

Section I of this Instruction sheet provides application procedures for AMP hand crimping tools.
Section II provides maintenance and inspection procedures for AMP hand crimping tools.

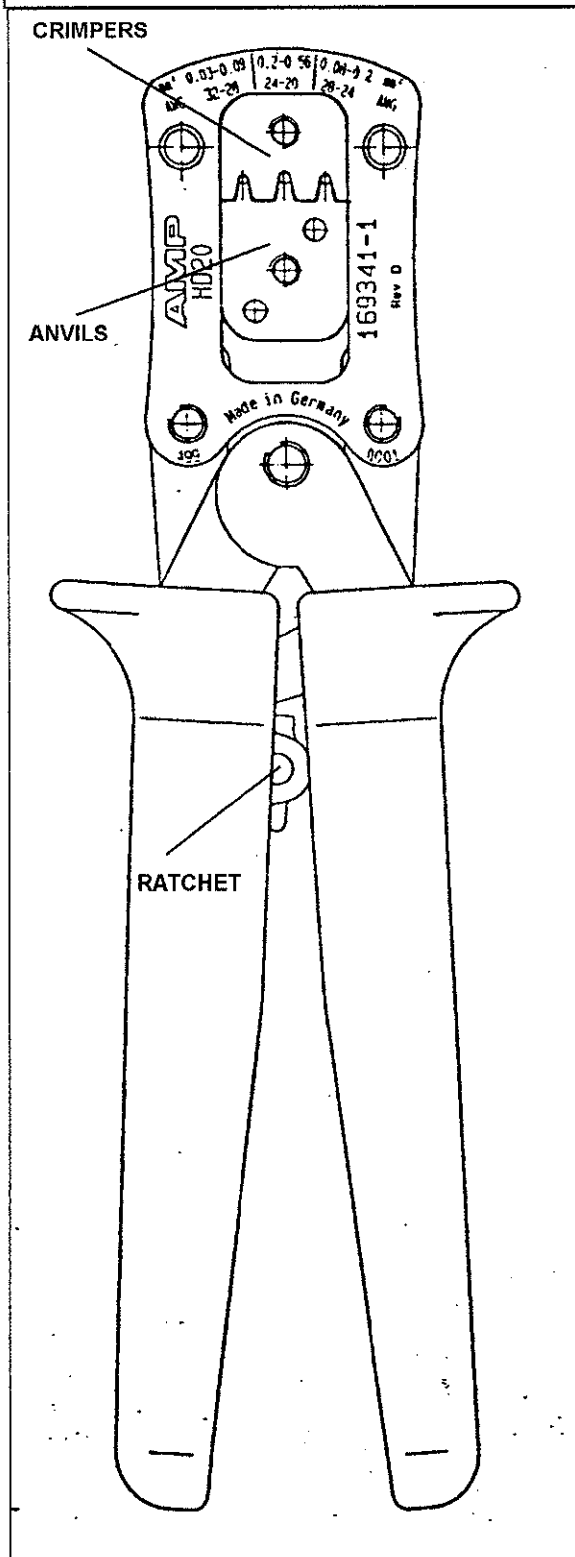


Figure 1

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SECTION I APPLICATION.

I-1 INTRODUCTION

This instruction sheet covers the use of the AMP Hand Crimping tool 169341-1, which crimps the AMP type HD-20 loose piece pin and socket contacts listed in Figure I-2. Read these instructions thoroughly before crimping any contacts

I-2 DESCRIPTION (FIGURES I-1 AND I-3).

The FRONT OF TOOL (contact side), into which the contact is inserted.

The BACK OF TOOL (wire side), into which the wire is inserted, has the wire size marked above each crimp section.

Each tool features two fixed dies (crimpers), two movable dies (anvils), 3 crimp sections with applicable wire size markings, a contact support, a locator/insulation stop, a ratchet release lever.

The ratchet assures full crimping of the contact. Once engaged, the ratchet will not release until the handles have been FULLY closed.

CAUTION

The ratchet assures full crimping of the contact. This is a design feature that assures maximum electrical and tensile performance of the crimp. Do NOT re-adjust the ratchet.

The locator/insulation stop has two functions. First, it positions the contact between the crimping dies, and second, it aids in locating the wire in the contact. In use, it rests in the locator slot.

See Figure I-2 and I-3.

The contact support prevents the contact from bending during the crimping procedure.

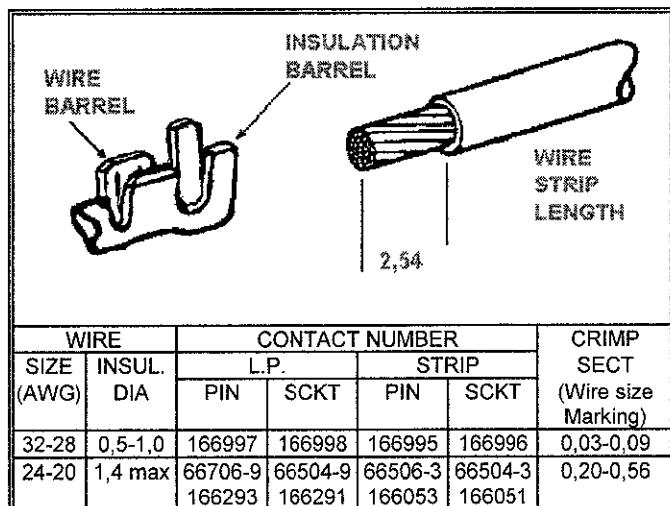
The ratchet release lever enables the user to open the partially closed tool handles when necessary.

The ratchet is used to control the crimp height of the terminal's wire/insulation barrel when a certain amount of wear has taken place on the ratchet mechanism or other internal parts of the tool.

See Paragraph II-3, RATCHET ADJUSTMENT.

I-3 CRIMPING PROCEDURE.

Refer to the chart in Figure 2 and check the selected wire, contact, and crimping tool of compatibility. Wire size and insulation diameter must be within the specified range for the contact. Strip the wire to the length indicated. Do NOT cut or nick the wire strands.



The hand crimping tool must be the one designed for crimping the wire and contact. Identify the appropriate crimp section (according to the wire size markings on the BACK of the tool).

The color dot, or wire size markings on the contact, must match the wire size marking above the appropriate crimp section.

Figure I-2

Refer to Figure I-3 and proceed as follows:

1. Hold tool so BACK (wire side) is facing you
2. Make sure the ratchet is released by squeezing the tool handles and allowing them to open FULLY.
3. Open flap locator. Insert contact up to stop. (Make sure contact is inserted properly).
4. Close flap locator.
5. Pre-close handles up to 1. ratchet tooth. Insert wire into contact.
6. Close the handles until automatic ratchet release.
7. Open flap locator. Take wire with contact out of locator.

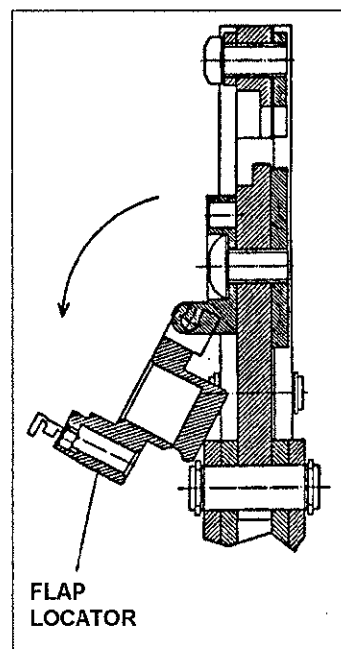


Figure I-3

I-4 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. If foreign matter cannot be removed easily, or if the proper replacement parts are not available, return the tool to your supervisor.

Make certain all pivot points and bearing surfaces are protected with a THIN coat of any good SAE No. 20 motor oil. Do NOT oil excessively. When the tool is not in use, keep the handles closed to prevent objects from becoming lodged between the crimping dies and store the tool in a clean dry area.

SECTION II MAINTENANCE / INSPECTION.

II-1 TOOL CERTIFICATION.

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 hand crimping tools.

II-2 INSPECTION PROCEDURES.

A. Daily Maintenance.

It is recommended that each operator of the tool 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 tool.
2. Make sure the proper retaining pins are in place and secured with the proper retaining rings.

3. Make certain all pins, pivot points and bearing surfaces are protected with a THIN coat of any good SAE No. 20 motor oil. Do NOT oil excessively.
4. When the tool is not in use, keep the handles closed to prevent objects from becoming lodged in the crimping dies and store the tool in a clean dry area.

B. Periodic Inspection.

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the tool and/or be supplied to supervisory personnel responsible for the tool. Through recommendations call for at least one inspections a month, the inspection frequency should be based on the amount of use, ambient working conditions, operator training and skill and established company standards. These inspections should be performed in the following sequence:

B-1 Visual Inspection.

1. Remove all lubrication and accumulated film by immerse the tool (handles partially closed) in a suitable commercial degreaser that will not affect paint or plastic material.
2. Make certain all retaining pins are in place and secured with retaining ring.
3. Close the tool handles untill the ratchet releases, then allow handles to open freely. If they do not open quickly and fully, return the tool to AMP for evaluation and repair.
4. Inspect the head assembly with special emphasis on checking for worn, cracked or broken die. If damage to any part of the head assembly is evident, return the tool to AMP for evaluation and repair.

B-2 Crimp height inspection.

This inspection requires the use of micrometer with a modified anvil as shown in Figure II-1.

Proceed as follows:

1. Refer to the chart in Figure II-1 and select a contact and a wire (maximum size) for each crimp section listed in the chart.
2. Refer to Paragraph I-3, CRIMPING PROCEDURE and crimp the contact(s) accordingly.
3. Using a crimp height comparator, measure wire barrel crimp height as shown in Figure II-1. If the crimp height conforms to that shown in the chart, the tool is considered dimensionally correct. If not, return the tool to AMP for evaluation and repair.

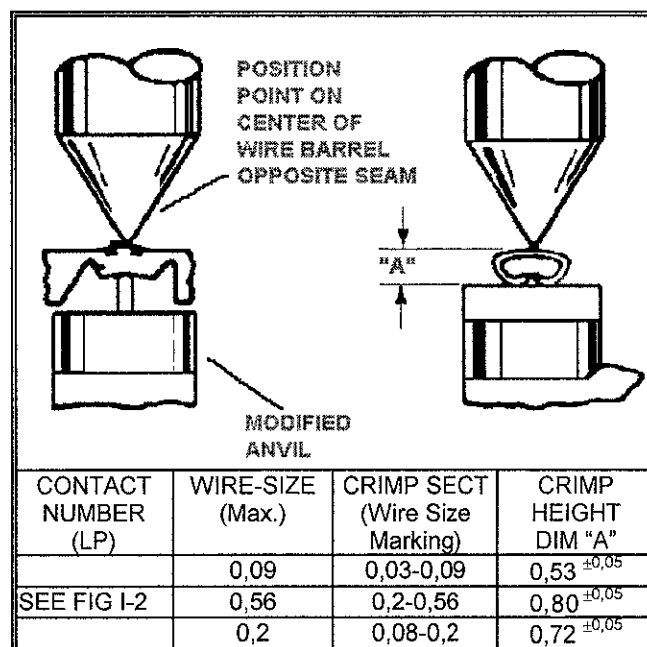


Figure II-1

For additional information concerning the use of the crimp height comparator, refer to AMP Instruction Sheet IS 408-7424.

II-3 RATCHET ADJUSTMENT (FIGURE II-3).

To adjust ratchet (and tighten crimp) proceed as follows:

1. Remove the existing shaft.
2. Replace the shaft by a shaft with an other diameter
3. Perform a test crimp. Repeat above procedure if necessary.

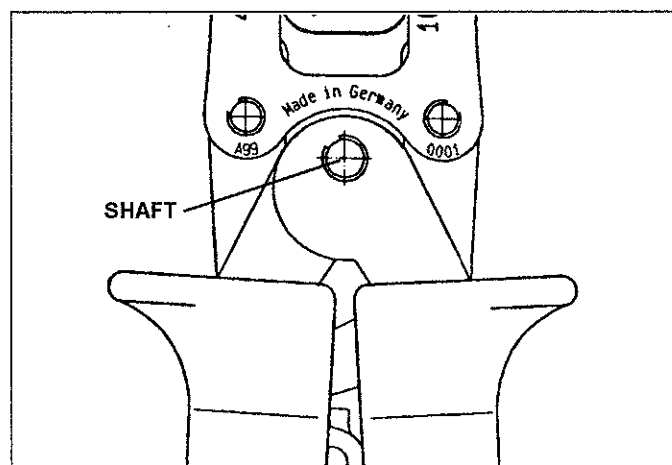


Figure II-2