

# **LOAD-RANGER® FLEX-LT®** **LOAD-RANGER® XLT GEN 2**

Maintenance Manual - Level 1

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## LOAD-RANGER® FLEX-LT®



## LOAD-RANGER® XLT® 2<sup>nd</sup> GENERATION



## SAFETY ALERT MESSAGES

### **⚠ WARNING**

Carefully read and fully understand this manual prior to operating, maintaining or testing this device. Improper operation, handling or maintenance of this device can result in death, grievous personal injury and or equipment damage.

### **⚠ WARNING**

Only trained and qualified personnel should operate, inspect and maintain this device.

## DISCLAIMER

Utility Solutions, Inc. recommends the following procedure for disassembly and inspection for all LOAD-RANGER® FLEX-LT® and LOAD-RANGER® XLT (Gen2) tools to be performed every 2 years. Prior to operating this tool, thoroughly read and fully understand the contents laid out in the Operation Manual which is separate from this document and can be found on our website, [www.utilitysolutionsinc.com](http://www.utilitysolutionsinc.com).

This manual is not intended to be a substitute for adequate training and experience in safety procedures when operating this type of equipment. Where a discrepancy exists, follow the procedures set forth by your employer.

## INSPECTION REMINDER STICKER

All LOAD-RANGER® FLEX-LT® and LOAD-RANGER® XLT (Gen2) tools ship with an Inspection Reminder Sticker.

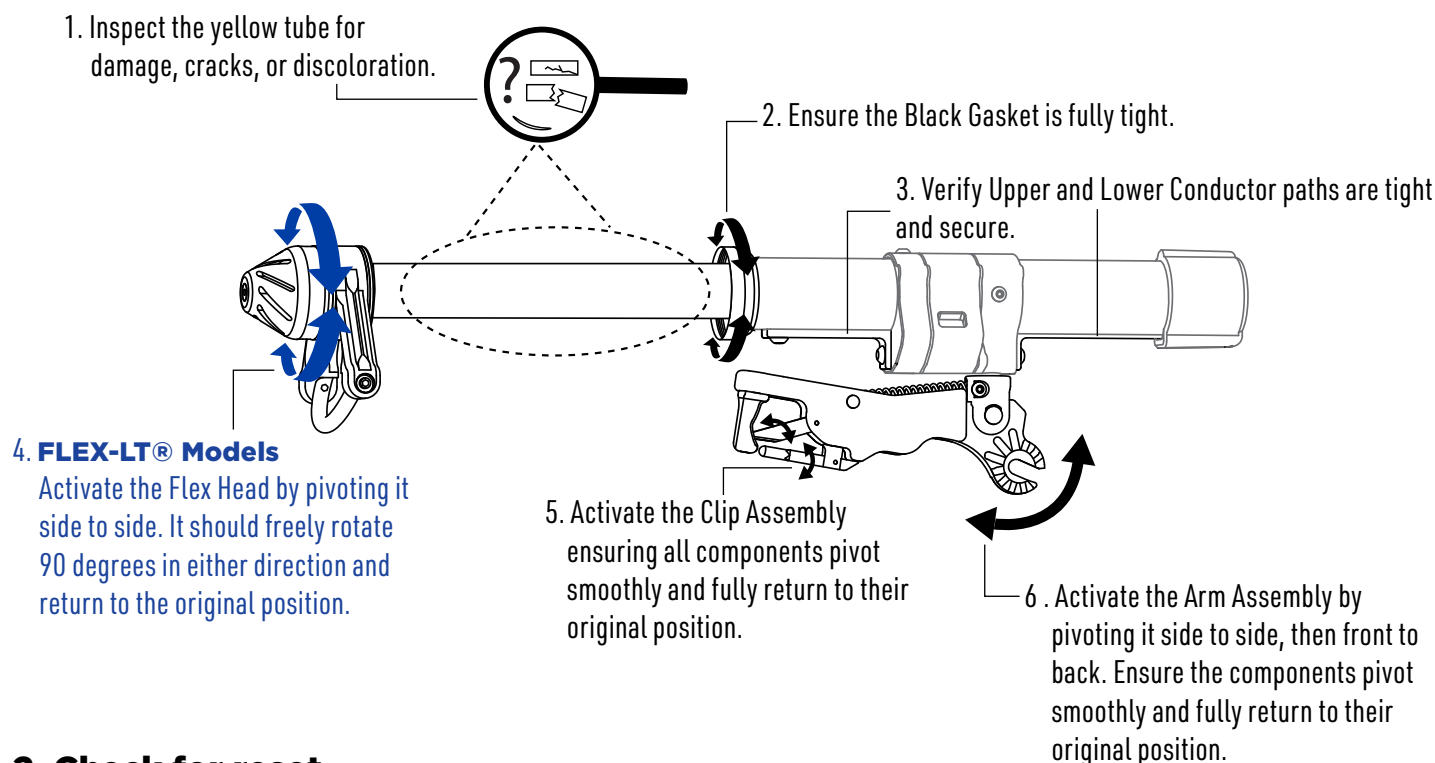
Load-Ranger® tools should be disassembled and inspected every 2 years in accordance with the date stamped on the sticker.

The sticker should be replaced after inspection. To reorder, call Utility Solutions, Inc. at 828-323-8914 and reference part number B-02373.

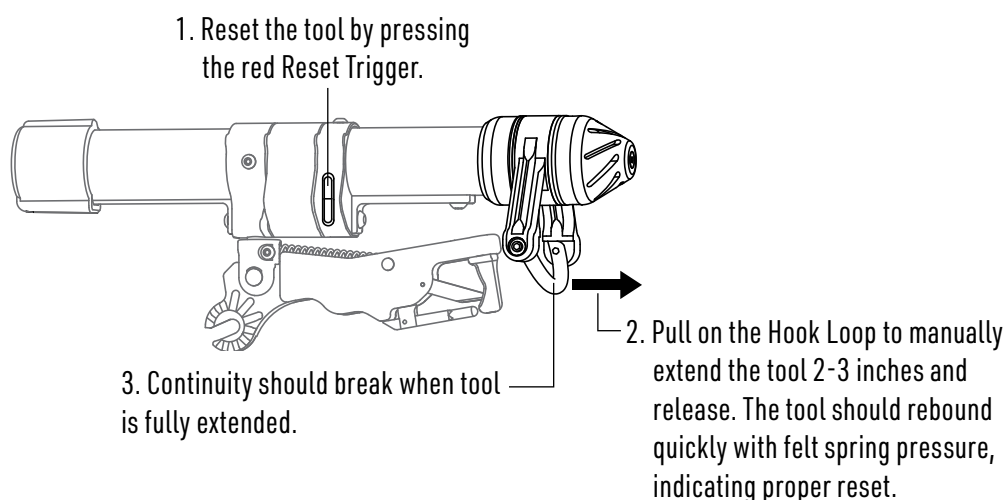
|                                      |   |   |   |   |                            |                            |   |   |    |    |                            |
|--------------------------------------|---|---|---|---|----------------------------|----------------------------|---|---|----|----|----------------------------|
| <b>INSPECTION REMINDER</b>           |   |   |   |   |                            |                            |   |   |    |    |                            |
| Recommended Inspection               |   |   |   |   |                            |                            |   |   |    |    |                            |
| TWO YEARS FROM DATE SHOWN            |   |   |   |   |                            |                            |   |   |    |    |                            |
| (See Maintenance Manual For Details) |   |   |   |   |                            |                            |   |   |    |    |                            |
| <b>MONTH</b>                         |   |   |   |   |                            |                            |   |   |    |    |                            |
| 1                                    | 2 | 3 | 4 | 5 | 6                          | 7                          | 8 | 9 | 10 | 11 | 12                         |
| <b>YEAR</b>                          |   |   |   |   |                            |                            |   |   |    |    |                            |
| <input type="radio"/> 2023           |   |   |   |   | <input type="radio"/> 2025 | <input type="radio"/> 2024 |   |   |    |    | <input type="radio"/> 2026 |
| B-02373                              |   |   |   |   |                            |                            |   |   |    |    |                            |

Utility Solutions, Inc. recommends performing the following Field Inspection Procedure prior to each use, as well as before and after teardown and reassembly as per this manual.

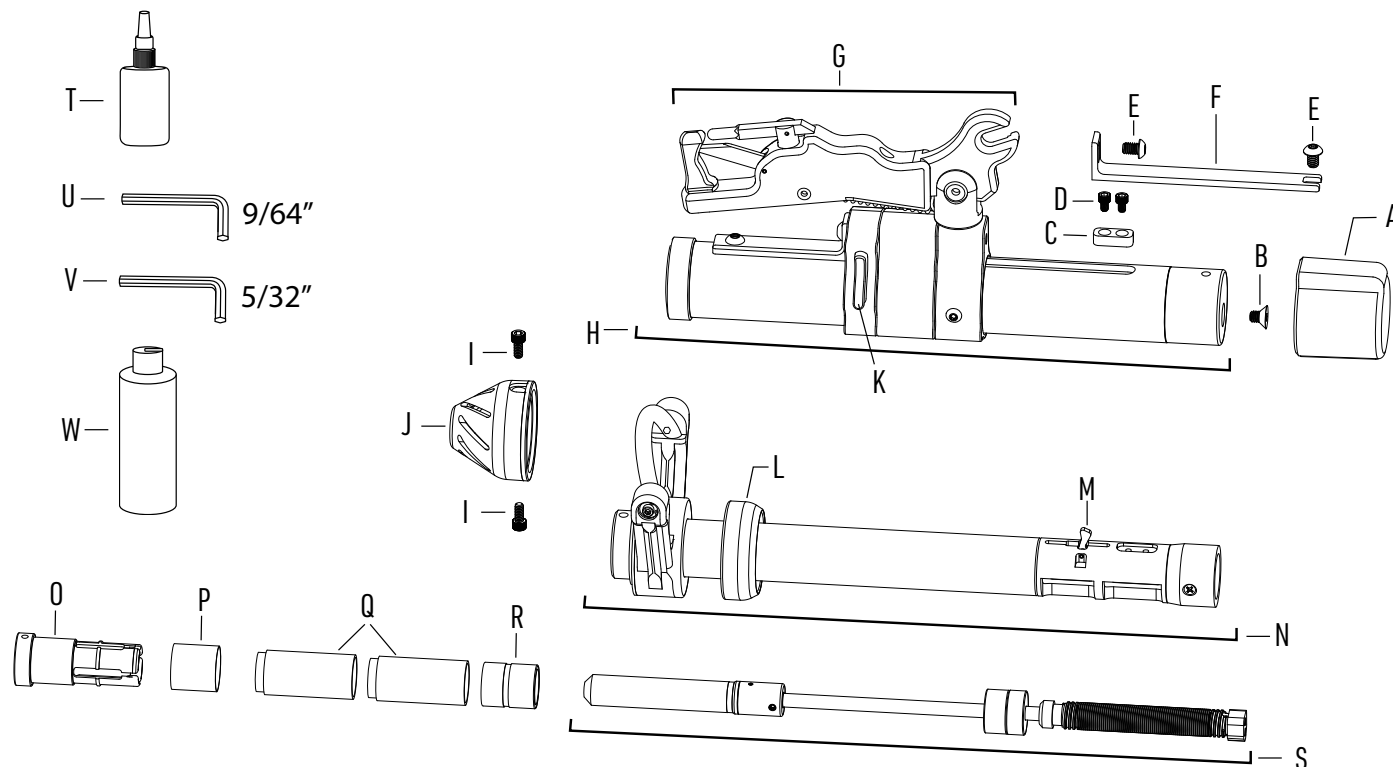
## 1. Fully extend the tool.



## 2. Check for reset.



For immediate assistance or help with this manual, please call Utility Solutions, Inc. at 828-323-8914.

**LOAD-RANGER® FLEX-LT PARTS****A - Rubber End Cap**

Item # C-02218

**B - 1/4"-20 x 3/8" Flat Head Screw**

Item # B-02072

**C - Guide Pin**

Item # C-02194

**D - 8-32 x 1/4" Socket Head Cap Screws**

Item # B-02073

**E - 1/4"-20 x 5/16" Button Head Screws**

Item # B-02390

**F - Lower Conductor Path**

FLEX-1: Item # C-02188

FLEX-2: Item # C-02189

**G - Arm Assembly****H - Black Tube Assembly****I - 10-24 x 7/16" Socket Head Cap Screws**

Item # B-02071

**J - Muffler Cap Assembly**

Item # P-00843

**K - Red Reset Trigger****L - Black External Gasket****M - Load Break Trigger****N - Yellow Tube Assembly**

FLEX-1: Item # P-00842

FLEX-2: Item # P-00851

**O - Female Contact**

Item # C-02212

**P - Arc Shim**

Item # C-00509

**Q - Pink Arc Snuffers**

FLEX-1: Item # C-00554 (x2)

FLEX-2: Item # C-00554 (x4)

**R - Plastic Spacer**

FLEX-1: Item # C-00528

FLEX-2: Item # C-00558

**S - Probe Shaft Assembly**

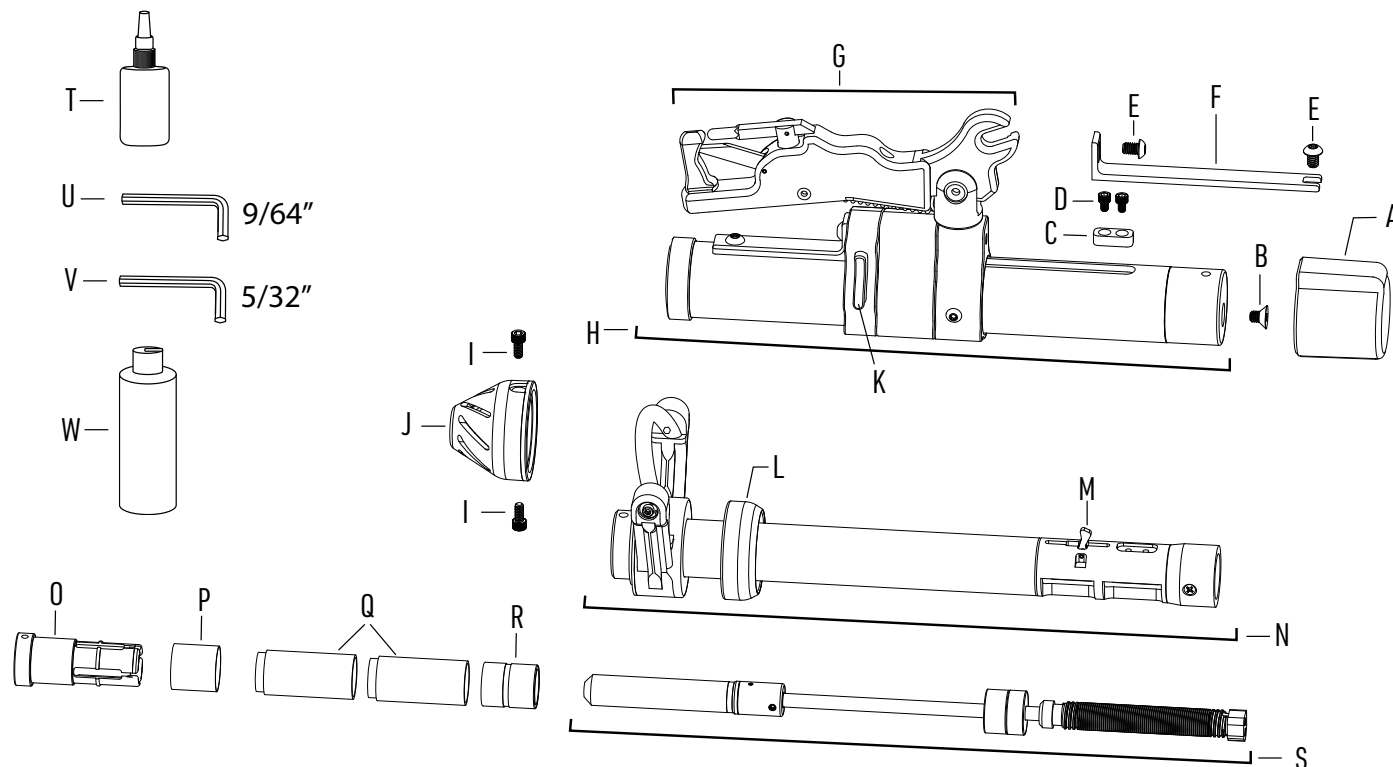
FLEX-1: Item # P-00841

FLEX-2: Item # P-00849

**T - Loctite® Threadlocker Red 263****U - 9/64" Hex Wrench****V - 5/32" Hex Wrench****W - Load Break Tool Fiberglass Cleaner / Wax**

Item # B-00159

**Ensure all components remain clean and free of oils, greases, soot etc. If necessary, clean parts with warm soapy water.**

**LOAD-RANGER® XLT GEN2 PARTS****A - Rubber End Cap**

Item # C-02218

**B - 1/4"-20 x 3/8" Flat Head Screw**

Item # B-02072

**C - Guide Pin**

Item # C-02194

**D - 8-32 x 1/4" Socket Head Cap Screws**

Item # B-02073

**E - 1/4"-20 x 5/16" Button Head Screws**

Item # B-02390

**F - Lower Conductor Path**

XLT-1: Item # C-02188

XLT-2: Item # C-02189

**G - Arm Assembly****H - Black Tube Assembly****I - 10-24 x 7/16" Socket Head Cap Screws**

Item # B-02071

**J - Muffler Cap Assembly**

Item # P-00843

**K - Red Reset Trigger****L - Black External Gasket****M - Load Break Trigger****N - Yellow Tube Assembly**

XLT-1: P-00853

XLT-2: P-00854

**O - Female Contact**

Item # C-02212

**P - Arc Shim**

Item # C-00509

**Q - Pink Arc Snuffers**

XLT-1: Item # C-00554 (x2)

XLT-2: Item # C-00554 (x4)

**R - Plastic Spacer**

XLT-1: Item # C-00528

XLT-2: Item # C-00558

**S - Probe Shaft Assembly**

XLT-1: Item # P-00841

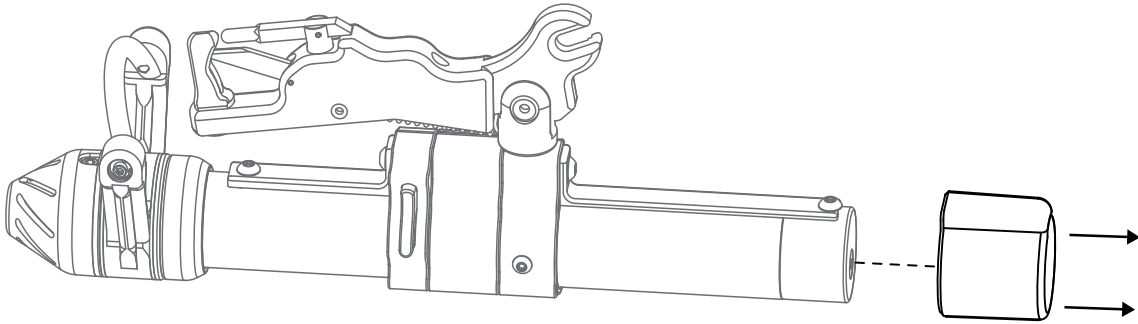
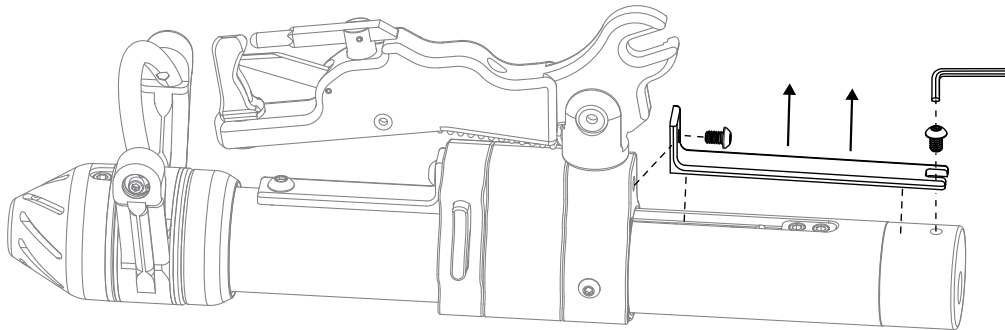
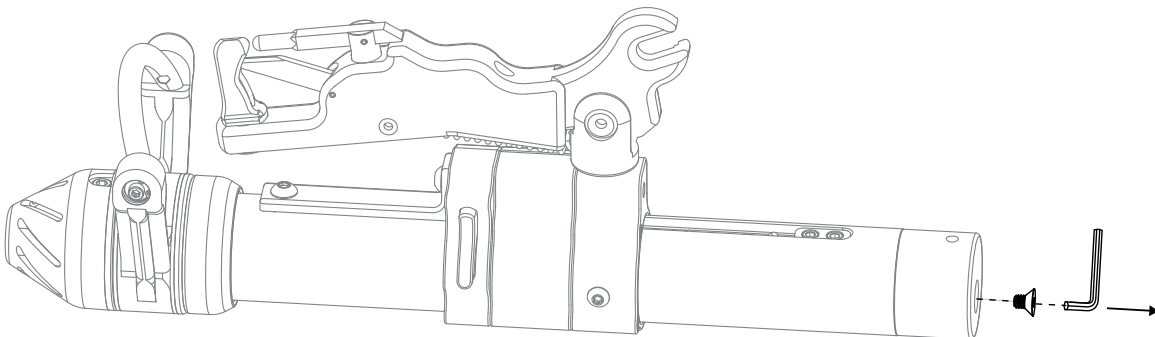
XLT-2: Item # P-00849

**T - Loctite® Threadlocker Red 263****U - 9/64" Hex Wrench****V - 5/32" Hex Wrench****W - Load Break Tool Fiberglass Cleaner / Wax**

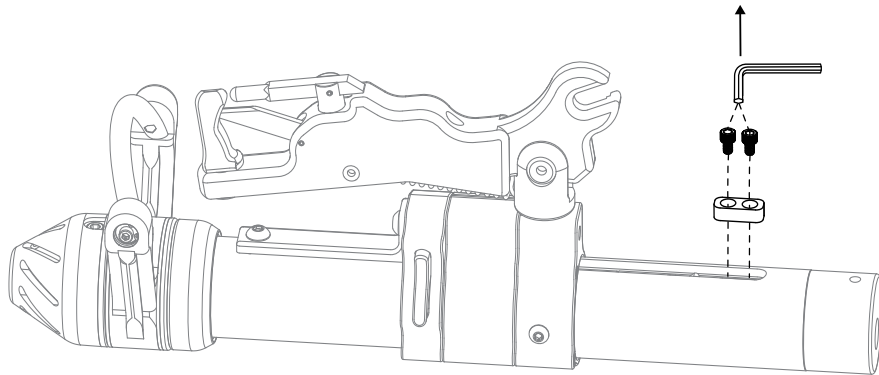
Item # B-00159

**Ensure all components remain clean and free of oils, greases, soot etc. If necessary, clean parts with warm soapy water.**

# **DISASSEMBLY INSTRUCTIONS**

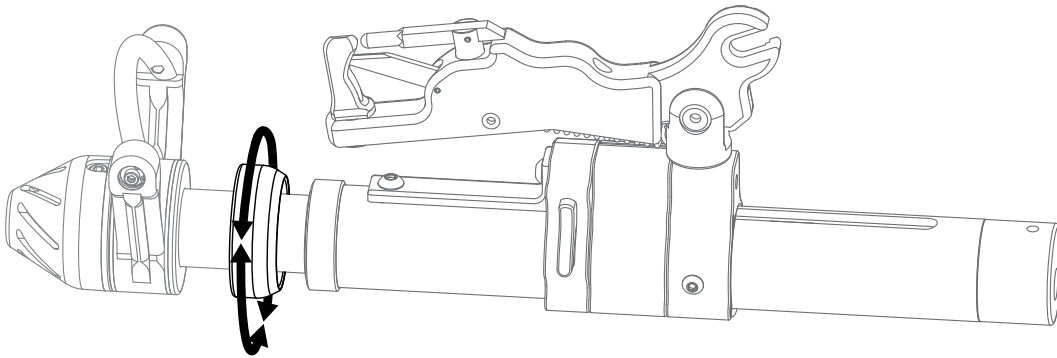
**Step One** Remove the **Rubber End Cap**.**Step Two** Using the 5/32" hex wrench, remove the **Lower Conductor Path**.**Step Three** Using the 5/32" hex wrench, remove the **Probe Shaft Assembly** fastener.

**Step Four** Using the  $\frac{9}{64}$ " hex wrench, remove fasteners and the **Guide Pin**.

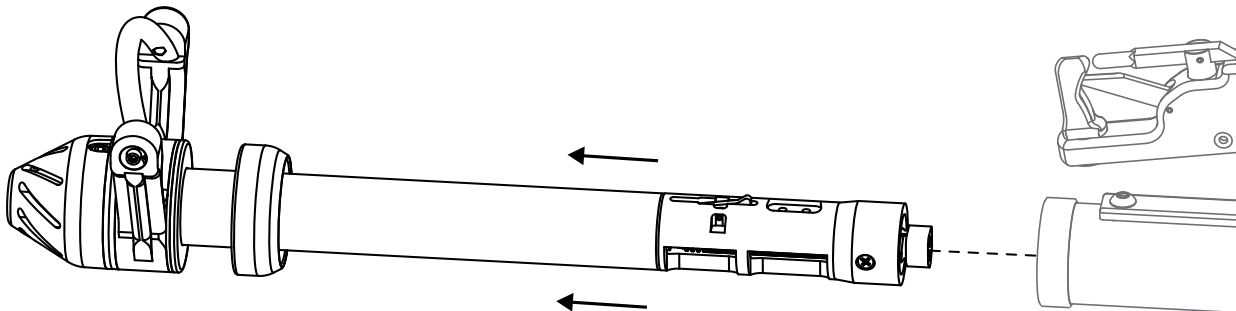


**Step Five** Unthread the **Black External Gasket**.

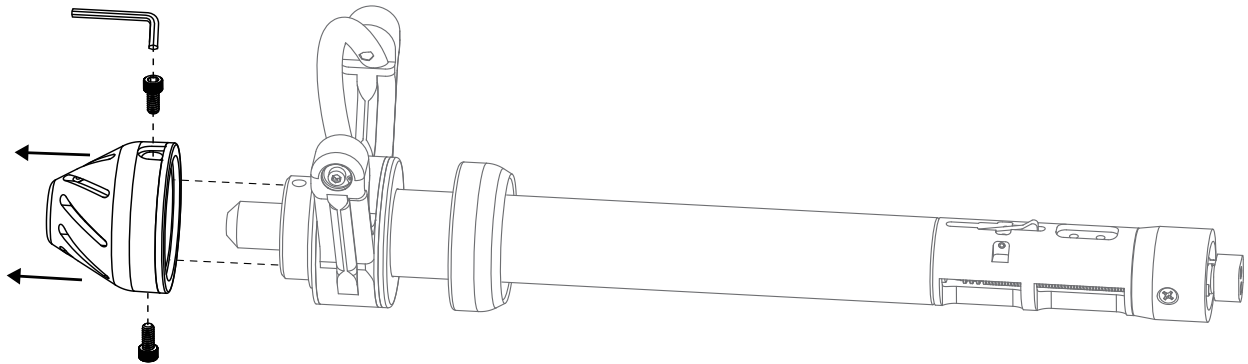
Note: additional force may be necessary as the threads are factory-sealed with thread sealant.



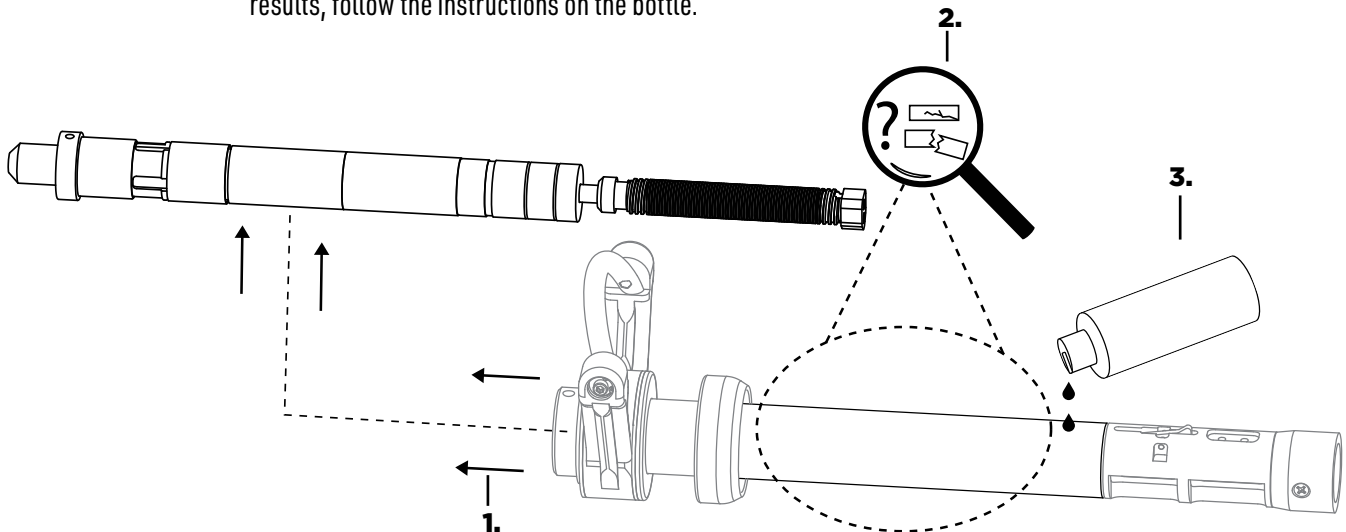
**Step Six** Pull the **Yellow Tube Assembly** from the **Black Tube Assembly**.



**Step Seven** Remove the **Muffler Assembly** using the 5/32" hex wrench.



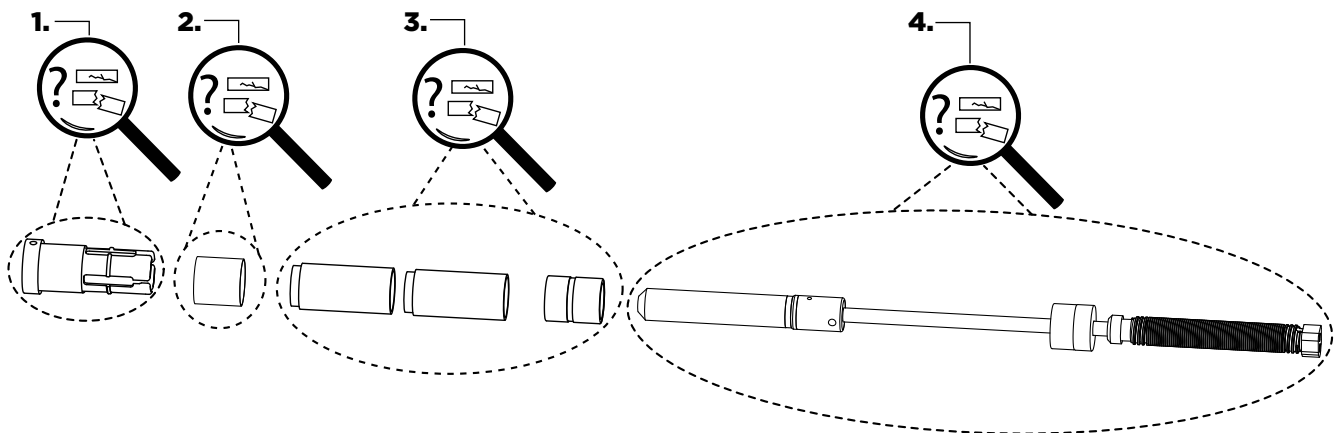
- Step Eight**
- 1) Pull the **Probe Shaft Assembly** from the **Yellow Tube Assembly**.
  - 2) Inspect the **Yellow Tube Assembly** to ensure the fiberglass is not damaged, chipped, or discolored.
    - a. Verify the load break trigger pivots smoothly and springs back with spring pressure.
    - b. Ensure the white plastic Gasket Tube is not damaged or chipped.
  - 3) Wax the fiberglass portion of the assembly using the **Load Break Tool Fiberglass Cleaner / Wax**. For best results, follow the instructions on the bottle.



**Step Nine**

- 1) Remove the **Female Contact** and inspect for excessive signs of pitting or damage. If surface soot deposits are present, use mild soap and water or a very fine nylon mesh sanding pad to remove the deposits.
  - a. Verify each finger on the **Female Contact** makes light contact with the brass & arc ring portion of the **Probe Shaft Assembly**. Resize the fingers on the **Female Contact** if necessary.
- 2) Remove the **Arc Shim** and inspect for excessive signs of pitting or damage. If surface soot deposits are present, use mild soap and water or a very fine nylon mesh sanding pad to remove the deposits.
- 3) Remove and inspect the **Pink Arc Snuffers** and **Plastic Spacer** to verify they are not cracked, chipped, or otherwise damaged.
  - a. FLEX-1 | XLT-1 = Qty 2 **Pink Arc Snuffers** & Qty 1 single groove **Plastic Spacer**.
  - b. FLEX-2 | XLT-2 = Qty 4 **Pink Arc Snuffers** & Qty 1 double groove **Plastic Spacer**.
- 4) Remove the **Probe Shaft Assembly** and inspect for excessive signs of pitting or damage. Replace if necessary.
  - a. **KEY INSPECTION: expand the spring to verify there are no signs of fraying or damage to the internal copper coils. This is a highly critical component in the load break tool, and a very important step in the inspection process. Repair personnel should take great care to follow these instructions carefully and to thoroughly inspect components.**
  - b. Inspect the white and black plastic discs to verify they are not cracked, chipped, or otherwise damaged.
  - c. Inspect the arc ring and probe base for signs of excessive pitting or arcing. If surface soot deposits are present a very fine nylon mesh sanding pad can be used to remove the deposits.
  - d. Verify the probe base, arc ring, and white molded probe are not loose or show signs of damage.

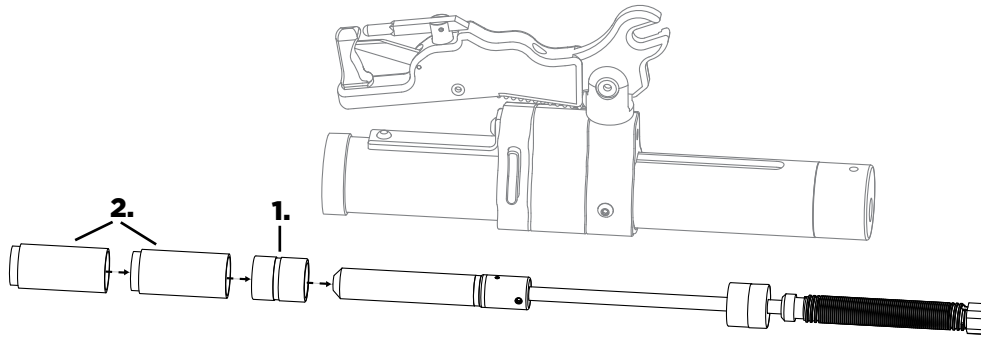
Note: Be sure to keep the **Probe Shaft** free from dirt and oils when inspecting. If there is any uncertainty on the extent of damage or repair needs, reach out to Utility Solutions, Inc. directly at 828-323-8914 or send pictures to [sales@utilityolutionsinc.com](mailto:sales@utilityolutionsinc.com).



# REASSEMBLY INSTRUCTIONS

## Step One

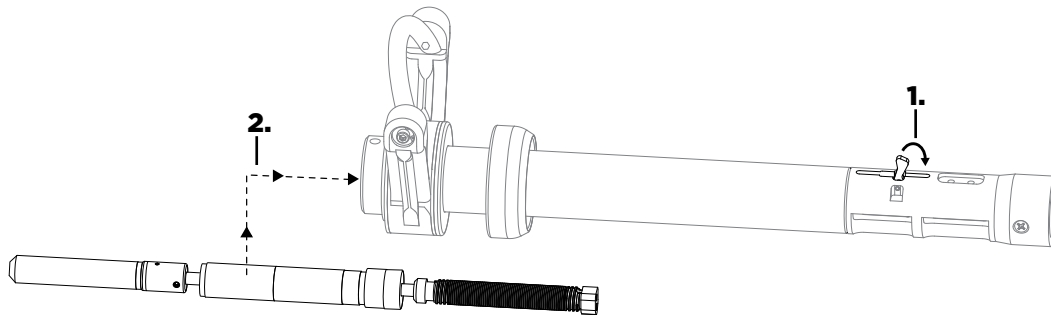
- 1) Reinstall the **Plastic Spacer** onto the **Probe Shaft Assembly**.
- 2) Reinstall the **Pink Arc Snuffers** onto the **Probe Shaft Assembly**.



Note: The FLEX-1 and XLT-1 reassembly is shown above. The FLEX-2 and XLT-2 assembly contains 2 additional **Pink Arc Snuffers**.

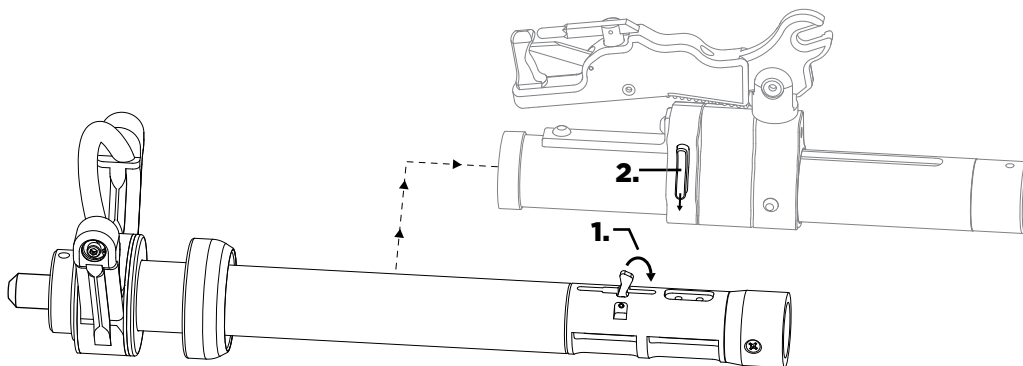
## Step Two

- 1) Depress and hold the **Load Break Trigger** as shown below.
- 2) Fully insert the **Probe Shaft Assembly** into the **Yellow Tube Assembly**.



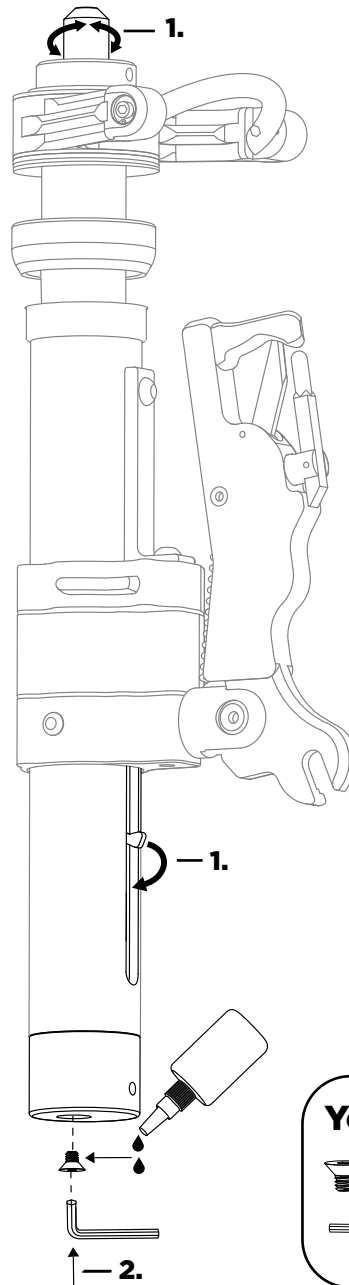
## Step Three

- 1) Depress the **Load Break Trigger** again and insert the **Yellow Tube Assembly** into the **Black Tube Assembly**.
- 2) Depress the red **Reset Trigger** to properly seat the **Yellow Tube Assembly**.



**Step Four**

- 1) While holding the tool in a vertical position, seat the **Probe Shaft Assembly** by depressing the **Load Break Trigger** and rotating the protruding end of the **Probe Shaft Assembly** until it fully seats in the tube. When fully seated, the protruding end of the **Probe Shaft Assembly** will be nearly flush with the lip of the **Yellow Tube Assembly**.
- 2) Hold the **Probe Shaft Assembly** in place and secure it by reinstalling the fastener with the 5/32" hex wrench. Apply 1-2 drops of **Loctite® Threadlocker Red 263** to the fastener threads prior to tightening.

**You Will Need:**

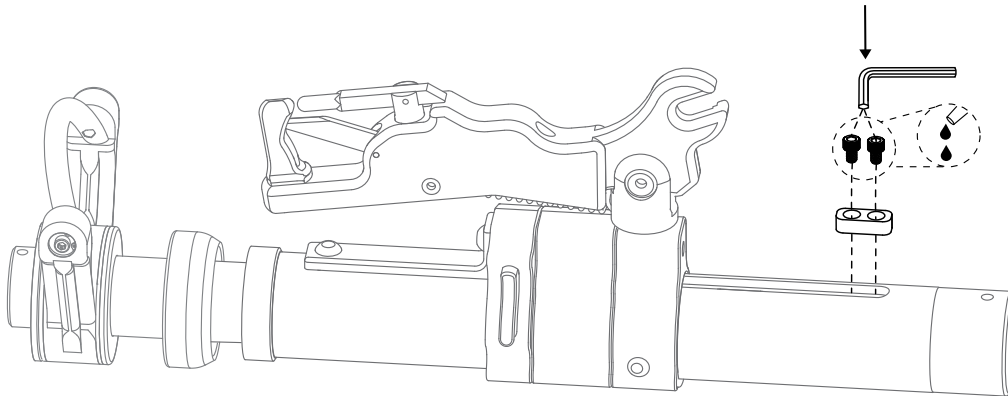
1/4" - 20 x 3/8" Flat Head Screw  
Item # B-02072



5/32" Hex Wrench

## Step Five

Using the 9/64" hex wrench, reinstall the **Guide Pin**. Apply 1-2 drops of **Loctite® Threadlocker Red 263** to each fastener prior to tightening.



### You Will Need:

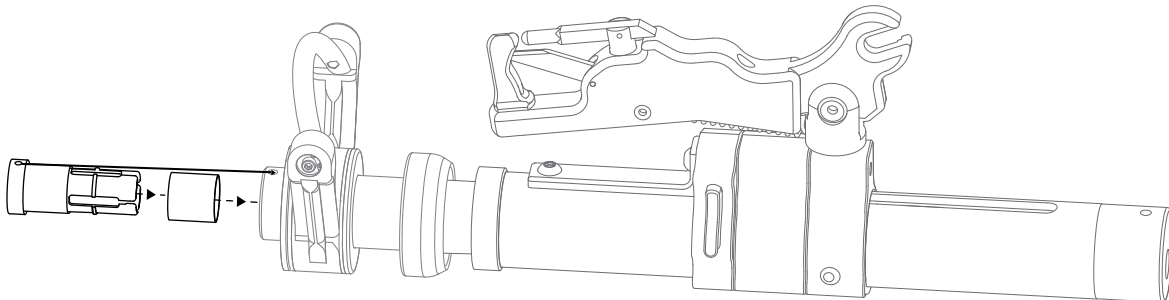
 8-32 x 1/4" Socket Head Cap Screw

Item # B-02073

 9/64" Hex Wrench

## Step Six

Reinstall the **Female Contact** and **Arc Shim**, making sure the screw holes are aligned.



## Step Seven

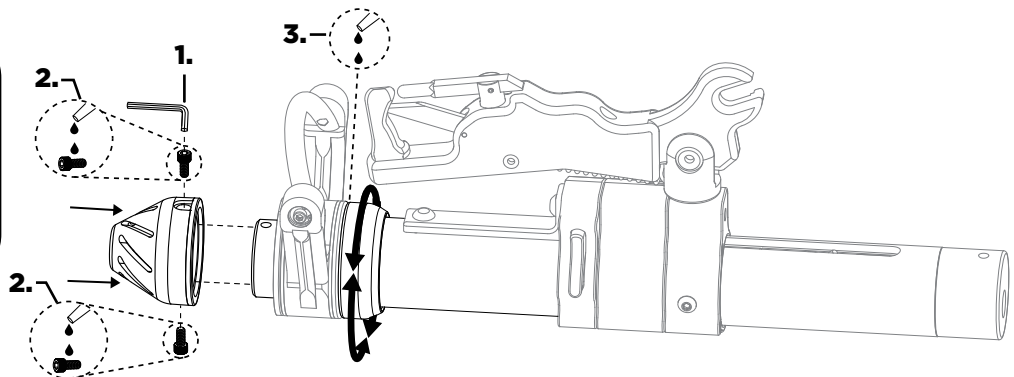
- 1) Using the 5/32" hex wrench, reattach the **Muffler Assembly**.
- 2) Apply 1-2 drops of **Loctite® Threadlocker Red 263** to each fastener prior to tightening.
- 3) Apply 1-2 drops of **Loctite® Threadlocker Red 263** to the aluminum threads on the **Black Tube Assembly** and tighten the **Black External Gasket**.

### You Will Need:

 10-24 x 7/16" Socket Head Cap Screw

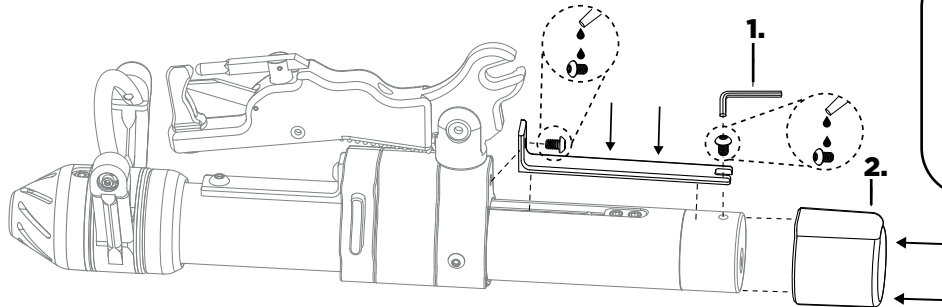
Item # B-02071

 5/32" Hex Wrench



## Step Eight

- 1) Using the 5/32" hex wrench, secure the **Lower Conductor Path** in place. Hold the part tight to the tool while reinstalling to minimize the gap. Apply 1-2 drops of **Loctite® Threadlocker Red 263** to each fastener prior to tightening.
- 2) Reinstall the **Rubber End Cap**.



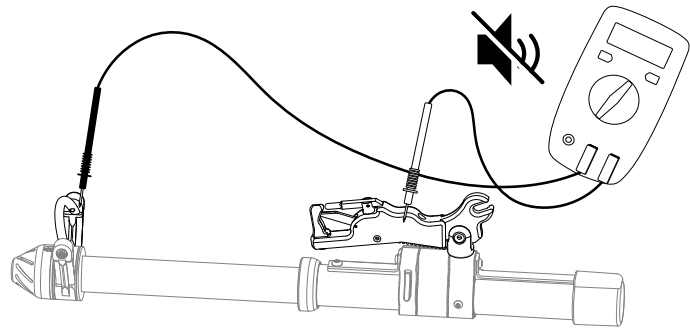
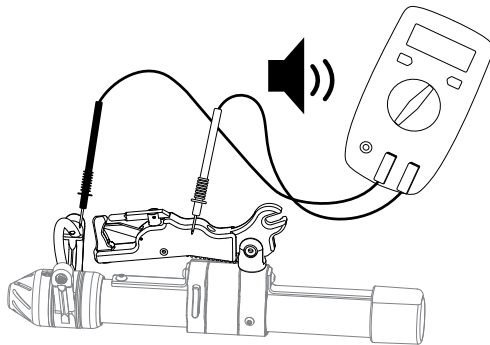
### You Will Need:

1/4" - 20 x 5/16" Button Head Screws  
Item # B-02090

5/32" Hex Wrench

## Step Nine

After reassembly, test for proper continuity and load break. Set a multimeter to Continuity Mode. Touch one lead to the hook loop and the other end to the **Arm Assembly** as shown below. When the tool is fully extended, there will be no continuity.



## Tool Inspection

After reassembly, refer to the Field Inspection procedure at the beginning of this document. Before each use and after reassembly, this procedure should be followed to ensure proper functionality. For further questions or assistance on using this manual, call customer service at 828-323-8914.

The sticker should be replaced after inspection. To order new Inspection Reminder stickers, call Utility Solutions, Inc. at 828-323-8914 or email [sales@utilityolutionsinc.com](mailto:sales@utilityolutionsinc.com) and reference part number B-02373.