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## 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.

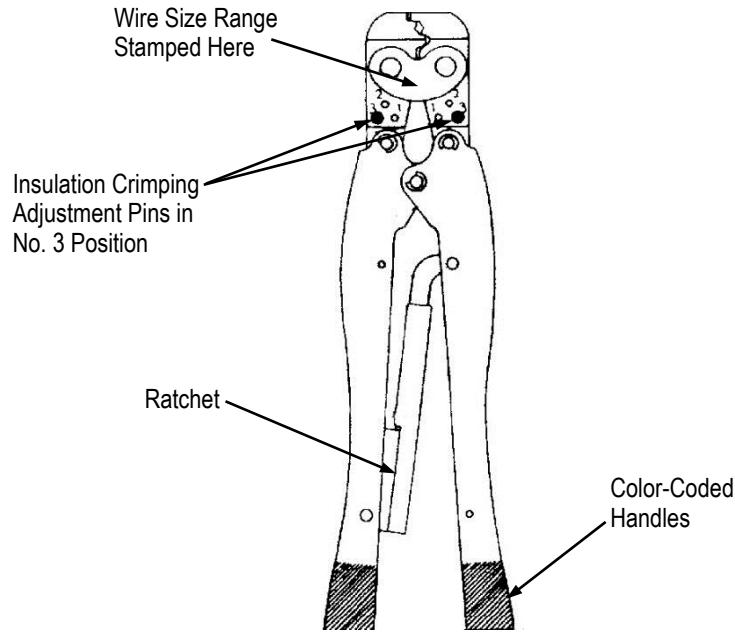


Figure 1

## 1. INTRODUCTION

CERTI-CRIMP hand tools 47386-4, 47387-7, and 525690-1 are used to crimp PIDG\* and PLASTI-GRIP\* terminals and splices onto a wire range size of 0.25-2.6 mm<sup>2</sup> [22-14 AWG].

## 2. WIRE STRIPPING AND CRIMPING PROCEDURES

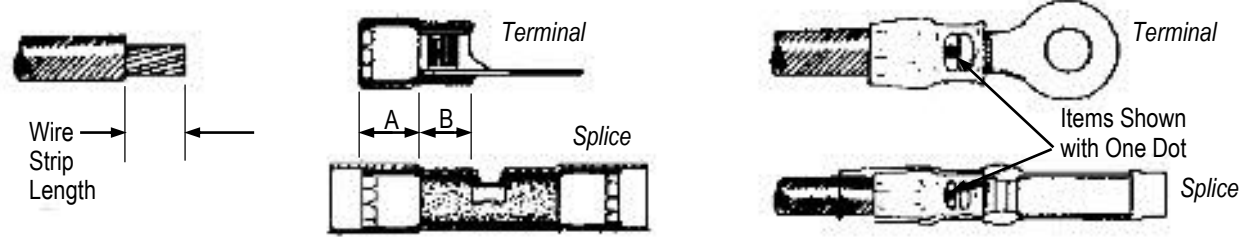
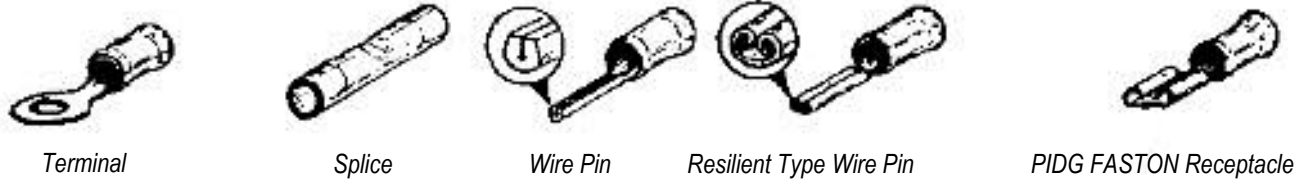
1. Strip the wire to the dimension listed in Figure 2. Strip length is determined by product to be crimped and by wire size.
2. Open crimping jaws by closing handles until the ratchet releases. See Figure 1.

**i** **NOTE**  
Once the ratchet is engaged, the handles cannot be opened until they are fully closed.

3. Place the terminal in the crimping jaws as shown in Figures 3A, 3B, and 3C.
4. Place the PIDG-Nylon butt splices in crimping jaws as shown in Figure 4A.

**i** **NOTE**  
For crimping PLASTI-GRIP butt splices, the locator has to be removed from the tool as shown in Figure 4B.

5. Close handles until the terminal or splice is held firmly in place. Do not deform the terminal or splice barrel. Make sure the terminal barrel rests against the locator.
6. Insert the stripped wire into the barrel. To complete the crimp, close the handles until the ratchet release mechanism releases. Handles will open automatically and the crimped item may be removed.
7. To crimp the other half of the splice, remove it and reposition the uncrimped half in the tool and repeat.

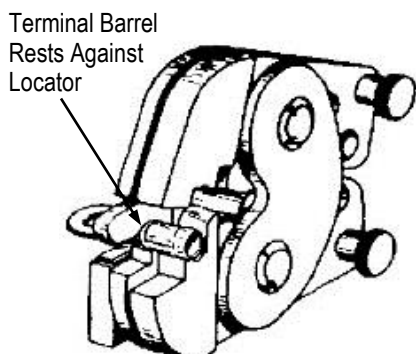


“A” is Insulation Barrel, “B” is Wire Barrel

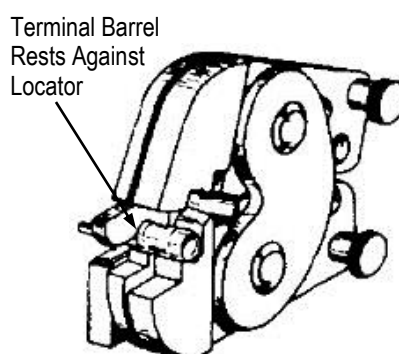
TOOL	WIRE SIZE mm <sup>2</sup> [AWG]	COLOR DOT CODE	PRODUCT CRIMPED	WIRE STRIPPING LENGTH			
				TERMINALS		SPICES	
				MIN	MAX	MIN	MAX
525690-1 47386-4	0.25-1.6 [22-16]	Red (One Dot)	PIDG and PLASTI-GRIP Terminals, Splices, and Wire Pins	5.5 [.219]	6.4 [.250]	6.3 [.250]	7.1 [.281]
	0.75-1.5 [18-16]		110-Series PIDG FASTON* Receptacles				
	1.0-1.5 [17-16]		187- and 250-Series PIDG FASTON Receptacles and Resilient Type PIDG Wire Pin	6.3 [.250]	7.1 [.281]	---	---
	0.3-1.0 [22-17]		250-Series PIDG FASTON Receptacle, Overlapping Barrel Type (160583-[ ])				
47387-7	1.0-2.6 [16-14]	Blue Green (Two Dot)	PIDG and PLASTI-GRIP Terminals, Splices, and Wire Pins	5.5 [.219]	6.4 [.250]	6.3 [.250]	7.1 [.281]
	3.0-3.4 [12]		187- and 250-Series PIDG FASTON receptacles and Resilient Type PIDG Wire Pin	6.3 [.250]	7.1 [.281]	---	---
	1.5-2.5 [16-14]		250-Series PIDG FASTON Receptacle, Overlapping Barrel Type (160313-[ ])				

Figure 2

**3A (Terminal)**



**3B (Wire Pin)**



**3C (PIDG FASTON Receptacle)**

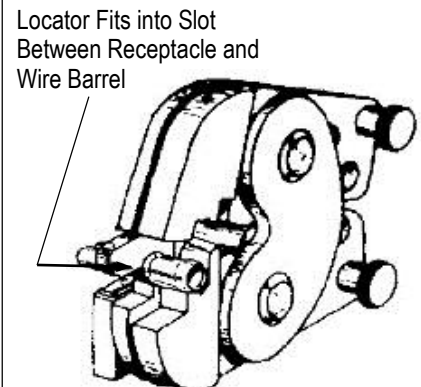
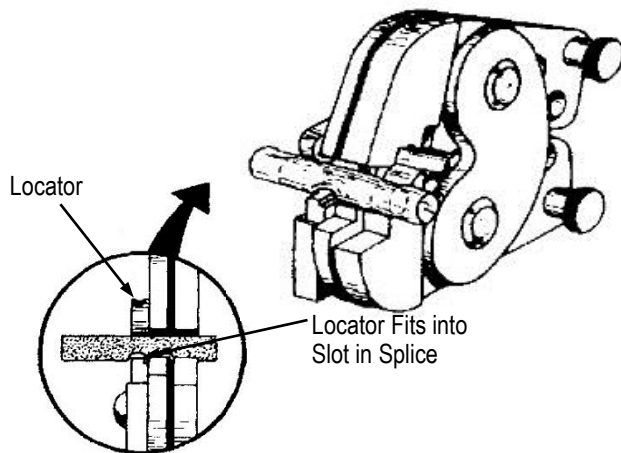


Figure 3

#### 4A (PIDG Butt Splice)



#### 4B (PLASTI-GRIP Butt Splice)

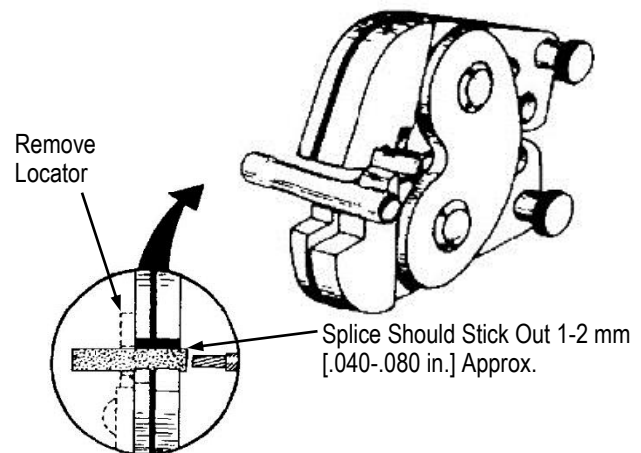


Figure 4

### 3. INSULATION CRIMP ADJUSTMENT FOR PIDG AND PLASTI-GRIP TERMINALS AND SPLICES

The insulation crimping section of the hand tool has three positions: 1-Tight, 2-Medium, and 3-Loose. Crimping position No. 3 is for wire having a large insulation diameter; No. 2 is for medium insulation diameter; and No. 1 is for small insulation diameter.

**i** **NOTE**  
Always make certain that both insulation adjustment pins are in the same position. See Figure 1.

1. Insert the insulation adjustment pins in the No. 3 position. See Figure 1.
2. Place the terminal or splice in the crimping jaws and insert the unstripped wire into *only* the insulation barrel portion of the terminal or splice. See Figure 2.
3. Squeeze the handles of the tool and complete the crimping procedure.
4. Remove the crimped terminal or splice and check the insulation support as follows:
  - a. Bent the wire back and forth once.
  - b. The terminal or splice should retain the grip on the wire insulation.
  - c. If the wire pulls out, set the insulation adjustment pins in next tighter position (No. 2).
  - d. Make a test crimp and repeat adjustment as necessary until the desired insulation grip is obtained.
  - e. Do not use a tighter setting than required.

**i** **NOTE**  
PLASTI-GRIP terminals and splices feature a wire insulation support only. PIDG terminals and splices feature an insulation grip.

#### 4. COLOR AND DOT CODE (Figure 2)

Make sure that the terminal, splice, and tool handle colors are coded for a given wire size. The dot coding will appear on terminals and splices when they are crimped properly in the correct hand tools.

### 5. MAINTENANCE AND INSPECTION PROCEDURE

#### 5.1. Cleaning

The tool should be immersed (handles partially closed) in a reliable commercial de-greasing compound to remove accumulated dirt, grease, and foreign matter. Make certain that the de-greasing compound does not attach paint or plastic materials. Remove remaining de-greasing compound with a lint-free cloth. When de-greasing compounds are not available, tool may be wiped clean with a lint-free cloth. Re-lubricate tool before placing it back in service. See Paragraph 5.2.

### 5.2. Lubrication

Lubricate all pins, pivot points, and bearing surfaces with a good grade SAE No. 20 motor as follows:

- a. Tools used in daily production, lubricate daily.
- b. Tools used daily (occasional), lubricate weekly.
- c. Tools used weekly, lubricate monthly.

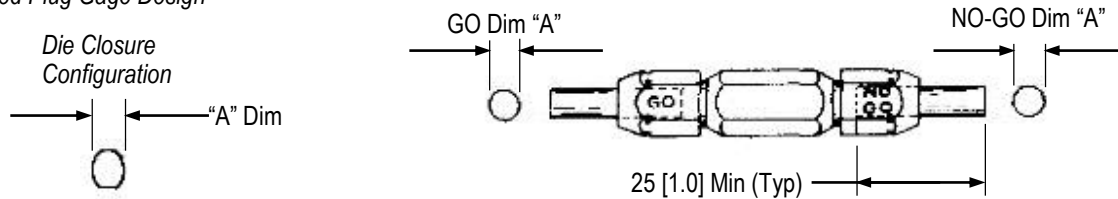
Wipe excess oil from tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of an application.

### 5.3. Die Closure Inspection

Every TE Connectivity hand tool is inspected and tested for proper die (jaw) closure before being shipped from the factory. An inspection should, however be performed periodically to measure the tool die closure.

The tool die closure inspection is accomplished using GO/NO-GO plug gages. TE neither manufactures nor sells plug gages, however, suggested plug gage design is shown in Figure 5. The GO/NO-GO dimensions of the plug gage are also listed in Figure 8. The following procedure is recommended for measuring the tool die closures. Also, refer to Instruction Sheet [408-7424](#).

*Suggested Plug Gage Design*



TOOL	DIE CLOSURE DIM "A"		GAGE MEMBER DIM "A"	
	GO	NO-GO	GO	NO-GO
525690-1 47386-4	2.76 [.109]	2.92 [.115]	2.769-2.776 [.1090-.1093]	2.918-2.921 [.1149-.1150]
47387-7	3.02 [.119]	3.17 [.125]	3.023-3.029 [.1190-.1193]	3.172-3.175 [.1249-.1250]

Figure 5

1. Remove traces of oil or dirt from tool crimping area and plug gage.
2. Remove locator assembly.

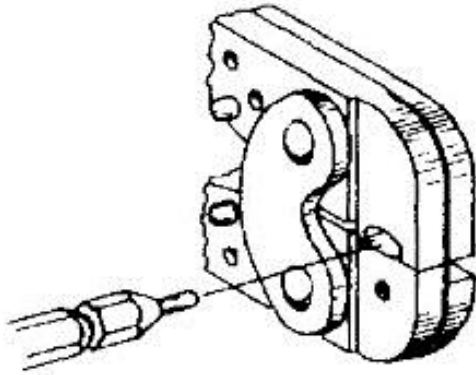


**CAUTION**

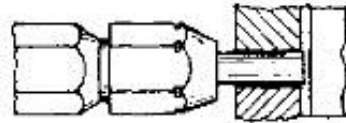
*Do not lose spring in locator assembly.*

3. Close handles of tool until crimping jaws are bottomed. Do not apply additional pressure to tool handles.
4. With crimping jaws bottomed, use plug gage to check the die closure.
5. Hold gage in straight alignment with the tool and carefully try to insert, without forcing, the GO element, and then the NO-GO element. See Figure 6.
6. The GO element must pass completely through the die closure.
7. The NO-GO element may enter partially, but must not pass completely through the die closure.
8. Re-install the locator assembly.
9. If the wire barrel crimping dies meet the GO/NO-GO gage conditions, the tool may be considered dimensionally correct.
10. If you find that the tool crimping dies do not conform to the GO/NO-GO gage conditions, return the tool to TE for repair.

*Inspection of Wire Barrel Crimping Dies with Plug Gage*



*"GO" Gage Must Pass Completely Through the Die Closure*



*"NO-GO" Gage May Enter Partially, but Must Not Pass Completely Through the Die Closure*

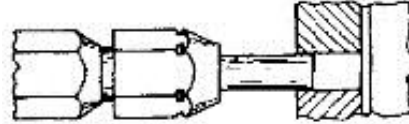


Figure 6