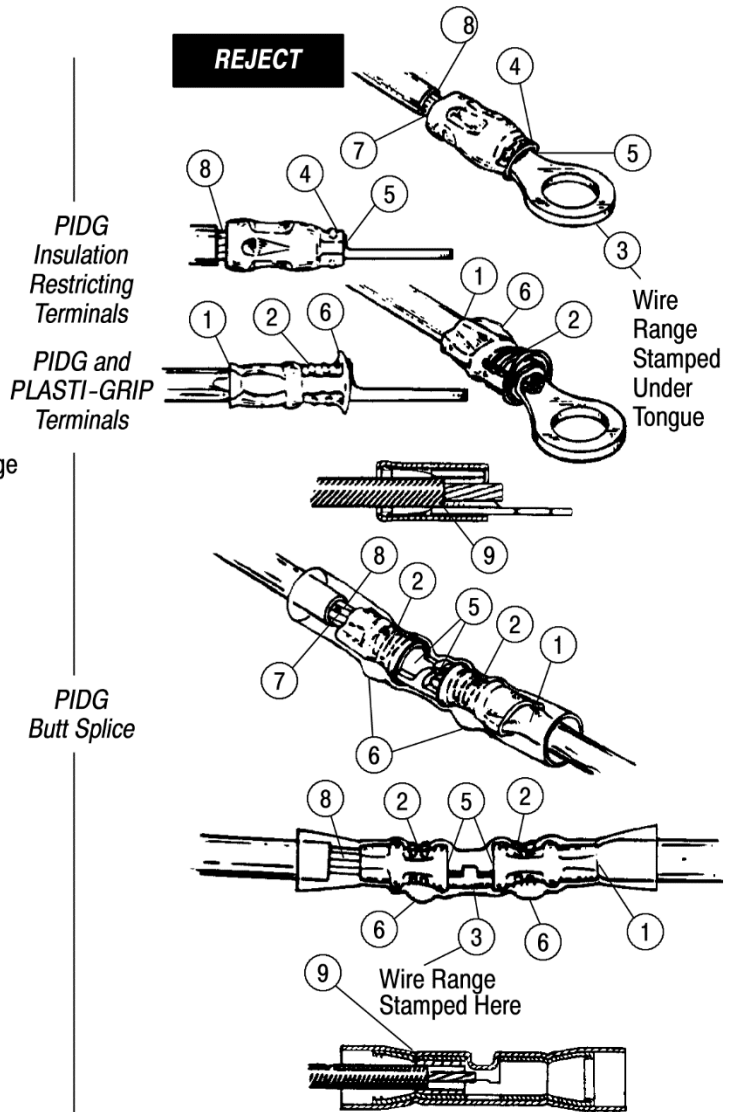
4. Repeat adjustment as necessary until desired insulation support is obtained. DO NOT use a tighter setting than required.

## 5. CRIMP INSPECTION

Inspect crimped terminals and splices by checking the features described in Figure 6.



- ① Insulation barrel is in firm contact with wire insulation.
- ② Correct color code, dot code, and tool combination.
- ③ Wire size is within wire range stamped on terminal tongue or splice.
- ④ Crimp centered on wire barrel.
- ⑤ End of conductor is flush with, or extends beyond end of terminal wire barrel.
- ⑥ End of conductor against wire stop of splice.  
**NOTE:** If conductor is not against wire stop, conductor must at least be flush with, or extend slightly beyond wire barrel of splice.
- ⑦ Wire insulation does not enter wire barrel.



- ① Wire insulation extruded. (Insulation crimp too tight on PIDG terminals) See Paragraph 4.3.
- ② Wrong dot code and color code combination. See chart, Figure 2.
- ③ Wire size is not within wire range stamped on terminal tongue or splice.
- ④ Crimp not centered on wire barrel. (Terminal was not butted against locator. See Figure 3.)
- ⑤ End of conductor is not flush with or extending beyond end of wire barrel. (Check for correct strip length.)
- ⑥ Excessive flash or extruded insulation. (Wrong tool, terminal, or splice combination used, or damaged dies.) See Figure 2.
- ⑦ Nicked or missing conductor strands.
- ⑧ Wire not fully inserted or wrong strip length.
- ⑨ Wire insulation entered wire barrel. Check for correct wire size or strip length.

Figure 6

## 6. INSPECTION AND MAINTENANCE



### **DANGER**

*Make sure hydraulic pressure is released before following maintenance and inspection procedures, unless otherwise specified in the procedure.*

It is recommended that an inspection and maintenance program be performed periodically to ensure dependable and uniform terminations. Though recommendations call for at least one inspection per month, frequency of inspection depends on:

- ◆ The care, amount of use, and handling of the hand tool,
- ◆ The type and size of the product crimped,
- ◆ The presence of abnormal amounts of dust and dirt,
- ◆ The degree of operator skill, and
- ◆ Your own established standards.

The crimping head is inspected before being shipped; however, it is recommended that the head be inspected immediately upon arrival at the facility of use to ensure the tool has not been damaged during shipment.

### 6.1. 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 10.
3. Check all bearing surfaces for wear. Make sure the rollers turn freely with minimal resistance. Replace worn parts.
4. Inspect crimp area for flattened, chipped, or broken areas (see Figure 7). Replace worn or damaged parts.

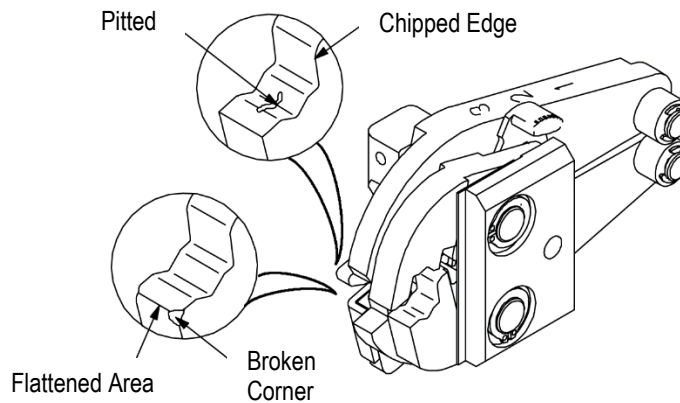


Figure 7

### 6.2. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the crimping heads or be supplied to supervisory personnel responsible for the crimping heads. Though recommendations call for at 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 6.1.) and a crimping chamber inspection (Paragraph 6.5).

### 6.3. Daily Maintenance

It is recommended 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 lint-free cloth. Do NOT use objects that could damage the heads.

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



**DANGER**

To avoid personal injury and damage to the tool, make sure quick pins are fully tightened.

3. Make certain all surfaces are protected with a thin coat of any good SAE 20 motor oil. Do NOT oil excessively.
4. When the head assembly is not in use, store it in a clean dry, area.

**6.4. Lubrication**

Lubricate all pins, pivot points, and bearing surfaces with a high quality grease. The recommended grease is Molykote paste, which is a commercially available lubricant. Lubricate according to the following schedule:

- ◆ Head used in daily production: lubricate daily
- ◆ Head used daily (occasionally): lubricate weekly
- ◆ Head used weekly: lubricate monthly

Wipe excess oil from tool, particularly from crimping area.



**CAUTION**

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

**6.5. Gaging the Crimping Chamber**

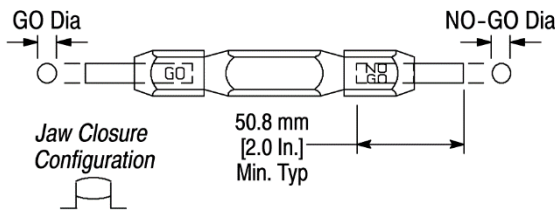
This inspection requires the use of plug gages conforming to the dimensions shown in Figure 8 (refer to 408-7424 for information concerning the gages).



**NOTE**

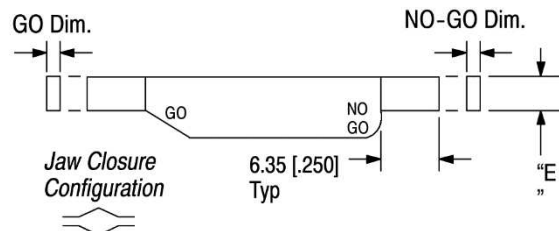
TE does not manufacture or market these gages.

**Suggested Plug Gage Design Wire Barrel Crimp**



Crimping Head	Gage Element Diameters mm [inch]	
	GO	NO-GO
1338317-1	4.293-4.300 [.1690-.1693]	4.442-4.445 [.1749-.1750]

**Suggested Plug Gage Design Insulation Crimp**



Crimping Head	Gage Element Diameters mm [inch]		Width "E" Max mm [inch]
	GO	NO-GO	
1338317-1	1.829-1.836 [.0720-.0723]	2.334-2.337 [.0919-.0920]	4.75 [.187]

Figure 8



**DANGER**

Disconnect air supply and remove crimping head from tool before inspecting crimping chambers.

1. Remove oil and dirt from the bottom of the jaw surfaces and plug gage element surfaces.
2. Close wire barrel crimping jaws until they are bottomed, but not under pressure.
3. Align GO element with wire-barrel crimping chamber. Push element straight into crimping chamber without using force. The GO element must pass completely through the chamber as shown in Figure 9, Detail A.

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- Align the NO-GO element and try to insert it into the chamber. The element may start entry, but it must not pass completely through the crimping chamber.

Repeat this procedure for the insulation-crimp chamber using a plug gage as shown in Figure 9, Detail B.

If the crimping chambers pass the gage inspection, 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 chambers do not conform to the plug gage conditions, contact your local TE field representative or refer to Section 7, REPLACEMENT AND REPAIR.

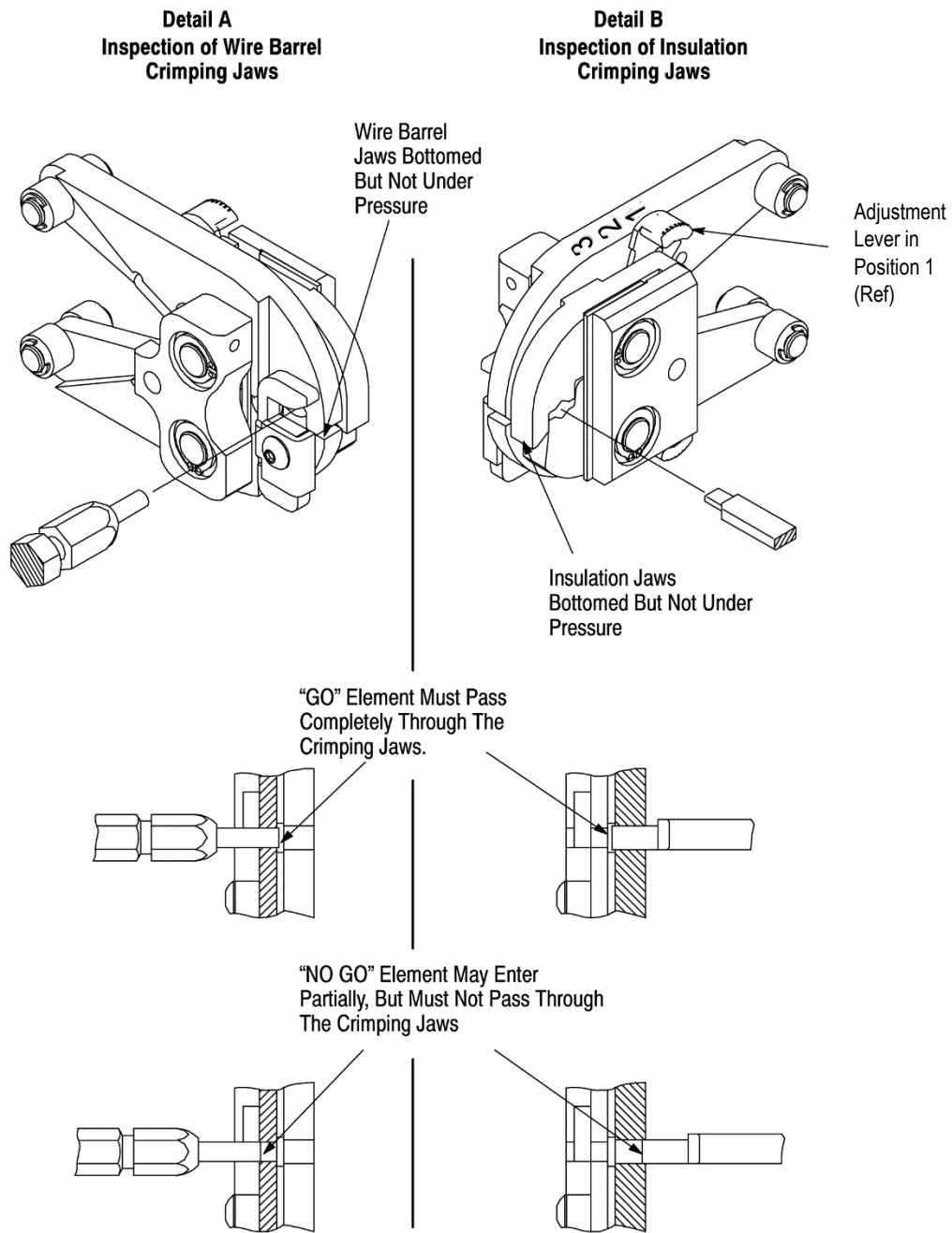


Figure 9

## 7. REPLACEMENT AND REPAIR

Customer-replaceable parts are listed in Figure 10. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Parts other than those listed should be replaced by TE Connectivity to ensure quality and reliability. Order replacement parts through your TE representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

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

For customer repair service, call 1-800-526-5136.

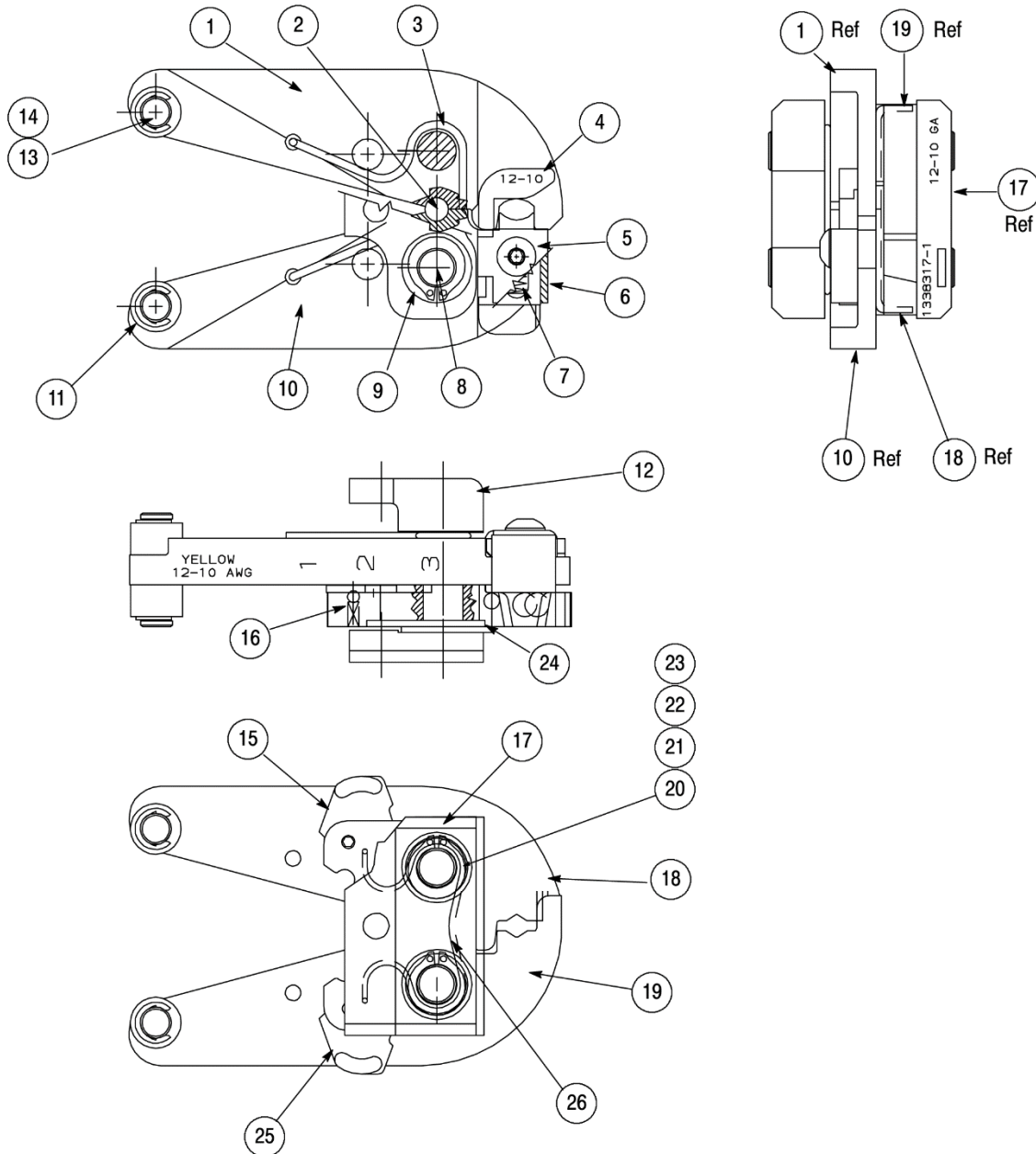


Figure 10 (cont'd)

REPLACEMENT PARTS			
ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSY
1	1338279-1	Indenter	1
2	302014	Pin, Pivot	1
3■	679942-1	Spring	1
4	189958-1	Locator	1
5	6-306105-9	Screw, 8-32 x .38	1
6	303252	Housing, Stop	1
7	304373	Spring, Compression	1
8	6- 23629-0	Pin, Str, Grv .3125 Dia.	2
9	1- 21048-0	Ring, Retaining	4
10	1338278-1	Anvil	1
11■	314479-6	Roller	4
12	768521-1	Link	1
13■	3- 23620-3	Pin, Str, Grv .255 Dia.	2
14■	21045-6	Ring, Retaining	4
15	1338303-2	Lever, Insulation	1
16	2-23057-4	Plunger, Ball	2
17	314259-4	Link	1
18	1338301-1	Anvil, Insulation	1
19	1338300-1	Indenter, Insulation	1
20	301185-6	Shim	As Required
21	301185-7	Shim	As Required
22	301185-8	Shim	As Required
23	301185-9	Shim	As Required
24	1424298-1	Shim	1
25	1338303-1	Lever, Insulation	1
26■	1424262-1	Spring	1

■ Recommended Customer Spares

Figure 10 (end)

## 8. REVISION SUMMARY

This revision resulted in formatting changes to most sections and the re-positioning (but not re-numbering) of some figures. Highlights include updating to the current TE format, logo, and enterprise name, and editing Detail B of Figure 9.