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MDP

MOBILE DEMOLITION PROCESSOR

SAFETY, OPERATION & MAINTENANCE

513914 User Manual 8/2019 Ver. 2

PREFACE

This manual contains information for the safe operation and maintenance of the LaBounty MDP Mobile Demolition 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.

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 it's 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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	The Safety Alert Symbol alerts you to potential personal injury hazards. Obey all safety messages that follow to avoid possible injury or death.
 DANGER	Indicates an imminently hazardous situation which will result in death or serious injury.
 WARNING	Indicates a potentially hazardous situation which could result in death or serious injury.
 CAUTION	Indicates hazards that could result in damage to the equipment or personal injury
 NOTICE	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.
- NEVER modify or mount the attachment to a carrier other than the one it was originally designed for. Rotation component failure may result, causing the attachment to fall to the ground.

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.
- NEVER operate the excavator without a proper restraint (seat belt) system in place. Doing so can create loss of control or ejection from the cab.
- 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 & TERMS



Pressure Relief
Warning decal
P/N 512572
FIGURE 1

LINKAGE CONNECTION

STICK CONNECTION

ROTATING HEAD

REAR CYLINDER PIN

FRONT CYLINDER PIN

MAIN BODY

UPPER JAW

DANGER



NOTICE



Cab Guard & Cylinder Bleed
Decal

P/N 503647 & 512554

FIGURE 5

STANLEY	1538 Highway 2 LaBounty 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:	



Safe Distance Decal
P/N 514446
FIGURE 2

U.S. PATENT NUMBERS

4,543,779	4,771,540	4,838,493
4,872,284	4,908,946	5,060,378
5,127,567	5,474,242	5,531,007
5,607,251	5,992,023	RE 35,432

STANLEY LABOUNTY
1538 Highway 2
Two Harbors, MN 55616
218-834-2123
www.stanley-hydraulics.com

FOURTEEN PATENTS AND OTHER PATENTS PENDING

STANLEY **LaBounty**

Serial Number & Patent
Plate
P/N 511045 & 116404
FIGURE 6

THIS ATTACHMENT
HAS BEEN HARDFACED
USING AMALLOY 814H
DO NOT USE A
HARDFACING ROD
WITH A CHROMIUM
CONTENT OVER 0.1%

Hard Surface Decal
P/N 513886
FIGURE 7

SAFETY FIRST

Read the Safety, Operation and
Maintenance Manual before
operating or servicing the equipment.

Keep the manual with the attachment
so it is available for reference.

Safety first decal

P/N 503590

(Included with manuals)

FIGURE 3

GREASE →

Grease Decal (At each fitting)

P/N 116388

FIGURE 4

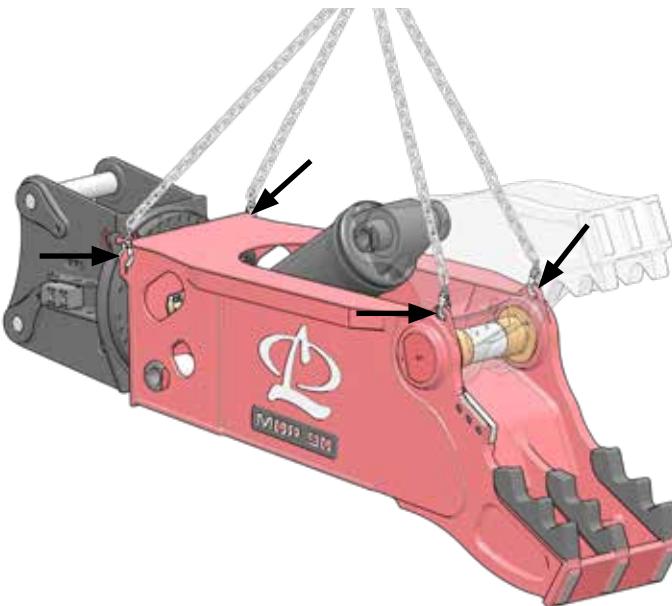
INSTALLATION

⚠️ WARNING

Use only approved rigging hardware rated for loads greater than the weight of MDP. Hooking Points are for moving the attachment only. Do not lift other objects or use MDP 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 Hooking Points shown in Figure 8. Use blocking if necessary.
2. Remove the excavator bucket. Follow the manufacturer's recommended procedure.

Note: Plug hydraulic hoses to prevent contamination.

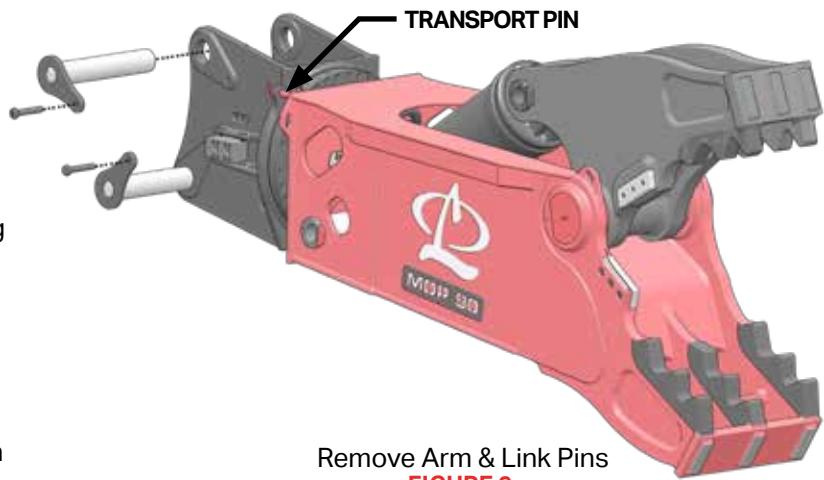


Hooking points for lifting
FIGURE 8

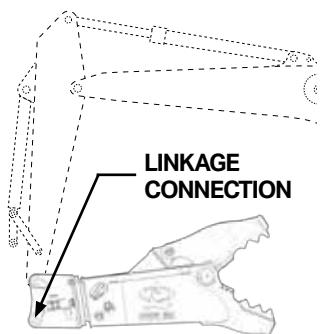
THIRD MEMBER INSTALLATION

Note: Ensure the stick and linkage pin are installed properly. Do not install MDP backwards.

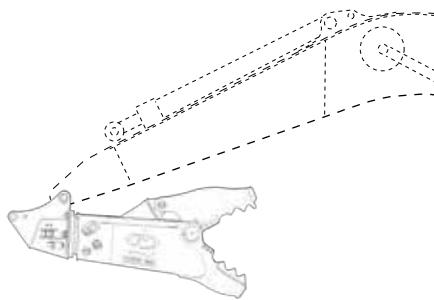
3. Remove the arm connection and link connection pins, as shown in Figure 9.
 4. Bring the excavator into position, carefully lining up the stick tip with the MDP mounting bracket. Pin the stick tip to the MDP mounting bracket using the pin provided (see Figure 10).
 5. Carefully extend the bucket cylinder 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.
6. Pin the linkage connection to the MDP bracket.



Remove Arm & Link Pins
FIGURE 9



Third Member Installation
FIGURE 10



Second Member Installation
FIGURE 11

7. Remove the Transport Pin.

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.**
4. Remove the Transport Pin

HYDRAULIC INSTALLATION

Read the hydraulic letter provided by LaBounty before the arrival of the attachment. This letter states the hydraulic requirements for the specific attachment.

WARNING

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

Hydraulic Circuit Requirements

Model	Cylinder Circuit	Rotation Circuit	Connection
MDP 20R	40-80 GPM (150-300 LPM) 4500-5500 PSI (300-380 Bar)	3-5 GPM (11-20 LPM) 2000-2500 PSI (138-172 Bar)	Cylinder - 1" Code 62 2-Port Rotation - .5" Flat Face O-Ring
MDP 27R	50-80 GPM (190-300 LPM) 4500-5500 PSI (300-380 Bar)	3-5 GPM (11-20 LPM) 2000-2500 PSI (138-172 Bar)	Cylinder - 1" Code 62 2-Port Rotation - .5" Flat Face O-Ring
MDP 35R	50-80 GPM (190-300 LPM) 4500-5500 PSI (300-380 Bar)	3-5 GPM (11-20 LPM) 2000-2500 PSI (138-172 Bar)	Cylinder - 1.25" Code 62 2-Port Rotation - .5" Flat Face O-Ring
MDP 50R	70-110 GPM (265-415 LPM) 4500-5500 PSI (300-380 Bar)	4-6 GPM (15-23 LPM) 2000-2500 PSI (138-172 Bar)	Cylinder - 1.25" Code 62 2-Port Rotation - .5" Flat Face O-Ring
MDP 90	120-180 GPM (455-680 LPM) 4500-5500 PSI (310-380 Bar)	8-10 GPM (30-38 LPM) 2000-2500 PSI (138-172 Bar)	Cylinder - 1.50" Code 62 4-Port Rotation - .5" Flat Face O-Ring

1. Connect the hydraulic hoses to the connections located on each side of the upper head.

Note: Each port is labeled, on the MDP itself, so users can easily identify the cylinder ports, rotation ports and case drains.

2. After installing the hydraulic circuit on the base machine, install additional hydraulic lines up the boom, if required.
 - Two 1/2 in (13 mm) diameter feed line
 - 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.
4. Torque all flange bolts and nuts using the table below.

Flange	Flange Code	Bolt Size	Torque
1.00"	62	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"	62	M14 x 2.00	224 Ft. Lbs. (304 Nm)

5. Check for any hydraulic oil leaks or interference.

Note: Hydraulics will need to be bled before putting into service (see "Bleed the Hydraulic Cylinder" on page 13).

REMOVING MDP FROM THE EXCAVATOR

1. Curl the attachment under the boom of the excavator and use blocking to support the stick cylinder.
2. Insert the Transport Pin.

WARNING

Disassembly of any pin-connected attachment can be hazardous. Never remove any pins unless MDP is on the ground and blocked up. Serious injury could result.

3. Remove the stick cylinder pin from the MDP.

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.

4. Carefully remove the jump-lines at the MDP hydraulic connectors.

Note: Plug hydraulic hoses to prevent contamination.

5. Unpin the boom pivot pin and release the weight of MDP.

STORING MDP

1. Securely block the attachment off the ground using wood blocking.
2. Plug all open hydraulic ports.
3. Grease MDP as described in "Lubrication" on page 17.

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 its 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.

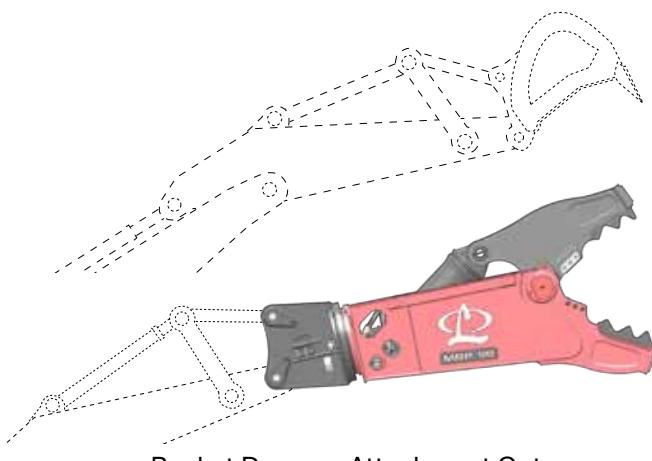
TECHNICAL SPECIFICATIONS

Model	Jaw Type	Weight	Jaw Opening	Jaw Depth	Reach	Minimum Excavator Size
MDP 20R	Cracker	4,600 Lbs. (2,100 Kg)	25 Inches (640 mm)	27 Inches (690 mm)	9.8 Feet (3 m)	40,000 Lbs. (18 M/Ton)
	Pulverizer	5,250 Lbs. (2,400 Kg)	25 Inches (640 mm)	27 Inches (690 mm)	9.8 Feet (3 m)	40,000 Lbs. (18 M/Ton)
MDP 27R	Cracker	6,300 Lbs. (2,900 Kg)	32 Inches (810 mm)	31 Inches (760 mm)	9.6 Feet (2.9 m)	55,000 Lbs. (25 M/Ton)
	Pulverizer	6,950 Lbs. (3,200 Kg)	28 Inches (710 mm)	30 Inches (760 mm)	9.6 Feet (2.9 m)	55,000 Lbs. (25 M/Ton)
MDP 35R	Cracker	8,250 Lbs. (3,700 Kg)	38 Inches (970 mm)	36 Inches (910 mm)	11.3 Feet (3.4 m)	70,000 Lbs. (32 M/Ton)
	Pulverizer	9,000 Lbs. (4,100 Kg)	34 Inches (860 mm)	36 Inches (910 mm)	11.3 Feet (3.4 m)	70,000 Lbs. (32 M/Ton)
MDP 50R	Cracker	12,400 Lbs. (5,600 Kg)	50 Inches (1270 mm)	45 Inches (1140 mm)	13.1 Feet (4 m)	99,000 Lbs. (45 M/Ton)
	Pulverizer	13,900 Lbs. (6,300 Kg)	50 Inches (1270 mm)	45 Inches (1140 mm)	13.1 Feet (4 m)	99,000 Lbs. (45 M/Ton)
MDP 90	Pulverizer	2,100 Lbs. (9,500 Kg)	56 Inches (1420 mm)	49 Inches (1240 mm)	15.2 Feet (4.6 m)	187,000 Lbs. (85 M/Ton)

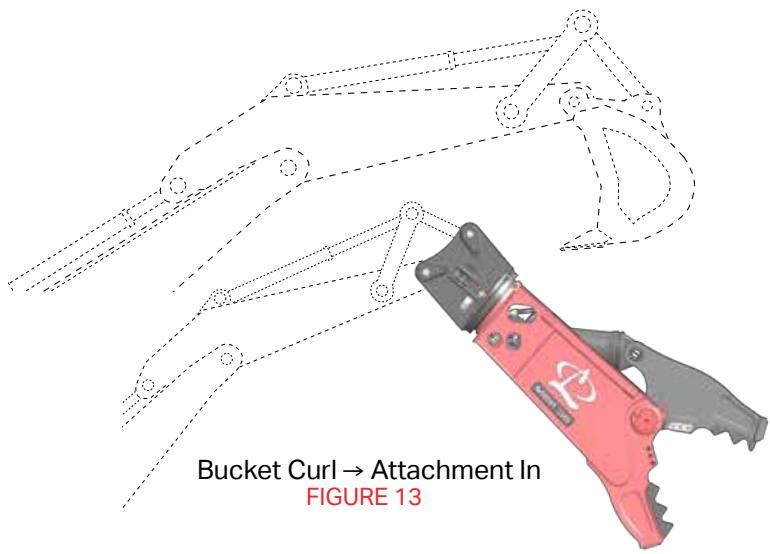
THIRD MEMBER CONTROLS



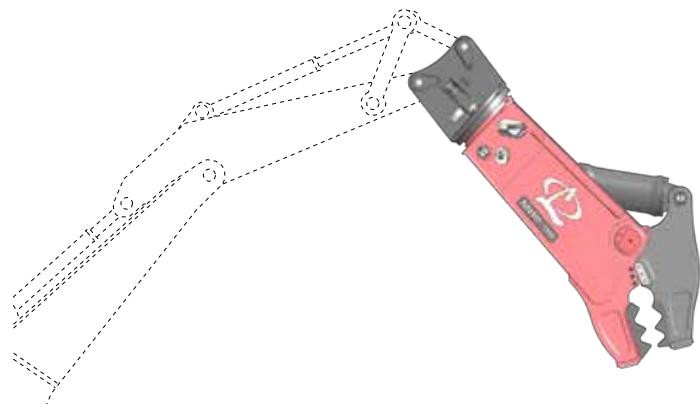
Learn the control for each movement of the attachment before attempting to operate.



Bucket Dump → Attachment Out
FIGURE 12

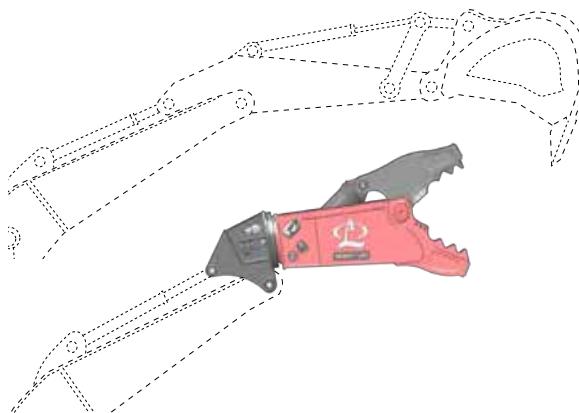


Bucket Curl → Attachment In
FIGURE 13

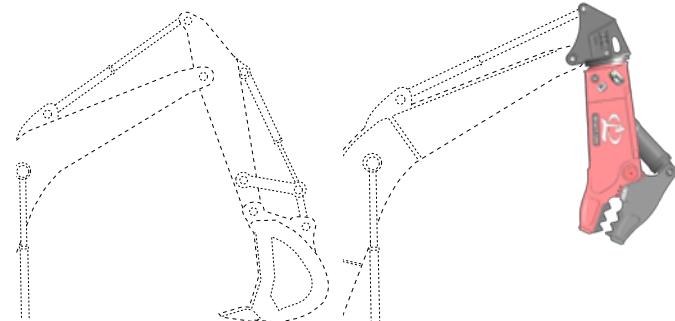


Auxiliary Switch → Jaws Close / Open
FIGURE 14

SECOND MEMBER CONTROLS



Bucket Dump → Jaws Open
FIGURE 15



Bucket Curl → Jaws Close
FIGURE 16

BLEED THE HYDRAULIC CYLINDER

Air must be bled out of the cylinder 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 MDP 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. Retract the cylinder rod all the way.
6. Repeat steps 3 and 4. Extend the rod a quarter inch 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 its 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.

OPERATING TIPS

- Start processing smaller materials and work up to larger materials. This will help you 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.
- 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.
- 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.

MAINTENANCE

8-HOUR INSPECTION CHECKLIST

Inspect all safety devices

- Safety decals are in place and legible (see "Decals & Terms" 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 for damage to the Jaw Teeth (see "Jaw Teeth Maintenance" on page 16).

Lubricate all points

- Lubricate (see "Lubrication" on page 17 & "Turntable Bearing Lubrication" on page 18).

Inspect bolts and hydraulic fittings

- Inspect bolts and fittings on attachment & jaws (see "Inspect / Torque Bolts" on page 19).

Inspect connecting pins and retaining hardware

- Arm Connection.
- Link connection.
- Front and rear cylinder pins.
- Main pivot group pin.

Inspected By: _____ Date: _____

80-HOUR INSPECTION CHECKLIST

Build-up, hard-surfacing & Blade Rotation

- Build-up jaws & check wear plates (see "Build Up & Wear Plates" on page 19).
- Rotate blades (see "Blade Maintenance" on page 22).

Rotator

- Inspect and torque turntable bearing bolts (see "Inspect / Torque Bolts" on page 19).

Inspected By: _____ Date: _____

EVERY 1500 HOURS

- Inspect / replace thrust washer (see "Thrust Washer Inspection - MDP 20/27/35/50" on page 24)

Inspected By: _____ Date: _____

JAW TEETH MAINTENANCE

When the jaw teeth are worn or cracking, performance is decreased and the teeth need to be replaced. MDP can have Swift-Lock Teeth or Weld-In Teeth, depending on model.

CAUTION

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

Replacing Swift-Lock Teeth [MDP 20/27/35/50]

1. Locate flat, hard ground and place the attachment on the ground.
2. Remove the washers on each side of each tooth, using a grinder.

Note: The washers 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: The retainer ring may fall out when removing the teeth. Do not lose the retainer ring.**
5. Insert the retainer ring in its place and insert a new Swift-Lock tooth.
6. Insert the tooth pin and weld the washers in place.

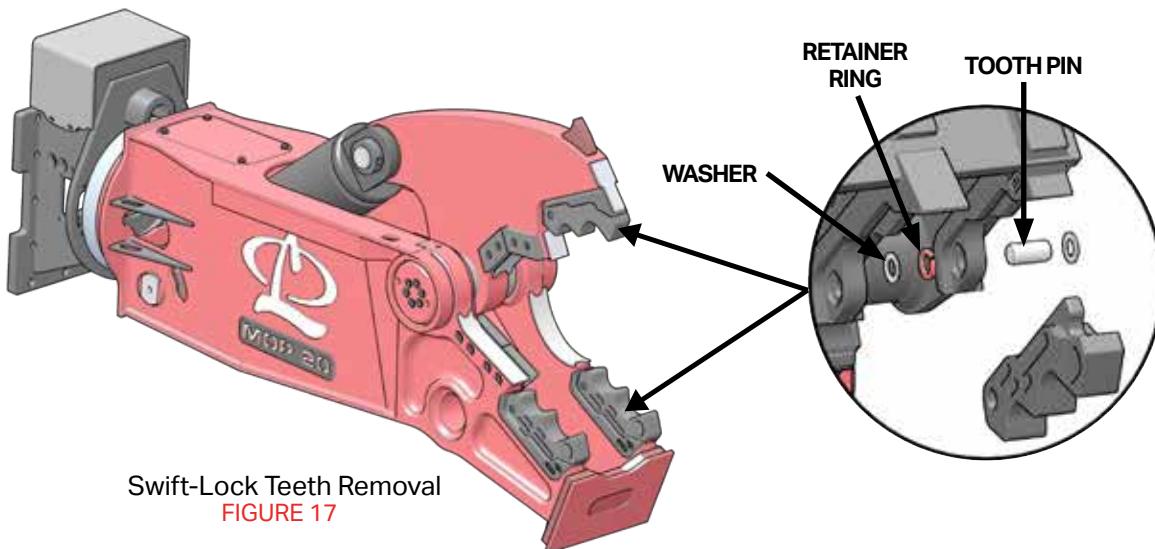
Note: Insert the tooth pin so that the pin groove will line up and seat in the retainer ring.

WARNING

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

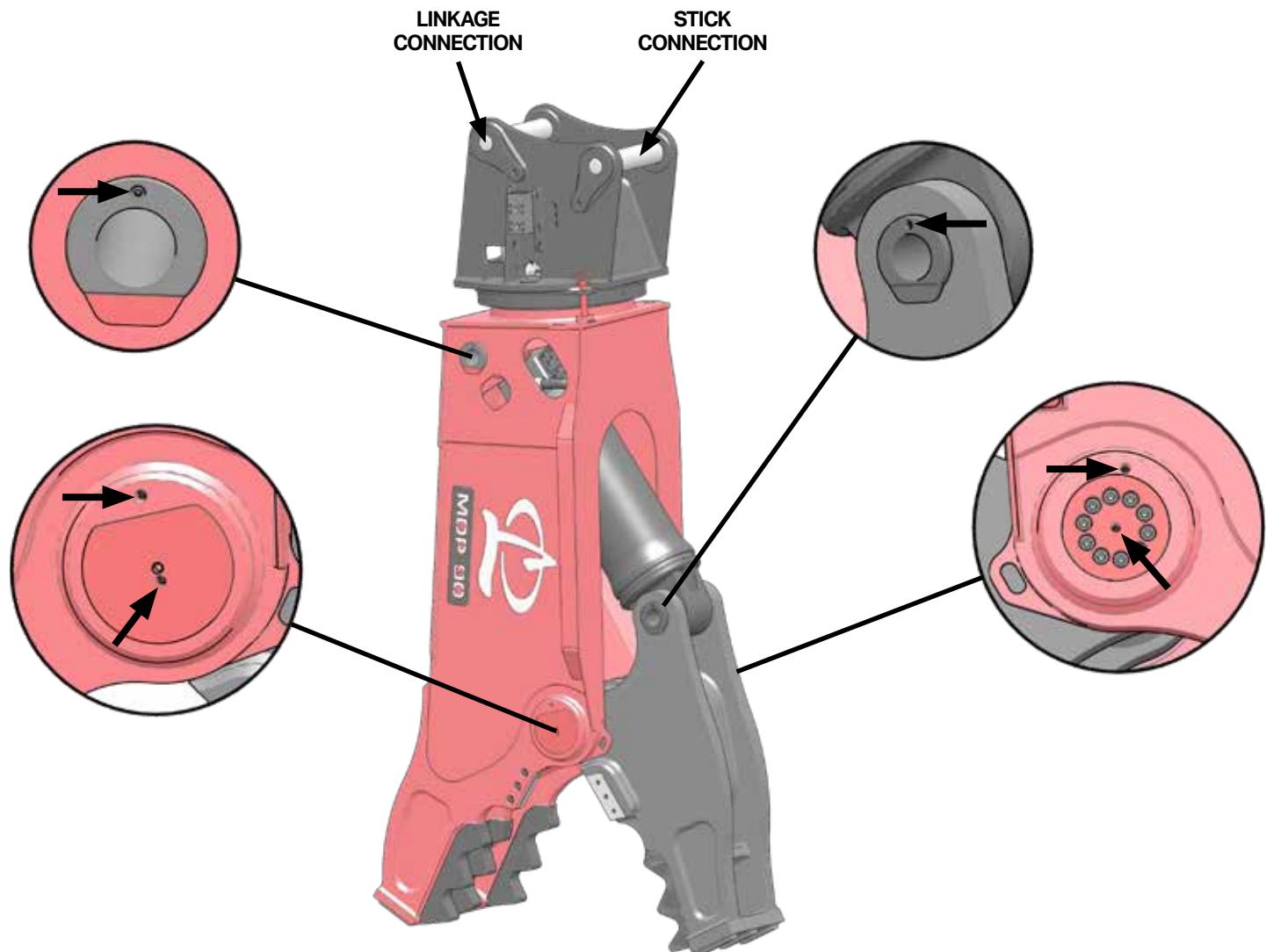
Replacing Weld-In Teeth [MDP 90]

1. Locate flat, hard ground and place the attachment on the ground.
2. Preheat the area around the tooth receptacle to 250° to 300° F.
3. Using carbon-air arc gouging, remove the weld material holding the tooth in place.
4. Remove the tooth. Fill and sand gouges, then clean the tooth receptacle.
5. Fit the new tooth into place.
6. Weld the tooth into place.
7. Cover the weld with a heat blanket and allow it to cool slowly.



LUBRICATION

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



Lubrication Locations

FIGURE 18

TURNTABLE BEARING LUBRICATION

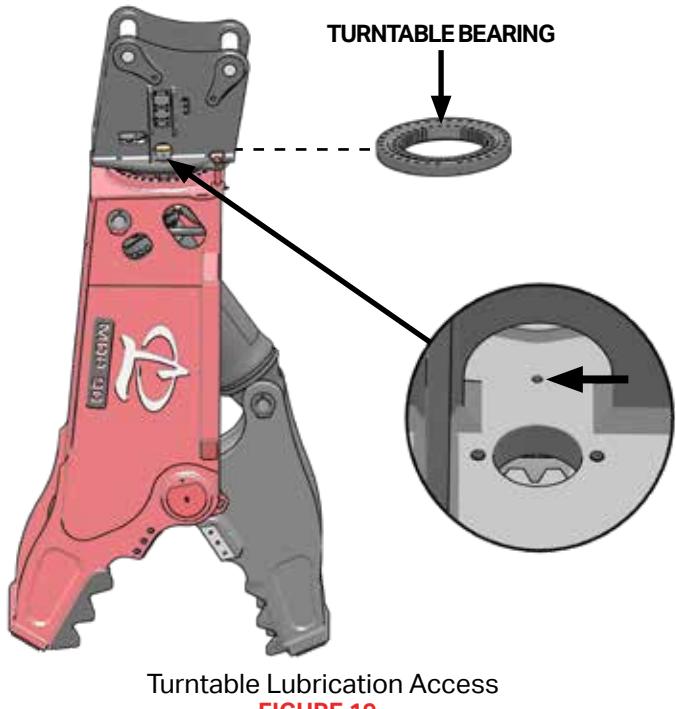
WARNING

Stand clear of MDP during rotation.

1. 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.

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



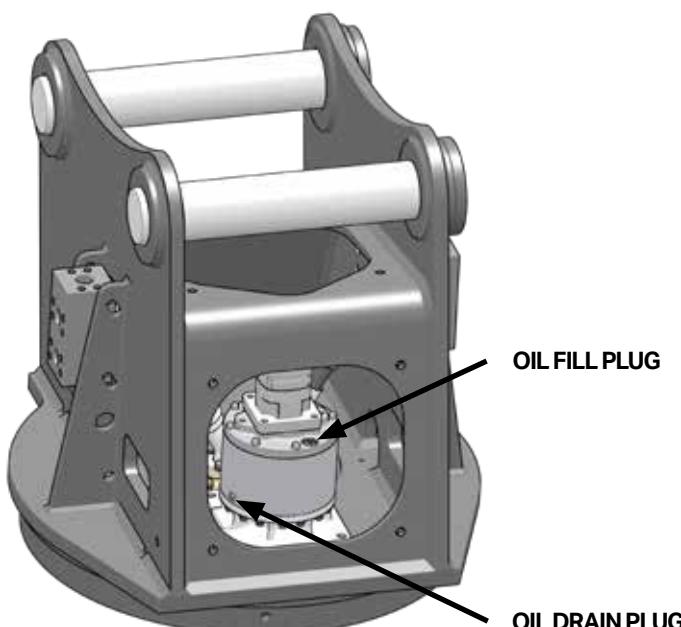
Turtable Lubrication Access

FIGURE 19

PLANETARY GEARBOX LUBRICATION (SELECT MODELS ONLY)

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		
500 hours / 1 years	1000 hours / 2 years	Every 1000 hours / 2 years
SAE 80W - 90	Synthetic ISO 150 @ 104° F	Synthetic ISO 150 @ 104° F



Planetary Gearbox Location

FIGURE 20

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.

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.

WARNING

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

Size	Torque	
	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)

General Fastener Torque

FIGURE 21

NOTICE

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

Size	Class	Torque
M20	10.9	435 Ft. Lbs. (590 Nm)
M24	10.9	752 Ft. Lbs. (1020 Nm)
M30	10.9	1511 Ft. Lbs. (2049 Nm)

Turntable & Rotation Head Fastener Torque

FIGURE 22

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 areas of the jaw 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. Do all work in a well ventilated area.

CHECKING AND REPLACING WEAR PLATES

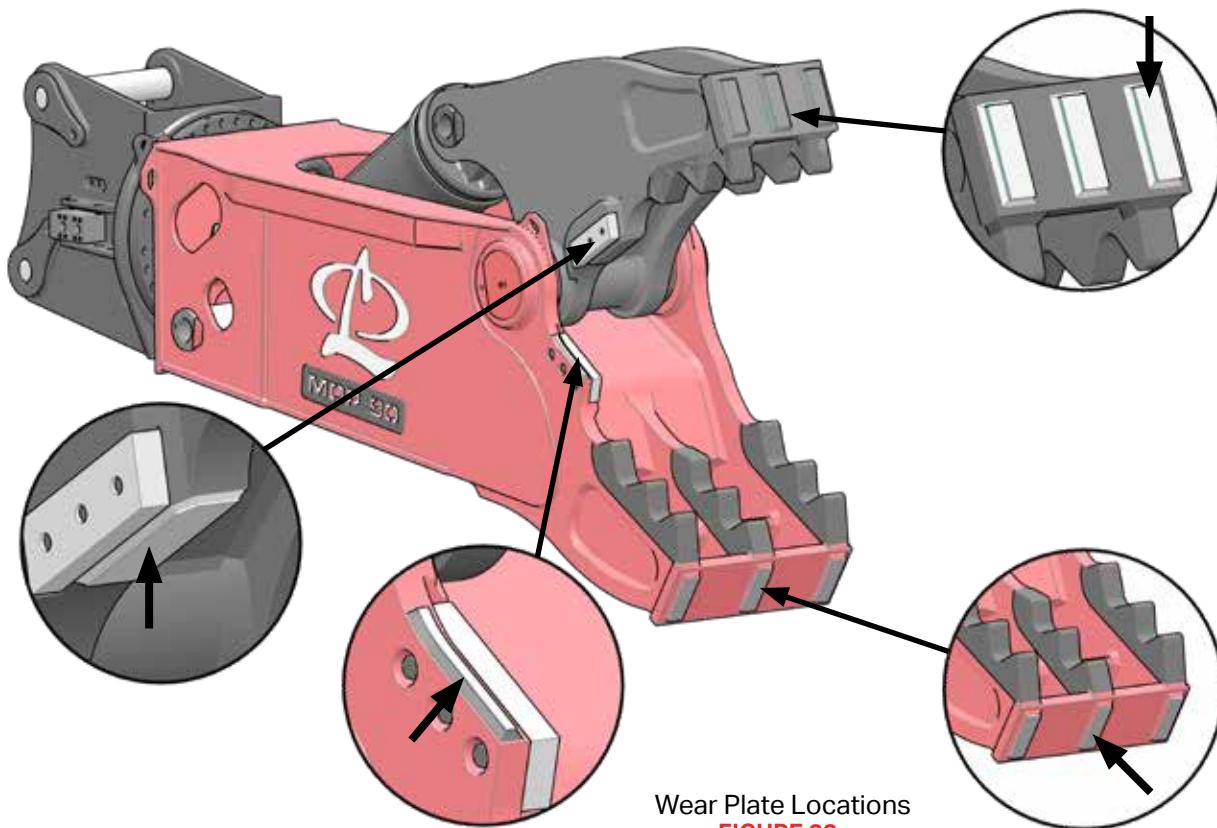
Wear bars are welded into the jaw and must be replaced after they have worn down to 1/4 their original thickness.

Using the MDP 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.
 4. Weld the wear bar into place.
- Note:** Wear bars are pre-cut to length and must be formed to the jaw in the field.

- Cover the weld with a heat blanket and allow it to cool slowly.



Jaw Teeth Build Up

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

Note: Do not exceed 450° F (232° C).

- Use the tooth template to determine how much build up is required.
- Using AWS E7018 welding rod, make hard surface beads, as shown in Figure 24.
- Relieve stress and remove slag after each pass by peening vigorously with an air operated slag peener.
- Repeat steps 6 and 7 until the tooth profile matches the build up template.
- Grind edges square to match the template.
- Using AWS E7018, place underlayment passes, as shown in Figure 24.
- 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.

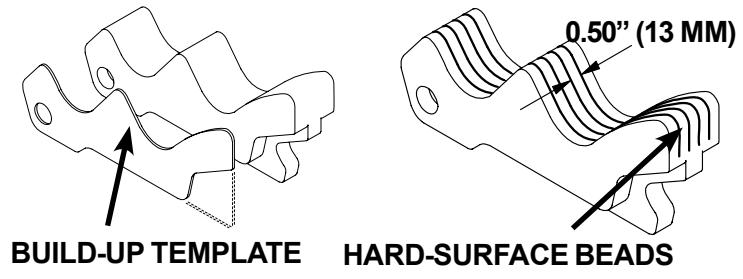
- Relieve stress after each pass by peening vigorously with an air operated slag peener.
- Taper the end of each hard-surface bead by grinding.

Note: Do NOT undercut the weld.

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

Note: About 5-10 minutes.

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



Wear Plate Locations

FIGURE 24

BLADE MAINTENANCE

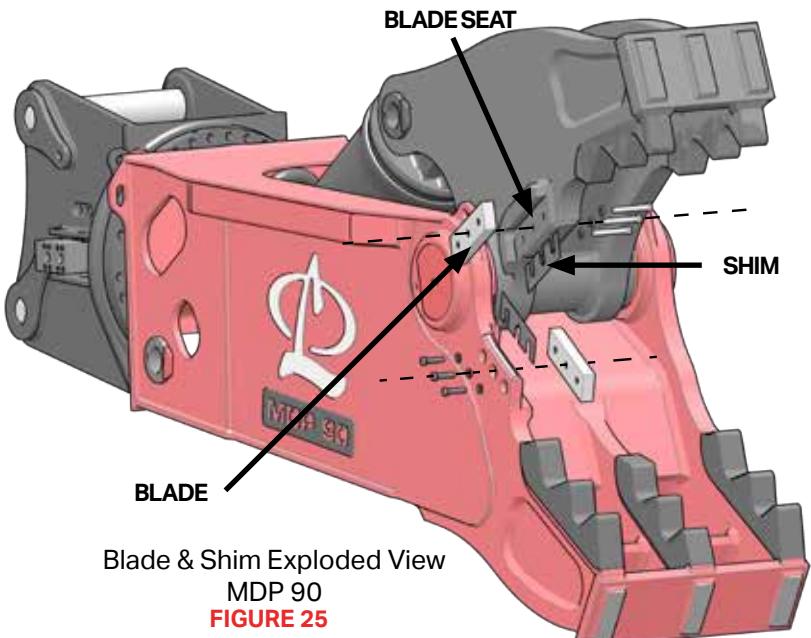
⚠ CAUTION

Wear leather work gloves at all times during blade maintenance.

1. Remove the blade as shown in Figure 25.
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 27 & Figure 28. 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 using 500 Ft. Lbs. (680 N/M) torque on each bolt.



⚠ DANGER

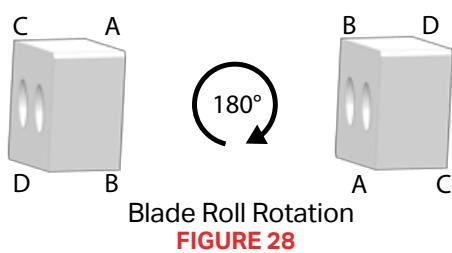
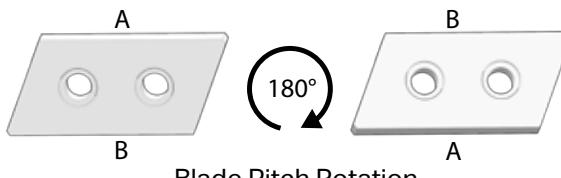
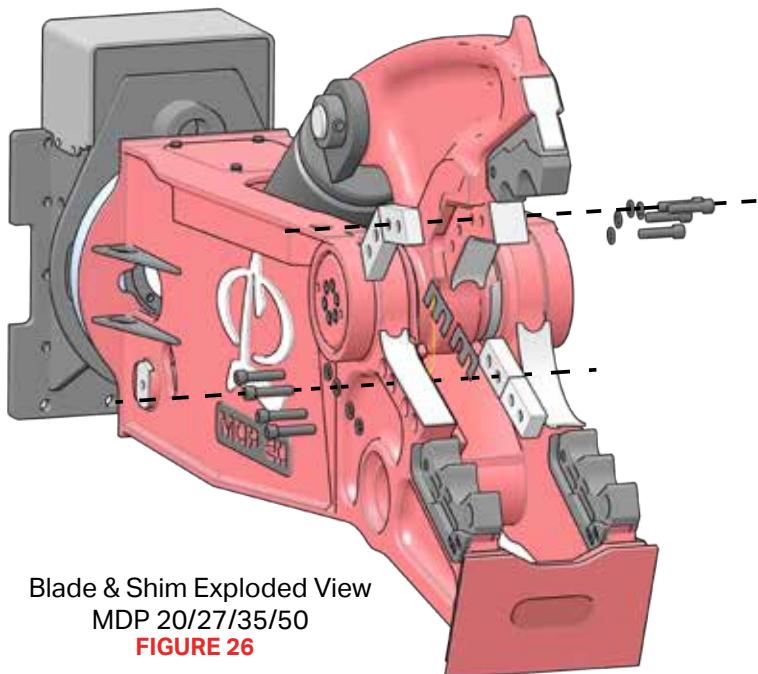
Stay at least 75 Ft. (23 m) when moving.

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

6. Measure the blade gap.
7. Shim each blade so that the blade gap is approximately .020"- .030". 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.



HYDRAULIC MAINTENANCE

Speed Valve (MDP 35/50/90)

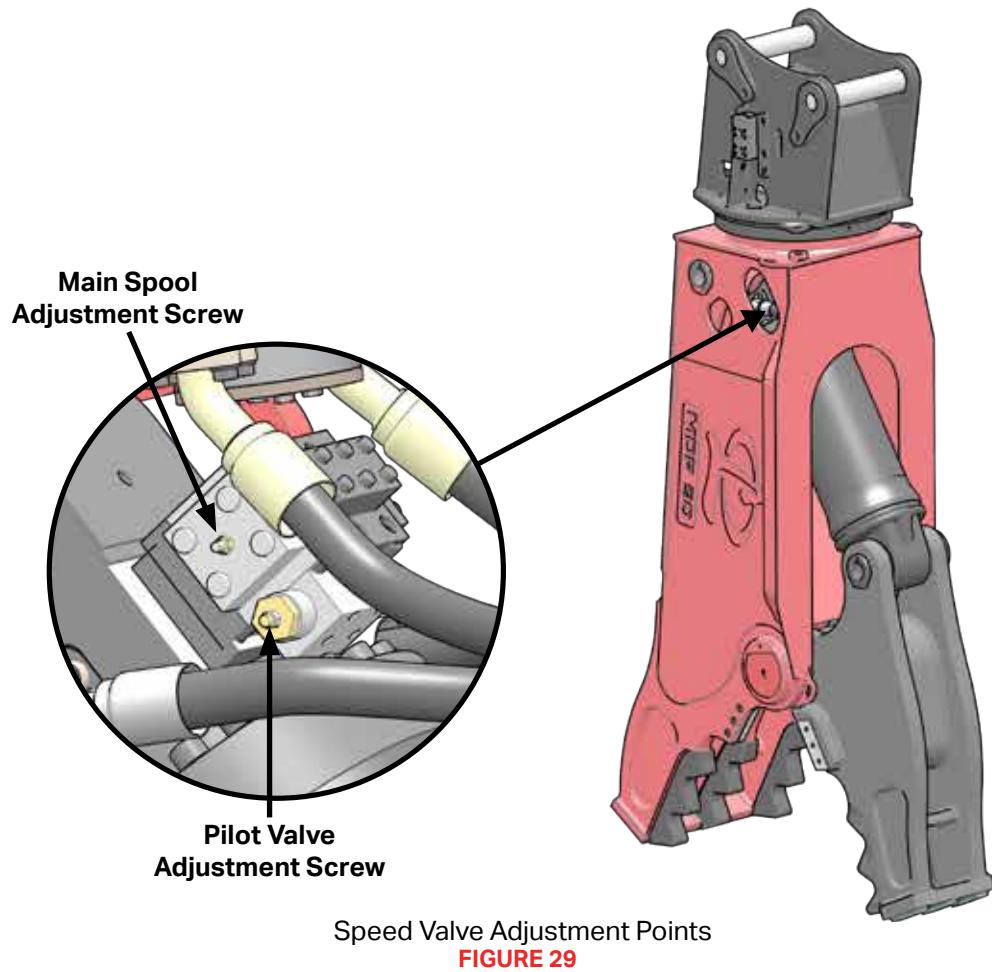
The speed valve allows the jaws to shift into high speed when not under a load. Two valve spools control this speed change, the Main Spool Adjustment Screw and the Pilot Valve Adjustment Screw.

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.



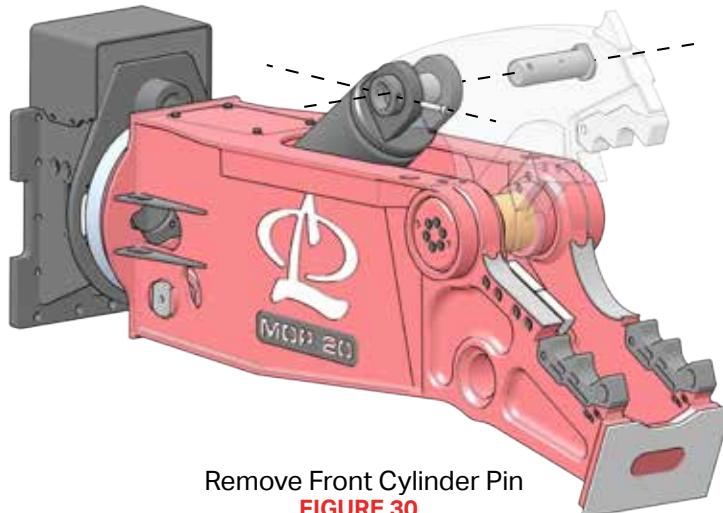
THRUST WASHER INSPECTION - MDP 20/27/35/50

1. Locate flat, hard ground and place the attachment on the ground. Ensure the upper jaw is secured and will not fall during removal.

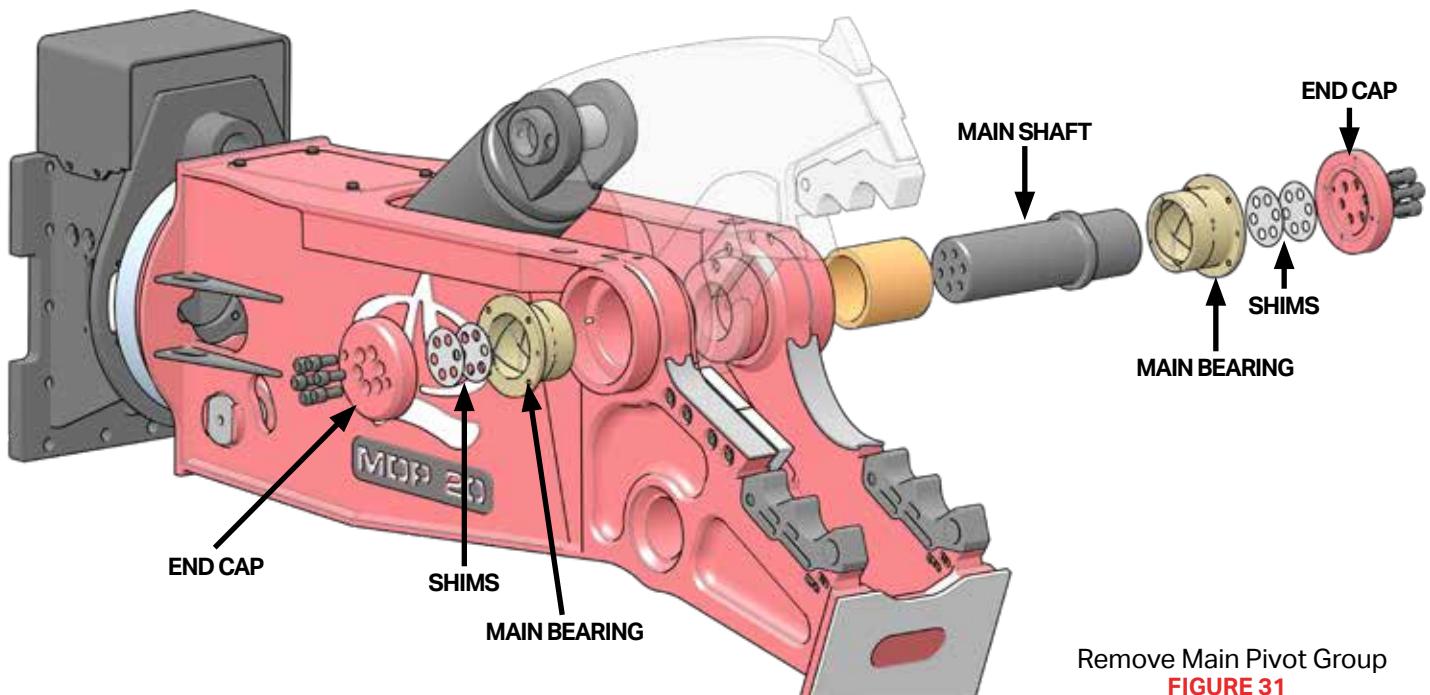
DANGER

- **NEVER remove any pins unless MDP is on the ground and blocked. Serious injury or death could result.**

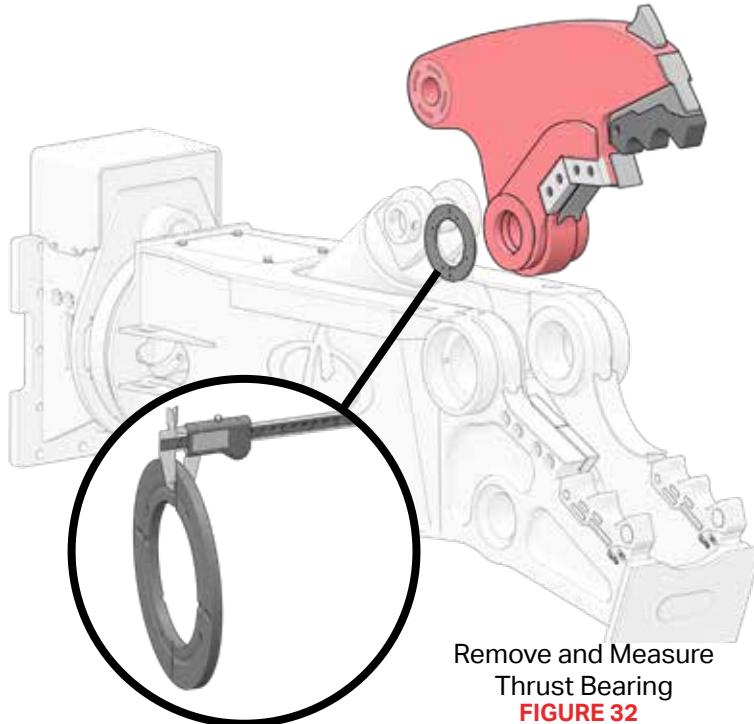
2. Remove the front cylinder pin.



3. Remove the main pivot group, as shown in Figure 31.

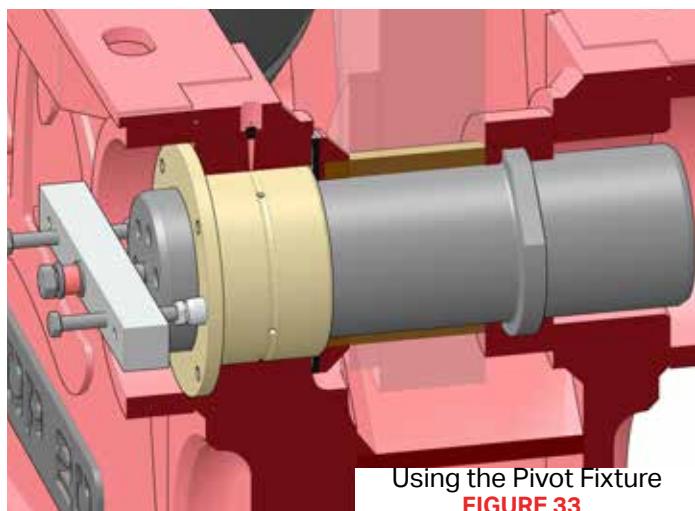


4. Remove the Upper Jaw from the MDP Body.
5. Remove the thrust washer.
6. Measure the thickness of the thrust washer.
7. Replace the thrust washer if the thickness is less than 0.355 inches.

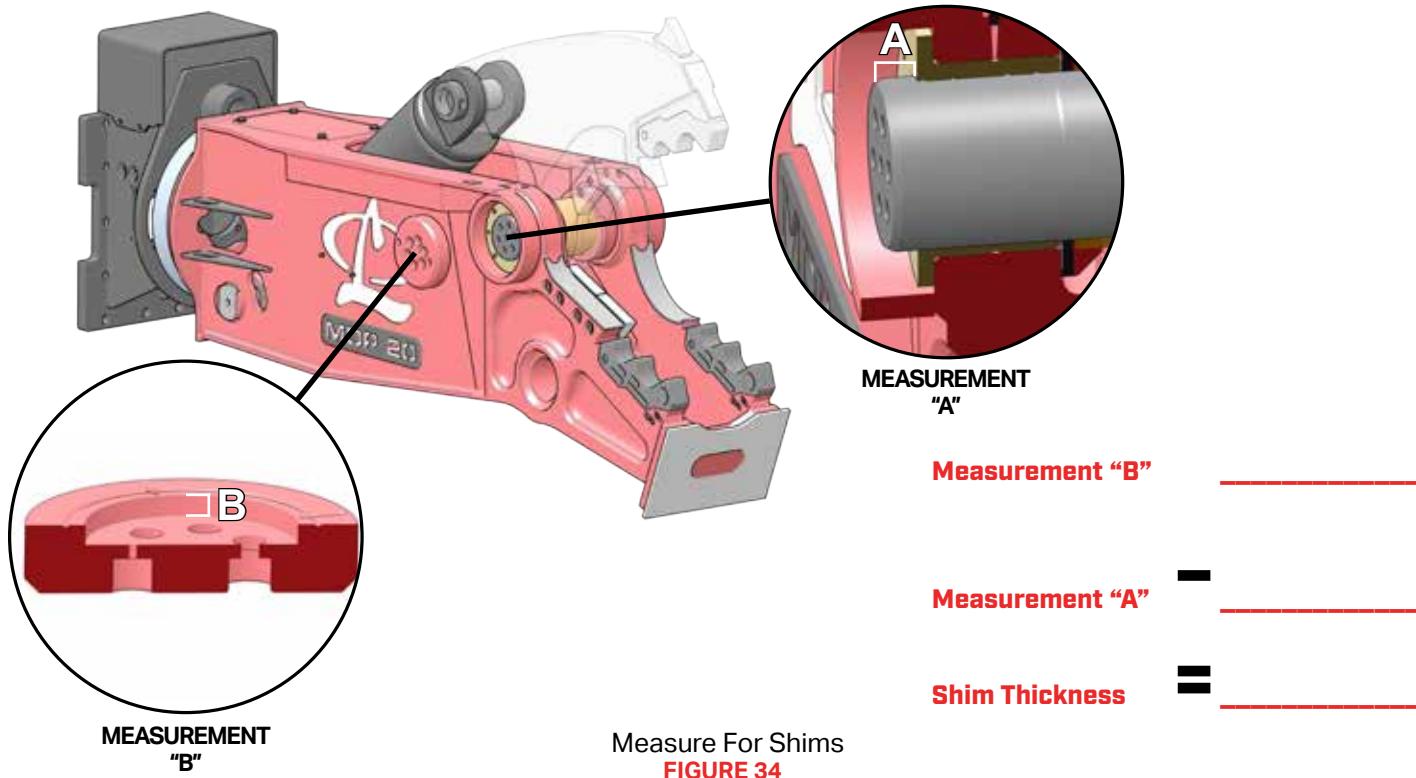


REASSEMBLY AND SHIMMING

1. Position the Lower Jaw into place.
2. Install the main shaft.
3. Install both main bearings.
4. Remove the pivot fixture tool from the start-up kit.
5. Thread the middle bolt into the shaft and tighten until the bolt is snug and the shaft cannot be pulled any further.
6. Slowly tighten the bearing bolts. Alternate bolts every 1 revolution. Tighten until the bolts are snug and the bearing cannot move any further.



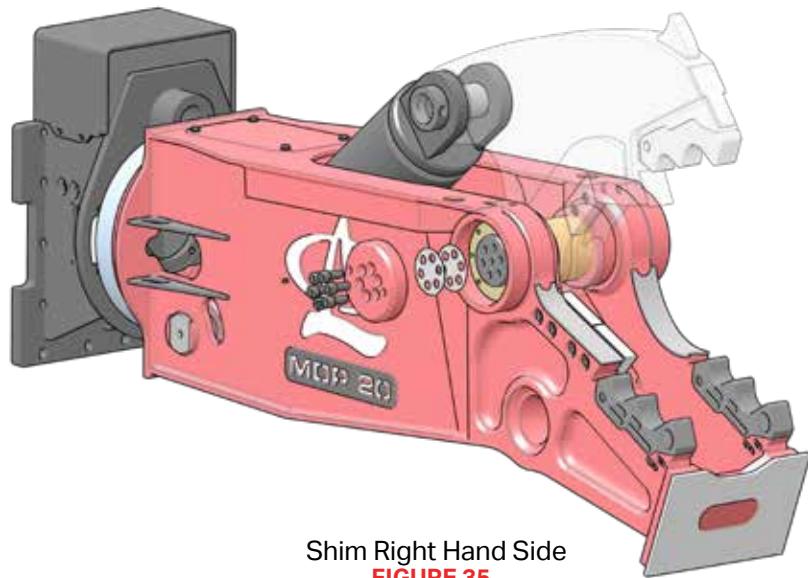
7. Using a micrometer, measure how far the main shaft protrudes past the main bearing, as shown in Figure 34. Record this measurement as "Measurement A".
8. Measure the wear on the right hand End Cap, as shown in Figure 34. Record this measurement as "Measurement B".
9. Subtract "Measurement B" by "Measurement A". The difference will be the thickness of the shims.



SHIMMING

Shim Color	Shim Value
BLUE	0.005 inches
BROWN	0.010 inches
YELLOW	0.020 inches
STEEL	0.060 inches

1. Put together a stack of shims that equal the shim thickness calculated in Figure 34, then remove one .005 inch shim.
2. Install shims on the right hand side of the MDP Main Pivot Group.
3. Install the right hand End Cap.



Shim Right Hand Side
FIGURE 35

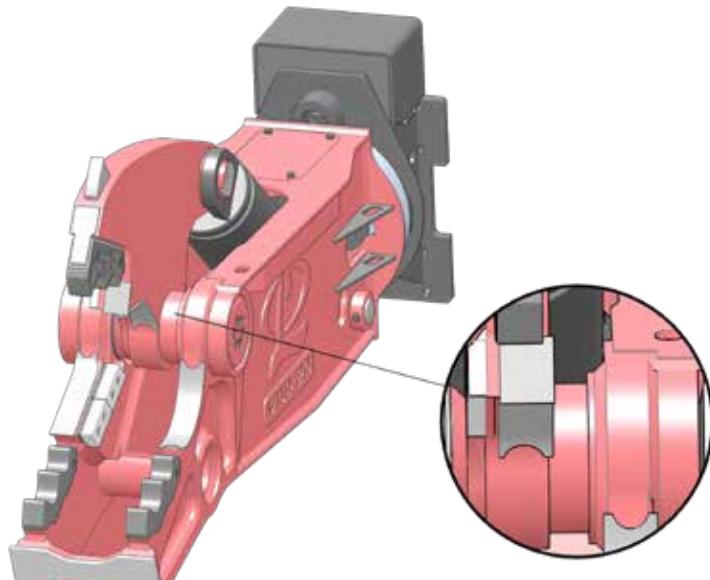
4. Using a crane, slowly lower and raise the Upper Jaw. If shimmed properly, the Upper Jaw will move with a slight bit of "drag". If the Upper Jaw does not move, or has too much drag, replace the .005 inch shim removed on step 1.
5. Measure and shim the left hand end cap using Figure 34.
6. Install the left hand End Cap and torque the Main Pivot Group bolts.

Model	Torque
MDP 20/27/35	403 Ft. Lbs. (546 Nm)
MDP 90	693 Ft. Lbs. (940 Nm)

7. Install the front cylinder pin. Use Loctite 263 on the cylinder pin bolt.

CHECK END PLAY

1. Grease each fitting on the Main Pivot Group (See "Lubrication" on page 17).
2. Set a dial indicator against the Upper Jaw and zero it.
3. Using a pry-bar, pry the left hand side of the Upper Jaw towards the thrust washer, as shown in Figure 36.
4. Pry against the right hand side of the Upper Jaw. The dial indicator should not move more than .005 inches.



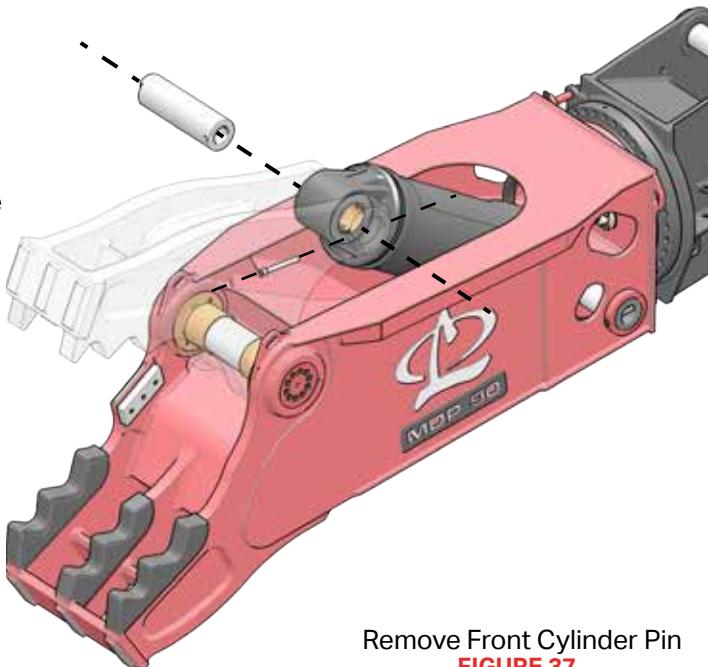
Pry-Bar Location
FIGURE 36

THRUST WASHER INSPECTION - MDP 90

1. Locate flat, hard ground and place the attachment on the ground. Ensure the Upper Jaw is secured and will not fall during removal.

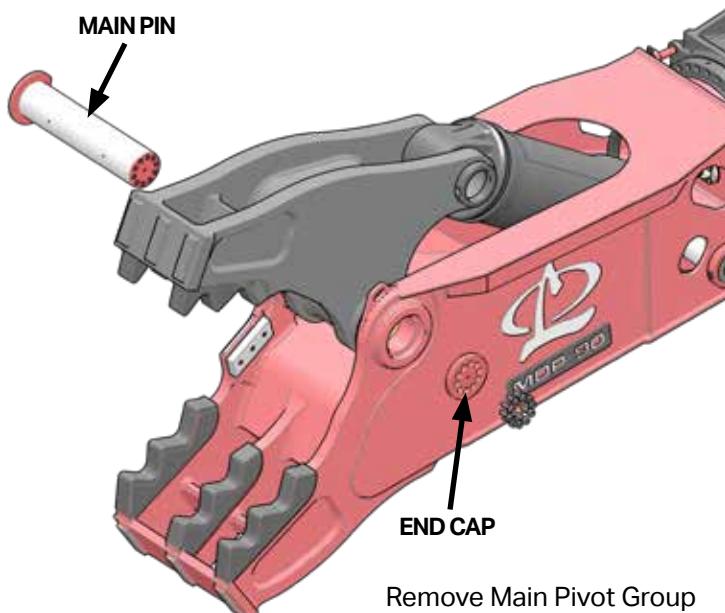
DANGER

NEVER remove any pins unless MDP is on the ground and blocked. Serious injury or death could result.

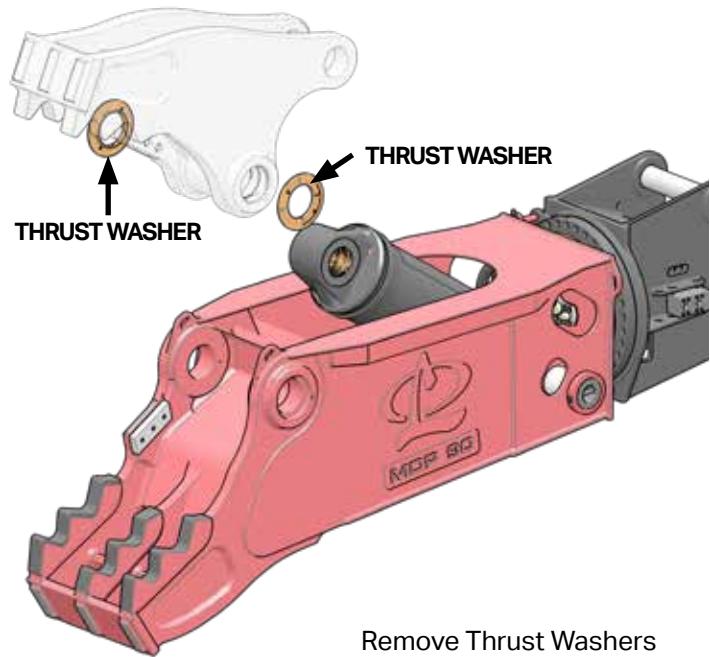


Remove Front Cylinder Pin
FIGURE 37

2. Remove the front cylinder pin, as shown in Figure 37.
3. Remove the main pivot group, as shown in Figure 38.
4. Remove the Upper Jaw from the MDP body.
5. Remove the Thrust Washers from the Upper Jaw.
6. Using a caliper, measure the thickness of both Thrust washers. Add the two measurements.
7. If the sum is .97 inches or less, replace the Thrust Washers.



Remove Main Pivot Group
FIGURE 38



Remove Thrust Washers
FIGURE 39

TROUBLESHOOTING

FIRST STEPS

- Ensure the hydraulic flow and pressure from the base machine meets specifications (see "Hydraulic Circuit Requirements" on page 8).
- Inspect all hydraulic lines for kinks or damage. Replace any damaged hydraulic lines.

Symptom	Cause	Remedy
Jaw will not move, moves too fast or moves too slow.	No hydraulic flow to the MDP or hydraulic flow is too high.	Check the excavator hydraulic circuit and ensure the hydraulic lines are not kinked.
	Check speed valve operation.	See "Adjusting the Speed Valve" on page 23.
Jaws drift open or closed	Base machine valve is open-center or is faulty.	Use a closed-center spool. Use the base machine manual to check the valve.
	Speed valve needs adjustment.	See "Adjusting the Speed Valve" on page 23.
MDP cannot process or hold material in it's jaws.	The material is too big.	Consult the factory.
	Speed valve needs adjustment.	See "Adjusting the Speed Valve" on page 23.
	Back pressure is too high.	Check all hydraulic lines. Ensure they are not kinked and are the proper size. Check the base machine circuit for a restrictor.
MDP will not rotate or rotation is very slow/fast.	Crossover relief valve is bypassing oil or the manifold block has internal leakage.	Replace the crossover valve. Replace the manifold block on the motor and check cartridge valve seals for damage.
	The rotation motor/gearbox is worn out or has a broken output shaft.	Replace or reseal the motor/gearbox.
Jaw rotation drifts left or right.	Control valve ports are open with spool in the neutral position. There is leakage in the control valve spool.	Inspect the base machine hydraulic system.
	Crossover relief valve is leaking or is set too low.	Replace the crossover relief valve.
The jaws don't shift speed when closing.	Pilot valve pressure is too high.	Adjust the pilot valve adjustment counter clockwise in small increments until issue is corrected (see "Adjusting the Speed Valve" on page 23).
	Back pressure is too high in the base machine return line.	Use larger diameter hydraulic lines to minimize back pressure. Move the main spool adjustment screw clockwise in small increments until the issue is corrected (see "Adjusting the Speed Valve" on page 23).

Symptom	Cause	Remedy
Jaw Speed wont shift when the jaws are partially opened.	Back pressure is too high in the base machine return line.	Use higher diameter hydraulic lines to minimize back pressure. Move the main spool adjustment screw clockwise in small increments until the issue is corrected (see "Adjusting the Speed Valve" on page 23).
Jaws continue to close after the operator has let go of the controls, after moving in speed mode.	The main valve spool isn't fully shifting out of speed mode.	Move the main spool adjustment screw clockwise,in small increments, until the issue is corrected (see "Adjusting the Speed Valve" on page 23).
The jaws lack power.	The main valve spool isn't fully shifting out of speed mode.	Move the main spool adjustment screw counter clockwise,in small increments, until the issue is corrected (see "Adjusting the Speed Valve" on page 23).
	Base machine pressure is too low or is in hammer mode.	Check the base machine.





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.