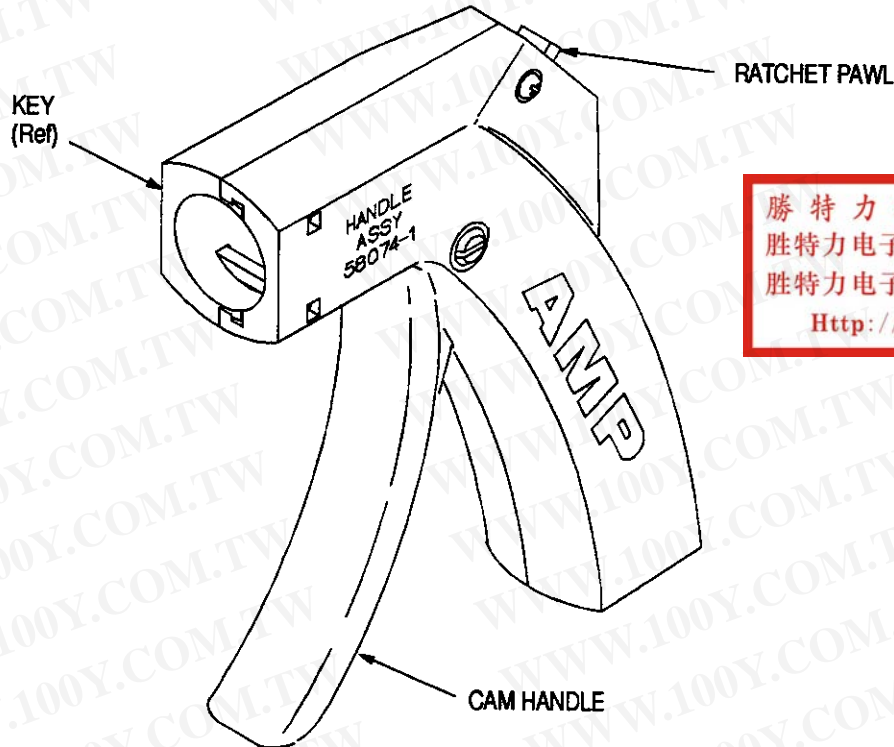


PROPER USE GUIDELINES

Cumulative Trauma Disorders can result from the prolonged use of manually powered hand tools. AMP hand tools are intended for occasional use and low volume applications. AMP offers a wide selection of powered application equipment for extended-use, production operations.



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Figure 1

cad

1. INTRODUCTION

This instruction sheet covers the application and maintenance procedures for AMP Pistol Grip Manual Handle Assembly 58074-1. The tool is designed to accept interchangeable heads that terminate wires in AMP connectors. Read these instructions carefully before using the tool.

Refer to the instruction sheet packaged with the head for details concerning termination procedures.

NOTE

Dimensions on this instruction sheet are in millimeters [followed by inches in brackets].

2. DESCRIPTION (Figure 1)

The pistol grip manual handle assembly features a cam handle, a key, and a ratchet pawl. The cam handle actuates the terminating mechanism inside the head (after the head is properly installed in the tool). The head is secured in the tool with the key. The ratchet pawl is used to release the handle before it is fully closed.

3. HEAD INSTALLATION AND REMOVAL

1. Position the tip of a screwdriver between the shoulder of the key and the tool body. Pry the key out of the tool. See Figure 2.

2. With the cam handle FULLY opened, insert the head into the tool until it bottoms. See Figure 2.

NOTE

Make sure the head is FULLY bottomed in the tool before re-inserting the key.

3. Re-insert the key into the tool body to secure the head. Apply enough pressure to fully insert the key into the tool.

NOTE

The key may be difficult to insert when the tool is new. The insertion should become easier after the tool has been used.

4. To remove the head, follow the procedure described in Step 1.

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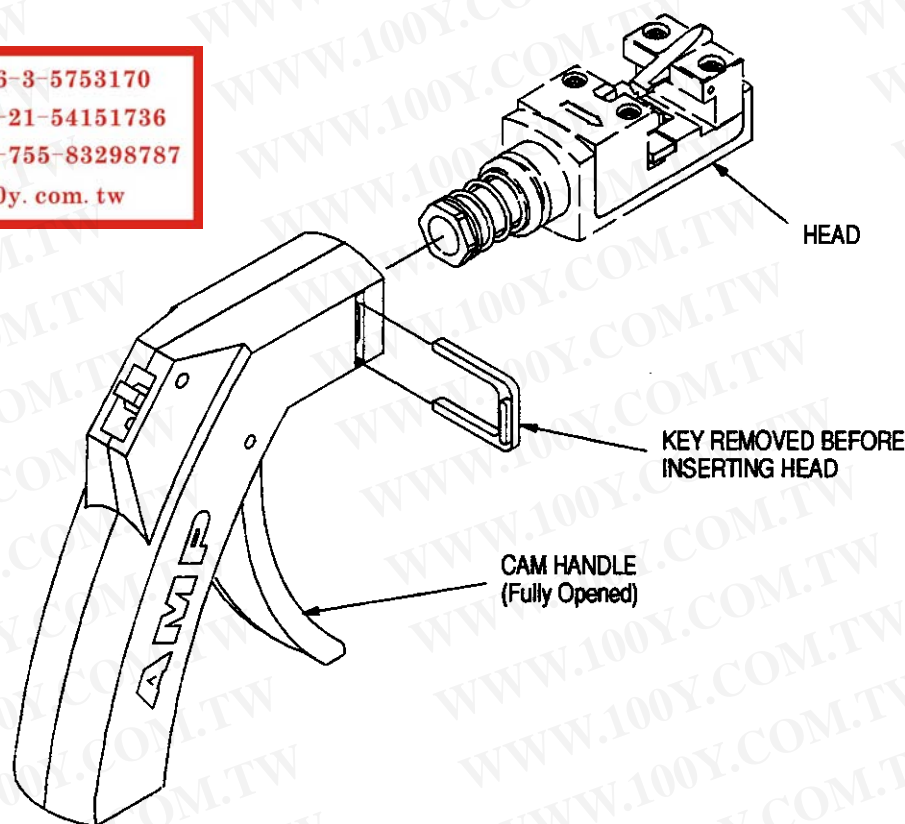


Figure 2

cad

4. TERMINATION PROCEDURE

After the head is properly inserted into the tool, it serves as a guide for the housing assemblies during termination. Unstripped wire is inserted into the wire slot of the head and is terminated in the contact using the Insulation Displacement Technique (a terminating technique which inserts unstripped wire into a slotted contact beam to form a reliable electrical connection between the wire and the contact). The termination is accomplished by squeezing the cam handle until the ratchet releases. For details concerning the termination procedure, refer to the instruction sheet packaged with the appropriate head.

5. MAINTENANCE

AMP recommends that a maintenance and inspection program be performed periodically to assure the quality and reliability of the tool. Frequency of inspection should be adjusted to suit your requirements through experience.

Frequency of inspection depends on:

1. The care, amount of use, and handling of the tool.
2. The presence of abnormal amounts of dust and dirt.

3. The degree of operator skill.
4. Your own established standards.

A. Quality Control Maintenance

1. Remove any accumulated film with a suitable cleaning agent that will NOT affect plastic material.
2. Make sure all components are in place and are properly secured. See Figure 2.
3. Make a few test terminations and inspect the termination using the inspection procedures provided with the head.
4. Check for chipped, cracked, worn, or broken areas. If damage is evident, repair is necessary. Refer to Section 6, REPLACEMENT AND REPAIR.

B. 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 handle assembly.
2. Ensure that all components are in place and properly secured.
3. Depress and release the spring-loaded ratchet pawl to ensure that the pawl moves freely.

4. Squeeze and release the cam handle to ensure that the mechanisms inside the handle and head assembly move smoothly.

5. Check the extension springs to ensure they are properly located and are not deformed.

CUSTOMER SERVICE (38-35)
AMP INCORPORATED
P.O. BOX 3608
HARRISBURG, PA 17105-3608

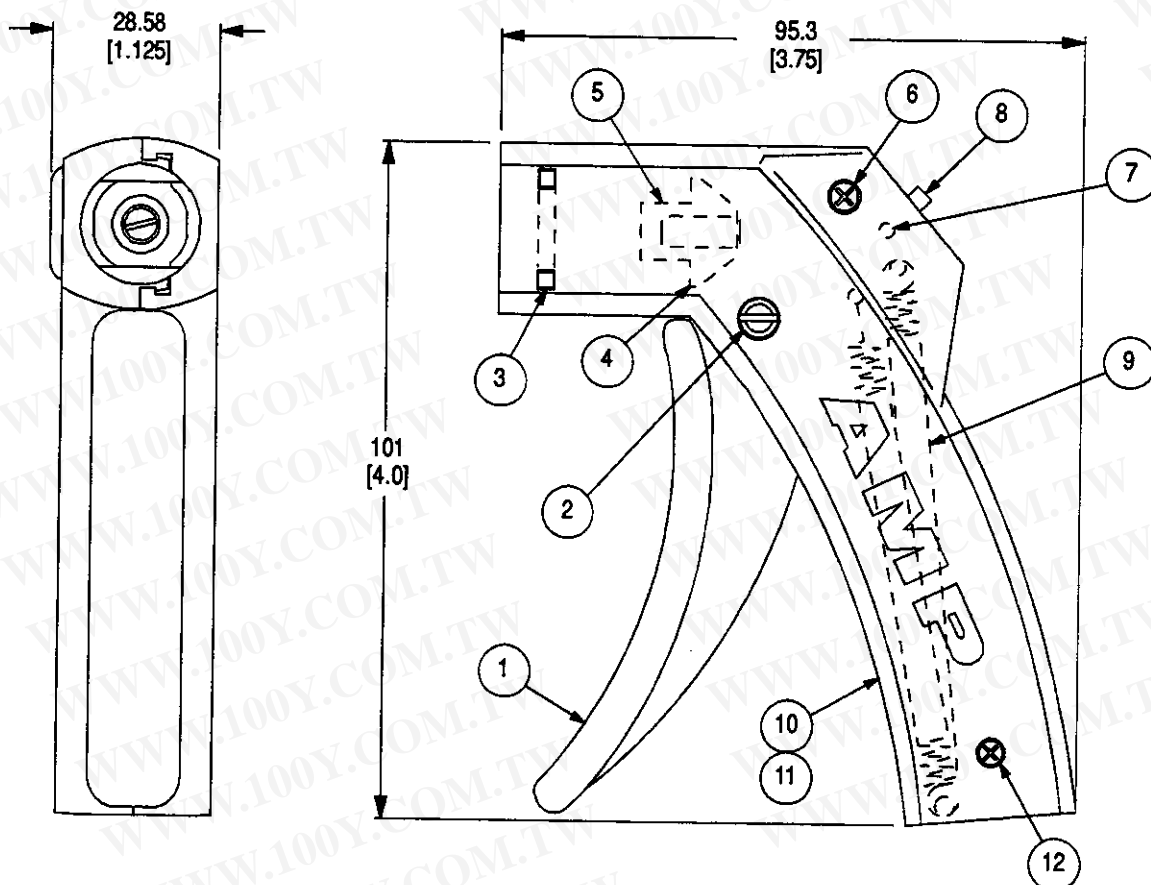
6. REPLACEMENT AND REPAIR

Replacement parts are listed in Figure 3. Parts other than those listed in Figure 3 should be replaced by AMP to insure performance of the tool. Replaceable parts can be ordered from:

For tool repair, return the tool to:

CUSTOMER REPAIR (01-12)
AMP INCORPORATED
1523 NORTH 4TH STREET
HARRISBURG, PA 17102-1604

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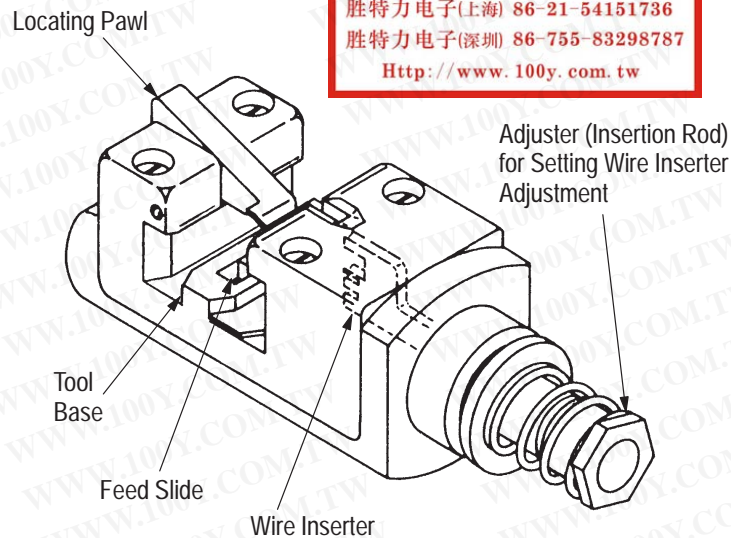


CUSTOMER REPLACEABLE PARTS FOR 58074-1

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	312145-1	HANDLE, Cam	1
2	1-22353-2	SCREW, Shoulder	1
3	312140-1	KEY	1
4	312141-1	NUT, Cam Adjustment	1
5	312142-1	SCREW, Ratchet Adjustment	1
6	28593-1	SCREW, Self-Tapping, .22 OD x .38 L	1
7	1-21919-2	PIN, Dowel	1
8	312143-1	PAWL, Ratchet	1
9	22286-9	SPRING, Extension	2
10	312144-1	HANDLE, Right Half	1
11	312144-2	HANDLE, Left Half	1
12	28593-3	SCREW, Self-Tapping, .22 OD x .62 L	1

Figure 3

cad



MTA-100 Receptacle Connectors
(Closed-End Style Only)

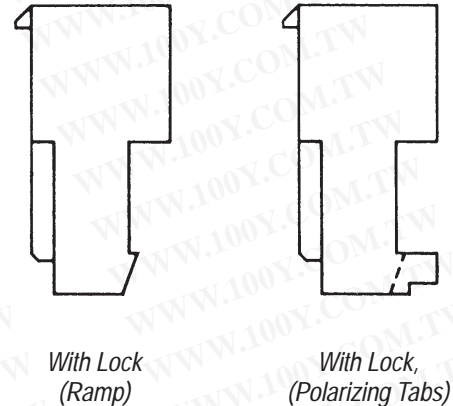


Figure 1

1. INTRODUCTION

This instruction sheet covers operation and maintenance of MTA Terminating Head 58246-1 for use in Pistol Grip Manual Handle Assembly 58074-1, or Pistol Grip Pneumatic Handle Assembly 58075-1. Read these instructions thoroughly before using the heads. Refer to the instructions packaged with the pistol grip handle assembly for head installation and removal: Instruction Sheet 408-6790 (manual) and Instruction Sheet 408-6789 (pneumatic).

NOTE

Add dimensions on this instruction sheet are in millimeters [with inches in brackets]. Figures are for reference only and are not drawn to scale.

See Section 8, REVISION SUMMARY, for revision information.

2. DESCRIPTION

This head is used to terminate unstripped wires in two types of MTA-100 closed-end receptacle assemblies: connectors with lock (ramp), and connectors with polarizing tabs and lock. Slotted contacts for insulation displacement termination are pre-assembled on 2.54 [.100] centerlines in each color-coded housing for a specific wire size. Refer to Figure 2 and to Application Specification 114-1019 for further details.

The head, which is inserted into the pistol grip handle assembly, serves as a guide and support for the connector during termination. Features of the head (shown in Figure 1) and their functions are as follows:

Wire Inserter – forces wire into the two slotted beams of the contact. Note that it provides support for the contact beams when applying insertion force on the wire.

Adjuster (Insertion Rod) – is a piston for the wire inserter and regulates wire inserter travel.

Feed Slide – automatically positions the connector after each termination.

Locating Pawl – aligns connector for insertion, and retains it during termination. The locating pawl is sometimes referred to as the “anti-backup pawl.”

3. SETUP ADJUSTMENTS AND TEST

The adjuster (insertion rod) of the wire inserter is preset for wire sizes 22 through 28 AWG. If the wire is being inserted too deeply or not deeply enough inside the contact, it may be necessary to adjust the depth of the wire inserter; or, if the pneumatic handle assembly is being used, it may be necessary to adjust either the air pressure or the depth of the wire inserter.

3.1. For Pistol Grip Manual Handle Assembly

1. Determine the wire size, and select the appropriate color-coded connector from the chart in Figure 2. Dash numbers are used to indicate number of contact positions.
2. Using a small knife, cut off the wire retainers (strain relief). This will provide a clear view for inspecting the connector for a properly terminated wire in the contact. See Figure 3.

WIRE SIZE, AWG	MTA-100 IDC RECEPTACLE CONNECTORS WITH LOCKING RAMP				
	COLOR CODE	WITHOUT POLARIZING TABS		WITH POLARIZING TABS	
22	Red	640440 641237 641534	643498 644314	643813 644042 644083	644677
24	Natural	640441 641238	641535 644574	643814 644020	644312
26	Blue	640442 641239 641536	643828 644315	643815 644043 644313	---
28	Green	640443 641240	641537	643816 644044	---

Figure 2

CAUTION

Wire retainers are removed to provide a connector for testing only. Do NOT use such connectors for production applications.

If you determine that the wire insertion depth is incorrect, proceed to Paragraph 3.3, Wire Insertion Depth Adjustment.

3. Place connector in tool and make a test termination using the procedures described in Section 4, TERMINATING PROCEDURE, Steps 1 through 6.

4. Push connector out of right side of head.

5. Inspect termination in accordance with Section 5, INSPECTION, Steps 1 through 6.

3.2. For Pistol Grip Pneumatic Handle Assembly

1. Perform the procedure outlined in Paragraph 3.1, For Pistol Grip Manual Handle Assembly, Steps 1 through 4.

2. Inspect termination to ensure that conductor is terminated past the lead-in transition and is positioned about halfway into the contact slot. See Figure 3.

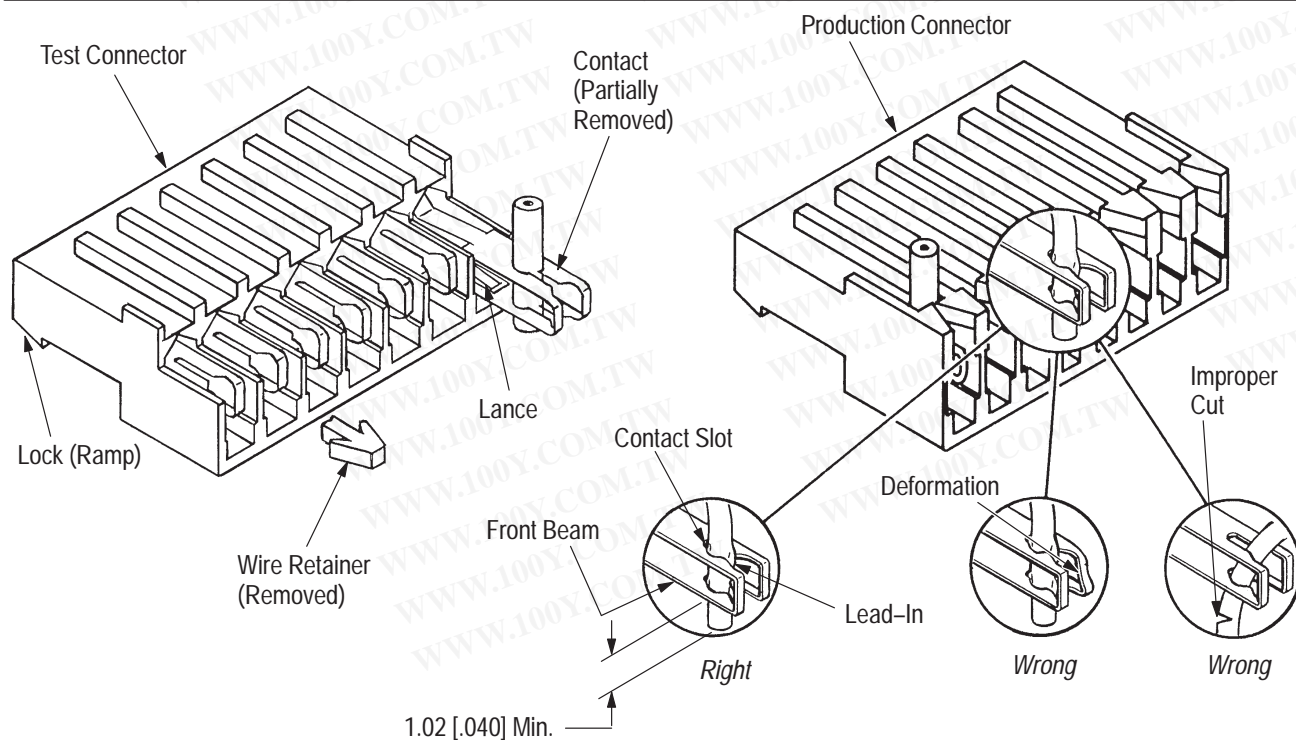
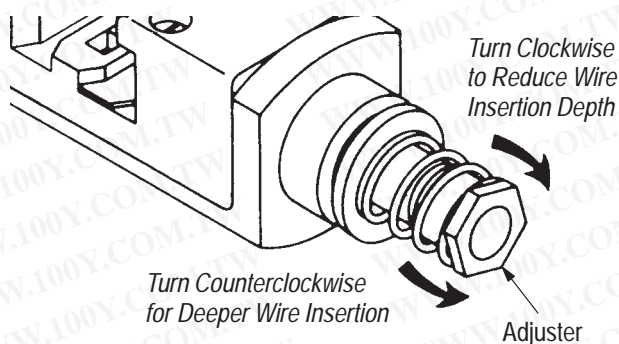


Figure 3



NOTE: 1/6 turn equals 0.20 [.008] adjustment.

Figure 4

3. Inspect termination to ensure that insulation is 1.02 [.040] minimum beyond the front contact beam.

4. If, upon inspection, it is determined that the wire is not inserted deeply enough, increase the air pressure by 69 kPa [10 psi], and repeat the termination and inspection procedure. Continue in this manner until either the proper insertion depth is obtained or the air pressure is set to 483 kPa [70 psi]. If the proper insertion depth is **NOT** reached at 483 kPa [70 psi], return the air pressure to 276 kPa [40 psi] and follow the procedure in Paragraph 3.3, Wire Insertion Depth Adjustment.

5. If the wire is inserted too deeply, refer to the procedure in Paragraph 3.3, Wire Insertion Depth Adjustment.

3.3. Wire Insertion Depth Adjustment

Wire Too Deep in Contact Slot – If the wire is inserted too deeply, remove the head, and turn the adjuster 1/6 revolution **CLOCKWISE** (see Figure 4). This will reduce the wire insertion depth by approximately 0.20 [.008]. Repeat Steps 3, 4, and 5 of Paragraph 3.1, for Pistol Grip Manual Handle Assembly.

Wire Not Deep Enough in Contact Slot – If the wire is not inserted deeply enough in contact slot, remove the head and turn the adjuster 1/6 revolution **COUNTERCLOCKWISE** (see Figure 4). This will increase the wire insertion depth by approximately 0.20 [.008]. Repeat Steps 3, 4, and 5 of Paragraph 3.1, (or Steps 3 and 4 of Paragraph 3.2).

4. TERMINATING PROCEDURE (Figure 5)

1. Insert connector into left side of head as indicated.
2. Align contact to be terminated with wire inserter.
3. Make sure locating pawl rests between connector index ribs.
4. Insert an unstripped wire into the funnel area between contact and wire inserter until it bottoms on tool base.
5. Depress trigger (or squeeze cam handle) of pistol grip handle assembly and hold it until inserter bottoms or ratchet releases.
6. Release trigger (or cam handle). The inserter will retract and the feed slide will automatically advance connector to next contact position.

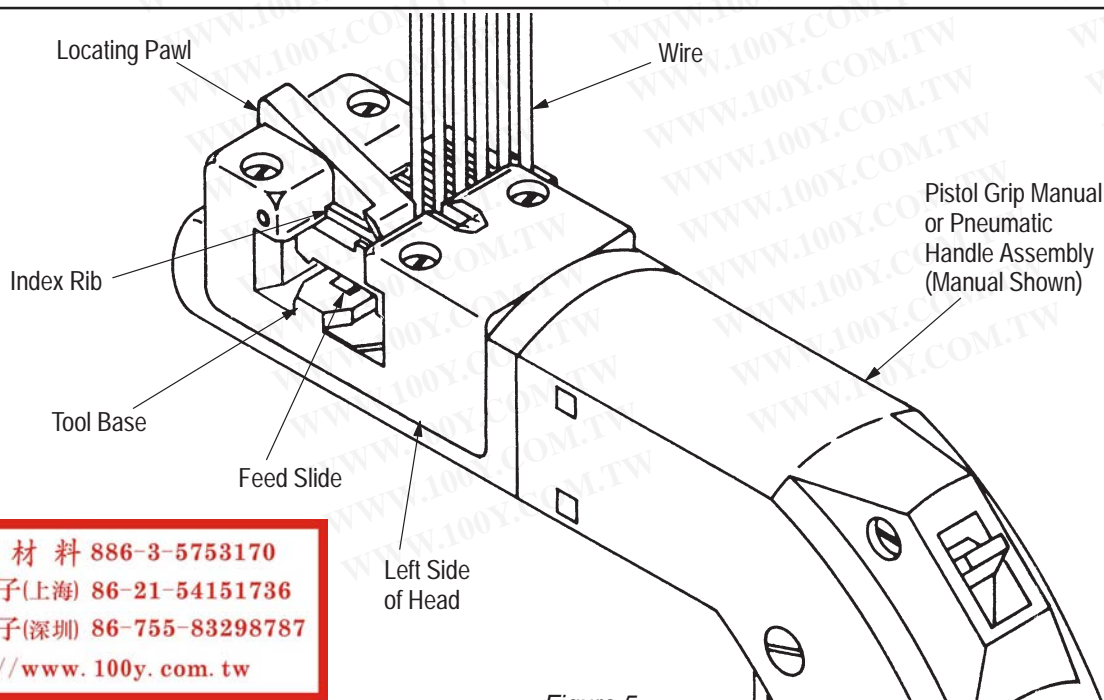


Figure 5

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NOTE

The locating pawl will move up and down as the connector is automatically advanced through the head. However, if movement is obstructed, or if desirable, the locating pawl can be depressed and the connector moved manually out the RIGHT side of the head.

7. Repeat Steps 2 through 6 until all contacts have been terminated.
8. Inspect each termination according to the procedure in Section 5, INSPECTION.

5. INSPECTION (Figure 3)

Inspect each termination to ensure the following:

1. Conductor is terminated past the lead-in transition and about halfway in the contact slot.
2. Insulation is 1.02 [.040] minimum beyond the front contact beam. See Figure 3.
3. Wire is NOT bottomed in contact slot.
4. Contact beams are NOT deformed. If damage is apparent, replace contacts in accordance with the instructions packaged with the connector.
5. Insulation of wire is NOT nicked or cut in any area other than the two wire slots.
6. Wire extends below the strain-relief features of connector.

6. TOOL MAINTENANCE

The procedures described in the following text have been established to assure quality and reliability of terminating tools. A brief check should be made daily, and a more detailed inspection should be scheduled by your quality control group.

6.1. Daily Maintenance

Each operator should be aware of, and responsible for, the following:

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 all components are in place and properly secured. (If NOT, return the tool to your supervisor.)

3. Actuate handle assembly to ensure mechanisms inside head move smoothly.

6.2. Periodic Maintenance

Regular inspections should be performed by your quality control personnel with a record of these inspections remaining with the personnel responsible for the tool. We recommend one inspection a month; however, operator training and skill, amount of use, ambient working conditions, and your company's established standards are all factors in establishing frequency of inspections.

These inspections should be done in the following sequence:

1. Remove any accumulated film with a suitable cleaning agent that will NOT affect plastic material.
2. Make sure all components are in place and properly secured. See Figure 6.
3. Make a few test terminations and inspect the terminations in accordance with Section 5, INSPECTION.
4. Check for chipped, cracked, worn, or broken areas. If damage is evident, repair is necessary. See Section 7, REPLACEMENT AND REPAIR.

7. REPLACEMENT AND REPAIR

The parts listed in Figure 6 are customer-replaceable. A complete inventory can be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your TYCO ELECTRONICS Representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 1-717-986-7605. or write to:

CUSTOMER SERVICE (38-35)
TYCO ELECTRONICS CORPORATION
P. O. BOX 3608
HARRISBURG, PA 17105-3608

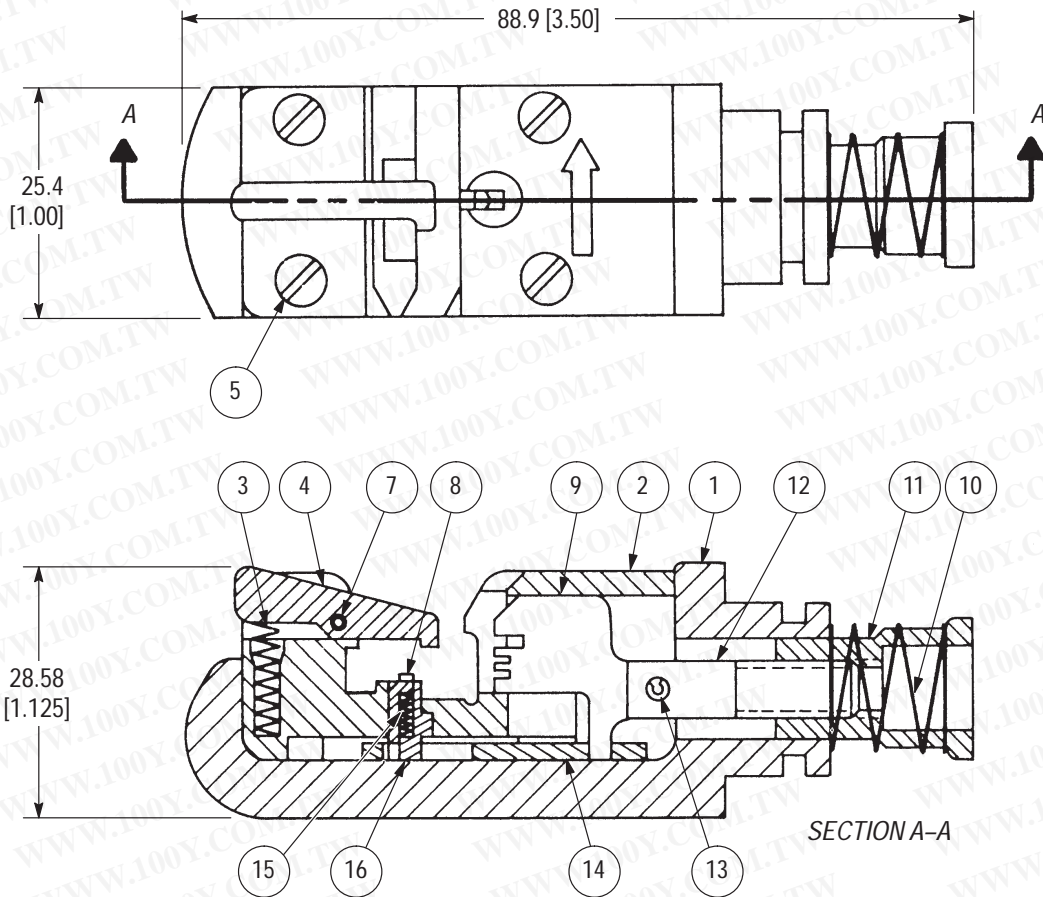
8. REVISION SUMMARY

Since the previous release of this sheet, the following changes were made:

Per EC 0990-0826-03:

- Updated document to corporate requirements
- Removed item 6 from Figure 6

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WEIGHT: 85 g [3 oz.]

CUSTOMER REPLACEABLE PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSY.
1	312150-1	HEAD, Finished	1
2	312158-2	HOUSING, Insert	1
3	6-22278-5	SPRING, Compression	1
4	312161-1	PAWL, Locating	1
5	4-22430-8	SCREW, Mach (4-40 x .875 L)	4
7	21041-7	PIN, Spiral Spring	1
8	312192-1	PAWL, Feed	1
9	312160-1	INSERTER, Wire	1
10	22488-5	SPRING, Compression	1
11	312149-1	ADJUSTER, Rod Insertion	1
12	312148-1	ROD, Inserter	1
13	3-21028-2	PIN, Slotted Spring	1
14	312159-1	CAM, Traverse Slide	1
15	1-23147-2	SPRING, Compression	1
16	312151-1	SLIDE, Feed	1

Figure 6

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