Instruction Manual

CCX and CCXS Collar Cutters

-06 to -12
EC Declaration of Conformity

Manufacturer:
Huck International, LLC, Industrial Products Group, 1 Corporate Drive, Kingston, NY, 12401, USA

Description of Machinery:
Models CC, OSCC, CCX, & CCXS families (-05 to -12) of Collar Cutters and specials based on their design (e.g. PR###).

Relevant provisions complied with:
British Standard related to hand held, non-electric power tools (ISO 11148-1:2011)

European Representative:
Rob Pattenden, Huck International, Ltd. Unit C Stafford Park 7, Telford Shropshire TF3 3BQ, England, United Kingdom

Authorized Signature/date:
I, the undersigned, do hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Signature:

Full Name: Robert B. Wilcox
Position: Engineering Manager
Location: Huck International, LLC d/b/a Arconic Fastening Systems and Rings
          Kingston, New York, USA
Date: 01/11/2016 (November 1, 2016)

Declared dual number noise emission values in accordance with ISO 4871

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Values determined according to noise test code ISO 3744. The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.

Declared vibration emission values in accordance with EN 12096

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Values measured and determined according to ISO 2866-1, ISO 5349-2, and EN 1033

Test data to support the above information is on file at:
Arconic Fastening Systems and Rings, Kingston Operations, Kingston, NY, USA.
SAFETY INSTRUCTIONS

GLOSSARY OF TERMS AND SYMBOLS:

- **Product complies with requirements set forth by the relevant European directives.**
- **READ MANUAL** prior to using this equipment.
- **EYE PROTECTION IS REQUIRED** while using this equipment.
- **HEARING PROTECTION IS REQUIRED** while using this equipment.

WARNINGS: Must be understood to avoid severe personal injury.

CAUTIONS: show conditions that will damage equipment and or structure.

Notes: are reminders of required procedures. **Bold, Italic type and underlining**: emphasizes a specific instruction.

I. GENERAL SAFETY RULES:
1. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
2. Huck equipment must be maintained in a safe working condition at all times. Tools and hoses should be inspected at the beginning of each shift/day for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.
3. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool. Failure to do so can result in serious bodily injury.
4. Only qualified and trained operators should install, adjust or use the cutting-off/crimping power tool.
5. Do not modify this cutting-off/crimping power tool. This can reduce effectiveness of safety measures and increase operator risk.
6. Do not discard safety instructions; give them to the operator.
7. Do not use cutting-off/crimping power tool if it has been damaged.
8. Tools shall be inspected periodically to verify all ratings and markings required, and listed in the manual, are legibly marked on the tool. The employer/operator shall contact the manufacturer to obtain replacement marking labels when necessary. Refer to assembly drawing and parts list for replacement.
9. Tool is only to be used as stated in this manual. Any other use is prohibited.
10. Only genuine Huck parts shall be used for replacements or spares. Use of any other parts can result in tooling damage or personal injury.
11. Never remove any safety guards or pinnail deflectors.
12. Check clearance between trigger and work piece to ensure there is no pinch point when tool is activated. Remote triggers are available for hydraulic tooling if pinch point is unavoidable.
13. Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle or to bend or pry the tool. Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency, eliminating downtime, and preventing an accident which may cause severe personal injury.

II. PROJECTILE HAZARDS:
1. Disconnect the cutting-off/crimping power tool from energy source when changing inserted tools or accessories.
2. Be aware that failure of the workpiece, accessories, or the inserted tool itself can generate high velocity projectiles.
3. Always wear impact resistant eye protection during tool operation. The grade of protection required should be assessed for each use.
4. For overhead work, wear a safety helmet.
5. Ensure that the workpiece is securely fixed.
6. The risk to others should also be assessed at this time.
7. Be aware of the risk of being exposed to the ejection of cuttings or chips.
8. Be aware that working on brittle material can cause harmful splinters.

III. OPERATING HAZARDS:
1. Use of tool can expose the operator’s hands to hazards including: crushing, impacts, cuts, abrasions and heat. Wear suitable gloves to protect hands.
2. Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
3. Hold the tool correctly and be ready to counteract normal or sudden movements with both hands available.
4. Maintain a balanced body position and secure footing.
5. Release trigger or stop start device in case of interruption of energy supply.
6. Use only fluids and lubricants recommended by the manufacturer.
7. Avoid direct contact with the inserted tool as it can become hot.
8. Sharp tools shall always be used.
10. Be aware of risk of cutting with tools with large dimensions.

IV. REPETITIVE MOTION HAZARDS:
1. When using cutting-off/crimping power tool, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
2. When using tool, the operator should adopt a comfortable posture while maintaining a secure footing and avoid awkward or off balanced postures.
3. The operator should change posture during extended tasks to help avoid discomfort and fatigue.
4. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warnings should not be ignored. The operator should tell the employer and consult a qualified health professional.

V. ACCESSORIES HAZARDS:
1. Disconnect tool from energy supply before changing inserted tool or accessory.
2. Use only sizes and types of accessories and consumables that are recommended. Do not use other types or sizes of accessories or consumables.

VI. WORKPLACE HAZARDS:
1. Be aware of slippery surfaces caused by use of the tool and of trip hazards caused by the air line or hydraulic hose.
2. Proceed with caution while in unfamiliar surroundings; there could be hidden hazards such as electricity or other utility lines.
3. The cutting-off/crimping power tool is not intended for use in potentially explosive environments.
4. Tool is not insulated against contact with electrical power.
5. Ensure there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.

VII. DUST AND FUME HAZARDS:
1. Dust and fumes generated when using cutting-off/crimping power tools can cause ill health; risk assessment and implementation of appropriate controls for these hazards are essential.
2. Risk assessment should include dust created by the use of the tool and the potential for disturbing existing dust.
3. Operate and maintain the cutting-off/crimping power tool as recommended in the instruction handbook, in order to minimize dust or fume emissions.
4. Direct the exhaust so as to minimize disturbance of dust in a dust-filled environment.
5. Where dust or fumes are created, the priority shall be to control them at the point of emission.
6. All integral features or accessories for the collection, extraction or suppression of airborne dust or fumes should be correctly used and maintained.
7. Use respiratory protection in accordance with employer’s instructions and as required by occupational health and safety regulations.

VIII. NOISE HAZARDS:
1. Exposure to high noise levels can cause permanent, disabling hearing loss and other problems such as tinnitus, therefore risk assessment and the implementation of proper controls is essential.
2. Appropriate controls to reduce the risk may include actions such as damping materials to prevent workpiece from ‘ringing’.
3. Use hearing protection in accordance with employer’s instructions and as required by occupational health and safety regulations.
4. Operate and maintain tool as recommended in the instruction handbook to prevent an unnecessary increase in the noise level.
5. Select, maintain and replace the consumable/inserted tool as recommended to prevent an unnecessary increase in noise.
6. If the power tool has a silencer, always ensure that it is in place and in good working order when the tool is being operated.

IX. VIBRATION HAZARDS:
1. Exposure to vibration can cause disabling damage to the nerves and blood supply to the hands and arms.
2. Wear warm clothing when working in cold conditions. Keep hands warm and dry.
3. If numbness, tingling, pain or whitening of the skin in the fingers or hands, stop using the tool, tell your employer and consult a physician.
**DESCRIPTION**

Series **CCX-QD** Hydraulic Collar Cutters are designed to remove LGP® HuckBolt® fasteners with flanged titanium collars, and should be powered by a Huck Powerig® hydraulic unit. The cutters operate on 6,000 psi (413.7 bar) PULL pressure as supplied by a Huck Powerig hydraulic unit. Set the correct pressure according to the applicable Powerig instruction manual.

**Air-triggered** CCX-QD cutters are designed for use with Powerig model 968.

**Electric-triggered** CCX-QD cutters are designed for use with Powerig models 913F, 918, and 940.

**CCX (Non-Sleeve Threaded) and CCXS (Sleeve Threaded) Style**

**SPECIFICATIONS**

**POWER SOURCE:**
Huck POWERIG® Hydraulic Unit

**HOSE KITS:**
Use only genuine HUCK Hose Kits rated at 10,000 psi (689.5 bar) working pressure.

**MAX OPERATING TEMP:**
125° F (51.7° C)

**MAX FLOW RATE:**
2 gpm (7.6 l/m)

**MAX PULL PRESSURE:**
6,000 psi (414 bar)

**WEIGHT:**
6CC & 8CC series: 1.9 lbs (0.86 kg)
10CC & 12CC series: 3.81 lbs (1.72 kg)

**HYDRAULIC FLUID:**
Hydraulic fluid shall meet DEXRON® III, DEXRON VI, MERCON®, Allison C-4 or equivalent Automatic Transmission Fluid (ATF) specifications. Fire-resistant fluid may be used if it is an ester-based fluid such as Quintolubric® HFD or equivalent. Water-based fluid shall NOT be used as serious damage to equipment will occur.
OUTLINE DIMENSIONS

**6CCX & 8CCX Series**

**10CCX & 12CCX Series**

**Figure 1**

Dimensions in inches (mm):
- 6CCX & 8CCX Series:
  - 3.02 (76.7)
  - 6.48 (164.5)
- 10CCX & 12CCX Series:
  - 8.77 (222.7)
  - 4.797 (121.8)
**PRINCIPLE OF OPERATION**

The hydraulic hose and trigger control cord are connected to the Huck Powerig® hydraulic power unit. The trigger, when depressed, controls the PUSH stroke of the tool. Hydraulic pressure is directed to the piston, which then moves forward. Fastener removal (collar cutting) begins as the lever moves, forcing the collar against stationary blades, cutting the collar. When the cutting is completed, the trigger is released. Spring pressure moves the piston rearward to the starting position; and the cutter is ready for the next cutting cycle.

**STICKER PLACEMENT**

All Collar Cutters are equipped with important information, safety, and WARNING stickers. If a sticker becomes unreadable, damaged, worn, or is missing, a replacement sticker must be ordered and placed as shown.

![Sticker Placement Diagram]
**PREPARATION FOR USE**

**WARNINGS:** Huck recommends that only Huck Powerigs be used as a power source for Huck installation equipment.

When operating Huck equipment always wear approved eye protection. Severe eye injury may occur if eyes are not protected.

Tool moves forcibly while cutting collars. Be sure there is adequate clearance for the tool and the operator’s hands before proceeding. Otherwise, severe personal injury may result.

Hydraulic power units that deliver high PULL and RETURN pressures—but which are NOT equipped with RELIEF VALVES—are specifically NOT RECOMMENDED and may be dangerous.

Set the PULL and RETURN pressures as specified in Specifications. Failure to properly set these pressures could result in serious personal injury.

Use Huck Pressure Gauge T-124833CE for setting pressures. Improper pressure settings may result in severe personal injury.

**CAUTIONS:**

Keep dirt and other foreign matter out of the hydraulic systems of tools, hoses, couplers, and the Powerig® hydraulic unit.

Do not let hose and couplers contact a dirty floor or unclean work surface. Foreign matter in hydraulic fluid may cause valve failures in the tool and Powerig.

Do not use Teflon® tape on pipe threads. Tape can shred, resulting in malfunctions.

Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads, hose fitting threads, and quick connect fittings (per manufacturer’s instructions) to prevent leaks and to ease assembly.

Do not abuse the tool by dropping it, using it as a hammer, or otherwise causing unnecessary wear and tear.

Reasonable care of tools by operators is an important factor in maintaining tool efficiency and reducing downtime.

1. Use a Huck Powerig hydraulic unit, or equivalent, that has been prepared for operation per applicable instruction manual. Check the PULL and RETURN pressures, and adjust as required.

2. Screw the PULL pressure hose, with the coupler nipple, into the port of tool.

3. Adjust the trigger assembly on the pressure hose for convenient position if required.

4. Connect the tool hose to the Powerig.

5. Connect the trigger control cord or air line to the Powerig.

6. Connect the Powerig to the power supply (air or electric). Depress the trigger a few times to cycle the tool and to circulate the hydraulic fluid. Observe the action of the tool and cheek for leaks. Disconnect the tool from power supply.

*Threadmate* is a registered trademark of Parker Intangibles LLC.
*Loctite* is a registered trademark of Henkel Corporation, U.S.A.
*Slic-Tite* is a registered trademark of LA-CO Industries, Inc.
*TEFLON* is a registered trademark of E. I. du Pont de Nemours and Company.
Unequal loading of the blades caused by misalignment is the cause of most tool malfunctions. Experience will show the most efficient procedure in each situation. Collars must be cut on the first attempt. Repeated cycling of the tool is likely to cause blade damage. The blades follow the previous blade path without cutting.

1. Place tool over fastener to be removed. (Figure 5 or 6) Check position of blades before triggering tool.
2. Depress tool trigger, and release it when cutting action stops. Remove the tool.
3. If tool is adjusted correctly for swaged condition of the collar, one stroke will remove the collar. (See Adjustments for detailed instructions.) When collar is cut but still attached to fastener, use appropriate hand tools to complete collar removal.
4. Tap the end of the fastener with soft-faced mallet to remove it from the hole.

Removing Partially Cut Collars (Figure 7)

1. Place the G57F over the fastener to be removed, and squeeze the handles, closing the blades around the pin.
2. Move the G57F handles up and down as shown in direction of arrows until the collar separates from the pin.

WARNING: The tool moves forcibly while cutting collars. Be sure there is adequate clearance for the tool and the operator's hands before proceeding. Otherwise, severe personal injury may result.

CAUTIONS:
- Tool must be held perpendicular to sheet. Tool heads must be flat against sheet.
- Tool must be centered on collar to ensure proper cutting action.
- If a collar is partially cut, do not force the cutter over collar. This will damage the locating pins in the tool pocket. See Removing Partially Cut Collars below.
- To prevent structural and tool damage, be sure there is enough clearance for the tool to move while cutting collars.
- Check the tool for collar segments after each cutting stroke. Segments not removed from tool will cause damage to the tool and the fastened structure.

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MAINTENANCE

GOOD SERVICE PRACTICES
The operating efficiency of any installation or removal tool depends upon proper maintenance and good service practices. Tools should be serviced by personnel who are thoroughly familiar with them and how they operate. Service the tool in a clean, well-lighted area. Give special care to prevent contamination of pneumatic and hydraulic systems. Carefully handle all parts and components. Before reassembly, examine hoses, parts, and components for damage and wear; replace when necessary.

Disassemble and assemble tool components in a straight line without bending, cocking, or undue force. Follow the disassembly and assembly procedures in this manual. Appropriate hand tools and soft materials to protect tool must be available. Only standard hand tools are required. A half-inch brass drift, and wood block and vise with soft jaws will prevent damaging tools.

NOTE: As experience shows, components such as jaws should be kept on hand for repairs. Keep perishable parts such as O-rings and seals on hand for replacement whenever the tool is disassembled.

PREVENTIVE MAINTENANCE
With proper care, the cutter will remove 200 collars before it may be necessary to replace the blades. Lubricate the area between the housing, wedge, and lever with Never-Seez every fifty fasteners. After 200 fasteners, the cutter should be disassembled, cleaned in mineral spirits, and blown dry with compressed air. When parts are completely dry, coat the specified areas with molybdenum disulfate solution (suggested product is MOLYKOTE® 106). When replacing a blade set, coat it with Never-Seez during assembly.

SYSTEM INSPECTION
The operating efficiency of the tool is directly related to the performance of the complete system, including the tool, hydraulic hoses, trigger assembly, and the Powerig® hydraulic unit. Therefore, an effective preventive maintenance program includes scheduled inspections of the system to detect and correct minor troubles.

Inspect the tool for external damage. Verify that hoses and fittings, and trigger connections are secure. Inspect hydraulic hoses for signs of damage; replace if necessary. Inspect tool, hoses, and Powerig during operation to detect abnormal heating, leaks, or vibration.

POWERIG MAINTENANCE
Maintenance instructions and repair procedures are in the applicable Powerig Instruction Manual.

TOOL MAINTENANCE
Whenever disassembled, and at regular intervals, replace all seals in the tool. Spare seals and parts should be kept on hand.

Inspect cylinder bore and piston for scored surfaces, excessive wear, and damage; replace as necessary.

Never-Seez is a registered trademark of Bostik, Inc.

MOLYKOTE is a registered trademark of Dow Corning Corporation

CAUTION: Always replace all seals, wipers, O-rings, and Back-up rings when the tool is disassembled for any reason.

TROUBLESHOOTING
Always check the simplest possible cause (such as a loose or disconnected trigger line) of a malfunction first. Then proceed logically, eliminating other possible causes until the cause is discovered. Where possible, substitute known good parts for suspected defective parts. Use this troubleshooting information to aid in locating and correcting trouble.

1. **Cutter fails to operate when trigger is pressed.**
   b. Loose air or electric connections.
   c. Damaged trigger assembly.
   d. Loose or faulty hydraulic hose couplings.
2. **Cutter blades do not cut through collar.**
   a. Reversed hydraulic hose connections between hydraulic unit and collar cutter.
3. **Cutter leaks hydraulic fluid.**
   a. Defective seals or loose hose connections at tool.
4. **Hydraulic couplers leak fluid.**
   a. Damaged or worn O-rings in coupler body. See illustration.
5. **Hydraulic fluid overheats.**
   a. Powerig not operating properly; see unit’s manual.
6. **Cutter operates erratically and fails to cut collar.**
   a. Low or erratic hydraulic pressure supply; air in system.
   b. Damaged or worn piston Polyseal in cutter.
   c. Excessive wear on sliding surfaces of tool parts.
   d. Excessive wear of blades or damage.
7. **Cutter blades fail to open when trigger is released.**
   a. Return spring is weak or broken.
The Collar Cutter is designed to remove a fully swaged collar in one stroke when adjusted with the set plug gauge that is supplied with the tool. (Set plug gage part number is 130045-*, where *= fastener size. e.g. 130045-6 is shipped with cutter 6CCX; 130045-10 is shipped with cutter 10CCX, etc.) The Collar Cutter can be adjusted to cut partially swaged collars by increasing the opening between the lever and the blades. **NOTE: See the applicable tool drawing for set plug gauge part number. Check fastener size.**

**LUBRICANTS & SEALANTS**

Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads—per manufacturer’s instructions—to ease assembly and to prevent leaks.

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<th>Description</th>
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**ADJUSTMENTS**

**PART NO.**

**DESCRIPTION**

**USE ON**

- 502865 Truarc Pliers #0200 500989 & 500991
- 502655 9/64” Hex Key 500054
- 502296 3/16” Hex Key 119513 & 123703

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**FULLY SWAGED COLLAR**

1. Adjust the gap opening between the blades and the lever by inserting a 3/16” hex key through the hole in the end cap and into the piston hex. The turning key moves the wedge and lever simultaneously. Adjust until a slight interference is felt on the flange diameter of the collar between the blade and the lever.
2. Check the tool on a test plate with properly installed fasteners. See **ADDITIONAL PROCEDURES AFTER ADJUSTMENT**.
3. Fill the tool with fluid and replace the hose kit.

**PARTIALLY SWAGED COLLAR**

Simulate the “partially swaged” condition by installing fasteners in a test plate using spacers (shim stock) equally spaced under the anvil of the nose assembly. Install the fasteners with various shims until the desired “partial swage” is obtained.
1. Follow **FULLY SWAGED COLLAR** steps 1–3.
2. Remove the gauge.

**ADDITIONAL PROCEDURES AFTER ADJUSTMENT**

After final adjustments have been made, if the collar cannot be cut with one stroke, remove the collar with appropriate hand tools. See Figure 7. If increased efficiency is required, more than one cutter can be used: one adjusted to cut **fully swaged** collars and one adjusted to cut **partially swaged** collars.
DISASSEMBLY PROCEDURE

WARNINGS:
Be sure hose and trigger assembly is disconnected from the Powerig® hydraulic unit before cleaning or replacing worn or damaged components. Severe personal injury may occur if not disconnected.

If the cap, piston, and spring are not restrained, they will forcibly eject from the housing. Disassemble using the following steps to prevent this:

1. If the wedge is broken from the piston, or if it has been unscrewed from the piston, the CAP MUST BE HELD FIRMLY WHILE THE RETAINING RING IS BEING REMOVED.
2. If the retaining ring has been removed before the wedge is unscrewed from the piston, the CAP MUST BE HELD FIRMLY WHILE THE WEDGE IS BEING UNSCREWED. SEVERE PERSONAL INJURY MAY RESULT IF THE UNRESTRAINED SPRING FORCIBLY EJECTS THE CAP AND PISTON FROM THE HOUSING.

Refer to MAINTENANCE and the Assembly Drawings in this manual. The following procedure is for complete disassembly. Disassemble only those subassemblies necessary to check and replace damaged seals and components.

1. Uncouple the hydraulic hose connector and electrical control cord connector or air connector from the power source.
2. Use the 1/8" hex key to remove the socket-head cap screw from blade. Remove blade from the housing.
3. Use a mallet and brass rod to tap the split pin from the housing. Remove the torsion spring.
4. Use TRUARC pliers #0200 to remove the retaining ring from the pin.
5. Push the pin from the housing. Remove the lever.
6. Remove the hydraulic hose from the elbow. Remove the quick disconnects.
7. Unscrew the elbow from the cap. Hold the cap wrench flats to prevent the cap from turning.
8. Unscrew cap retainer from the cap. Hold the flats.
9. READ WARNINGS above. Remove the retaining ring using a pointed tool.

CAUTIONS: Replace all seals, wipers, and rings when the tool is disassembled for any reason, and at regular intervals, depending on severity and length of use.

10. READ WARNINGS. Use the 3/16" hex key to unscrew the piston from the wedge.
11. Carefully release the pressure from the cap, piston, and spring. Remove these components from the housing.
12. Use a small-diameter rod with a dull point to remove Polyseal and O-rings from the components.

See Assembly Drawing SWITCH AND ELECTRIC CORD KIT

14. Loosen the strain relief that is holding the electric cord. Unscrew the strain relief from the switch housing.
15. Use a thin screwdriver to pry the trigger switch assembly from the housing.
16. Unscrew both socket screws attaching the wires to the switch. Pull the cord from the switch and strain relief.
17. Loosen both screws on the face of the connector; disassemble the connector. Loosen the screws and remove the wires.

See Assembly Drawing AIR TRIGGER AND HOSE ASSEMBLY

18. Loosen the large hex on the air fitting and the hex on the disconnect fitting. Remove the tubing. Unscrew the air fitting from the trigger housing assembly.
19. Unscrew the hose fitting; then unscrew the air trigger assembly.
20. Disassemble the air trigger assembly.

Store all re-usable parts (screws and disassembled components) in a clean, dry area.
ASSEMBLY PROCEDURE

Clean all components with mineral spirits. Inspect for wear and damage; replace as necessary. **Replace all seals of disassembled components.** Use O-rings and Polyseals supplied in Spare Parts Service Kits. See applicable service kit parts list. Smear LUBRIPLATE® 130-AA (Huck P/N 502723) or SUPER-O-LUBE® (Huck P/N 505476) on rings, polyseal, and mating components to facilitate assembly. When assembling the tool, do NOT damage the O-ring or the polyseal.

**CAUTION: Remove Elastomer Spring from Polyseal prior to assembly in tool.**

See Assembly Drawing Air Trigger and Hose Assembly

1. Assemble air trigger assembly.
2. Screw hose fitting into housing. Screw air trigger assembly into housing. Tighten both parts.
3. Start air fitting onto hose fitting. Push tubing into fitting, then tighten fitting.
4. Push other end of tubing into disconnect fitting and tighten.

See Assembly Drawing Switch and Electric Cord Kit

5. With connector disassembled, push cord through top of connector. Push both wires into holes in base; tighten both retaining screws.
6. Squeeze assembled base and top together until both connecting screws are seated. Continue tightening screws until cord is firmly gripped.
7. Screw strain relief into housing and tighten.
8. Push cord through strain relief. Push each wire into an attaching hole in back of electric switch assembly and tighten both screws.
9. Lubricate the O-ring and, using arbor press, press electric switch into housing. Tighten the strain relief on the cord.
10. Position air trigger hose/electric switch cord and hose spacer in lower half of housing clamp. Put hydraulic hose in clamp near cutter end of hose. Allow extra space on hose so hose guard can be pulled back to allow access to hex hose fitting.
11. Place upper half of housing clamp over components in lower half. Join halves with two screws, lockwashers, and nuts. When properly aligned, tighten screws.
12. Hold housing in a soft-jawed vise.
13. Slide spring over piston. Push piston into housing. Hold cylinder cap against back of piston and push both into housing until retainer can be installed.
14. Screw retainer cap onto cylinder cap and tighten.
15. Apply Vibra-Tite® to piston threads. Hold wedge in position in housing. Insert 3/16” hex key through back of cap, and screw piston onto wedge. **NOTE: Apply NEVER-SEEZ® and MOLYKOTE® 106 to contact surfaces between wedge and lever.** (Figure 9)
16. Hold lever in position in housing, and push pin through housing and lever. Use TRUARC Pliers #0200 to install the retaining ring.
17. Position torsion spring in housing, and tap split pin through housing and spring.
18. Place blade in housing and use 1/8” hex key to install cap screw. **NOTE: Adjust tool lever before elbow is attached to tool. See Adjusting for Partially Swaged Collars.**
19. Screw in elbow after adjusting lever. Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to pipe threads and tighten the connection. **NOTE: Elbow can be omitted and hose installed directly into cylinder cap. This configuration provides advantages with some structural forms.**
20. Install hose assembly into elbow. Install quick disconnects.
21. To prevent air being trapped in tool, causing loss of hydraulic pressure, fill hydraulic hose and tool with hydraulic fluid before screwing hose into elbow. Use TEFLO® thread compound.

**Loctite** is a registered trademark of Henkel Corporation, U.S.A.
**LUBRIPLATE** is a registered trademark of Fiske BrothersRefining Co.
**Threadmate and SUPER-O-LUBE** are registered trademarks of Parker Intangibles LLC.
**Never-Seez** is a registered trademark of Bostik, Inc.
**TEFLON** is a registered trademark of E. I. du Pont de Nemours and Company.
**Slic-tite** is a registered trademark of LA-CO Industries, Inc.
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See Assembly Drawing Air Trigger and Hose Assembly

**Figure 9** Lever & Wedge Lubrication
**SUBASSEMBLY PART NUMBERS AND DRAWINGS**

### 6CCX-QD, CCX-QD, & 8CCXS-QD

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>128884</td>
<td>Piston Assembly contains: Piston, (<em>not available separately</em>) and Polyseal</td>
</tr>
<tr>
<td>128878</td>
<td>End Cap &amp; Swivel Assembly (Figure 10)</td>
</tr>
</tbody>
</table>

### 10CCX-QD & 12CCX-QD

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>128970</td>
<td>Piston Assembly contains: Piston, (<em>not available separately</em>) and Polyseal</td>
</tr>
<tr>
<td>128951</td>
<td>End Cap &amp; Swivel Assembly (Figure 11)</td>
</tr>
</tbody>
</table>
ASSEMBLY DRAWING 6CCX-QD

Figure 12
Figure 13

Assembly Drawing 8CCX-QD

Parts List:

- 128876 End Cap & Swivel Assy
- 128877 Spring
- 128871 Housing
- 508179 Spring
- 508130 Split Pin
- 128874 Wedge
- 508042 Male Pipe Nipple
- 110438 Coupler Nipple
- 503431 Reducer Bushing
- Also shipped with tool

Legend:

- 50098 Caution Sticker
- 50073 Warning Sticker
- 500272 Caution Sticker
- 500273 Warning Sticker
- 500245 Caution Sticker
- 500247 Sticker
- 505827 Polyseal
- 502101 Screw
- 505737 Screw
- 119783 Torsion Spring
- 128941 Lever Guard
- 128941 Retaining Ring (Not Shown)
CCX and CCXS Collar Cutters (HK1103)

ASSEMBLY DRAWING 8CCXS-QD

FIGURE 14
Figure 15

10CCX-QD
**ASSEMBLY DRAWING 12CCX-QD**

**Figure 16**

- **128951 End Cap & Swivel Assy**
- **508377 Polyseal**
- **506478 Spring**
- **128944 Housing**
- **505737 Screw**
- **128945 Blades**
- **502101 Screw**
- **128948 Pin**
- **128949 Piston**
- **128947 Wedge**
- **128946 Lever**
- **500635 Split Pin**
- **500991 Retaining Ring (not shown)**
- **502772 Caution Sticker**
- **500245 Caution Sticker**
- **508042 Male Pipe Nipple**
- **110436 Coupler Nipple**
- **503431 Coupler Body**
- **503431 Reducer Bushing**

Also shipped with tool.
ASSEMBLY DRAWINGS

**Figure 17**

**Switch and Electrical Cord Kit, 120245-2**

- 500780 O-Ring
- 505344 Strain Relief
- 120341 Electric Cord
- 110686 Male Connector

If needed for replacement, the Housing must be purchased separately.

**Figure 18**

**Air Trigger and Hose Assembly, 120346**

- 119345 - Air Trigger Assem. Includes:
  - 112556 - Air Trigger Body
  - 112555 - Air Trigger Stem
  - 500777 - O-Ring (Large)
  - 500773 - O-Ring (Small)
- 112143 Tubing
- 113021 Male Disconnect
- 503902 - Air Fitting
- 120344 - Housing
- 119331 - Air Trigger Fitting
- 119332 Hose Fitting

sold separately:
- 500780 - O-Ring
**ASSEMBLY DRAWINGS (CONTINUED)**

**Figure 19**

**Hose and Switch Kit, 120347**

120345 Switch & Electric Cord Assy

122447 Switch Guard

108278 Clamp Assy includes:
- 108294 Clamp
- 500428 Screw (2)
- 500180 Lock Washer (2)
- 503141 Nut (2)

118944-1 Hydraulic Hose

503431 Reducing Bushing

110438 Coupler Nipple

**Figure 20**

**Hydraulic Hoses and Air Trigger Assembly, 120348**

120346 Air Trigger & Hose Assy (Ref)

108278 Clamp Assy

118944-1 Hydraulic Hose

503431 Reducing Bushing

110438 Coupler Nipple
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