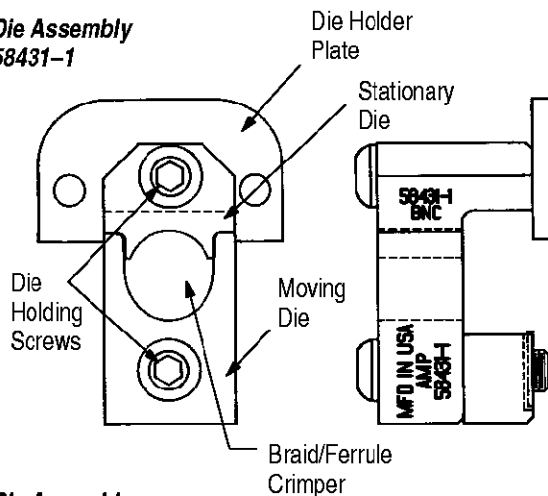


### Die Assembly 58431-1



### Die Assembly 58432-1

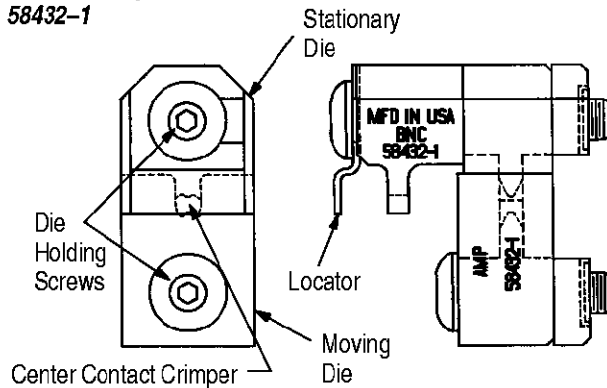


Figure 1

## 1. INTRODUCTION

AMP\* Interchangeable Crimping Dies 58431-1 and 58432-1 (see Figure 1) are designed to be used in the C-Head Adapter 318161-1 for the AMP 626 Pneumatic Tool System to crimp center contacts and ferrules (AMP Part Numbers 225526-4 [contact] and 225325-2 [ferrule]) to BNC Plug Assemblies 225887-2 and 413586-1, using AMP coaxial cable (AMP part numbers 222672 and 222405). For information regarding the pneumatic tool, refer to AMP Customer Manual 409-5862 and Instruction Sheet 408-4190. Information on the connector and the cable is contained on AMP Customer Drawing 222403.

### 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.

Read these instructions thoroughly before using the interchangeable crimping dies.

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

## 2. DESCRIPTION

The crimping dies are designed to be used in a two-step procedure in which (1) the center contact of the connector is crimped onto the twisted pair of center conductors of the coaxial cable and, (2) the ferrule is crimped over the cable braid onto the support sleeve of the connector.

Each crimping die assembly consists of a moving die and a stationary die. The moving die is positioned in the lower portion of the tool head and is attached to the moving die holder by a die holding screw. The stationary die is secured to the stationary die holder located in the upper portion of the tool head. The center contact crimp is performed by die assembly 58432-1 and the ferrule-to-braid-to-support sleeve crimp is performed by die assembly 58431-1. Note that crimping die assembly 58431-1 also includes a die holder plate (on the stationary die). The die holder plate is required to crimp this particular product when using the pneumatic tool. Thus, the existing die holder plate on the tool must be removed prior to crimping.

## 3. CABLE PREPARATION AND ASSEMBLY

Slide the ferrule onto the cable far enough from the cable end so that it will not interfere with the center contact crimping procedure. Then, strip and prepare the cable using the information provided on AMP Drawing 222403 (Thinnet Cable Subassembly). Assemble the prepared cable with the BNC plug center contact on the center conductor of the cable.

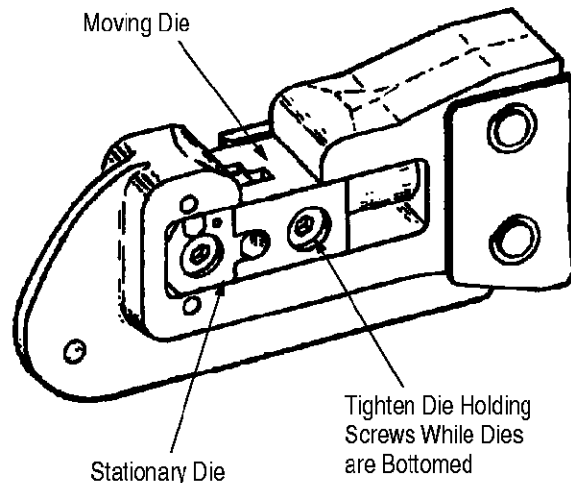


Figure 2

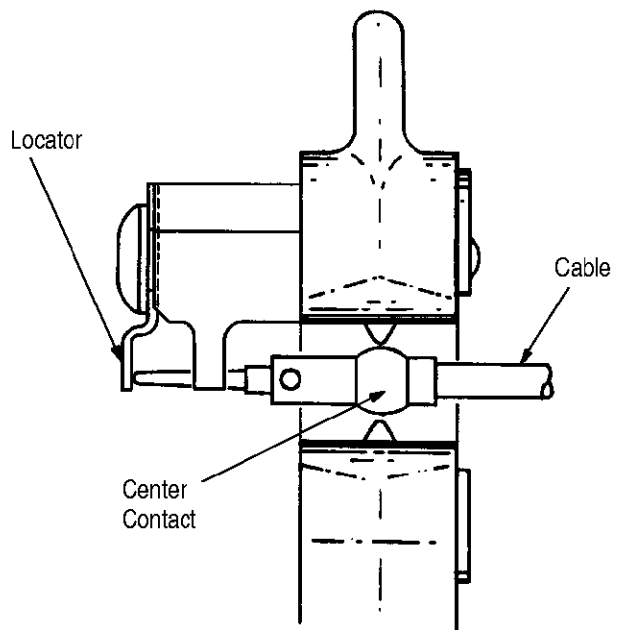


Figure 3

#### 4. DIE INSTALLATION AND CRIMPING

The procedures which follow are recommended when using the 626 pneumatic tool system:

##### 4.1. Center Contact Crimping Dies (58432-1)

1. Shut off air supply.
2. Position stationary die in stationary die holder and moving die in moving die holder. Refer to Figure 2. Fasten die holding screws enough to hold dies in place but do NOT tighten fully.
3. Reconnect air supply. Then activate tool until dies bottom. Fully tighten both die holding screws while dies are bottomed. The tool is now ready for crimping.

**DANGER** Avoid personal injury. Always keep fingers clear of crimping area when air supply is connected.

**NOTE** Check die alignment and tighten die holding screws at least twice daily.

4. Make sure that the ferrule is slipped onto the cable. With plug-cable assembly prepared as described in AMP Drawing 222403, place center contact in crimping dies, as shown in Figure 3. Make sure that the center contact is bottomed in crimping die.
5. Holding the plug-cable assembly in place, activate the tool to crimp center contact to cable conductor. Allow dies to open and remove crimped center contact assembly from tool head.

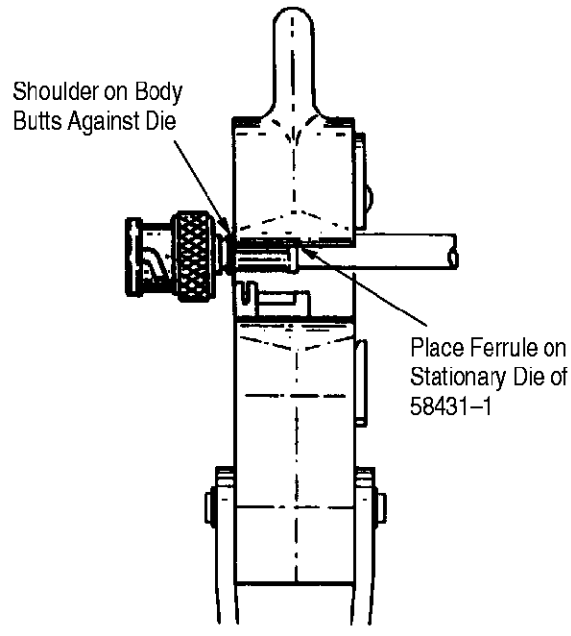


Figure 4

##### 4.2. Ferrule Crimping Dies (58431-1)

1. Shut off air supply.
2. Remove die holder plate from stationary die holder of the tool head. Position the stationary die in the stationary die holder and the moving die in the moving die holder. Refer to Figure 2. Fasten die holding screws enough to hold dies in place but do NOT tighten fully.

**NOTE** Because die assembly 58431-1 has an integral die holder plate, it is not necessary to use the die holder plate of the pneumatic tool. Place the pneumatic tool's die holder plate in a properly labeled box or location for future use with die assemblies not having an integral die holder plate.

3. Reconnect air supply. Then activate tool until dies bottom. Full tighten both die holding screws while dies are bottomed. The tool is now ready for use.

**DANGER** Avoid personal injury. Always keep fingers clear of crimping area when air supply is connected.

**NOTE** Check die alignment and tighten die holding screws at least twice daily.

4. Insert the crimped center contact into the plug body until the dielectric of the cable butts against the dielectric inside plug body. Make sure the flared braid fits over the support sleeve of connector. Refer to AMP Drawing 222403 for procedures.
5. Slide the ferrule forward over the braid until the ferrule butts against the shoulder of the plug connector. Assembly is now ready to be crimped.

6. Position assembly between the dies so that the ferrule is placed on the stationary die with the shoulder on connector butting against die. See Figure 4.

7. Holding assembly in place, activate the tool to crimp ferrule to braid and support sleeve. Allow the dies to open and remove the crimped connector.

Inspect the crimped connector assembly to ensure that it meets established parameters before placing it into service.

## 5. DAILY MAINTENANCE

Remove all foreign particles with a clean, soft brush, or a clean, soft, lint-free cloth. Make sure the proper retaining pins are in place, and secured with the proper retaining rings.

Make certain all pivot points and bearing surfaces are protected with a THIN coat of any good SAE 20 motor oil. Do NOT oil excessively. When tool or dies are not in use, keep the dies closed to prevent objects from becoming lodged between them and store the tooling in a clean, dry area.

## 6. MAINTENANCE/INSPECTION

These instructions have been approved by AMP design, production, and quality control engineers to provide documented maintenance and inspection procedures. Through AMP test laboratories and the inspection of production assembly, the procedures described herein have been established to ensure quality and reliability of AMP crimping die sets.

Customer-replaceable parts are listed in Figure 5. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. When parts are needed, order by part number and description.

### 6.1. Daily Maintenance

It is recommended that each operator using the crimping dies be made aware of, and responsible for, the following four steps of daily maintenance:

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

2. Make sure the proper die holding screws are in place and are secured.

3. Make certain that all surfaces are protected with a THIN coat of any good SAE 20 motor oil. Do NOT oil excessively.

4. When the dies are not being used, mate them and store 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 dies and/or be supplied to supervisory personnel responsible for the dies. Though recommendations call for at least one inspection a month, the inspection frequency should be based on the amount of use, working conditions, operator training and skill, and established company standards. These inspections should include a visual inspection and a gaging of the crimping chambers. Gaging both the center contact crimp chamber and the ferrule crimping chamber is necessary. The inspections should be performed in the following sequence:

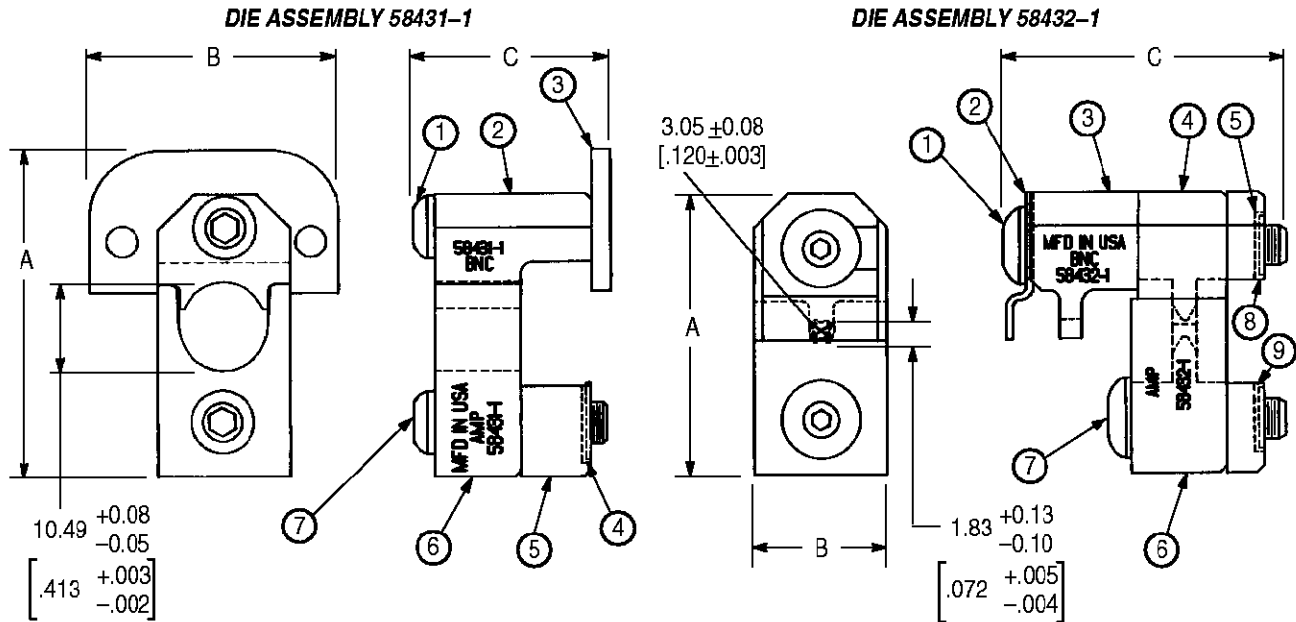
#### A. Visual Inspection

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

2. Make certain all die-holding screws and die components are in place and secured. If replacements are necessary, refer to parts listed in Figure 5.

3. Check all bearing surfaces for wear. Remove and replace worn components.

4. Inspect the crimp area for flattened, chipped, worn, or broken areas. If damage is evident, the dies must be replaced before returning the tool to service (see Section 7, DIE REPLACEMENT).



DIE ASSEMBLY 58431-1					DIE ASSEMBLY 58432-1						
CUSTOMER-REPLACEMENT PARTS				DIM.	CUSTOMER-REPLACEMENT PARTS				DIM.		
ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSY		ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSY			
1	314432-1	SCREW, Special	1	A	38.35 [1.510]	1	6-59575-4	SCREW, Special	1	A	33.32 [1.312]
2	314441-1	ANVIL, Braid	1	B	29.36 [1.156]	2	314433-1	LOCATOR	1	B	15.88 [.625]
3	314431-1	PLATE, Die Holder	1	C	20.32 [.800]	3	314434-1	SPACER	1	C	33.53 [1.320]
4	1-21046-3	RING, Retaining	1			4	314442-1	ANVIL	1		
5	3-59675-4	SPACER, Lower	1			5	1-21046-3	RING, Retaining	2		
6	314439-1	INDENTER, Braid	1			6	314440-1	INDENTER	1		
7	306131-9	SCREW, Special	1			7	306131-9	SCREW, Special	1		
<b>NOTE:</b> Dies weigh approximately 3 oz. each assembly.						8	2-59674-8	SCREW, Upper	1		
					9	3-59675-8	SPACER	1			

Figure 5

**B. Inspecting the Center Contact Crimping Chamber**

Plug gaging of the center contact crimping chamber requires the use of two separate gages. One gage is used inside the radius of the die closure; the other is used between the indent forming sections. Refer to Figure 6 and proceed as follows:

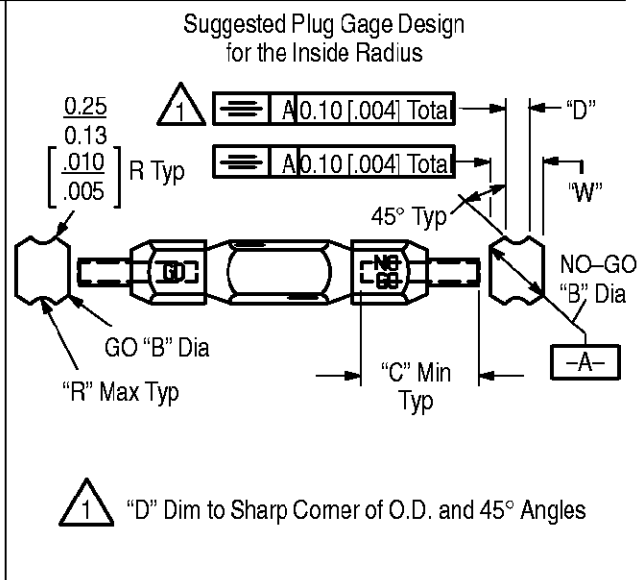
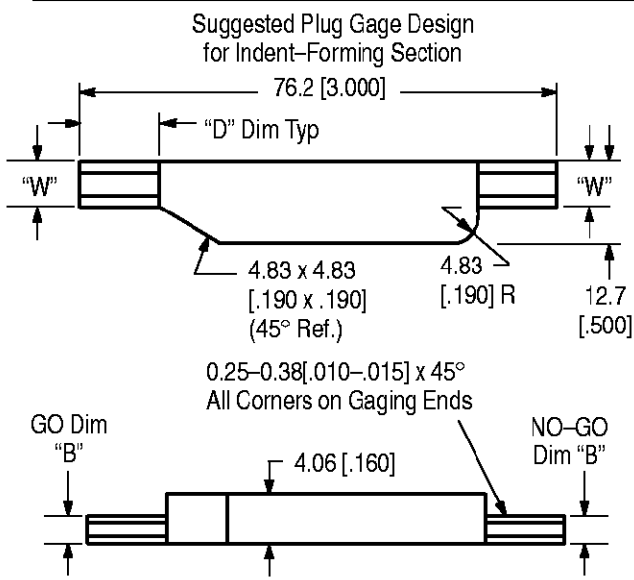
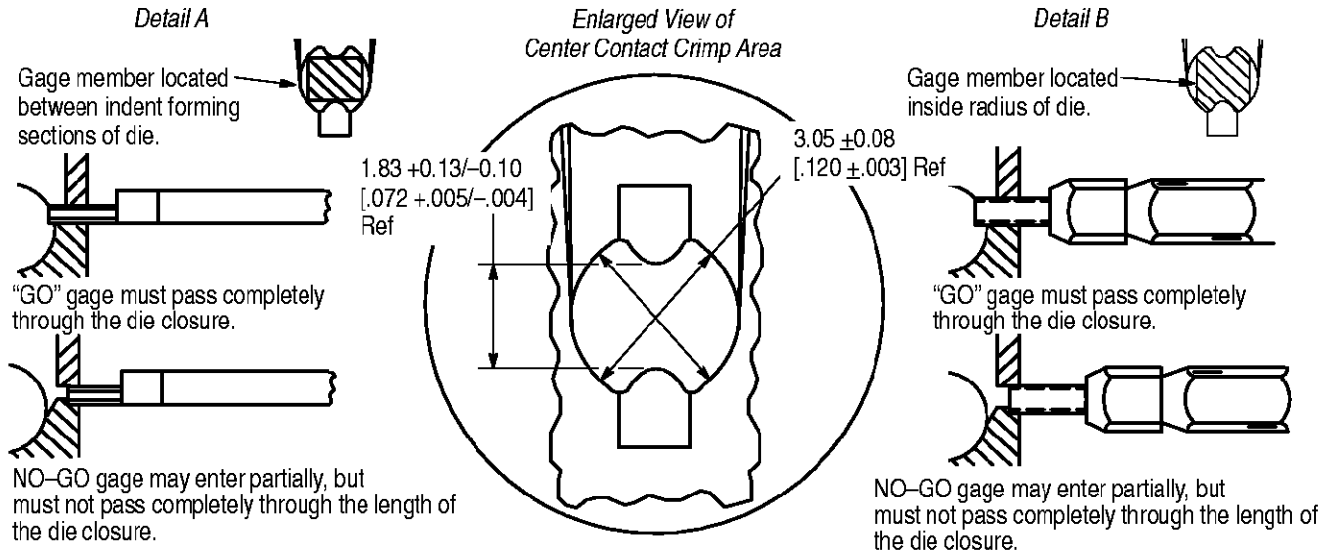
1. Mate the dies until it is evident that they have bottomed. Using the pneumatic tool, hold the dies in this position with a pressure of 10 psi.

**DANGER**

Avoid personal injury. Always keep fingers clear of crimping area when air supply is connected.

2. With dies bottomed, check the indent forming closure by using the box-type plug gage shown in Figure 6, Detail A. Align the GO element with the contact crimping chamber and insert the element without using force. The GO element must pass completely through the die closure.

**Inspection of Center Contact Crimping Dies with Plug Gages**



GAGE MEMBER DIMENSIONS				GAGE MEMBER DIMENSIONS					
DIM "B"		DIM "W"	DIM "W" TYP	DIM "B" Dia		DIM "W"	DIM "D"	DIM "C"	RADIUS "R" MAX
GO	NO-GO			GO	NO-GO				
1.727-1.735 [.0680-.0683]	1.953-1.956 [.0769-.0770]	2.03-2.16 [.080-.085]	9.65 [.380]	2.972-2.979 [.1170-.1173]	3.122-3.124 [.1229-.1230]	2.62 [.103]	1.57-1.73 [.062-.068]	25.4 [1.000]	0.64 [.025]

Figure 6

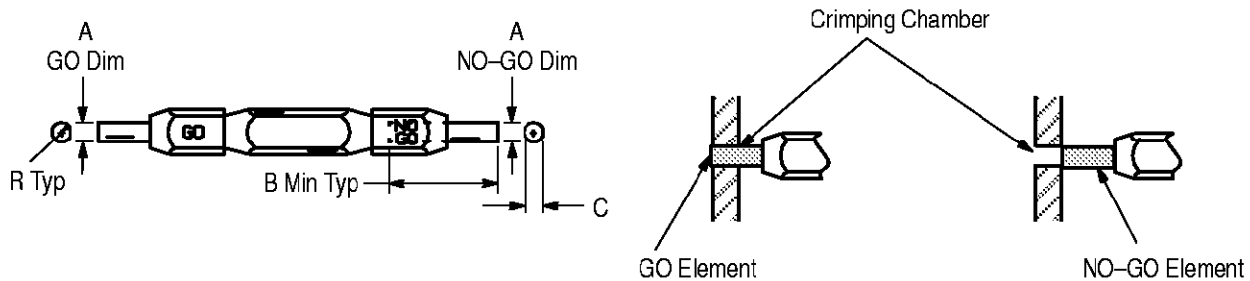
3. Now align the NO-GO element and try to insert it straight into the same crimping chamber. The NO-GO element may start entry but must NOT pass completely through, as shown in Figure 6.

4. Continue to hold the dies bottomed and insert the second (grooved) gage to inspect the

radius of the dies, as shown in Figure 6, Detail B. Use the same method as described in Steps 2 and 3.

5. If die closure meets both plug gage conditions, the dies may be considered dimensionally correct.

**Suggested Plug Gage Design – Ferrule Crimp**



DIE ASSEMBLY PART NUMBER	GAGE MEMBER DIMENSIONS				
	A (GO)	A (NO-GO)	B	C	R (Typ)
58431-1	10.439-10.447 [.4110-.4113]	10.564-10.566 [.4159-.4160]	25.4 [1.000]	10.29 [.405]	5.144 [.2025]

Figure 7

**C. Inspecting Ferrule Crimp**

The procedure to inspect the ferrule crimp requires the use of a plug gage conforming to the dimensions listed in Figure 7. AMP does not manufacture or market this type of gage. For additional information regarding these gages, refer to AMP Instruction Sheet 408-7424. To perform the inspection, proceed as follows:

1. Mate the dies until it is evident that they have bottomed. Hold the dies in this position with a pressure of 69 kPa [10 psi].

**DANGER** Avoid personal injury. Always keep fingers clear of crimping area when air supply is connected.

2. Keeping crimping dies bottomed, align the GO element with the crimping chamber. 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 7.
3. Now align the NO-GO element and try to insert it straight into the chamber. The NO-GO element may start entry but must not pass completely through. See Figure 7.

**7. DIE REPLACEMENT**

Replacement parts are listed in Figure 5. Parts other than those listed in Figure 5 should be replaced by AMP to ensure quality and reliability of the tool. Order replacement parts through your AMP 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)  
AMP INCORPORATED  
P.O. BOX 3608  
HARRISBURG, PA 17105-3608

For tool repair service, please contact an AMP representative at 1-800-526-5136.

**8. REVISION SUMMARY**

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

Per EC 0990-1106-99:

- Updated document to corporate requirements
- Deleted tool 69365-3 and added new 626 tooling system in Section 1, INTRODUCTION
- Realigned tables in Figure 5
- Changed tool repair service information in Section 7, DIE REPLACEMENT