

LABOUNTY

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MRX

MULTI-JAW DEMOLITION TOOL

SAFETY, OPERATION & MAINTENANCE

519014 User Manual 3/2020 Ver. 3

PREFACE

This manual contains information for the safe operation and maintenance of the LaBounty MRX MULTI-JAW DEMOLITION TOOL. 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.

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.

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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 75 feet (23 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) and cab guarding. 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 and cab guarding. Lack of proper FOPS and guards 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.

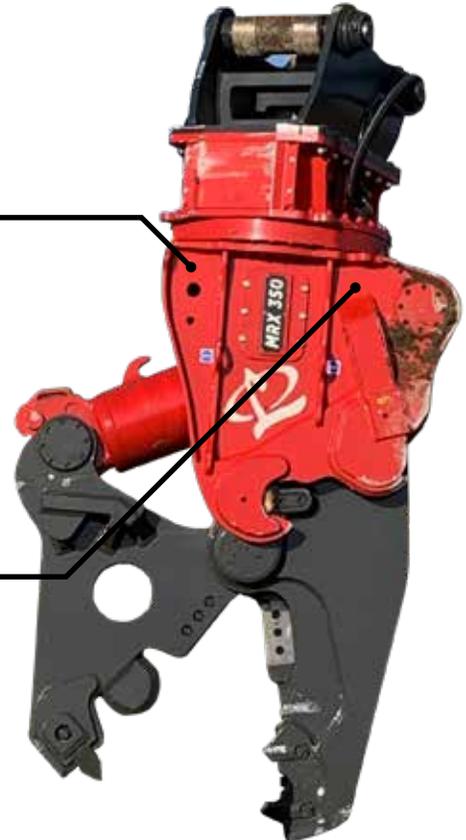
HYDRAULIC

- 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.

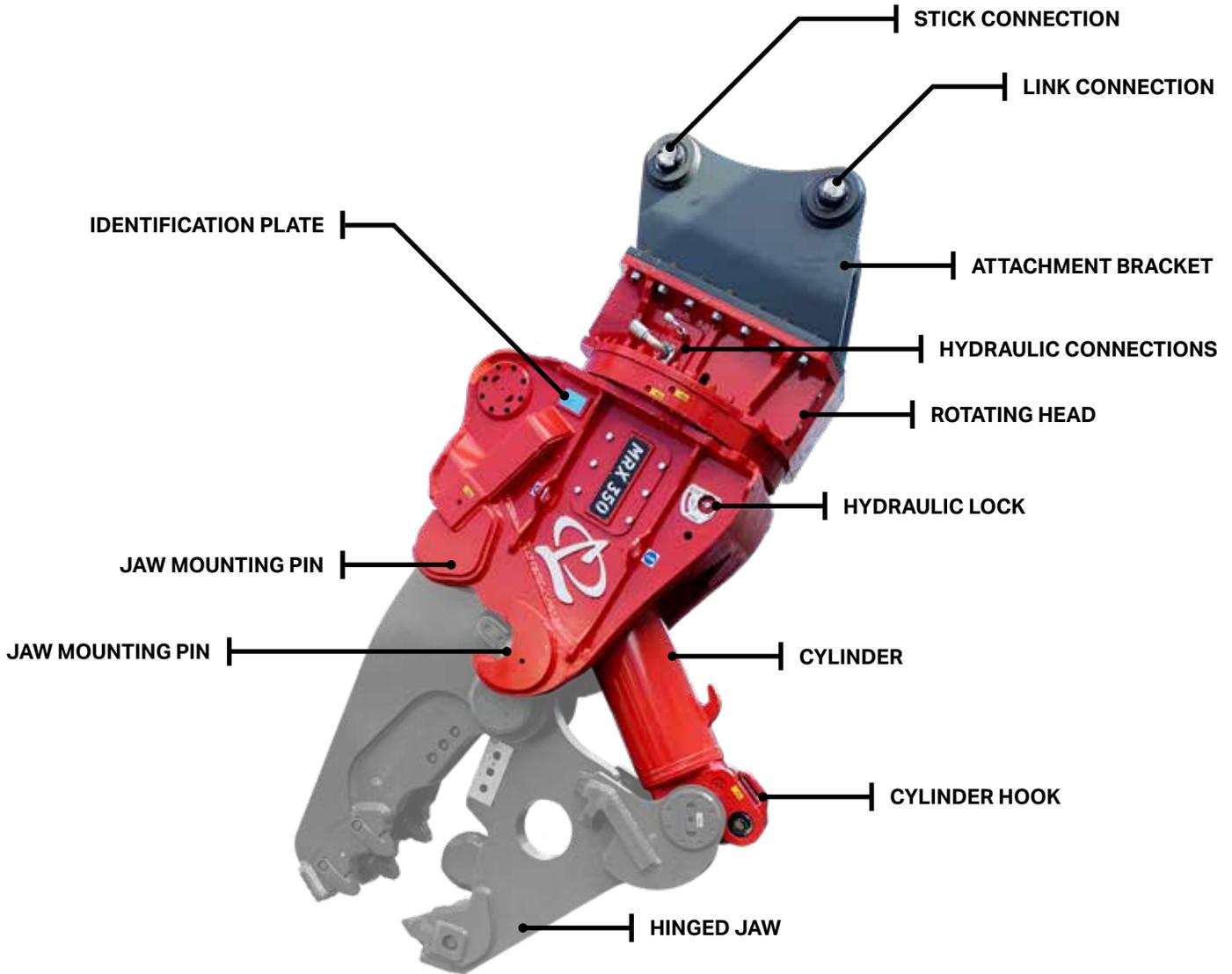
DECALS



ATTACHMENT DESCRIPTION

The MRX is the answer to most primary and secondary demolition applications. The interchangeable jaws' designs facilitate improved penetration and rapid material downsizing.

TERMS



INSTALLATION

ATTACH TO EXCAVATOR

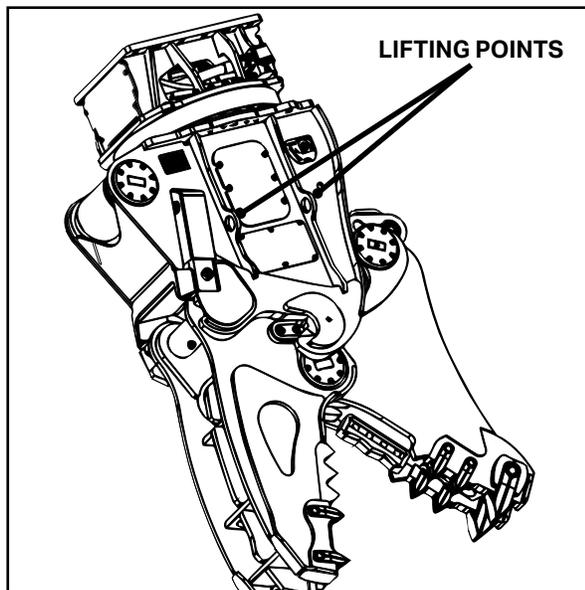
WARNING

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

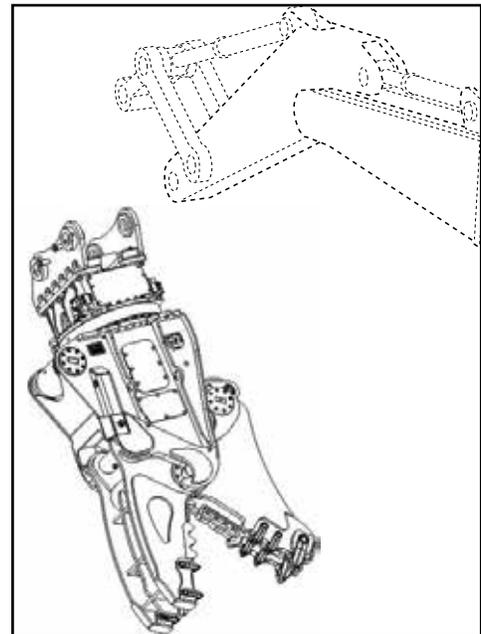
1. Locate flat, hard ground (e.g., concrete floor) for installation. Lift and place the attachment on the ground using the lifting points.
2. Ensure the attachment bracket is positioned vertically.
3. Remove the excavator bucket. Follow the manufacturer's recommended procedure.

Note: Plug hydraulic hoses to prevent contamination.

4. Clean the inside surface of the attachment bracket and all attachment pins. Remove all dirt and debris.
5. Bring the excavator in position, carefully lining up the stick tip with the stick connection on the attachment bracket.
6. Pin the excavator stick to the stick connection.
7. Carefully extend the excavator bucket cylinder to move the bucket linkage. Position the link into the attachment bracket linkage connection.
8. Pin the linkage connection to the attachment bracket.



Lifting Points



Connect to Excavator

9. Remove the transport pin.

HYDRAULIC INSTALLATION

| Model | Jaw Cycle Circuit (Max) | Rotation Circuit (Max) | Connection | |
|--------|--|--|--------------|-------------|
| | | | Attachment | Rotation |
| MRX200 | 74 GPM (280 LPM) 5075 PSI (350 Bar) | 3.9 GPM (14.8 LPM) 2030 PSI (140 Bar) | 1 In Code 62 | 1/2 In BSPP |
| MRX250 | 79 GPM (299 LPM) 5075 PSI (350 Bar) | 4.8 GPM (18 LPM) 2030 PSI (140 Bar) | | |
| MRX350 | 92 GPM (348 LPM) 5075 PSI (350 Bar) | 9.7 GPM (36.7 LPM) 2030 PSI (140 Bar) | | |

1. Turn off the excavator and relieve any trapped pressure in the hydraulic system. Lock-out / Tag-out the hydraulic power source.



Trapped hydraulic pressure may be present after the excavator is shut off. Extreme caution must be taken when removing hydraulic hoses or lines. Injury or death could result.



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

2. Clean the excavator hydraulic hose fittings.
3. Route each hydraulic hose so that they will not rub on the attachment bracket or will otherwise become damaged.
4. Connect the excavator hoses to the hydraulic connections located on each side of the MRX head. Each hydraulic port is labeled.

| Label | Function |
|---------|----------------------------------|
| EXT | Cylinder extend. Closes the jaw. |
| RET | Cylinder retract. Opens the jaw. |
| ROT CW | Clockwise rotation |
| ROT CCW | Counter clockwise rotation |
| Drain | Case drain (if equipped) |



5. Torque all hydraulic fittings to values shown in "Inspect / Torque Bolts" on page 25.

WARNING

Do not check for hydraulic leaks with your hands. Hydraulic oil could inject into the skin. Seek immediate medical attention if an injection injury occurs.

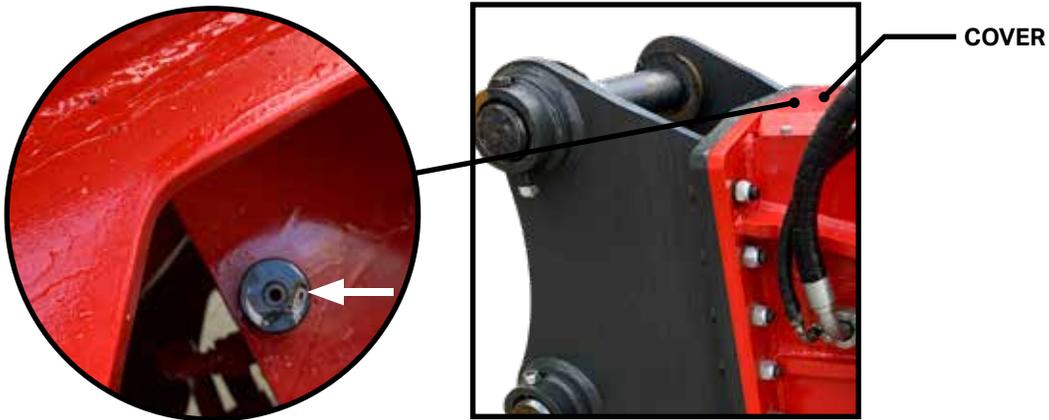
6. Visually check for hydraulic oil leaks or hydraulic hose interference.

Note: The hydraulic circuit must be bled before putting the attachment into service (see "Bleed the Attachment Hydraulic Circuit" on page 17).

ADJUST ROTATION FLOW

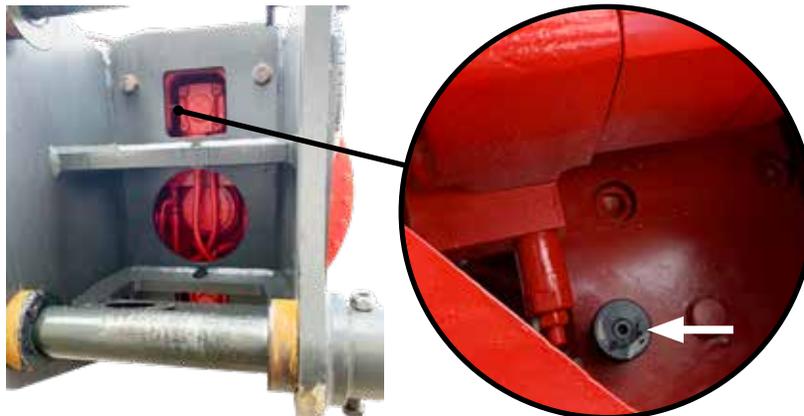
MRX has two rotation flow controls, one accessed from the rotating head cover and another accessed from the top of the attachment.

1. Remove the cover from the rotating head. The flow control port will be attached to the port block.
 - Turn the rotation flow control knob clockwise to increase flow.
 - Turn the rotation flow control knob counter clockwise to decrease flow.



Look through the top of the mounting bracket. The flow control will be attached to the port block.

- Turn the rotation flow control knob clockwise to increase flow.
- Turn the rotation flow control knob counter clockwise to decrease flow.



JAW INSTALLATION

MRX is shipped without the jaw installed. Follow the instructions below to install the jaw.

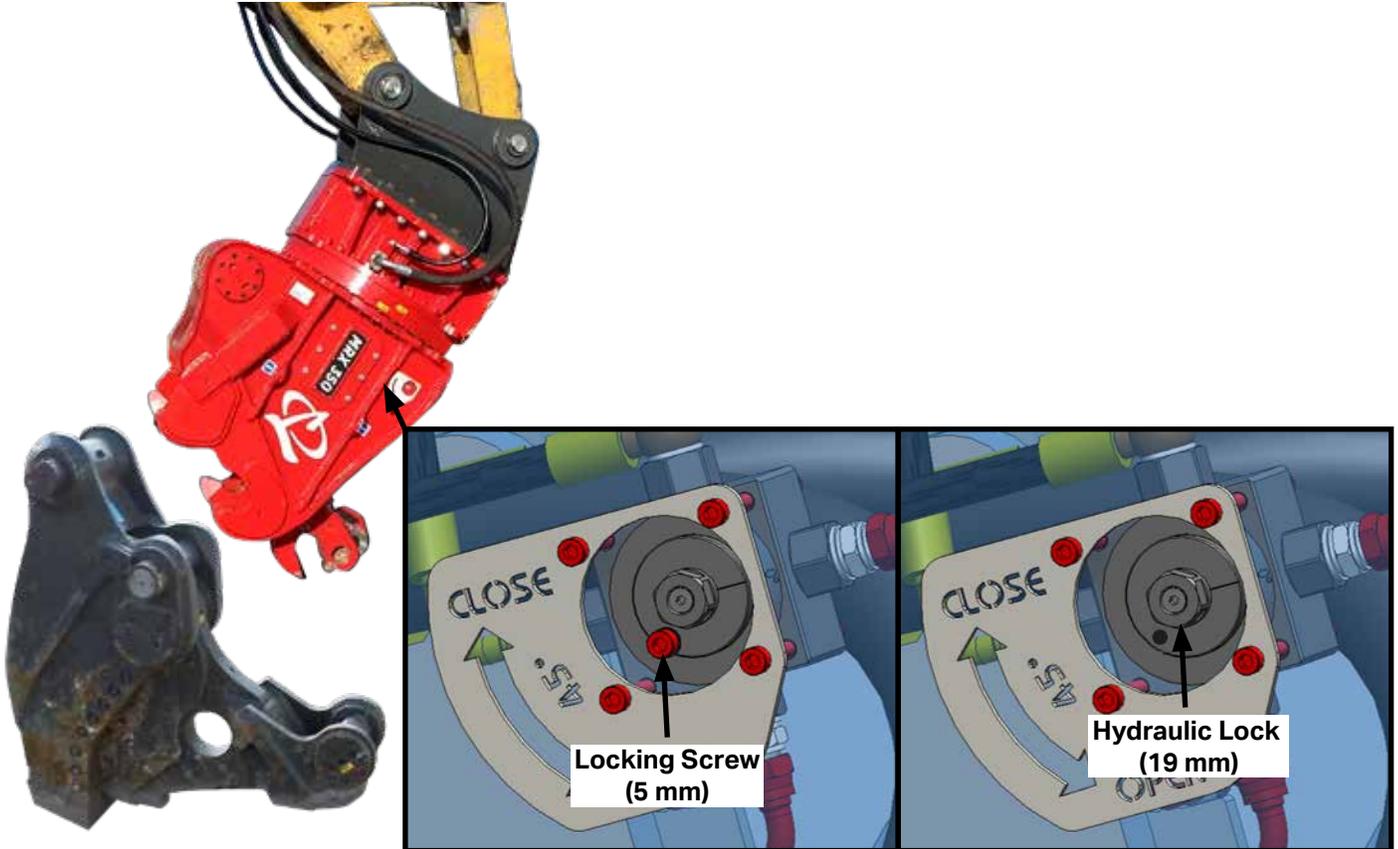
⚠ CAUTION

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

⚠ WARNING

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).

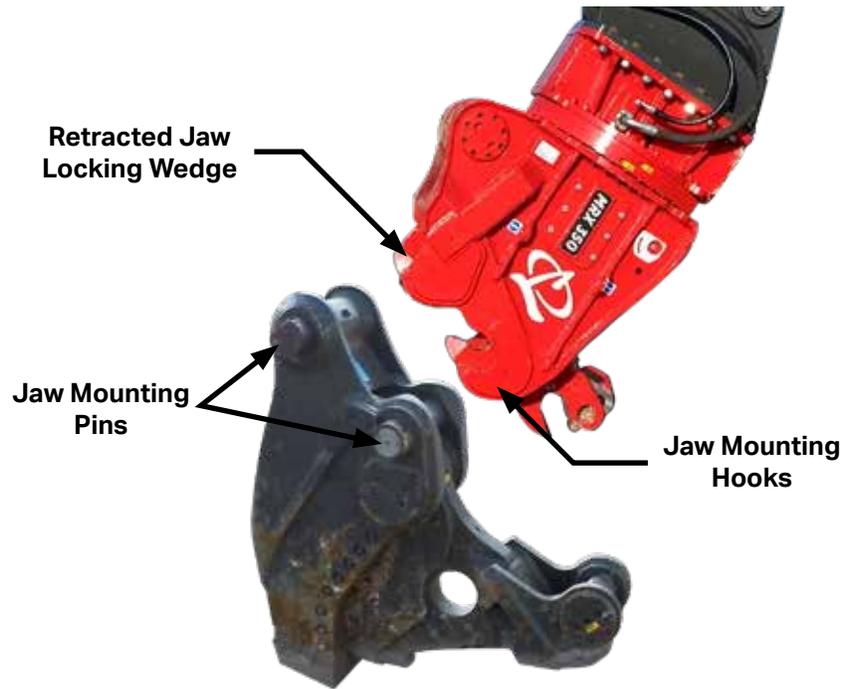
1. Place the jaw horizontally on the ground.
2. Curl MRX under the excavator and position it so that it can be accessed from the ground.
3. Remove the locking screw from the hydraulic lock using a 5 mm hex wrench.
4. Using a 19 mm socket, turn the hydraulic lock to the open position.



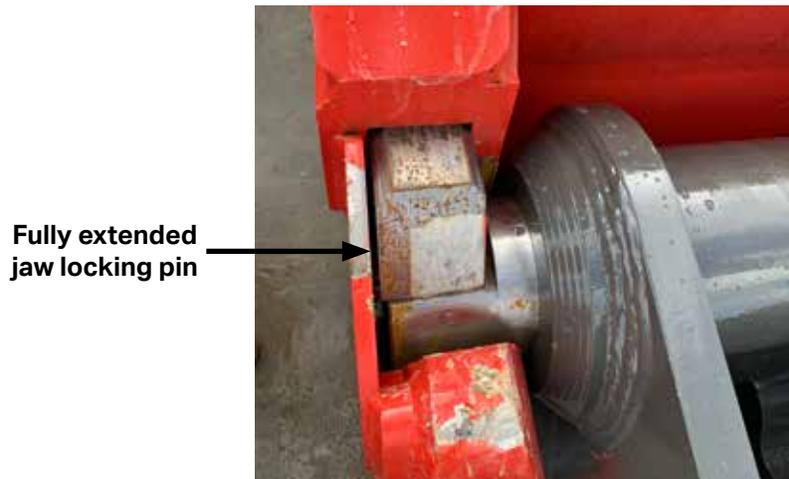
5. Use the auxiliary circuit control to extend the MRX cylinder. This will retract the jaw locking wedge.
6. Release the auxiliary circuit control, then have a helper quickly turn the hydraulic lock to the closed position. If performed correctly, the jaw locking wedge will be fully retracted.

Note: Do not continue if the jaw locking wedge is not fully retracted.

7. Hook the jaw mounting pins onto the MRX jaw mounting hooks.



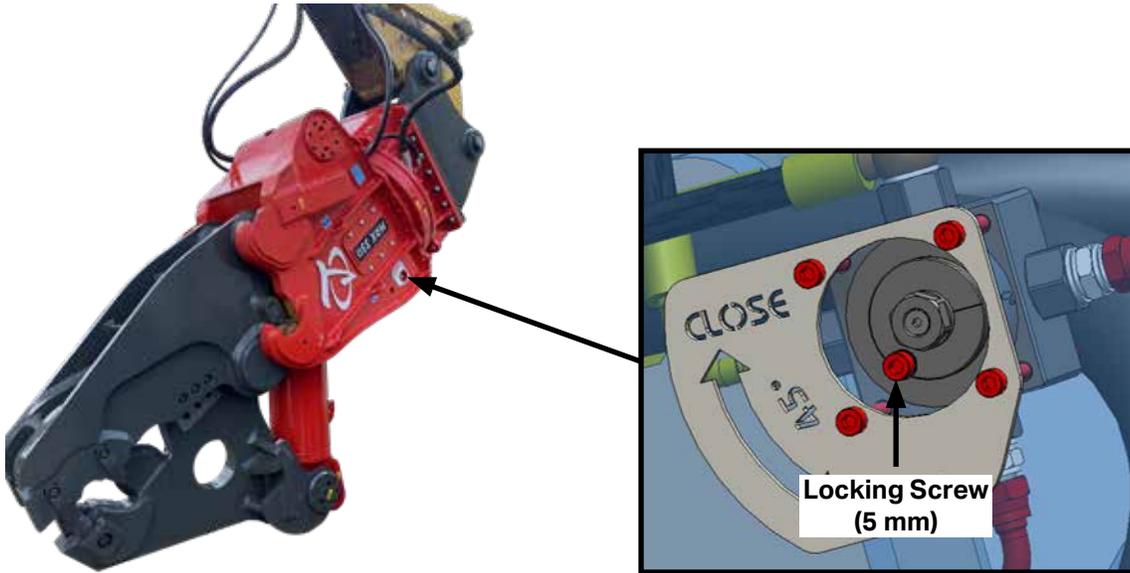
8. Turn the hydraulic lock to the open position.
9. Use the auxiliary circuit control to retract the MRX cylinder. This will extend the jaw locking wedge.
10. Release the auxiliary circuit control, then have a helper quickly turn the hydraulic lock to the closed position. If performed correctly, the jaw locking pin will be fully extended.



11. Insert the locking screw into the hydraulic lock and torque to 8 ft. lbs. (10.3 Nm).

⚠️ WARNING

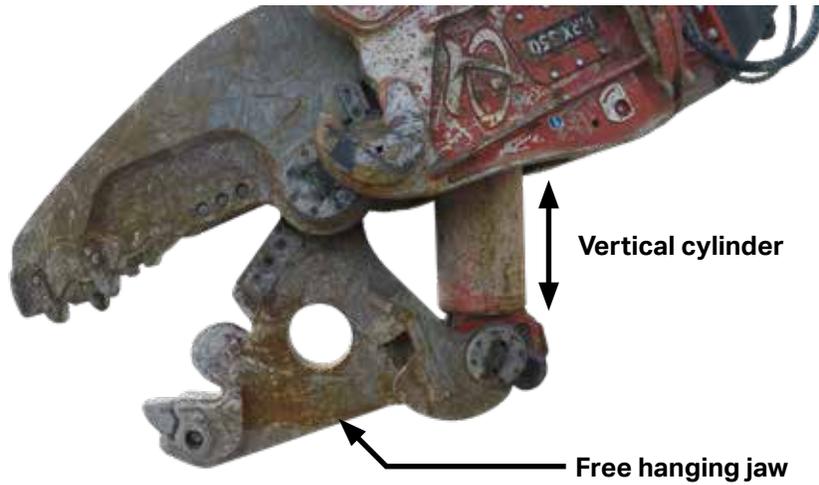
Jaw can become unhooked from the MRX base if locking screw is missing. Ensure the locking screw is in place and properly torqued. Jaws can fall and crush bystanders and damage equipment.



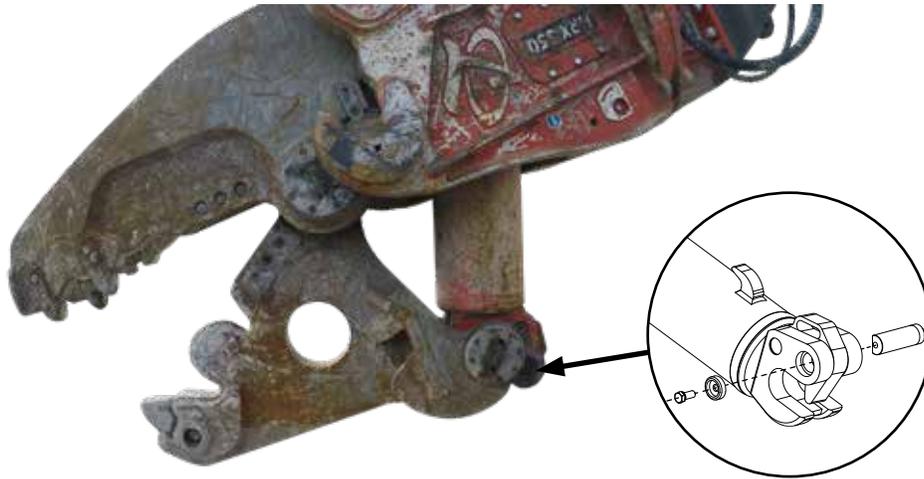
12. Clear the area of bystanders, then slowly raise the jaw off of the ground.

Note: The cylinder and the hinged jaw will not be attached. The hinged jaw will be free hanging. Use caution when moving.

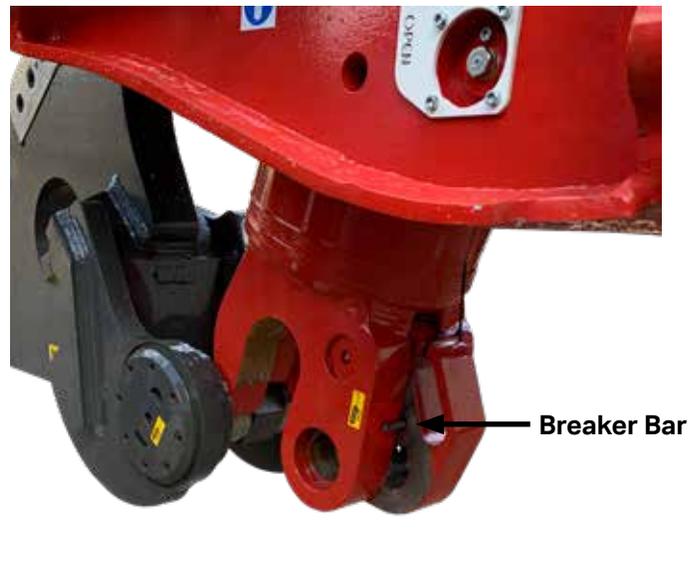
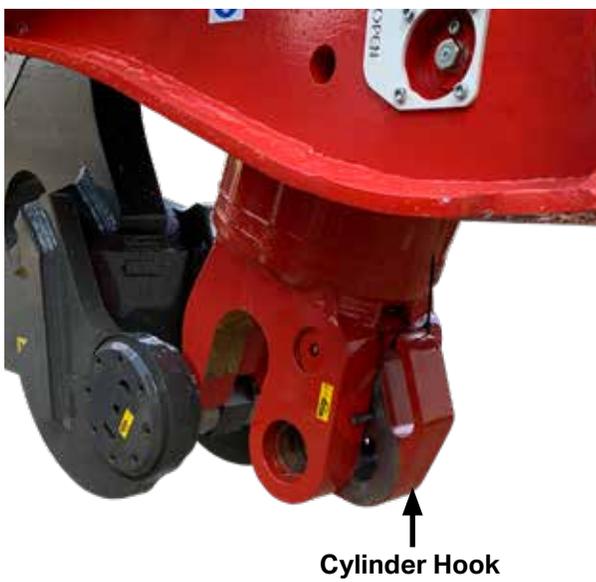
13. Knuckle the attachment under the excavator until the hinged jaw is floating and the cylinder is vertical.



14. Using a 36 mm socket, remove the screw, washer and pin from the cylinder coupling. Set aside for use later.



15. Lift the cylinder hook and place a breaker bar in the cylinder hook hole. This will keep the hook open during coupling.



16. Slowly extend the MRX cylinder until the cylinder coupler interfaces with the lower jaw pin.

17. Remove the breaker bar and close the cylinder hook around the lower jaw coupling.

18. Insert the pin, screw and washer removed previously.

STORING THE ATTACHMENT

1. Lubricate all parts. See "Lubrication" on page 21.
2. Insert the transport pin.
3. Secure the attachment on two wooden supports on the ground, orienting it horizontally.
4. Turn off the excavator and relieve any trapped pressure in the hydraulic system. Lock-out / Tag-out the hydraulic power source.

WARNING

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

WARNING

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

5. Remove and plug all hydraulic lines.
6. Store the MRX body and jaws in a protected place where they will be isolated from shock, stress, damage and corrosive substances.

Note: Do not store the attachment in a high humidity environment or in an environment with extreme temperature shifts.

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. This includes eye protection, hard hat, steel toe shoes, gloves, hearing protection and respirator.



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.
- 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 Protective Structures (FOPS)
- Canopies
- Shields and guards
- Barricades
- Warning lights
- Visual or audible warning devices

General Rules For Safe Operation

- **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.
- 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.
- Maintain a safe distance.
- **NEVER** leave the attachment suspended or pass it over people, occupied vehicles or buildings.
- When working in confined spaces, keep watch on exposed parts, such as cylinder rods and hoses, to avoid damage.
- Maintain at least 50 feet (15 meters) between the attachment and any nearby power lines.
- **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.
- 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.
- **DO NOT** alter factory preset hydraulics. This may void the warranty.
- **DO NOT** shear high tensile steel, such as railroad rail, spring steel, axles and some types of wire. Jaw damage will result. This type of material breaks when processed and can become a projectile which could cause injury or death.

- Use attachment rotation for positioning only. Do not use if for bending, breaking or prying.
- DO NOT use attachment as a jack hammer or wrecking ball.
- DO NOT attempt to shear material stuck through the lower jaw.
- Before shearing thin material, ensure the blades are sharp and properly adjusted. Thin material may jam the blades.
- DO NOT apply excavator force at the ends of the upper shear in an attempt to un-jam the jaws or cut material that is too large for the shear.

TECHNICAL SPECIFICATIONS

| Model | Jaw | Weight w/ Jaw | Jaw Opening | Jaw Depth | Reach | Minimum Excavator Weight - 3rd Member |
|--------|---------------------|-----------------------|---------------------|-------------------|-----------------|---------------------------------------|
| MRX200 | Shear | 5,980 Lbs 2,700 Kg | 18.9 in 480 mm | 20.7 in 530 mm | 8.3 ft 2.5 m | 55,000 Lbs 25 mTons |
| | Concrete Pulverizer | 6,170 Lbs 2,800 Kg | 34.6 in 880 mm | 31.1 in 790 mm | 8.8 ft 2.7 m | 55,000 Lbs 25 mTons |
| | Concrete Cracking | 6,250 Lbs 2,800 Kg | 36.2 in 920 mm | 30.1 in 760 mm | 9.1 ft 2.8 m | 55,000 Lbs 25 mTons |
| MRX250 | Shear | 7,680 Lbs 3,500 Kg | 19.7 in 500 mm | 22 in 560 mm | 8.6 Ft 2.6 M | 77,000 Lbs 35 mTons |
| | Concrete Pulverizer | 7,740 Lbs 3,500 Kg | 35.6 in 900 mm | 32.3 in 820 mm | 9.1 ft 2.8 m | 77,000 Lbs 35 mTons |
| | Concrete Cracking | 7,670 Lbs 3,500 Kg | 37.2 in 940 mm | 32.1 in 820 mm | 9.3 ft 2.8 m | 77,000 Lbs 35 mTons |
| MRX350 | Shear | 8,780 Lbs 4,000 Kg | 20.7 in 530 mm | 22.2 in 560 mm | 8.8 ft 2.7 m | 99,000 Lbs 45 mTons |
| | Concrete Pulverizer | 9,430 Lbs 4,300 Kg | 38.2 in 970 mm | 33.9 in 860 mm | 9.5 ft 2.9 m | 99,000 Lbs 45 mTons |
| | Concrete Cracking | 9,380 Lbs 4,300 Kg | 39.8 in 1,010 mm | 34.4 in 870 mm | 9.7 ft 3.0 m | 99,000 Lbs 45 mTons |

CONTROLS



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

| Control | Attachment Function |
|----------------------------|---------------------|
| Bucket Curl | Attachment Curl |
| Bucket Dump | Attachment Out |
| Auxiliary Cylinder Circuit | Jaw Open/Close |

BLEED THE ATTACHMENT HYDRAULIC CIRCUIT

Air must be bled out of the hydraulic circuit prior to operation. Air in the hydraulic 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 in the vertical position.
2. Set the excavator at idle speed.
3. Slowly open the jaws until a noticeable change in tone of the excavator is heard, indicating a full cylinder. Release the controls and do not continue to apply full operating pressure to the cylinder.
4. Slowly close the jaws until the cylinder rod is extended approximately 1/4 stroke.
5. Open the jaws to retract the cylinder all the way.
6. Repeat steps 3 and 4. Extend the cylinder a quarter 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 cylinder at this time.
8. Check the base machine hydraulic fluid level and fill if necessary.
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 becoming damaged in any way. Contact your dealer immediately if interference occurs.

MAINTENANCE

8 HOURS INSPECTION CHECKLIST

Lubrication

_____ Lubricate as shown on page 21.

_____ Inspect the grease fittings and replace if damaged.

Inspect Hardware

_____ Inspect the locking screw on the hydraulic lock. Ensure it is properly torqued and is not damaged (See "Jaw Installation" on page 10).

_____ Inspect all hardware on the attachment. Ensure they are properly torqued and are not damaged (See "Inspect / Torque Bolts" on page 23).

_____ Inspect the teeth and blade bolts. Ensure they are properly torqued and are not damaged (See "Inspect / Torque Bolts" on page 23).

Inspect Blades

_____ Inspect blade wear. Rotate or replace if rounded more than 0.25" (See "Blade Maintenance" on page 23).

Inspected By: _____ Date: _____

DAILY INSPECTION CHECKLIST

Visual Inspection

_____ Ensure the identification plate is present and legible. Replace if necessary.

_____ Inspect all tool decals and ensure they are legible. Replace if missing or illegible. Contact LaBounty customer service for replacements.

_____ Visually inspect the structure of the attachment for damage. If damage is found, do not use the attachment and repair immediately.

_____ Inspect all welds and ensure there are no cracks or damage. If damage is found, do not use the attachment and repair immediately.

_____ Visually inspect all hydraulic hoses and connections. Ensure they are not damaged.

Inspect Hardware

_____ Check the play between the pins and bushings on the attachment bracket. If the play is greater than 0.6 mm, replace the bushings and pins.

_____ Check all hydraulic connection hardware. Ensure they are properly torqued and are not damaged (see "Inspect / Torque Bolts" on page 23).

Inspected By: _____ Date: _____

40 HOUR INSPECTION CHECKLIST

Inspect Hardware

_____ Check the play between the pins and bushings on the rotating head. If the play is greater than 0.6 mm, replace the bushings and pins.

Lubrication

_____ Grease the pinion and teeth of the rotation bearing (See "MRX Body Grease Fittings" on page 21).

Blade / Teeth Maintenance

_____ Measure the play between the blades. Ensure the play is between 0.2 - 1.2 mm. If the play is greater, shim the blades (see "Blade Maintenance" on page 23).

Inspected By: _____ Date: _____

6 MONTH INSPECTION CHECKLIST

_____ Inspect the gaskets on the rotation thrust block.

Inspected By: _____ Date: _____

12 MONTH INSPECTION CHECKLIST

_____ Visually inspect the cylinder. Ensure there is no oil leakage.

Inspected By: _____ Date: _____

LUBRICATION

Recommended Grease Types

Only use grease that is acid-free, contains resins, is not hygroscopic, resists aging and has a temperature range suitable for the application. After underwater use carefully clean the pins and bushings. Eliminate all trace of oxidation before lubricating again.

Note: When greasing the rotation components, you must use different grease for the rollers and the teeth.

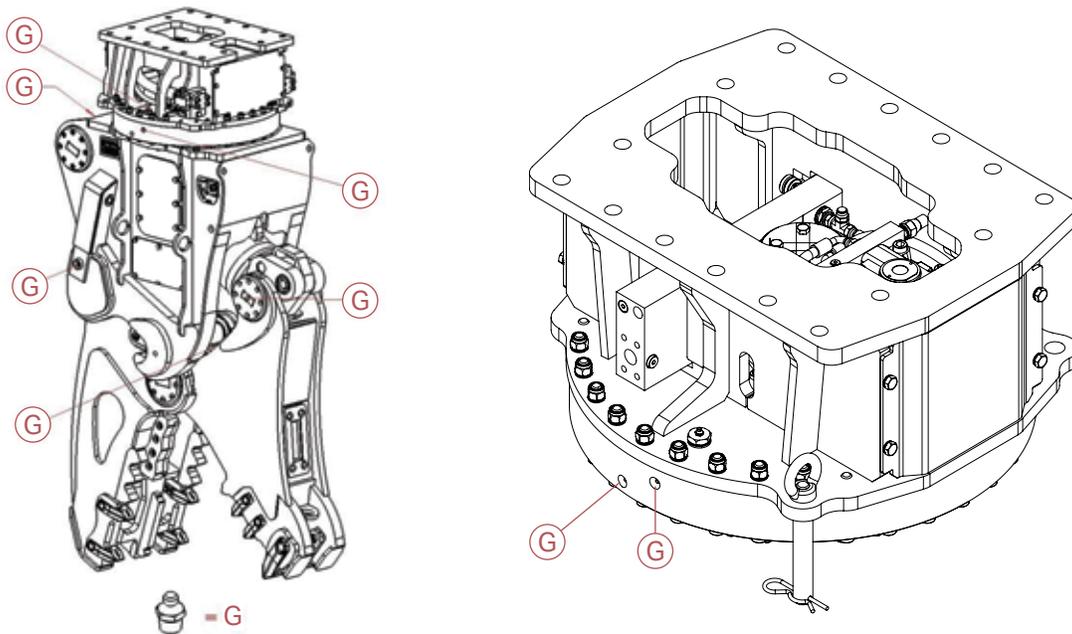
| Roller Grease | |
|-------------------------|----------------------------------|
| Grease Name | Operating Temperature |
| Energrease LS-EP 2 | -4°F - 248°F (-20°C - 120°C) |
| Spheerol EPL 2 | -22°F - 266°F (-30°C - 130°C) |
| EPEXA 2 | -22°F - 266°F (-30°C - 130°C) |
| Beacon EP2 | -22°F - 266°F (-30°C - 130°C) |
| Athesia EP 2 | -13°F - 212°F (-25°C - 100°C) |
| Mobilux EP 2 | -22°F - 266°F (-30°C - 130°C) |
| Centoplex 2 EP | -22°F - 266°F (-30°C - 130°C) |
| Shell Alvania EP (LF) 2 | -22°F - 266°F (-30°C - 130°C) |

| Teeth Grease | |
|----------------------------------|----------------------------------|
| Grease Name | Operating Temperature |
| Energrease LC 2 | -13°F - 320°F (-25°C - 160°C) |
| Castrol LZV-EP | -22°F - 266°F (-30°C - 130°C) |
| Cardrexa GR 1-AL | -22°F - 266°F (-30°C - 130°C) |
| Esso Multi-Purpose Grease (Moly) | -22°F - 266°F (-30°C - 130°C) |
| Viscum Fluids | 14°F - 302°F (-10°C - 150°C) |
| Mobiltac 81 | -22°F - 266°F (-30°C - 130°C) |
| Grafloscon C-SG 0 Ultra | -22°F - 266°F (-30°C - 130°C) |
| Shell Malleus GL 95 | -22°F - 266°F (-30°C - 130°C) |

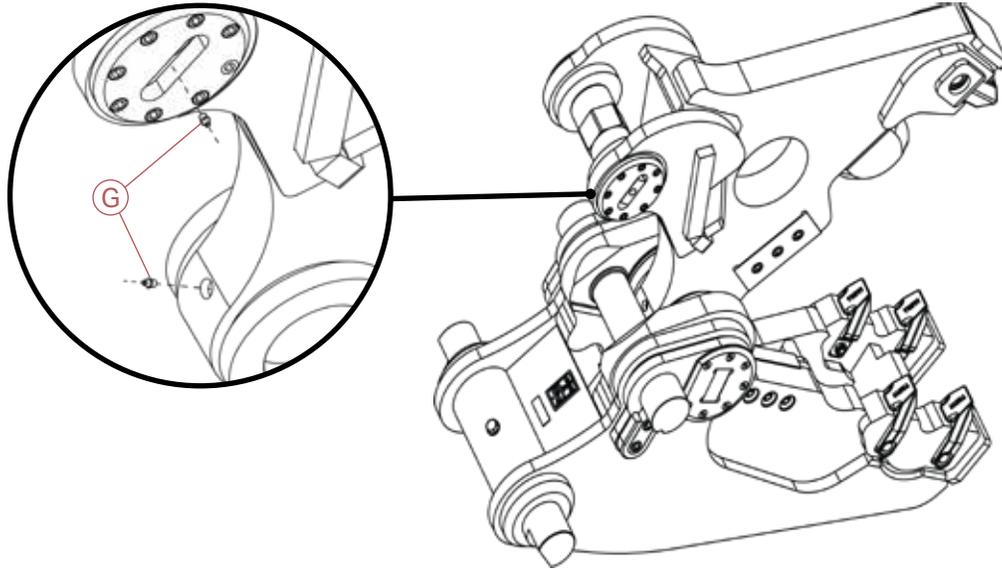
Grease Fitting Locations

Note: Grease fittings are indicated by a yellow "Grease" sticker on the attachment.

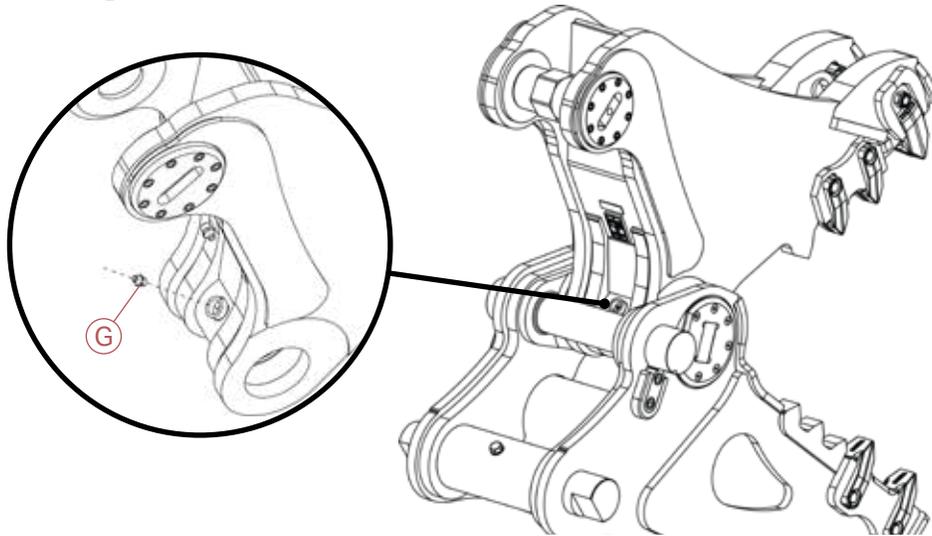
MRX Body Grease Fittings



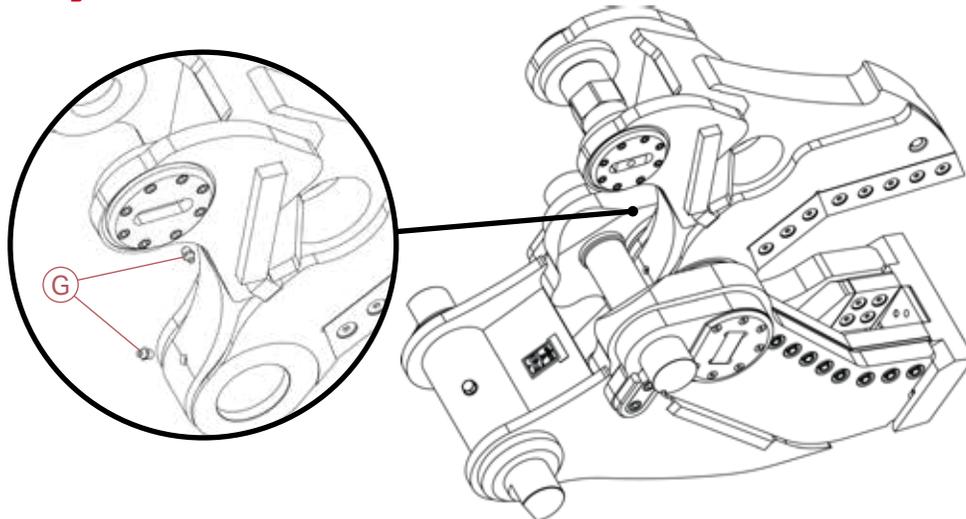
Cracker Jaw Grease Fittings



Pulverizer Jaw Grease Fittings



Shear Jaw Grease Fittings



INSPECT / TORQUE BOLTS

| General Fastener Torque Table | | | | |
|-------------------------------|---------------------------|---------------------------|--------------------------|-------------------------|
| Size | 6S | 8.8 - (8G) | Class 10.9 | Class 12.9 |
| M5 | 4 Ft. Lbs. (5.10 Nm) | 4 Ft. Lbs. (5.98 Nm) | 6 Ft. Lbs. (8.5 Nm) | 8 Ft. Lbs. (10.2 Nm) |
| M6 | 6 Ft. Lbs. (8.73 Nm) | 8 Ft. Lbs. (10.3 Nm) | 11 Ft. Lbs. (14.7 Nm) | 13 Ft. Lbs. (17.6 Nm) |
| M8 | 16 Ft. Lbs. (21.58 Nm) | 19 Ft. Lbs. (25.5 Nm) | 26 Ft. Lbs. (35.3 Nm) | 31 Ft. Lbs. (42 Nm) |
| M10 | 31 Ft. Lbs. (42.2 Nm) | 37 Ft. Lbs. (50 Nm) | 52 Ft. Lbs. (70.6 Nm) | 63 Ft. Lbs. (85.5 Nm) |
| M12 | 54 Ft. Lbs. (73.6 Nm) | 64 Ft. Lbs. (87.3 Nm) | 90 Ft. Lbs. (122.6 Nm) | 108 Ft. Lbs. (147 Nm) |
| M14 | 86 Ft. Lbs. (116.7Nm) | 102 Ft. Lbs. (138.3 Nm) | 143 Ft. Lbs. (194.2 Nm) | 174 Ft. Lbs. (235.5 Nm) |
| M16 | 132 Ft. Lbs. (178.5 Nm) | 156 Ft. Lbs. (210.9 Nm) | 221 Ft. Lbs. (299.2 Nm) | 264 Ft. Lbs. (358 Nm) |
| M18 | 181 Ft. Lbs. (245 Nm) | 213 Ft. Lbs. (289.4 Nm) | 304 Ft. Lbs. (412 Nm) | 362 Ft. Lbs. (490.5 Nm) |
| M20 | 257 Ft. Lbs. (348.5 Nm) | 304 Ft. Lbs. (412 Nm) | 427 Ft. Lbs. (578.8 Nm) | 514 Ft. Lbs. (696.5 Nm) |
| M22 | 347 Ft. Lbs. (471 Nm) | 412 Ft. Lbs. (559.2 Nm) | 579 Ft. Lbs. (784.8 Nm) | 695 Ft. Lbs. (942 Nm) |
| M24 | 441 Ft. Lbs. (598.5 Nm) | 525 Ft. Lbs. (711.2 Nm) | 738 Ft. Lbs. (1000.5 Nm) | 883 Ft. Lbs. (1197 Nm) |
| M27 | 655 Ft. Lbs. (888 Nm) | 774 Ft. Lbs. (1049.7 Nm) | 1092 Ft. Lbs. (1481 Nm) | 1310 Ft. Lbs. (1776 Nm) |
| M30 | 890 Ft. Lbs. (1206.5 Nm) | 1049 Ft. Lbs. (1422.4 Nm) | 1483 Ft. Lbs. (2011 Nm) | 1772 Ft. Lbs. (2403 Nm) |
| M33 | 1201 Ft. Lbs. (1628.5 Nm) | 1425 Ft. Lbs. (1932.6 Nm) | 2004 Ft. Lbs. (2717 Nm) | 2410 Ft. Lbs. (3267 Nm) |

BLADE MAINTENANCE

Before performing blade maintenance, place the attachment on the ground, so that the part being maintained is closest to the ground. When performing maintenance on the upper jaw curl the attachment under the stick so that the upper jaw is on the ground.



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



Blades are very heavy. Do not remove a blade if it's not supported. The blade may fall and cause injury.

CRACKER JAW

Measuring Blade Gap and Shimming

Note: Removing and handling blades can be hazardous if done incorrectly.

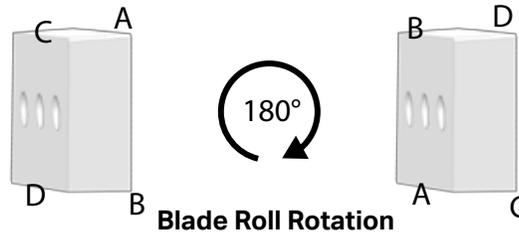
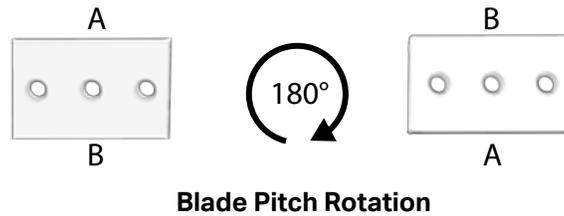


Stay at least 75 ft. (23 m) when moving.

1. Cycle the tool until the upper jaw blade begins to overlap the lower jaw blade.
2. Measure the blade gap. If the gap is larger than 0.4 mm, add shims between the guide blade and blade seat until the gap is 0.4 mm - 0.4 mm.

Blade Rotation

Each cracker jaw blade has four edges. Each time you rotate the blade, use a different edge until all the edges are worn to .25" radius.



PULVERIZER JAW

Measuring Blade Gap and Shimming

Note: Removing and handling blades can be hazardous if done incorrectly.

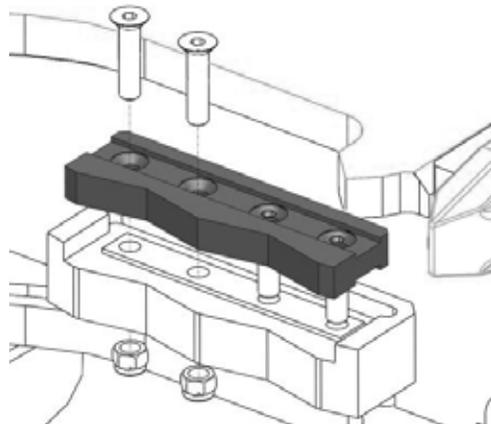


Stay at least 75 ft. (23 m) when moving.

1. Cycle the tool until the upper jaw blade begins to overlap the lower jaw blade.
2. Measure the blade gap. If the gap is larger than 0.4 mm, add shims between the guide blade and blade seat until the gap is 0.4 mm - 0.4 mm.

Blade Rotation

Each pulverizer jaw blade has two edges. Flip the blade when the cutting edge is worn to a .25" radius. Replace when both edges are worn.



1. Remove the blade bolts and remove the blade from the blade seat.
- Note:** Bolts may need to be removed by metal arc gouging.
2. Ensure the blade seat is clean.
 3. Flip the blade or install a new blade.
 4. Insert the blade bolts and torque as specified in "Inspect / Torque Bolts" on page 23.

SHEAR JAW

Measuring Primary / Secondary Blade Gap and Shimming

Note: Removing and handling blades can be hazardous if done incorrectly.



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

1. Cycle the tool until the upper jaw blade begins to overlap the lower jaw blade.
2. Measure the blade gap. If the gap is larger than 0.4 mm, add shims between the guide blade and blade seat until the gap is 0.4 mm.

Measuring Guide Blade Gap and Shimming

Note: Removing and handling blades can be hazardous if done incorrectly.



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

1. Slowly close the jaws until the tip blade meets the guide blade.
2. Measure the gap between the tip blade and guide blade. This gap should never exceed 0.4 mm.
3. If the gap is larger than 0.4 mm, remove the guide blade and insert shims until the gap is within 0.4 mm.
4. If you are unable to shim the blade within the 0.4 mm gap measurement, you must rotate the blade.

Measuring Cross Blade Gap and Shimming

Note: Removing and handling blades can be hazardous if done incorrectly.

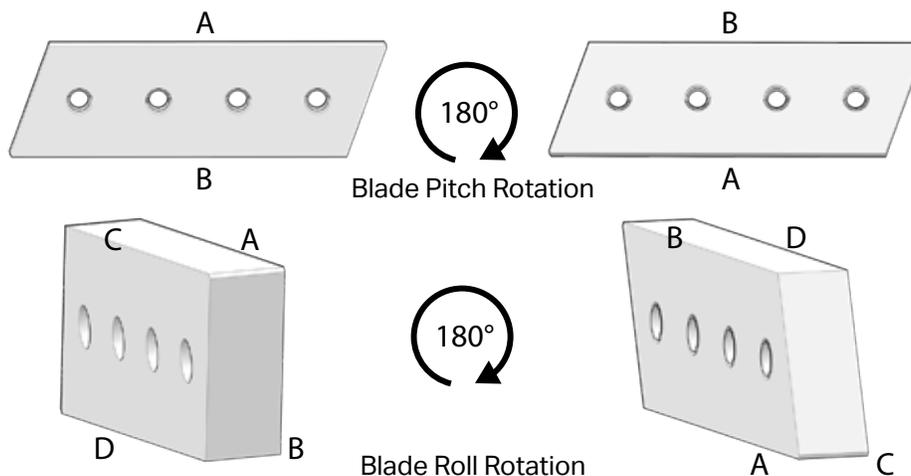


Stay at least 75 ft. (23 m) when moving.

1. Slowly close the jaws until the tip blade meets the cross blade.
2. Measure the gap between the tip blade and cross blade. This gap should never exceed 0.4 mm.
3. If the gap is larger than 0.4 mm, remove the cross blade and insert shims until the gap is within 0.4 mm.
4. If you are unable to shim the blade within the 0.4 mm gap measurement, you must rotate the blade.

Primary/Secondary Blade Rotation

Each shear jaw blade has four edges. Each time you rotate the blade, use a different edge until all the edges are worn to .25" radius.



Guide Blade Rotation

Each guide blade has two edges. Rotate the blade when the cutting edge is worn to a .25" radius. Replace when both edges are worn.

1. Remove the blade bolts and remove the blade from the blade seat.
2. Ensure the blade seat is clean.
3. Rotate the blade end-over end or install a new blade.
4. Insert the blade bolts and torque as specified in "Inspect / Torque Bolts" on page 23.

Cross Blade Rotation

1. Remove the cross blade.
2. Rotate it end-over-end
3. Re-install the cross blade. Torque bolts as specified in "Inspect / Torque Bolts" on page 23.
4. Check the blade gap. Shim if necessary.

Note: The guide blade can only be rotated once. Replace during the next rotation.

Tip Blade Rotation

The tip blades cannot be shimmed or rotated. Once worn, the blade must be replaced.

1. Loosen the blade tip bolts.
2. Remove the blade.
3. Clean the blade seat.
4. Install a new tip blade and replace the blade bolts. Torque as specified in "Inspect / Torque Bolts" on page 23.

TOOTH MAINTENANCE

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

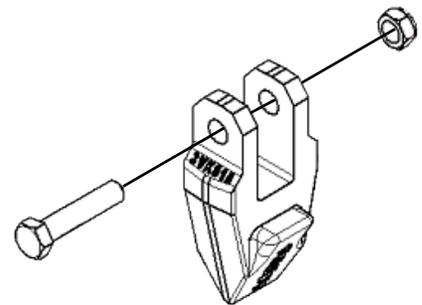
! CAUTION

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

! WARNING

Jaw teeth are very heavy. DO NOT remove a tooth pin if the tooth is not supported. The tooth may fall and cause injury.

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 bolt and nut that holds the tooth in the jaw.
 3. Remove the tooth from the receptacle.
 4. Insert a new tooth into the receptacle.
 5. Insert bolt and fasten the nut to secure the tooth. Torque as specified in "Inspect / Torque Bolts" on page 23.



BUILD UP & HARDSURFACING



Do not use stainless hardsurface rod or other improper build up and hardsurfacing products. Using improper products may result in premature wear or cracking of the base metal.



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).

Material Recommendation

Choose a build up material that meets the following classifications.

Shielded Metal Arc Welding - Stick Electrodes

- E7018
- E8018-C3

Gas Metal Arc Welding - Solid Wire Electrodes

- ER70S-6

Gas Metal Arc Welding - Flux Cored Electrodes

- E71T-1
- E71T-1M
- E80T1-Ni1
- E80T1-Ni1M

Gas Metal Arc Welding - Metal Powder Cored Electrodes

- E70C-6M
- E80C-Ni1

Hardsurfacing Recommendations

Hardsurfacing must be inspected and maintained.

For hardsurfacing, LaBounty recommends;

- FabTuf 960 or equivalent

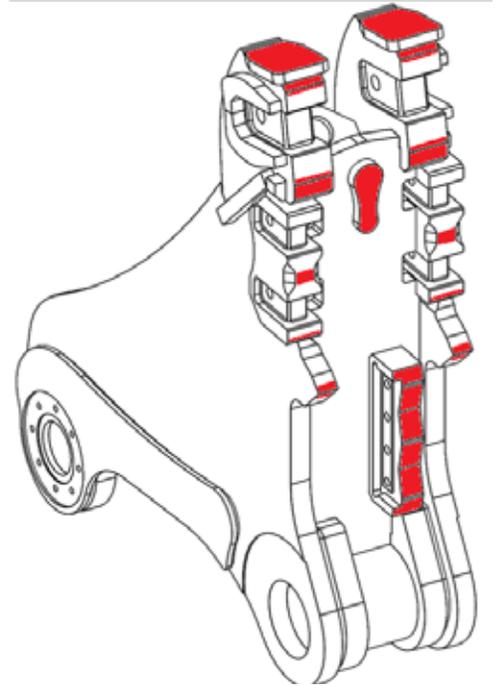
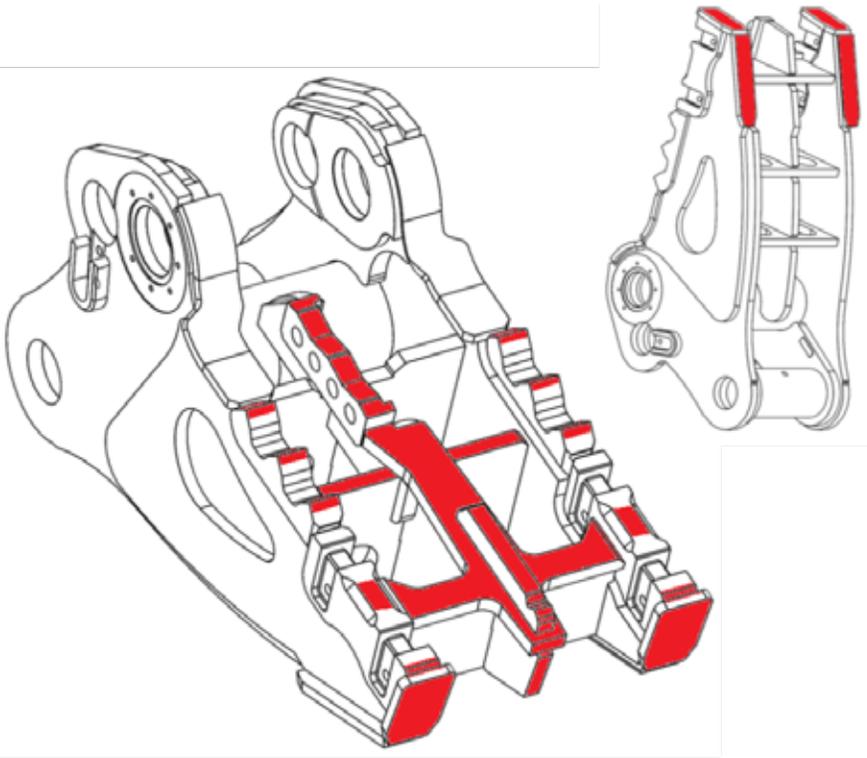
If you have questions about what hardsurface material to use, contact LaBounty Customer Service at 1-(800) 522-5059.

Guidelines

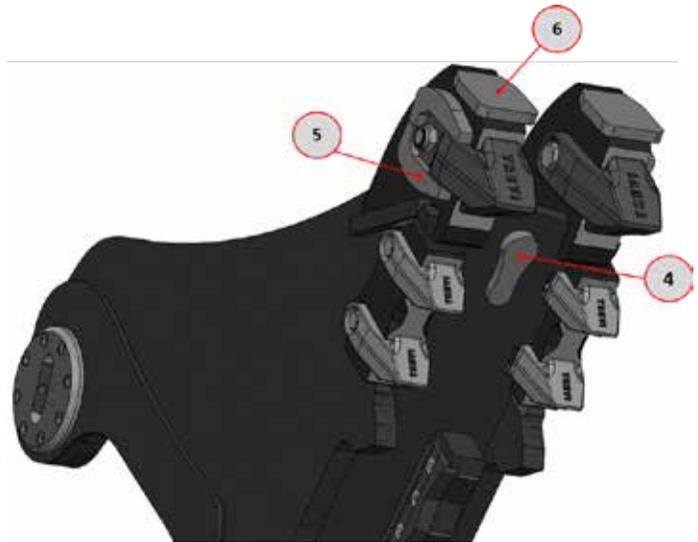
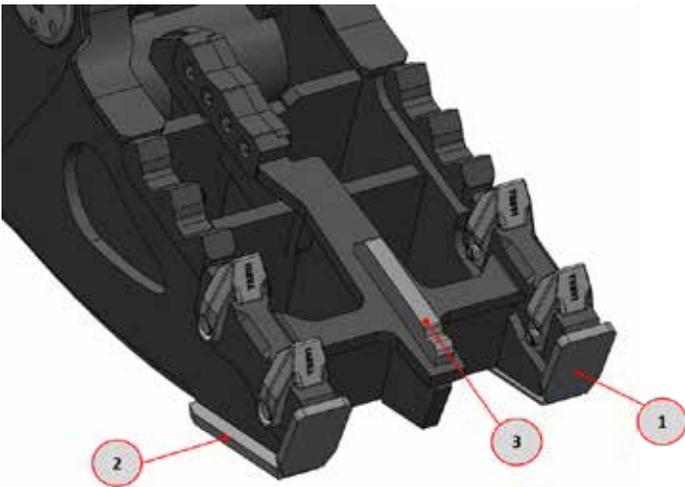
- Connect the ground pole of the welder to the part to be welded, as close as possible to the welding area. The ground pole must be connected so that the current does not cross the hinges or the hydraulic cylinder. If the attachment is mounted on the operation machine during welding, follow the instructions in the base machine manual to avoid damaging its battery or electronics.
- Carefully clean the area where material is to be added.
- Preheat to 302°F - 392°F (150°C - 200°C) and check the temperature frequently.
- Do not place more than two layers.
- Apply material with the grain of the parent material.
- Grind the ends of the fill material beads.
- After welding, cover the area with a heat blanket and allow to cool slowly.
- Carefully follow the application standards recommended by the manufacturer of the fill wire.

PULVERIZER JAW

Hard weld areas

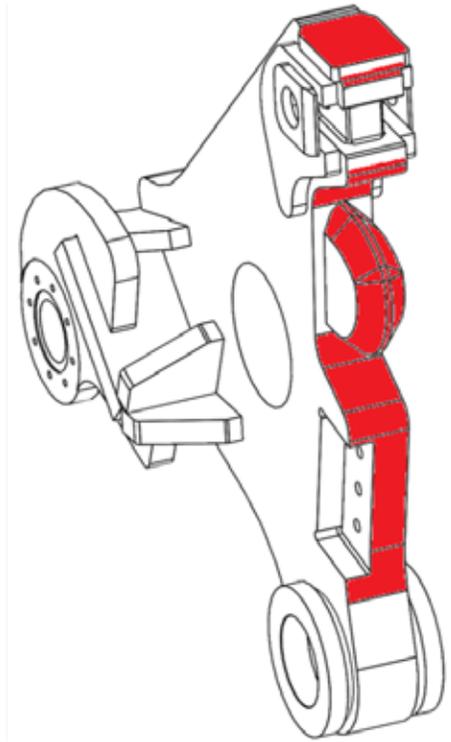
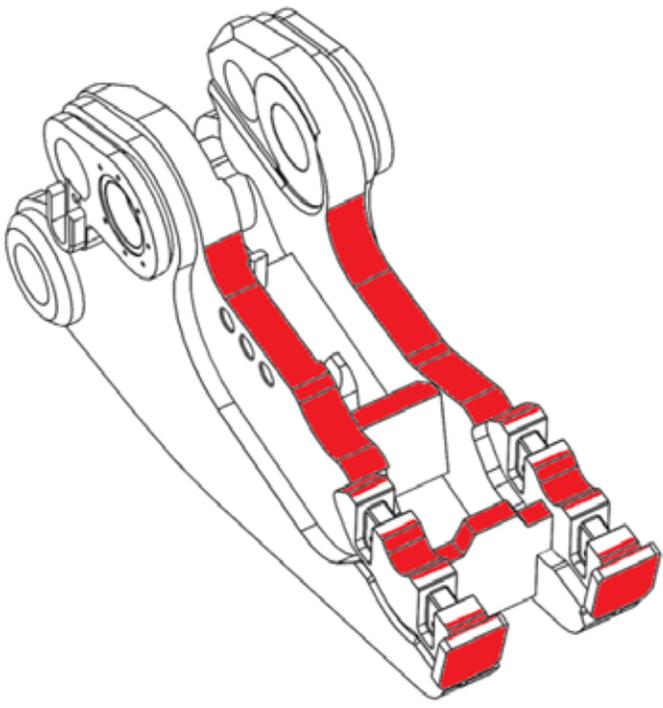


Wear Plates

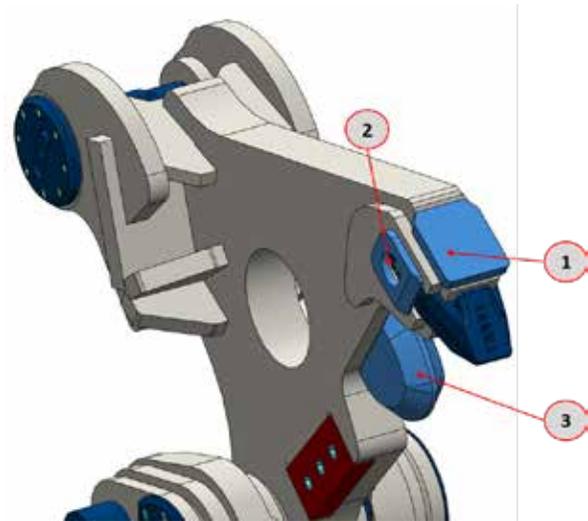
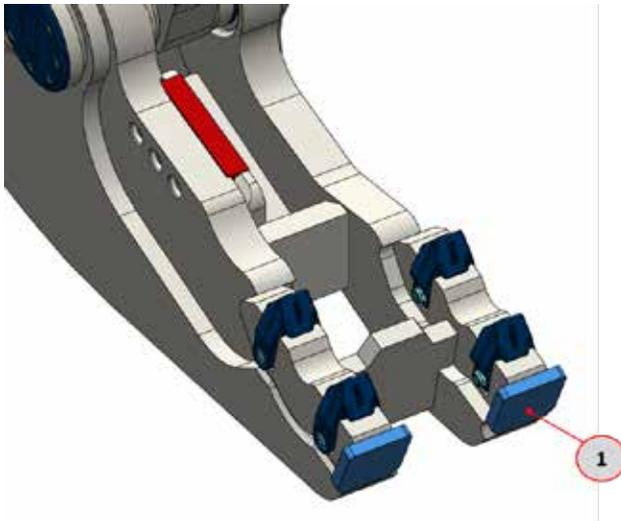


CRACKER JAW

Hard weld areas

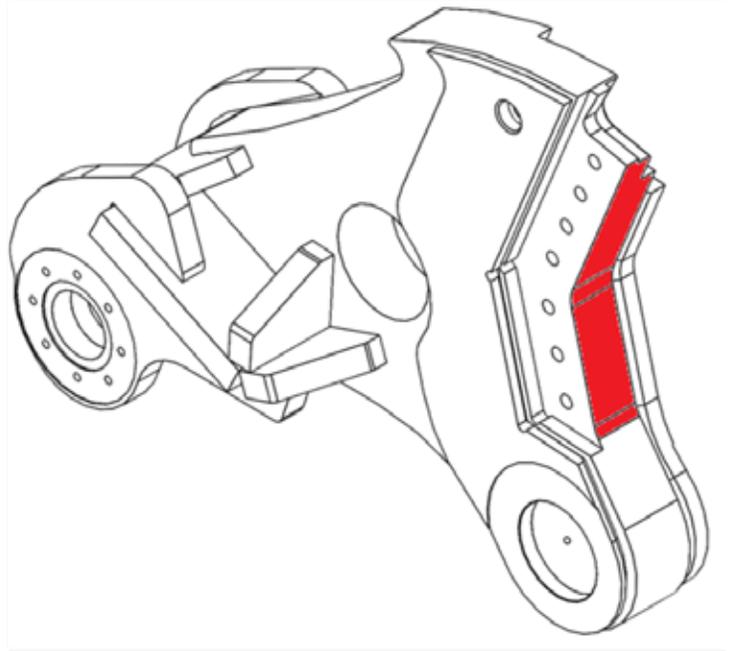
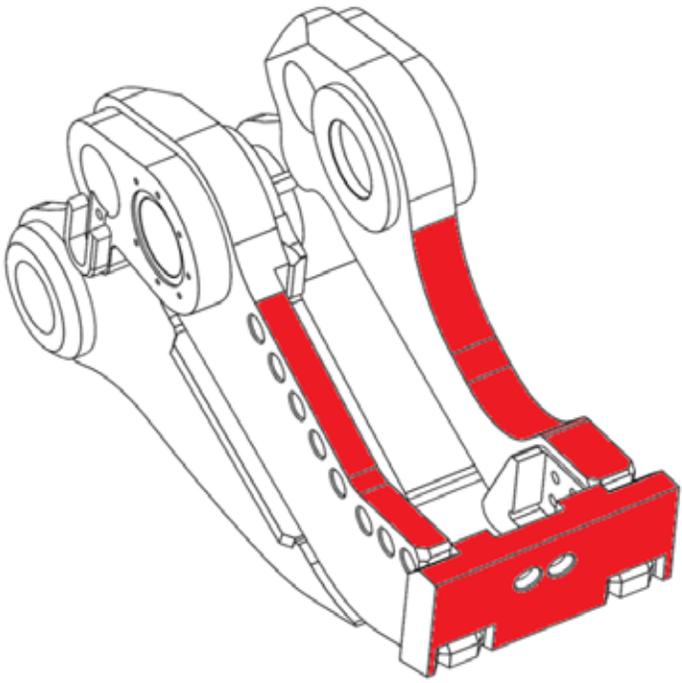


Wear plates



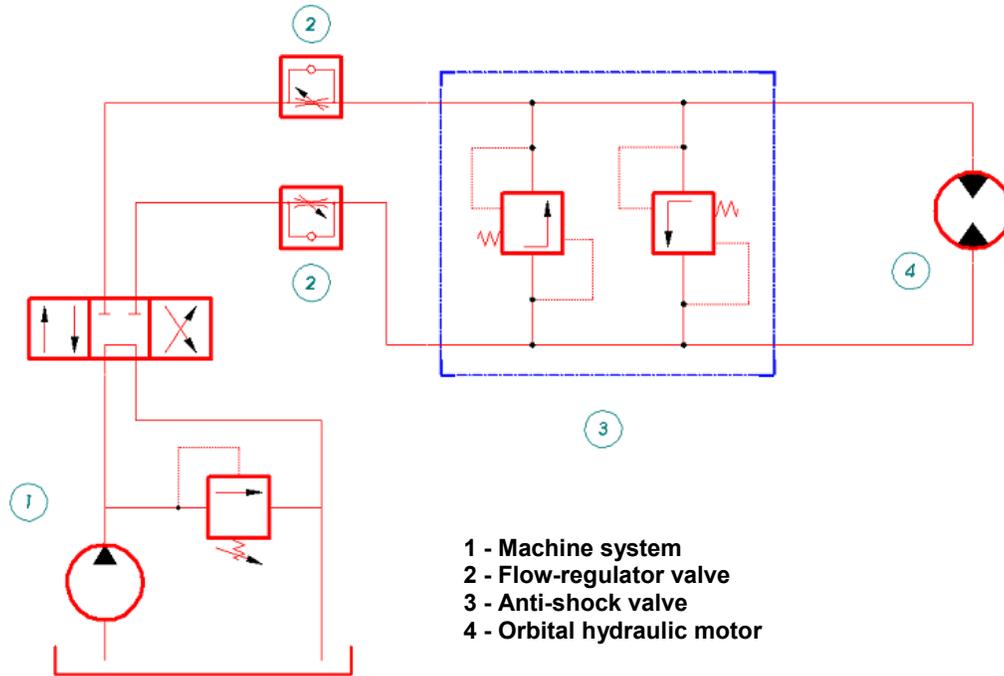
SHEAR JAW

Hard wear areas

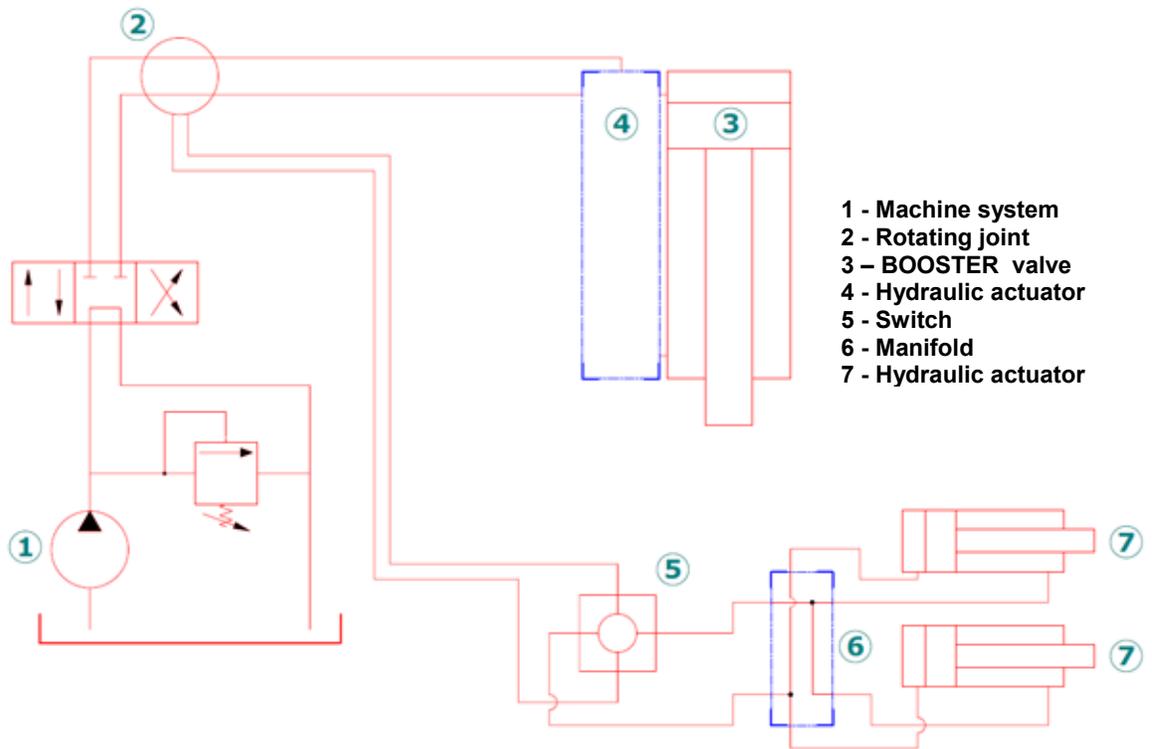


HYDRAULIC SCHEMATIC

ROTATION HYDRAULIC DIAGRAM



HYDRAULIC POWER DIAGRAM



HYDRAULIC TEST PORTS

The MRX is equipped with hydraulic test ports that will allow you to measure cylinder pressure for troubleshooting purposes.

Accessing the Hydraulic Test Ports

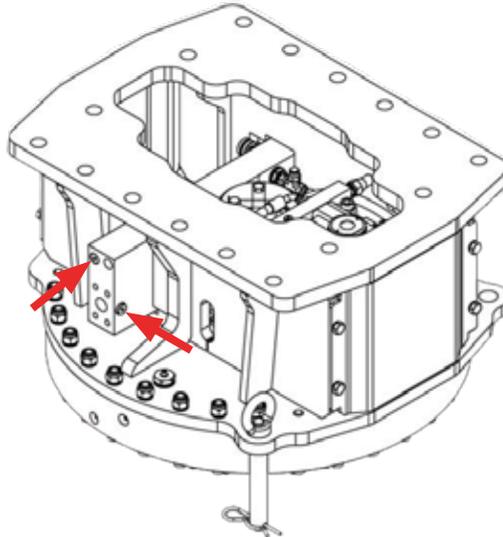
! WARNING

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

! WARNING

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

1. Before performing maintenance, place the attachment on flat, hard ground, so that the part being maintained is closest to the ground and the attachment will not move when hydraulic pressure is released.
2. Turn off the excavator and relieve any trapped pressure in the hydraulic system. Lock-out / Tag-out the hydraulic power source.
3. The hydraulic test ports are located on the incoming hydraulic port blocks on each side of the attachment head.



4. Remove the plug from the test port and connect a gauge.

| Model | Diagnostic Test Port Fittings | |
|--------|-------------------------------|-------------|
| | Attachment | Rotation |
| MRX200 | 1/4 In BSPP | 1/4 In BSPP |
| MRX250 | | |
| MRX350 | | |

LABOUNTY®

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.