

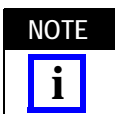
Figure 1

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.

Read these instructions thoroughly before proceeding.



Measurements are in metric units [followed by U.S. customary units in brackets].

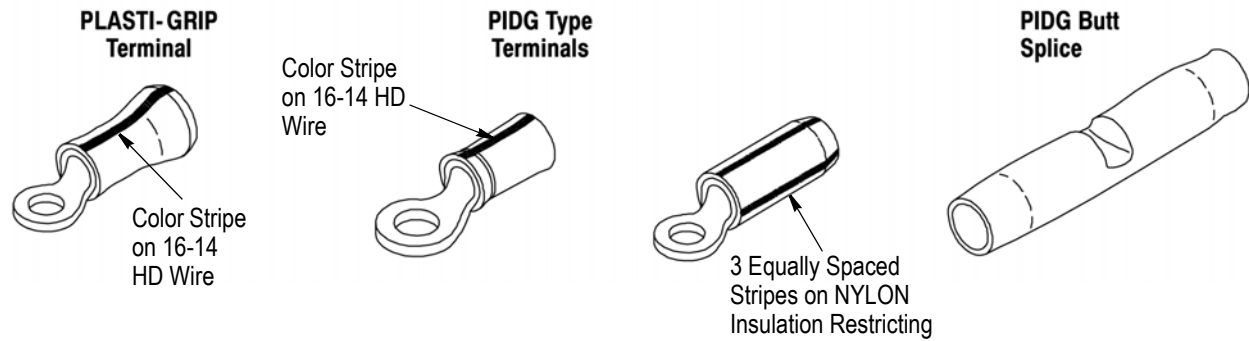
2. DESCRIPTION (Figure 1)

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

The crimping heads are color-coded to match the terminal and splice insulation color. See Figure 2. Observe the embossed dots on the insulation of finished crimps to ensure that the correct combination of terminal or splice and tool was used. See Figure 2.

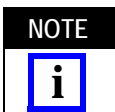


| PRODUCT | CRIMPING HEADS | DOT CODE | WIRE RANGE (AWG) | TERMINAL/SPLICE INSULATION COLOR CODE | WIRE STRIP LENGTH | | | |
|--|----------------|----------|------------------|---------------------------------------|-------------------|----------------|----------------|----------------|
| | | | | | TERMINALS | | SPLICES | |
| | | | | | MIN. | MAX. | MIN. | MAX. |
| PIDG Terminals and Splices and PLASTI-GRIP Terminals | 1338317-1 | 1 Dot | 12-10 or 16-14 | Yellow Yellow w/Black Stripe | 7.95 [.313] | 8.74 [.344] | 8.74 [.344] | 9.53 [.375] |

| PRODUCT | CRIMPING HEADS | DOT CODE | WIRE RANGE (AWG) | INSUL DIA RANGE | TERMINAL INSULATION COLOR CODE | WIRE STRIP LENGTH | |
|---|----------------|----------|------------------|----------------------------|--------------------------------|-------------------|-----------------|
| | | | | | | MIN. | MAX. |
| 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



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



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

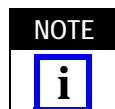


DO NOT operate pneumatic tool without the proper crimping head installed. After crimping head is installed, make sure that the quick pins are FULLY tightened to avoid personal injury and damage to the tool.

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. See Figure 1.



Use Loctite† No. 242 removable threadlock, 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.

†Trademark of Loctite Corporation.

3.3. Removal



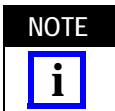
To avoid personal injury, ALWAYS disconnect tool from air supply before removing crimping head.

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

4. CRIMPING PROCEDURES



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.



Crimping head shown without guard for clarity.

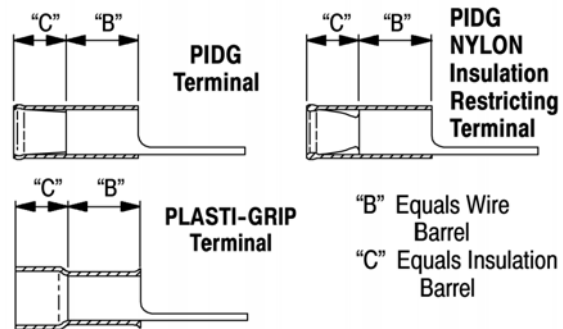
4.1. Terminal Crimping Procedure

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; 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.
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.

PIDG and PLASTI-GRIP Terminals



Terminal Tongue Positioned Under Locator

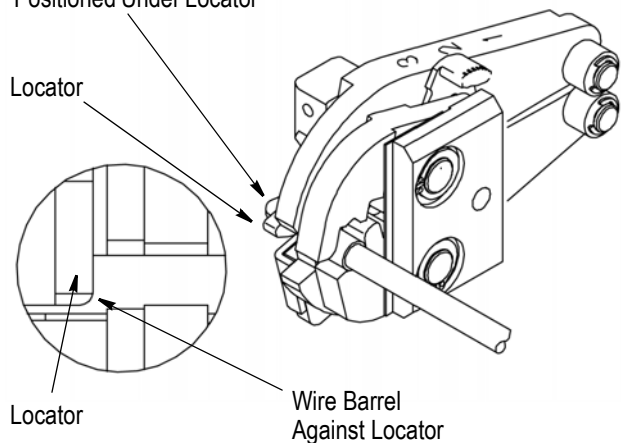
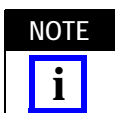


Figure 3.

4. Insert stripped wire into wire barrel of splice until the end of the conductor is against the splice wire stop. See Figure 4, A.
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. See Figure 4, B.
7. Refer to Section 5 and Figure 6 for crimp inspection.

4.3. Insulation Crimp Adjustment

A. PIDG Terminals and Splices



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.

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 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. Perform insulation crimp adjustment by placing adjustment levers in position 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 2 (medium) and repeat the crimp procedure.

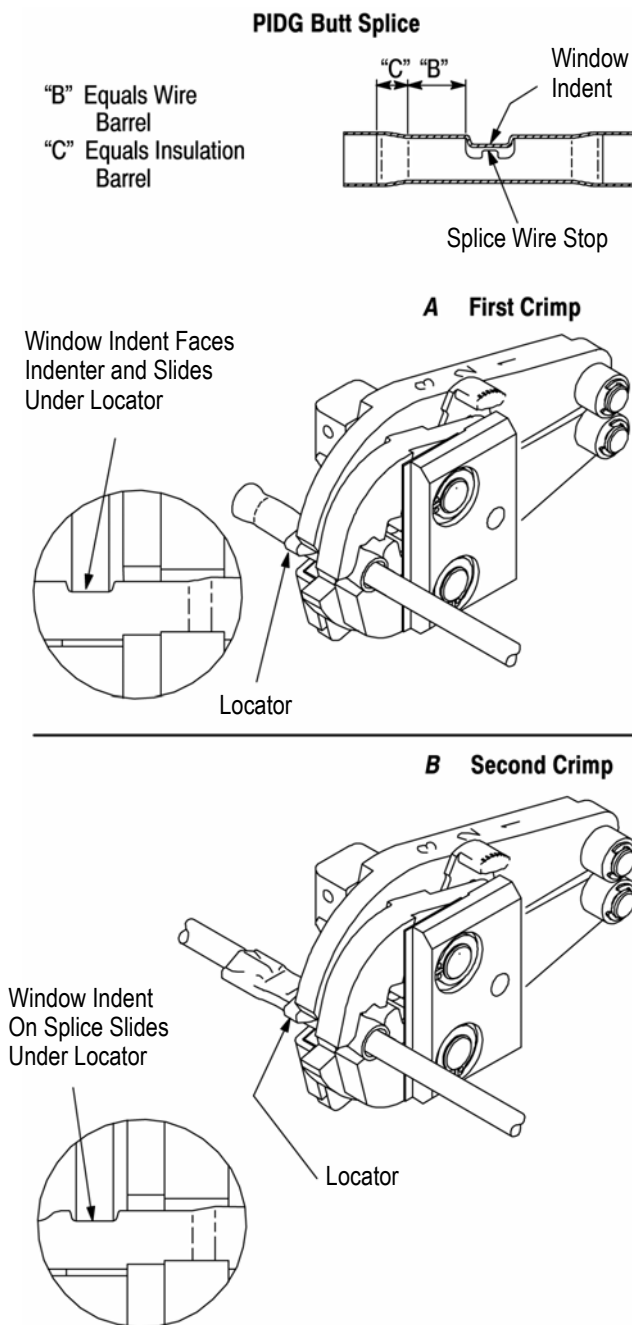


Figure 4

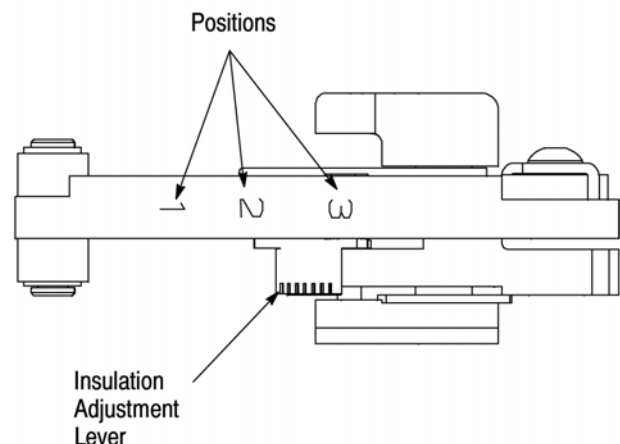


Figure 5

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.

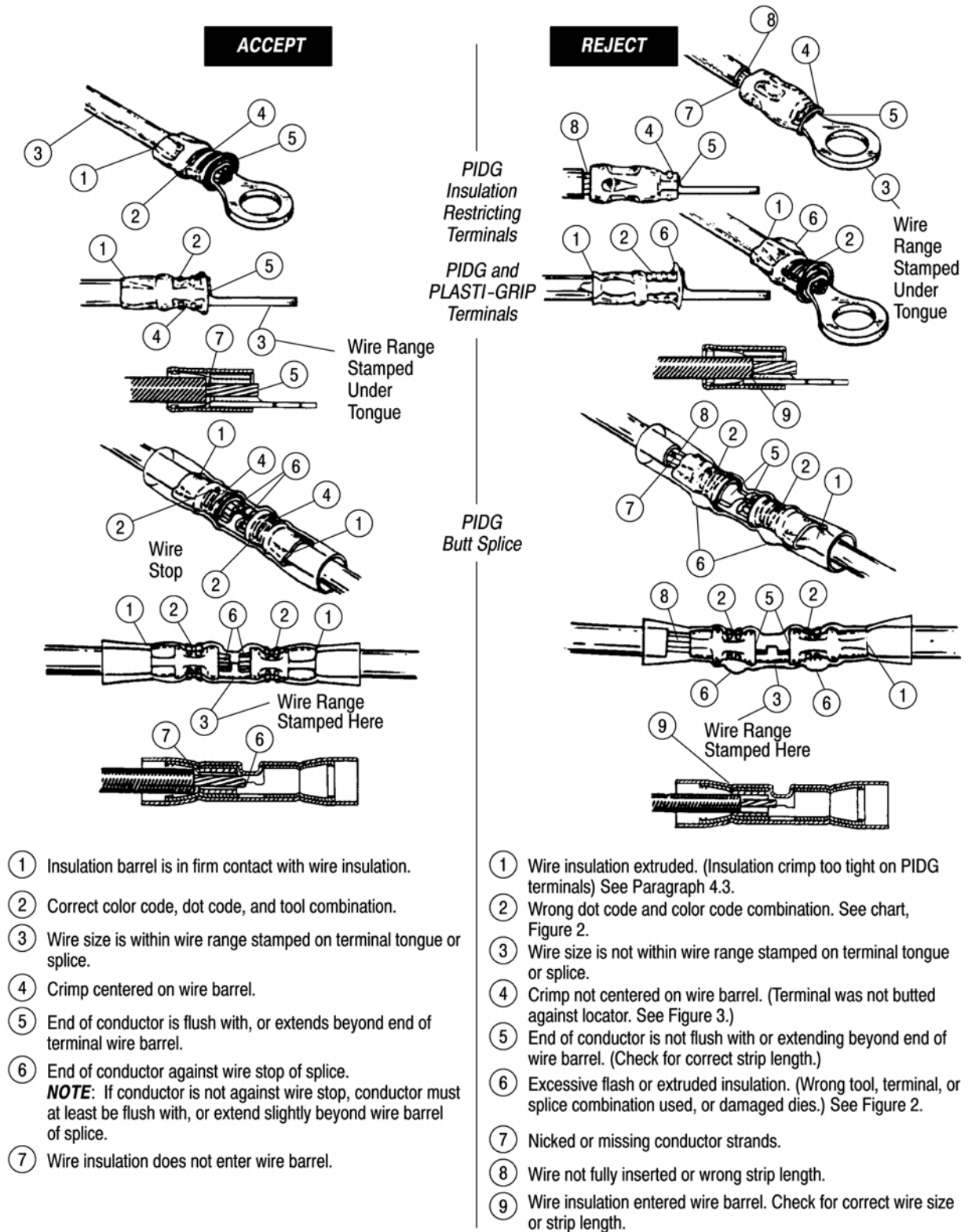


Figure 6

6. MAINTENANCE AND INSPECTION



To avoid personal injury, ALWAYS disconnect air supply from pneumatic tool before performing maintenance or inspection.

It is recommended that a maintenance and inspection program be performed periodically to ensure dependable and uniform terminations. The pneumatic crimping head should be inspected once a month. Frequency of inspection should be adjusted to suit your requirements through experience. Frequency of inspection depends on:

1. The care, amount of use, and handling of the crimping head.
2. The type and size of the product crimped.
3. The degree of operator skill.
4. The presence of abnormal amounts of dust and dirt.
5. Your own established standards.

Each crimping head is thoroughly inspected before packaging. Since there is the possibility of crimping head damage during shipment, new crimping heads should be inspected immediately upon arrival at your facility.

6.1. 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.



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.

6.2. 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 6.3) and a crimping chamber inspection (Paragraph 6.5).

6.3. 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 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.

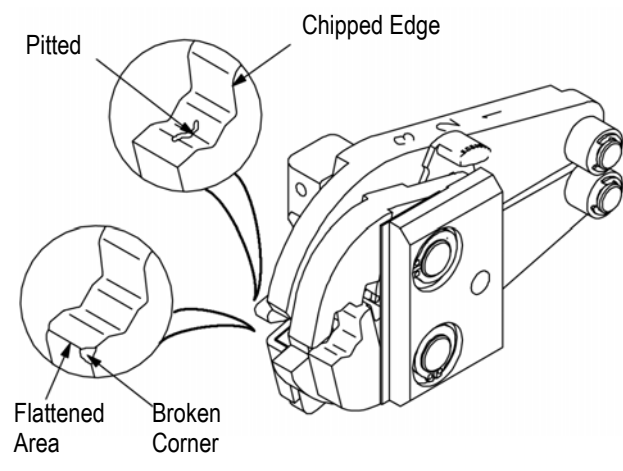


Figure 7

6.4. 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 (occasional) - lubricate weekly
- Head used weekly - lubricate monthly

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.

[‡] Trademark of Dow Corning Corporation

6.5. Gaging the Crimping Chamber

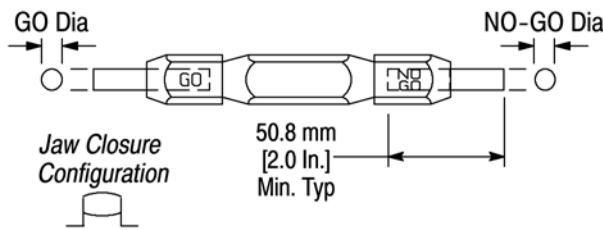
This inspection requires the use of plug gages conforming to the dimensions shown in Figure 8. TE does not manufacture or market these gages. Refer to 408-7424 for information concerning the gages.



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

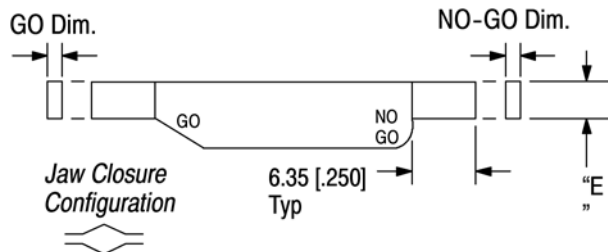
1. Remove oil and dirt from the bottom of the jaw surfaces and plug gage element surfaces.
2. Close wire barrel crimping jaws until they are bottomed, but not under pressure.
3. Align GO element with wire-barrel crimping chamber. Push element straight into crimping chamber without using force. The GO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

Suggested Plug Gage Design Wire Barrel Crimp



| CRIMPING HEAD | GAGE ELEMENT DIAMETERS mm [IN.] | |
|---------------|------------------------------------|------------------------------|
| | 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 DIMENSIONS mm [IN.] | | WIDTH "E" (Max.) mm [IN.] |
|---------------|-------------------------------------|------------------------------|---------------------------------|
| | GO | NO-GO | |
| 1338317-1 | 1.829-1.836 [.0720-.0723] | 2.334-2.337 [.0919-.0920] | 4.75 [.187] |

Figure 8

4. 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,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.

7. REPLACEMENT AND REPAIR

Replacement parts and recommended spares are listed in Figure 10. The recommended spares should be stocked for immediate replacement.

Order replacement parts through your TE representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 1-717-986-7605, or write to:

CUSTOMER REPAIR (150-01)
TYCO ELECTRONICS CORPORATION
2465 LEE HIGHWAY
MT. SIDNEY VA 24467

CUSTOMER SERVICE (38-35)

For further repair and replacement information,

call the Tooling Assistance Center: 1-800-722-1111.

When repair is necessary, return crimping head (along with a written description of the problem) to:

CUSTOMER REPAIR (150-01)
TYCO ELECTRONICS CORPORATION
2465 LEE HIGHWAY
MT. SIDNEY VA 24467

8. REVISION SUMMARY

Revisions to this instruction sheet include:

- Changed company name and logo

†† SAE is a trademark.

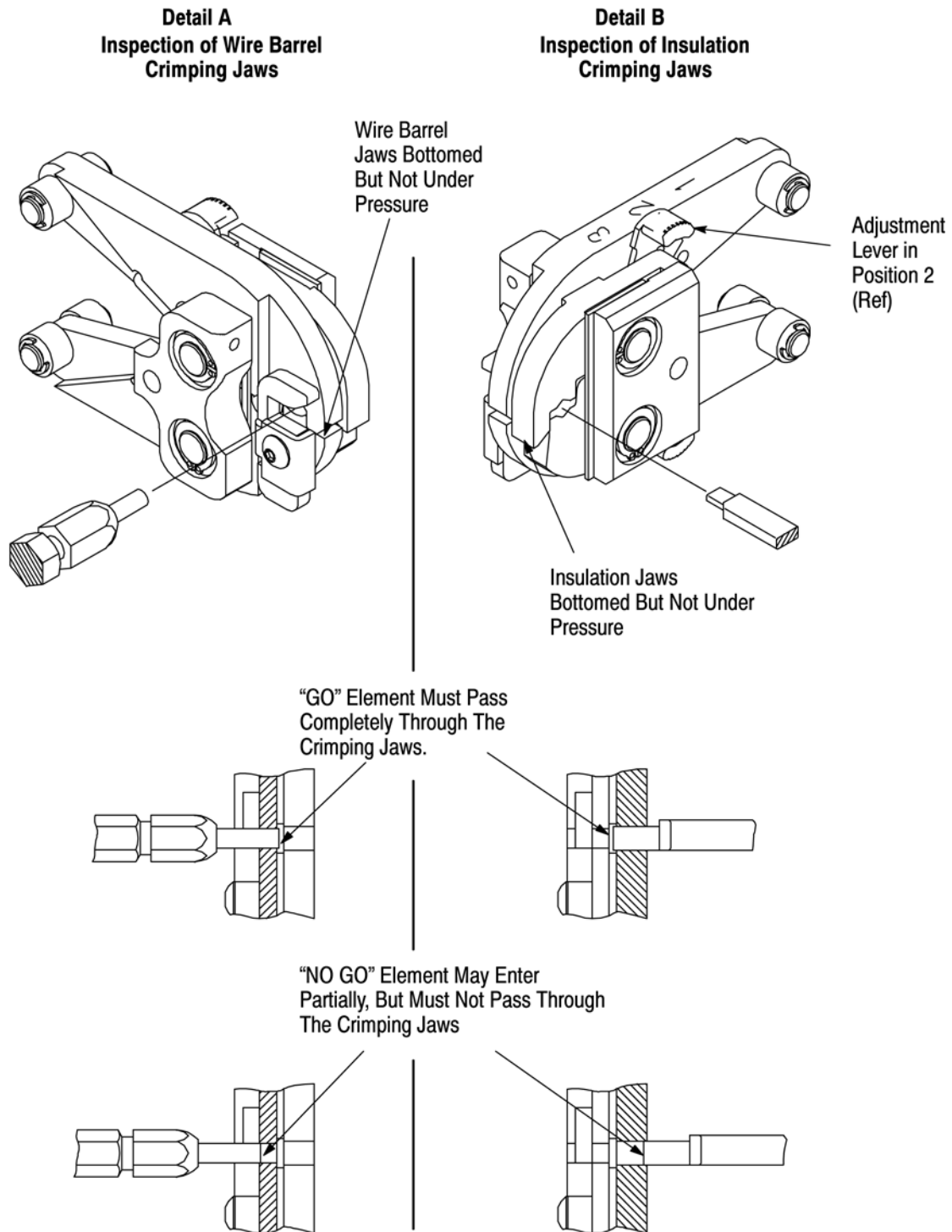


Figure 9

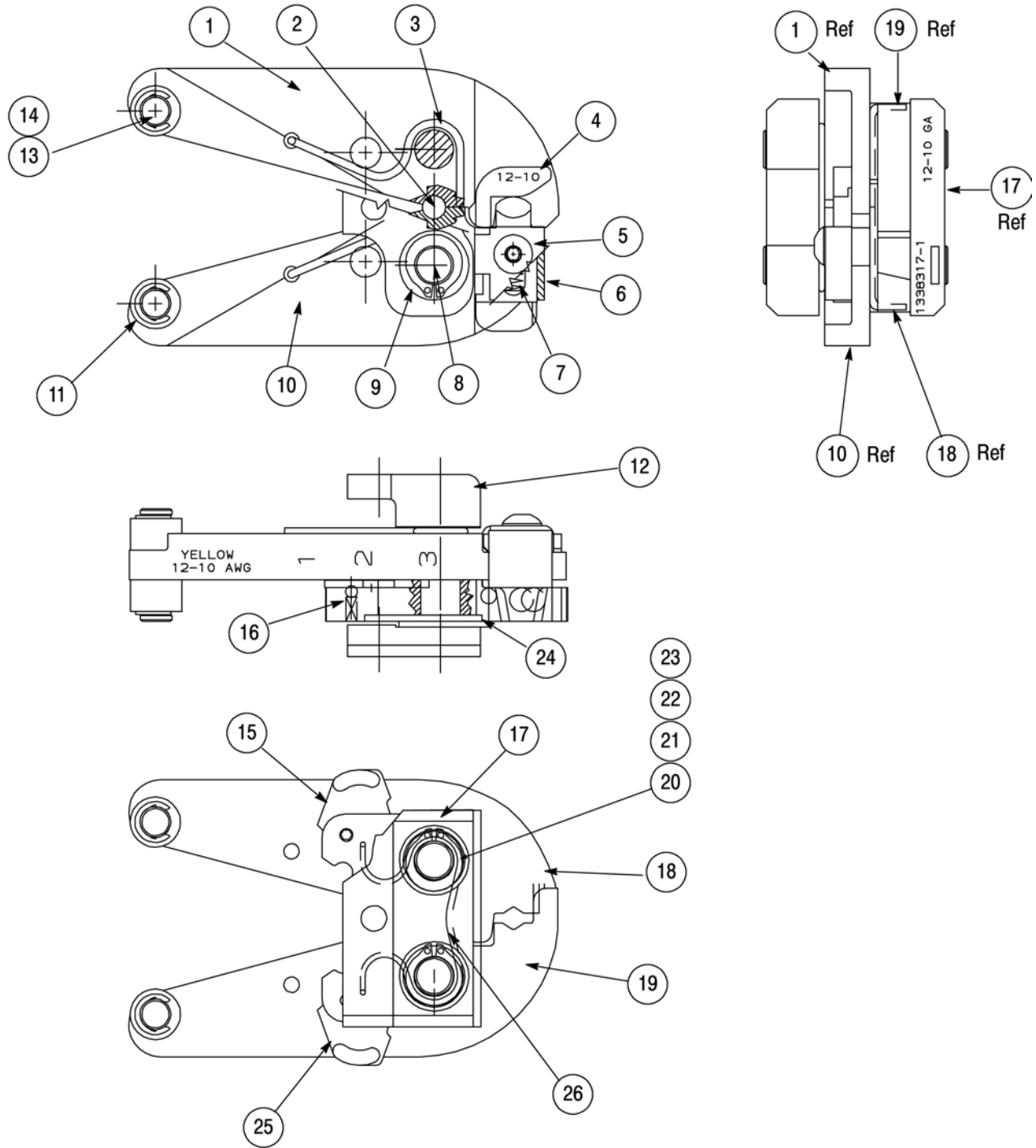


Figure 10 (Cont'd)

| CRIMPING HEAD | ITEM NUMBER | PART NUMBER | DESCRIPTION | QTY PER ASSY |
|---------------|-------------|-------------|--------------------------|--------------|
| 1338317-1 | 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 .2550 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)

