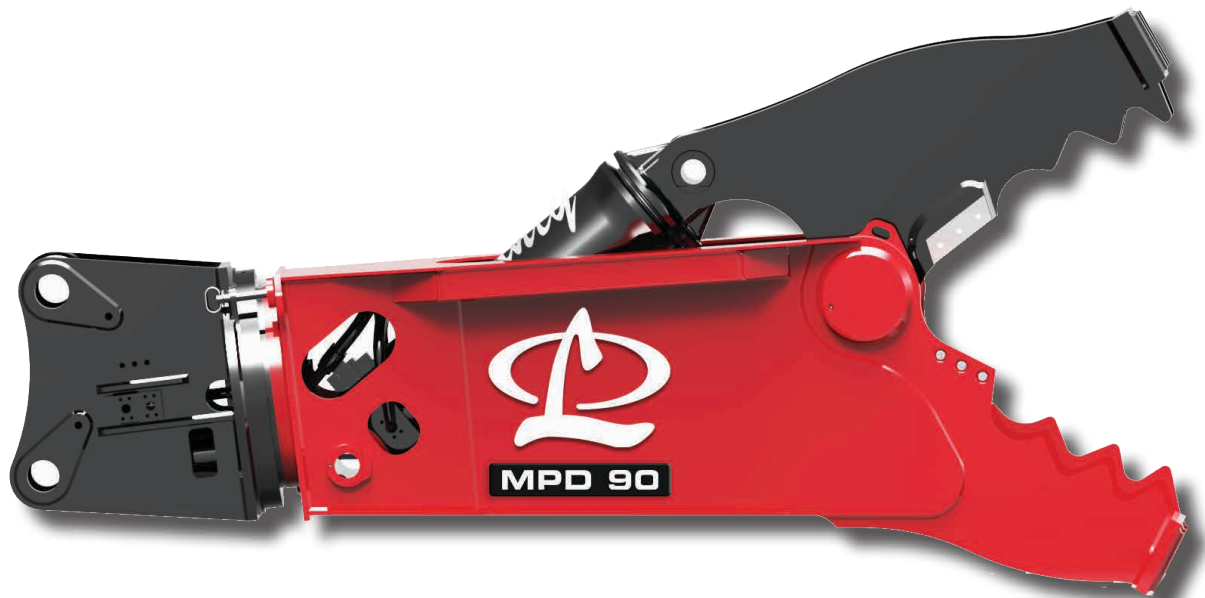




MDP SERIES

MOBILE DEMOLITION PROCESSORS

CE Operating and
Maintenance Manual



CE

Part Number 513914
2/2018 Ver. 1

PREFACE

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



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

This safety alert and signal word indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

This safety alert and signal word indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

This safety alert and signal word indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE

This signal word indicates a situation which, if not avoided, will result in damage to the equipment.

Always observe safety symbols. They are included for your safety and for the protection of the tool.



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 decals. Keep safety decals in good condition. Replace missing or damaged safety decals.

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.

OPERATIONAL SAFETY



DANGER

- If the attachment is not functioning properly, shut down the machine, follow proper lockout / tag out procedures and follow proper repair procedures.
- **NEVER** operate equipment without the original safety guards in place.
- 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 cab.
- **NEVER** operate the equipment while under the influence of drugs, alcohol or other substances that inhibit mental abilities or reaction time.
- **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.
- 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.
- 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.
- **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.



WARNING

- 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.

OPERATIONAL SAFETY

- **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.
 - **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.
 - 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.
- viewing, operating or maintaining the attachment. Safety equipment includes eye protection, hard hat, steel toe shoes, gloves, hearing protection and respirator.
- Keep clear of potential pinch points, including the moving upper jaw, cylinder connections, bucket linkages and other moving parts.
 - **ALWAYS** read and observe all safety instructions in this manual. If you are unfamiliar with any operation or maintenance procedure, seek instruction before proceeding.

MODEL DESCRIPTION

MDP series Mobile Demolition Processors can crush concrete and cut a wide variety of materials, including I-beams, H-beams, channel iron, steel plate, pipe, round stock, wire, rebar and concrete. They are ideal for processing, demolition work, road and bridge construction, and jobs where torching is not feasible.

DECAL MAINTENANCE

Ensure safety decals are installed and visible. Keep decals clean and promptly replace decals that are damaged. Replacement decals are available through the LaBounty Service Department. Place replacement decals in the same position as the original decals.

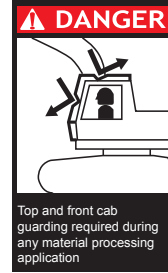
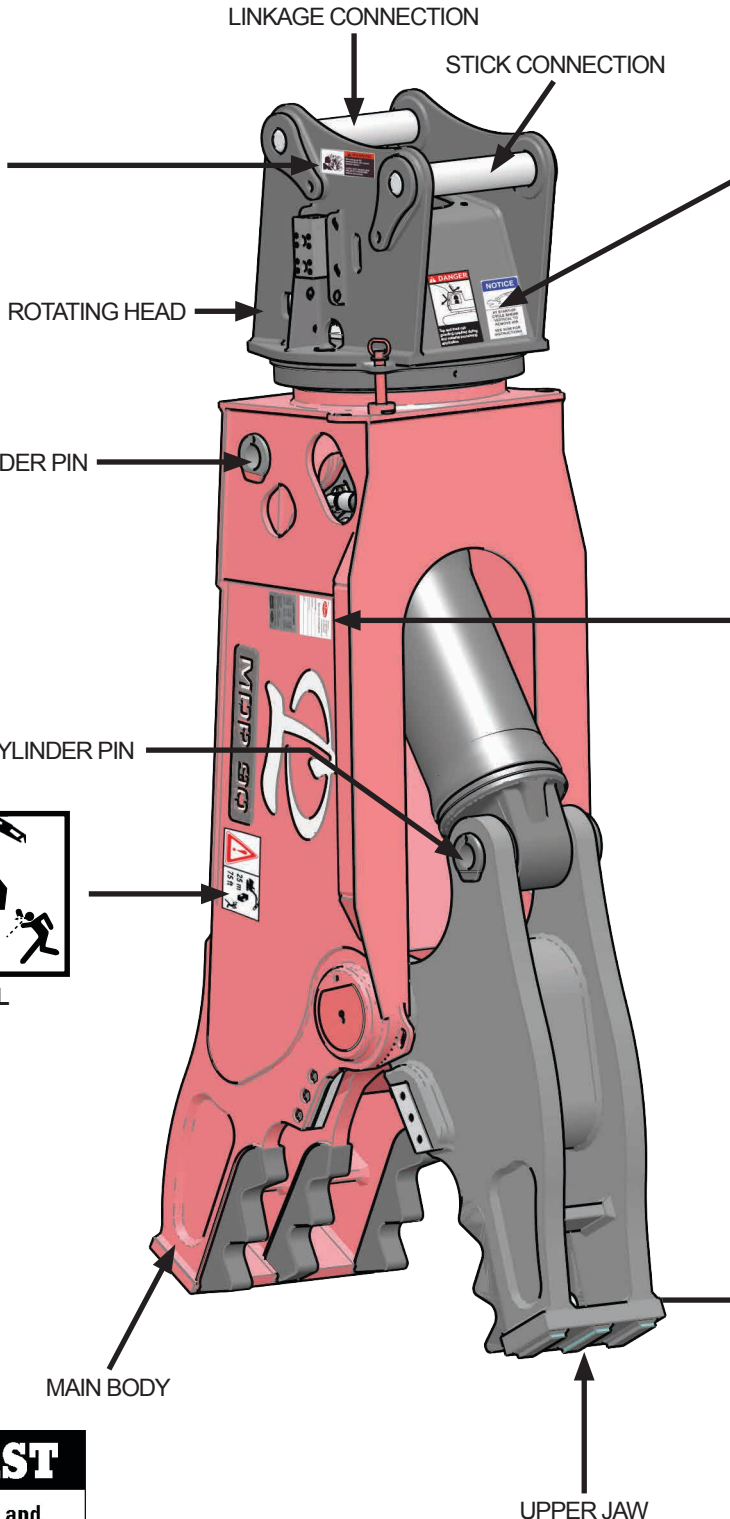
CAUTION

- **DO NOT** weld on any structural member unless specifically authorized by LaBounty.
- **ALWAYS** wear close-fitting clothing and safety equipment appropriate to the job. Safety equipment should be worn at all times when

DECALS & TERMS



WARNING
 Servicing while pressurized can cause severe injury
 LOCK OUT source and RELIEVE PRESSURE before servicing
PRESSURE RELIEF WARNING DECAL
 P/N 512572
FIGURE 1



DANGER
 Top and front cab guarding required during any material processing application
NOTICE
 AT START-UP CYCLE SHEAR VERTICAL TO REMOVE AIR
 SEE SOM FOR INSTRUCTIONS
CAB GUARD & CYLINDER BLEED DECAL
 P/N 503647 & 512554
FIGURE 5



SAFE DISTANCE DECAL
 P/N 514446
FIGURE 2

STANLEY
LaBounty
 1538 Highway 2
 Two Harbors, MN 55616
 tel: 1-800-522-5059
 fax: 218-834-3879
 www.stanleyhydraulics.com
 Made in the U.S.A. with Global Materials

Attachment Model: _____
 Serial Number: _____
 Year of Manufacture: _____
 Weight: _____

U.S. PATENT NUMBERS

4,543,179	4,771,540	4,838,493
4,872,264	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 2 218-834-2123
 Two Harbors MN 55616 www.stanley-hydraulic-tools.com

FOREIGN PATENTS AND OTHER PATENTS PENDING

STANLEY **LaBounty** 116404

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



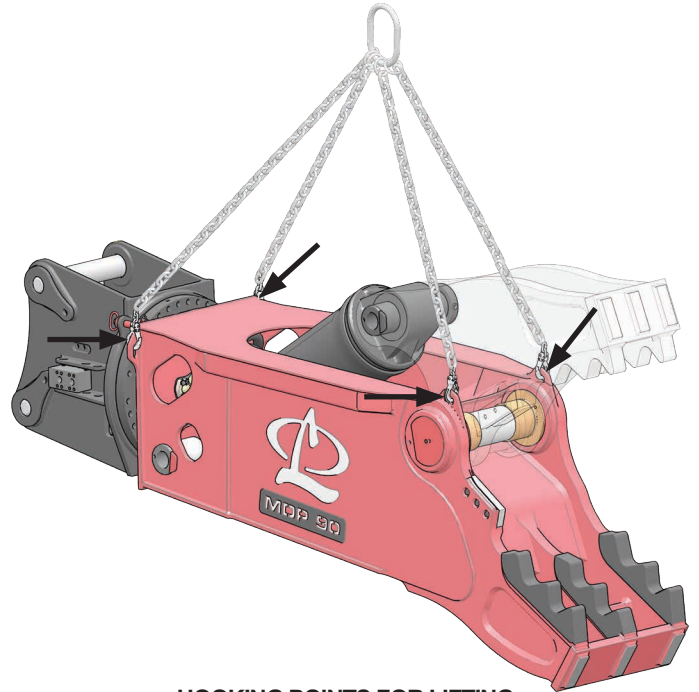
GREASE DECAL (AT EACH FITTING)
 P/N 116388
FIGURE 4



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.**

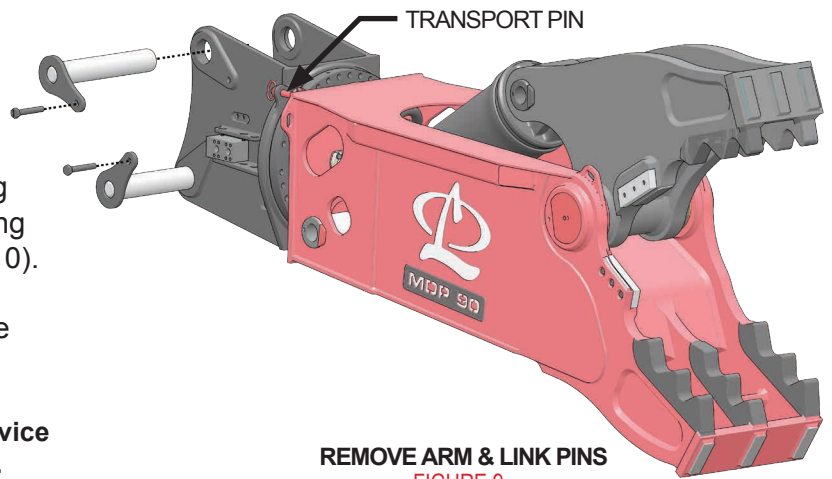


HOOKING POINTS FOR LIFTING
FIGURE 8

THIRD MEMBER INSTALLATION

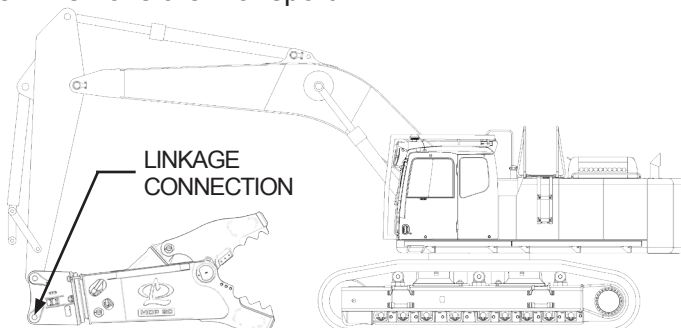
Note: Ensure the stick and linkage pin are installed properly. Do not install MDP backwards.

1. Remove the arm connection and link connection pins, as shown in Figure 9.
 2. 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).
 3. 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.**



REMOVE ARM & LINK PINS
FIGURE 9

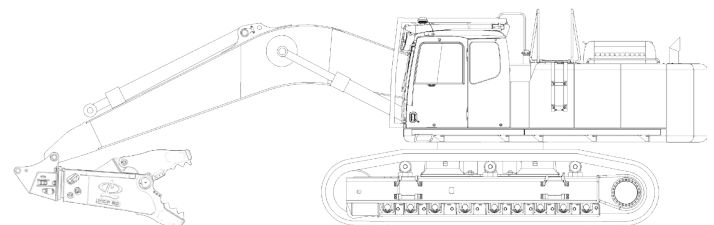
4. Pin the linkage connection to the MDP bracket.
5. Remove the Transport Pin.



LINKAGE
CONNECTION

THIRD MEMBER INSTALLATION

FIGURE 10



SECOND MEMBER INSTALLATION

FIGURE 11

INSTALLATION

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. See "MDP Hydraulic Schematic" on page 12

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.

INSTALLATION

- 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	M16 x 2.00	224 ft/lbs (304 Nm)

- 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

- Curl the attachment under the boom of the excavator and use blocking to support the stick cylinder.
- 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.**

- 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.**

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

Note: Plug hydraulic hoses to prevent contamination.

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

STORING MDP

- Securely block the attachment off the ground using wood blocking.
- Plug all open hydraulic ports.
- 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. This includes eye protection, hard hat, steel toe shoes, gloves, hearing protection and respirator.



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 its attachments. **DO NOT** overload or serious injury could result. The attachment may have altered the machine's lift capabilities.
- MDP is for processing materials. **DO NOT** use for unapproved purposes or warranty may be voided.
- If MDP stalls during processing, scale back the amount of material being processed at one time. Overloading can cause overheating and has adverse effects on the hydraulic system.
- Cycle the MDP cylinder completely when processing. Fully cycling MDP will allow hydraulic fluid to circulate and prevents overheating.
- Maintain a safe distance.
- **NEVER** leave MDP 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 15 feet (5 meters) between MDP and any nearby power lines.
- **ALWAYS** lower MDP 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 MDP attachment.
- **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.

OPERATION

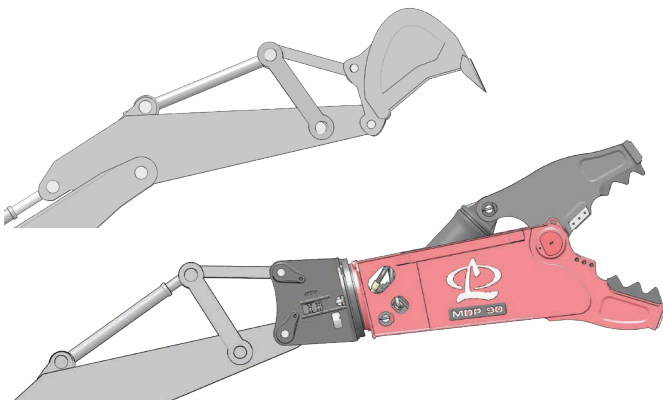
TECHNICAL SPECIFICATIONS

Model	Jaw Type	Weight	Jaw Opening	Jaw Depth	Reach	Minimum Excavator Size
MDP 20R	Cracker	4,600 Lbs. (2,100 Kg)	25 in (640 mm)	27 in (690 mm)	9.8 ft (3 m)	40,000 Lbs. (18 M/Ton)
	Pulverizer	5,250 Lbs. (2,400 Kg)	25 in (640 mm)	27 in (690 mm)	9.8 ft (3 m)	40,000 Lbs. (18 M/Ton)
MDP 27R	Cracker	6,300 Lbs. (2,900 Kg)	32 in (810 mm)	31 in (790 mm)	9.6 ft (2.9 m)	55,000 Lbs. (25 M/Ton)
	Pulverizer	6,950 Lbs. (3,200 Kg)	28 in (710 mm)	30 in (760 mm)	9.6 ft (2.9 m)	55,000 Lbs. (25 M/Ton)
MDP 35R	Cracker	8,250 Lbs. (3,700 Kg)	38 in (970 mm)	36 in (910 mm)	11.3 ft (3.4 m)	70,000 Lbs. (32 M/Ton)
	Pulverizer	9,000 Lbs. (4,100 Kg)	34 in (860 mm)	36 in (910 mm)	11.3 ft (3.4 m)	70,000 Lbs. (32 M/Ton)
MDP 50R	Cracker	12,400 Lbs. (5,600 Kg)	50 in (1270 mm)	45 in (1140 mm)	13.1 ft (4 m)	99,000 Lbs. (45 M/Ton)
	Pulverizer	13,900 Lbs. (6,300 Kg)	50 in (1270 mm)	45 in (1140 mm)	13.1 ft (4 m)	99,000 Lbs. (45 M/Ton)
MDP 90	Pulverizer	2,100 Lbs. (9,500 Kg)	56 in (1420 mm)	49 in (1240 mm)	15.2 ft (4.6 m)	187,000 Lbs. (85 M/Ton)

THIRD MEMBER CONTROLS

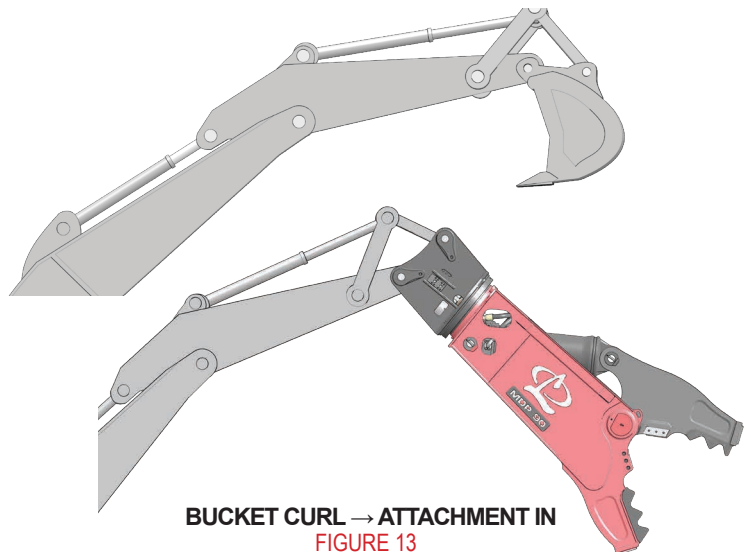
! WARNING

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



BUCKET DUMP → ATTACHMENT OUT

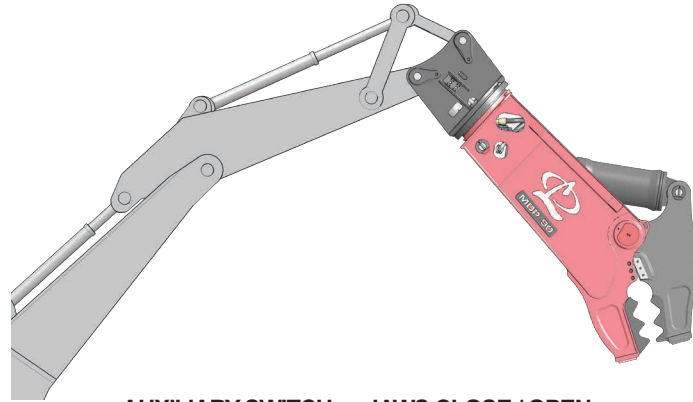
FIGURE 12



BUCKET CURL → ATTACHMENT IN

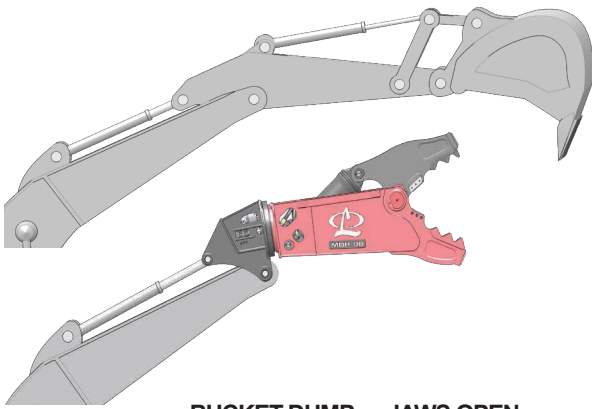
FIGURE 13

OPERATION

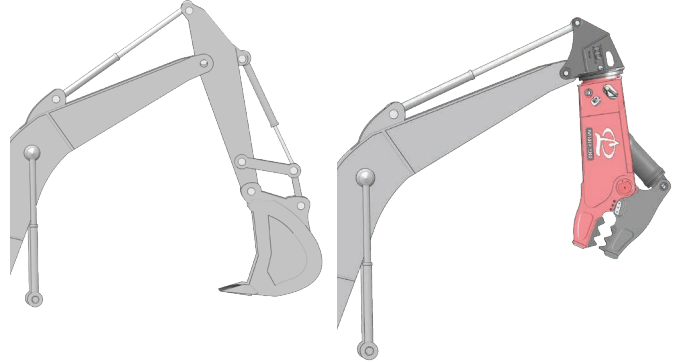


AUXILIARY SWITCH → JAWS CLOSE / OPEN
FIGURE 14

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 inch of 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.

OPERATION

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 1)
- _____ 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.

80-HOUR INSPECTION CHECKLIST

Build-up, hard-surfacing & Blade Rotation

- _____ Build-up jaws & check wear plates (see “Build Up & Wear Plates” on page 20).
- _____ Rotate blades (see “Blade Maintenance” on page 22).

Rotator

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

EVERY 1500 HOURS

- _____ Inspect / replace thrust washer (see “Thrust Washer Inspection” on page 26).

Inspected By: _____

Date: _____



MAINTENANCE

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.

WARNING

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

Replacing Swift-Lock Teeth (MDP 20/27/35/50)

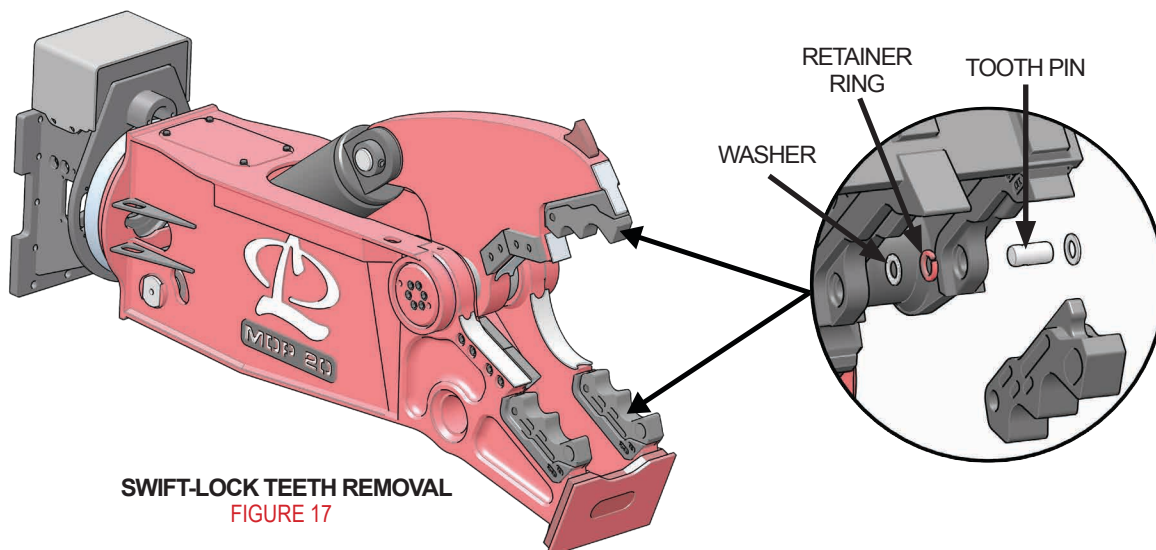
1. Locate flat, hard ground and place the attachment on the ground.
2. Remove the washers on each side of each tooth, using a grinder.

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.

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.

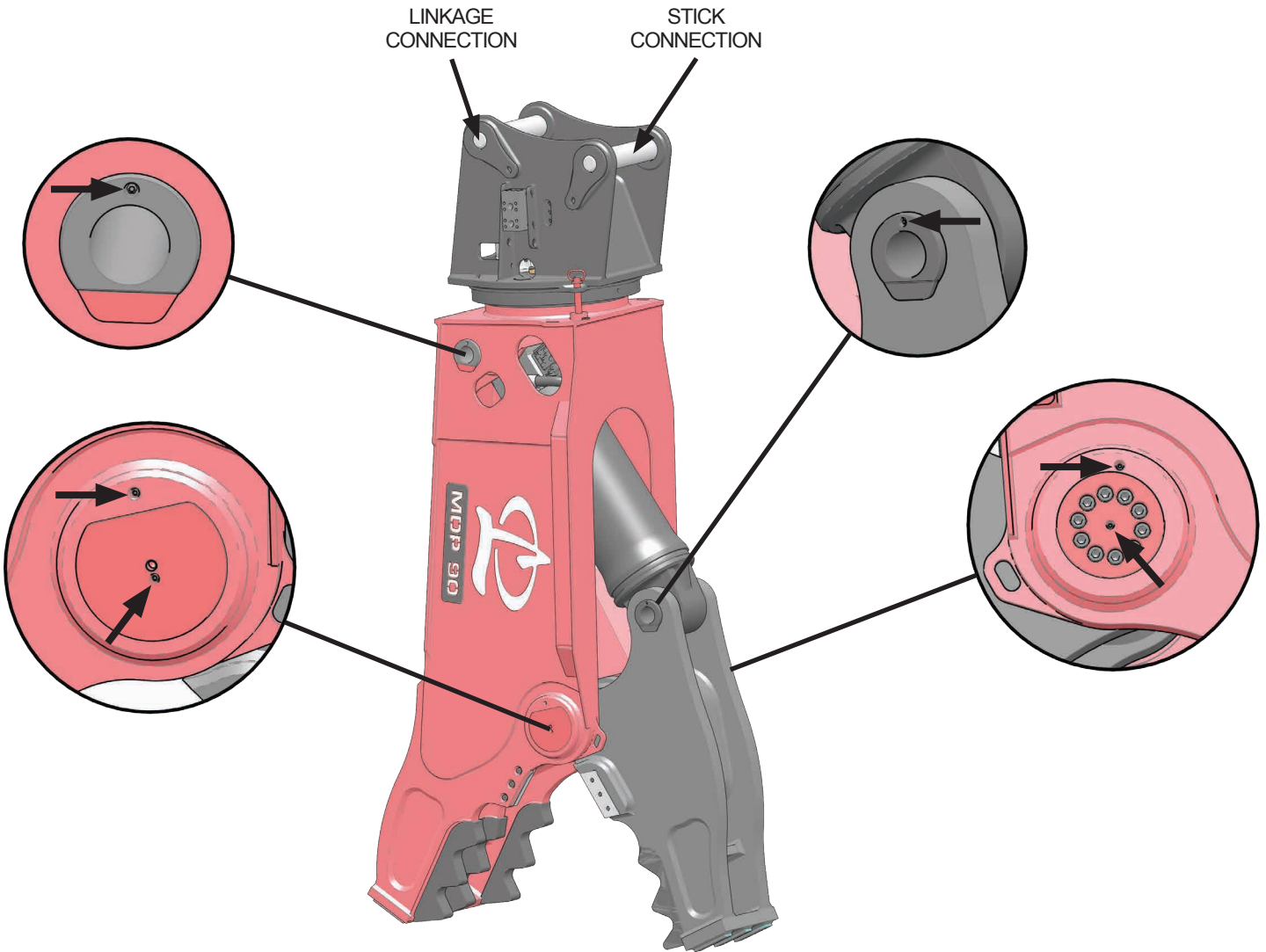


SWIFT-LOCK TEETH REMOVAL
FIGURE 17

MAINTENANCE

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

MAINTENANCE

TURNTABLE BEARING LUBRICATION

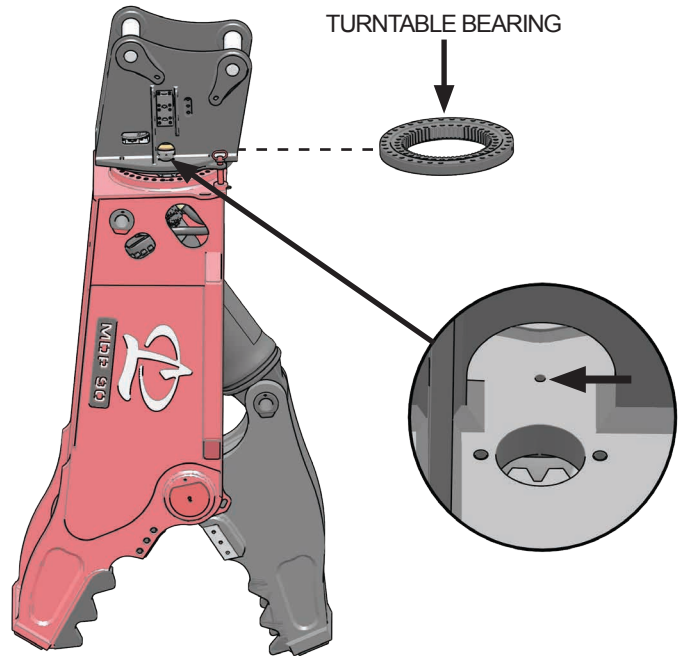


- Stand clear of MDP during rotation.

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

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

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

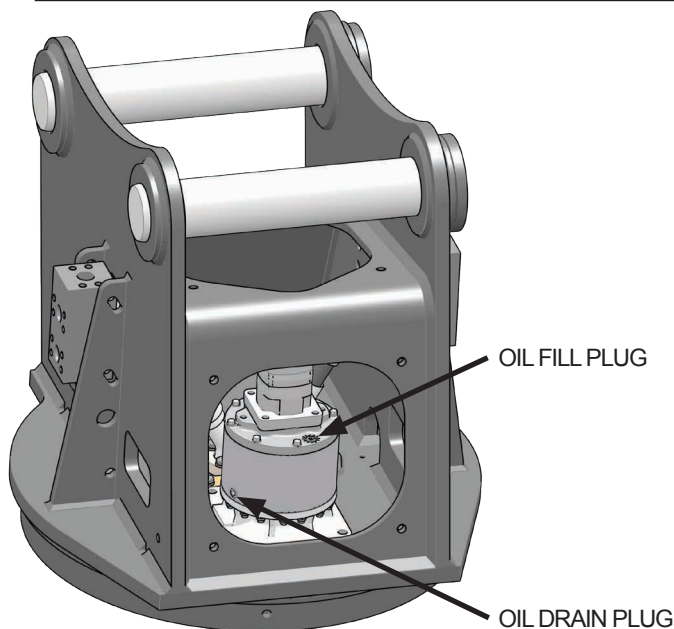


TURNTABLE LUBRICATION ACCESS
FIGURE 19

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 year	1000 hours / 2 year	Each 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.

MAINTENANCE

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 capscrews, class 10.9 metric flat head capscrews and class 12.9 metric socket head capscrews. When installing new bolts, ensure that the bolt is clean and dry.

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



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



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

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

Metric	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

MAINTENANCE

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.

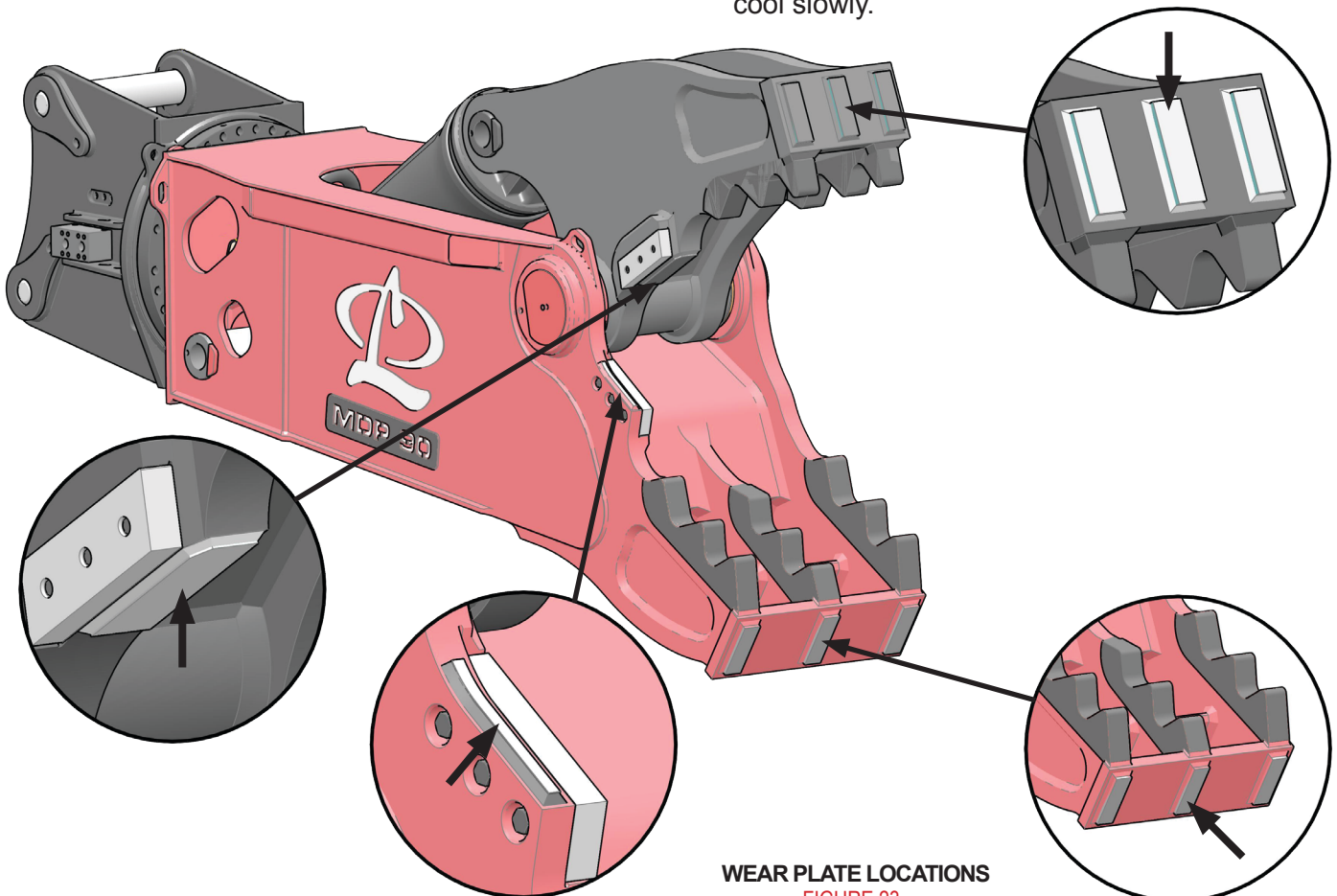
CHECKING AND REPLACING WEAR PLATES

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.
Note: Wear bars are pre-cut to length and must be formed to the jaw in the field.
4. Weld the wear bar into place.
5. Cover the weld with a heat blanket and allow it to cool slowly.



WEAR PLATE LOCATIONS
FIGURE 23

MAINTENANCE

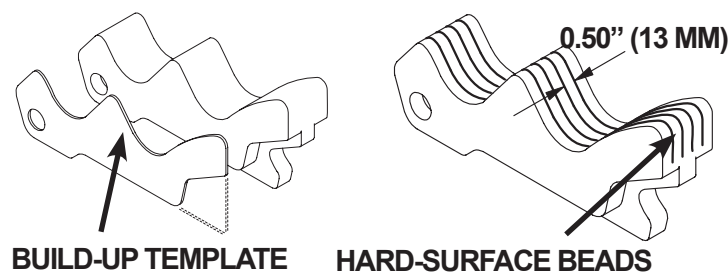
JAW TEETH BUILD UP

1. Obtain the proper tooth build up template. Refer to the parts manual for template part numbers.
2. Thoroughly clean the area to be built up. Grind off any existing hard-surface material.
3. Preheat the area to 200° F (93.3° C) to remove moisture.
4. Preheat the area to be build up to 300° - 400° F (149° - . 204° C)
Note: Do not exceed 450° F (232° C).
5. Use the tooth template to determine how much build up is required.
6. Using AWS E7018 welding rod, make hard surface beads, as shown in Figure 24.
7. Relieve stress and remove slag after each pass by peening vigorously with an air operated slag peener.
8. Repeat steps 6 and 7 until the tooth profile matches the build up template.
9. Grind edges square to match the template.
10. Using AWS E7018, place underlayerment passes, as shown in Figure 24.
11. Apply a bead of Amalloy 814H rod on top of each

of the underlayerment beads.

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

12. Relieve stress after each pass by peening vigorously with an air operated slag peener.
13. Taper the end of each hard-surface bead by grinding.
Note: Do NOT undercut the weld.
14. When grinding is complete, peen the area until it is shiny or until the peener cannot dent the weld.
Note: About 5-10 minutes.
15. Cover the welded area with a heat blanket and allow to cool slowly.



SWIFT-LOCK TOOTH BUILD UP

FIGURE 24

MAINTENANCE

BLADE MAINTENANCE

⚠ CAUTION

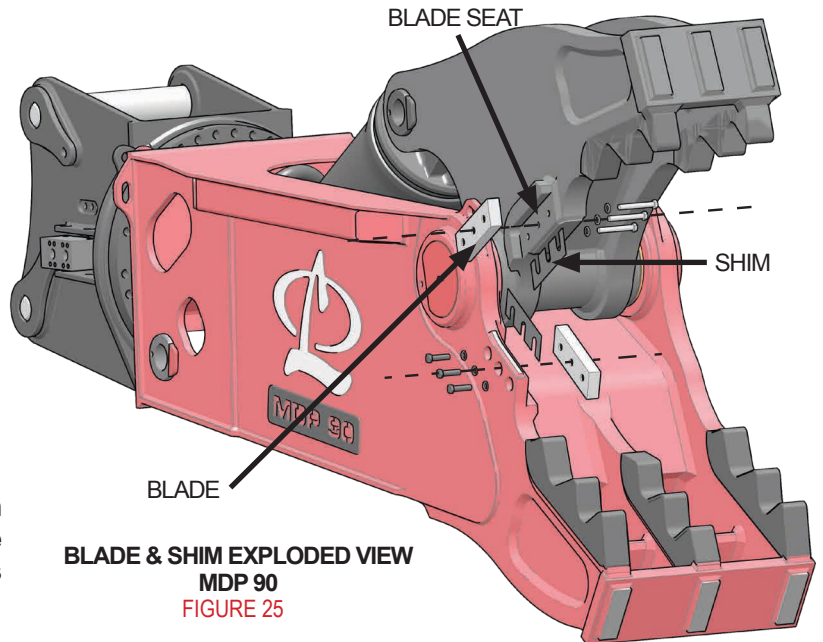
- **Wear leather work gloves at all times during blade maintenance.**
1. Remove the blade as shown in Figure 25.
 2. Grind all rough edges from each blade and clean the blade seat.
 3. Rotate the blade.
Note: Each blade has four edges, as shown in Figure 27 & Figure 28. Each time you rotate the blade, 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

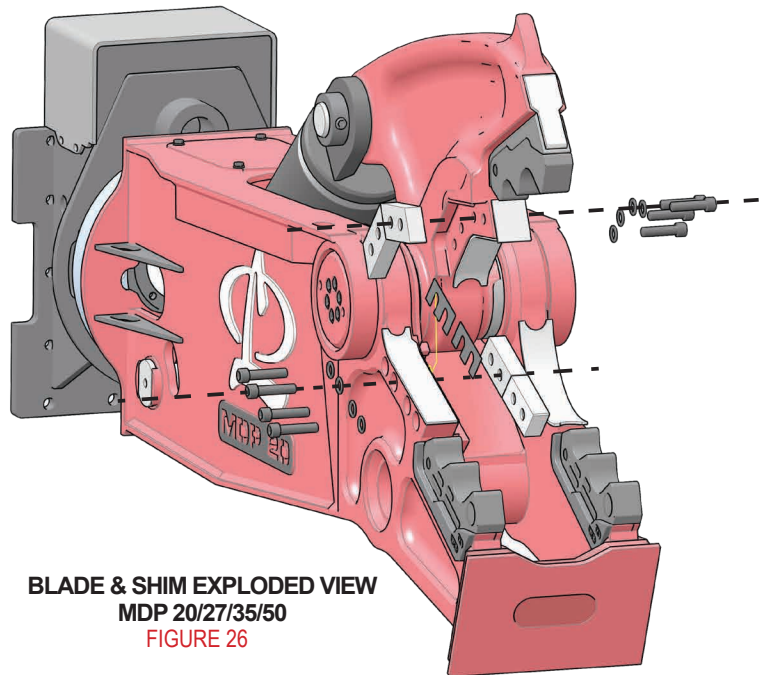
- **Stay at least 75 ft. (23 m) when moving.**
5. Cycle the jaws closed. Measure the gap between the upper and lower blade using a feeler gauge. If the gap is larger than .060", shim the blade.

Shimming the Blades

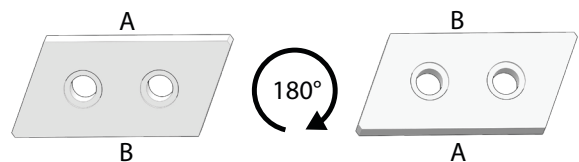
1. Measure the blade gap.
2. Shim each blade so that the blade gap is approximately .020"-.030". Fit the shims between the blade and the blade seat.
Note: Do not shim out a blade more than .125". Doing so may cause structural damage and will void the warranty.



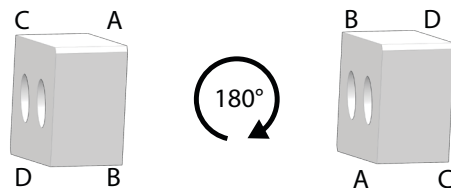
BLADE & SHIM EXPLODED VIEW
MDP 90
FIGURE 25



BLADE & SHIM EXPLODED VIEW
MDP 20/27/35/50
FIGURE 26



BLADE PITCH ROTATION
FIGURE 27



BLADE ROLL ROTATION
FIGURE 28

MAINTENANCE

HYDRAULIC MAINTENANCE

Speed Valve (MDP 35/50/90)

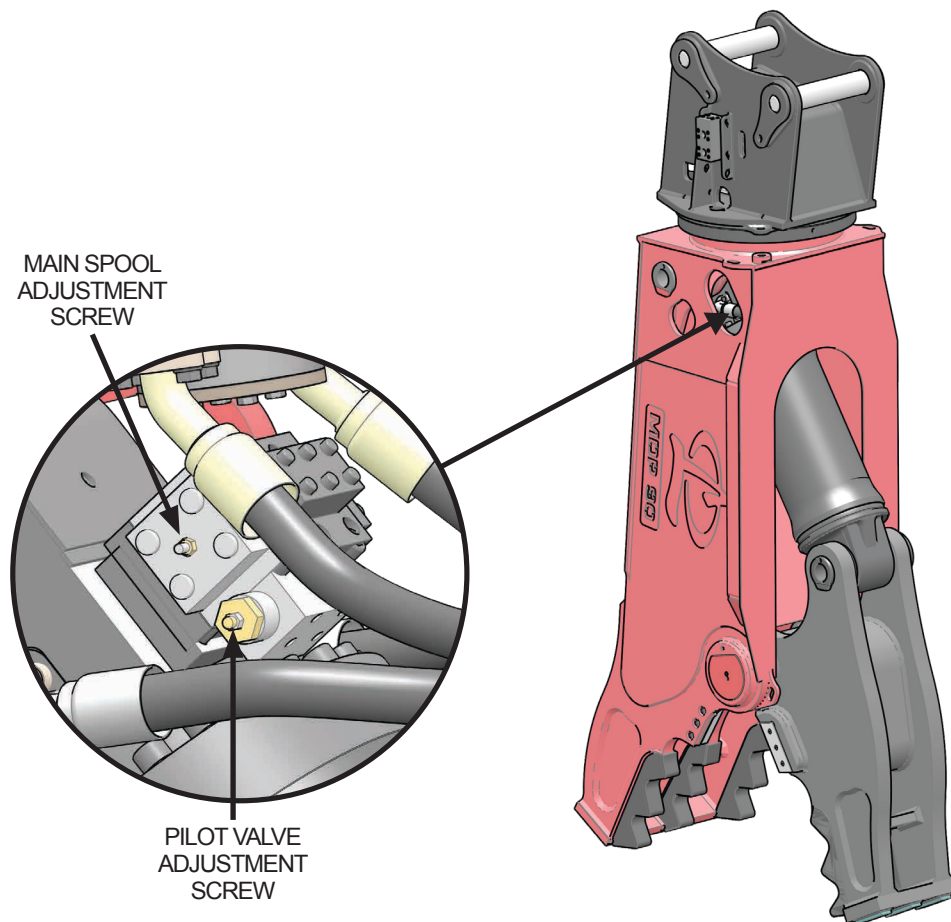
The speed valve allows the jaws to shift into high speed when not under a load. Two valve spools control this speed change, the Main Spool Adjustment Screw and the Pilot Valve Adjustment Screw.

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.



SPEED VALVE ADJUSTMENT POINTS

FIGURE 29

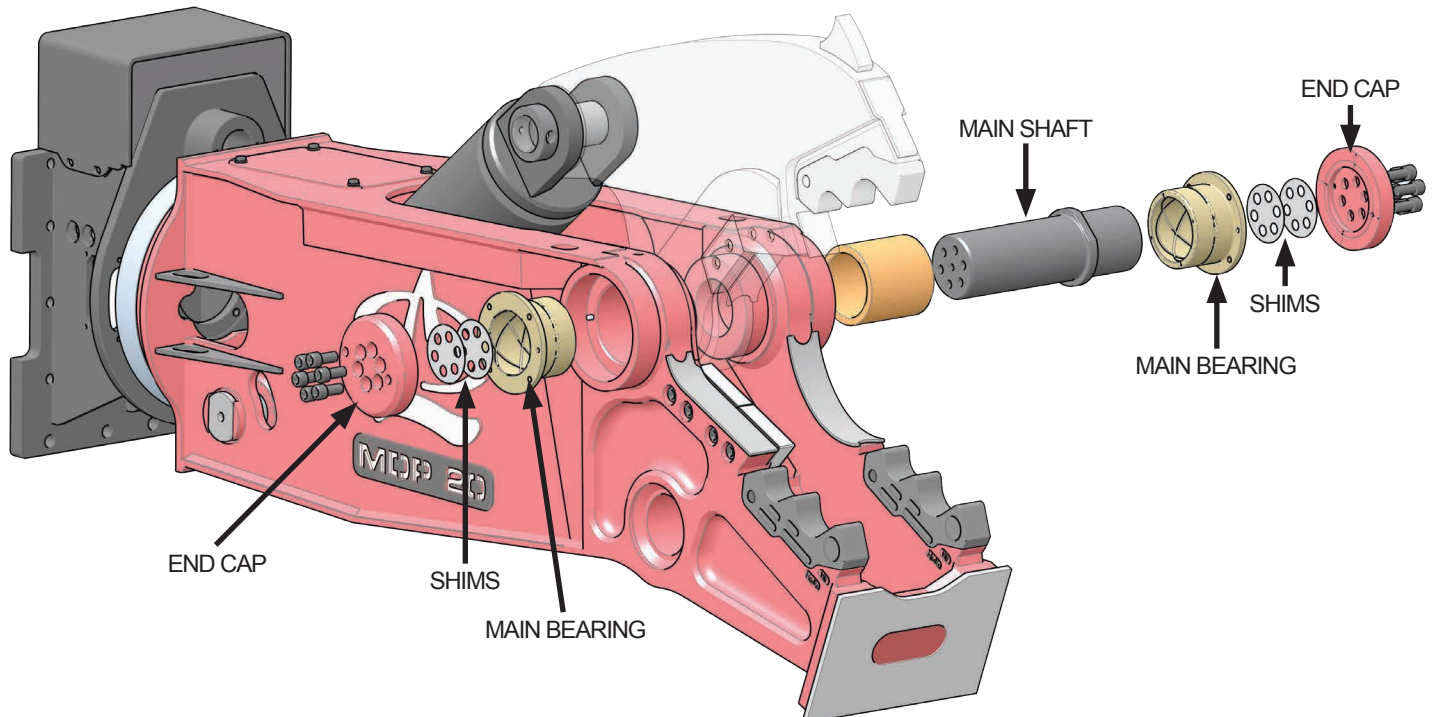
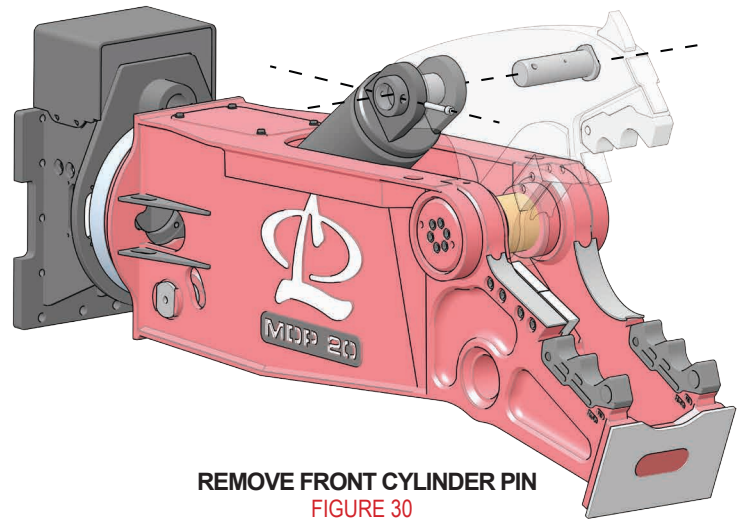
MAINTENANCE

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.

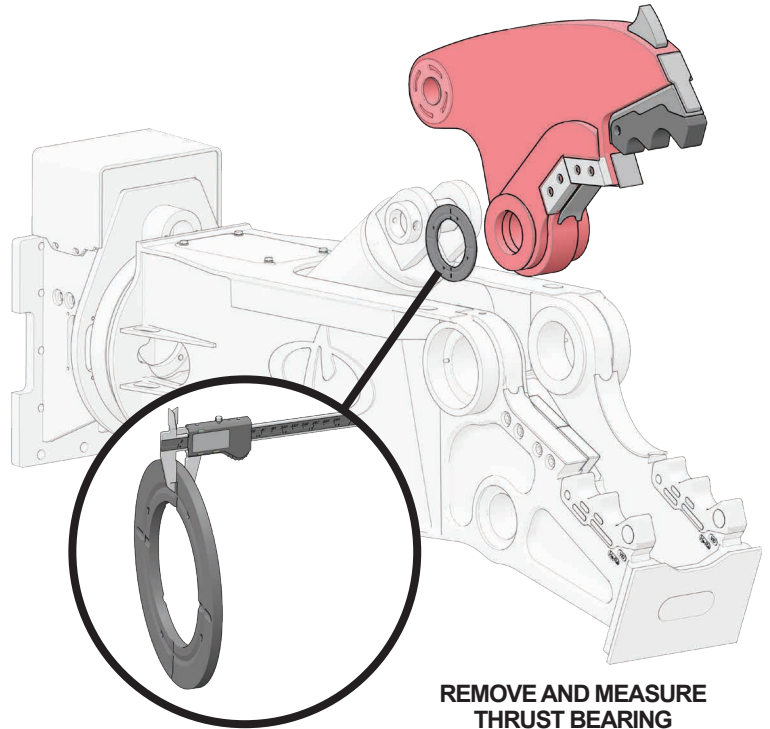
DANGER

- **NEVER** remove any pins unless MDP is on the ground and blocked. Serious injury or death could result.
2. Remove the front cylinder pin, as shown in Figure 30.
 3. Remove the main pivot group, as shown in Figure 31.



MAINTENANCE

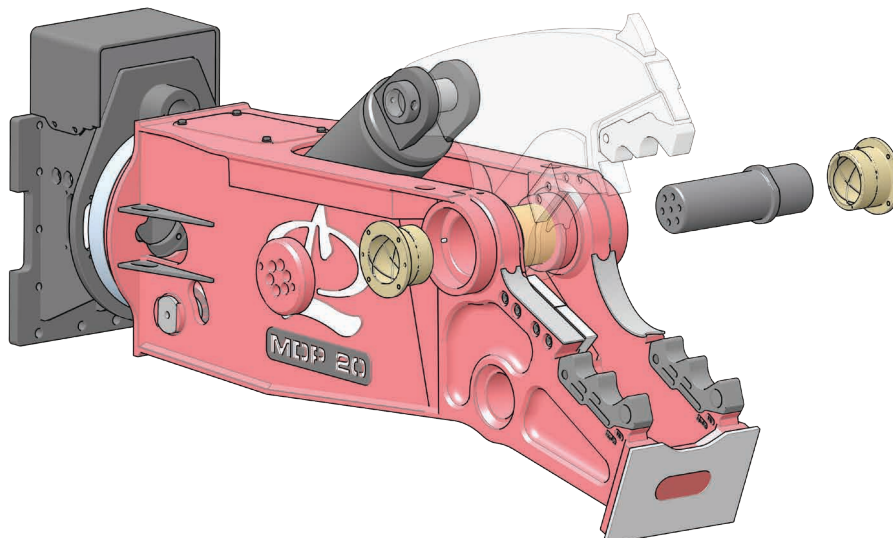
4. Remove the Upper Jaw from the MDP Body.
5. Remove the thrust washer.
6. Measure the thickness of the thrust washer.
7. Replace the thrust washer if the thickness is less than 0.355 inches.



**REMOVE AND MEASURE
THRUST BEARING**
FIGURE 32

REASSEMBLY AND SHIMMING

1. Position the Lower Jaw into place.
2. Install the main shaft.
3. Install both main bearings.
4. Using a wedge between the Upper Jaw and MDP Body, push the Upper Jaw tight against the thrust washer.



MAIN PIVOT GROUP ASSEMBLY
FIGURE 33

MAINTENANCE

5. 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”.
6. Measure the wear on the right hand End Cap, as shown in Figure 34. Record this measurement as “Measurement B”.
7. Subtract “Measurement B” by “Measurement A”. The difference will be the thickness of the shims.

MEASUREMENT
“B”

MEASUREMENT
“A”

Measurement “B” _____

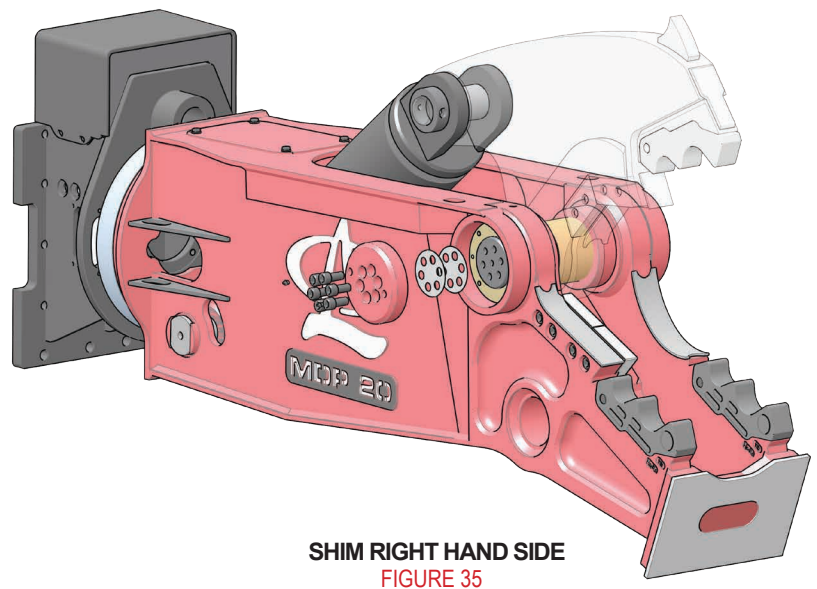
Measurement “A” **—** _____

Shim Thickness **=** _____

MEASURE FOR SHIMS
FIGURE 34

SHIMMING

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



SHIM RIGHT HAND SIDE
FIGURE 35

MAINTENANCE

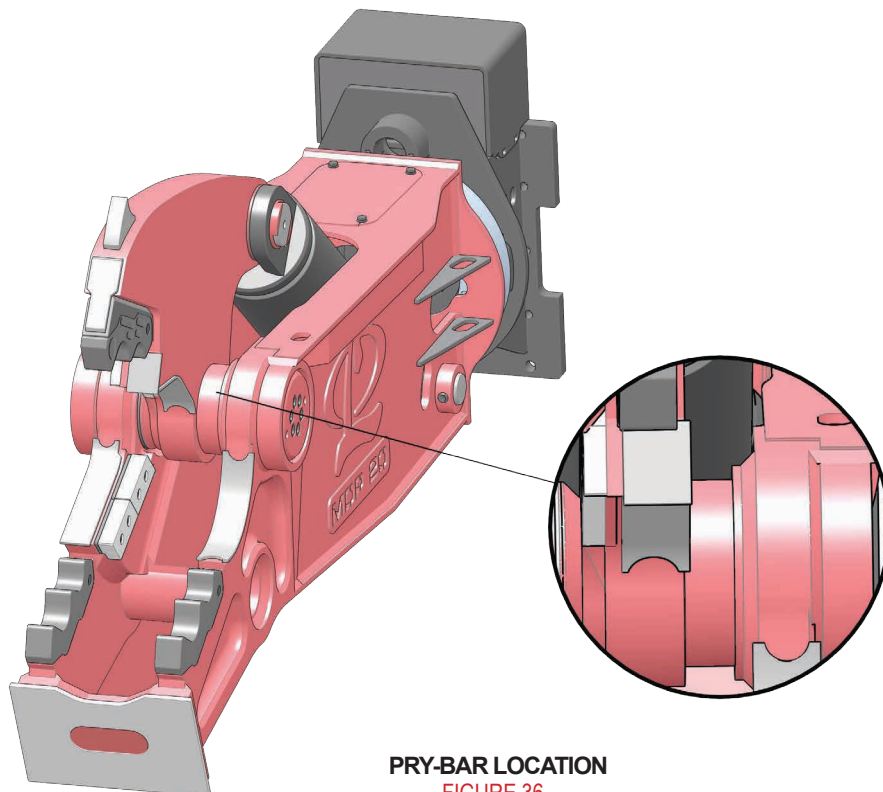
1. Put together a stack of shims that equal the shim thickness calculated in Figure 34.
2. Install shims on the right hand side of the MDP Main Pivot Group.
3. Install the right hand End Cap.
4. Using a crane, slowly lower and raise the Upper Jaw. If shimmed properly, the Upper Jaw will move with a slight bit of “drag”.
5. 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 50	693 ft/lbs (940 Nm)

Install the front cylinder pin. Use Loctite 271 on the cylinder pin bolt.

CHECK END PLAY

1. Grease each fitting on the Main Pivot Group (See Lubrication).
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

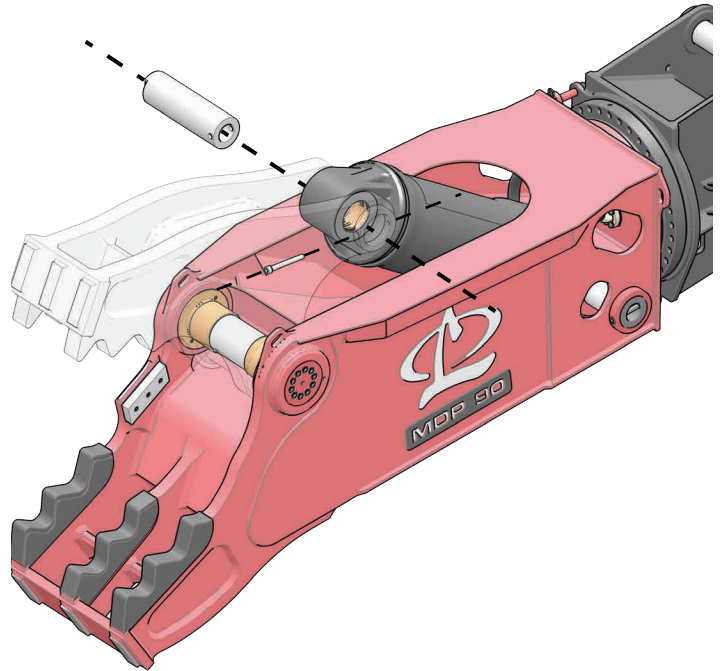
MAINTENANCE

THRUST WASHER INSPECTION - MDP 90

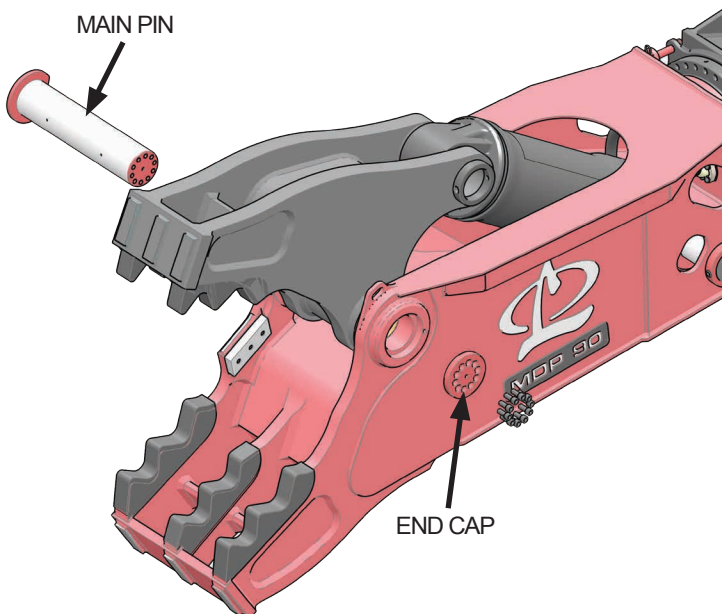
1. Locate flat, hard ground and place the attachment on the ground. Ensure the Upper Jaw is secured and will not fall during removal.

⚠ DANGER

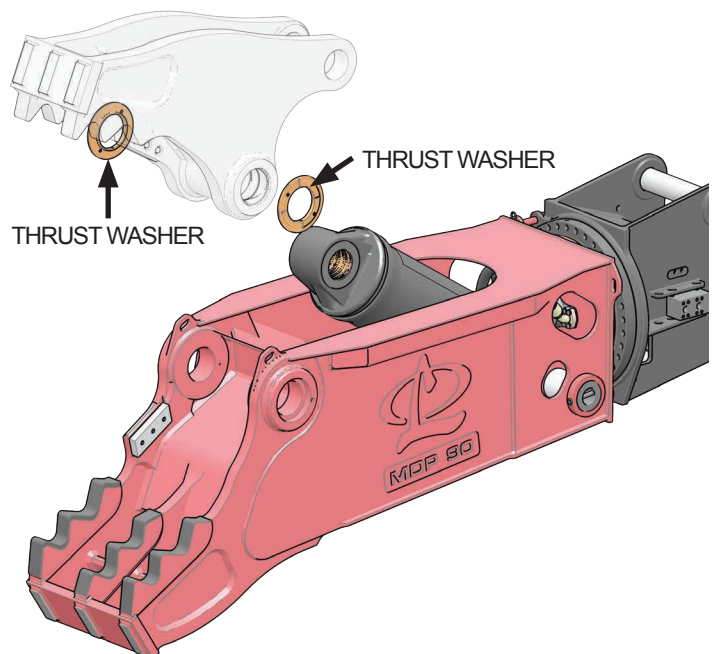
- **NEVER** remove any pins unless MDP is on the ground and blocked. Serious injury or death could result.
2. Remove the front cylinder pin, as shown in Figure 37.
 3. Remove the main pivot group, as shown in Figure 38.
 4. Remove the Upper Jaw from the MDP body.
 5. Remove the Thrust Washers from the 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 FRONT CYLINDER PIN
FIGURE 37



REMOVE MAIN PIVOT GROUP
FIGURE 38



REMOVE THRUST WASHERS
FIGURE 39

TROUBLESHOOTING

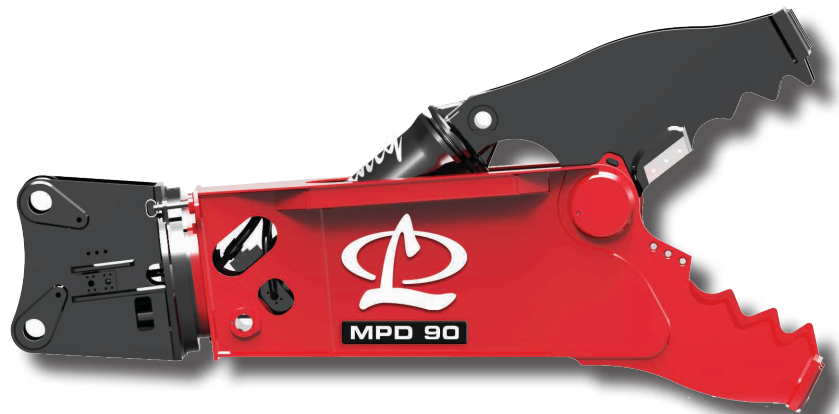
FIRST STEPS

- Ensure the hydraulic flow and pressure from the base machine meets specifications (see “Hydraulic Circuit Requirements” on page 9).
- 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).

TROUBLESHOOTING

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.



LaBounty
1538 Highway 2
Two Harbors, MN 55616-8015 USA
Phone: (218) 834-2123
Fax: (218) 834-3879

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.