

AIR POWERED TOOL
Operating and Maintenance Instructions
Order No: 63816-0100

***Optional* Bench Adapter with Foot Switch**
Order No: 63816-0500


- Description
- Operation
- Maintenance





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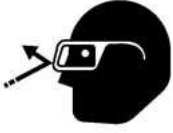






1. Safety Warnings and Information
2. General Description
3. Set-Up and Adjustments
4. Preventive Maintenance
5. Parts List, Assembly Drawings and Troubleshooting

Section 1

Safety Warnings and Information

	<p>Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.</p> <p style="text-align: center;"><u>Keep this manual available when using this tool.</u></p> <p style="text-align: center;">Replacement manuals are available upon request at no charge at www.molex.com.</p>
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	<h3>SAFETY ALERT SYMBOL</h3>
<p>This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.</p>	
 DANGER	<p>DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
 WARNING	<p>WARNING: Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.</p>
 CAUTION	<p>CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events that could lead to personal injury.</p>

	<p> WARNING</p> <p>Wear eye protection when operating or servicing this tool.</p> <p>Failure to wear eye protection could result in serious eye injury from flying debris.</p>		<p> WARNING</p> <p>Pinch points: Keep hands away from the crimping head when crimping.</p> <p>Failure to observe this warning could result in severe injury or death.</p>
	<p> WARNING</p> <p>Wear appropriate ear protection when operating this tool.</p> <p>Failure to wear ear protection could result in loss of hearing over a period of time.</p>	<p> WARNING</p> <p>Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike someone nearby.</p> <p>Failure to observe this warning could result in severe injury or death.</p>	

NEVER INSTALL OR SERVICE THIS MACHINE WHILE CONNECTED TO THE COMPRESSED AIR SOURCE.

NEVER WEAR LOOSE CLOTHING OR JEWELRY THAT MAY CATCH IN THE MOVING PARTS OF THIS TOOL.

CAUTION THE MOLEX 63816-0100 AIR POWERED TOOL IS DESIGNED TO BE USED WITH CRIMP TOOL HEADS AND TOOLING SUPPLIED BY MOLEX. USE OF TOOL HEADS OR TOOLING FROM ANY OTHER SOURCE MAY RESULT IN DAMAGE OR INJURY. MOLEX WILL NOT BE LIABLE FOR ANY DAMAGE OR INJURY FROM USE OF NON-MOLEX COMPONENTS IN THIS TOOL.

WORK SAFELY AT ALL TIMES

For Service, Contact Your Local Molex Sales Office

**Molex Application Tooling Group
2200 Wellington Court
Lisle, Illinois 60532 USA
Tel: 1-630-969-4550
Fax: 1-630-505-0049**

Section 2

General Description

- 2.1 Description
- 2.2 Features
- 2.3 Technical Specifications
- 2.4 Delivery Check
- 2.5 Tools

2 General Description

Principal Mechanical Parts

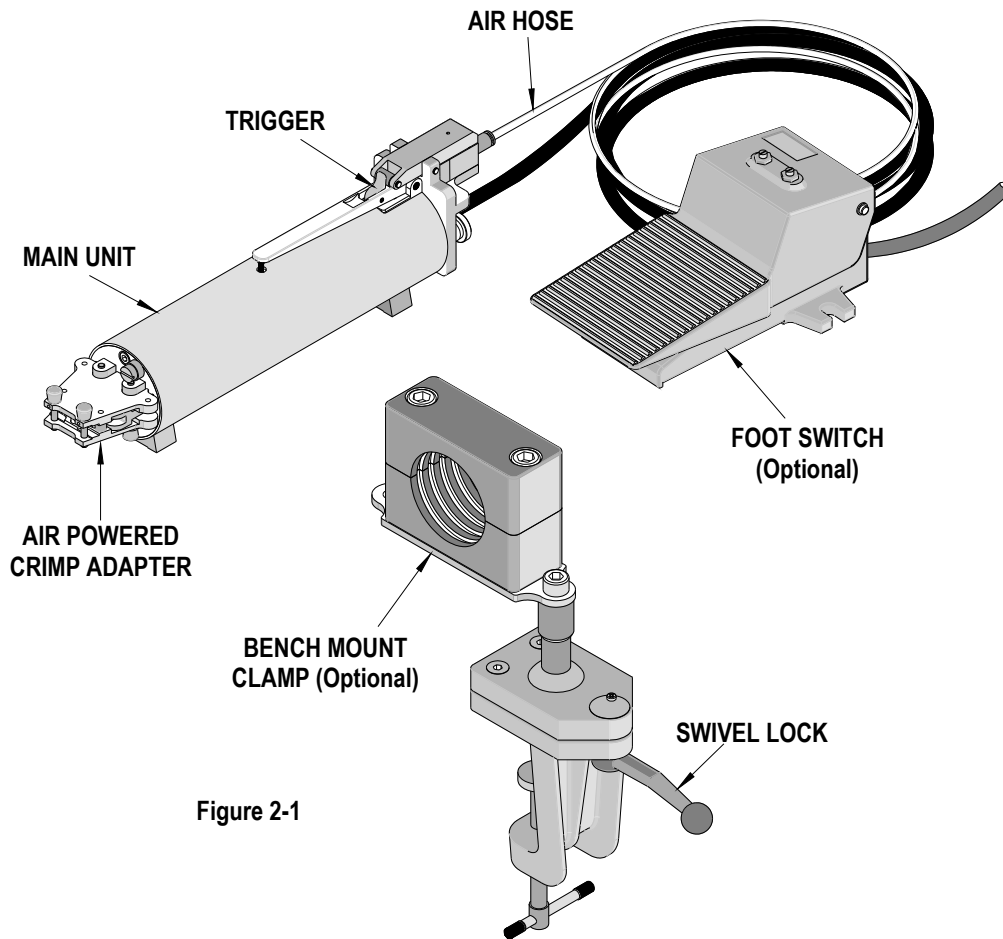


Figure 2-1

2.1 Description

The Molex Air Powered Tool is designed to crimp a variety of insulated and uninsulated terminals and splices. This tool has an automatic retractable system which returns the crimping adapter along with the crimping dies to the starting position when the maximum force is reached. It is equipped with a special brake that will stop the forward motion of the crimping dies when the trigger is released. The crimping head can be rotated 360° for better access in difficult working situations. This unit requires a power unit and a modular crimp tool head.

2.2 Features

- Light weight tool for high quantities of terminations.
- Crimps a wide range of products with interchangeable tool heads and tool kits, which reduce the overall cost and provide production flexibility.
- Modular crimp heads are easily and quickly interchanged to reduce production down time.
- Operated by hand or foot, stationary unit available.
- Modular crimp heads can be rotated to at any angle to accommodate the operator.

2.3 Technical Specifications

Dimensions (with tool head adaptor)

Length	342.9mm (13.50")
Diameter	65.0mm (2.56")
Weight	1.3kg (2.98lbs)

Production Rate

600 cycles per hour maximum, depending on operator skill and tool kit installed.

Operating Parameters

Cycle Time	1.0 seconds
Air Consumption per Cycle	.721 L (.025 cubic feet)
Required pressure of filtered air supply	6 to 6.5 bar (87 to 94 psi) 8 bar maximum (116 psi)

2.4 Delivery Check

Carefully remove the Pneumatic Crimping Tool from its shipping container and determine that the following items are included in the package.

- ✓ 63816-0100 Pneumatic Crimping Unit with tooling adaptor
- ✓ TM-638160100 Operation Manual

2.5 Tools

The following tools are recommended for setup and adjustments to this tool.

1. Metric standard hex wrench set
2. Adjustable wrench
3. Wire stripper / cutter
4. Screwdriver

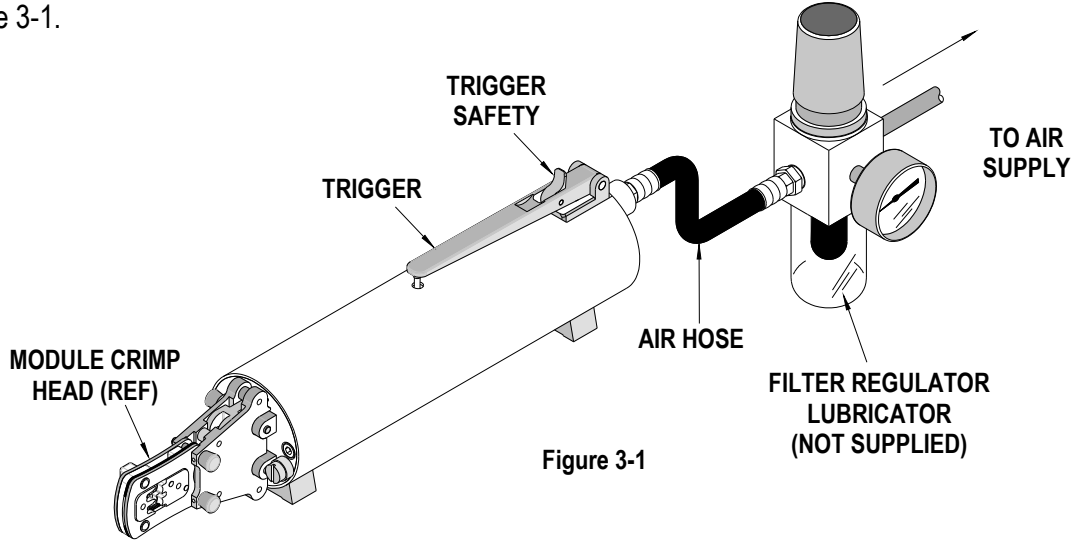
Section 3

Set-Up and Adjustments

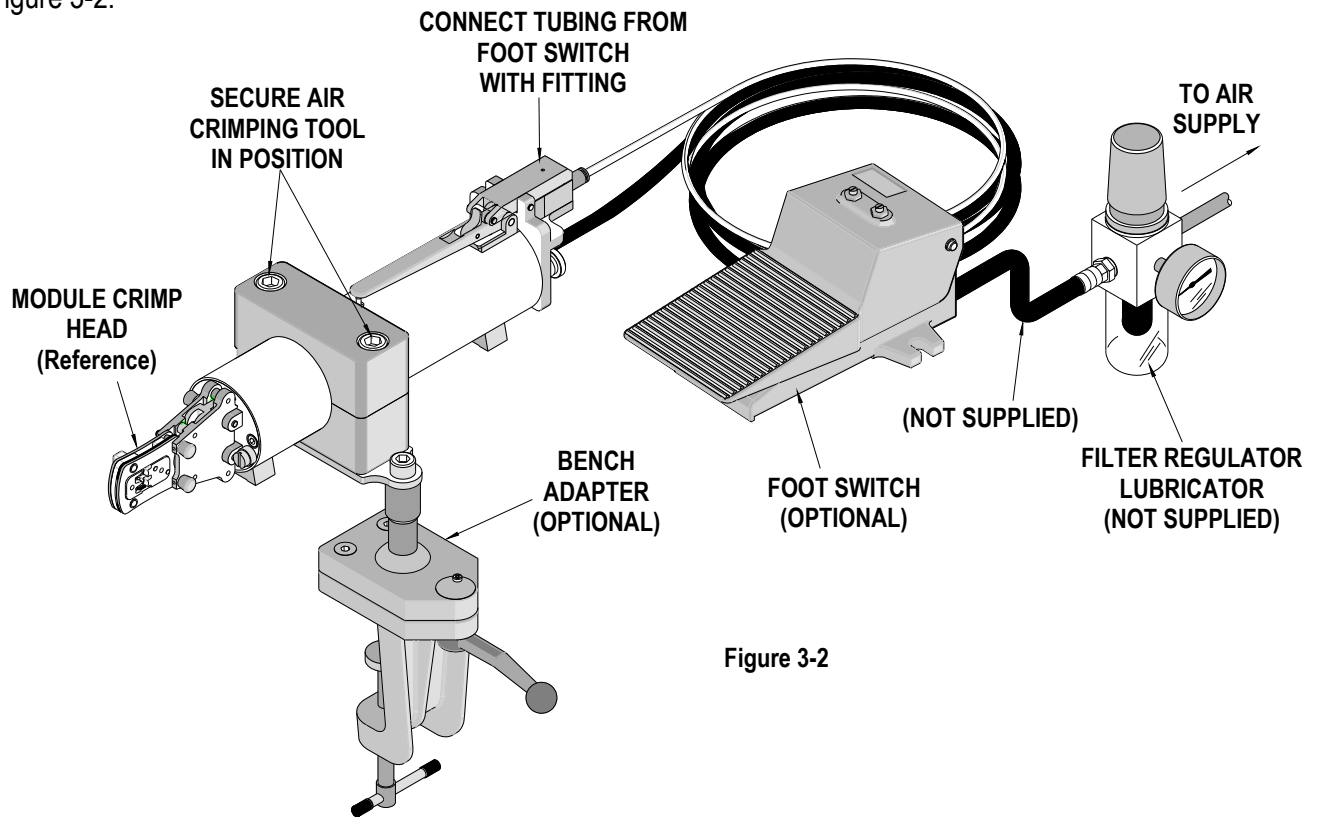
- 3.1. Set-up
- 3.2. Installing or Changing Modular Crimp Heads
- 3.3. Operation
- 3.4. Terminal Crimping

3.1 Set-Up

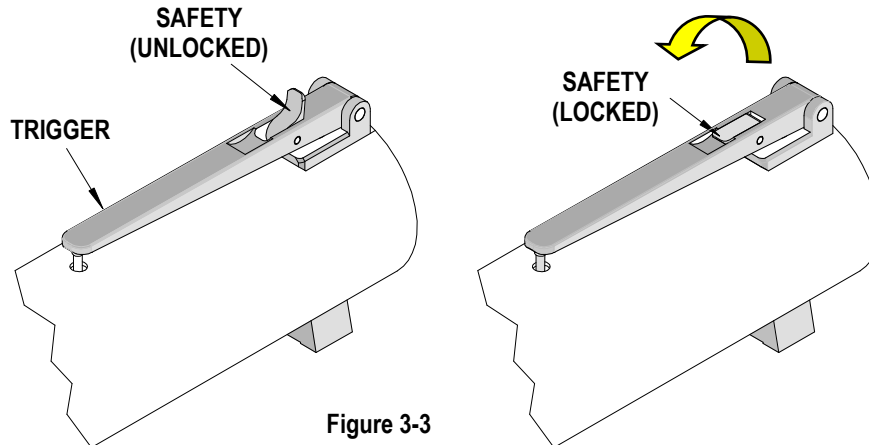
1. Read the following instructions before attempting to operate this tool.
2. Connect an 8mm or 5/16" air hose to the fitting attached to the rear of the tool and to air supply 6 to 6.5 bar (87 to 94 psi). Do not exceed 8 bar (116 psi). **May cause injury or damage to the tool.** Air supply must be equipped with an air filter regulator (not supplied by Molex). (Available from any industrial supply co.). See Figure 3-1.



If changing to the Optional bench adapter, remove the air hose and connect the tubing from the footswitch. See Figure 3-2.



- Next lock the trigger on the actuator by flipping the safety switch. Push the safety switch all the way down on the end of the trigger to lock. See Figure 3-3.




Note: Always use the safety or disconnect air supply when changing crimping heads.

- For the proper crimping head see the tool part number on the label of the terminal/connector container.
- Strip proper wire to minimum length located on label of terminal/connector container or on the air powered crimp tool head specification sheet.

3.2 Installing or Changing Modular Crimp Heads

Before starting any work on any electrical applications:

- Make sure there are no live cables or parts in the immediate area of the user.
- Make sure the safety is in the locked position before changing heads.

 WARNING
Remove the power source from the crimping tool before installing and removing the modular crimp head.

Installing or Changing heads procedure:

- Remove the locking pins (2) from the air powered crimp adapter on the air powered tool.
- Pull the modular crimp head out of the adapter head.
- To replace the modular crimp head, select the correct modular crimp head for the application needed.
- While holding the air powered tool in one hand, grasp the modular crimp head with the other hand and slide it into the air powered crimp adapter until the holes in the side plates of the crimp head line up with the holes in the adapter.
- Replace the locking pins (2) making sure that the modular crimp head is secure. The locking pins can be inserted from either side of the adapter. See Figure 3-4.

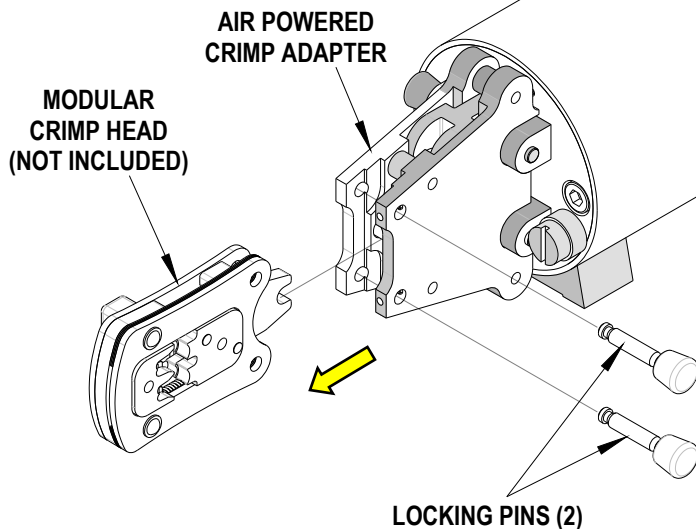


Figure 3-4

3.3 Operation:

To actuate the crimping tool, first lift the safety lock lever on the trigger. See Figure 3-3. The tool can now be actuated by depressing the trigger and holding until the ram is fully extended. After the ram has been extended fully, release the trigger and the ram will return.

If using the optional bench mount, lift the safety lock lever as described above. The tool is now actuated by depressing the footswitch.

3.4 Terminal Crimping

Specifications and Instructions for crimping are included with the individual Modular Crimp Heads.

Section 4

Preventive Maintenance

- 4.1 Periodic Cleaning
- 4.2 Storage
- 4.3 Warranty
- 4.4 Maintenance

4.1 Periodic Cleaning

Always clean tool after use and keep moving parts clear of dirt and debris.

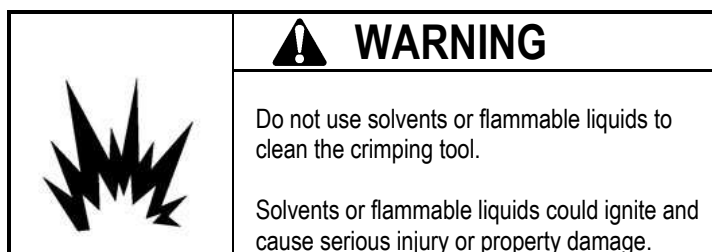
This tool is maintenance free, only the sliding ram in the crimping head has to be oiled regularly.

Before use:

1. Inspect dies for wear or damage such as cracks, gouges, or chips.
2. Inspect the tool for damage or leaks. If damage is detected, contact Molex to have the tool evaluated.

After use:

1. Wipe all tool surfaces clean with a damp cloth and mild detergent. Excessive dirt and grit can contribute to the premature wear of the tool's internal mechanical parts. If this tool becomes dirty with excessive debris it may jam and become damaged during operation.
2. Fully retract the ram. Store in a cool, dry place.



Monthly:

1. Thoroughly clean all surfaces.

Annually or After 10,000 Crimps

1. Return the tool to a Molex representative for inspection.

A routine should be established to keep the tool as free from dirt as possible.

An example of a maintenance chart is shown below. Copy and use this chart to track the maintenance of this crimping tool or use this as a template to create your own schedule or use your company's standard chart, if applicable.

Preventive Maintenance Chart

CHECK SHEET MONTH _____ YEAR _____

Week	Daily Use	Days of the Week							Solution
		MON	TUE	WED	THU	FRI	SAT	SUN	
1									
2									
3									
4									
Cleaning	Daily								After use
Lubrication	Sliding ram into crimping head								Use SAE No. 10 Oil

Schedule should be adjusted up or down depending on usage. Molex recommends that a log of preventive maintenance be kept with the tool.

4.2 Storage

In order to protect the tool against damages, this tool should be cleaned carefully and stored in a clean and dry location.

4.3 Warranty

All tools are warranted free of manufacturing defects for a period of 30 days. Should such a defect occur, we will repair or exchange the tool free of charge. This repair or exchange will not be applicable to altered, misused, or damaged tools. This tool is designed for hand use only. After one year Molex recommends the crimping tool be returned to Molex for inspection. Only the heads of the crimping tool are permitted to be changed by the operator.

If seals are damaged the warranty is void.

CAUTION: Molex crimp specifications are valid only when used with Molex terminals and tooling.

4.4 Maintenance

Crimping nest should be kept free of oil and all foreign particles.

Crimp tool head assemblies should be lubricated monthly by placing a few drops of light machine oil on the sliding ram of the crimping tool.

Check the lubricator in the air supply and fill with SAE 10W oil as needed.

Check the air filter. To clean, remove the bowl and the filter element and clean with denatured alcohol.

Section 5

Parts List, Assembly Drawing and Troubleshooting

- 5.1. Parts List and Assembly Drawings
- 5.2. Troubleshooting

5.1 Parts List and Assembly Drawings

Item	Order No	Description	Quantity
1	63816-0100	Air Powered Crimp Tool	1
2	63816-0700	Air Powered Crimp Adapter	(Included)
3	63816-0500	Optional Bench Adapter with Foot Switch	(Sold Separately)

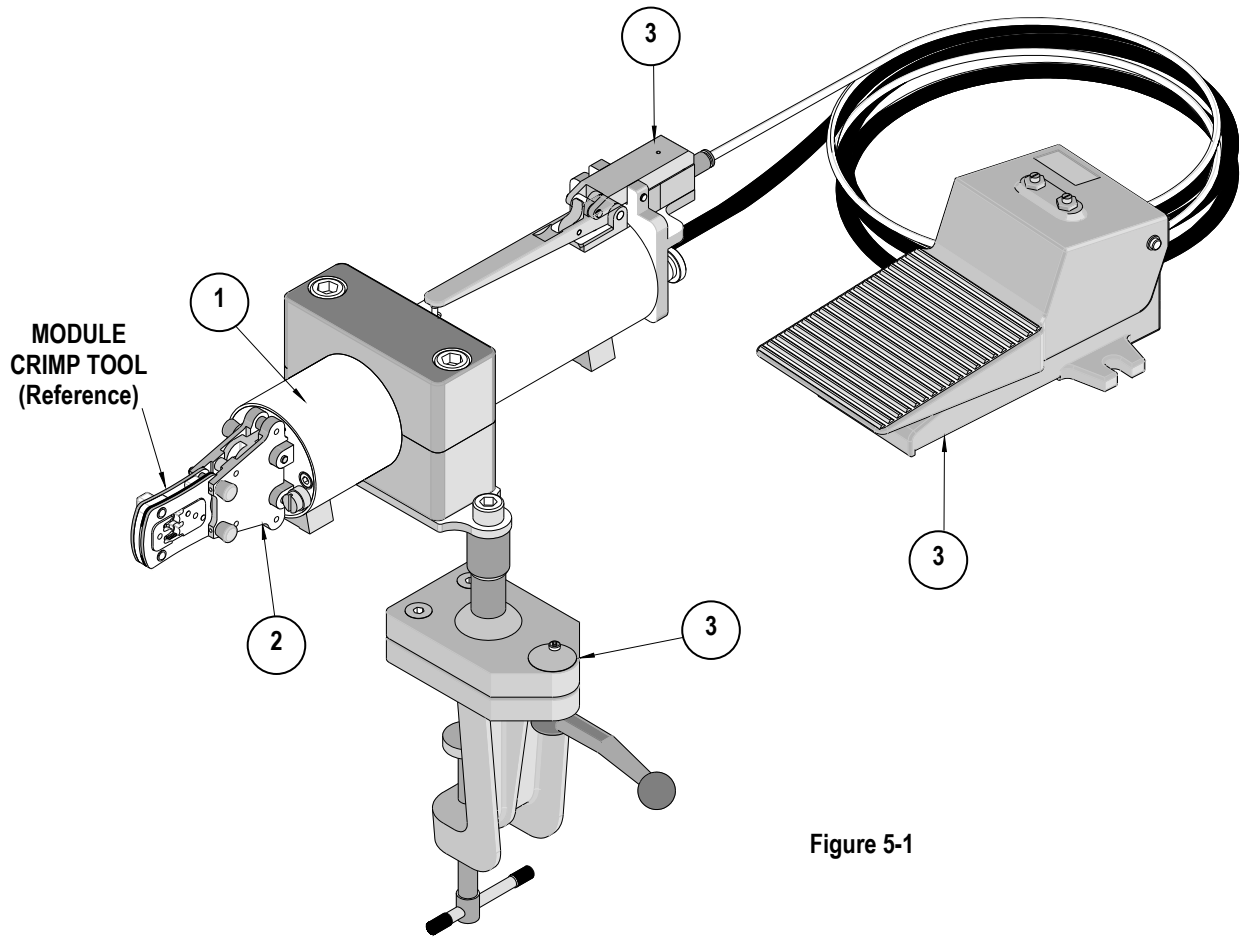


Figure 5-1

5.2 Troubleshooting

Symptom	Cause	Solution
<u>Hand Actuated Unit</u>	<ul style="list-style-type: none"> ▪ Power unit not connected to main air supply. 	Connect power unit to main air supply.
Power unit piston will not extend when actuated.	<ul style="list-style-type: none"> ▪ Faulty hand switch assembly. 	Replace switch assembly.
<u>Foot Actuated Unit</u>	<ul style="list-style-type: none"> ▪ Air line connections to power unit reversed. ▪ Faulty foot switch. 	Disconnect main air supply, then reverse the air line connections on crimping unit. Replace switch assembly.
Power unit piston will not extend when actuated.		
Loss of power.	<ul style="list-style-type: none"> ▪ Improper lubrication. 	Check for lubrication in the main air supply.
	<ul style="list-style-type: none"> ▪ Internal seals of crimping unit worn or damaged. 	Replace the seals or contact a Molex Sales Engineer.

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