

**LaBounty**<sup>®</sup>

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**UPX**

**UNIVERSAL PROCESSORS**

**SAFETY, OPERATION & MAINTENANCE**

514821 User Manual 6/2019 Ver. 4

# PREFACE

This manual contains information for the safe operation and maintenance of the LaBounty UPX Universal Processor. Read the entire manual before the initial start-up of the attachment. It is important to know the correct operating procedures of the attachment and all safety precautions to prevent the possibility of property damage and personal injury.

The LaBounty attachment has been designed and manufactured with high quality materials and care in workmanship. The instructions in this manual have been prepared to ensure that, when followed properly, the attachment will provide efficient and reliable service. Continuing product development and improvement may have caused changes in the attachment that are not reflected in this manual. If a question arises regarding the operation or maintenance of the attachment, contact a LaBounty dealer for the most current information available.

## IMPORTANT

This operator's manual must accompany the attachment at all times and be readily available to the operator.

## MANUAL REPLACEMENT

Should this manual become damaged, lost or additional copies are required, immediately contact any authorized LaBounty dealer. You may also download a PDF copy at [www.stanleyinfrastructure.com](http://www.stanleyinfrastructure.com).

## REGISTRATION FORM

The Warranty Registration Form must be filled out by the dealer or customer and returned to LaBounty indicating the date the machine went into service.

## POSSIBLE VARIATIONS

LaBounty cannot anticipate every possible circumstance that might involve a potential hazard, as the owner's requirements and equipment may vary. Therefore, the warnings in this publication and on the product may not be all-inclusive and you must ensure that the procedure, application, work method and operating technique is safe for you, and others, before operation.

## PUBLIC NOTICE

LaBounty reserves the right to make changes and improvements to its products and technical literature at any time, without public notice or obligation. LaBounty also reserves the right to discontinue manufacturing any product at its discretion, at any time.

## WARRANTY

All work or repairs to be considered for warranty reimbursement must be authorized by the LaBounty Service Department before work is started. Any alterations, modifications or repairs performed before authorization by the LaBounty Service Department will render all warranty reimbursement consideration null and void without exception. Improper operation or improperly performed maintenance may render any warranty null and void.

# CONTENTS

<b>SAFETY .....</b>	<b>4</b>
<b>DECALS.....</b>	<b>6</b>
<b>TERMS .....</b>	<b>7</b>
<b>INSTALLATION .....</b>	<b>9</b>
Third Member Installation.....	9
Second Member Installation.....	9
Third Member-To- Second Member Adapter Bracket (Optional).....	10
Third Member Installation.....	10
Second Member Installation.....	10
Hydraulic Installation .....	11
<b>OPERATION.....</b>	<b>12</b>
Before You Start .....	12
Safety Devices .....	12
Attachment Controls.....	13
Bleed the Hydraulic Cylinders.....	14
Operating Tips .....	14
Changing Jaws .....	15
<b>MAINTENANCE .....</b>	<b>16</b>
8-Hour Inspection Checklist.....	16
80-Hour Inspection Checklist.....	17
2,000-Hour Inspection Checklist.....	17
Hydraulic Inspection.....	18
Swift-Lock Teeth Maintenance .....	18
Lubrication.....	19
Turntable Bearing Lubrication.....	20
Planetary Gearbox Lubrication.....	20
Inspect / Torque Bolts .....	21
Main Pivot Group Maintenance.....	22
Blade Maintenance.....	22
Check the Cylinder Gap.....	26
Build Up & Wear Plates.....	27
Swift-Lock Teeth Build Up.....	28
Hydraulic Maintenance .....	28
Control Valve Schematics and Descriptions.....	29
UPX Hydraulic Schematic .....	30

# SAFETY

	The Safety Alert Symbol alerts you to potential personal injury hazards. Obey all safety messages that follow to avoid possible injury or death.
	Indicates an imminently hazardous situation which will result in death or serious injury.
	Indicates a potentially hazardous situation which could result in death or serious injury.
	Indicates hazards that could result in damage to the equipment or personal injury
	Indicates important procedures



Your safety and the safety of others is a direct result of how you operate and maintain your equipment. Read and understand this manual and other safety information provided with the base machine and be sure that you understand all controls and operating

instructions before attempting to operate this equipment. Failure to follow the safety precautions can result in personal injury, death or property damage.

Carefully read all safety messages in this manual and on your equipment safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs.

Because LaBounty cannot foresee all hazardous circumstances, the precautions listed in this manual and on the equipment are not all-inclusive. If a procedure, method, tool or part is not specifically recommended by LaBounty, determine whether it is safe for you and others, and that the equipment will not be damaged or made unsafe as a result of your decision to implement it.

The basic rules are summarized in this section of the manual. They also appear throughout the manual along with additional specific rules for safety and operation.

## GENERAL

- If the attachment is not functioning properly, shut down the machine, follow proper Lock-out / Tag-out

- procedures and follow proper repair procedures.
- Remove and replace any damaged or worn parts with parts recommended by LaBounty. Use of parts that are not factory approved may cause damage or unnecessary downtime and may void the warranty.
- NEVER operate equipment without the original safety guards in place.
- DO NOT process material with the attachment over the operator's cab. Doing so will result in severe personal injury or death from falling debris.
- DO NOT attempt to process brittle materials, such as axles and railroad rail. DO NOT process any material in a position that may propel it toward the operator, other workers, buildings or equipment.
- Clear all persons and equipment from the area of operation and machine movement. NEVER move loads over people or equipment. When viewing the operation of the attachment, maintain a safe distance of at least 30 feet (10 meters).
- NEVER approach power lines with any part of the machine. Keep clear at a minimum of 15 feet (5 meters).
- DO NOT close the attachment on a structure and reverse the excavator in an attempt to pull down material.
- Use of this tool on certain materials could generate dust potentially containing a variety of hazardous substances, such as, asbestos, silica or lead. Inhalation of dust containing these, or other hazardous substances could result in serious injury, cancer or death. Protect yourself and those around

you. Research and understand the materials you are processing. Follow safety procedures and comply with all applicable national, state or provisional health and safety regulations relating to them. If appropriate, arrange for the safe disposal of the materials by a qualified person.

- Disassembly of any pin-connected attachment can be hazardous. NEVER remove any pin unless the attachment is on the ground and blocked up. Serious injury or death could result. Metal chips or debris may fly when a connecting pin is struck. Use a brass drift when striking pins and always wear protective clothing and proper eye protection. Pins may fly when struck with force to drive them in or out. Always keep people clear when removing or installing pins.
- Do not operate this, or any other equipment, under the influence of drugs or alcohol.
- DO NOT modify LaBounty equipment without factory authorization. This equipment is designed to do a specific job and alterations could result in injury.
- ALWAYS lower the boom to the ground before leaving the cab. If it is necessary to work on an attachment off the ground, securely support the machine and attachment. DO NOT support the machine on cinder blocks, hollow tiles or props that may crumble under continuous load. DO NOT rely on a cylinder to hold the attachment in the air. If a control is moved or hydraulic pressure is otherwise released, the attachment may drop. DO NOT work under a machine that is supported only by a jack.
- DO NOT weld on any structural member unless specifically authorized by LaBounty. Unauthorized welding will void the warranty, may cause structural failure and could result in personal injury.
- Keep clear of potential pinch points, including the moving upper jaw, cylinder connections, bucket linkages and other moving parts.
- Before operating the attachment, read and observe all safety instructions in the Operation & Maintenance manual. If you are unfamiliar with any operation or maintenance procedure, seek instruction before proceeding.
- Inspect the attachment daily. Do not operate a poorly maintained or damaged attachment.
- Never operate a machine if an unsafe condition exists. Attach a "Do Not Operate" tag to the machine.

## BASE MACHINE

- Ensure that the cab is equipped with the proper safety guards for LaBounty applications. The cab MUST be equipped with an approved Falling Object Protection Structure (FOPS). The FOPS must meet the requirements of SAE standard J1356. A transparent, shatter-resistant shield covering the front of the cab, is also required. Contact your base machine equipment dealer or manufacturer for more

information on the availability of FOPS. Lack of proper FOPS may result in injury or death.

- Avoid tipping. The attachment will alter the lift capacities of the base machine. DO NOT overload the excavator or serious injury could result. Lift capacities will vary if the base machine is not on level ground. Lifting incorrectly can cause severe injury or machine damage. Use the recommended excavator counterweight. Use short slings and lift the load only as high as necessary.
- DO NOT allow riders on the machine. Riders are subject to serious injuries, such as being struck by foreign objects or being thrown off the machine. Riders also distract and obstruct the operator, resulting in the machine being operated in an unsafe manner. NEVER use the attachment as a work platform or personnel carrier.
- Check ground conditions before operating. Avoid unstable or slippery areas and position the base machine on firm, level ground. If level ground is not possible, position the base machine to use the attachment to the front or back of the carrier. Avoid working over the side of the base machine.

## HYDRAULIC

- Hydraulic oil becomes hot during operation. DO NOT come in contact with hot hydraulic oil as it could cause severe burns. Wear adequate protective clothing and safety equipment.
- DO NOT tamper with hydraulic lines or components while they are pressurized. Escaping fluid under pressure can penetrate the skin, causing serious injury. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard to search for leaks. If ANY fluid is injected into the skin, seek immediate medical assistance.

## PPE

- ALWAYS wear close-fitting clothing and safety equipment appropriate to the job. Safety equipment should be worn at all times when viewing, operating or maintaining the attachment. Safety equipment includes eye protection, hard hat, steel toe shoes, gloves, hearing protection and respirator.

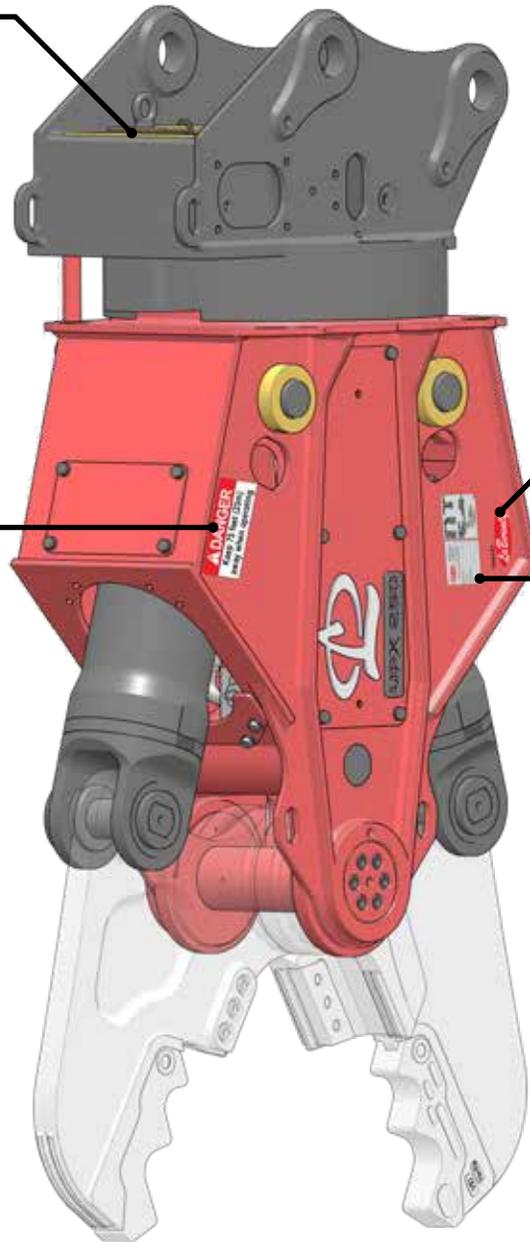
# DECALS



Cab Guard Decal  
503647  
**FIGURE 1**



LaBounty brand decals  
**FIGURE 2**



Safe Distance Decal  
503706

	1538 Highway 2 Two Harbors, MN 55616 tel: 1-800-522-5059 fax: 218-834-3879 www.stanleyhydraulics.com
Made in the U.S.A. with Global Materials	
Attachment Model:	
Serial Number:	
Year of Manufacture:	
Weight:	

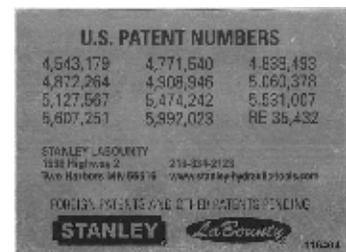
Model/Serial Number Plate  
511045  
**FIGURE 3**



Safety first decal  
503590  
(Included with manuals)  
**FIGURE 5**



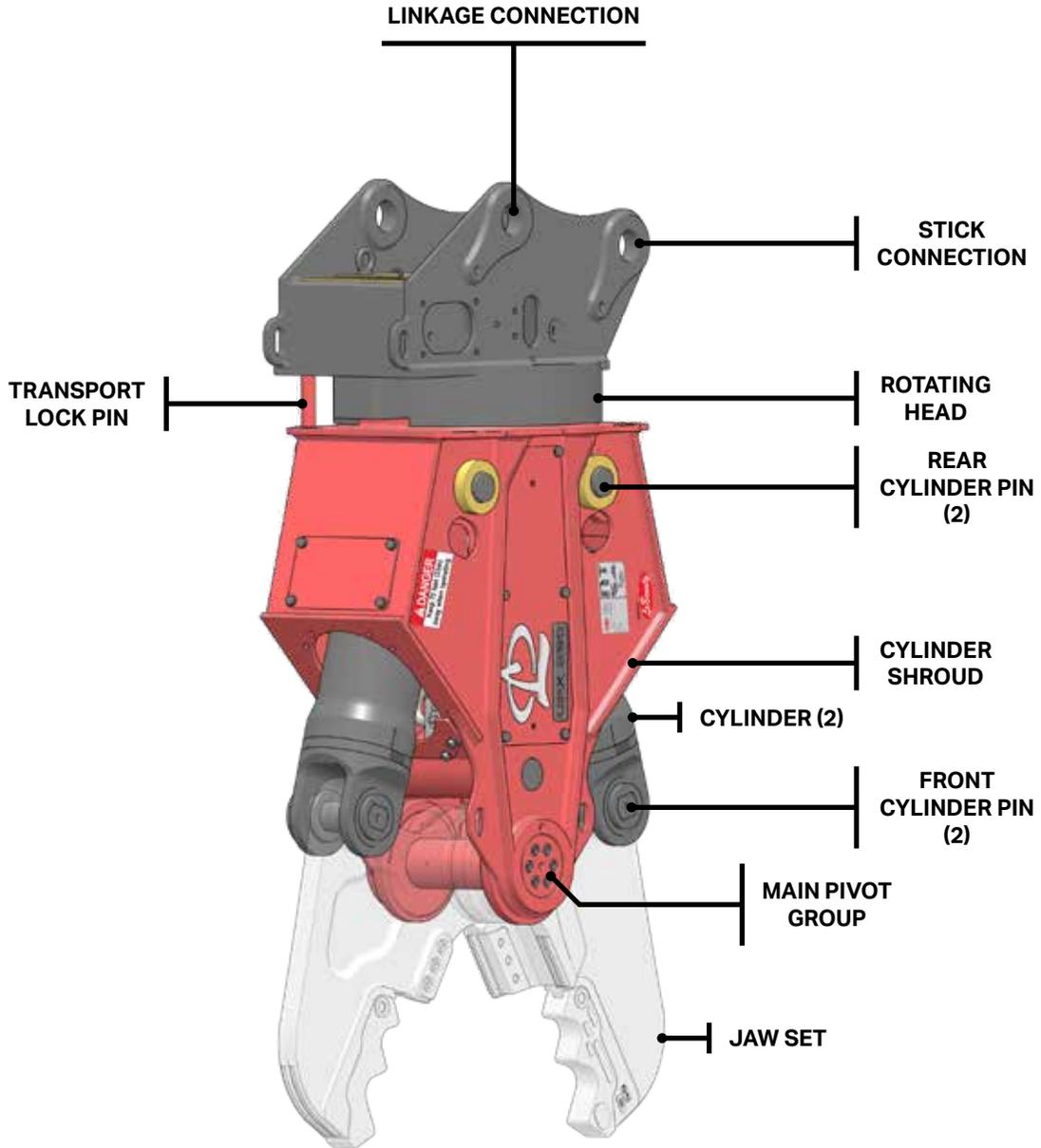
Grease Decal (At each fitting)  
116388  
**FIGURE 6**



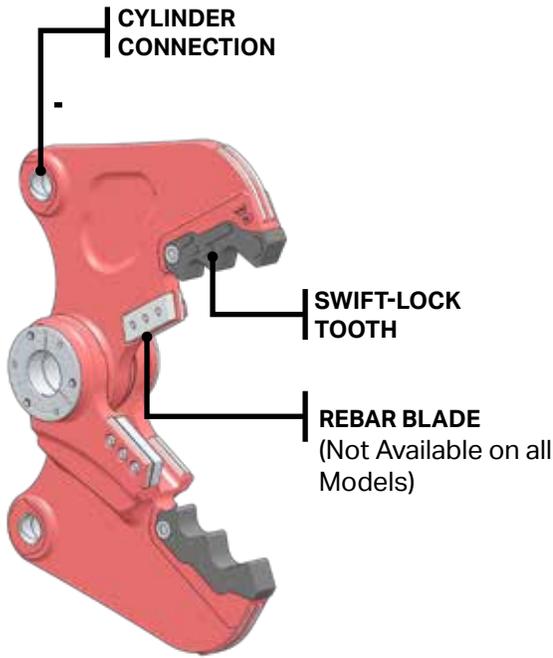
Patent Plate  
116404  
**FIGURE 4**



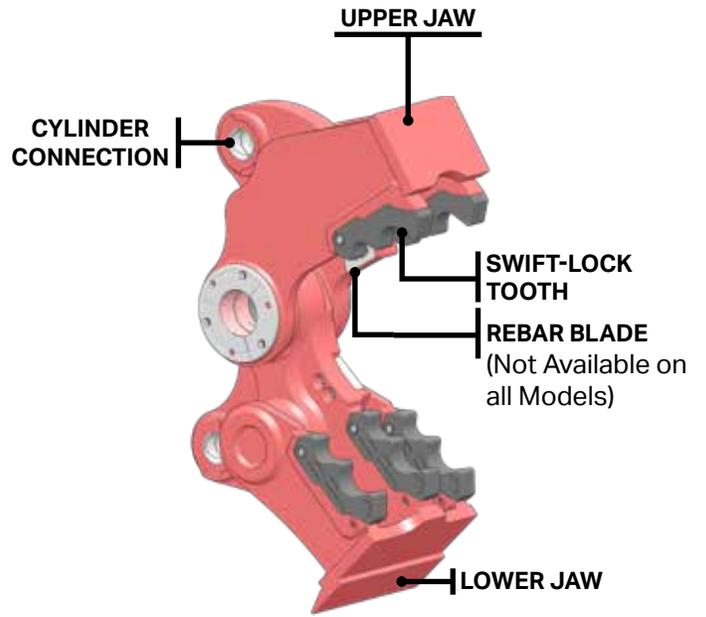
# TERMS



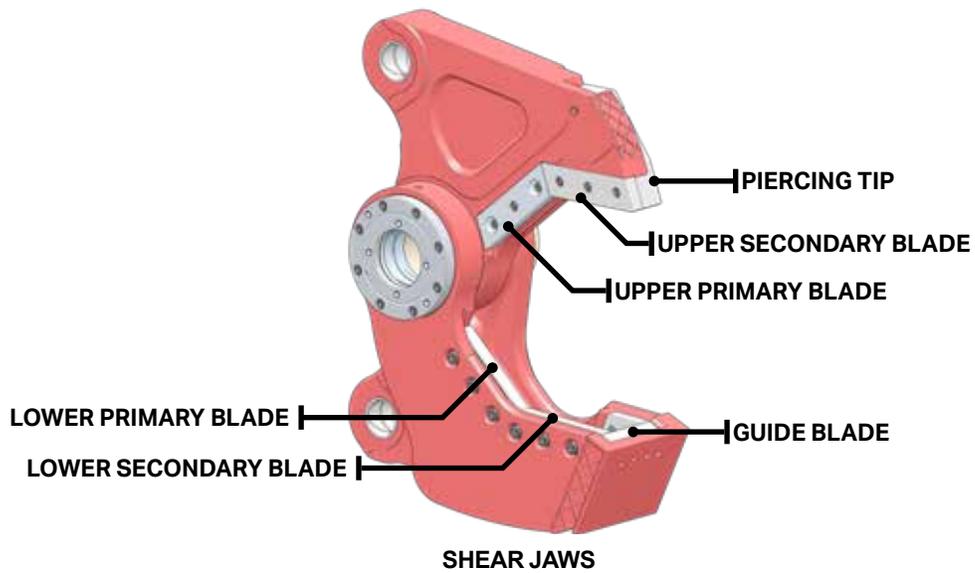
# TERMS



CONCRETE CRACKER JAWS



CONCRETE PULVERIZER JAWS



SHEAR JAWS

# INSTALLATION

## ⚠️ WARNING

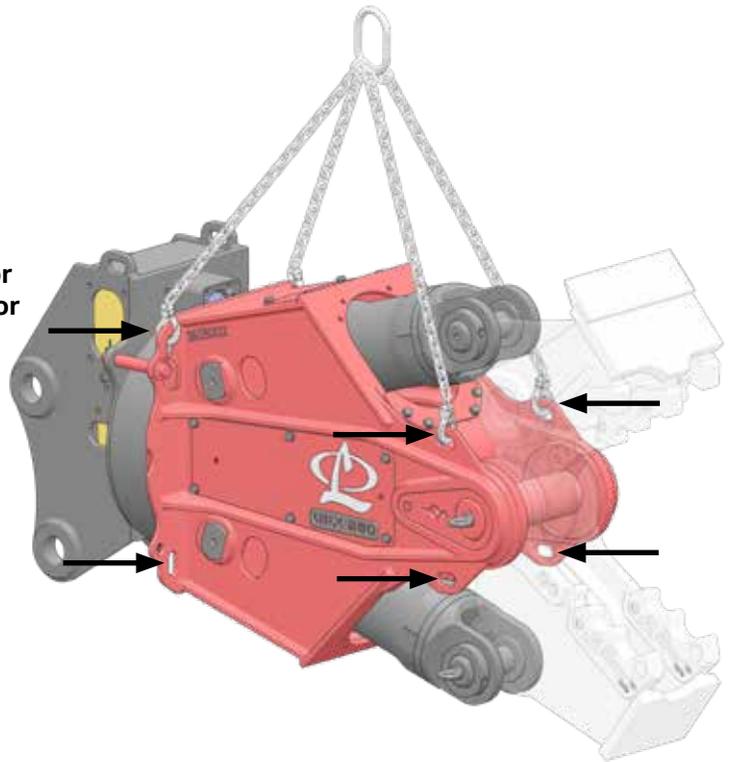
Use only approved rigging hardware rated for loads greater than the weight of UPX. Hooking Points are for moving the attachment only. Do not lift other objects or use UPX in a cable-hung application.

1. Locate flat, hard ground (e.g., concrete floor) for installation. Lift and place the attachment on the ground as shown. Use blocking if necessary.
2. Remove the Transport Lock Pin.

**Note: Insert the Transport Lock Pin when transporting UPX.**

3. Remove the bucket (third member attachment) or the excavator stick (second member attachment). Follow the manufacturer's recommended procedure.

**Note: Plug hydraulic hoses to prevent contamination.**



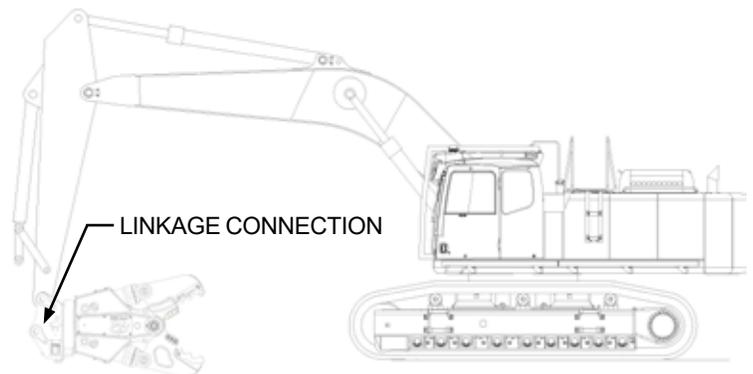
Hooking Points for Lifting  
**FIGURE 7**

## THIRD MEMBER INSTALLATION

1. Bring the excavator into position, carefully lining up the stick tip with the UPX mounting bracket. Pin the stick tip to the UPX mounting bracket using the pin provided.
2. Carefully extend the bucket cylinder to move the bucket linkage. Position the link into the mounting bracket linkage connection.

**Note: It may be necessary to use a lifting device (overhead hoist, forklift, etc.) to position the link.**

3. Pin the linkage connection using the pin provided.

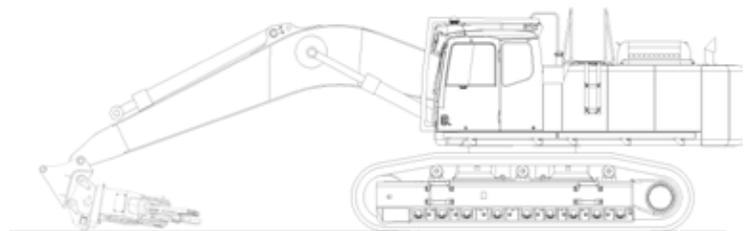


Third Member Installation  
**FIGURE 8**

## SECOND MEMBER INSTALLATION

1. Pin the excavator boom and attachment boom pivot together using the same pin that was used for pinning on the stick.
2. Clear all personnel and instruct the operator to slowly lift the attachment so there will be enough clearance to pin the excavator cylinder to the cylinder connection on the mounting bracket.
3. Extend the cylinder rod and connect the cylinder connection. Install the pin provided with the mounting bracket.

**Note: It may be necessary to use a lifting device (overhead hoist, forklift, etc.) to position the cylinder.**



Second Member Installation  
**FIGURE 9**

## THIRD MEMBER-TO- SECOND MEMBER ADAPTER BRACKET (OPTIONAL)

The third member to second member adapter bracket option allows the Universal Processor to be mounted as a third member, then quickly mount as a second member on another, smaller carrier.

**Note: Not all combinations of carriers will work. Use of carriers must be approved by the LaBounty Applications Department.**

### THIRD MEMBER INSTALLATION

1. Locate flat, hard ground (e.g., concrete floor) for installation. Lift and place the attachment on the ground as shown. Use blocking if necessary.
2. Remove the bucket. Follow the manufacturer's recommended procedure.

**Note: Plug hydraulic hoses to prevent contamination.**

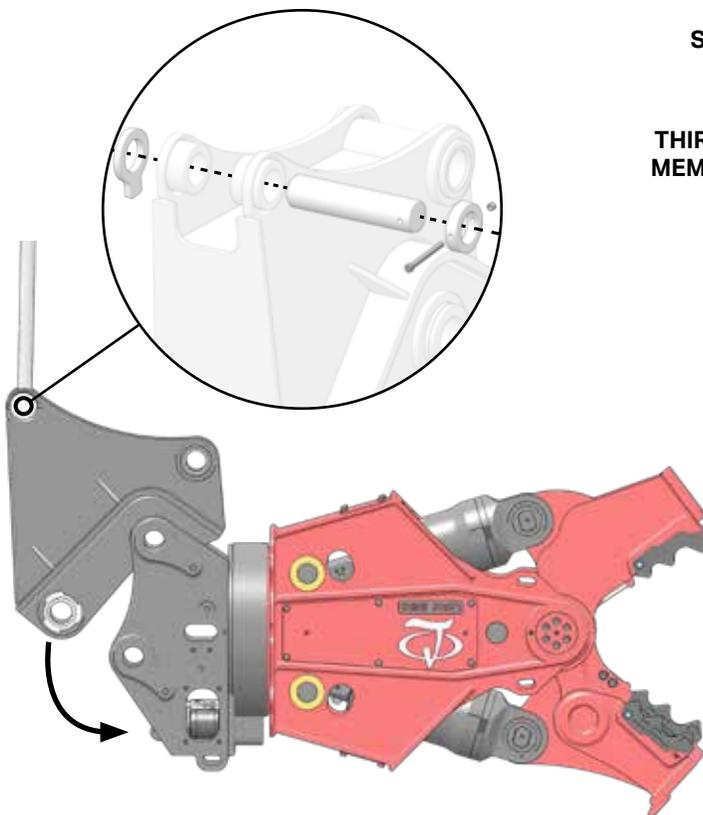
3. Use an overhead crane with a lifting strap through the stick cylinder connection, to lower the adapter bracket into place so the stick connection pin can be installed. Use the existing third member bracket pin.

**Note: Ensure the crane and the lifting strap are rated to safely lift the adapter.**

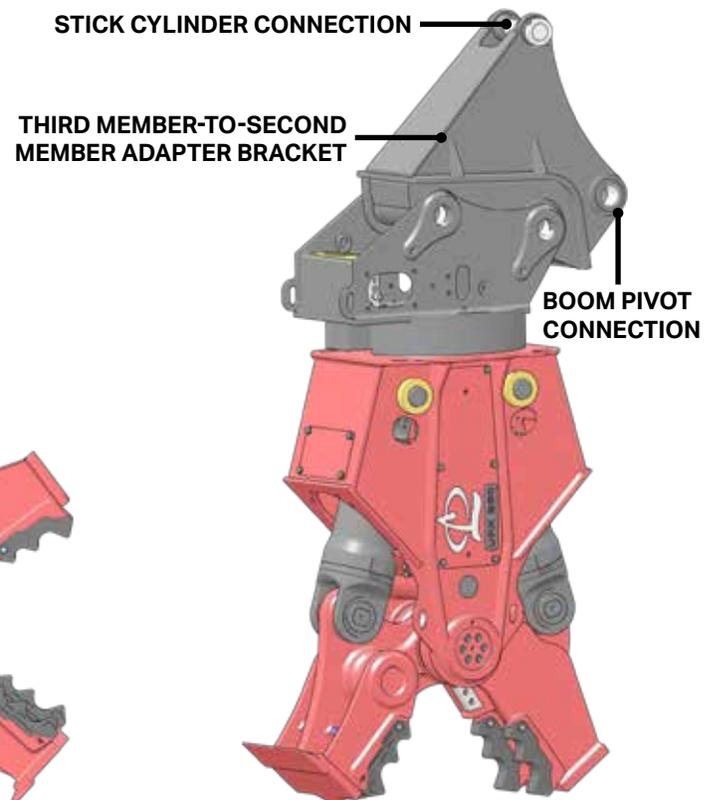
4. Apply a thin coating of grease to the inside and outside diameters of the linkage connection sleeves. Slide the sleeves into the bores on each side of the adapter bracket.
5. Lower the bracket so the linkage connection bores line. If the bores line up closely, it may be possible to install the pin at this time.
6. The inside diameter of the linkage connection sleeves are off-center from the outside diameter. This allows the bores on the adapter bracket to be aligned with the bores on the third member bracket by rotating the sleeves. This can be done by pounding against the notches in the head of the sleeve.
7. Once aligned, the linkage connection pin may be installed. Install the collars to secure the pins.

### SECOND MEMBER INSTALLATION

See "Second Member Installation" on page 9



Bracket Installation  
**FIGURE 10**



Bracket Overview  
**FIGURE 11**

# HYDRAULIC INSTALLATION

Note: Refer to "UPX Hydraulic Schematic" on page 30.

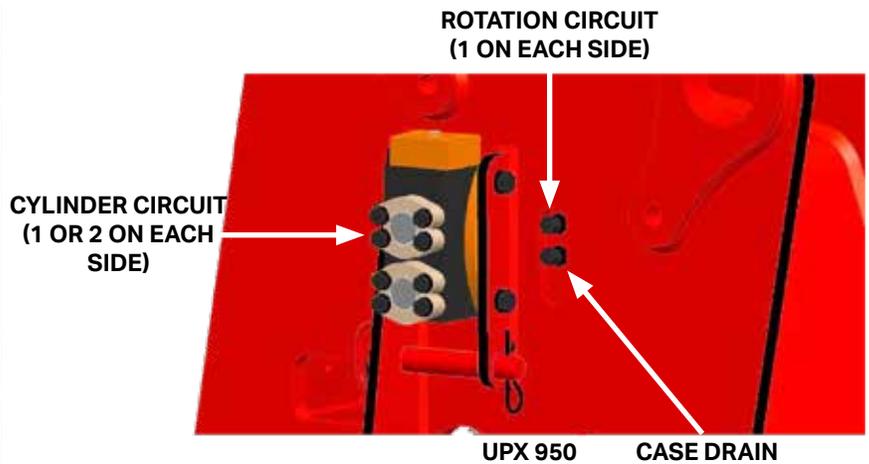
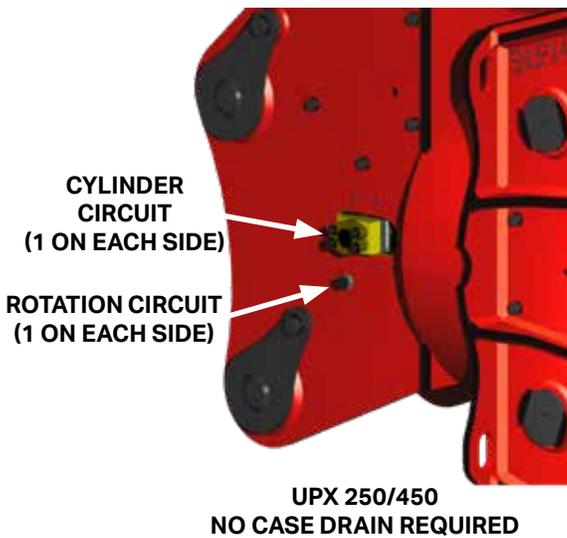


**Do not connect hydraulic lines while they are pressurized. Escaping fluid under pressure can penetrate the skin, causing serious injury.**

## Hydraulic Circuit Requirements

Model	Jaw Cycle Circuit (Max)	Rotation Circuit (Max)	Connection
UPX 250	40-70 GPM (151-265 LPM) 4000-5500 PSI (275-380 Bar)	8-10 GPM (30-38 LPM) 2000-2500 PSI (140-170 Bar)	Cylinder - 1" Code 62 Flange Rotation - .5" Flat Face O-Ring
UPX 450	70-110 GPM (265-416 LPM) 4000-5500 PSI (275-380 Bar)	8-10 GPM (30-38 LPM) 2000-2500 PSI (140-170 Bar)	Cylinder - 1.25" Code 62 Flange Rotation - .5" Flat Face O-Ring
UPX 950	120-180 GPM (450-680 LPM) 4500-5500 PSI (275-380 Bar)	8-10 GPM (30-38 LPM) 2000-2500 PSI (140-170 Bar)	Cylinder - 1.5" Code 62 Flange Rotation - .5" Flat Face O-Ring

1. Connect the hydraulic hoses to the connections located on each side of the upper head.  
**Note: Remember to cap all hydraulic hoses and fittings immediately to prevent contamination of the oil.**
2. After installing the hydraulic circuit on the base machine, install additional hydraulic lines up the boom
  - One 1/2 inch (13 mm) diameter case drain line**Note: These lines will terminate at the end of the boom.**
3. Install jump lines from these hydraulic lines to the attachment bulkhead or manifold fittings.  
**Note: Check to make sure all bolts and nuts are properly installed and torqued.**
4. Check for any hydraulic oil leaks or interference.  
**Note: Hydraulics will need to be bled before putting into service (see "Bleed the Hydraulic Cylinders" on page 14).**



Hydraulic connections  
**FIGURE 12**

# OPERATION

## BEFORE YOU START

### Know Your Safety Program

- Read and understand this manual and the base machine manual.
- Know the employer's safety rules. Consult your foreman for instructions and safety equipment.
- Learn the traffic rules at the work site. Know the hand signals used on the job and who is responsible for signaling. Take signals from only **ONE** person.
- Wear personal protection equipment (PPE) at all times. This includes eye protection, hard hat, steel toe shoes, leather gloves and hearing protection that conforms to standards ANSI Z87.1 (Eye and Face Protection), ANSI Z89.1 (Head Protection), ANSI Z41.1 (Foot Protection) and ANSI S12.6 (S3.19) (Hearing Protection).



Wear Eye Protection



Wear Ear Protection



Wear a Mask

### Know Your Equipment

- Learn and test the function of all controls. If malfunctions are found, shut the machine down and report the malfunction for repair.
- Be familiar with safety devices, indicators, warning devices and caution instructions. They will alert you to conditions that are hazardous.
- Know the clearances in the work area.

### Daily Safety Checks

- Ensure all decals are installed and legible. Contact LaBounty for replacements as required.
- Have a **DAILY** safety dialog with all workers. Inform them of any abnormal work that is planned. Remind them of the safe working distance.
- Clear the area. **ALWAYS** look out for others. In any work area, people constitute a serious safety hazard. Before operating, walk around the machine to ensure no workers are next to, under or on it. Warn nearby workers that you are starting up. **DO NOT** start up until they are out of danger. Review Job Safety Analysis (JSA) with all personnel in the immediate proximity to the work being done.
- Check the location of cables, gas lines and water mains before operation. Ensure work site footing has sufficient strength to support the machine. When working close to an excavation, position machine with the propel motors at the rear.
- Keep bystanders clear, especially before moving the boom, swinging the upper structure, or traveling.

**ALWAYS** be alert for bystanders in or near the operating area.

## SAFETY DEVICES

- Seat belts
- Safety decals
- Flags and flares
- Signs and other markings
- Falling Objects Protection Structures (FOPS)
- Canopies
- Shields and guards
- Barricades
- Warning lights
- Visual or audible warning devices

### General Rules For Safe Operation

## DANGER

- Clear all persons and equipment from the area of operation and machine movement. **NEVER** move loads over people or equipment. When viewing the operation of the attachment, maintain a safe distance of at least 75 feet (23 meters).
- Maintain at least 15 feet (5 meters) between the attachment and any nearby power lines.

## WARNING

- **KNOW** the capacity of the excavator and it's attachments. **DO NOT** overload or serious injury could result. The attachment may have altered the machine's lift capabilities.
- **NEVER** leave the attachment suspended or pass it over people, occupied vehicles or buildings.
- **ALWAYS** lower the attachment to the ground and turn the base machine off when leaving the machine unattended.
- **DO NOT** close the jaws on a structure and reverse the excavator in an attempt to pull down material. This is dangerous and will damage the excavator and the attachment.

## CAUTION

- This attachment is for processing materials. **DO NOT** use for unapproved purposes.
- **DO NOT** continuously process oversized materials by forcing them into the jaw. This will shorten the life of the attachment.
- If attachment stalls, scale back the amount of material being processed at one time. Overloading can cause

- overheating or damage to the hydraulic system.
- Cycle the cylinder completely when processing. Fully cycling will allow hydraulic fluid to circulate and prevents overheating.
- When working in confined spaces, keep watch on exposed parts to avoid damage.
- Avoid collision of the boom or jaws, especially when working with limited visibility or inside buildings. Know the height and reach of the attachment during operation, transport and when swinging the excavator. Watch out for overhead obstacles.

- **DO NOT** alter factory preset hydraulics. This may void the warranty.
- **DO NOT** use attachment as a jack hammer or wrecking ball.
- **DO NOT** operate a poorly maintained or damaged attachment.
- The attachment is not a dozer. **DO NOT** position it on the ground and travel forward.
- Lifting lugs are to be used for shipping and installation. Do not use them in cable-hung applications.

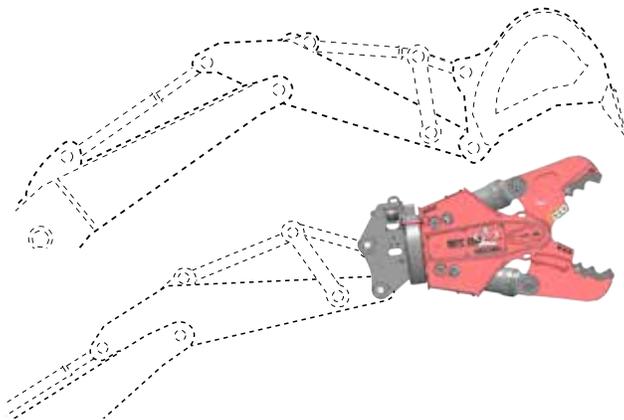
## ATTACHMENT CONTROLS



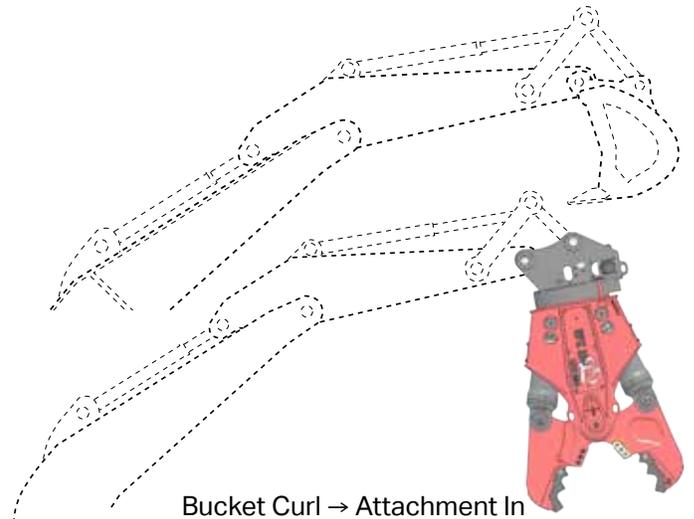
Learn the control for each movement of the attachment before attempting to operate.

### THIRD MEMBER CONTROL

Note: When installed as a third member, use the excavator auxiliary control to open and close the UPX jaws.

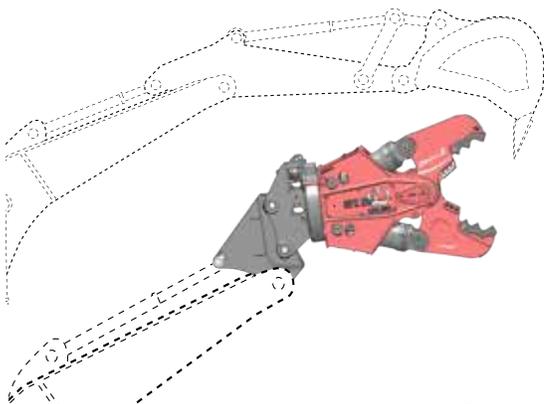


Bucket Dump → Attachment Out  
FIGURE 13

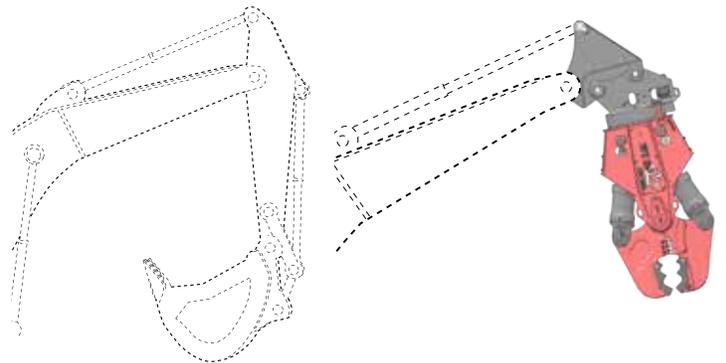


Bucket Curl → Attachment In  
FIGURE 14

### SECOND MEMBER CONTROL



Bucket Dump → Jaws Open  
FIGURE 15



Bucket Curl → Jaws Close  
FIGURE 16

## BLEED THE HYDRAULIC CYLINDERS

Air must be bled out of the cylinders prior to operation. Air in the system leads to cavitation, oxidation of the oil and excessive heat. These conditions promote hydraulic oil break-down, contamination, noise, sluggish operation, reduced component life and potential cylinder damage.

1. Start with the attachment cylinders fully retracted. Shut off the excavator and operate the jaw controls in order to relieve any existing hydraulic pressure to the attachment cylinders.
2. Position the attachment so the cylinders are as horizontal as possible. Set the excavator at idle speed.
3. Slowly open the jaws until a noticeable change in tone of the excavator is heard, indicating full cylinders. Release the controls and do not continue to apply full operating pressure to the cylinders.
4. Slowly close the jaws until the rods are extended approximately 1/4 stroke.
5. Retract the cylinder rods all the way.
6. Repeat steps 3 and 4. Extend the rod 1/4 stroke more each time, until you reach full stroke.
7. Slowly cycle back and forth, at least five times, to full stroke. Be careful not to apply full operating pressure to the cylinders at this time.
8. Check the base machine hydraulic fluid level.
9. Slowly extend and retract the excavator cylinder to it's limits. Check for interference between the attachment and the excavator boom or stick. Check the hydraulic lines that connect to the attachment . Ensure they are not rubbing or getting damaged in any way. Contact your dealer immediately if interference occurs.

## OPERATING TIPS

- Start processing smaller materials and work up to larger materials. This will help you to learn the limitations of the machine and will allow the machine to warm up properly.
- When handling materials, keep the load as close to the base machine as safely possible. This will provide the greatest machine stability.
- Avoid handling long, heavy materials off center. Excessive weight held out to one side can force the attachment to rotate or "back-drive". Back-driving puts increased strain on the rotation system and, if done continually, can lead to rotation component problems. The rotator is for positioning only.
- When processing oversized concrete, make partial bites to start the breakage and then back off before making the next partial bite. This will allow the broken material to fall away between bites.
- When shearing large steel members, such as I-beams or tubing, try doing it in two cuts rather than one. Pierce the material about halfway through with the first cut, and then finish it off with the second cut.
- The shear jaws are best capable of processing light, thinner gauge materials immediately after performing blade maintenance. When processing larger materials, the condition of the blades are not as critical. See "Blade Maintenance" on page 16.
- Sort your scrap to get the highest capacity from the attachment.
- Understand that the attachment does have limits. Sometimes it may be necessary to downsize very large material by another method before the attachment can process it effectively.
- Keep the attachment properly maintained. Jaws with excessive blade gaps or dull teeth are much less effective. Lack of maintenance can lead to greater problems and potential downtime.

## CHANGING JAWS

### **⚠️ WARNING**

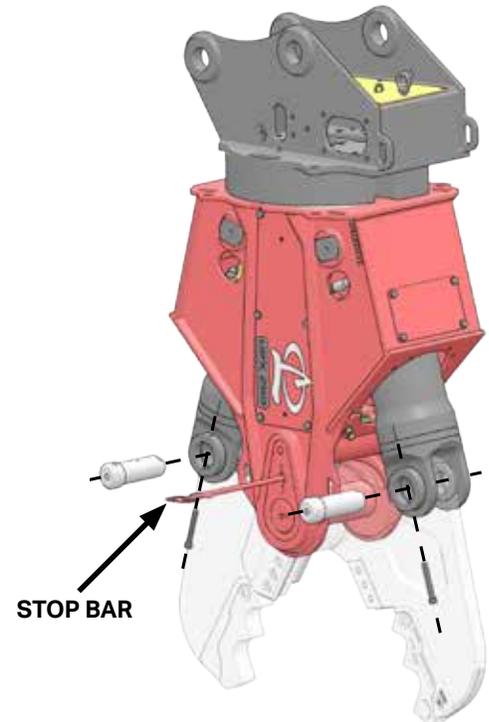
Removal of the attachment pins can be hazardous. Never release the weight of the jaw unless it is secured.

1. Park the excavator on solid, level ground.
2. Remove the front cylinder pins and retract the cylinders.

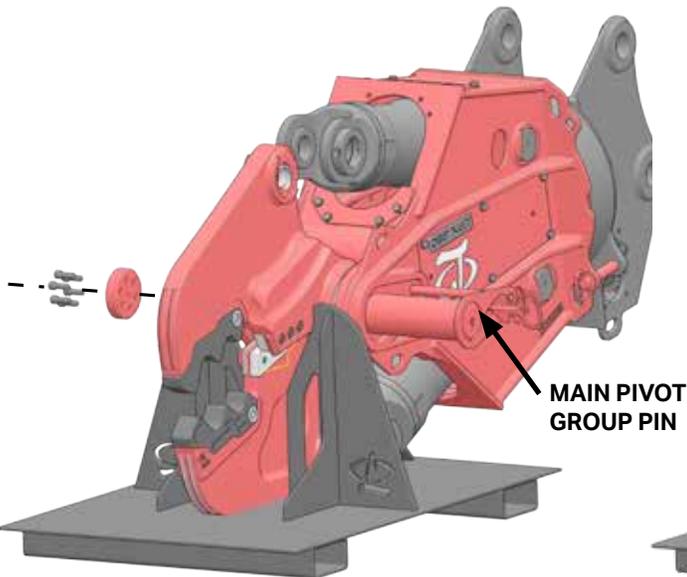
### **⚠️ WARNING**

Avoid all potential pinching points when exchanging jaws.

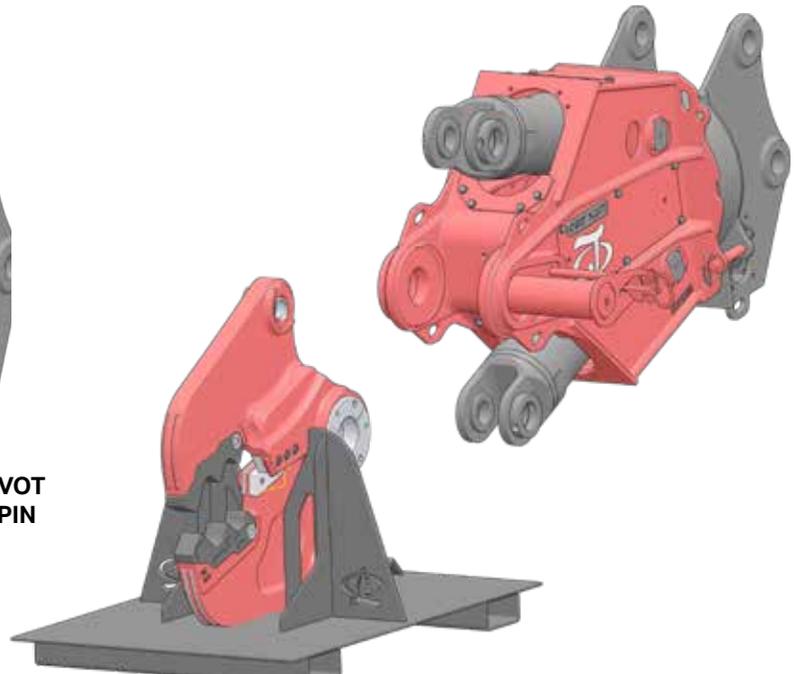
3. Screw in the stop bar and tack weld into place.
  4. Place the jaws in the LaBounty Jaw Stand, or other blocking.
  - Note: Secure the jaws to prevent them from tipping or falling.**
  5. Slide the pivot group pin to the stop bar.
  6. Slowly raise UPX to separate from the jaws.
  7. Insert UPX into another set of jaws.
  8. Insert the main pivot group pin and front cylinder pins.
- Remove the stop bar.



Remove Front Cylinder Pins  
**FIGURE 17**



Remove Main Pivot Group Pin  
**FIGURE 18**



Separate UPX from Jaws  
**FIGURE 19**

# MAINTENANCE

## 8-HOUR INSPECTION CHECKLIST

### Inspect all safety devices

- \_\_\_\_\_ Safety decals are in place and legible (see "Decals" on page 6).
- \_\_\_\_\_ Cab protection is in good condition.
- \_\_\_\_\_ Excavator warning systems are working.

### Visually inspect for damage

- \_\_\_\_\_ Check for physical damage to the attachment, jaws, hoses and fittings.
- \_\_\_\_\_ Check rotation connections for wear, leaks or failure (see "Hydraulic Inspection" on page 18).
- \_\_\_\_\_ Check for damage to the Swift-Lock Teeth (see "Swift-Lock Teeth Maintenance" on page 18).

### Lubricate all points

- \_\_\_\_\_ Lubricate attachment and jaws (see "Lubrication" on page 19).
- \_\_\_\_\_ Lubricate the turntable bearing, if equipped (see "Turntable Bearing Lubrication" on page 20).
- \_\_\_\_\_ Lubricate the planetary gearbox, if equipped (see "Planetary Gearbox Lubrication" on page 20).

### Inspect bolts and hydraulic fittings

- \_\_\_\_\_ Inspect bolts and fittings on attachment and jaws (see "Inspect / Torque Bolts" on page 21).

### Inspect connecting pins and retaining hardware

- \_\_\_\_\_ Stick connection / boom pivot pin.
- \_\_\_\_\_ Link connection / cylinder connection pin.
- \_\_\_\_\_ Front and rear cylinder pins.
- \_\_\_\_\_ Main pivot group pin.

### Inspect pivot group & jaw blades

- \_\_\_\_\_ Check main pivot group for play (see "Main Pivot Group Maintenance" on page 22).
- \_\_\_\_\_ Inspect blade gap & shear jaw guide blade gap (see "Blade Maintenance" on page 22).

Inspected By: \_\_\_\_\_ Date: \_\_\_\_\_

## 80-HOUR INSPECTION CHECKLIST

### Build-up, hard-surfacing & Blade Rotation

\_\_\_\_\_ Build-up jaws & check wear plates. Replace if necessary (see "Build Up & Wear Plates" on page 27).

\_\_\_\_\_ Rotate blades (see "Blade Maintenance" on page 22).

\_\_\_\_\_ Inspect the cylinder gap (see "Check the Cylinder Gap" on page 26).

Inspected By: \_\_\_\_\_ Date: \_\_\_\_\_

## 2,000-HOUR INSPECTION CHECKLIST

### Reseal Attachment

\_\_\_\_\_ Replace cylinder seals.

\_\_\_\_\_ Replace swivel manifold seals, if equipped.

Inspected By: \_\_\_\_\_ Date: \_\_\_\_\_

## HYDRAULIC INSPECTION

### ⚠ CAUTION

Wear personal protection equipment at all times. This includes eye protection, hard hat, steel toe shoes, leather gloves and hearing protection.

1. Locate flat, hard ground and place the attachment on the ground.
2. Check the hydraulic oil reservoir and ensure it is filled.
3. Visually inspect all hydraulic hoses for leaks or damage.

### ⚠ WARNING

Trapped hydraulic pressure may be present after the base machine is shut off. Extreme caution must be taken when removing hydraulic hoses or injury or death could result.

## SWIFT-LOCK TEETH MAINTENANCE

When the jaw teeth are worn or cracking, performance is decreased and the teeth need to be replaced.

### ⚠ CAUTION

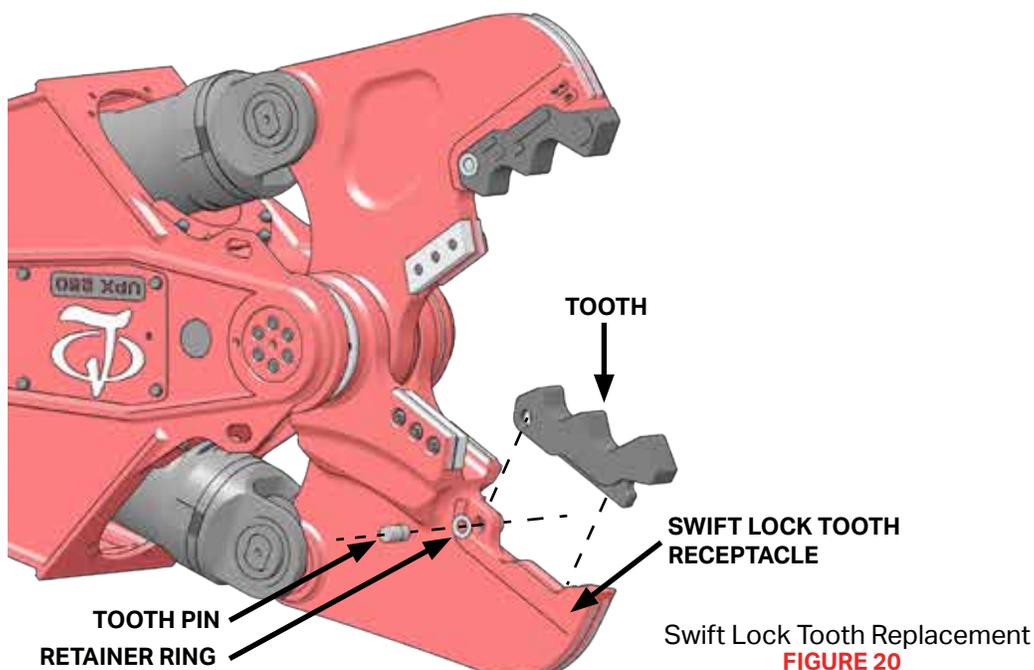
Wear personal protection equipment at all times. This includes eye protection, hard hat, steel toe shoes, leather gloves and hearing protection.

1. Locate flat, hard ground and place the attachment on the ground.  
**Note: Work only on the jaw closest to the ground, with the tooth facing up.**
2. Remove the retainer ring using a grinder.  
**Note: The retainer rings are welded into place.**
3. Use a soft metal drift and a mallet to drive out the tooth pin.
4. Remove the tooth from the receptacle.  
**Note: Do not lose the retainer ring.**
5. Weld the retainer ring in its place and insert a new Swift-Lock tooth.
6. Insert the tooth pin.

**Note: Insert the tooth pin so that the pin groove will line up and seat in the retainer ring.**

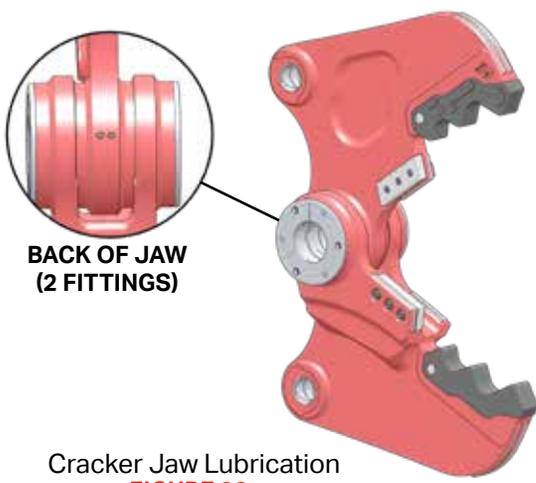
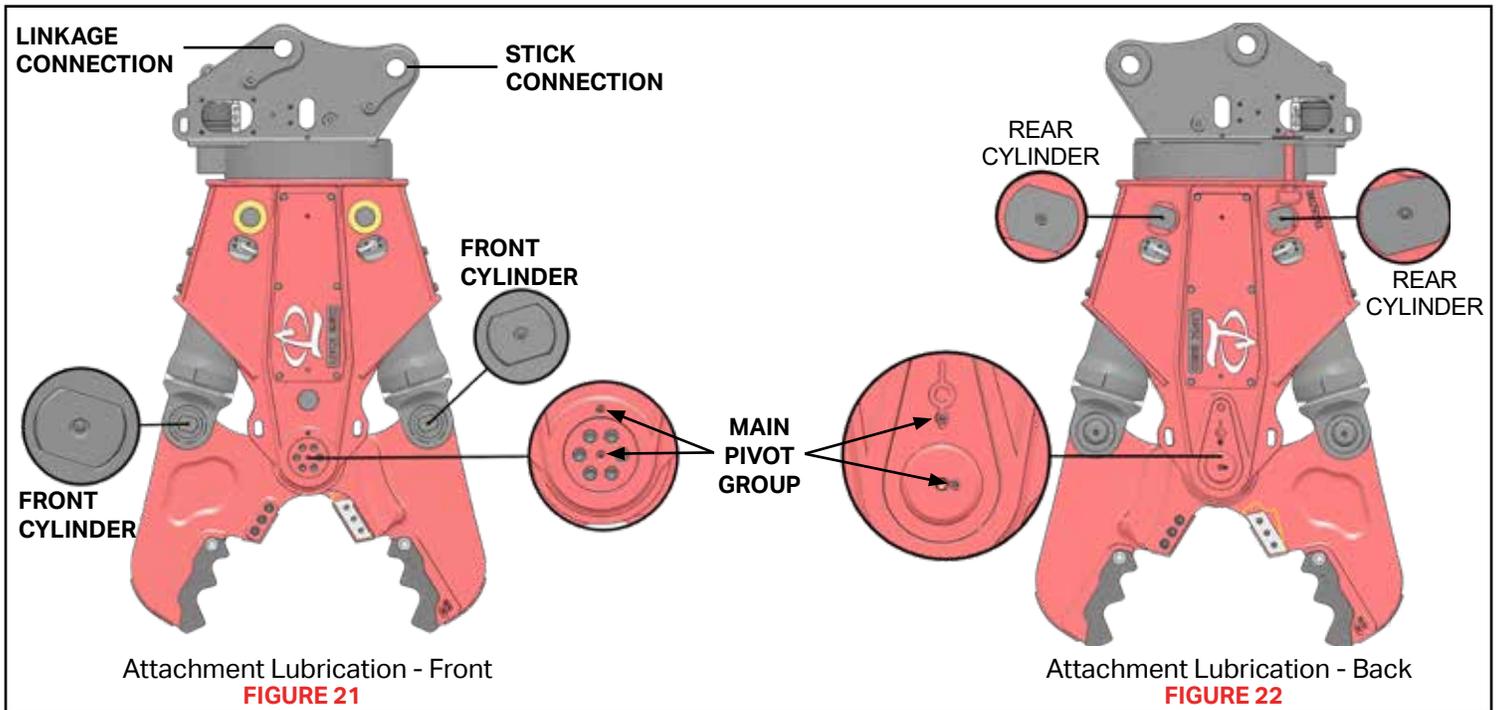
### ⚠ WARNING

Swift-Lock Teeth are very heavy. DO NOT remove a tooth pin if the tooth is not supported. The tooth may fall and cause injury.

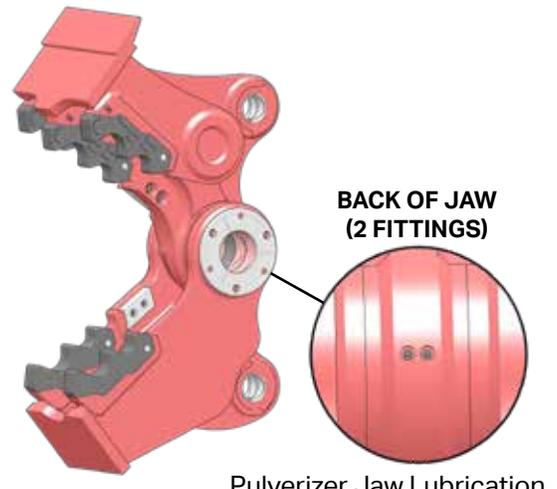


# LUBRICATION

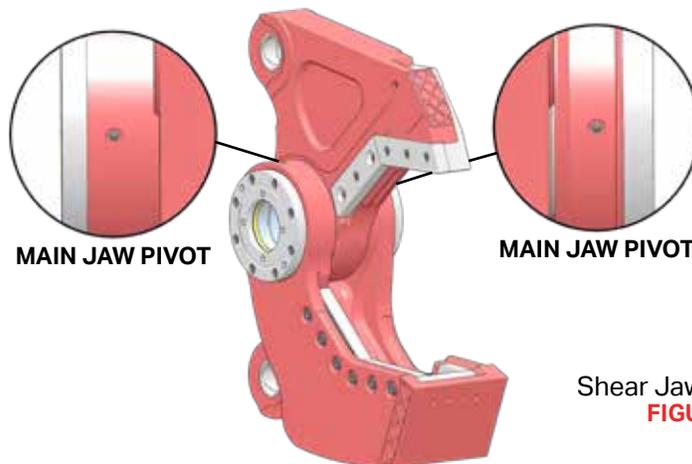
Use premium grease, No. 2EP. Grease fittings are indicated on the attachment by yellow "GREASE" decals. Each grease fitting requires .3 oz (8 g) of grease. This is about 6 shots of grease from an average grease gun.



Cracker Jaw Lubrication  
**FIGURE 23**



Pulverizer Jaw Lubrication  
**FIGURE 24**



Shear Jaw Lubrication  
**FIGURE 25**

## TURNTABLE BEARING LUBRICATION

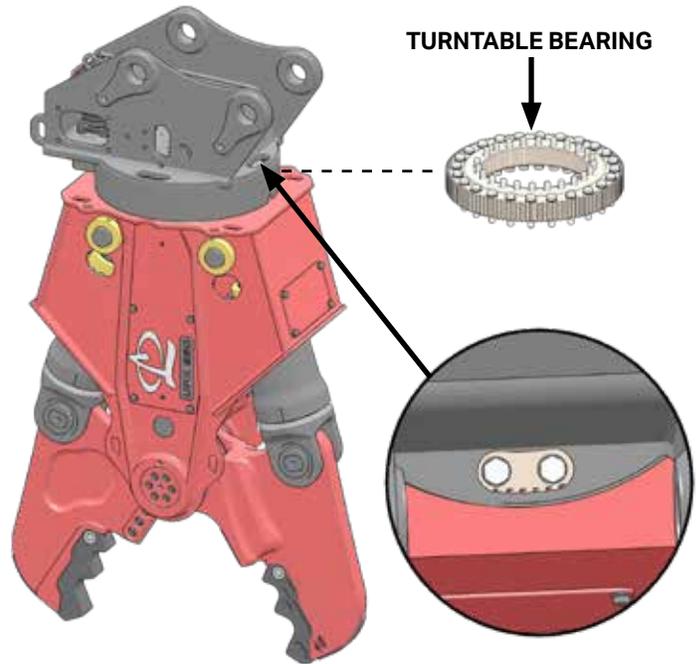
### **! WARNING**

Stand clear of UPX during rotation.

The turntable bearing has 1 to 4 grease fittings, depending on model type. Use lithium Grade 2 extreme pressure grease.

**Note: For operation below 0° F, use Grade 0 grease.**

1. Grease a fitting with 4 shots (.2 oz) of grease.
2. Stand clear and rotate the attachment 360°.
3. Grease the same fitting with 4 more shots (.2 oz) of grease, or until grease starts to escape from the bearing seals.
4. Perform steps 1 through 3 for every grease fitting.



Turntable Lubrication Access  
**FIGURE 26**

## PLANETARY GEARBOX LUBRICATION

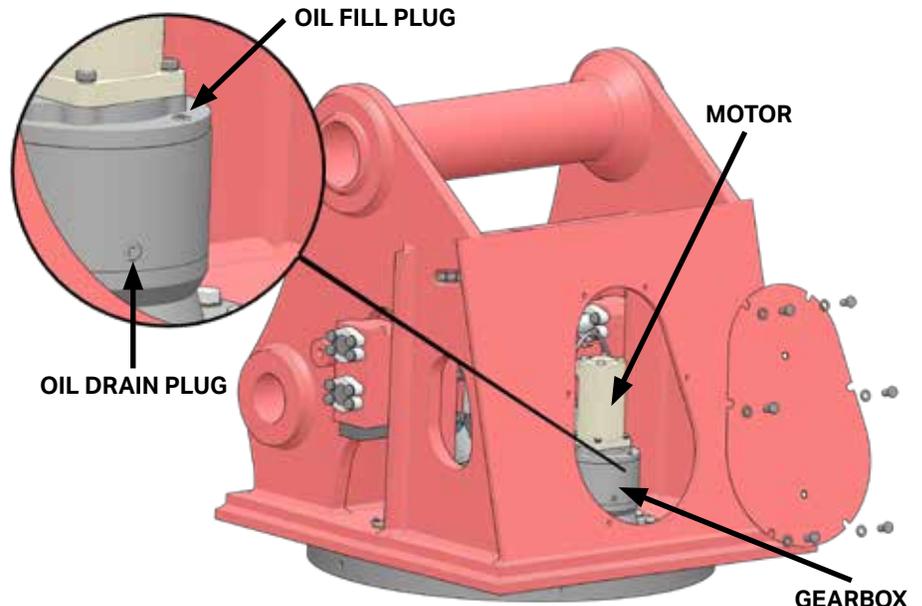
Some models use a planetary gearbox to rotate the attachment. The gearbox oil must be changed regularly, based on the Planetary Gearbox Oil Change Schedule.

Planetary Gearbox Oil Change Schedule			
FIRST 50 Hours	250 Hours / 6 Months	500 Hours / 1 Year	1000 Hours / 2 Years
SAE 80W - 90	Inspect Oil / Fill if needed	Synthetic ISO 150 @ 104°F	Synthetic ISO 150 @ 104°F

1. Access the gearbox.
2. Remove the oil fill plug.
3. Remove the oil drain plug. Drain oil into a container larger than 2 quarts.

**Note: The plugs are magnetic and will collect metal filings. Discard the filings.**

4. Install the oil drain plug.
5. Fill the gearbox with oil, as specified in the parts manual.
6. Install oil fill plug.



Planetary Gearbox Location  
**FIGURE 27**

# INSPECT / TORQUE BOLTS

Inspect all bolts for damage. Check the torque of all bolts and replace any bolt that is damaged or has been re-torqued more than once. Always use replacement bolts of the same size and class as the one removed. Unless otherwise specified, use class 10.9 metric hex head cap screws, class 10.9 metric flat head cap screws and class 12.9 metric socket head cap screws. When installing new bolts, ensure that the bolt is clean and dry.

**Note: Some bolts have unique torque specifications. Refer to the parts manual.**



**Never use an inferior class fastener. Fastener failure can cause damage, injury or death.**

Size	Class 10.9	Class 12.9
M10	41 Ft. Lbs. (55 Nm)	49 Ft. Lbs. (67 Nm)
M12	71 Ft. Lbs. (96 Nm)	85 Ft. Lbs. (116 Nm)
M14	112 Ft. Lbs. (152 Nm)	136 Ft. Lbs. (185 Nm)
M16	173 Ft. Lbs. (235 Nm)	207 Ft. Lbs. (281 Nm)
M20	335 Ft. Lbs. (454 Nm)	403 Ft. Lbs. (547 Nm)
M24	579 Ft. Lbs. (785 Nm)	693 Ft. Lbs. (939 Nm)
M30	1164 Ft. Lbs. (1579 Nm)	1391 Ft. Lbs. (1887 Nm)

Flange	Flange Code	Bolt Size	Torque
0.75"	61	M10 x 1.50	42 Ft. Lbs. (57 Nm)
1.00"	61	M10 x 1.50	42 Ft. Lbs. (57 Nm)
1.00"	62	M12 x 1.75	70 Ft. Lbs. (95 Nm)
1.25"	61	M12 x 1.75	70 Ft. Lbs. (95 Nm)
1.25"	62	M12 x 1.75	70 Ft. Lbs. (95 Nm)
1.25"	62	M14 x 2.00	112 Ft. Lbs. (152 Nm)
1.50"	61	M12 x 1.75	70 Ft. Lbs. (95 Nm)
1.50"	62	M16 x 2.00	224 Ft. Lbs. (304 Nm)
2.00"	61	M12 x 1.75	70 Ft. Lbs. (95 Nm)
2.00"	62	M20 x 2.25	435 Ft. Lbs. (590 Nm)

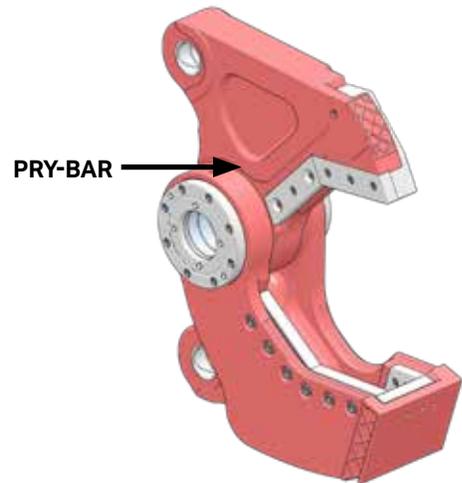
	Size	Class	Torque
Metric	M10	12.9	64 Ft. Lbs. (87 Nm)
	M12	10.9	92 Ft. Lbs. (125 Nm)
	M16	10.9	224 Ft. Lbs. (304 Nm)
	M20	10.9	435 Ft. Lbs. (590 Nm)
	M24	10.9	752 Ft. Lbs. (1020 Nm)
	M30	10.9	1511 Ft. Lbs. (2049 Nm)
Standard	0.38"	Gr. 8	44 Ft. Lbs. (60 Nm)
	0.50"	Gr. 8	154 Ft. Lbs. (209 Nm)
	0.75"	Gr. 8	380 Ft. Lbs. (515 Nm)
	1.00"	L9	900 Ft. Lbs. (1220 Nm)
	1.50"	ZN-L9	2600 Ft. Lbs. (3525 Nm)



**Replace Rotation bolts after 1500 hrs / 2 years. You may need to rotate UPX to access bolts.**

## MAIN PIVOT GROUP MAINTENANCE

1. Check for play in the main pivot group **BEFORE** performing maintenance on jaw blades.
2. Fully open the UPX jaws.
3. Lower UPX so the lower jaw is on the ground. Turn off the base machine.
4. Using a pry-bar between the upper and lower jaw, attempt to move the jaws.
5. Measure the movement using a dial indicator. If movement is detected, contact your LaBounty Dealer or LaBounty Customer Service.



Main Pivot Group Pry-bar Location  
**FIGURE 28**

## BLADE MAINTENANCE



**Wear leather work gloves at all times during blade maintenance.**

### Cracker and Pulverizer Jaws

1. Remove the blade.
2. Grind all rough edges from each blade and clean the blade seat.
3. Rotate the blade.

**Note: Each blade has four edges, as shown in Figure 30 & Figure 31. Each time you rotate the blade, you use a different edge. Replace blades when all edges are rounded to .25" radius.**

4. Reinstall each blade.



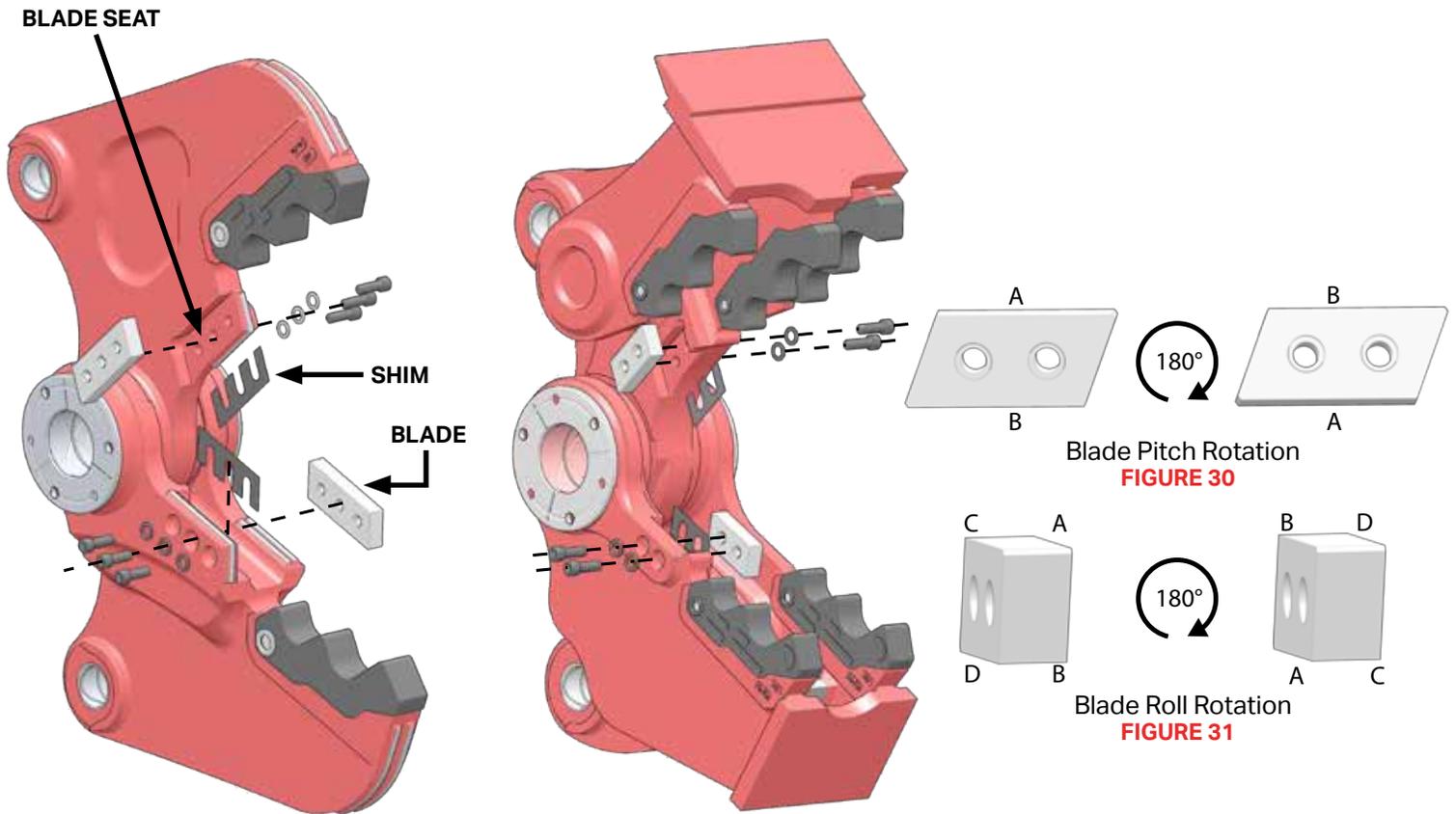
**Stay at least 75 ft. (23 m) when moving.**

5. Cycle the jaws closed. Measure the gap between the upper and lower blade using a feeler gauge. If the gap is larger than .060", shim the blade.

### Shimming the Blades

1. Measure the blade gap.
2. Shim each blade so that the blade gap is approximately .005" - .010". Fit the shims between the blade and the blade seat.

**Note: Do not shim out a blade more than .125". Doing so may cause structural damage and will void the warranty.**



Blade & Shim Exploded View  
**FIGURE 29**

**Shear Jaws**

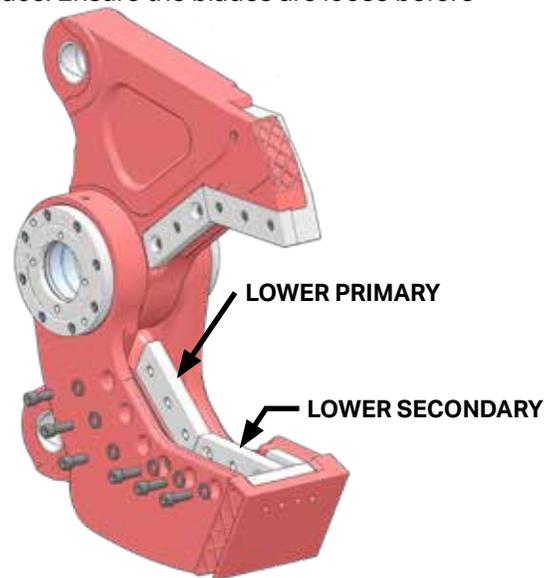
1. Loosen the bolts holding the lower primary and secondary blades in place. Ensure the blades are loose before removing each blade, one at a time.

**! WARNING**

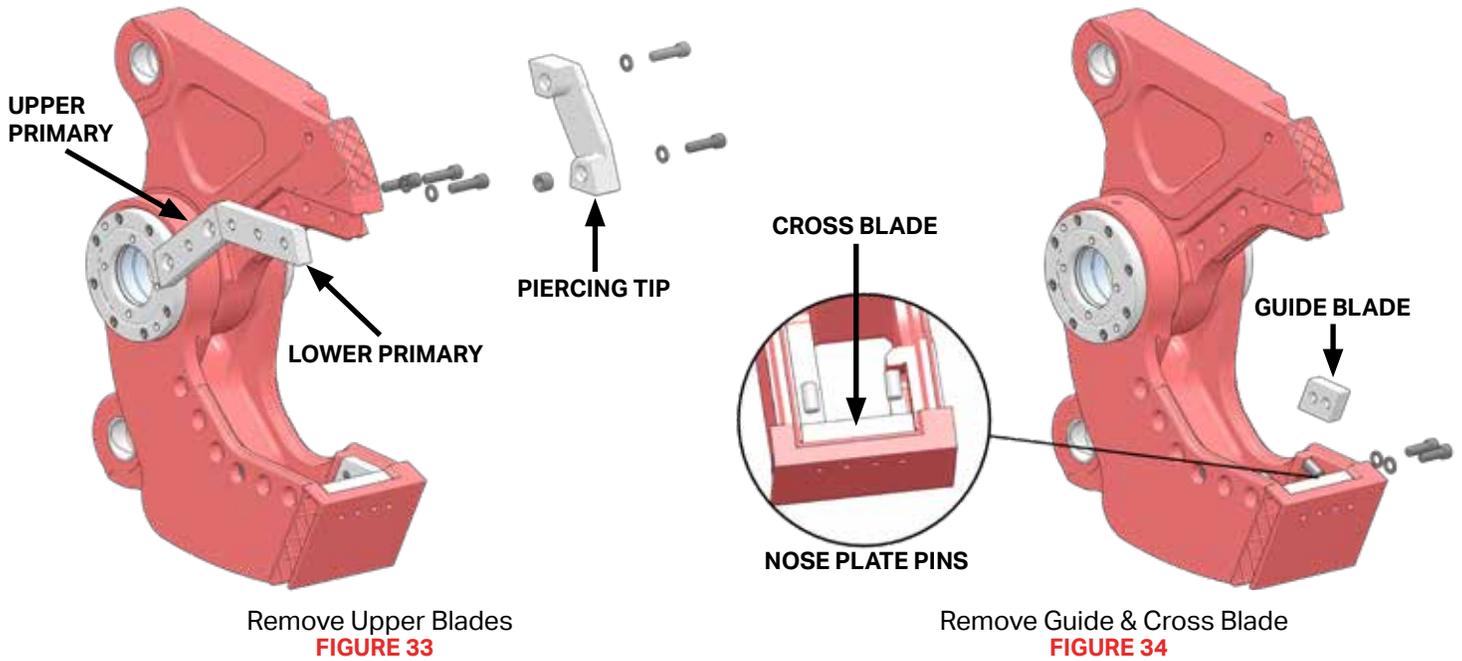
Never strike a UPX blade with a hardened steel tool. The blade may chip and cause severe injury.

Note: If the blades are not loose, try the following:

- Lightly tap on the blade with a soft-faced mallet.
- Insert a soft metal punch into one of the bolt holes and lightly tap against the back of the blade.

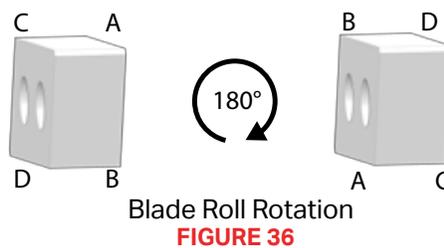
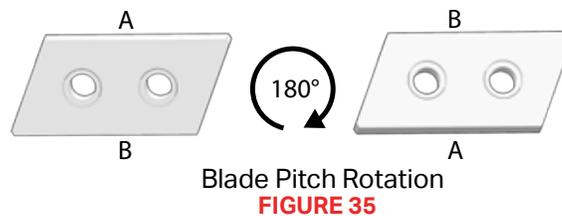


Remove Lower Blades  
**FIGURE 32**



2. Remove the piercing tip, than the upper primary and secondary blades.
3. Remove the guide blade..
4. Place a soft metal punch through the two outer most holes in the nose plate. Drive the pins that hold the cross blade in place. Remove the cross blade.
5. Grind the rough edges from the blades and clean the blade seats.
6. Rotate the blades.

**Note: Each blade has four edges, as shown below. Each time you rotate the blade, you use a different edge. Replace blades when all edges are rounded to .25" radius.**



7. Reinstall each blade.

### Shimming the Guide Blade

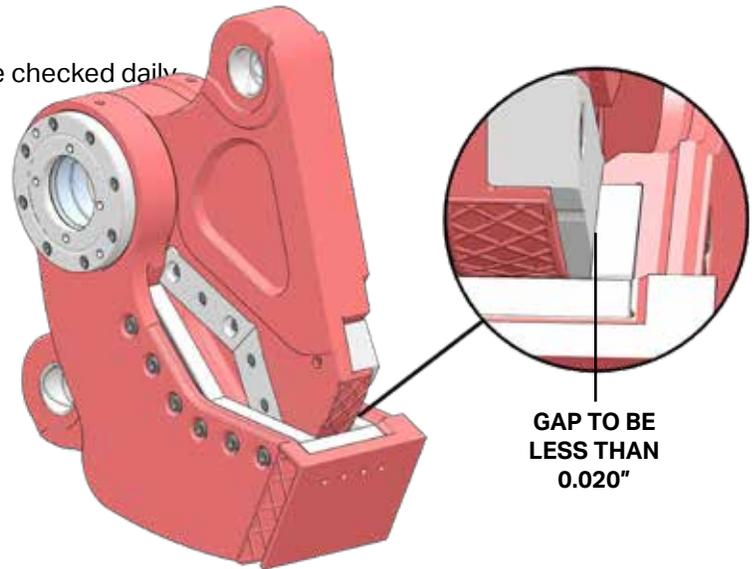
The guide blade supports the upper jaw. The gap must be checked daily.



**Stay at least 75 ft. (23 m) when moving.**

8. Cycle the tool until the side of the piercing tip begins to bypass the guide blade.
9. Measure the blade gap in multiple spots. If the gap is larger than .020", add shims, supplied by LaBounty, between the guide blade and blade seat until the gap is .010" - .020".

**Note: When all of the provided shims have been used, rotate the guide blade, end over end, and shim. Once all provided shims have been used again, replace the guide blade.**



Guide Blade Gap  
**FIGURE 37**

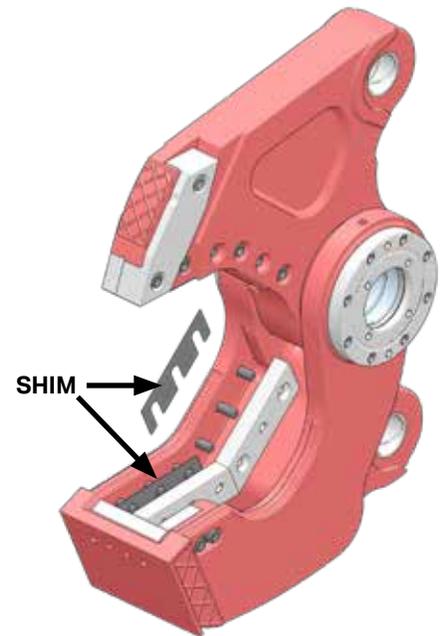
### Shimming the Primary and Secondary Blades



**Stay at least 75 ft. (23 m) when moving.**

1. Cycle the jaws closed. Measure the gap between the upper and lower blades using a feeler gauge. If the gap is larger than .015", shim the blade.
2. Shim each blade so that the blade gap is approximately .005" - .010". Fit the shims between the blade and the blade seat.

**Note: Do not shim out a blade more than .125". Doing so may cause structural damage and will void the warranty.**

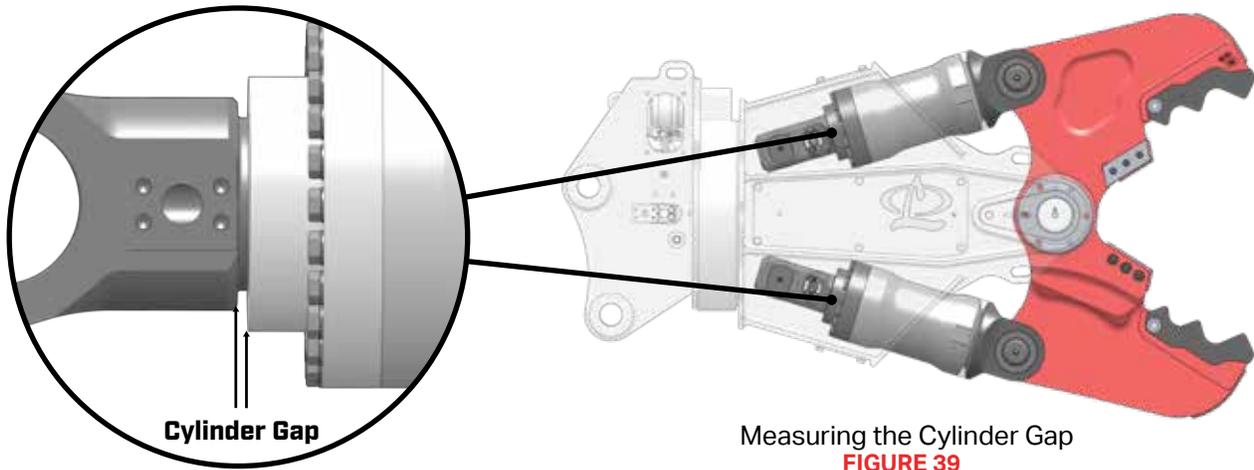


Shimming Blades  
**FIGURE 38**

## CHECK THE CYLINDER GAP

**Note:** Measuring the cylinder gap is necessary for UPX 450 and 950 only.

1. Fully open the shear jaws.
2. Measure the gap between the rod eye shoulder and the head face, as shown.



If the cylinder gap exceeds the value in the "Maximum Cylinder Gap" table, contact the LaBounty Service Department at (218) 834-6901.

Maximum Cylinder Gap Table	
Model	Maximum Cylinder Gap
UPX 450	0.25 inches (6.4 mm)
UPX 950	0.52 inches (13 mm)

## BUILD UP & WEAR PLATES

As the jaws become worn from use, the worn areas will need to be built up to prolong the life of the attachment. Some jaws have wear plates that protect commonly worn surfaces and reduces the need to build up and hard-surface.

### CAUTION

**Wear safety equipment when welding. This includes eye protection, hard hat, steel toe shoes, gloves, hearing protection and respirator protection. Do all work in a well ventilated area.**

#### Checking and Replacing Wear Plates

Wear bars are welded into the jaw and must be replaced after they have worn down to 1/4 their original thickness.

Using the UPX parts manual, ensure you have ordered the proper wear plate kits.

#### Installing Wear Bars

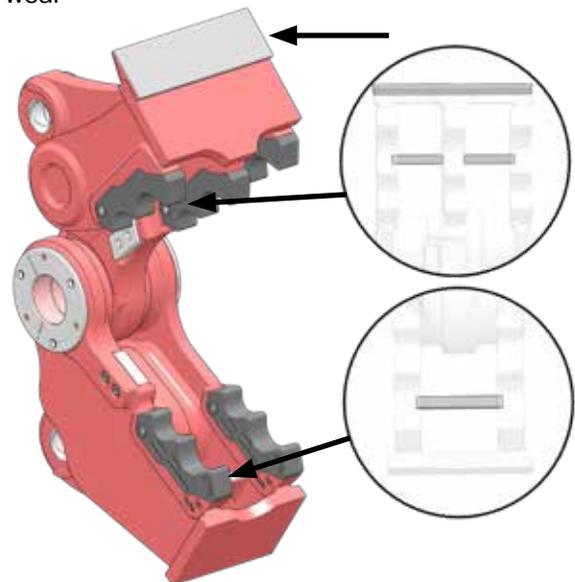
1. Preheat the area around the wear bar to 250° to 300° F.
2. Remove the worn wear bar.
3. Fit the new wear bar into the receptacle. Heat the bar locally and bend it into place.

**Note: Wear bars are pre-cut to length and must be formed to the jaw in the field.**

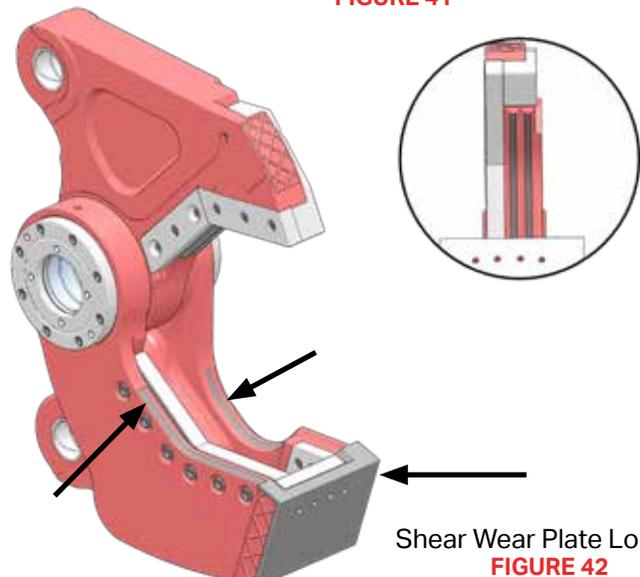
4. Weld the wear bar into place.
5. Cover the weld with a heat blanket and allow it to cool slowly.



Cracker Wear Plate Location  
**FIGURE 40**



Pulverizer Wear Plate Location  
**FIGURE 41**



Shear Wear Plate Location  
**FIGURE 42**

## SWIFT-LOCK TEETH BUILD UP

1. Obtain the proper Swift-Lock tooth template. Refer to the parts manual for template part numbers.
2. Thoroughly clean the area to be build up. Grind off any existing hard-surface material.
3. Preheat the area to 200° F (93.3° C) to remove moisture.
4. Preheat the area to be build up to 300° - 400° F (149° - 204° C).

**Note: Do not exceed 450° F (232° C).**

5. Use the tooth template to determine how much buildup is required.
6. Using AWS E7018 welding rod, make hard surface beads.
7. Relieve stress and remove slag after each pass by peening vigorously with an air operated slag peener.
8. Repeat steps 6 and 7 until the tooth profile matches the build up template.
9. Grind edges square to match the template.
10. Using AWS E7018, place underlayment passes.
11. Apply a bead of Amalloy 814H rod on top of each of the underlayment beads.

**Note: Do NOT apply Amalloy 814H to the base metal.**

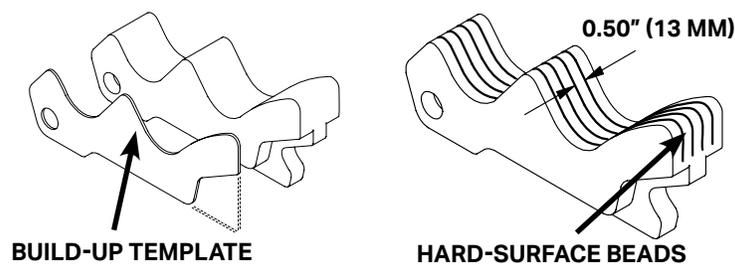
12. Relieve stress after each pass by peening vigorously with an air operated slag peener.
13. Taper the end of each hard-surface bead by grinding.

**Note: Do NOT undercut the weld.**

14. When grinding is complete, peen the area until it is shiny or until the peener cannot dent the weld.

**Note: About 5-10 minutes.**

15. Cover the welded area with a heat blanket and allow to cool slowly.



Swift-Lock Tooth Build up

**FIGURE 43**

## HYDRAULIC MAINTENANCE

### Speed Valve

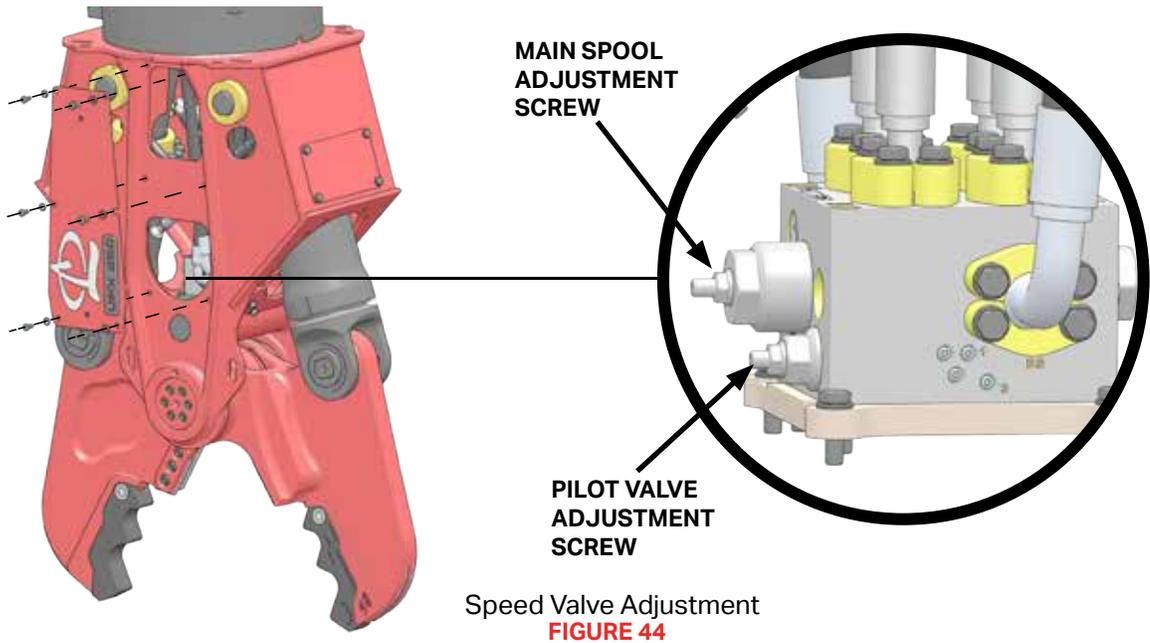
The speed valve allows the jaws to shift into high speed when the jaws are closing. Two valve spool screws control this speed change, the Main Spool Adjustment Screw and the Pilot Valve Adjustment Screw. Access the adjustments through the side access panel.

### Testing the Speed Valve

Close the jaws and observe the movement. If the speed valve is working properly, the jaw closing speed will increase after 1-2 inches of movement.

### Adjusting the Speed Valve

If the jaw movement doesn't shift to high speed when closing, adjust the pilot valve adjustment screw clockwise until the jaws shift speed.



## CONTROL VALVE SCHEMATICS AND DESCRIPTIONS

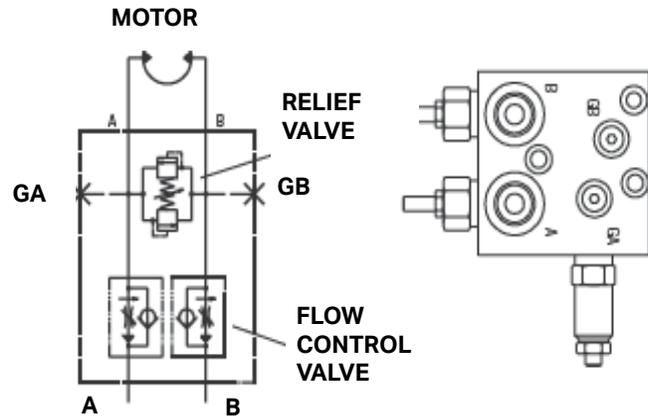
### Crossover Relief Flow

#### Work Ports (A&B)

SAE #8 O-Ring Boss Ports for 5/8 OD Tube, 7/8-14UNF-2B

#### Gauge Ports (GA & GB)

SAE #4 O-Ring Boss Ports for 1/4 OD Tube, 3/8-24UNF-2B



### Crossover Relief Flow Control Valve

#### Work Ports (A & B)

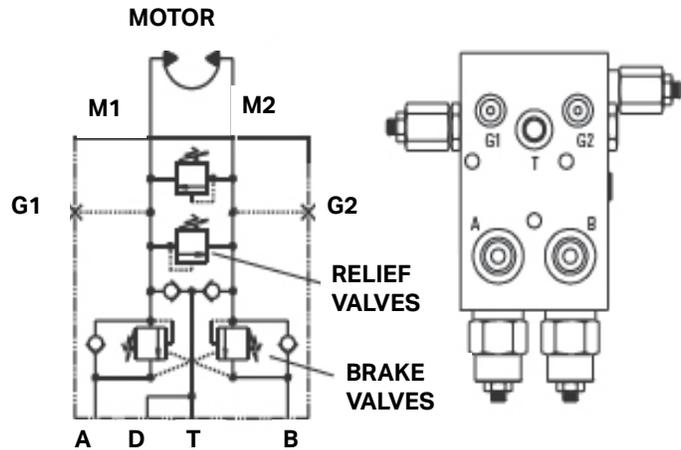
SAE #8 O-Ring Boss Ports

#### Gauge Ports (G1 & G2)

SAE #4 O-Ring Boss Ports

#### Drain Ports (D & T)

SAE #4 O-Ring Boss Ports

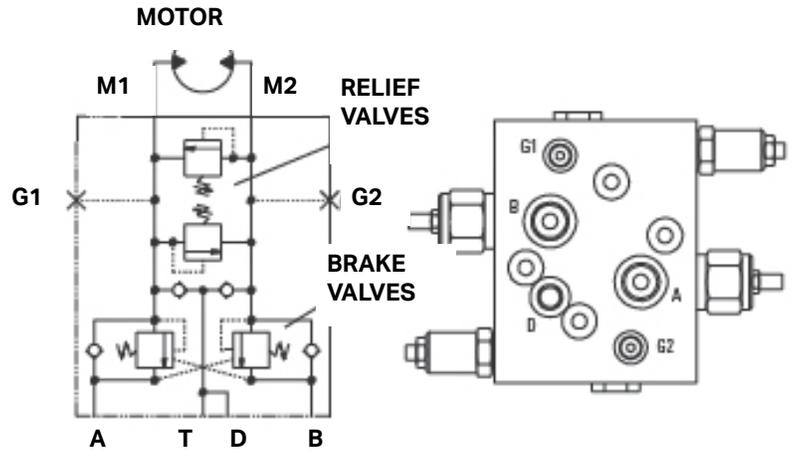


**Motion Control Valve**

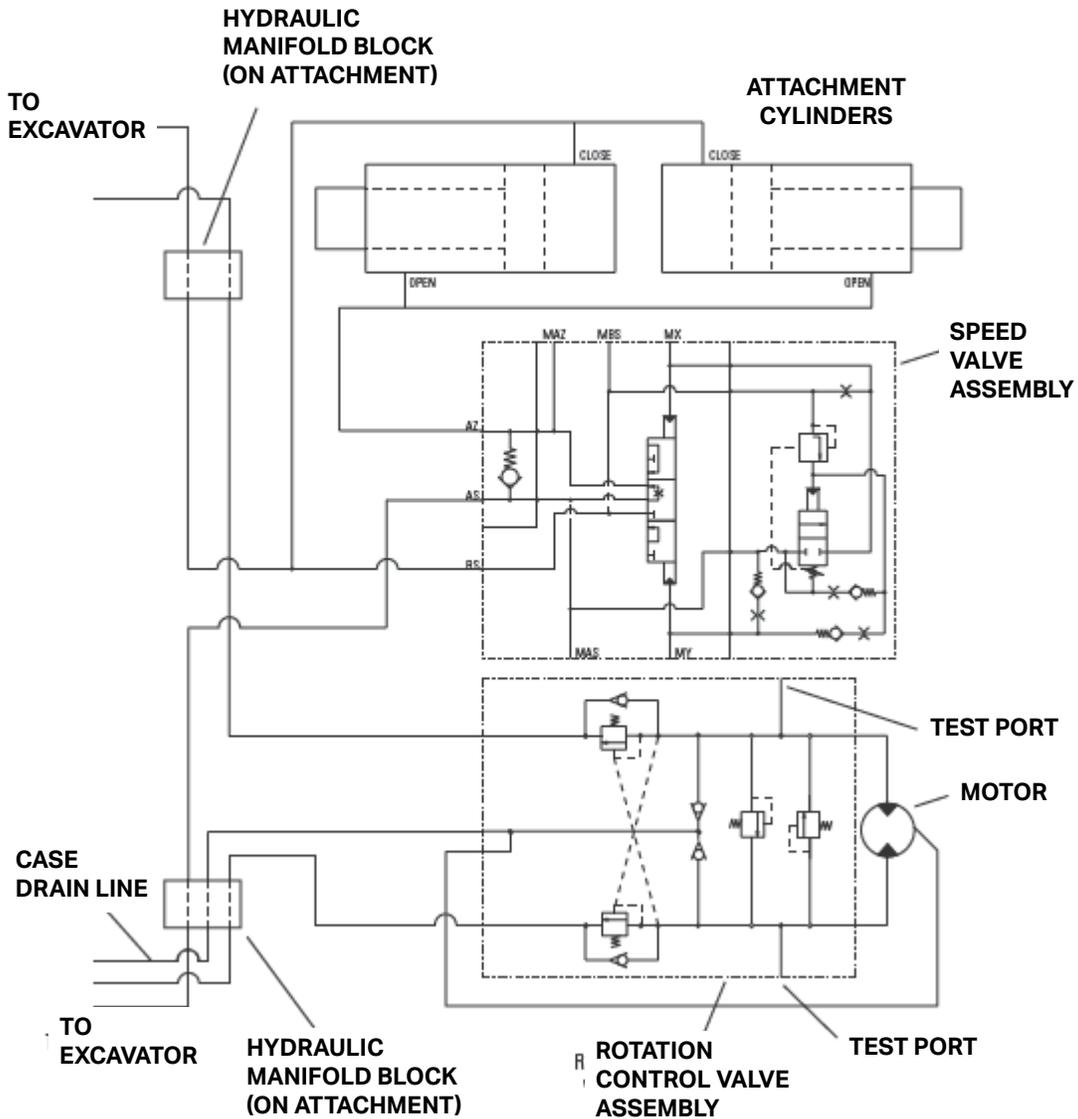
**Work Ports (A & B)**  
SAE #10 O-Ring Boss Ports

**Gauge Ports (G1 & G2)**  
SAE #4 O-Ring Boss Ports

**Drain Ports (D & T)**  
SAE #6 O-Ring Boss Ports



**UPX HYDRAULIC SCHEMATIC**







Additional copies of this manual are available by contacting your dealer or the LaBounty parts department, and requesting a CE Operation & Maintenance manual. You must include the attachment model number and serial number.