

1. INTRODUCTION

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

AMP NO. 220065-1

These tools are used to crimp A-MP* COAXICON* R.F. connectors. Basic instructions on the use of these tools are provided in section 2, "INSTRUCTIONS". Information, pertaining to the connectors, such as cable stripping dimensions and assembly of component parts, is included on instructions packaged with the connectors.

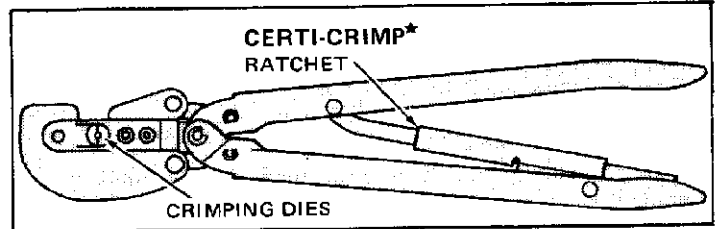


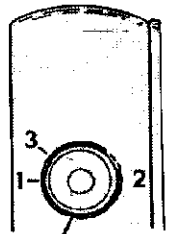
Figure 1

Section 3 contains a "Maintenance and Inspection Procedure" which will enable you to establish and maintain a tool certification program.

All illustrations and information contained in this instruction sheet are based on the latest product information available at the time of publication.

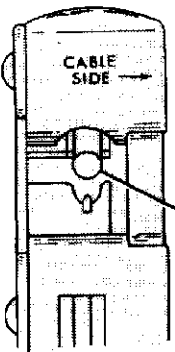
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CRIMPING CENTER CONTACT

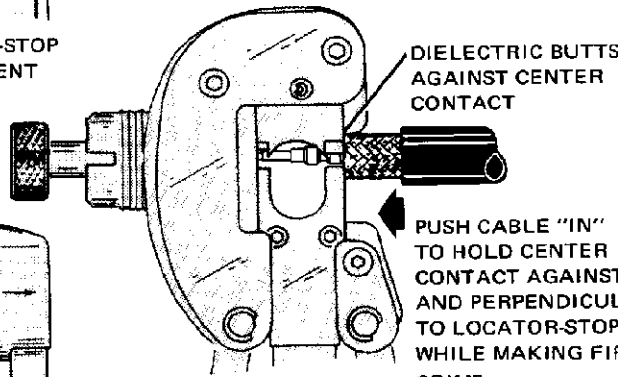


LOCATOR-STOP ADJUSTMENT KNOB

| SERIES N CONNECTOR | LOCATOR-STOP ADJ. | |
|--|-------------------|-----------|
| | 1st Crimp | 2nd Crimp |
| PLUG, JACK, PANEL JACK OR RT. ANGLE | NO. 1 | NO. 2 |
| BULKHEAD JACK | NO. 3 | NO. 1 |



END OF CONTACT MUST BE LOCATED IN LOCATOR-STOP RECESS



DIELECTRIC BUTTS AGAINST CENTER CONTACT
PUSH CABLE "IN" TO HOLD CENTER CONTACT AGAINST AND PERPENDICULAR TO LOCATOR-STOP WHILE MAKING FIRST CRIMP

1. Slip Ferrule on Cable, then strip cable.
2. Rotate contact locator-stop to proper position, as described below.
3. Insert Conductor into contact Wire Barrel until Contact butts against cable Dielectric, then, place Contact in Tool Head as shown. (Crimping Dies on Tool are opened by closing Handles until CERTI-CRIMP Ratchet releases. Once Ratchet is engaged, Handles cannot be opened until fully closed.)
4. Close handles until Ratchet releases to complete crimp.
5. Rotate locator-stop to appropriate position and make second crimp.

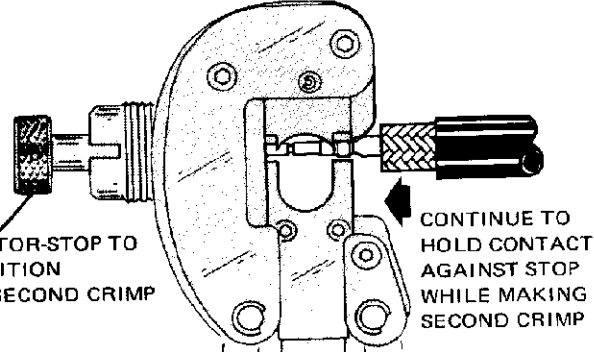
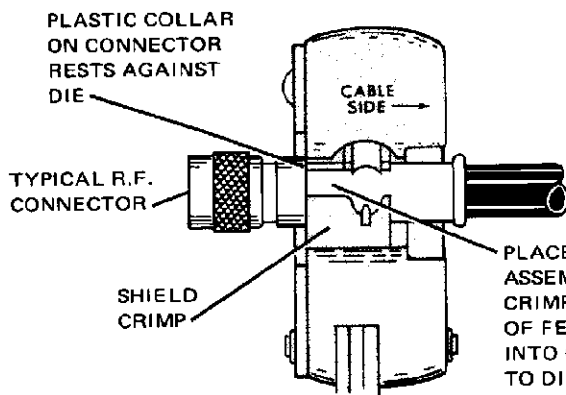


Figure 2

CRIMPING FERRULE



PLACE CONNECTOR AND FERRULE, ASSEMBLED ON CABLE, IN UPPER CRIMPING DIE. NOTE: WHERE O.D. OF FERRULE IS TOO LARGE TO SLIP INTO CRIMPING DIE, SLIP CABLE INTO DIE, THEN PULL FERRULE INTO CRIMPING POSITION

1. Place Assembly in Tool as shown.
2. Close Handles until CERTI-CRIMP Ratchet releases to complete crimp. (Assemble and crimp all connectors in the same manner as Plug shown in this procedure.) NOTE: MAKE SURE THAT CONNECTOR IS LOCATED IN TOOL EXACTLY AS IT IS SHOWN, TO ASSURE A PROPER CRIMP.

Figure 3

2. INSTRUCTIONS

After the cable is prepared, crimp the center contact as shown in Figure 2. Assemble the connector body over the crimped contact (as described on connector instructions) then crimp ferrule as shown in 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 tools will result in the same dependable and uniform terminations for which the tools 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 tool.
2. The type products crimped.
3. The degree of operator skill.
4. The presence of abnormal amounts of dust and dirt.
5. Your own established standards.

With proper maintenance and inspection, these tools will give years of satisfactory service.

All A-MP tools are inspected and calibrated before being shipped from the factory, however, since there is a possibility of tool damage in shipment, AMP recommends that new tools be inspected in accordance with Section 3 when received in your plant. Due to the precision design, it is important that no parts of these tools be interchanged except those replacement parts listed in Figure 8.

3.1 CLEANING

The tool should be immersed (Handles partially closed) in a reliable commercial de-greasing compound to remove accumulated dirt, grease and foreign matter. Make certain the de-greasing compound does not attack paint or plastic materials. Remove remaining de-greasing compound with a lint free cloth. When de-greasing compounds are not available, tool may be wiped clean with a lint free cloth. Re-lubricate tool, as instructed in paragraph 3.2, before placing it back in service.

3.2 LUBRICATION

Lubricate all pins, pivot points and bearing surfaces with a good grade S.A.E. no. 20 motor oil as follows:

- Tools used in daily production-Lubricate daily
- Tools used daily (occasional)-Lubricate weekly
- Tools used weekly-Lubricate monthly

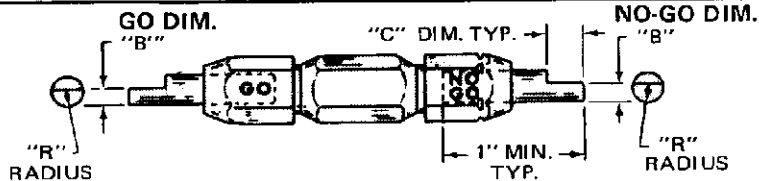
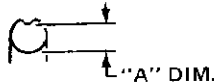
Wipe excess oil from tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of an application.

3.3 VISUAL INSPECTION

- (a) Visually inspect the tool for missing pins or retaining rings, then operate the tool and note the return action of the spring-loaded handles. If parts are missing or spring in handles is defective, refer to Figure 8 for customer replaceable parts.
- (b) Visually inspect the Die Closure Surfaces for flattened, broken or chipped conditions. Although dies may gage within permissible limits, worn or broken die closure surfaces are objectionable and can affect the quality of the crimp.

SUGGESTED PLUG GAGE DESIGN-CENTER CONTACT DIES

DIE CLOSURE CONFIGURATION

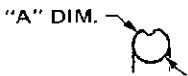


| DIE CLOS. DIM'S. "A"† | | GAGE MEMBER* DIM'S. "B" | | "R" RADIUS (MAX) | "C" DIM. |
|-----------------------|-------|-------------------------|-------------|------------------|----------|
| GO | NO-GO | GO | NO-GO | | |
| .1260 | .1360 | .1260-.1263 | .1359-.1360 | .146 | .500 |

Figure 4

SUGGESTED PLUG GAGE DESIGN-CENTER CONTACT DIES

DIE CLOSURE CONFIGURATION



.010
.005 R TYP.

"R" MAX. TYP.

"B" DIA.

▲ "D" DIM. TO SHARP CORNER OF .O.D AND 45° ANGLES.



▲ ≡ A .004 TOTAL

≡ A .004 TOTAL

"D"

"W"

NO-GO "B" DIA.

— A —

| DIE CLOSURE DIM'S "A"† | | GAGE MEMBER* DIM'S. | | | | | |
|------------------------|-------|---------------------|-------------|----------|-----------|----------|------------------|
| | | DIM. "B" | | DIM. "W" | DIM. "D" | DIM. "C" | RADIUS "R" (MAX) |
| GO | NO GO | GO | NO-GO | | | | |
| .1530 | .1580 | .1530-.1533 | .1579-.1580 | .135 | .060-.065 | 1.000 | .025 |

Figure 5

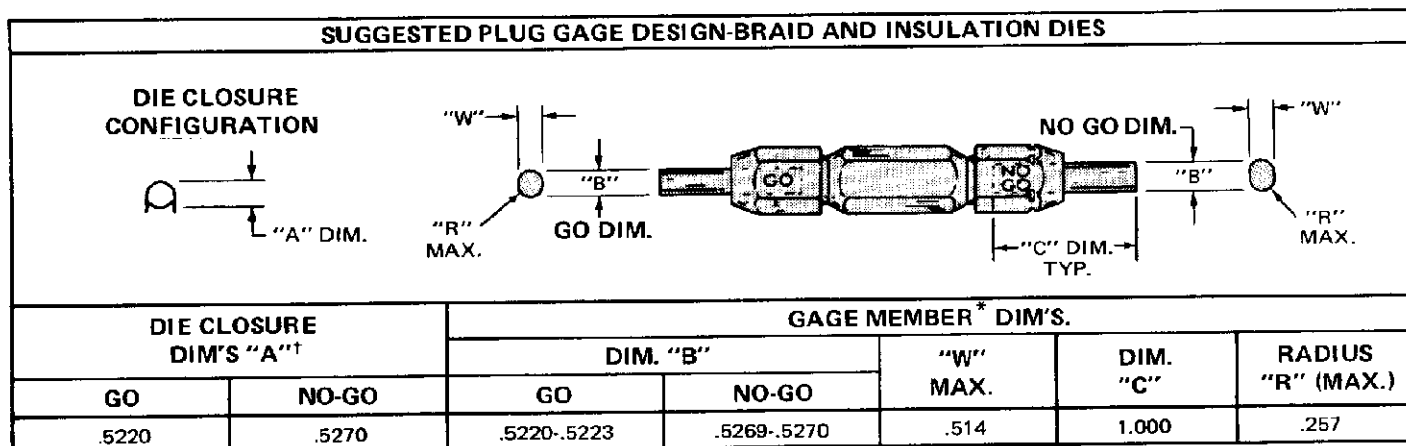


Figure 6

* MATERIAL-TOOL STEEL

† DIE CLOSURE DIMENSIONS APPLY WHEN DIES ARE BOTTOMED, BUT NOT UNDER PRESSURE.

3.4 DIE CLOSURE INSPECTION

Every A-MP hand tool is inspected and tested for proper die (jaw) closure before being shipped from the factory. An inspection should, however, be performed periodically to measure the tool die closure.

Tool die closure inspection is accomplished using GO NO-GO plug gages. AMP neither manufactures nor sells plug gages, however, suggested plug gage designs are shown in Figures 4 thru 6. The following procedure is recommended for measuring the tool die closures.

3.4.1 Center Contact Dies

NOTE: Plug gaging of the center contact crimping dies requires the use of two separate gages. One gage is used inside the radius of the die closure; the other is used over the indent forming area.

- Remove traces of oil or dirt from tool crimping area and plug gage members.
- Close handles of tool until crimping dies are bottomed. Do not apply additional pressure to tool handles.
- With crimping dies bottomed, check the radius of the barrel crimp die closure using the plug gage shown in Figure 4. Hold gage in straight alignment with the tool and carefully try to insert, without forcing, the GO element, and then the NO-GO element. See Figure 7 Detail A. The GO element must pass completely through the barrel crimp die closure.
- The NO-GO element may enter partially, but must not pass completely through the length of the barrel crimp die closure.
- Continue to hold the dies bottomed and insert the second gage to inspect the indent forming area of the die in the same manner as described in steps (c) and (d). See Figure 7, Detail B.
- If wire barrel dies meet the GO NO-GO gage conditions, the dies may be considered dimensionally correct.

3.4.2 Braid and Insulation Dies

- Remove traces of oil or dirt from tool crimping area and plug gage members.
- Close handles of tool until crimping jaws are bottomed. Do not apply additional pressure to tool handles.
- With crimping jaws bottomed, check the braid and insu-

lation crimp die closure using the proper plug gage. Hold gage in straight alignment with the tool and carefully try to insert, without forcing, the GO element, and then the NO-GO element. See Figure 7, detail C. The GO element must pass completely through the crimp die closure.

- The NO-GO element may enter partially, but must not pass completely through the crimp die closure.
- If braid and insulation dies meet the GO NO-GO gage conditions, the tool may be considered dimensionally correct.
- If you find that the tool crimping dies do not conform with the GO NO-GO gage conditions, contact your local AMP field representative.

3.5 CERTI-CRIMP RATCHET INSPECTION

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

- Thoroughly clean bottoming surfaces of jaws.
- Make a test crimp. When this crimp is made, squeeze handles until the ratchet is free, however, DO NOT RELAX PRESSURE ON TOOL HANDLES.
- If a .001 or smaller shim can be inserted between the bottoming surfaces of the jaws, or if there is no opening whatever, the CERTI-CRIMP Ratchet is satisfactory.
- If the clearance between the bottoming surfaces of the jaws is greater than .001, the jaws are considered as not bottoming. Contact your local AMP Field representative.

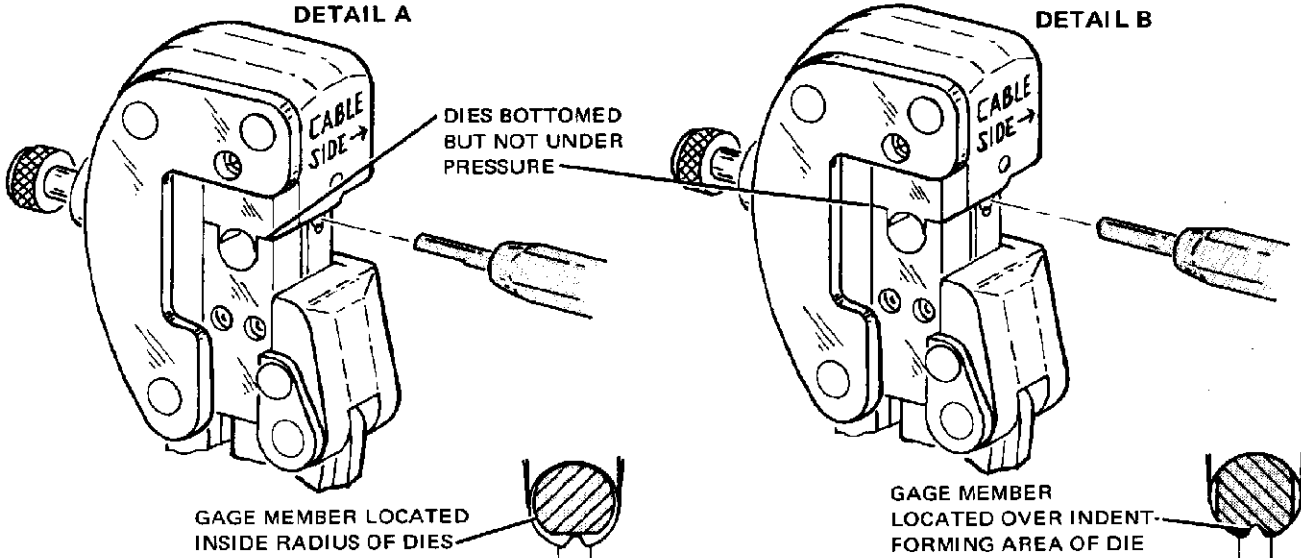
3.6 REPLACEMENT PARTS

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., or a wholly owned subsidiary of AMP Incorporated. Parts other than those listed in Figure 8 should be replaced by AMP Incorporated to insure proper CERTI-CRIMP ratchet adjustments. For tool repair service or CERTI-CRIMP ratchet adjustment, the tools should be returned to AMP Incorporated, Harrisburg, Pa., or a wholly owned subsidiary of AMP Incorporated.

**INSPECTION OF CENTER CONTACT
CRIMPING DIES WITH PLUG GAGES**

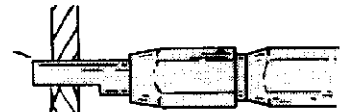
DETAIL A

DETAIL B

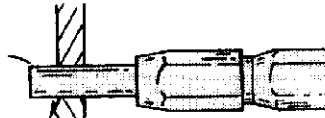


GAGE MEMBER LOCATED
INSIDE RADIUS OF DIES

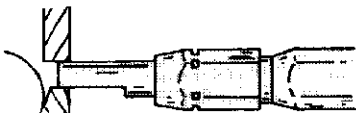
GAGE MEMBER
LOCATED OVER INDENT-
FORMING AREA OF DIE



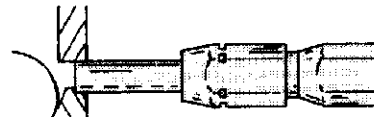
"GO" gage must pass completely
through the die closure.



"GO" gage must pass completely
through the die closure



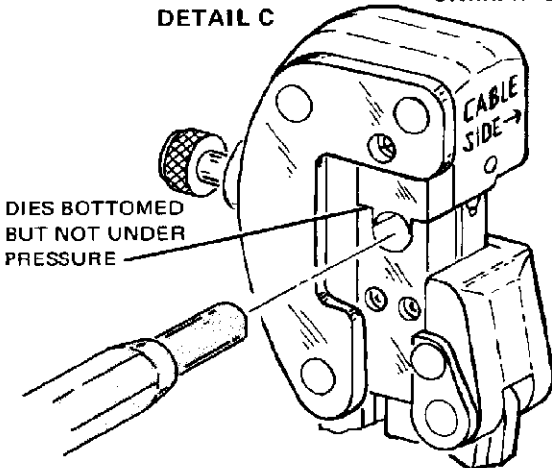
NO-GO gage may enter partially, but
must not pass completely through
the length of the die closure.



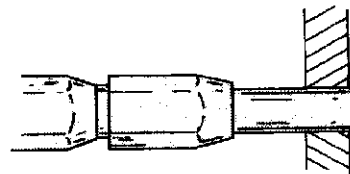
NO-GO gage may enter partially, but
must not pass completely through
the length of the die closure.

**INSPECTION OF BRAID AND INSULATION
CRIMPING DIES WITH PLUG GAGE**

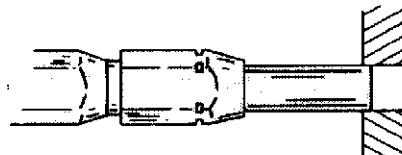
DETAIL C



DIES BOTTOMED
BUT NOT UNDER
PRESSURE

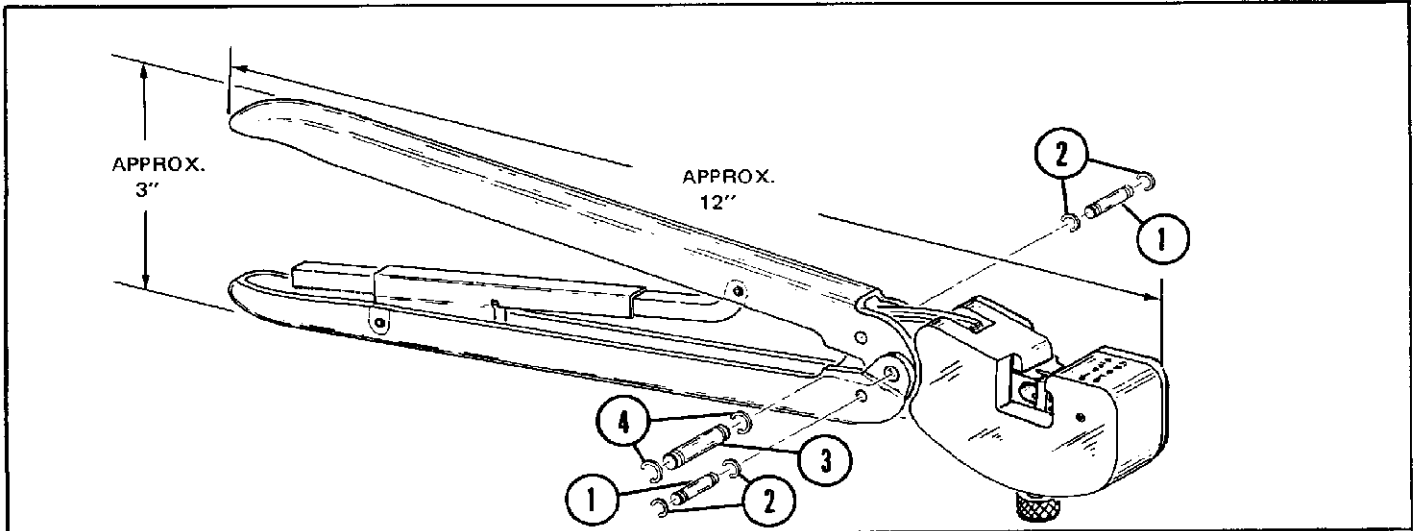


"GO" gage must pass completely
through the die closure



"NO GO" gage may enter partially, but
must not pass completely through the die closure.

Figure 7



| ITEM | DESCRIPTION | QUANTITY | PART NUMBERS |
|------|-----------------|----------|--------------|
| 1 | PIN, RETAINING | 2 | 300388 |
| 2 | RING, RETAINING | 4 | 21045-3 |
| 3 | PIN, RETAINING | 1 | 300389 |
| 4 | RING, RETAINING | 2 | 21045-6 |

Figure 8

| REL. DATE | REV. DATE | APPROVALS | |
|-----------|-----------|---------------------------|------------------------|
| 11-19-71 | 12-27-71 | ENG. <i>Ivan P. Croub</i> | PUB. <i>Paul Felty</i> |