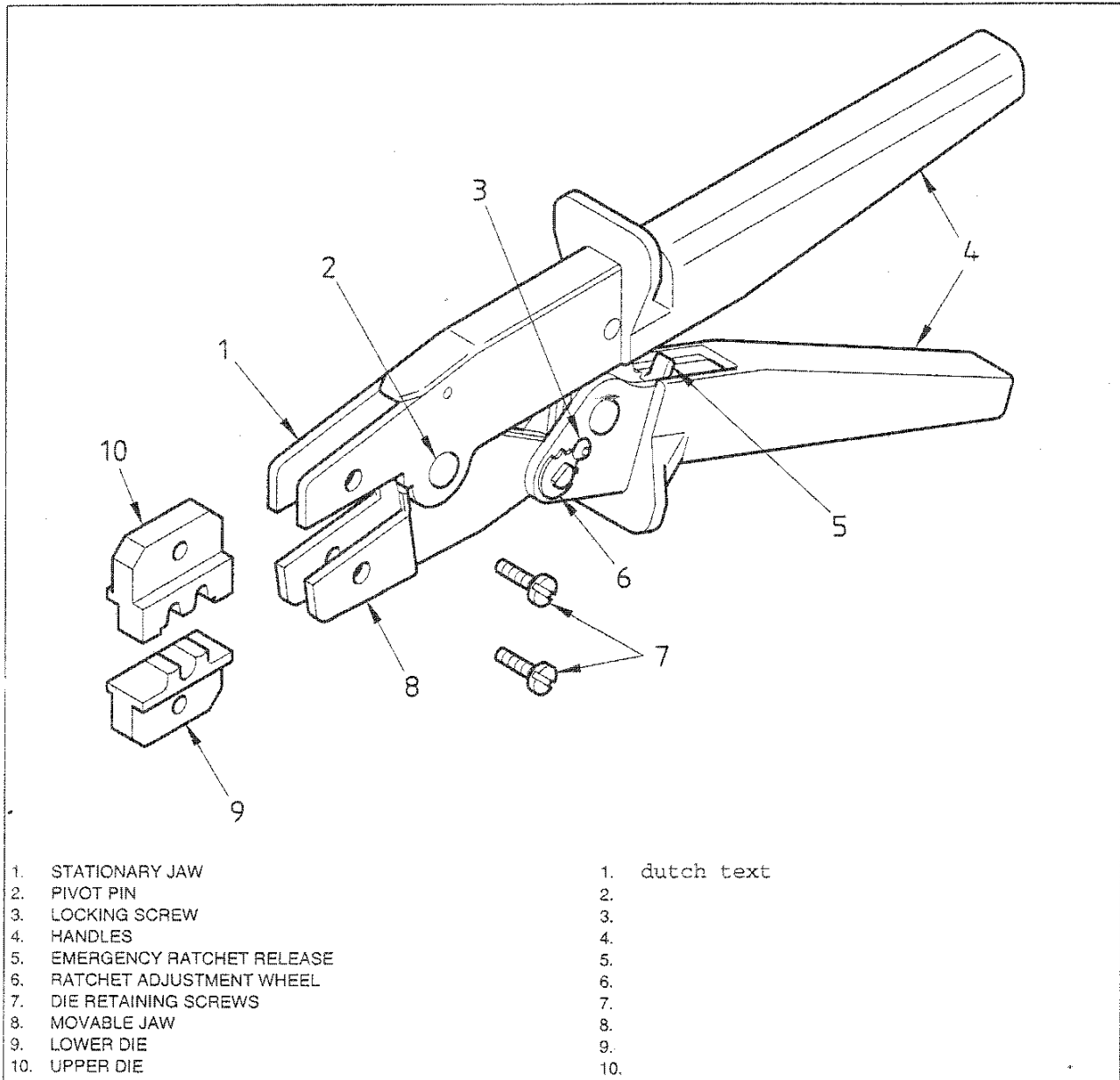


**1. INTRODUCTION**

This instruction sheet provides operation and maintenance procedures for the AMP Hand Tool Assembly 734790-1 and Die Set 734761-1 which are used with Contacts 965858 and 965859 (pin), and 965861 and 965862 (socket).

Read these instructions carefully before installing the dies and using the hand tool.

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**FIGURE 1**

CONTACT PART NUMBER	CONTACT SIZE	WIRE SIZE	WIRE INSULATION DIAMETER	WIRE STRIP LENGTH
dutch text dutch text	dutch text dutch text	dutch text	dutch text dutch text	dutch text
965858 (pin)	4.0 mm	>2.5 - 4.0 mm <sup>2</sup>	2.7 - 3.7 mm	6.0 ± 0.3 mm
965859 (pin)	4.0 mm	>4.0 - 6.0 mm <sup>2</sup>	3.4 - 4.3 mm	6.5 ± 0.3 mm
965861 (socket)	4.0 mm	>2.5 - 4.0 mm <sup>2</sup>	2.7 - 3.7 mm	6.0 ± 0.3 mm
965862 (socket)	4.0 mm	>4.0 - 6.0 mm <sup>2</sup>	3.4 - 4.3 mm	6.5 ± 0.3 mm

**TABLE 1****2. DESCRIPTION (Figure 1)**

The AMP Hand Tool consists of two crimping jaws, an adjustable ratchet, spring-actuated handles, two die retaining screws, and an emergency ratchet release. The slotted design of the crimping jaws permits easy installation and removal of the crimping dies. The adjustable ratchet allows crimp height to be set for optimum crimping performance. The Die Set consists of an upper die and a lower die.

**3. DIE SET INSTALLATION AND REMOVAL (Figure 1)**

The AMP Hand Tool ratchet has detents that are audible as seven 'clicks' as the handles are closed. The ratchet releases on the seventh 'click' and the spring-actuated handles fully open. If the jaws have to be opened in an emergency, push the emergency ratchet release toward the jaws to release the ratchet.

1. Fully close the handles of the Hand Tool to release the ratchet, then release the handles to open the jaws.
2. Remove the die retention screws from the jaws of the Hand Tool.
3. Place the upper die, with the die size markings on the same side as the die retention screw, in the stationary jaw. Insert a die retention screw through the stationary jaw and upper die to hold the die in place, but do not tighten the screw at this point.
4. Place the lower die, with the die part number marking on the same side as the die retention screw, in the moving jaw. Install a die retention screw through the moving jaw and lower die to hold the die in place, but do not tighten the screw at this point.
5. Slowly close the handles of the Hand Tool, allowing the upper and lower dies to mate and align, until the jaws are closed sufficiently to hold

the dies in place. Fully tighten both die retaining screws.

6. To remove the upper and lower dies, fully close the handles of the Hand Tool to release the ratchet, then release the handles to open the jaws. Remove the die retention screws and slide the dies out of the jaws.

#### 4. CRIMPING PROCEDURE (Figure 2)

The AMP Hand Tool has a crimp height adjustment feature. Before crimping is done on a production basis, the crimp height should be verified as specified in Section 5, CRIMP HEIGHT INSPECTION, and, if necessary, the Hand Tool adjusted as specified in Section 6, CRIMP HEIGHT ADJUSTMENT.

Refer to Table 1 and select the wire of the specified size and insulation diameter, and the applicable contact. Strip the wire to the length indicated in Table 1, taking care not to nick or cut wire strands. On the Die Set identify the appropriate crimp section from the die size markings. Refer to Figure 2 and proceed as follows:

1. Hold the tool with the back (wire side) facing you. Fully close the handles of the Hand Tool to release the ratchet, then release the handles to open the jaws.
2. Hold the contact by the mating end and insert it -- insulation barrel first and the open "U" of the wire barrel upward -- through the front of the tool into the appropriate crimp section.
3. Hold the contact in position and squeeze the handles of the Hand Tool together until the ratchet engages sufficiently to hold the contact in position.

**NOTE** Make sure that the contact is not turned in the crimp section. DO NOT attempt to crimp an incorrectly positioned contact.

4. Insert the stripped wire into the contact in the position shown in Figure 3.
5. Hold the wire in position then fully close the handles of the Hand Tool to release the ratchet, then release the handles to open the jaws. Remove the crimped contact.
6. Check the contact crimp dimension as shown in Figure 2. DO NOT try to re-crimp an incorrectly crimped contact.
7. If necessary, inspect the contact crimp height as specified in Section 5, CRIMP HEIGHT INSPECTION.

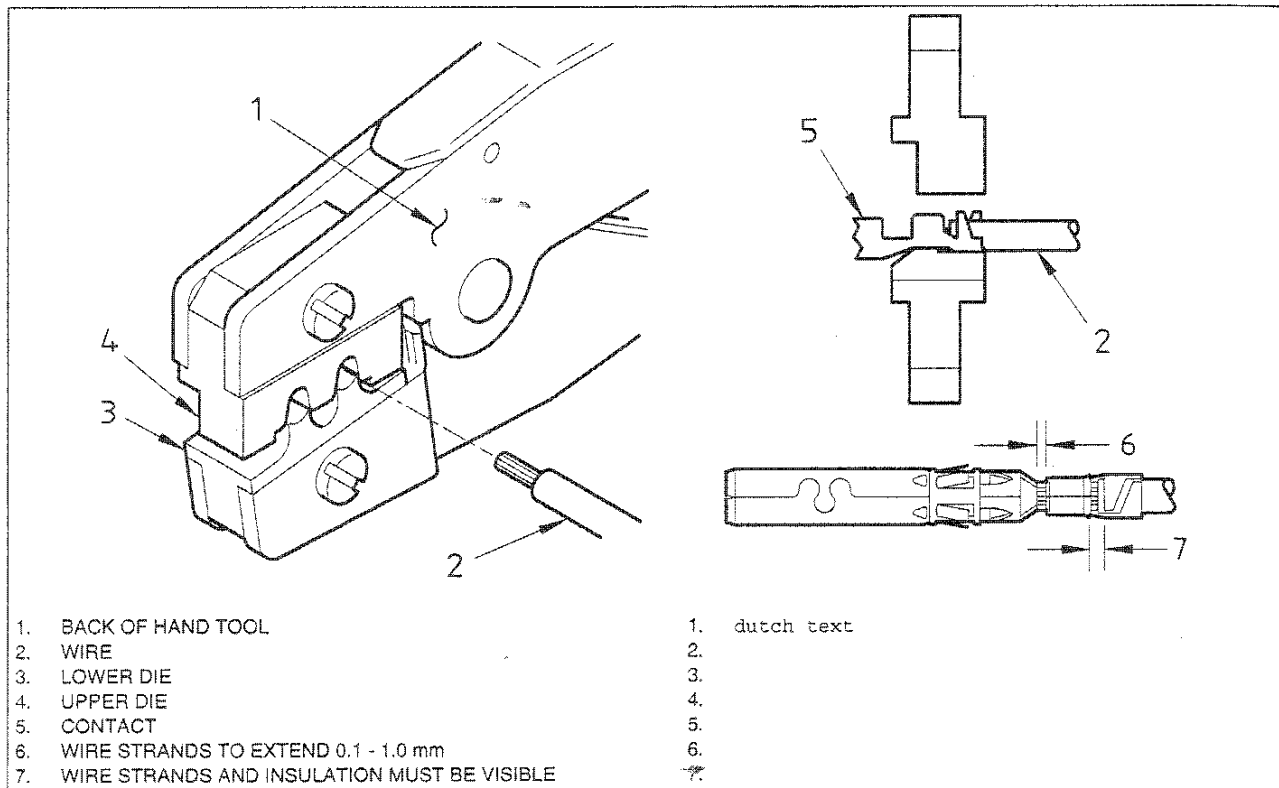


FIGURE 2

### 5. CRIMP HEIGHT INSPECTION (Figure 3)

A micrometer with a modified anvil is used to measure the crimp height. Order the micrometer from AMP or your AMP Sales Representative. Proceed as follows:

1. Crimp a contact onto a correctly-prepared wire and check the contact crimp dimension as specified in Section 4, CRIMPING PROCEDURE.
2. Use the crimp height micrometer to measure the contact crimp height as shown in Figure 3. If the crimp height conforms to that shown in Table 2, the Hand Tool does not need to be adjusted. If the crimp height is incorrect, the Hand Tool must be adjusted as specified in Section 6, CRIMP HEIGHT ADJUSTMENT.

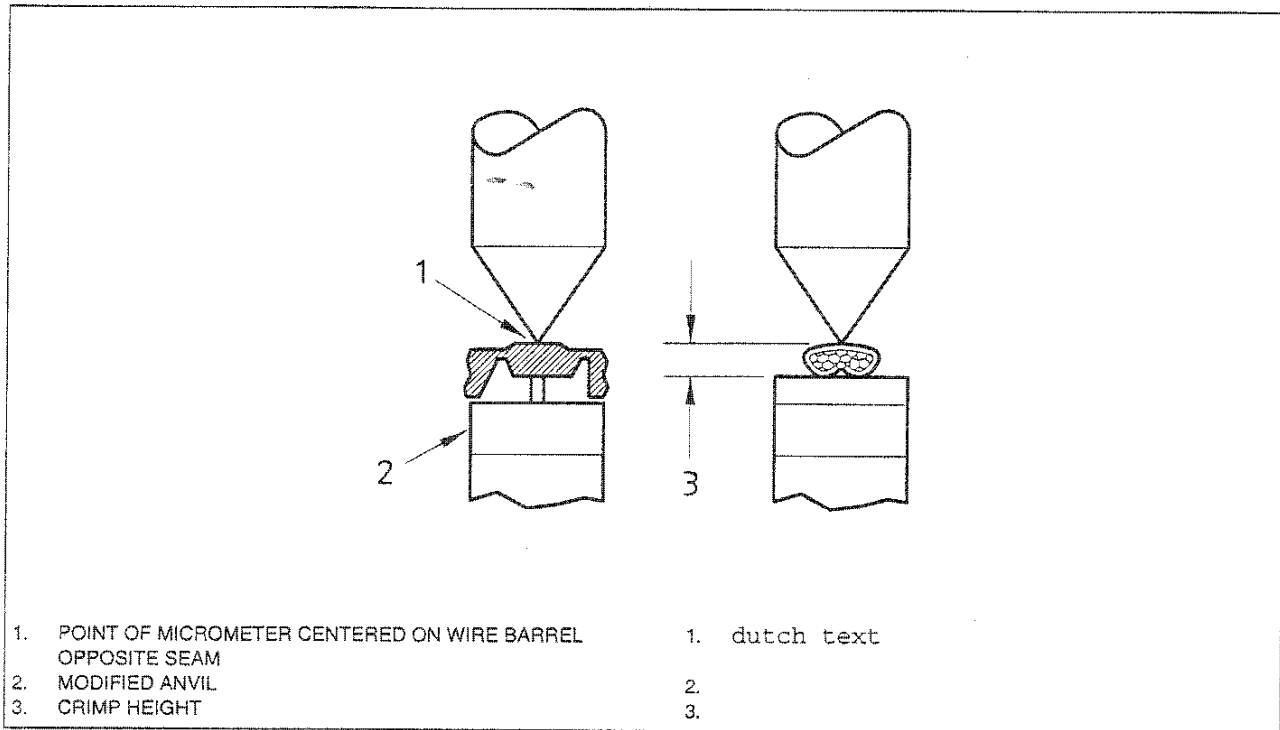


FIGURE 3

CONTACT PART NUMBER	WIRE SIZE	CRIMP HEIGHT
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965858 (pin)	4.0 mm <sup>2</sup>	2.48 ± 0.05 mm
965859 (pin)	6.0 mm <sup>2</sup>	2.92 ± 0.05 mm
965861 (socket)	4.0 mm <sup>2</sup>	2.48 ± 0.05 mm
965862 (socket)	6.0 mm <sup>2</sup>	2.92 ± 0.05 mm

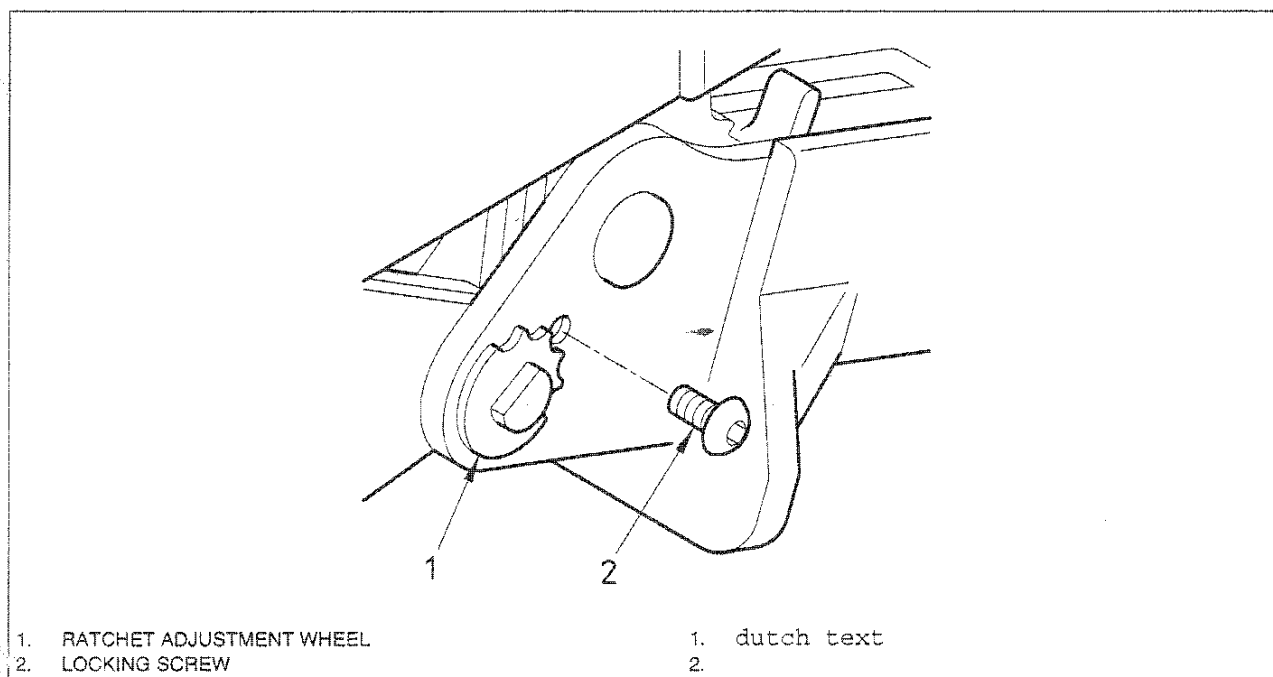
TABLE 2

## 6. CRIMP HEIGHT ADJUSTMENT (Figure 4)

The ratchet sets the final position of the jaws and dies during crimping, and ensures that the crimping cycle is completed. The ratchet has an adjustment wheel with seven settings which allows the final position of the jaws and dies to be adjusted, thus changing the crimp height. Although the ratchet is pre-set prior to shipment, it is important that you inspect the crimp height. Also, general use and subsequent wear may cause the tool to go out of adjustment. It is recommended that the crimp height is inspected and, if necessary, adjusted on a regular basis by quality control personnel.

1. Crimp a contact onto a correctly-prepared wire and inspect the height of the crimp.

2. If the crimp is too high, remove the locking screw and turn the adjustment wheel COUNTERCLOCKWISE.
3. If the crimp is too low, remove the locking screw and rotate the adjustment wheel CLOCKWISE.
4. Install the locking screw.
5. Repeat the crimp and adjustment procedure until the correct crimp height is achieved.
6. If the correct crimp height cannot be achieved the dies must be replaced or the hand tool must be repaired.

**FIGURE 4**

## 7. MAINTENANCE AND INSPECTION

### Routine Maintenance

To maintain the AMP Hand Tool and Die Set in good condition AMP recommends that the operator does the following maintenance steps on a daily basis or before they are stored.

1. Remove dust, moisture, and other contaminants from the Hand Tool and Die Set with a clean, soft brush, or a clean, soft, lint-free cloth. DO NOT use hard or abrasive objects that could damage the Hand Tool and Die Set.
2. Make certain that the pivot pins are in place and secured with retaining rings.
3. Apply a thin coat of a good SAE 20 motor oil



to all moving parts and sliding surfaces. Do not use excessive amounts of oil.

4. When the Hand Tool is not in use, keep the handles closed to prevent objects becoming jammed in the jaws.
5. To store the Hand Tool, clean and lubricate it then keep it in a clean, dry area.

#### **Periodic Inspection**

Quality control personnel should do regular inspections of the Hand Tool and Die Set. Keep a record of scheduled inspections with the tool or give the record to supervisory personnel who are responsible for the tool. Inspection frequency should be based upon amount of use, working conditions, operator training and skill, and established company standards.

1. Remove all lubrication and accumulated film by immersing the Hand Tool (handles partially closed) and Die Set in a suitable commercial degreaser that will not damage paint or plastic material. If necessary, clean the Hand Tool and Die Set with a soft brush.
2. Dry the Hand Tool and Die Set with a clean, soft, lint-free cloth.
3. Make certain that the pivot pins are in place and secured with retaining rings.
4. Slowly close the handles of the Hand Tool until the ratchet makes the sixth "click". If the ratchet does not hold the handles at each "click" position the ratchet is worn, or the ratchet spring is broken, and must be replaced.
5. Fully close the handles of the Hand Tool to release the ratchet, then release the handles to open the jaws. If the jaws do not open quickly and fully, the spring is defective and must be replaced.
6. Inspect the Hand Tool and Die Set for wear and damage. On the Hand Tool carefully inspect the jaws, moving parts, sliding surfaces pivot points. On the Die Set carefully inspect the die forming surfaces. If damage is found repair or replace the damaged part. If the Hand Tool is acceptable, do the routine maintenance and return it to service.