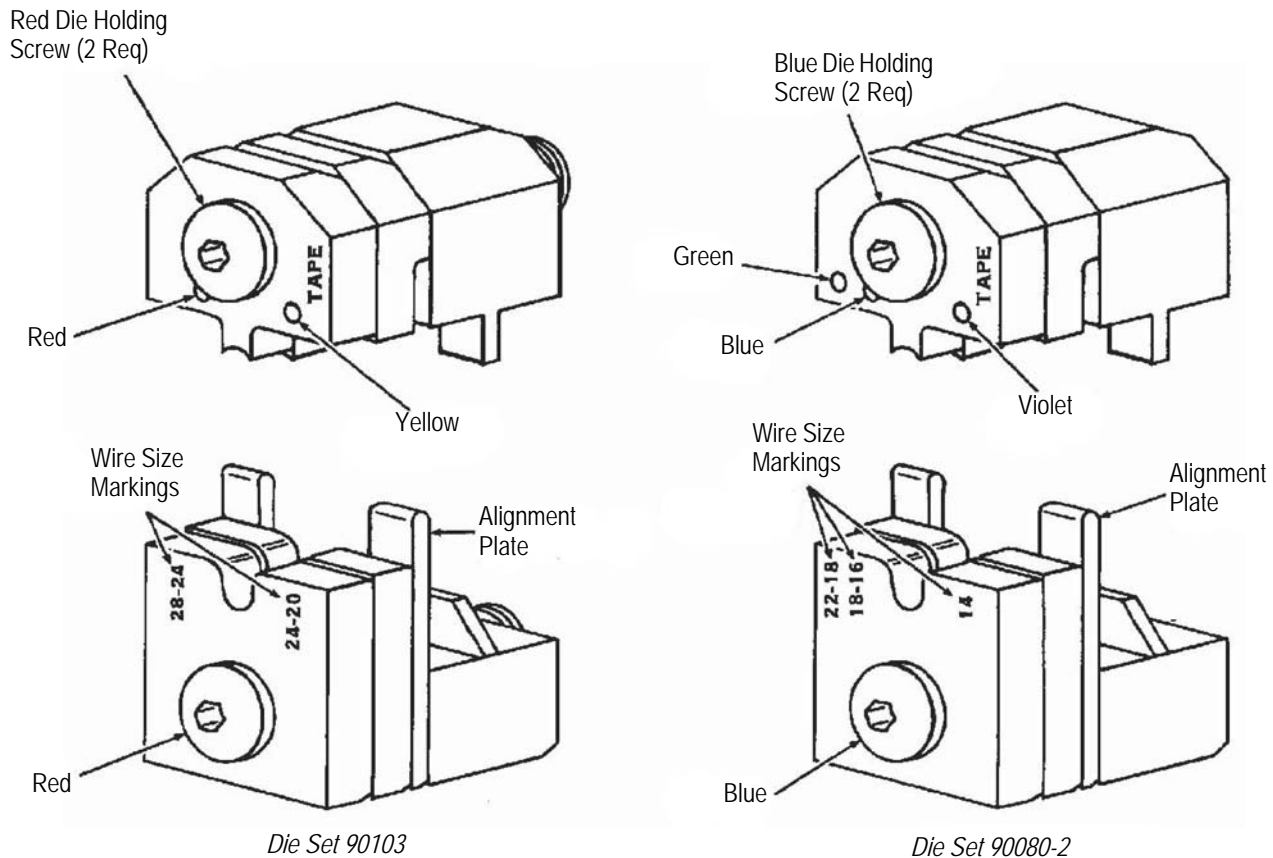


Stationary Dies



Moving Dies

Figure 1

1. INTRODUCTION

Crimping dies 90080-2 and 90103 are recommended for crimping the tape-mounted contacts listed in Figure 2. These dies are designed for use in Pneumatic Tool 69118-1.

Read this instruction sheet for specific information concerning the dies, applicable contacts and wire specifications. Read the instructions (Customer Manual 409-1773) packaged with the pneumatic tool for information concerning die insertion, crimping procedures, and general performance of the tool.

i **NOTE**
Dimensions are in metric units with [inches in brackets].
Figures and illustrations are for reference only and are not drawn to scale.

For reasons for revision, refer to Section 8, REVISION SUMMARY.

2. DESCRIPTION

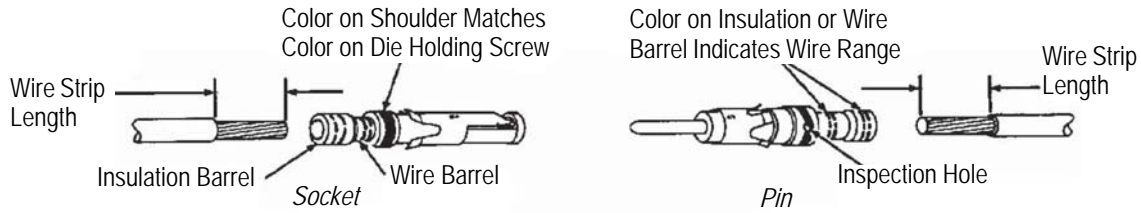
Each die assembly consists of a stationary die and a moving die.

The stationary dies have chamfered corners and feature color-coded dots which match the color-coding on the insulation barrel or wire barrel of the contact. This color-coding indicates the wire range of the contact. See Figure 2.

The moving dies have square corners and feature an alignment plate and wire size markings. Notice that the die holding screws are also color-coded. This facilitates mating of the dies and also mates with the color-coding on the shoulder of the contact. See Figure 2.

3. CRIMPING PROCEDURE

Determine your application requirements. Then, using the table in Figure 2, make your selection according to the following instructions:



SOCKET	PIN	CONTACT SIZE & PIN DIA	WIRE SIZE (AWG)	INSUL DIA	COLOR-CODE		WIRE STRIP LENGTH	CRIMPING DIE	
					BARREL	SHOULDER		DIE NO.	SCREW COLOR
200331	200334	20 [.040]	24-20	1.40-1.90 [.055-.075]	Yellow	Red	5.16 [.203]	90103	Red
200333	200335	16 [.062]	18-16	‡	Blue	Blue	6.35 [.250]	90080-2	Blue
	200336								
	200681†								
	204274								
201328	200679†	16 [.062]	24-20	1.40-2.16 [.055-.085]	Yellow	Red	5.16 [.203]	90103	Red
	201330††								
	204188††								
201332	201334††	20 [.040]	28-24	1.22-1.65 [.048-.065]	Red				
201353	201354	20 [.040]	28-24	1.22-1.65 [.048-.065]	Red				
201568	201570	16 [.062]	14	‡	Violet	Blue	6.35 [.250]	90080-2	Blue
	201645†								
	206029								
201580	201578††	16 [.062]	24-20	1.02-1.57 [.040-.062]	Yellow	Red	5.16 [.203]	90103	Red
	201647†								
201584	201582	20 [.040]	18-16	‡	Blue	Blue	6.35 [.250]	90080-2	Blue
201589	201591								
201609	201607								
201613	201611††	16 [.062]	28-24	0.89-1.40 [.035-.055]	Red	Red	5.16 [.203]	90103	Red
	201649†								
	204189††								
202726	202725	20 [.040]	(2) 18	‡	---	Blue	6.35 [.250]	90080-2	Blue

‡These contacts have no insulation support. †Special short pins. ††Special long pins.

Figure 2

A. Die Assembly and Contact Number

Be sure the die assembly you select is compatible with the contacts to be crimped. The color-code on the contact shoulder must correspond with the color of the die holding screw.

B. Wire Size and Insulation Diameter

Make certain the wire and insulation are within the specified range.

C. Wire Type and Strip Length

Using stranded wire, strip it to the length shown. Do NOT crimp wire that has cut or nicked strands.

D. Color-Code

Make sure the color-code on the insulation barrel or wire barrel of the contact matches one of the color-code dots on the stationary die.

Crimp a contact as follows:

1. Install the dies and contacts according to the instructions packaged with the pneumatic tool.
2. Make sure the contact is properly positioned between the dies. Then, insert a stripped wire into the contact until the wire bottoms in the wire barrel of the contact.

3. Actuate the machine a complete cycle. Check to be sure the contact is properly crimped. The wire must be visible through the inspection hole of the contact.

4. INSPECTION

4.1. Daily Maintenance

The importance of daily maintenance cannot be over emphasized, as this can easily and efficiently be performed after each shift, ensuring satisfactory performance and continuous production. TE Connectivity recommends the following:

1. Remove dust, moisture, and other contaminants with a clean brush or soft lint-free cloth. Do NOT use objects that could damage the dies. If foreign matter cannot be removed easily, or if the proper replacement parts are not available, return the dies to your supervisor.
2. Make sure the proper die holding screws are in place and secured with the proper retaining rings.
3. Check die alignment and tighten die holding screws at least twice daily. Make sure the dies are protected with a THIN coat of any good S.A.E. No. 20 motor oil. DO NOT OIL EXCESSIVELY.
4. When the dies are not in use, store them in a clean, dry area.

4.2. Periodic Inspection

Regular inspections should be performed and recorded by your Quality Control Department with a record of scheduled inspections remaining with the dies or supplied to supervisory personnel responsible for the dies. TE recommends at least one inspection a month, however, frequency of inspection will depend on the amount of use, ambient working conditions, operator training and skill, and your own established standards. These inspections should be performed in the following sequence.

A. Visual Inspection

1. Remove all lubrication and accumulated film by immersing the dies in a suitable commercial degreaser that will not effect paint or plastic material.
2. Make sure all holding screws, retaining rings, and die components are in place. Refer to the parts listed in Figure 4 if replacements are necessary.
3. Check all bearing surfaces for wear. Remove and replace worn components.
4. Inspect the crimp area for flattened, chipped, cracked, worn, or broken areas. Make sure the holding screws and the depressions on the stationary die are properly color-coded. Refer to Section 2, DESCRIPTION. If damage is evident, the dies must be repaired before returning to service. Refer to Section 5, REPAIR AND REPLACEMENT.

B. Mechanical Inspection

This inspection utilizes a GO / NO-GO gage conforming to the dimensions in Figure 3. TE does not manufacture or market these gages. Refer to Instruction Sheet 408-7424.

Proceed as follows:

1. Mate the dies until it is evident that they have bottomed. Hold the dies in this position with approximately 69 kPa [10 psi].
2. Align the GO element with the wire barrel crimping area and push it straight into the crimping chamber without using force. The GO element must pass completely through the crimping chamber as shown in Figure 3.
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 3.

If the crimping chambers conform to the gage inspection, the dies are considered dimensionally correct and should be lubricated with a THIN coat of oil. If not, the dies must be repaired before returning them to service. Refer to Section 5, REPAIR AND REPLACEMENT.

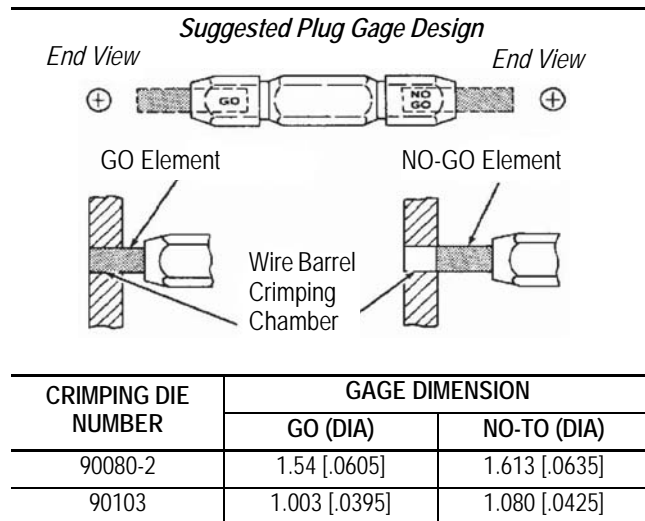


Figure 3

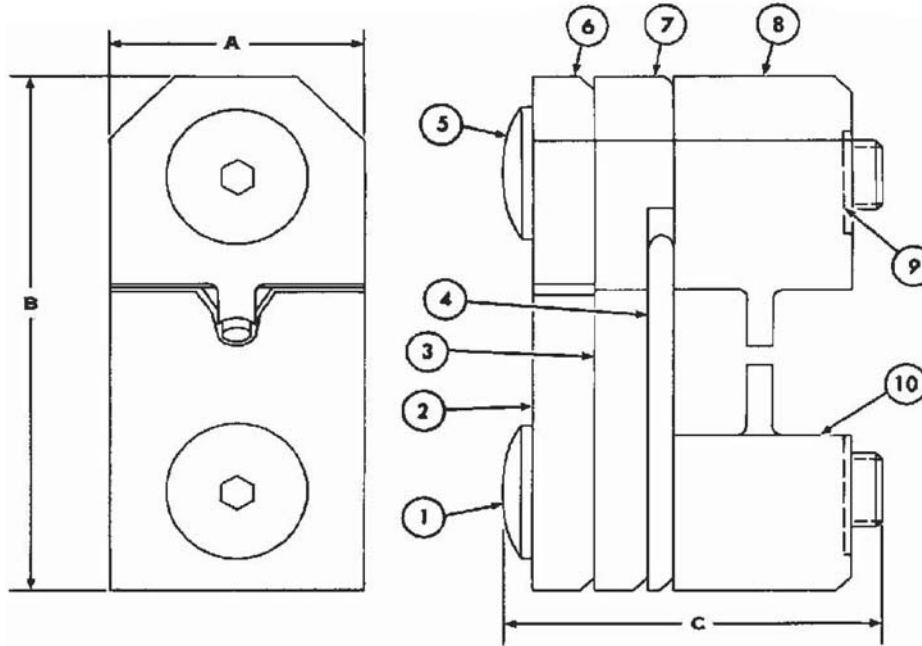
5. REPAIR AND REPLACEMENT

The parts listed in Figure 4 are customer replaceable parts. A complete inventory can be stocked and controlled to prevent lost time when replacement of parts is necessary. The dies can also be returned to TE for evaluation and repair. Send the dies and a written description of the problem to:

CUSTOMER SERVICE (038-035)
 TYCO ELECTRONICS CORPORATION
 PO BOX 3608
 HARRISBURG PA 17105-3608

6. REVISION SUMMARY

- Deleted product trademark name in all instances
- Updated document to corporate requirements



DIE SPECIFICATIONS				REPLACEMENT PARTS					
DIE NO.	DIMENSION			WEIGHT	ITEM	DESC	PART NUMBER FOR:		QTY PER SET
	A	B	C				90080-2	90103	
90080-2	15.88 [.625]	33.32 [1.312]	26.59 [1.047]	0.834 N [3 Oz]	1	SCREW, Die Holding	1-306105-5	306105-7	1
					2	CRIMPER, Insulation	125401-2	45283	1
					3	CRIMPER, Wire	125398-4	125398-1	1
					4	PLATE, Alignment	125180-2	125180-2	1
					5	SCREW, Die Holding	306624-8	306624-5	1
90103	15.88 [.625]	33.32 [1.312]	26.59 [1.047]		6	ANVIL, Insulation	125402-2	45284	1
					7	ANVIL, Wire	125399-5	125399-1	1
					8	SPACER SUPPORT, Upper	125400-6	125400-1	1
					9	RING, Retaining	1-21046-3	1-21046-3	2
					10	SPACER SUPPORT, Lower	1-125154-8	125154-2	1

Figure 4