



APPLICATION AND MAINTENANCE  
FOR AMP★ CRIMPING DIES  
90080-2 AND 90103

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NOTE

Section I of this Instruction Sheet covers the contacts and application procedures recommended for the AMP Crimping Dies 90080-2 and 90103. Section II covers the Maintenance and Inspection procedures recommended by AMP to assure reliability of AMP Crimping Dies and each application.

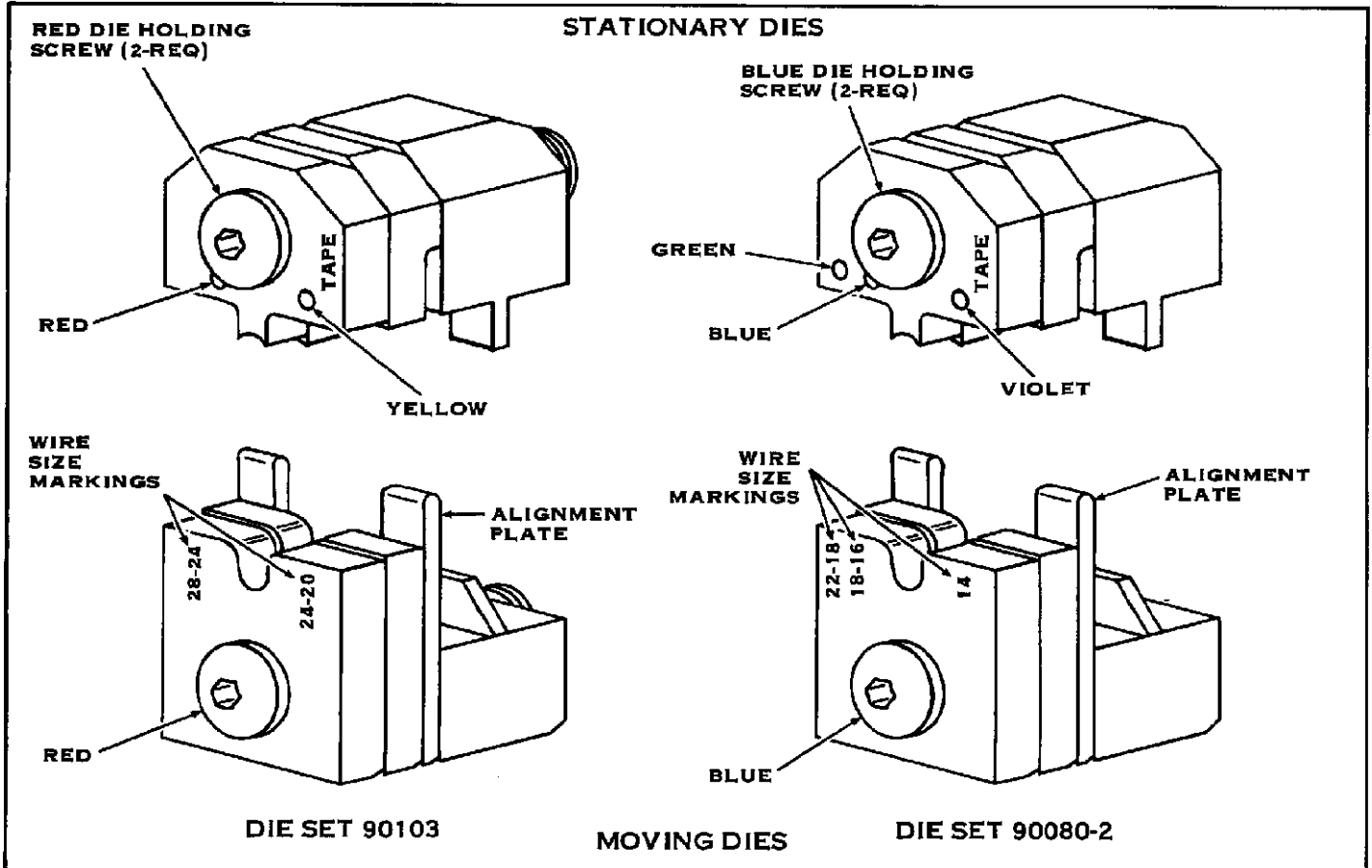


FIGURE I-1

SECTION I APPLICATION

I-1. INTRODUCTION

The AMP Crimping Dies 90080-2 and 90103 are recommended for crimping the Tape-Mounted AMP-INCERT★ Type II Contacts listed in Figure I-2. These dies are designed for use in the AMP-TAPEMATIC★ Pneumatic Tool 69118-1.

Read this Instruction Sheet for specific information concerning the Dies, applicable Contacts and Wire Specifications. Read the instructions (CM 1773) packaged with the Pneumatic Tool for information concerning Die Insertion, Crimping Procedures and General Performance of the tool.

NOTE

*All dimensions presented on this instruction sheet are in inches, unless otherwise stated.*

I-2. DESCRIPTION

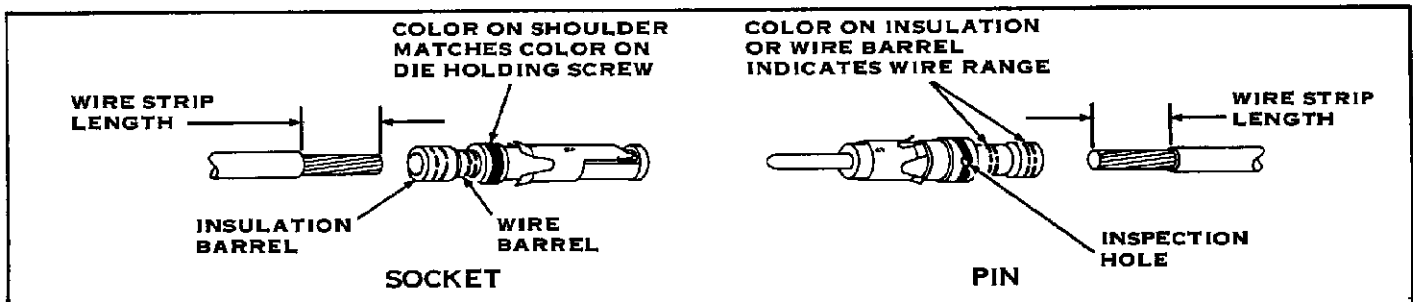
Each Die Assembly consists of a Stationary Die and a Moving Die.

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 I-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 I-2.

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SOCKET	PIN	CONT SIZE & PIN DIA	WIRE SIZE	INS DIA	COLOR CODE		WIRE STRIP LG	CRIMPING DIE	
					BARREL	SHOULDER		DIE NO.	SCREW COLOR
200331	200334	20-.040	24 to 20	.055 to .075	Yel	Red	13/64	90103	Red
200333	200335	16-.062	18 to 16	**	Blu	Blu	1/4	90080-2	Blue
	200336								
	200681†								
	204274								
201328	200679†		24 to 20	.055 to .085	Yel	Red	13/64	90103	Red
	201330††								
	204188††								
201332	201334††		28 to 24	.048 to .065	Red				
201353	201354	20-.040	28 to 24	.048 to .065	Red				
201568	201570	16-.062	14	**	Vio	Blu	1/4	90080-2	Blue
	201645†								
	206029								
201580	201578††		24 to 20	.040 to .062	Yel	Red	13/64	90103	Red
201580	201647†								
201584	201582	20-.040							
201589	201591		18 to 16	**	Blu	Blu	1/4	90080-2	Blue
201609	201607		28 to 24	.035 to .055	Red	Red	13/64	90103	Red
201613	201611††	16-.062							
	201649†								
	204189††								
202726	202725		(2) 18's	**	---	Blu	1/4	90080-2	Blue

\*\* THESE CONTACTS HAVE NO INSULATION SUPPORT  
 † SPECIAL SHORT PINS  
 †† SPECIAL LONG PINS

FIGURE I-2

**I-3. CRIMPING PROCEDURE**

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

**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.

**Wire Size and Insulation Diameter** — Make certain the Wire and Insulation are within the specified range.

**Wire Type and Strip Length** — Using Stranded Wire, strip it to the length shown. Do not crimp wire that has cut or nicked strands.

**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.

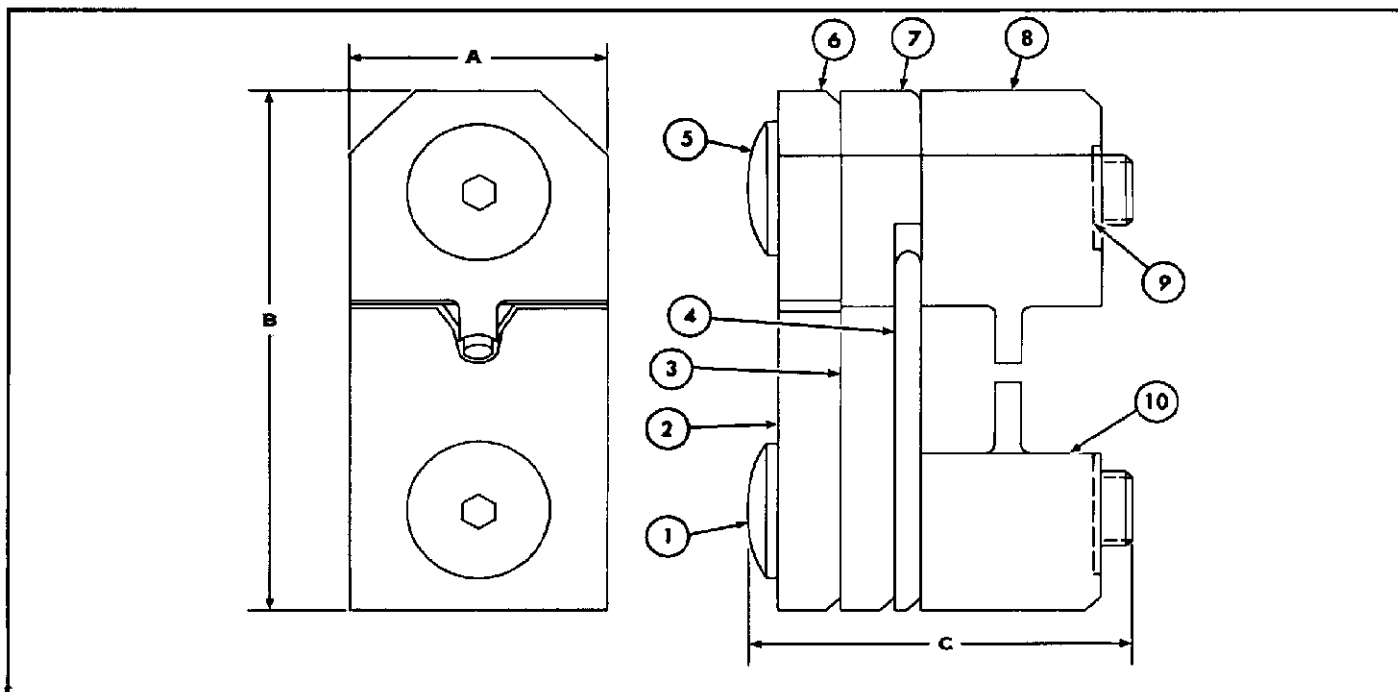
Crimp a contact as follows:

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 press through a complete cycle. Check to be sure the contact is properly crimped. The Wire must be visible through the Inspection Hole of the Contact.

**I-4. DAILY MAINTENANCE**

Remove all foreign particles with a clean, soft brush or clean, soft, lint-free cloth. If foreign matter cannot be removed easily, or if the proper replacement parts are not available, return the dies to your supervisor.

Check die alignment and tighten die holding screws at least twice daily. Make certain the dies are protected with a THIN coat of any good S.A.E. No. 20 Motor Oil. DO NOT OIL EXCESSIVELY. When the dies are not in use, store them in a clean, dry area.



DIE SPECIFICATIONS					REPLACEMENT PARTS				
DIE NUMBER	DIMENSION			WEIGHT	ITEM	DESCRIPTION	PART NUMBER		QTY REQ
	A	B	C				DIE 90080-2	DIE 90103	
90080-2	5/8	1-5/16	1-3/64	3 oz	1	Screw - Die Holding	1-306105-5	306105-7	1
90103	5/8	1-5/16	1-3/64	3 oz	2	Crimper - Insulation	125401-2	45283	1
					3	Crimper - Wire	125398-4	125398-1	1
Engineer Approval <i>Don Dennis</i>				Date 1/3/73	4	Plate - Alignment	125180-2	125180-2	1
					5	Screw - Die Holding	306624-8	306624-5	1
					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 II-1

SECTION II MAINTENANCE PROCEDURES

II-2.INSPECTION PROCEDURES

**NOTE**  
Section I of this Instruction Sheet covers the contacts and application procedures recommended for the AMP Crimping Dies 90080-2 and 90103.

II-1.DIE CERTIFICATION

These instructions have been approved by AMP Design, Production and Quality Control Engineers to provide you with documented maintenance and inspection procedures in accordance with AMP Corporate Policy Number 3-3. We have, through our Test Laboratories and Inspection of production assembly, established the procedures described herein to assure quality and reliability for which the dies were designed.

The parts listed in Figure II-1 are customer replaceable parts. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is deemed necessary.

A. 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. We recommend 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.
2. Make sure the proper die holding screws are in place and secured with the proper retaining rings.
3. Make certain 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.

**B. 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. We recommend 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.

**B-1. Visual Inspection**

1. Remove all lubrication and accumulated film by immersing the dies in a suitable commercial de-greaser 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 II-1 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 (See Section I of this Instruction Sheet). If damage is evident, the dies must be repaired before returning to service. (See Paragraph II-3)

**B-2. Mechanical Inspection**

This inspection utilizes a GO NO-GO Gage conforming to the dimensions in Figure II-2. AMP does not manufacture or market these gages.

Proceed as follows:

1. Mate the dies until it is evident that they have bottomed. Hold the dies in this position with approximately 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 II-2.

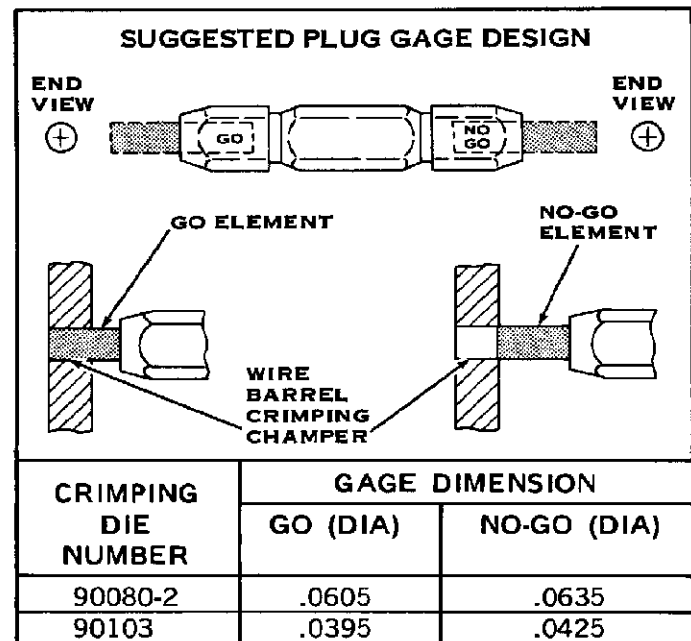


FIGURE II-2

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 II-2.

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. (See Paragraph II-3)

**II-3.REPAIR**

The parts listed in Figure II-1 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 AMP for evaluation and repair. Send the dies and a written description of the problem to:

AMP Incorporated  
Customer Repair Department  
1523 North 4th Street  
Harrisburg, Pennsylvania 17105

or a wholly owned subsidiary of AMP Incorporated.