1. INTRODUCTION

This instruction sheet is intended to provide you with "Instructions" on product application and a "Maintenance and Inspection Procedure" for the following interchangeable crimping dies:

SERIES BNC AND TNC SINGLE CRIMP CONNECTOR CRIMPING DIES
(FOR USE IN HAND TOOL NO. 69710 OR PNEUMATIC TOOL NO. 69365)

69493	**69814**
69493-1	**69815**

First read instructions shipped with tools for information concerning crimping procedure and general tool usage. Then refer to selection chart shipped with connectors for proper connectors, cables, and cable strip lengths to use.

Basic instructions on the use of these dies are proviced in Section 2, "Instructions". Section 3 contains "Maintenance and Inspection Procedure" which will enable you to establish and maintain a *die certification program.*

2. INSTRUCTIONS

2.1 DIE INSTALLATION

(a) Shut off air supply for pneumatic tool.
(b) Each set of dies consists of a moving die and a stationary die. See Figure 1.
(c) Position stationary die in stationary die holder. Take up on die holding screw enough to hold die in place. Do not tighten screw.
(d) Position moving die in moving die holder. Take up on die holding screw enough to hold die in place. Do not tighten screw.

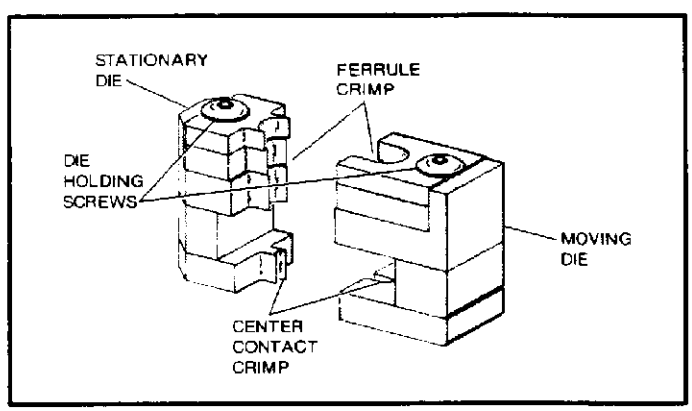


Figure 1

(e) Connect air supply for pneumatic tool.
(f) Actuate pneumatic tool, or if hand tool is used, close handles until dies bottom.
(g) Tighten both die holding screws while dies are bottomed. See Figure 2.
(h) Tool is now ready for operation.
IMPORTANT: CHECK DIE ALIGNMENT AND TIGHTEN DIE HOLDING SCREWS AT LEAST TWICE DAILY.

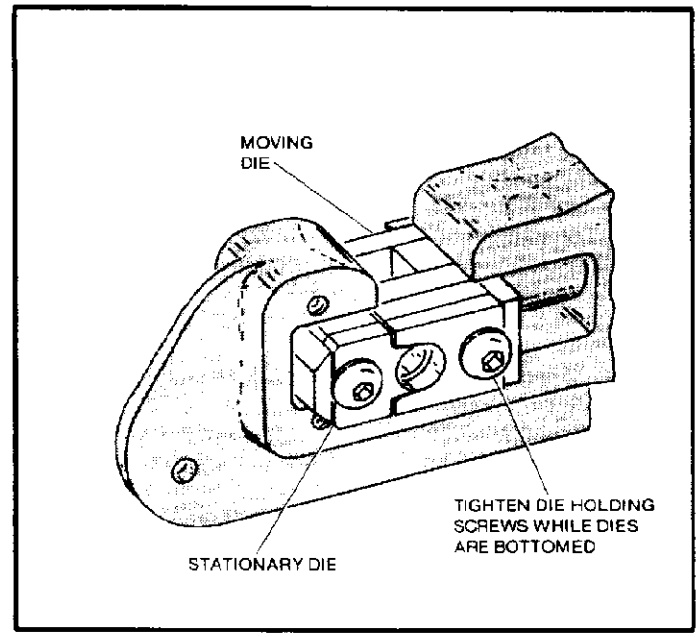


Figure 2

2.2 CRIMPING PROCEDURE

(a) The die assemblies have two sets of crimping dies as shown in Figure 1. One set crimps the center contact; the other set crimps the braid ferrule. Both crimps are made at the same time.
(b) Prepare cable and assemble connector crimp end on cable as described on connector instructions.
(c) Place the jack or plug crimp end, assembled on the stripped conductor, in crimping dies as shown in Figure 3.
(d) Make certain that crimp end is bottomed in crimping die.
(e) Hold cable in place and press trigger or close tool handles to complete crimp.
(f) Remove crimped assembly from dies.
(g) Screw crimp end into connector body.

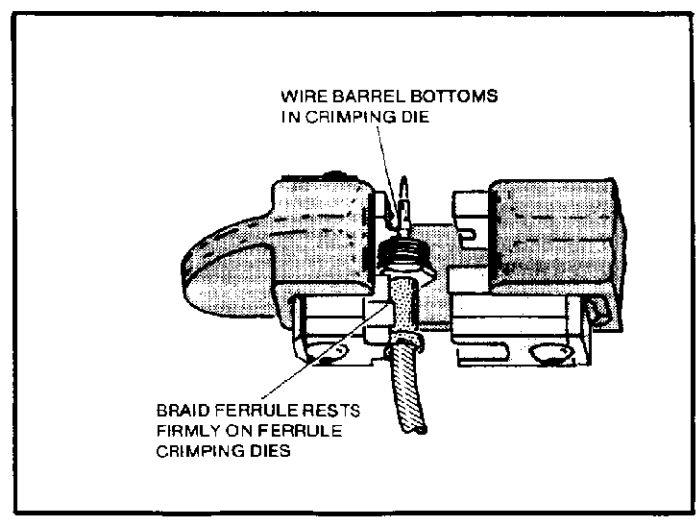


Figure 3

3. MAINTENANCE/INSPECTION PROCEDURE

AMP recommends that a maintenance/inspection program be performed periodically. This is necessary to assure that continued use of the dies will result in the same dependable and uniform terminations for which the dies were designed.

We recommend an initial frequency of inspection of once a month. This frequency may be adjusted to suit your requirements through experience. The frequency of an inspection is dependent upon:

1. The care, amount of use, and handling of the dies.
2. The type and size of the products crimped.
3. The degree of operator skill.
4. The presence of abnormal amounts of dust and dirt.
5. Your own established standards.

All AMP* dies are thoroughly inspected before being shipped from the factory, however, since there is a possibility of die damage in shipment, AMP recommends that new dies be inspected in accordance with this section when received in your plant.

3.1 CLEANING

Do not allow deposits of dirt, grease and foreign matter to accumulate in the die closure area. These deposits may cause excessive wear in the die closure surfaces, thereby affecting the quality of the crimp. The dies should be wiped clean frequently with a clean cloth.

3.2 VISUAL INSPECTION

Visually inspect the die closure surfaces for broken, pitted, or chipped areas. Although dies may gage within permissible limits, worn or damaged die closure surfaces are objectionable and can affect the quality of the crimp.

3.3 DIE CLOSURE INSPECTION

Every AMP die set is inspected and tested for proper die closure before being shipped from the factory. An inspection should, however, be performed periodically to measure the center contact crimp configuration of two die assemblies, and the braid ferrule crimp configuration of all dies listed in Figure 6.

Measurement of center contact and ferrule crimp configuration is accomplished by measuring a crimped assembly.

The center contact die closures of the two dies that can be gaged are inspected with GO NO-GO plug gages. AMP neither manufactures nor sells plug gages, however, suggested plug gage design is shown in Figure 5.

The following procedure is recommended for measuring the die closures.

3.3.1 Center Contact Die Closure Inspection

(a) Remove traces of oil or dirt from die crimping area and plug gage members.

(b) Close handles of tool until crimping dies are bottomed. Do not apply additional pressure to tool handles.

(c) When using pneumatic tool, reduce air supply pressure to a range between 15-20 PSI. Actuate tool to bottom dies.

(d) With crimping dies bottomed, check the barrel crimp die closure using the proper plug gage. Hold gage in straight alignment with the dies and carefully try to insert, without forcing, the GO element. See Figure 4. The GO element must pass completely through the barrel crimp die closure.

(e) Try to insert the NO-GO element. The NO-GO element may enter partially, but must not pass completely through the length of the barrel crimp die closure. See Figure 4.

(f) If wire barrel dies meet the GO NO-GO gage conditions, the dies may be considered dimensionally correct.

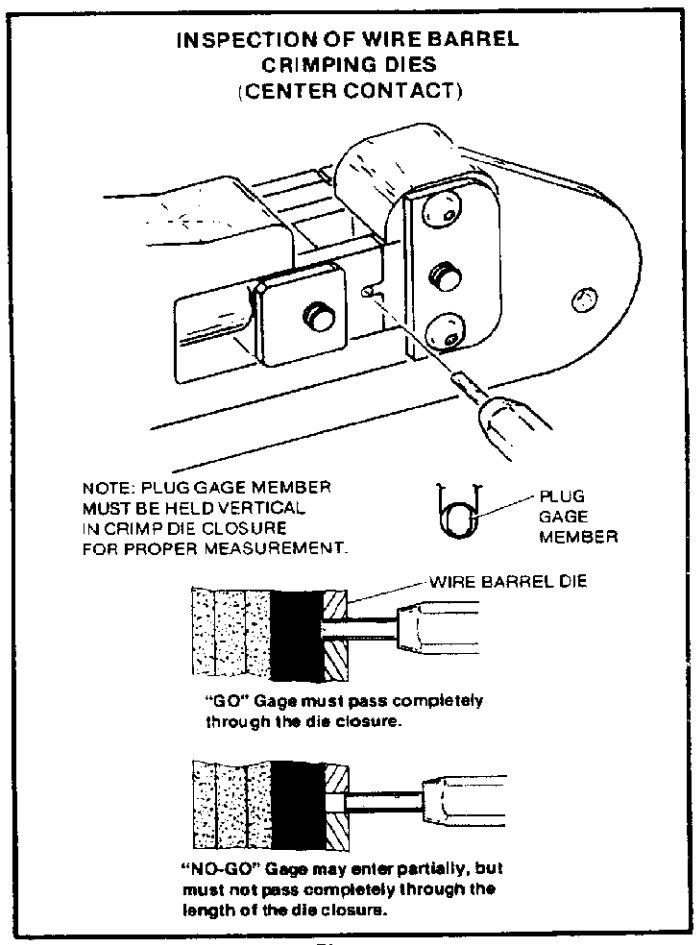


Figure 4

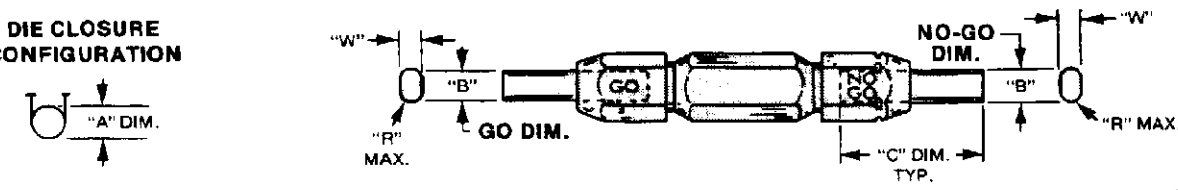
3.3.2 Ferrule and Center Contact Crimp Configuration Measurement

(a) First crimp a crimp end on the appropriate cable. The crimp end assembly and cable listed in Figure 6 should be used for this test since the dimensions listed apply only to the combinations shown.

(b) Measure the crimped ferrule over the braid, insulation and seal sections and over center contact of parts crimped in dies listed in Figure 6. A typical measuring device is shown in Figure 7.

(c) If crimp dimensions do not conform to those listed in Figure 6, contact your local AMP representative.

SUGGESTED PLUG GAGE DESIGN—CENTER CONTACT DIES‡

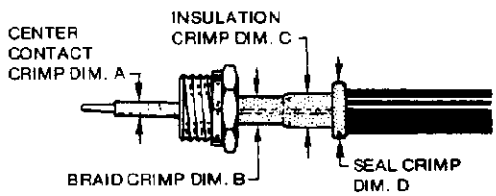


TOOL NO.	DIE CLOSURE DIM'S. "A"†		GAGE MEMBER* DIM'S.				
			DIM. B		DIM. "C"	"W" MAX.	RADIUS "R" (MAX.)
	GO	NO-GO	GO	NO-GO			
69493-1	.0795	.0835	.0795-.0798	.0834-.0835	1.000	.066	.033
69493	.0795	.0835	.0795-.0798	.0834-.0835	1.000	.066	.033

†Die closure dimensions apply when dies are bottomed, but not under pressure.
‡Configuration of center contact dies on die assemblies 69814 and 69815 does not permit plug gaging.
*Material — Tool Steel

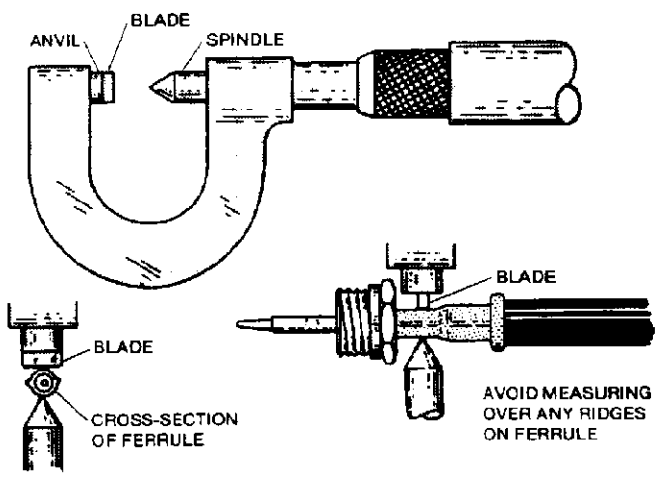
Figure 5

MEASUREMENT OF INSULATION, BRAID AND CENTER CONTACT‡ CRIMPS



TOOL	CRIMP END	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	CABLE SIZE
69493-1	2-330953-2	PLUG GAGE	.211 / .221	.224 / .238	.310 / .333	RG-142
69493	2-330953-1	PLUG GAGE	.195 / .205	.209 / .223	.310 / .333	RG-58C
69814	2-330953-3	.075 / .079	.211 / .221	.224 / .238	.310 / .333	RG-55B
69815	330953	.075 / .079	.195 / .205	.209 / .223	.310 / .333	RG-58

Figure 6



CRIMP HEIGHT MICROMETERS

The micrometer shown here is conventional outside type with exception of the design of anvil and spindle. The anvil's measuring surface is a blade, perpendicular to the moveable spindle, which is conical.
AMP does not stock or sell these items.

Figure 7

3.4 CERTI-CRIMP★ RATCHET INSPECTION

The CERTI-CRIMP ratchet feature on AMP hand tools should be checked to make certain that the ratchet does not release prematurely allowing dies to open before dies have fully bottomed.

To check ratchet feature:

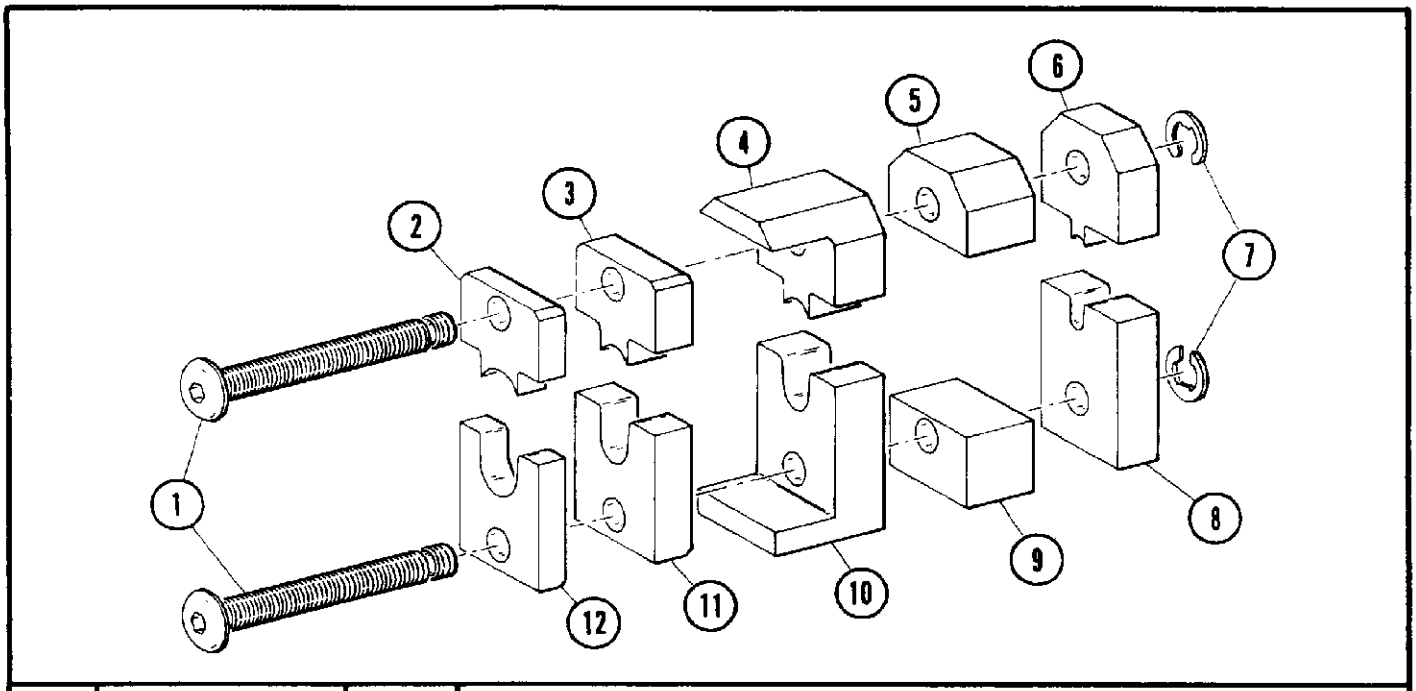
(a) Make a test crimp. When this crimp is made, squeeze handles until the ratchet is free, however, DO NOT RELAX PRESSURE ON TOOL HANDLES.

(b) Bottoming is satisfactory if bottoming surfaces of the dies make contact with each other or if the clearance between the bottoming surfaces is .001" or less.

(c) If the .001" shim stock can be inserted completely between the bottoming surfaces of the dies, the dies are considered as not bottoming. Contact your local AMP field representative.

3.5 REPLACEMENT PARTS

It may be advantageous to stock certain replaceable parts to prevent loss of production time. Figure 8 lists the customer replaceable parts that can be purchased from AMP Incorporated, Harrisburg, Pa. 17105, or a wholly owned subsidiary of AMP Incorporated.



ITEM	DESCRIPTION	QTY.	DIE NUMBERS			
			69493	69493-1	69814	69815
1	Screw	2	6-306131-5	7-306131-1	7-306131-1	6-306131-5
2	Anvil, Gasket	1	306329	306329	306329	306329
3	Anvil, Insulation	1	306333	306333-1	306333-1	306333
4	Anvil, Braid	1	306331	306331-1	306331-1	306331
5	Spacer, Upper	1	1- 59672-4	1- 59672-4	1- 59672-4	1- 59672-4
6	Anvil, Barrel	1	306335	306335	45969-3	45969-3
7	Ring, Retaining	2	1- 21046-3	1- 21046-3	1- 21046-3	1- 21046-3
8	Indenter	1	306334	306334	306949	306949
9	Spacer	1	6-305832-7	6-305832-7	6-305832-7	6-305832-7
10	Indenter, Braid	1	306330	306330-1	306330-1	306330
11	Indenter, Insulation	1	306332	306332-1	306332-1	306332
12	Indenter, Gasket	1	306328	306328	306328	306328

Figure 8

REL. DATE	REV. DATE	APPROVALS	
4—21—75		ENG. Tom Stambaugh	PUB. Paul Felty