Inspection and Maintenance

Table of Contents

April 8, 2024

Qualified Persons

⚠ WARNING

Only qualified persons knowledgeable in the installation, operation, and maintenance of overhead and underground electric distribution equipment, along with all associated hazards, may install, operate, and maintain the equipment covered by this publication. A qualified person is someone trained and competent in:

- The skills and techniques necessary to distinguish exposed live parts from nonlive parts of electrical equipment
- The skills and techniques necessary to determine the proper approach distances corresponding to the voltages to which the qualified person will be exposed
- The proper use of special precautionary techniques, personal protective equipment, insulated and shielding materials, and insulated tools for working on or near exposed energized parts of electrical equipment

These instructions are intended only for such qualified persons. They are not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment.

Read this Instruction Sheet

NOTICE

Thoroughly and carefully read this instruction sheet and all materials included in the product's instruction handbook before installing or operating the Loadbuster—The S&C Loadbreak Tool. Become familiar with the Safety Information on pages 4 through 5 and Safety Precautions on page 6. The latest version of this publication is available online in PDF format at **sandc.com/en/contact-us/product-literature/**.

Retain this Instruction Sheet

This instruction sheet is a permanent part of the Loadbuster—The S&C Loadbreak Tool. Designate a location where users can easily retrieve and refer to this publication.

Video

A video of the procedures in this instruction sheet is available at **sandc.com/loadbuster-tool-operation**.

Proper Application

⚠ WARNING

The equipment in this publication is only intended for specific switching applications. When used with appropriately designed "hook-equipped" disconnects, cutouts, power fuses, dropout reclosers, fuse limiters, and pad-mounted gear, the Loadbuster tool is suitable for the live-switching of single- or three-phase overhead distribution circuits through 34.5 kV and underground distribution circuits through 25 kV. These applications must be within the ratings furnished for the equipment. Ratings for the Loadbuster tool are listed on the ratings table in Specification Bulletin 811-31. The ratings are also on the S&C product labeling on the Loadbuster tool's chassis.

Warranty

The warranty and/or obligations described in S&C's Price Sheet 150, "Standard Conditions of Sale—Immediate Purchasers in the United States," (or Price Sheet 153, "Standard Conditions of Sale—Immediate Purchasers Outside the United States"), plus any special warranty provisions, as set forth in the applicable product-line specification bulletin, are exclusive. The remedies provided in the former for breach of these warranties shall constitute the immediate purchaser's or end user's exclusive remedy and a fulfillment of the seller's entire liability. In no event shall the seller's liability to the immediate purchaser or end user exceed the price of the specific product that gives rise to the immediate purchaser's or end user's claim. All other warranties, whether express or implied or arising by operation of law, course of dealing, usage of trade or otherwise, are excluded. The only warranties are those stated in Price Sheet 150 (or Price Sheet 153), and THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY EXPRESS WARRANTY OR OTHER OBLIGATION PROVIDED IN PRICE SHEET 150 (OR PRICE SHEET 153) IS GRANTED ONLY TO THE IMMEDIATE PURCHASER AND END USER, AS DEFINED THEREIN. OTHER THAN AN END USER, NO REMOTE PURCHASER MAY RELY ON ANY AFFIRMATION OF FACT OR PROMISE THAT RELATES TO THE GOODS DESCRIBED HEREIN, ANY DESCRIPTION THAT RELATES TO THE GOODS, OR ANY REMEDIAL PROMISE INCLUDED IN PRICE SHEET 150 (OR PRICE SHEET 153).

Understanding Safety-Alert Messages

Several types of safety-alert messages may appear throughout this instruction sheet and on labels and tags attached to the product. Become familiar with these types of messages and the importance of these various signal words:

⚠ DANGER

"DANGER" identifies the most serious and immediate hazards that will likely result in serious personal injury or death if instructions, including recommended precautions, are not followed.

⚠ WARNING

"WARNING" identifies hazards or unsafe practices that can result in serious personal injury or death if instructions, including recommended precautions, are not followed.

⚠ CAUTION

"CAUTION" identifies hazards or unsafe practices that can result in minor personal injury if instructions, including recommended precautions, are not followed.

NOTICE

"NOTICE" identifies important procedures or requirements that can result in product or property damage if instructions are not followed.

Following Safety Instructions

If any portion of this instruction sheet is unclear and assistance is needed, contact the nearest S&C Sales Office or S&C Authorized Distributor. Their telephone numbers are listed on S&C's website **sandc.com**, or call the S&C Global Support and Monitoring Center at 1-888-762-1100.

NOTICE

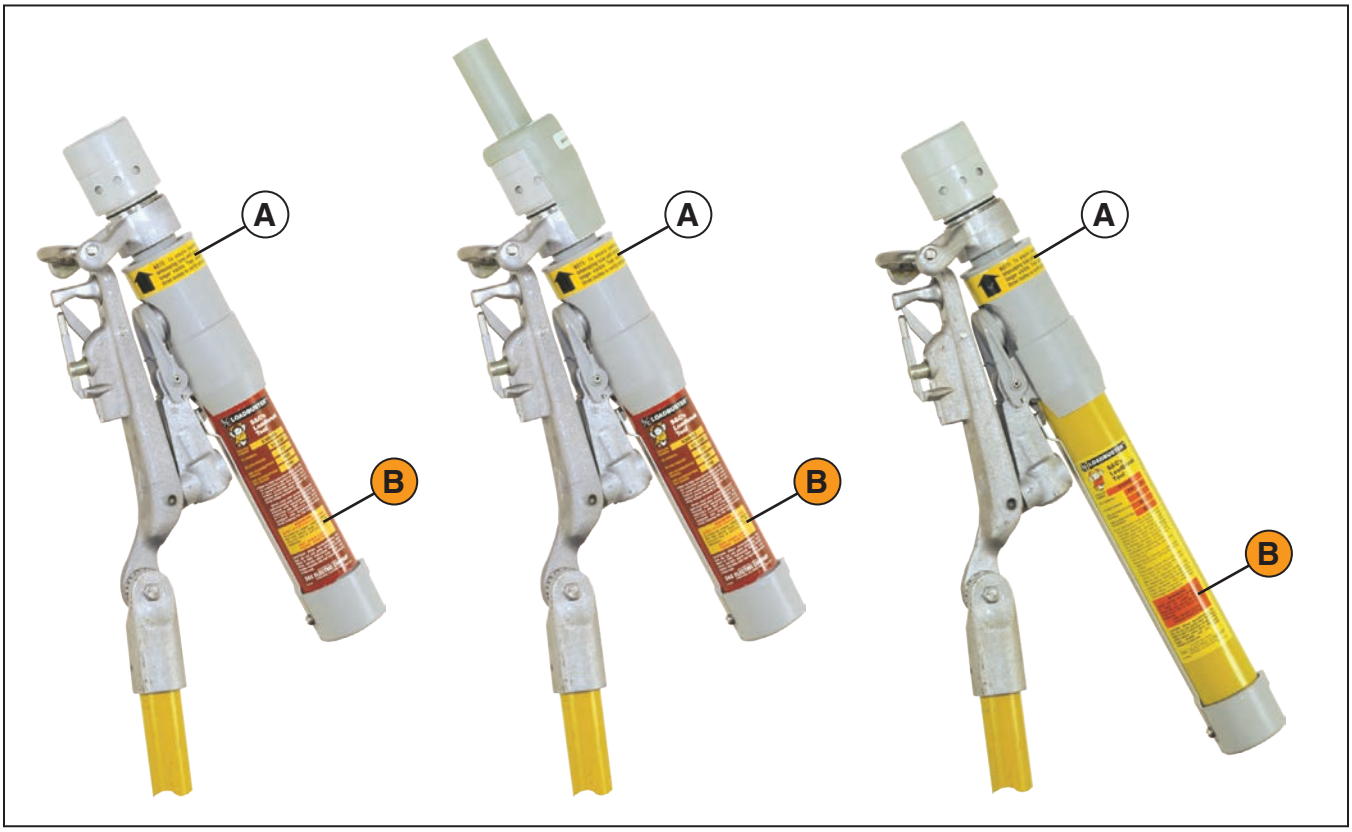
Read this instruction sheet thoroughly and carefully before maintaining a Loadbuster tool.

Replacement Instructions and Labels

If additional copies of this instruction sheet are required, contact the nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.

It is important that any missing, damaged, or faded labels on the equipment be replaced immediately. Replacement labels are available by contacting the nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.

Location of Safety Labels



Reorder Information for Safety Labels

Location	Safety Alert Message	Description	Part Number
A	**INSTRUCTIONAL NOTE**	To ensure resetting, depress telescoping tube until orange band . . .	G-5840R1
B	**⚠ WARNING**	RESET AFTER EACH OPERATION—To check for proper resetting . . .	G-4401 (for 5300R3)
			G-4401 (for 5300R3-E)
			G-4320 (for 5400R3)

⚠ DANGER

The Loadbuster loadbreak tool is used to switch equipment that operates at high voltage. Failure to observe the precautions below will result in serious personal injury or death.

Some of these precautions may differ from your company's operating procedures and rules. Where a discrepancy exists, follow your company's operating procedures and rules.

1. **QUALIFIED PERSONS.** Access to a Loadbuster loadbreak tool must be restricted only to qualified persons. See the "Qualified Persons" section on page 2.
2. **SAFETY PROCEDURES.** Always follow safe operating procedures and rules. Always maintain proper clearance from energized components.
3. **PERSONAL PROTECTIVE EQUIPMENT.** Always use suitable protective equipment, such as rubber gloves, rubber mats, hard hats, safety glasses, arc flash clothing, and fall protection in accordance with safe operating procedures and rules.
4. **SAFETY LABELS.** Do not remove or obscure any of the "DANGER," "WARNING," "CAUTION," or "NOTICE" labels. Remove tags ONLY if instructed to do so.
5. **ENERGIZED COMPONENTS.** Always consider all parts live until de-energized, tested, and grounded.
6. **MAINTAINING PROPER CLEARANCE.** Always maintain proper clearance from energized components.
7. **OPERATION.** Never position the Loadbuster loadbreak tool so the outer tube obscures your line of vision.
8. **RESETTING.** Keep hands clear during resetting. The Loadbuster tool is spring-loaded. Pulling the resetting latch will cause the anchor end of the tool to move down quickly. Keep hands in the position shown in Figure 7 on page 14 in S&C Instruction Sheet 811-505.

Before performing maintenance on the Loadbuster tool, make sure to have the necessary tools and materials listed below:

- A 7⁄16-inch combination wrench
- (2) flat-head screwdrivers (1⁄8-inch and 3⁄16-inch recommended)
- A 5⁄32-inch Allen key
- An S&C spanner wrench (NA-1057) or a 3⁄32-inch drift pin
- Vernier calipers
- An Emery cloth
- A rubber mallet (8–16 oz.)
- DC-Moly-GY lubricant (Part no. 0352-407)
- Petroleum jelly lubricant
- Silicone oil lubricant, Dow Corning DC 200 (5 cSt viscosity) or equivalent

Cleaning supplies:

- Soft cloth or lint-free towels
- A liquid abrasive-type household cleanser
- Degreasing dish soap
- A bottle brush

Four trigger screws and one set screw have integral nylon gaskets that must be replaced with new hardware. Make sure to have the replacement trigger assembly hardware and socket head set screw before disassembling a Loadbuster tool. S&C also recommends having on hand a new inner-tube seal, a moving contact, silicone oil lubricant, and DC-Moly-GN lubricant. For a detailed view of Loadbuster tool parts, see Figure 51 on page 25.

Necessary replacement parts to have on hand:

- A socket head set screw (Part no. NA-1048)
- Trigger assembly hardware (Part no. NA-1050)

Suggested replacement parts to have on hand:

- An inner tube seal (Part no. NA-1023)
- A moving contact (Part no. NA-1068-1 or NA-1068-2)

Complete the following steps to disassemble a Loadbuster tool:

STEP 1. Loosen the tube cover with a rubber mallet and remove the tube cover by pulling it out. Unscrew the end cap. Pull the end cap out until the Loadbuster tool trips, and then push the end cap back until the contact tube is inside the chassis. See Figures 1 and 2.

⚠ CAUTION

Keep fingers clear of the end of the chassis when tripping the Loadbuster tool. The contact tube is spring-loaded and will move quickly toward the trigger assembly. **Failure to keep fingers clear could cause minor injury.**

STEP 2. To prevent spinning, use a 7/16-inch combination wrench to hold the locknut on the underside of the end cap steady. Use an appropriately sized flat-head screwdriver to loosen and remove the set screw followed by the retaining screw. Remove the end cap. See Figures 3 and 4.

NOTICE

Do not remove the locknut from the moving contact.

Figure 1. Use a mallet to loosen the tube cover.

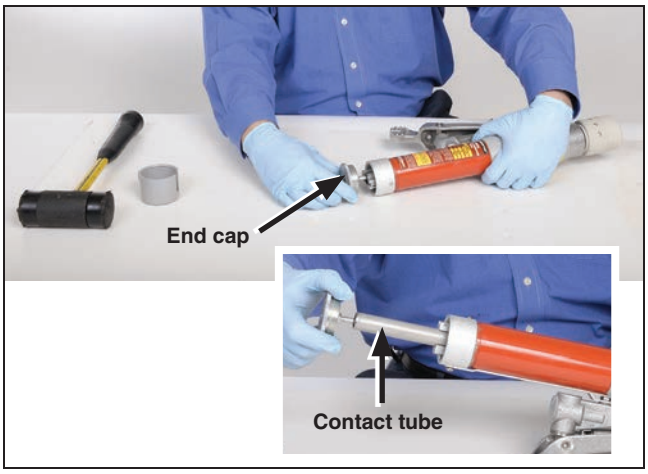


Figure 2. Unscrew the end cap and pull it out until the Loadbuster tool trips. Push the end cap into the tube until the contact tube is inside the chassis.

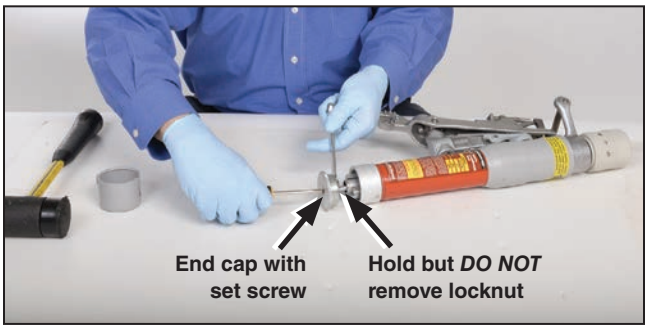


Figure 3. Hold the locknut steady and loosen and remove the set screw.

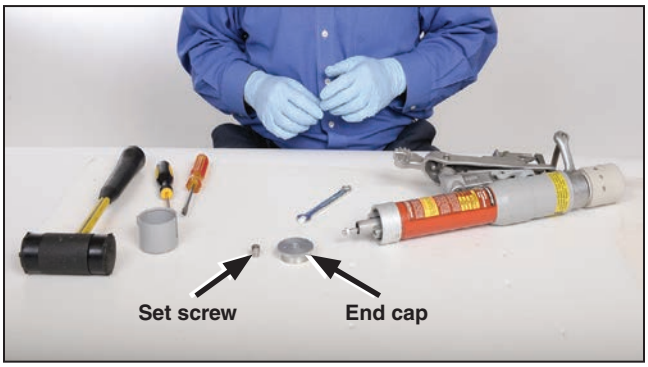


Figure 4. Remove the set and retaining screws.

STEP 3. Remove the four screws that fasten the trigger assembly to the inner tube assembly, and withdraw the trigger assembly. Discard the screws. See Figure 5.

NOTICE

Use a hand-driven screwdriver to loosen the four screws. **A power-driven screwdriver may damage the trigger assembly.**

STEP 4. Withdraw the moving contact assembly, and then slide off the guide bearing. See Figure 6.

STEP 5. Carefully withdraw the inner tube assembly from the chassis. See Figure 7.

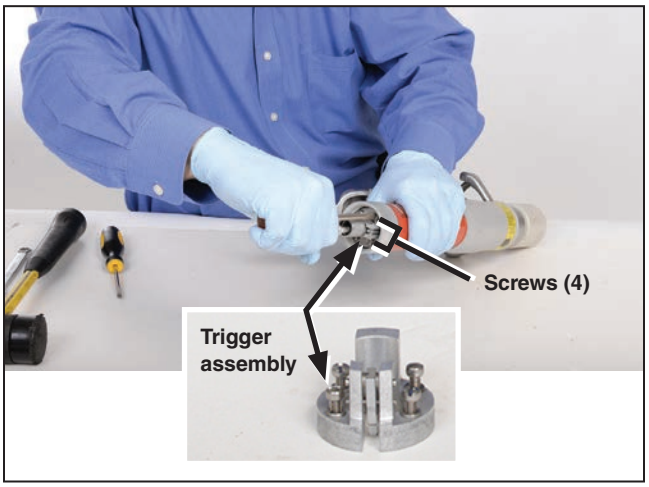


Figure 5. Remove the four screws securing the trigger assembly to the inner tube assembly. Remove the trigger assembly.

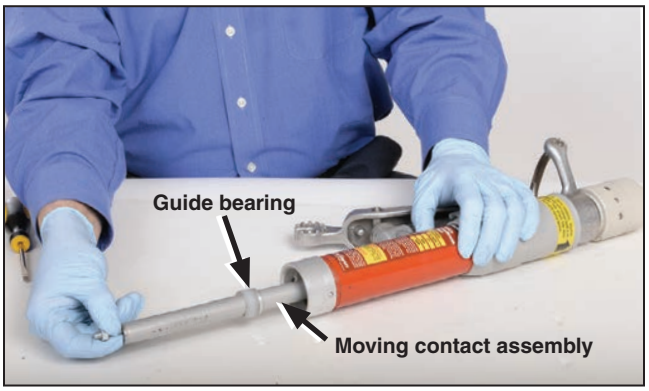


Figure 6. Remove the moving contact assembly and slide off the guide bearing.

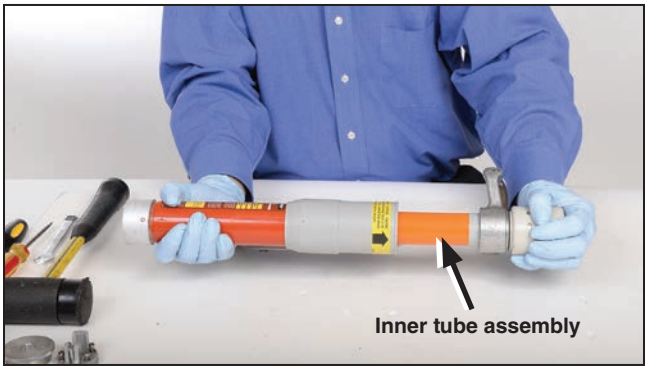


Figure 7. Remove the inner tube assembly.

STEP 6. Unscrew and remove the silencer. See Figure 8.

STEP 7. Use the mallet and a screwdriver or other pry tool to loosen and remove the retaining ring securing the anchor assembly to the inner tube assembly. See Figures 9 and 10, and Figure 11 on page 11.

Figure 8. Remove the silencer.

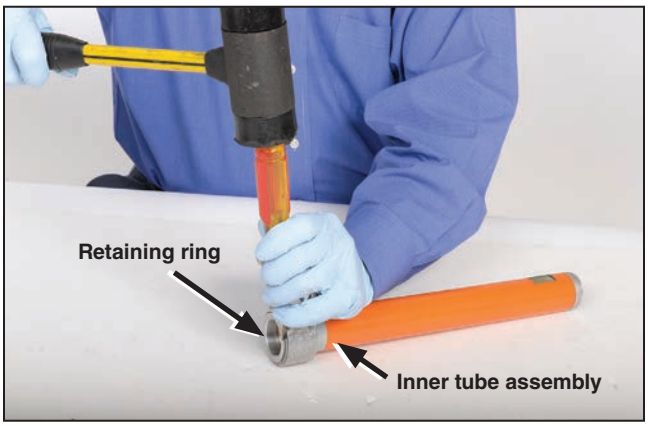


Figure 9. Use a hammer and screwdriver to loosen the ring.

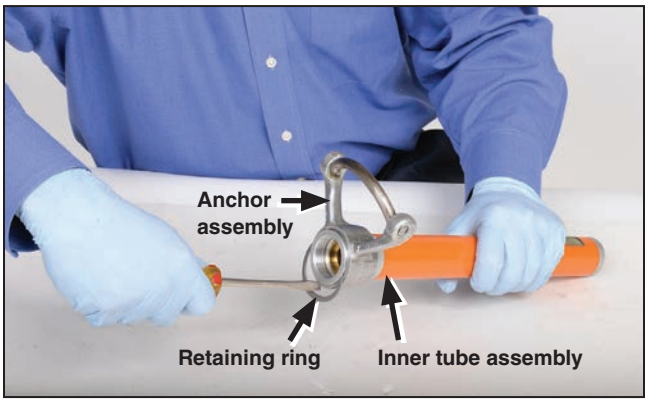


Figure 10. Pry the retaining ring until it comes off of the inner tube assembly.

STEP 8. Remove the anchor assembly. See Figure 11.

STEP 9. Use a 5⁄32-inch Allen key to remove the socket-head set screw. Discard the set screw. See Figure 12.

STEP 10. Withdraw the stationary contact assembly from inside the inner tube. See Figure 13.

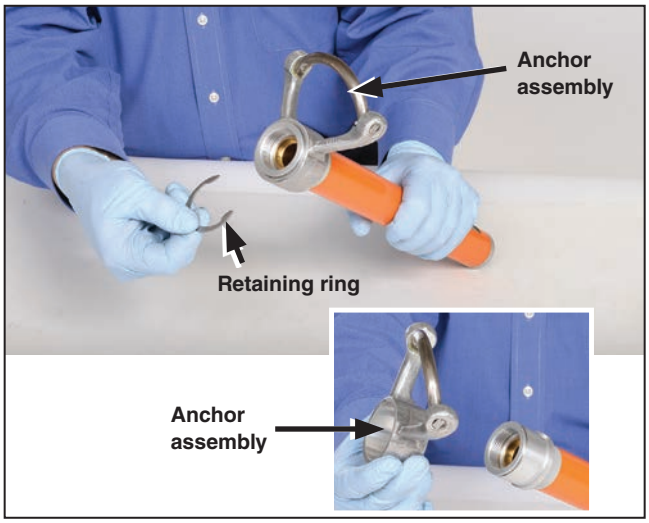


Figure 11. Remove the retaining ring and anchor assembly.

Figure 12. Remove and discard the set screw.

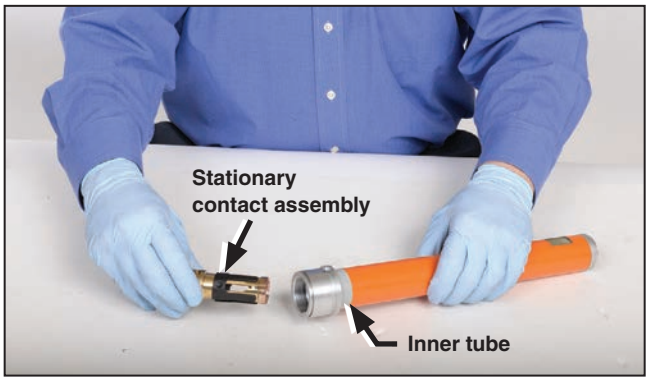


Figure 13. Remove the stationary contact.

STEP 11. Remove the chassis cover by slightly prying the cover equally on both sides and sliding off the chassis. See Figure 14.

STEP 12. Unscrew and remove the bearing retainer from the chassis, and remove the inner tube seal and the bearing. See Figure 15.

STEP 13. Use a drift pin or S&C spanner wrench (NA-1057) in the wrenching hole to unscrew the contact tube from the moving contact assembly. Remove the tube. See Figure 16. This concludes the Loadbuster tool disassembly.

STEP 14. Inspect the trigger assembly. Make sure the spring is working and the key is still secure and in place. Look for evidence of excessive wear, a broken spring, or burning or pitting of any part of the assembly. Replace the entire trigger assembly if necessary. See Figure 17.

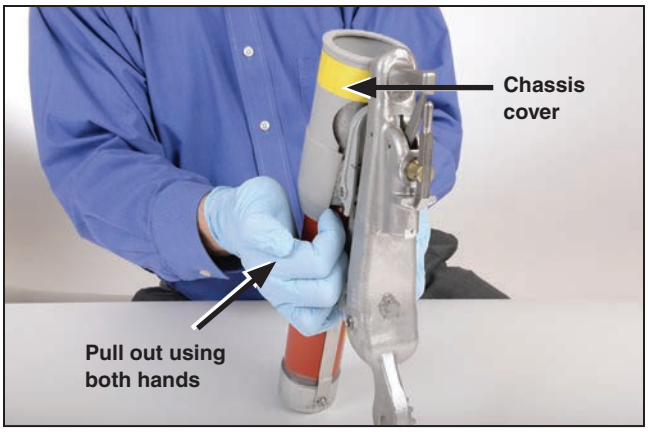


Figure 14. Remove the chassis cover.

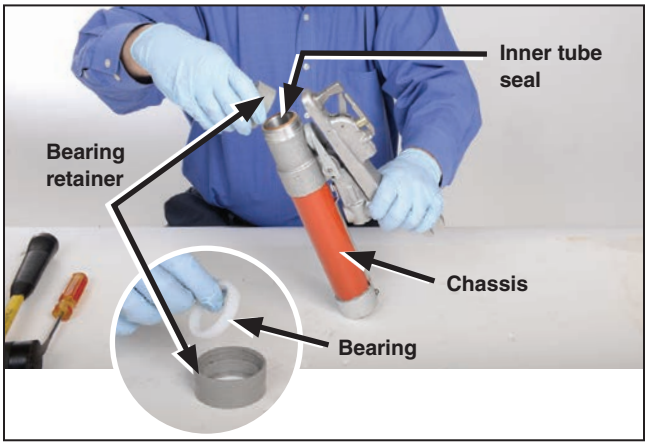


Figure 15. Remove the bearing retainer from the chassis along with the inner tube seal and the bearing.

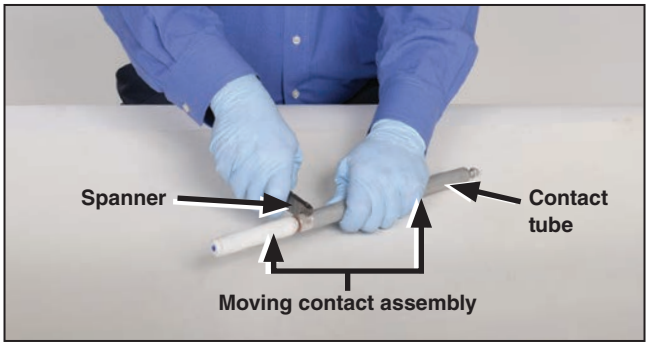


Figure 16. Unscrew the contact tube from the moving contact.

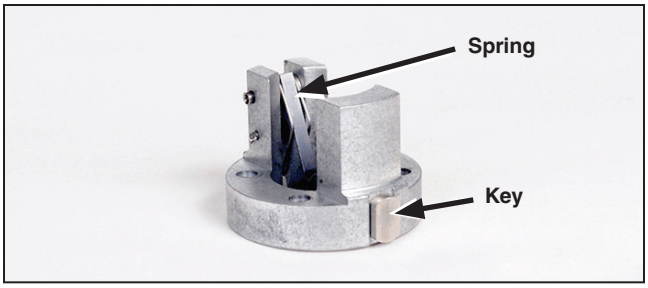


Figure 17. Inspect the trigger assembly.

STEP 15. Inspect the moving contact assembly.

NOTICE

Do not soak any part of the Loadbuster tool in cleaning solution or water. The Loadbuster tool and its components are not designed for submersion in water or solvent. **Damage to the tool may result.**

To inspect the moving contact assembly:

(a) Use water and a liquid abrasive-type household cleanser to remove surface carbon deposits from the trailer and the moving contact. Thoroughly rinse and dry the assembly immediately after cleaning. DO NOT submerge the moving contact assembly in water or cleaning solution. See Figure 18.

(b) If necessary, use an Emery cloth to polish the moving contact. Avoid heavy filing that would change the dimensions.

(c) Pull either end of the assembly to extend the spring. Examine the flexible cable inside the spring for signs of wear or fraying. Make sure the cable is securely connected at both ends. See Figure 18.

(d) Using a micrometer, check the diameter of the trailer. See Figure 19.

Note: Exercise care to avoid mechanical damage to the trailer.

If the trailer diameter is 0.65 inches (16.5 mm) or less at any point other than the chamfered ends, or if the flexible cable is frayed, replace the moving contact assembly and inner tube assembly. S&C also recommends replacing the stationary contact assembly, guide bearing, and the silencer at the same time.

NOTICE

Loadbuster tools with a red dot on the trailer (manufactured before August 2002) can be operated 500 to 1,000 times before inspection and maintenance are required. Tools with a blue dot on the trailer (manufactured during or after August 2002) can be operated 1,500 to 2,000 times before inspection and maintenance are required.

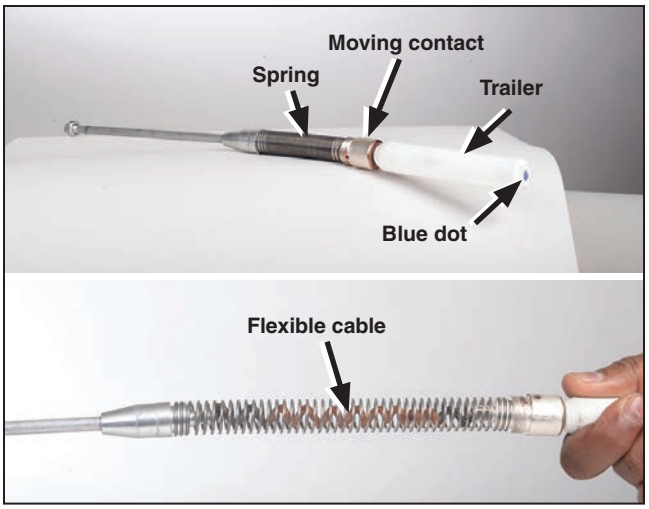


Figure 18. Inspect the moving contact assembly.

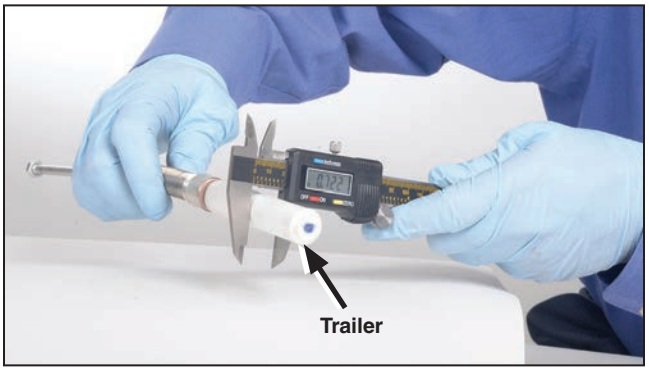


Figure 19. Measure the diameter of the trailer. Do not measure the chamfered ends.

STEP 16. Inspect the inner tube assembly. Do not replace the inner tube assembly unless the diameter of the trailer is 0.650 inch (16.5 mm) or less, as described in Step 15(d). If replacement is not required, use water and an abrasive-type household cleanser applied with a bottle brush to remove any surface carbon deposits from the liner of the inner tube assembly. Thoroughly rinse and dry the assembly immediately after cleaning. See Figure 20.

Minor scratches on the inner tube assembly are allowable. Tubes with rough scratches must be replaced because the rough scratches may impede proper operation of the Loadbuster Loadbreak tool. DO NOT repaint the tube.

STEP 17. Inspect the inner tube seal. Replace the seal if it is cracked, deformed, or damaged in any way. S&C recommends replacing the inner tube seal when the inner tube assembly is replaced. See Figure 21.

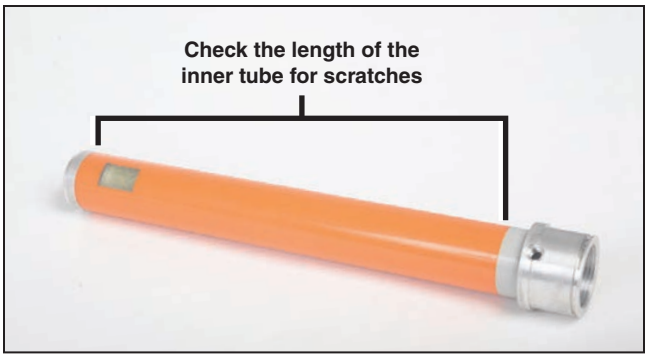


Figure 20. Inspect the inner tube assembly.

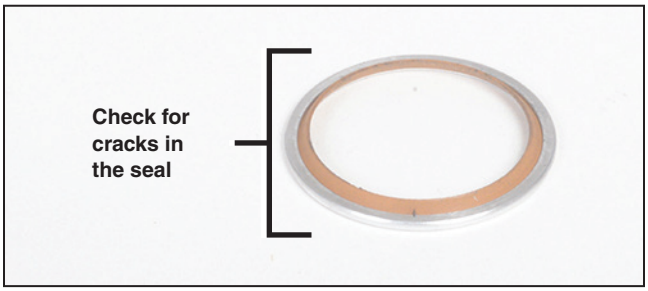


Figure 21. Inspect the inner tube seal.

STEP 18. Inspect the stationary contact assembly. Use water and an abrasive-type household cleanser to remove any surface carbon deposits from the stationary contact assembly. Thoroughly rinse and dry the assembly immediately after cleaning.

Examine the stationary contact assembly for extreme pitting, erosion, or cracking. Light polishing is permissible, but avoid heavy filing that would change the dimensions. Replace the stationary contact if the ring inside the contact is bent. Be careful not to drop the contact assembly. See Figure 22.

STEP 19. Inspect the anchor assembly. Use an Emery cloth to polish the surface and remove pitting. If the anchor assembly is severely pitted or burned, or if the spring does not work, replace the anchor assembly. See Figure 23.

STEP 20. Inspect the resetting latch. Look for excessive wear on the latching surface. The latching surface should be flat. Pull the latch and check the springs. Replace the resetting latch if it is deformed or damaged. See Figure 24.

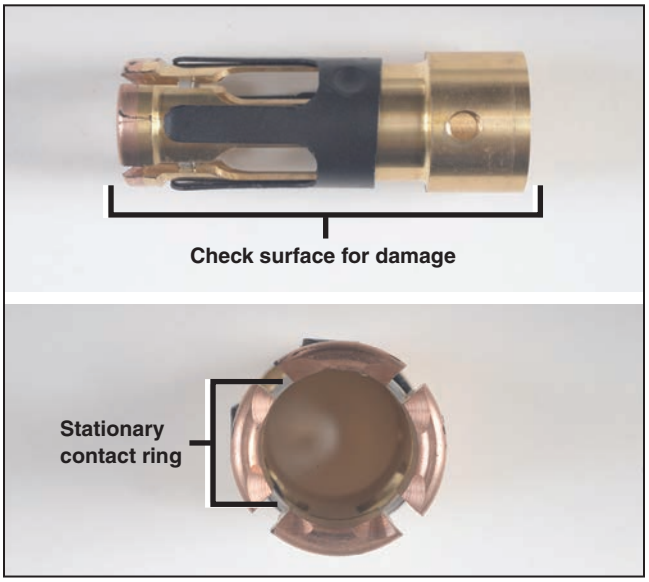


Figure 22. Inspect the stationary contact assembly.

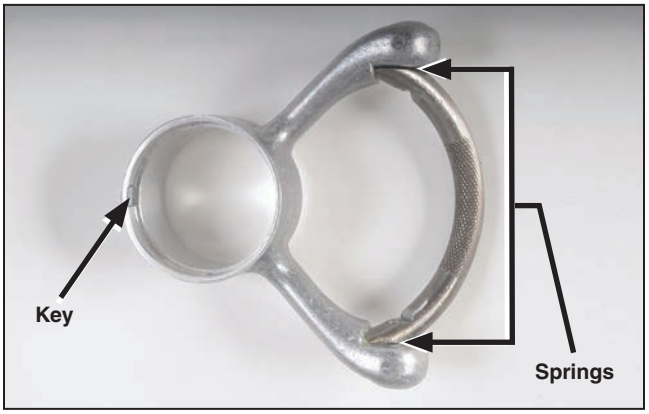


Figure 23. Inspect the anchor assembly.

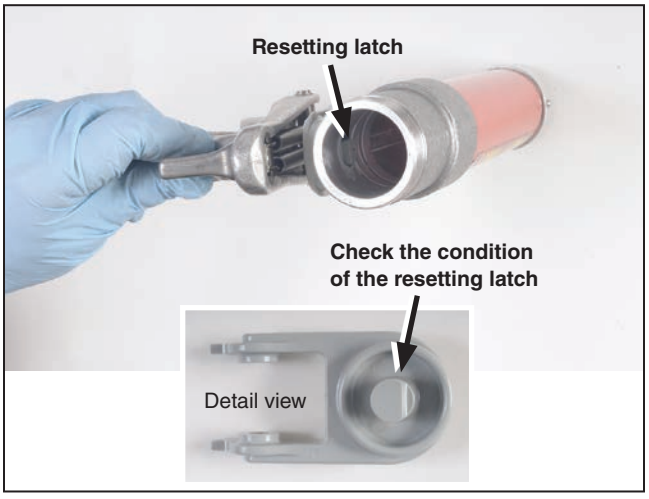


Figure 24. Inspect the resetting latch..

STEP 21. Inspect the hook frame attachment assembly. Look for excessive burning or pitting on all contact surfaces on the hook frame attachment assembly. Make sure the pull-ring hook is straight and the spring in the pivot contact is working properly. The spring in the pivot should allow movement in the same direction as the pivot contact. The pivot also should move freely side to side. Replace the hook frame attachment assembly if it is damaged. See Figure 25.

STEP 22. Inspect the chassis. Clean the chassis with a cloth and household detergent to remove grease or dirt. DO NOT soak the chassis in water or detergent solution. Replace the shunt strap if it is badly burned. Check the hook frame assembly springs to make sure they are in good condition and hold tension. Replace the springs if necessary. The hook frame assembly should move approximately 65 degrees "in and out" and "side to side" approximately 35 degrees in each direction. Contact the local S&C Sales Office if the chassis does not rotate properly. Replace any missing or faded product labels. See Figure 26.

STEP 23. Inspect the bearing and bearing retainer for evidence of mechanical damage. See Figure 27. Replace as required.

STEP 24. Inspect the silencer. Make sure the snubber (gasket) is in good condition. Also look inside and make sure there is no corrosion and that the mesh is in good condition. Push the pin that actuates the counter. The counter should advance to the next "operation number." Replace the silencer if there is any evidence of damage. See Figure 28.

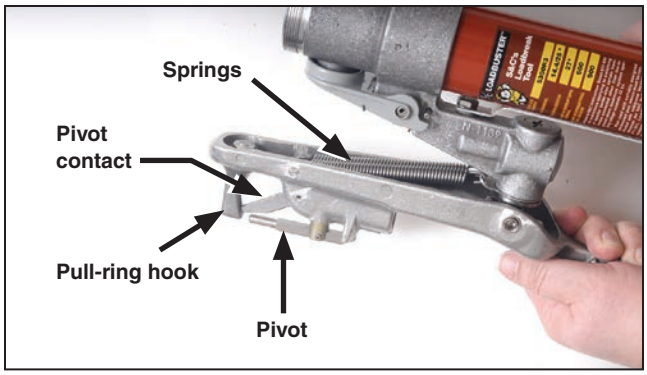


Figure 25. Inspect the hook frame attachment assembly.

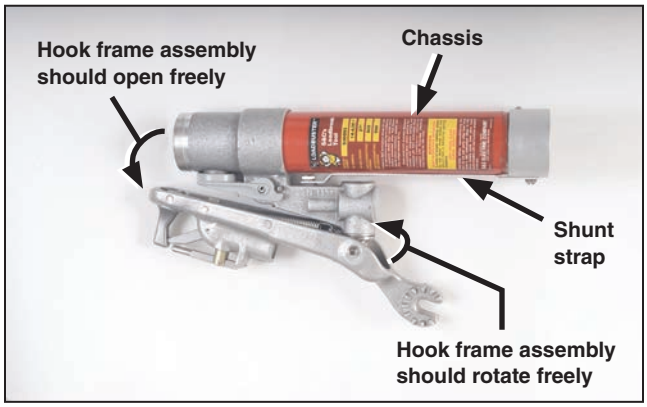


Figure 26. Inspect the chassis.

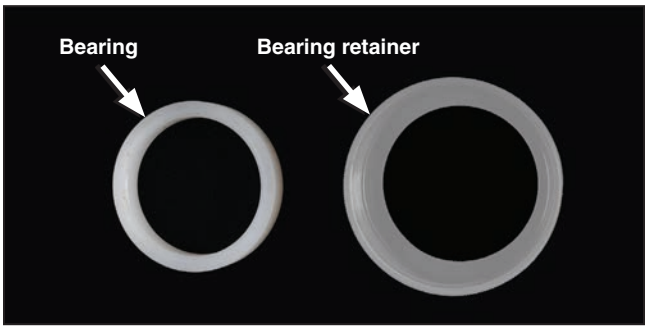


Figure 27. Inspect the bearing and bearing retainer.

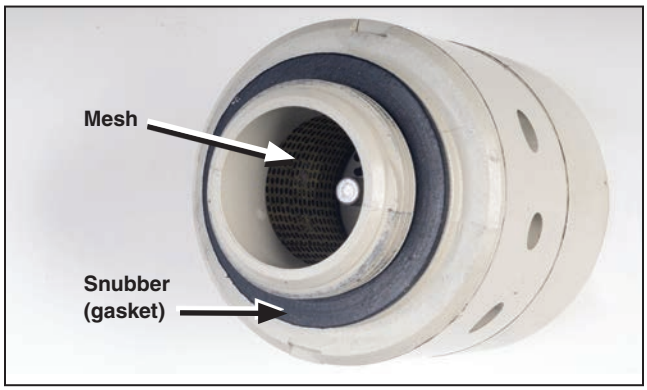


Figure 28. Inspect the silencer.

STEP 25. Install the stationary contact assembly in the inner tube assembly. Use the 5/32-inch Allen key to install a new socket head set screw. Make sure its point engages the locating hole in the stationary contact assembly. Tighten the socket head set screw firmly, but avoid overtightening, which may bend the stationary contact assembly. See Figure 29.

STEP 26. Assemble the inner tube assembly. See Figure 30 and Figure 31.

(a) Apply a thin coating of silicone oil to the surface of the inner tube assembly.

(b) Slide the bearing retainer onto the inner tube assembly.

> **NOTICE**
>
> The inner tube seal will not perform properly unless it is installed with its flared edge pointing toward the stationary contact end of the inner tube assembly.

(c) Slide the inner tube seal onto the assembly. If the seal is difficult to put on the inner tube assembly, expand its inner diameter somewhat by rotating it against a thumbnail or other smooth object. Use care to avoid damaging the seal. The seal material has a "memory" and will soon return to its original shape. Immediately place the flared edge of the inner tube seal squarely against the metal insert on the lower end of the inner tube assembly. Then, using a slight twisting motion, work the inner tube seal onto the inner tube assembly, taking care to avoid damaging or inverting the seal, especially when sliding the seal past the flat area on the inner tube assembly.

(d) Slide the bearing onto the inner tube assembly.

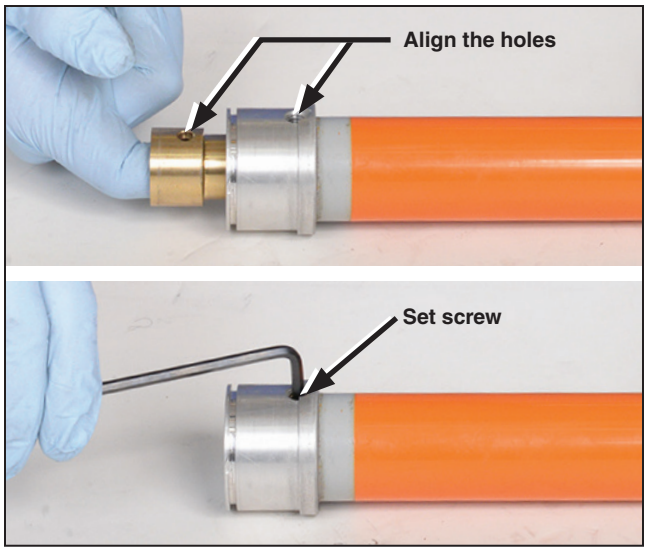


Figure 29. Install the stationary contact assembly to the inner tube assembly.

Figure 30. Apply a layer of silicone oil.

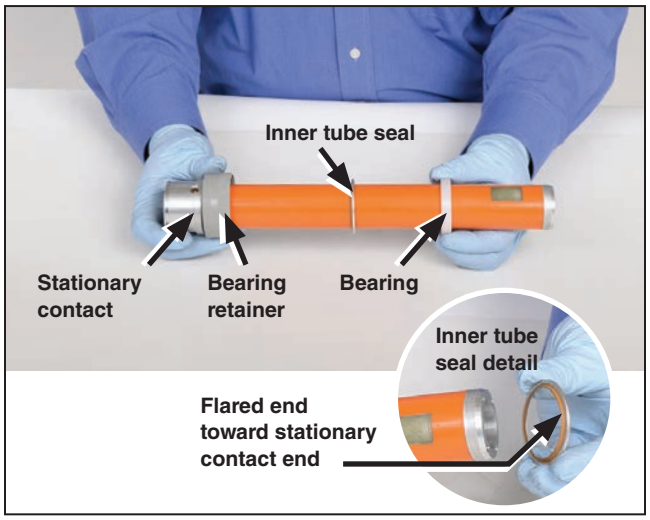


Figure 31. Assemble the inner tube assembly. Detail view of inner seal. Make sure the flared end is pointing toward the stationary contact end of the inner tube assembly.

STEP 27. Insert the inner tube assembly into the chassis, lifting the resetting latch to provide clearance for the inner tube. See Figure 32.

STEP 28. Thread the bearing retainer firmly onto the chassis. See Figure 33.

STEP 29. Reinstall the chassis cover. See Figure 34.

STEP 30. Extend the inner tube assembly approximately 2 inches (51 mm). See Figure 35.

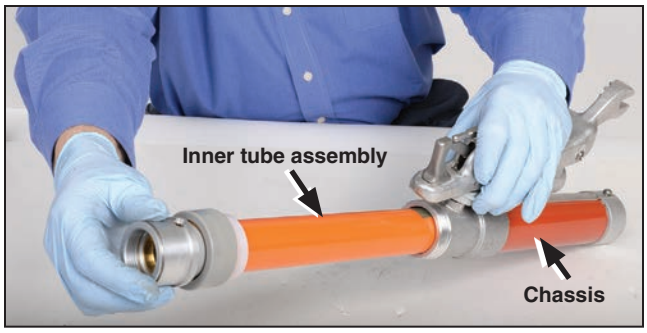


Figure 32. Insert the inner tube assembly into the chassis.

Figure 33. Thread the bearing retainer onto the chassis.

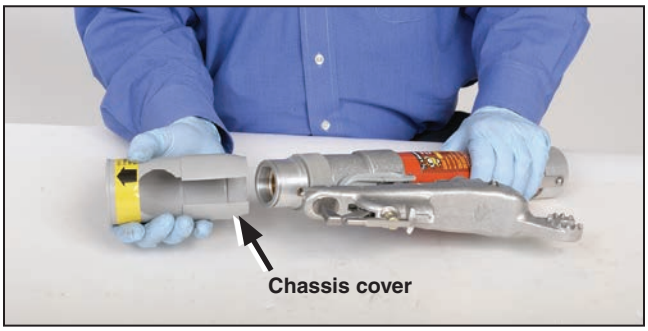


Figure 34. Install the chassis cover.

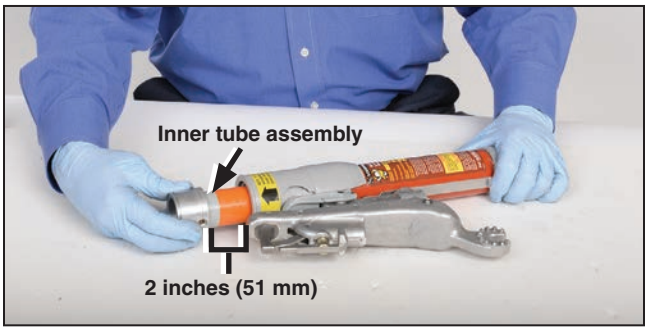


Figure 35. Extend the inner tube assembly.

STEP 31. Install the anchor assembly so the key on the anchor assembly mates with a slot in the ferrule of the inner tube assembly. See Figure 36.

STEP 32. Reinstall the retaining ring. Position the retaining ring so the concave shape is toward the anchor assembly. Use a hammer or mallet to secure the ring in place around the inner tube assembly and the anchor assembly. See Figure 37.

STEP 33. Reinstall the silencer on the inner tube assembly. If the silencer has metal threads, apply a light coating of petroleum jelly to the threads. See Figure 38.

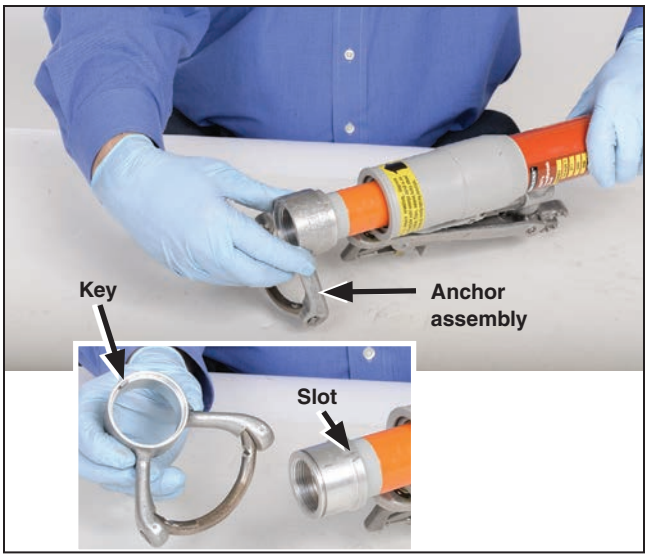


Figure 36. Install the anchor assembly so the key mates with the slot on the inner tube assembly.

Figure 37. Reinstall the retaining ring. Make sure the ring is bowed toward the surface of the anchor assembly. Tap it into place with a mallet.

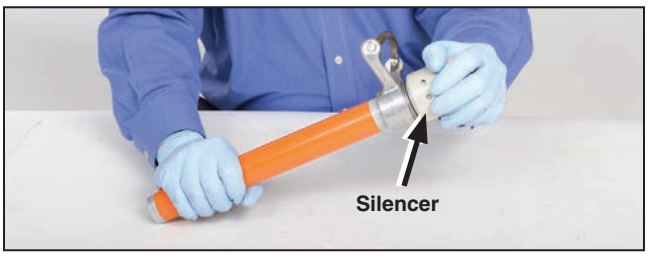


Figure 38. Reinstall the silencer.

STEP 34. Screw the contact tube onto the moving contact assembly. Use a drift pin or spanner wrench (NA-1057) in the wrenching hole while tightening the threads. See Figure 39.

STEP 35. Slide the guide bearing over the open end of the contact tube. See Figure 40.

STEP 36. Apply a light coating of DC-MOLY-GN paste lubricant to the trigger end of the moving contact assembly. See Figure 41.

STEP 37. Insert the moving contact assembly into the inner tube assembly, trailer end first, making certain the guide bearing is seated in the inner tube assembly. See Figure 42.

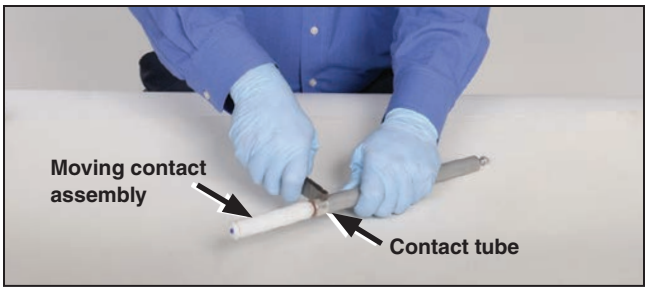


Figure 39. Install the contact tube onto the moving contact assembly.

Figure 40. Install the guide bearing.

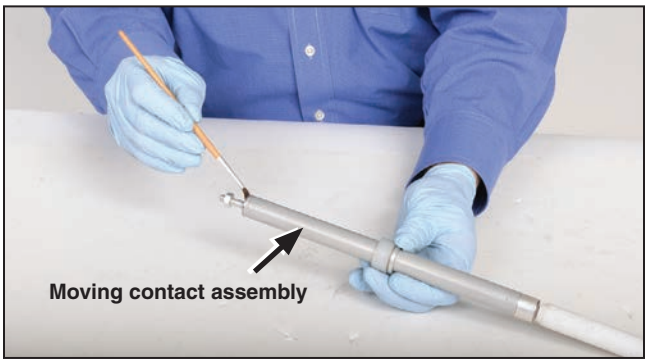


Figure 41. Apply lubricant to the trigger end of the moving contact assembly.

Figure 42. Insert the moving contact assembly into the inner tube assembly.

STEP 38. Apply a light coating of DC-MOLY-GN paste lubricant to the latching area of the trigger only. See Figure 43.

STEP 39. Insert the trigger into the inner tube assembly. Use a screwdriver to depress the trigger latch and extend the moving contact assembly through the trigger assembly. See Figure 44.

Figure 43. Apply lubricant to the latching area of the trigger.

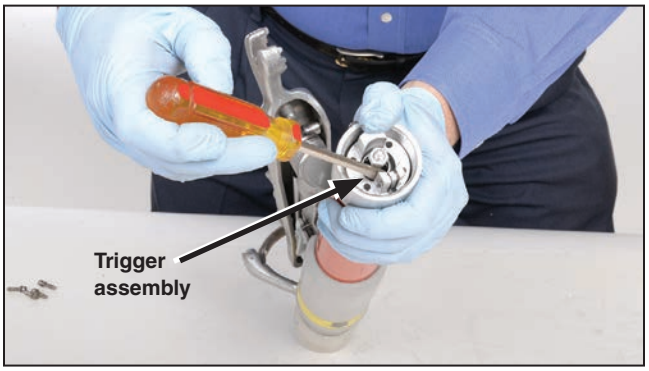


Figure 44. Insert the trigger into the inner tube assembly. Depress the trigger to extend the moving contact assembly.

STEP 40. Rotate the anchor assembly as required to center the anchor with the pull-ring hook. Using four new screws, attach the trigger assembly to the inner tube assembly, aligning the guide pin on the trigger assembly with the slot in the chassis. See Figure 45.

STEP 41. Reposition the end cap, and use the retaining screw and set screw to secure it to the moving contact assembly. Tighten the set screw last. See Figure 46.

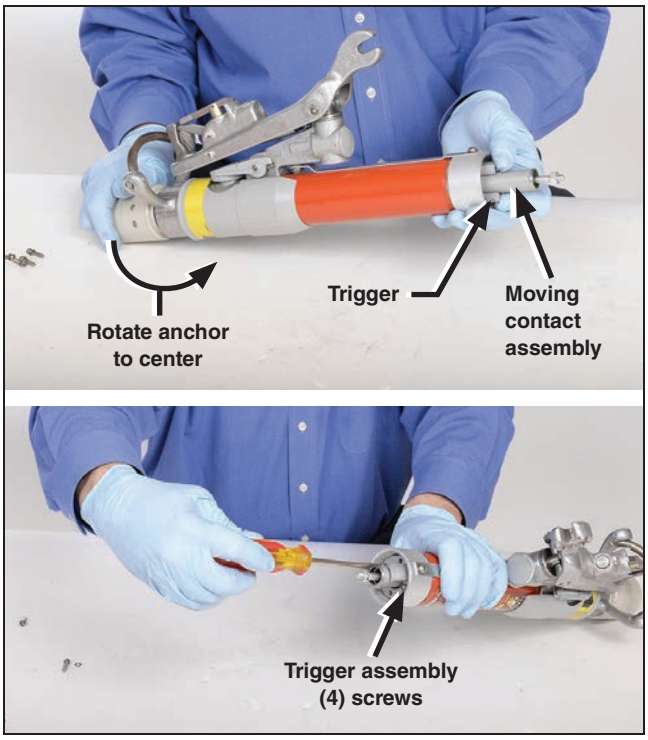


Figure 45. With the moving contact extended, turn the anchor to align the holes in the trigger with the holes in the inner tube assembly. Attach the trigger assembly to the inner tube assembly.

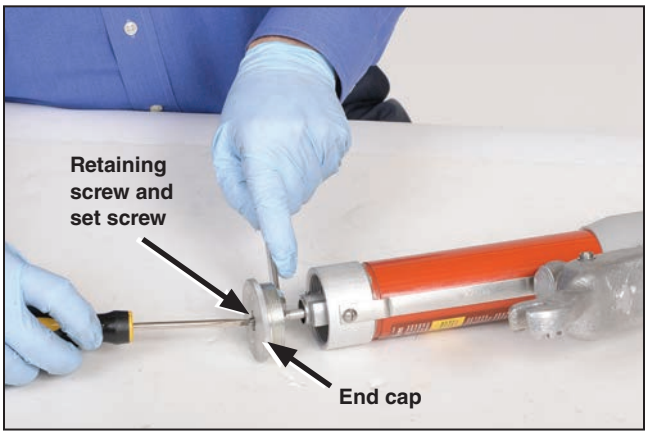


Figure 46. Install the end cap.

STEP 42. Apply a light coating of petroleum jelly to the threads of the end cap. Screw the end cap firmly into the chassis. See Figure 47.

STEP 43. Install the tube cover. See Figure 48.

STEP 44. ***For Loadbuster tool catalog number 5300R3-E:*** Install the extended insulating hood. See Figure 49.

STEP 45. After reassembly, reset the Loadbuster tool. Hold with the inner tube extended, and lift the resetting latch with your thumb. With the latch up, press down on the inner tube assembly until the tool is closed completely so the trigger can reset itself. When reset properly, the orange inner tube will no longer be visible.

Check for proper resetting by extending the tool about three inches (76 mm) until increasing spring resistance is felt. Operate the tool several times to make sure the trigger and resetting latch perform properly. Refer to S&C Instruction Sheet 811-505 for complete operation instructions.

STEP 46. Make sure the trip force is between 20 and 27 lbs. for Loadbuster tool catalog number 5300R3 (20 to 29 lbs. for Loadbuster tool catalog number 5400R3) by securing the hook frame assembly and pulling open the tool using a force gauge attached to the anchor assembly.

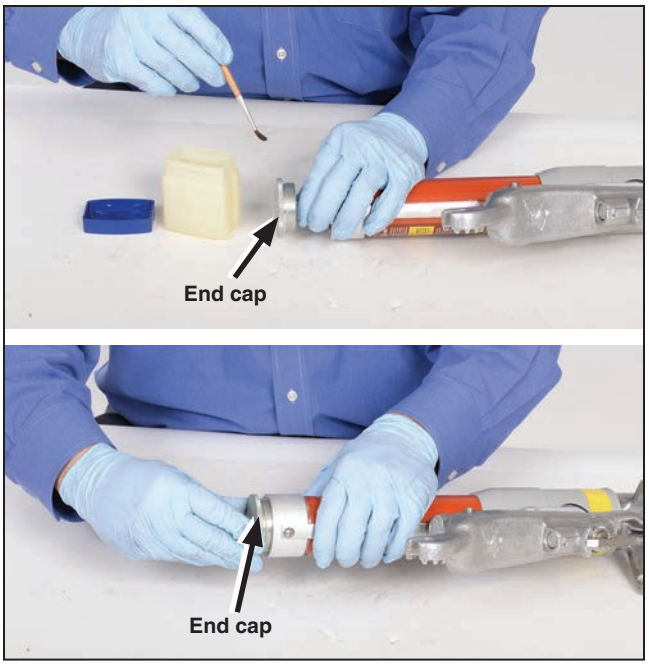


Figure 47. Lubricate the threads of the end cap, and screw the end cap into the chassis.

Figure 48. Install the tube cover.

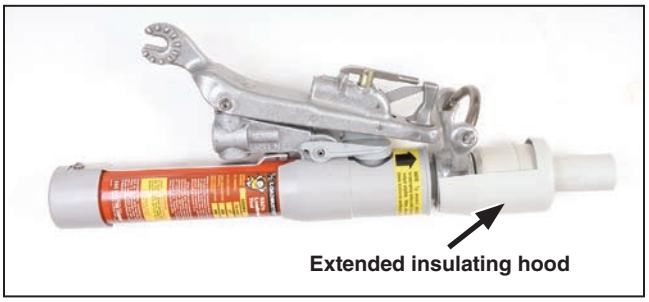


Figure 49. The extended insulating hood on Loadbuster tool catalog number 5300R3-E.

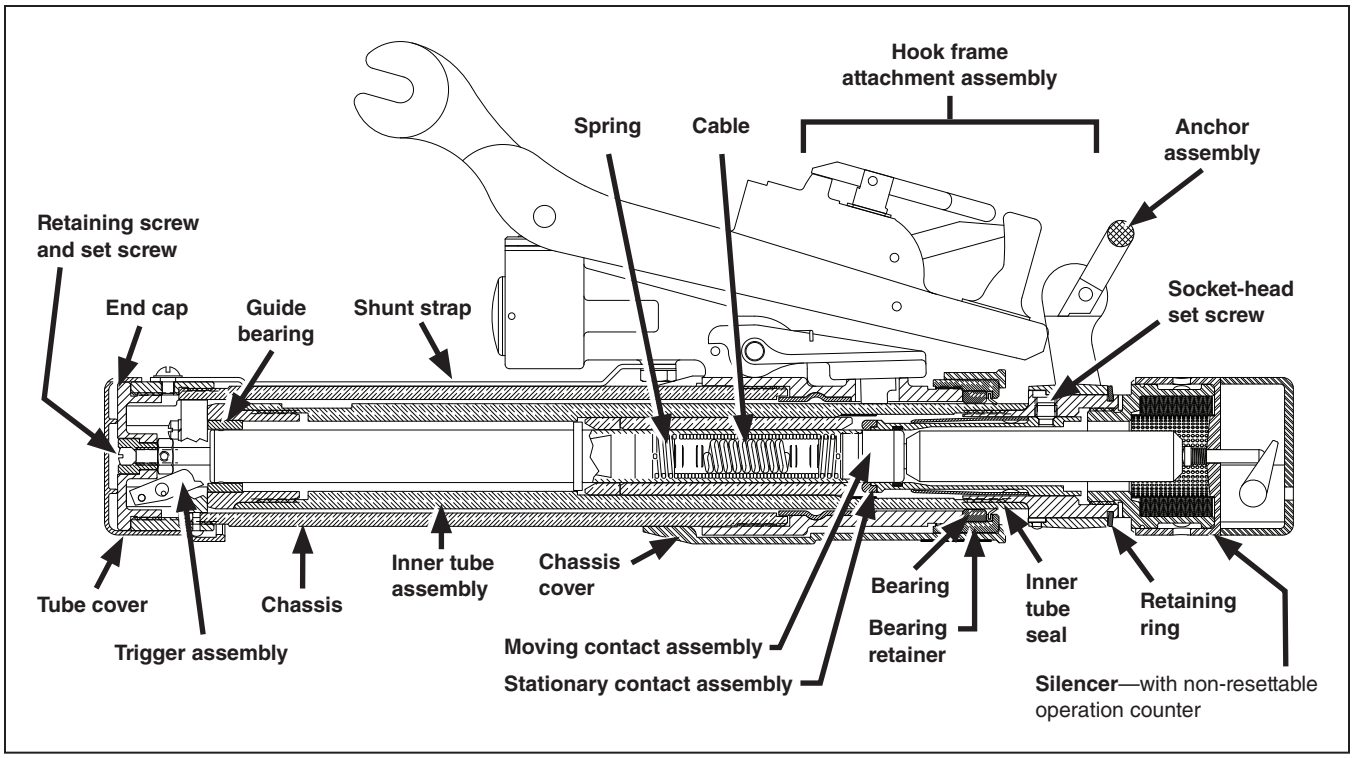


Figure 50. Cross-section view of the Loadbuster tool.

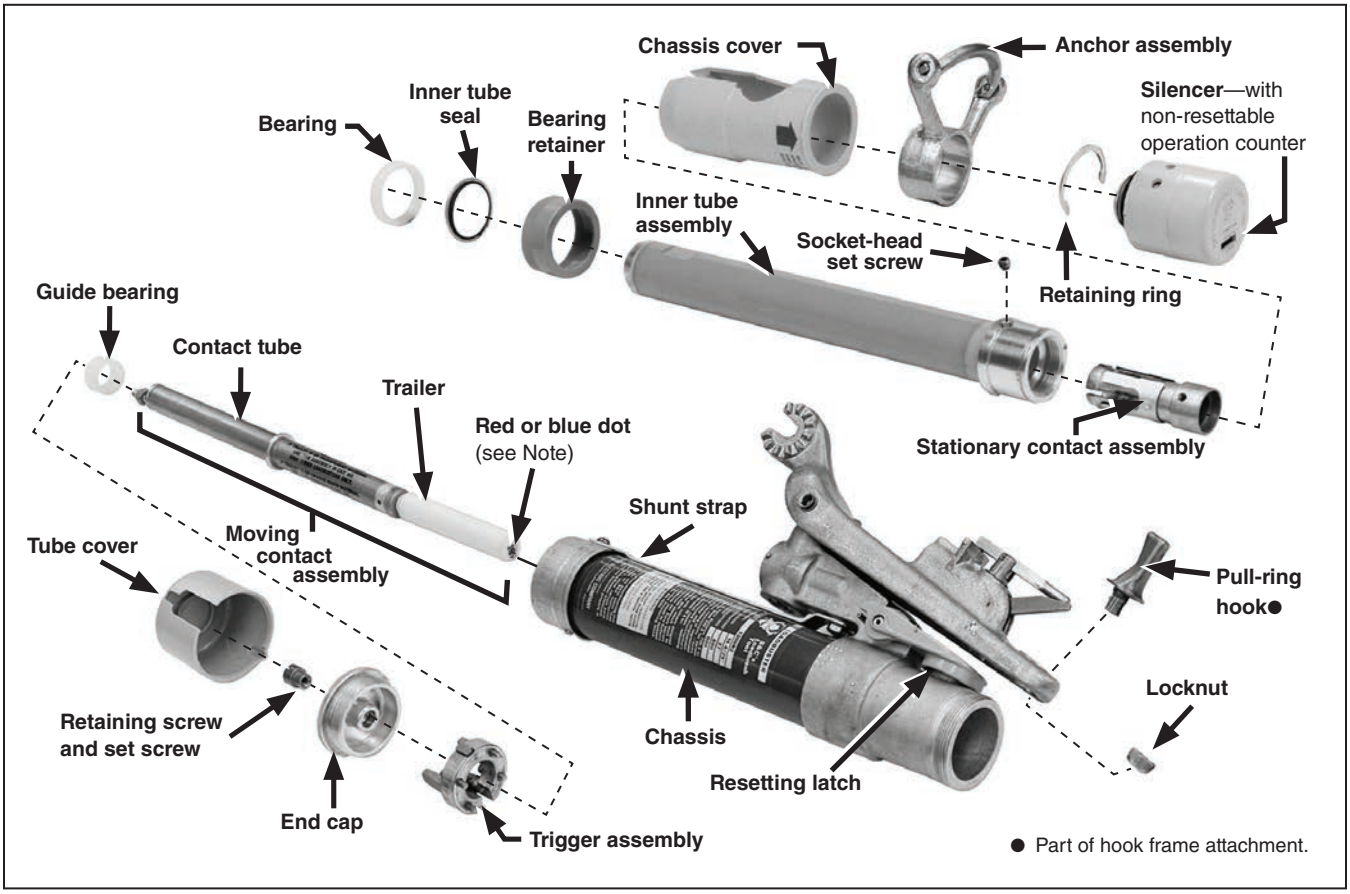


Figure 51. Exploded view of the Loadbuster tool.

Note: Loadbuster tools with a red dot on the trailer (manufactured prior to August 2002) can be operated 500 to 1,000 times before inspection and maintenance are required. Tools with a blue dot on the trailer (manufactured during or after August 2002) can be operated 1,500 to 2,000 times before inspection and maintenance are required.