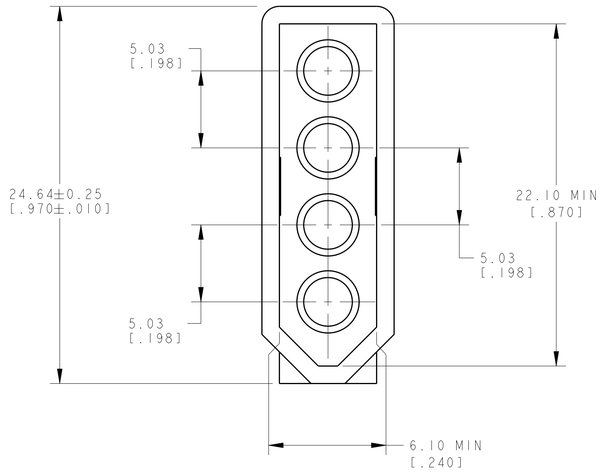
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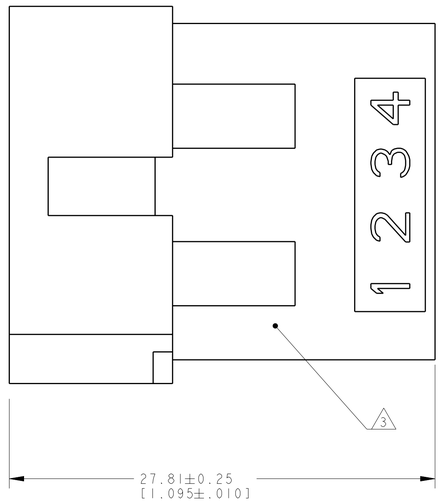
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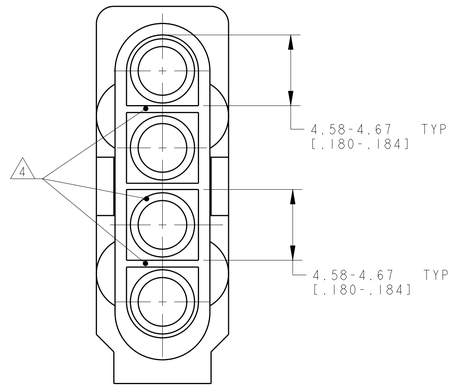
REVISIONS

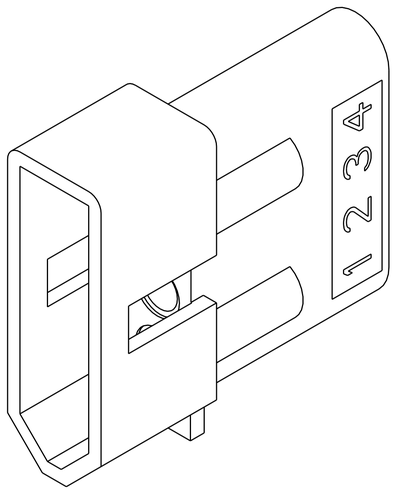
P	LTR	DESCRIPTION	DATE	DWN	APVD
	L	REVISED PER 0G3B-0540-04	05AUG04	KW	DC
	L1	REVISED PER ECO-06-008661	19JUL06	KW	DC

1. MATERIAL: NYLON UL94V-2 (NATURAL).
2. MARKING FOR UL AND CSA LOGO SHALL BE LOCATED ON ANY EXTERNAL SURFACE.
3. AMP LOGO AND CIRCUIT NUMBERS LOCATED IN AREA, EITHER SIDE, SIZE OPTIONAL, FROST BACKGROUND.
4. WALL THICKNESS TO MEASURE 0.36-0.46 [.014-.018]









勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
http://www.100y.com.tw

METRIC

770078-1
PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT FOR TYCO ELECTRONICS CORPORATION IT IS SUBJECT TO CHANGE AND THE CONTROLLING ENGINEERING ORGANIZATION SHOULD BE CONTACTED FOR THE LATEST REVISION.

DIMENSIONS: mm [INCHES]

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±-
2 PLC ±0.13 [.005]
3 PLC ±-
4 PLC ±-
ANGLES ±0° 30'

MATERIAL - 1
FINISH -

DWN K WHITAKER 05AUG2004
CHK D COLEY 05AUG2004
APVD D COLEY 05AUG2004
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

tyco Electronics
Tyco Electronics
Harrisburg, PA 17105-3608

NAME
PLUG,
4 CIRCUIT,
.093 COMMERCIAL PIN AND SOCKET

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	00779	C-770078	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 1 OF 1 | REV L1

NOTE

All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ±0.13 [±.005] and angles have a tolerance of ±2°. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of .093 Diameter Pin and Socket Contacts and Housings. These requirements are applicable automatic machine crimping tools.

When corresponding with TE Connectivity (TE) Personnel, use the terminology provided on this specification to help facilitate your inquiry for information. Basic terms and features of components are provided in Figure 1.

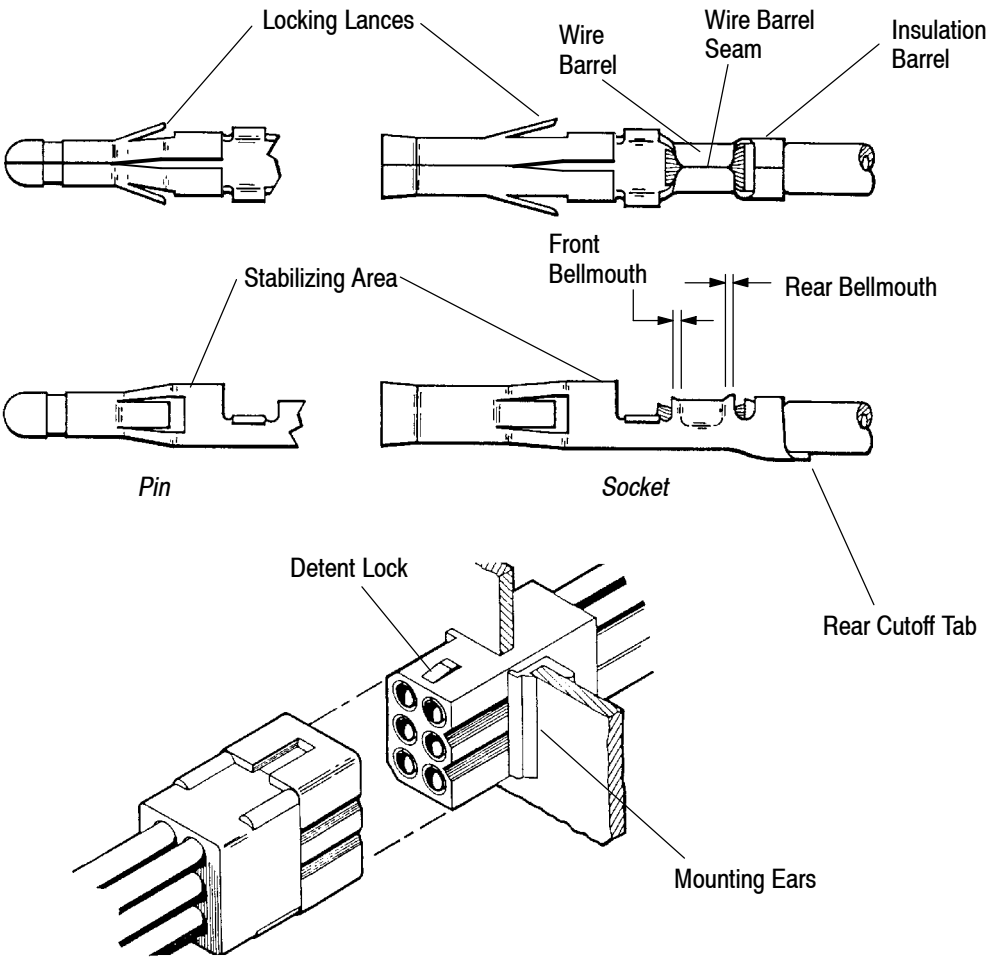


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

- Updated document to corporate requirements
- New logo

©2011 Tyco Electronics Corporation, a TE Connectivity Ltd. Company
All Rights Reserved
TE logo is a trademark.
*Trademark. Other product names, logos, or company names might be trademarks of their respective owners.

2.2. Customer Assistance

Reference Part Number 350415 and Product Code 2090 are representative numbers of the .093 Diameter product line. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such information can be obtained through a local TE Representative or, after purchase, by calling the Tooling Assistance Center or the Product Information numbers at the bottom of page 1.

2.3. Drawings

Customer Drawings for specific products are available from the responsible Engineering department via the service network. The information contained in the Customer Drawings takes priority if there is a conflict with this specification or with any other technical documentation supplied by TE.

2.4. Specifications

Product Specification 108–1038 provides applicable performance requirements for the contacts.

2.5. Instruction Material

Instruction material for automatic and hand application tooling is shipped with the appropriate tooling. Refer to Figure 2 for referenced documents.

3. REQUIREMENTS

3.1. Wire Preparation

A. Wire Selection

The contacts will accept stranded wire ranging in size from 14 to 24 AWG. Wire insulation diameter shall have minimum and maximum dimensions according to the wire sizes indicated in Figure 2.

B. Wire Preparation

The wire strip length shall be as indicated in Figure 2. Reasonable care shall be taken during the stripping operation to ensure the conductor is not nicked, scraped, or cut.

3.2. Crimped Contacts

Contacts shall be crimped in accordance with the material packaged with the tooling; refer to Figure 2.

A. Carrier Cutoff Tab

Cutoff tab shall not exceed .38 [.015].

HAND TOOL WIRE CRIMP DIMENSIONS

WIRE			WIRE BARREL		INSULATION BARREL CRIMP WIDTH	HAND TOOL PART NUMBER● (Instruction Sheet)
SIZE (AWG)	INSULATION DIAMETER (Max.)	STRIP LENGTH ±0.38 [.015]	CRIMP HEIGHT ±0.05 [.002]	CRIMP WIDTH		
20	3.56 [.140]	4.34 [.171]	1.07 [.042]	2.29 [.090]	3.30 [.130]	90871-1 (408-9966)
18			1.07 [.042]			
16			1.45 [.057]			
14			1.45 [.057]			
24	2.79 [.110]	4.34 [.171]	0.81 [.032]	1.78 [.070]	3.05 [.120]	90872-1 (408-9967)
22			0.81 [.032]			
20			1.02 [.040]			
18			1.02 [.040]			

● Use dash 1 (-1) and dash 3 (-3) for a “T” type machine and dash 2 (-2) and dash 4 (-4) for a “K” type machine.

Figure 2 (cont’d)

AUTOMATIC MACHINE WIRE CRIMP DIMENSIONS						
WIRE			WIRE BARREL		INSULATION BARREL CRIMP WIDTH	APPLICATOR PART NUMBER● (Instruction Sheet)
SIZE (AWG)	INSULATION DIAMETER (Max.)	STRIP LENGTH ±0.38 [.015]	CRIMP HEIGHT ±0.05 [.002]	CRIMP WIDTH		
20	3.56 [.140]	4.34 [.171]	1.09 [.043]	2.29 [.090]	3.30 [.130]	466878-1, -2 (408-8040)
18			1.22 [.048]			
16			1.40 [.055]			
14			1.68 [.066]			
24	2.79 [.110]	4.34 [.171]	0.89 [.035]	1.78 [.070]	3.05 [.120]	466656-1, -2 (408-8040)
22			0.94 [.037]			
20			0.99 [.039]			
18			1.14 [.045]			
18	4.57 [.180]	6.35 [.250]	1.40 [.055]	2.29 [.090]	4.57 [.180]	567273-2 (408-8040)
18 (2)	4.57 [.180] Each		1.68 [.066]			
16	4.57 [.180]		1.57 [.062]			
14			1.85 [.073]			
20	4.57 [.180]	4.34 [.171]	1.09 [.043]	2.29 [.090]	3.94 [.155]	567337-3, -4 (408-8040)
18			1.22 [.048]			
16			1.40 [.055]			
14			1.68 [.066]			

Figure 2 (end)

B. Wire Barrel Crimp Inspection

1. Crimp height and width shall be as shown in Figure 2.

2. The wire barrel seam shall be closed adequately to confine all strands of the wire. There shall be no loose wire strands. Wire strands should not be embedded in the seam of the wire barrel.

3. The rear bellmouth shall be .13–.76 [.005–.030]. The front bellmouth shall be 0.38 [015] maximum.

4. The end of the wire shall be flush with the front end of the wire barrel, or extend 1.02 [.040] maximum. Both insulation and conductor shall be visible between the insulation barrel and wire barrel. Care shall be taken not to allow insulation to be crimped in the wire barrel.

5. Wire barrel flash shall not exceed 0.25 [.010].

C. Insulation Barrel Crimp Inspection

1. Crimp width shall be as shown in Figure 2.

2. Care shall be taken not to cut or break the insulation during the crimping operation.

D. Locking Lances

The locking lances shall not be deformed.

E. Alignment

The crimped insulation barrel shall fall into an area defined by a 4.06 [.160] diameter circle. Crimped contacts with two wires shall fall into a 5.21 x 9.78 [.205 x .385] area. Crimped contacts using 4.57 [.180] insulation diameter should fall into a 4.44 [.175] diameter circle. See Figure 3.

There shall be no twist or roll in the crimped portion that will impair usage of the contact.

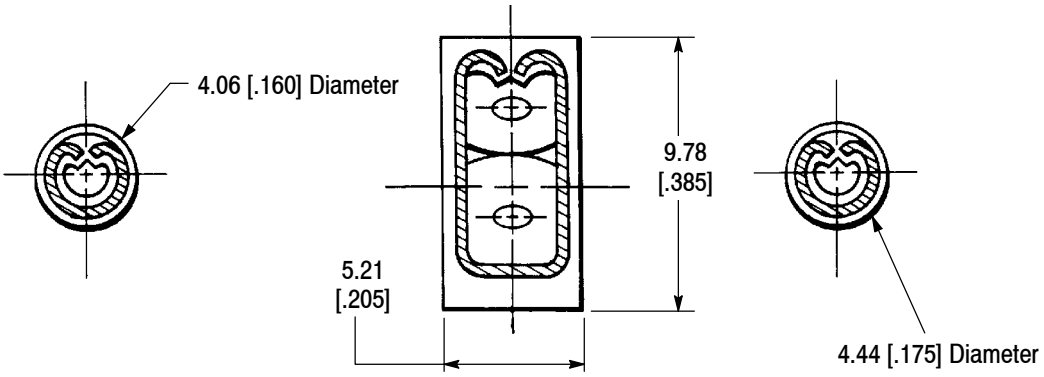


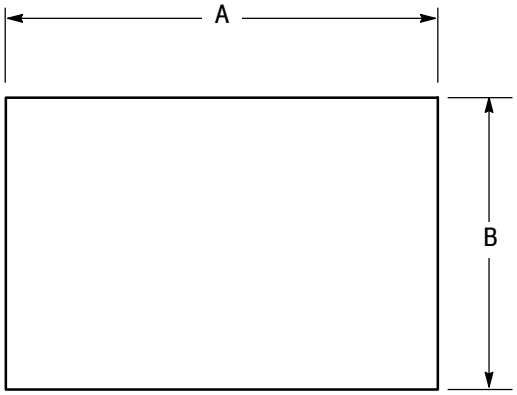
Figure 3

3.3. Housings

Housings are available in receptacle and plug versions. Receptacles are available with mounting ears and detents or with detent only. Plugs are available with or without mounting ears. Housings are available in 1 through 15 positions and have a standard 5.03 [.198] centerline. They are also available with a 6.35 [.250] centerline.

3.4. Panel-Mounting Cutouts

Panel–mounting cutouts shall be as indicated in Figure 4.



Recommended Panel Cutout

NUMBER OF CIRCUIT POSITIONS	DIMENSIONS†			
	RECEPTACLE		PLUG	
	A	B	A	B
2	18.42 [.725]	7.92 [.312]	20.32 [.800]	9.52 [.375]
3	21.34 [.840]	7.92 [.312]	23.70 [.933]	9.52 [.375]
3 (6.35 [.250] CTR)	23.37 [.920]	7.87 [.310]	25.96 [1.022]	9.27 [.365]
4 (6.35 [.250] CTR)	29.67 [1.168]	7.87 [.310]	32.26 [1.270]	9.27 [.365]
4 IN-LINE	26.37 [1.038]	7.92 [.312]	28.73 [1.131]	9.52 [.375]
6	18.24 [.718]	15.24 [.600]	19.05 [.750]	17.65 [.695]
6 (6.35 [.250] CTR)	24.03 [.946]	15.44 [.608]	26.62 [1.048]	16.71 [.658]
9	21.03 [.828]	18.42 [.725]	23.80 [.937]	16.76 [.660]
12	26.67 [1.050]	18.42 [.725]●	29.34 [1.155]	19.30 [.760]
15	31.50 [1.240]	16.64 [.655]	34.11 [1.343]	19.30 [.760]

† Tolerance of 0.25 [.010].
● Use 16.64 [.655] if using housing without detents.

Figure 4

3.5. Repair

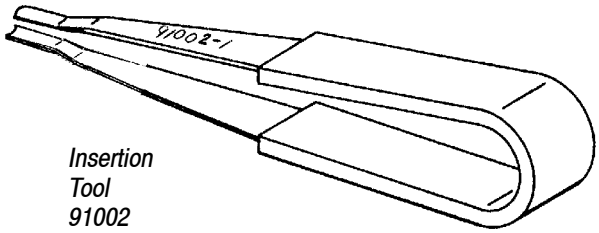
Connectors can be repaired by removing the contact from the housing and making the repair. When extracting a contact, the lances should be reset to their original position. Consult the customer print for the correct setting. See Section 5 for tooling.

4. QUALIFICATION

The .093 Diameter Housings are Recognized by Underwriters' Laboratories, Inc. in UL File number E28476 and CSA International Certified in File number LR7189.

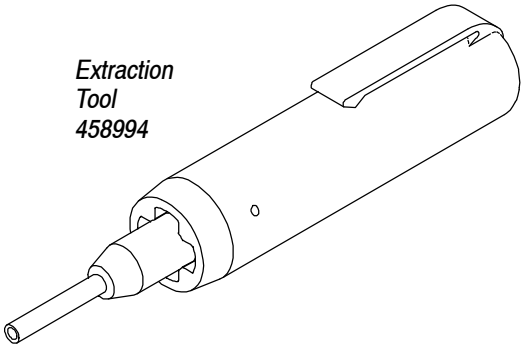
5. TOOLING (Figure 5)

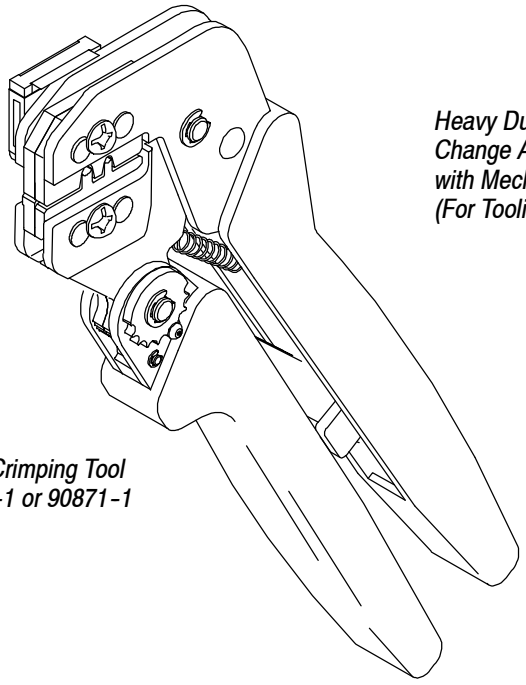
The .093 Diameter Contacts are terminated by automatic machine or hand crimping tools. Figure 2 lists tooling used for crimping these contacts. Use Insertion Tool 91002 (408-7347) to insert crimped pin and socket contacts in housing. Use Extraction Tool 458994-3 (408-9923) to remove pin and socket contacts from the housing.



Insertion Tool 91002

Extraction Tool 458994





Hand Crimping Tool 90872-1 or 90871-1

Heavy Duty Miniature Quick Change Applicator (Side-Feed Type) with Mechanical Feed System (For Tooling Part Numbers, See Figure 2)

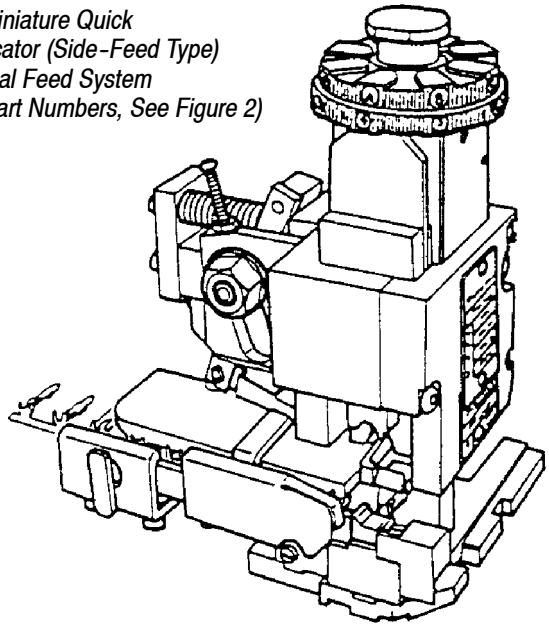


Figure 5

6. VISUAL AID

The following illustrations are to be used by production personnel to ensure properly applied product. The views suggest requirements for good applications. Applications considered visually incorrect should be inspected using the information in the main body of this document.

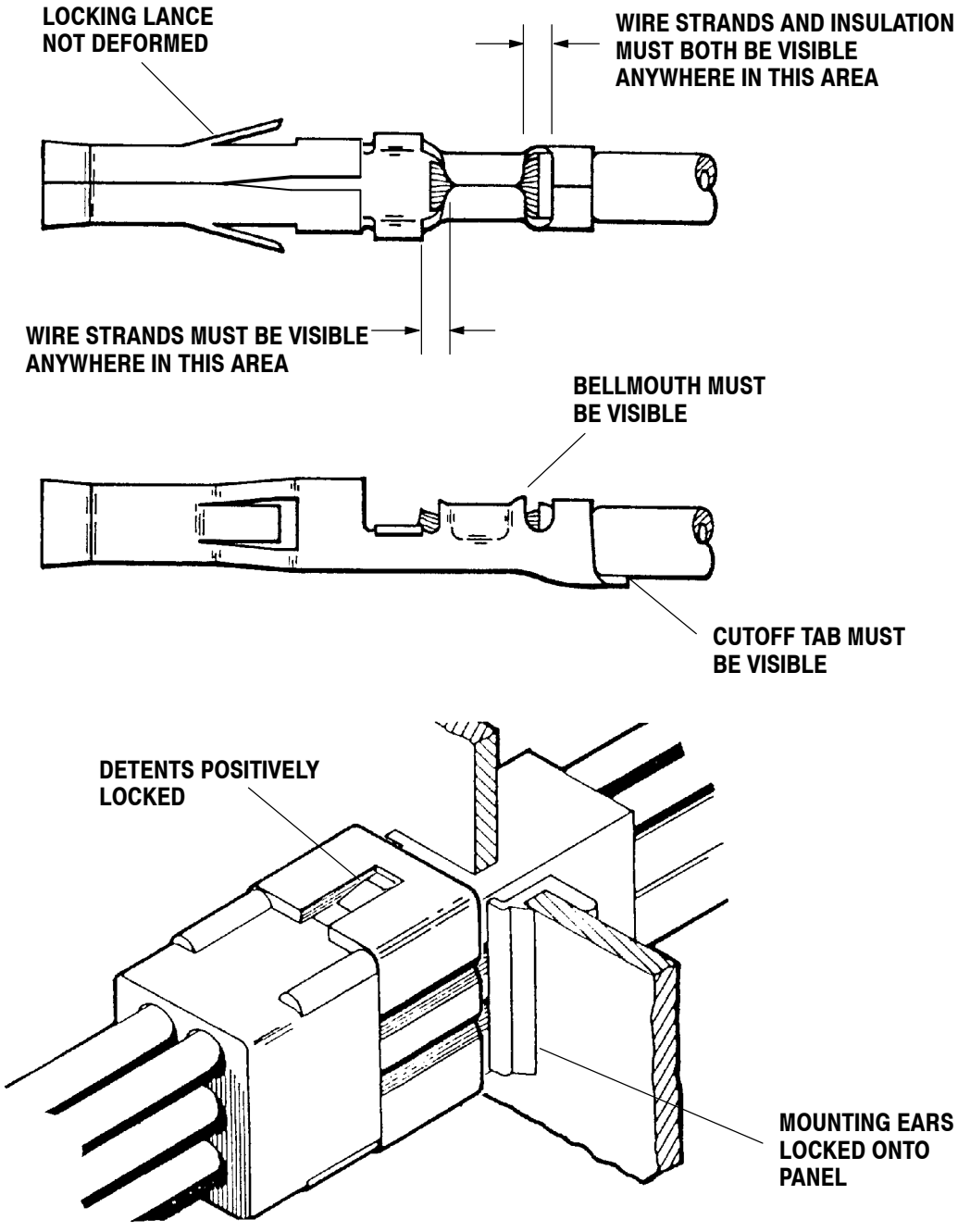


FIGURE 6. VISUAL AID