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ServiceGrade™ Multi-Functional Tool

ServiceGrade™ Multi-Functional Tool		
	Application Tooling Specification Sheet	

FEATURES

- Small handle spread – ideal for all users
- Compact and portable, only 9" long
- Easily cuts wires
- Stripping holes can be used to measure wire gauge
- Non Ratchet

	WARNING
	<p>Do not strip live circuits! Danger of electric shock.</p> <p>Wear safety glasses to avoid eye injury</p>




SCOPE

Cuts a variety of screw sizes (#8-32, #10-24, #10-32, #6-32, #4-40)
 Strips wires 10-22 AWG
 Crimps 10-22 AWG insulated and non-insulated closed barrel terminals.

DESCRIPTION:

This Multi-Functional Tool cuts screws, strips and measures wire, and also crimps terminals. It is made for low-volume field repairs.

OPERATION

-  **CAUTION:** Sharp edges; always keep hands and fingers out of the wire stripping and cutting areas!
-  Make sure work area is clean and dry and wear approved eye protection.
-  **WARNING:** Make sure that the wire is **DISCONNECTED** from any power supply.

Stripping Wires

- Follow the steps below for stripping the wire or cable:
1. Select the proper wire gauge and the strip length for application.
 2. Open the handles.
 3. Place the wire in proper stripping hole with the desired strip length.
 4. Squeeze the handles, and pull the insulation off of end of the wire.

Cutting Wires:

-  **WARNING:** For Wire Cutter Only. Do not use this area of the tool to cut hardened objects.

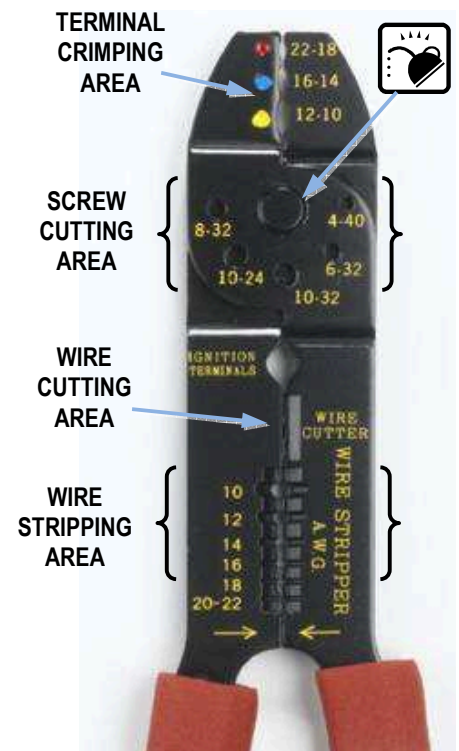


Figure 1

ServiceGrade™ Multi-Functional Tool

Follow the steps below for cutting the wire or cable:

1. Select the proper wire gauge.
2. Open the handles.
3. Place on cutting blade and squeeze handles until wire is cut.

Cutting Screws and Bolts

Follow the steps below for cutting screws and bolts:

1. Select the proper bolt or screw
2. Open the handles.
3. Thread the bolt or screw into the proper hole to the desired cut length (add .125" for tool thickness), and squeeze handles to snap the bolt or screw.

Crimping Terminals



CAUTION: Always keep hands and fingers out of the crimping area!



Make sure work area is clean and dry and wear approved eye protection.

Follow the steps below for crimping terminals:

1. Select the appropriate Molex terminal and verify that the wire gauge and the strip length are within specifications. Strip the wire to the specified length.
2. Place the terminal on the open jaws of the tool in the correct die.
3. Squeeze the tool slightly to hold the terminal or connector in place.
4. Place the stripped wire into the terminal, making sure it sits parallel inside the terminal and the wire is fully inserted.
5. Hold the wire steady in place with one hand, ensuring the wire remains seated in the terminal until it is fully crimped. Gently squeeze tool until fully crimped.

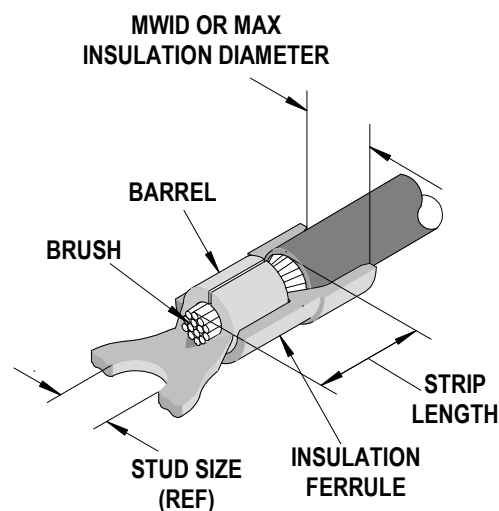
DEFINITION OF TERMS

The illustration is a generic representation of crimp attributes and not an exact image of a particular terminal.

Restrictions

Termination crimp quality is dependent on the conductor profile choice and skill of the operator. Customers should independently verify that intended termination meets quality and performance needs. Not all terminal, wire and profile combinations will provide minimum pull force requirements, or provide an acceptable crimp form. Molex makes no warranties, express or implied, regarding the performance or reliability of the crimp, or the appropriateness of the tool application. Molex does not certify or repair hand tools.

Visit www.molex.com/product/apptool/ and download the Molex Quality Crimping Handbook for additional information on crimping and pull force testing.



ServiceGrade™ Multi-Functional Tool

Maintenance

It is recommended that each operator of the tool be made aware of, and responsible for, the following maintenance steps:

1. Remove dust, moisture, and other contaminants with a clean brush, or soft, lint free cloth.
2. Do not use any abrasive materials that could damage the tool.
3. Make certain all pins; pivot points and bearing surfaces are protected with a thin coat of high quality machine oil. Do not oil excessively. Light oil (such as SAE30W oil) applied at the oil points, shown in Figure 1, every 5,000 crimps or 3 months, is recommended.
4. Wipe excess oil from hand tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of an application.
5. When 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.

Warranty

This tool is for electrical terminal crimping purposes only. All tools are warranted to be free of manufacturing defects for a period of 30 days. Should such a defect occur, the tool will be repaired or exchanged free of charge. This exchange will not be applicable to altered, misused, or damaged tools. This tool is designed for hand use only. Any clamping, fixturing, or use of handle extensions voids this warranty.

ServiceGrade™ crimp hand tools are low cost tools used in field repair for a limited number of terminations. If a high quality tool is required or a higher volume of terminations required, please purchase the corresponding PremiumGrade™ crimp hand tool. A ServiceGrade™ crimp tool may or may not have a terminal locator and in some case may need the locator removed to operate properly.



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

CAUTIONS:



1. Manually powered hand tools are intended for low volume or field repair. This tool is **NOT** intended for production use. Repetitive use of this tool should be avoided.
2. Insulated rubber handles are not protection against electrical shock. **NEVER** perform crimps on active electrical circuits.
3. Wear eye protection at all times.
4. Use only the Molex terminals specified for crimping with this tool.



Certification

Molex does not certify or re-certify ServiceGrade™ hand tools but rather supplies the following guidelines for customers to maintain their hand tools.

- % This tool is qualified to pull force only. To re-certify, crimp a terminal to a wire, which has been stripped 12.7mm (1/2") long, so there is no crimping of the insulation. Pull the terminal and wire at a rate no faster than 25mm (1.00") per minute. See the Molex web site for the Quality Crimp Handbook for more information on pull testing.
- % When the hand tool is no longer capable of achieving minimum pull force, it should be replaced.

Visit our Web site at <http://www.molex.com>