# Messer Wood Splitter & Tree Shear Attachment

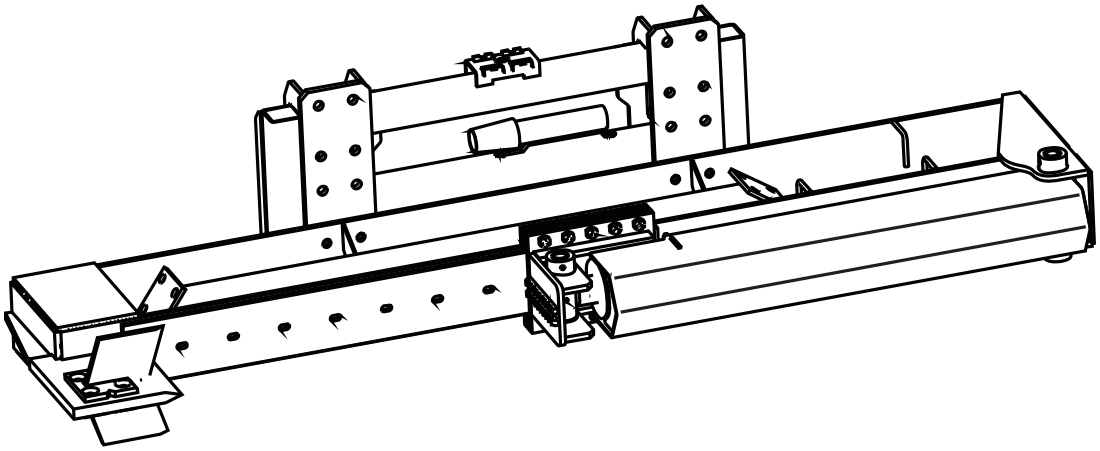
View Product

# OPERATOR'S MANUAL

Model WS5X36  Serial Number 12997

Manual# 96374  September 2024

ENGLISH



MESSER ATTACHMENTS LLC

SAUK CENTRE, MN USA

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# Introduction

## Using This Manual

The term loader is used in this manual to refer to a skid steer loader.

Your loader operator's manual contains instructions to safely operate the loader. Anyone who operates a loader with this attachment installed must first read, understand and follow the instructions in the loader operator's manual.

This manual contains instructions to safely operate and service the attachment. Anyone who operates or services the attachment must first read, understand and follow the instructions in this manual.

Additional operating or servicing information for the attachment may be provided online, in video, or in other publications. This additional information does not replace, and is not a substitute for reading and following, the instructions in this manual.

The safety alert symbol is shown in WARNING statements to alert users to hazards which could cause death or injury. Carefully read and follow the messages.

IMPORTANT notices alert users to instructions which, if not followed, could result in damage. Carefully read and follow the messages.

There may be times when the attachment and loader shown in this manual may not be your exact model. The model shown will be close enough to your attachment or loader to accurately convey the information.

The most current information available is included in this manual. The publisher may revise this manual at any time and is not required to notify users of revisions.

### Replacement Manuals

Be sure to include this operator's manual if you sell or transfer ownership of the attachment.

Contact Messer Attachments LLC for a printed manual, or find a downloadable manual on our website.

## Using This Attachment

The attachment is designed to split wood, and shear and prune trees.

The attachment is designed to be connected to the loader's front auxiliary hydraulic couplers.

The manufacturer reserves the right to make improvements, and to discontinue or change specifications, models or design without notice and without incurring obligation.

### Loader Compatibility

The attachment is designed for installation on loaders with a minimum **Rated Operating Capacity (ROC) of 1,500 lbs.**

Confirm your loader's Rated Operating Capacity (ROC) in the loader operator's manual. Confirm your attachment's ROC in Specifications in this manual.

Do not install the attachment on the loader if the combined weight of the attachment and attachment load will exceed the loader ROC during operation because this may cause difficulty in controlling the loader or may cause loader damage.

Do not exceed the attachment's ROC because this may damage the attachment.

### Product Misuse

Product misuse can cause accidents, injury and death.

The manufacturer of the attachment is not responsible for any harm or injury resulting from product misuse.

Product misuse includes operating or servicing the attachment without following the instructions in this manual, using the attachment in any way for which it was not designed, and modifying the attachment.

### Modifications

Do not modify the attachment in any way.

## Manufacturer Contact

Call Messer Attachments LLC at (833) 352-3477
visit https://messerattach.com

# Product Identification and Specifications

## Identification Numbers

Record your product information to provide when you contact the dealer or manufacturer.

**Wood Splitter / Tree Shear**
**Model WS5X36**
**Serial Number 12997-**

### Serial Number Location

| | |
|---|---|
| **Purchase Date** | |
| **Dealer** | |
| **Dealer Phone** | |
| **Model** | |
| **Serial #** | |

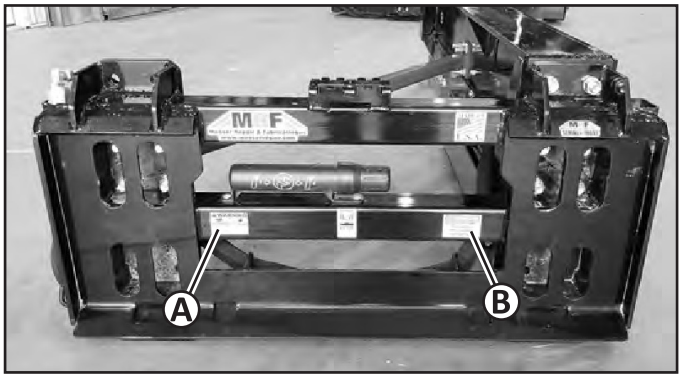
## Specifications

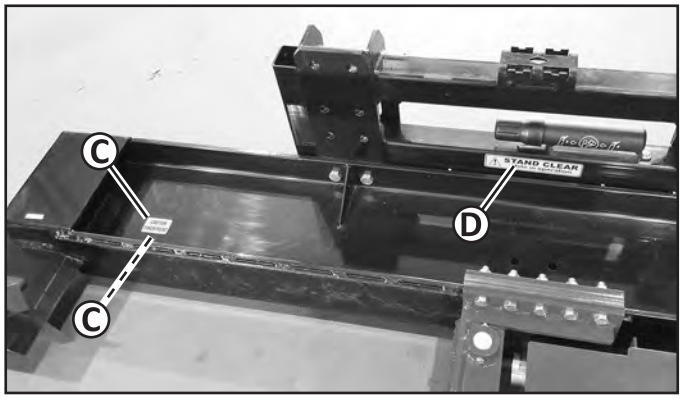
| | |
|---|---|
| **Model** | WS5X36 |
| **Overall Length/Depth (Boom out)** | 269 cm (106 in.) |
| **Overall Length/Depth (Sideways)** | 69 cm (27 in.) |
| **Overall Width x Height (Boom out)** | 114 x 58 cm (45 x 23 in.) |
| **Overall Width x Height (Sideways)** | 251 x 58 cm (99 x 23 in.) |
| **Max. Throat Opening** | 91 cm (36 in.) |
| **Cylinder Push Force (@ 3000 psi)** | 30 Tons |
| **Weight** | 447 kg (985 lb.) |
| **Rated Operating Capacity** | 1814 kg (4000 lbs.) |

# Safety Decals

## Decal Locations

- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.
- Relieve pressure on system before repairing, adjusting or disconnecting.




| Location | Description | Part Number |
|---|---|---|
| A | Warning Decal | 96117 |
| B | Danger Decal | 96116 |
| C | Caution Decal | 96109 |
| D | Stand Clear Decal | 96138 |

### WARNING DECAL 96117

**HIGH PRESSURE FLUID HAZARD**
**To prevent serious injury or death:**

### DANGER DECAL 96116

**DO NOT ATTEMPT TO SHEAR A TREE OVER 8” IN DIAMETER**

### CAUTION DECAL 96109

**PINCH POINT**

### STAND CLEAR DECAL 96138

**STAND CLEAR WHILE IN OPERATION**

# Safety

## Wear Protective Equipment

- Wear gloves to protect hands from burns if hydraulic couplers become hot during operation.
- Never wear sandals or other light footwear when operating or servicing the attachment. Wear protective footwear when handling blades or heavy parts.
- Do not wear loose fitting clothing which may become entangled when operating or servicing the attachment.

## Parking Safely

1. Follow the instructions in the loader operator's manual to park the loader safely.
2. Fully lower the attachment to level ground.
3. Stop the loader engine and remove the key from the switch.
4. Do not leave the loader operator seat until the engine and all other moving loader and attachment parts have stopped.
5. Follow the instructions in the loader operator's manual to exit the loader safely. Use the attachment step area if one is provided.

## Operating Attachments Safely

- Do not allow anyone to operate the attachment unless they have first read and understood the loader and the attachment operator's manuals.
- Do not allow anyone to operate the attachment unless they have first read and understood the safety and warning decals on the loader and on the attachment.
- The attachment owner is responsible for training others to safely operate the attachment, and is responsible for any injuries or harm which occurs while the attachment is being operated.
- If an area to step on the attachment has been provided, be sure to use it when entering and exiting the loader.
- Before operating, replace any worn or damaged safety decals.
- Before operating, thoroughly inspect the attachment to be sure all hardware (bolts, nuts, etc.) is installed and tightened.
- Before operating, thoroughly inspect the attachment to be sure it is in working order. If the attachment is damaged or otherwise not in working order, do not operate until it has been repaired by a qualified technician.
- Before raising or lowering the attachment be sure the area is clear of bystanders.
- Do not operate the loader or the attachment if you are under the influence of alcohol, drugs, or medications which may cause drowsiness.
- Do not allow children to operate the loader or the attachment.
- Do not allow anyone who has not been trained to operate the loader or the attachment.
- Never allow riders on the attachment.
- Keep hands, feet or other objects away from underneath the attachment while operating.
- Fully lower the attachment to level ground when you are done operating.
- Never leave the attachment unattended while in a raised position.
- When transporting the attachment installed on the loader, travel at a slower speed to maintain control.

## Using the Wood Splitter / Tree Shear Safely

- Do not hand feed or roll wood into the attachment.
- Operate the attachment from the cab of the loader only.
- Do not attempt to shear trees which are more than eight inches in diameter.
- Extend the boom out by raising and tilting the attachment to keep pruned or sheared limbs away from the loader to prevent falling onto the loader.

## Servicing Safely

- Disconnect the attachment hydraulic hoses from the loader before servicing. Do not service the attachment when the hydraulic hoses are installed on the loader.
- Remove the attachment from the loader before servicing when instructed to do so in this manual.
- Do not allow anyone to service the attachment

unless they have first read and understood the loader and the attachment operator's or service manuals.

- Do not allow anyone to service the attachment unless they have first read and understood the safety and warning decals on the loader and on the attachment.
- The attachment owner is responsible for training others to safely service the attachment, and is responsible for any injuries or harm which occurs while the attachment is being serviced.
- Before inspecting or servicing the attachment, follow the Parking Safely instructions in this manual and disconnect the attachment hydraulic hoses from the loader.
- Always securely block the attachment to prevent accidental release of the lifting mechanism when inspecting or servicing the attachment.

## Hydraulic Fluid Safety

- Read and understand the hydraulic safety information in the loader operator's manual before operating or servicing the attachment.
- Use cardboard or a board when you check for a leak.
- Fluid in hydraulic hoses is under extreme pressure. If fluid is injected into your skin seek medical treatment immediately.
- Do not handle any hydraulic components until pressure has been relieved from the system.
- Disconnect the attachment hydraulic hoses from the loader before inspection or service.
- Inspect attachment hydraulic hoses and hose shields for damage or wear before attaching to the loader.

## Safety Decals

Safety decals may be installed on the attachment to warn users of safety hazards:

- DANGER decals provide warnings about hazardous situations which will result in death or serious injury if not avoided.
- WARNING decals provide warnings about hazardous situations which could result in death or serious injury if not avoided.
- CAUTION decals provide warnings about hazardous situations which could result in injury if not avoided.

Read and understand all safety decals before operating or servicing the attachment.

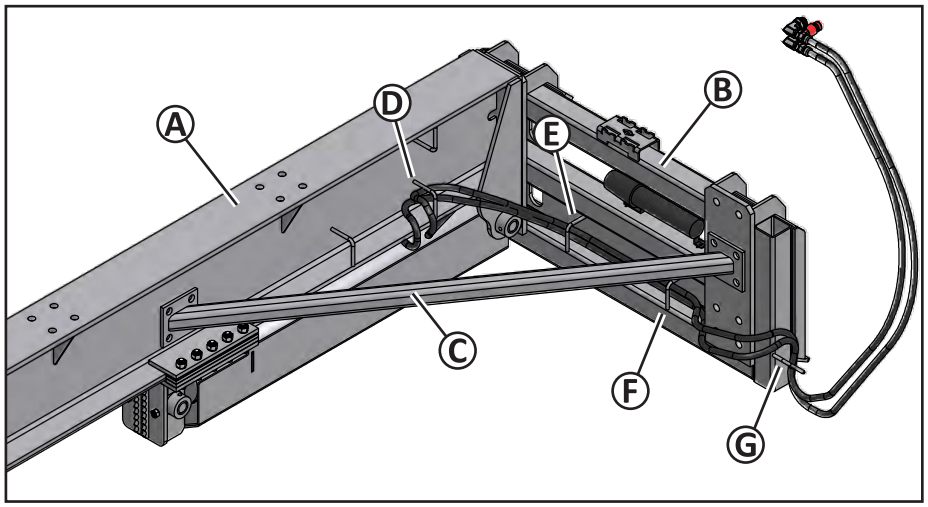
See the Safety Decal Location illustration in this manual to confirm where decals are installed on the attachment.

Safety decals which are missing, worn or faded must be replaced. Replacement safety decal part numbers are included in this manual. Contact the attachment manufacturer for replacement decals.

# Assembly

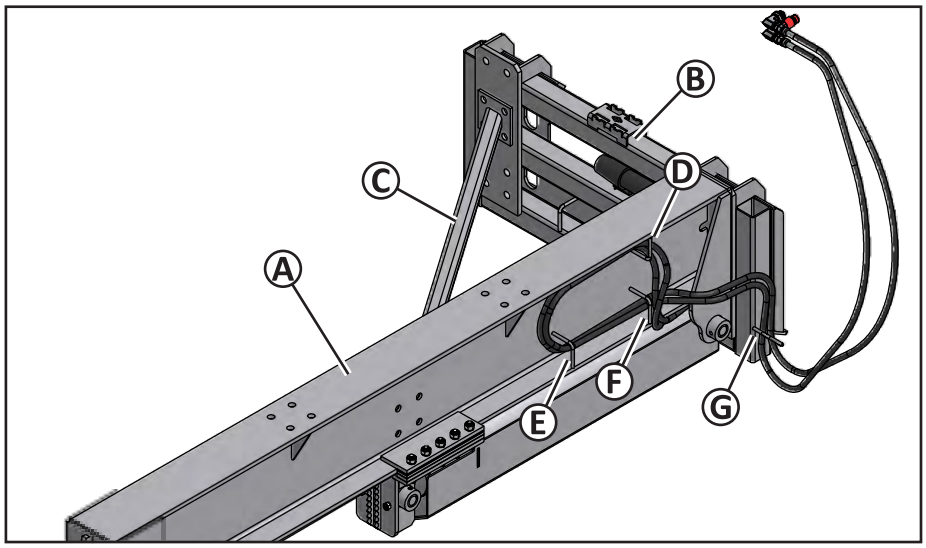
## Boom Out Right Assembly

1. Attach the boom weldment (A) to the right side of the main frame (B) with six 3/4 x 2-1/2 bolts, 3/4 lockwashers and 3/4 nuts.
2. Attach the kicker weldment (C) to the main frame with four 3/4 x 2-1/2 bolts, 3/4 lockwashers and 3/4 nuts.
3. Attach the kicker weldment to the boom weldment with four 3/4 x 2 bolts, 3/4 lockwashers and 3/4 nuts.
4. Route the attachment hydraulic hoses-through four guides (D-G) as shown.



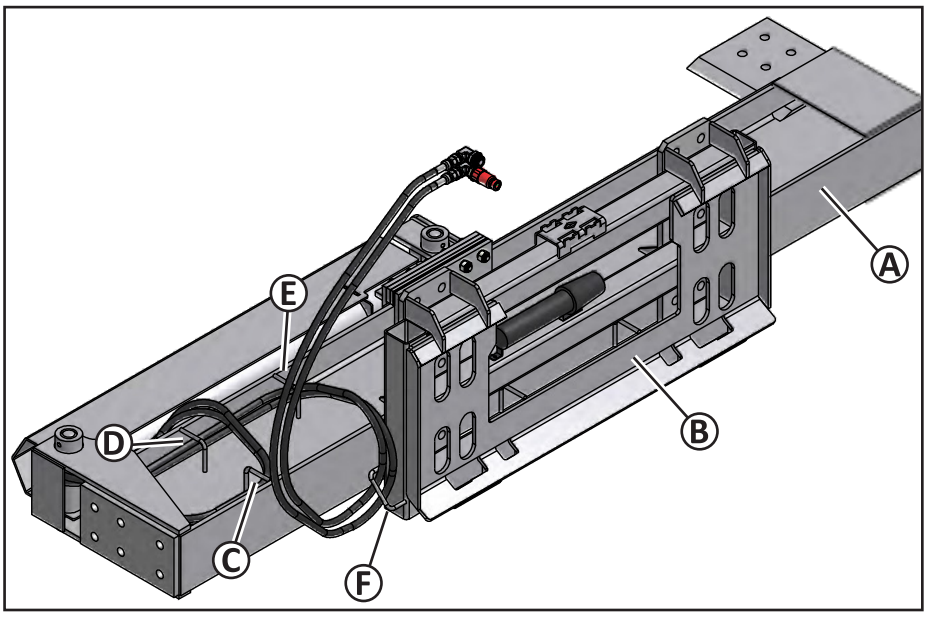

## Boom Out Left Assembly

1. Attach the boom weldment (A) to the left side of the main frame (B) with six 3/4 x 2-1/2 bolts, 3/4 lockwashers and 3/4 nuts.
2. Attach the kicker weldment (C) to the main frame with four 3/4 x 2-1/2 bolts, 3/4 lockwashers and 3/4 nuts.
3. Attach the kicker weldment to the boom weldment with four 3/4 x 2 bolts, 3/4 lockwashers and 3/4 nuts.
4. Route the attachment hydraulic hoses-through four guides (D-G) as shown.




## Boom Sideways Assembly

1. Attach the boom weldment (A) to the center of the main frame (B) with eight 3/4 x 2-1/2 bolts, 3/4 lockwash-ers and 3/4 nuts.
2. Route the attachment hydraulic hoses through four guides (C-F) as shown.



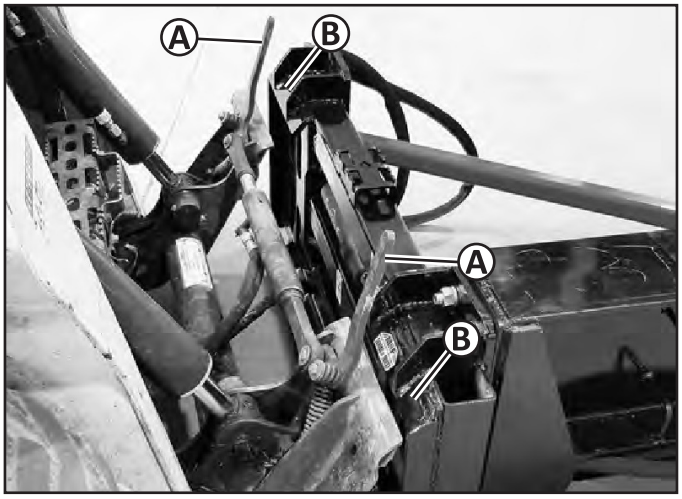
# Installing and Removing

## Preparing for Installation

1. Check the loader and attachment hydraulic couplers to be sure the surfaces are clean before connecting.
2. Inspect the couplers for damage or wear and replace if needed for proper connection.

## Installing the Attachment

1. Follow the instructions in the loader operator's manual to install the attachment and exit the operator station safely.
2. Fully lower the loader lift arms.



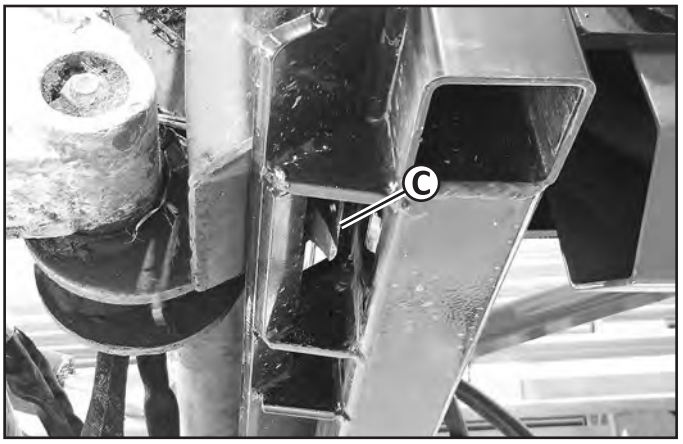

3. Move the loader attaching plate levers (A) to the unlocked (up) position either manually or by using the loader controls.

**IMPORTANT**
**AVOID DAMAGE!**
**Attaching plate levers may be damaged if they strike the attachment. Be sure the attaching plate levers do not hit the attachment during installation.**

4. Tilt the loader attaching plate forward, and drive the loader forward until the top edge of the loader attaching plate is under the top flange (B) of the attachment mounting frame.
5. Raise the loader lift arms slightly until the attaching plate is fully seated under the top flange.
6. Tilt the attaching plate backward to raise the front of the attachment.

7. Move the loader attaching plate levers (A) to the locked (fully down) position either manually or by using the loader controls.
8. Park the loader. (See Parking Safely in this manual.)

**IMPORTANT**
**AVOID DAMAGE!**
**The attachment may come off the loader if it is not secured to the attaching plate. The attaching plate pins or wedges must be extended into the attachment with the levers fully down.**

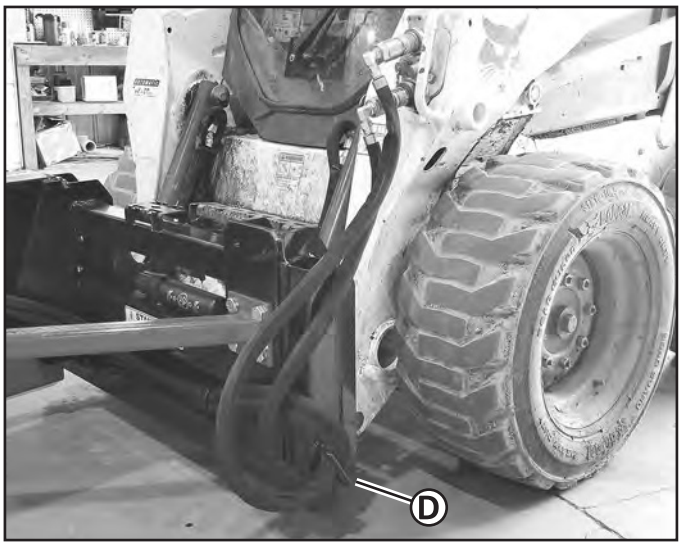



*Picture Note: Wedge on right side shown. Check the wedges or pins on both sides of the attachment.*

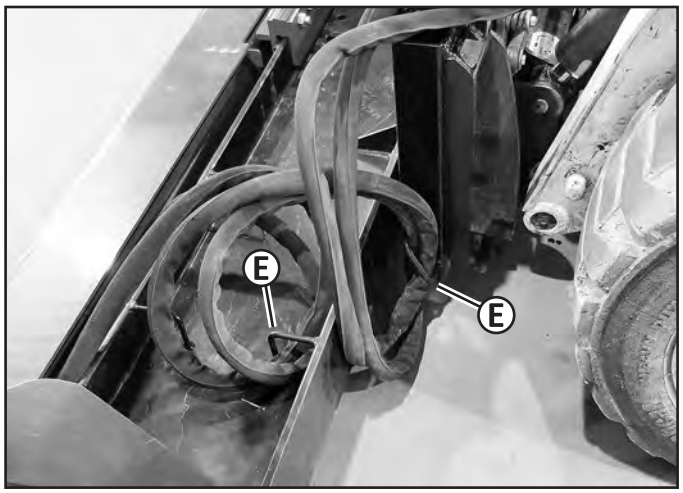
9. Check to be sure the loader attaching plate pins or wedges (C) extended into the holes in the bottom of the attachment mounting frame. If not, move the loader attaching plate levers to the unlocked (up) position and repeat installation.

# Installing and Removing

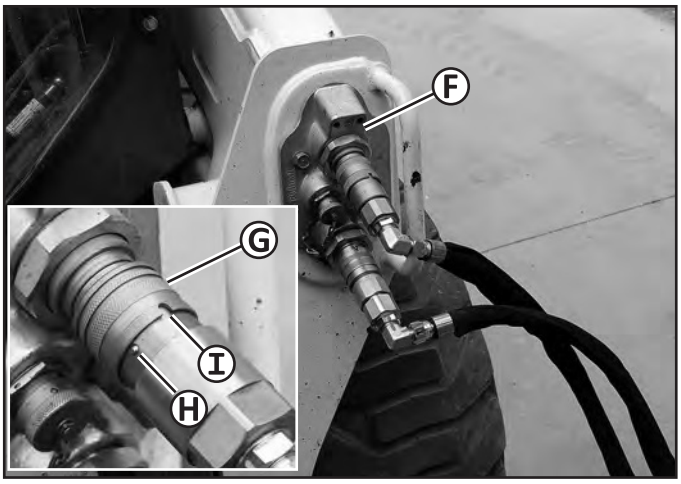
10. Check the attachment hose routing to the loader's front auxiliary couplers:




- If the attachment is assembled for operation with the boom out, route the hoses through the guide (D) as shown.




- If the attachment is assembled for operation with the boom sideways, route the hoses through the two guides (E) as shown.



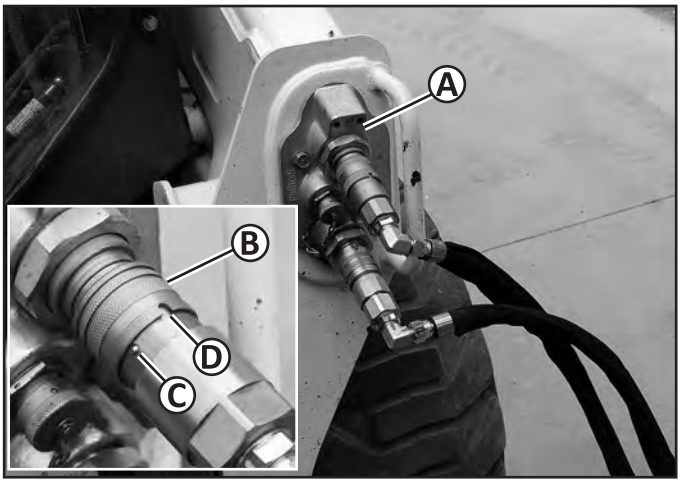

11. Connect the attachment hydraulic hoses to the loader's front auxiliary couplers (F).
    a. Install the male couplers into the female couplers and pull or push the sleeves (G) to be sure they are locked into place.
    b. Rotate the coupler sleeves as shown so the ball (H) is outside the groove (I) to prevent the coupler disconnecting (Some sleeves may not have this locking mechanism).

## Removing the Attachment

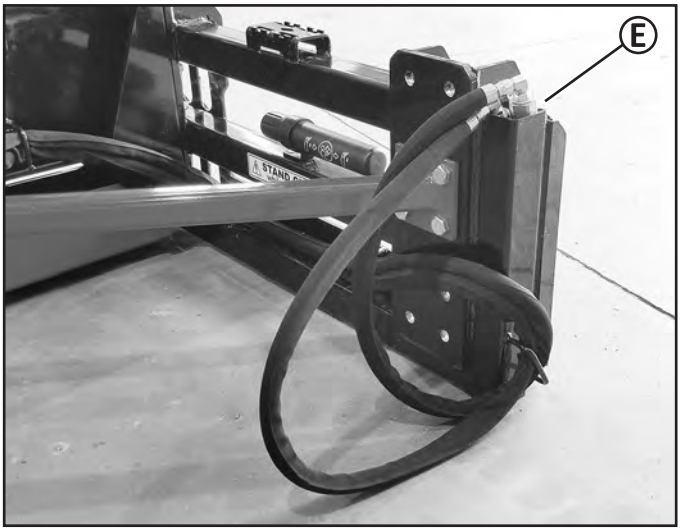
1. Follow the instructions in the loader operator's manual to remove the attachment and exit the operator station safely.
2. Fully lower the loader lift arms and the attachment to level ground.
3. Follow instructions in the loader operator's manual to relieve hydraulic pressure in the front auxiliary hydraulic coupler lines.
4. Stop the loader engine.

**WARNING**
**AVOID INJURY!**
**Hydraulic couplers may become hot during operation. Avoid burns by wearing gloves when disconnecting hydraulic couplers.**

# Installing and Removing

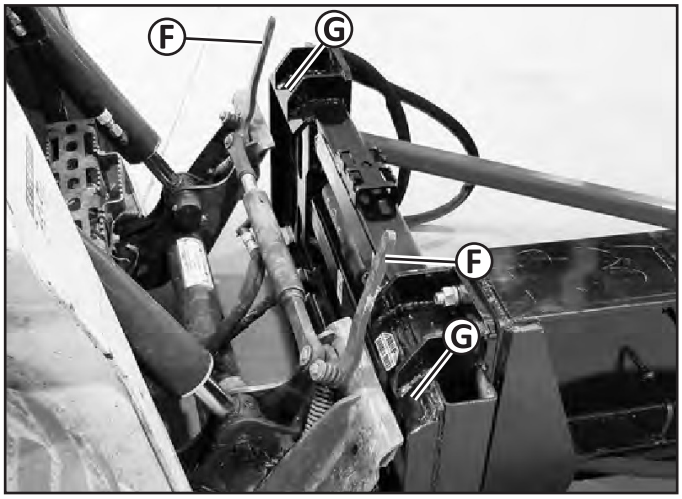



5. Disconnect the attachment hydraulic hoses from the loader's front auxiliary couplers (A).
   a. Rotate the coupler sleeves (B) so the ball (C) is aligned with the groove (D) to allow the coupler to disconnect (Some sleeves may not have this locking mechanism). 10
   b. Grasp and push or pull the sleeves to disconnect the couplers.




6. Install protective caps on the couplers if they are provided, and insert the couplers in the tube (E).

**WARNING**
**AVOID INJURY!**
**Loader attaching plate levers which are operated manually may have spring tensioning. Firmly grasp the levers and move the levers slowly.**




7. Move the loader attaching plate levers (F) to the unlocked (up) position as shown either manually or by using the loader controls.
8. Tilt the loader attaching plate forward slightly and drive the loader backward until the top edge of the attaching plate clears the top flange (G) of the attachment mounting frame.

# Operating

## Pre-Operation Inspection

Before starting operation, inspect the area you will be operating in and inspect the attachment.

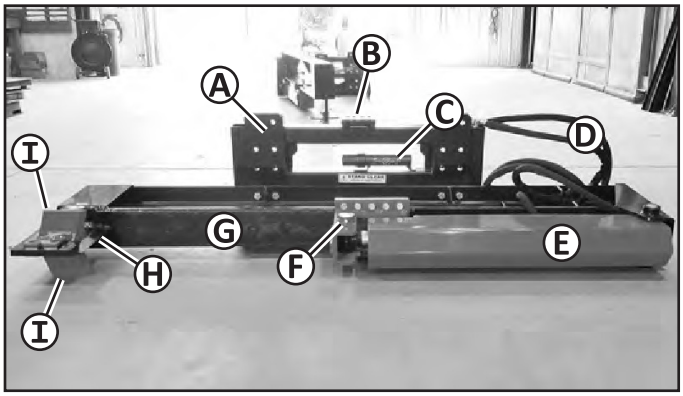
### Inspect the Work Area

1. Confirm the area is clear of bystanders including animals. Establish a safety zone by keeping bystanders and animals beyond a 100 foot radius around the attachment when operating.

### Inspect the Attachment

1. Inspect the attachment to be sure it is in working order. If the attachment is damaged or not in working order, do not operate until it has been repaired by a qualified technician.

## Description




*Picture note: Assembled for boom sideways operation.*

**A - Main Frame**
**B - Step Area**
**C - Operator Manual Holder**
**D - Hydraulic Hoses**
**E - Hydraulic Cylinder Guard**
**F - Slider Weldment**
**G - Boom**
**H - Cutting Edge**
**I- Cross Cut Blades (Optional)**

## Theory of Operation

The Wood Splitter / Tree Shear hydraulic hoses are connected to the loader front auxiliary hydraulic couplers. The loader's hydraulic controls are used to extend and retract the hydraulic cylinder, which moves the slider weldment, forcing the wood into the cutting edge or the cross cut blades. The Wood Splitter / Tree Shear can be assembled for operation with the boom out or the boom sideways.

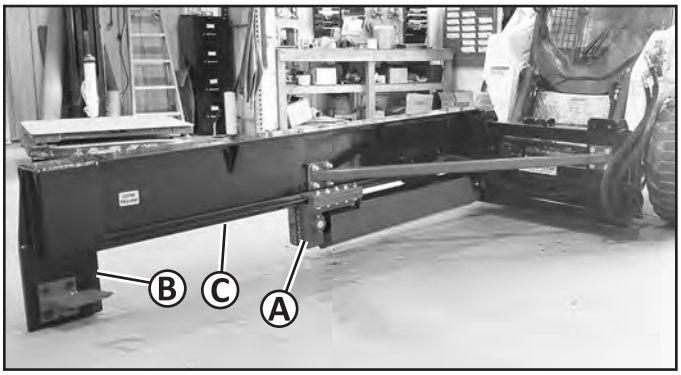
## Operation

1. Follow the instructions in the Installing and Removing section to install the attachment.
2. Park the loader. (See Parking Safely in this manual.)
3. Peform the pre-operation inspection.

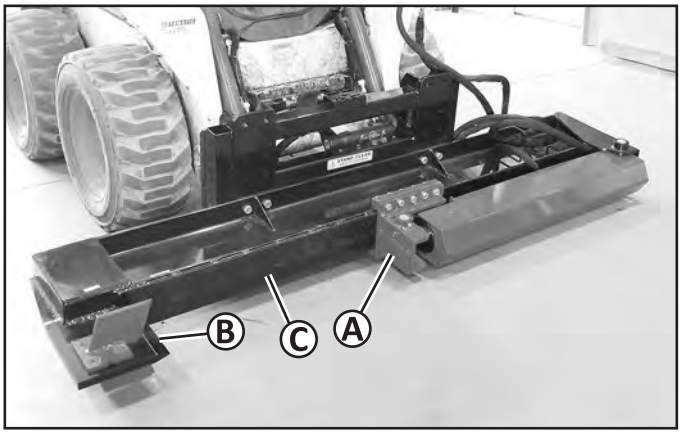
### Splitting Wood

1. Use the loader hydraulic controls to fully retract the attachment cylinder, opening the area between the slider weldment and the cutting edge.

**WARNING**
**AVOID INJURY!**
**Do not attempt to hand feed or roll wood into the attachment. Keep bystanders beyond a 100 foot radius around the attachment when operating. Only operate the attachment from inside the loader cab.**




*Picture note: Attachment installed for operation with the boom out. Optional cross cut blades shown.*




*Picture note: Attachment installed for operation with the boom sideways. Optional cross cut blades shown.*

# Operating

2. Move the loader and tilt the attachment to position the wood between the slider weldment (A) and the cutting edge (B) with the wood against the boom (C).

***Picture note: Splitting with optional cross cut blades.***

3. Use the loader hydraulic controls to extend the cylinder and force the wood into the cutting edge and cross cut blades.
4. When the wood has split as desired or the cylinder is fully extended, use the loader hydraulic controls to fully retract the cylinder.
5. Repeat to split the wood as needed.

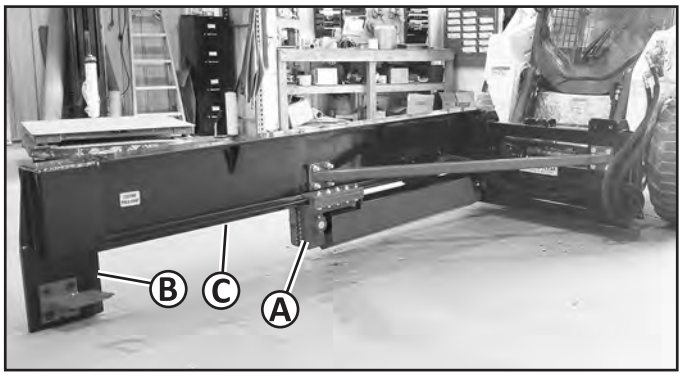
### Trimming or Pruning and Shearing Trees

**IMPORTANT**

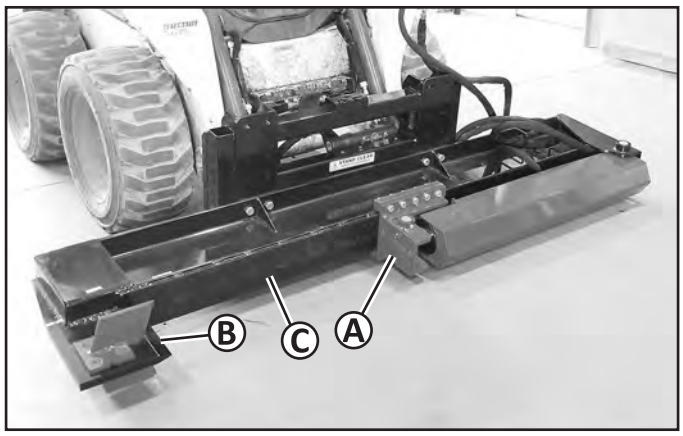
**AVOID DAMAGE!**

**Do not attempt to shear trees which are more than 8 inches in diameter. Shearing trees which are more than 8 inches in diameter may damage the attachment.**

1. Remove the cross cut blades if installed (See OPTIONAL ATTACHMENTS.)




***Picture note: Attachment installed for operation with the boom out. Optional cross cut blades shown.***




***Picture note: Attachment installed for operation with the boom sideways. Optional cross cut blades shown.***

2. Use the loader hydraulic controls to retract the hydraulic cylinder, opening the area between the slider weldment (A) and the cutting edge (B) far enough to allow the tree to fit between them.
3. Move the loader and tilt the attachment to position the tree to be sheared or the limbs to be trimmed or pruned between the cutting edge and the slider weld-ment with the wood against the boom (C).

# Operating

4. Use the loader hydraulic controls to extend the cylinder and force the wood into the cutting edge until it is cut through.
5. Use the loader hydraulic controls to fully retract the cylinder.

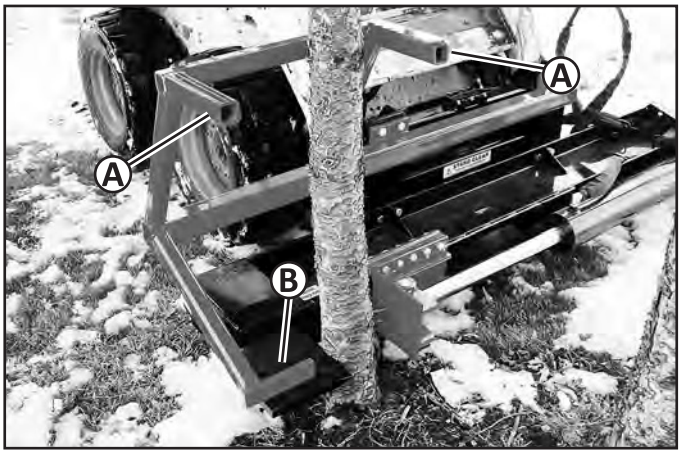
## Using the Optional Tree Catcher for Shearing Trees

**IMPORTANT**

**AVOID DAMAGE!**

**Do not attempt to shear trees which are more than 8 inches in diameter. Shearing trees which are more than 8 inches in diameter may damage the attachment.**

1. Install the tree catcher attachment (See OPTIONAL ATTACHMENTS.)
2. Remove the cross cut blades if installed (See OPTIONAL ATTACHMENTS.)




3. Follow shearing instructions (See Trimming or Pruning and Shearing Trees).
4. Catch the tree between the top arms (A) and behind the bottom arm (B) to transport.

## Transporting the Attachment

### On the Loader

Check to be sure the attachment is correctly installed on the loader before hauling the loader on a trailor or truck. Follow all loader, truck or trailer operator's manual instructions to safely haul the loader.

### Hauling the Attachment

Follow all truck or trailer operator's manual instructions to securely fasten the attachment to the truck or trailer with straps or chains.

# Optional Attachments

## Cross Cut Blades

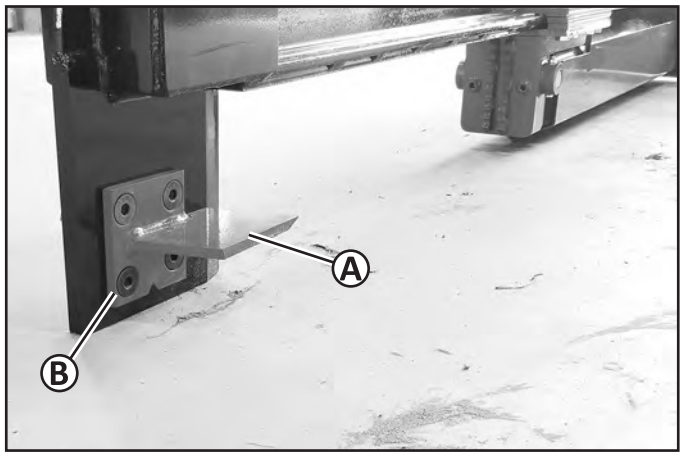
The standard cutting edge on the Wood Splitter / Tree Shear is used for shearing and pruning, and will split wood into two parts.

Install the cross cut blades to split wood into four parts.

One set of cross cut blades and hardware with an allen wrench are shipped with the attachment from the factory.

### Installing and Removing Cross Cut Blades

1. Remove the attachment or park the loader. (See Parking Safely in this manual.)




***Picture note: Install cross cut blades as shown with small notch at bottom.***

2. Install the left blade (A) on the left side of the cutting edge as shown with four 3/4 x 2-1/4 flat head allen bolts (B) and install the right blade to the other side of the cutting edge.
3. Remove the bolts and the blades when using the Wood Splitter / Tree Shear for shearing, pruning or trimming.

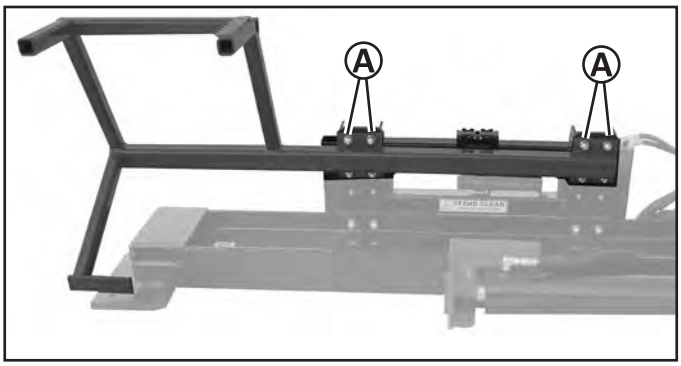
## Tree Catcher

See Attachment →

The tree catcher can be used to catch trees no more than 8 inches in diameter after shearing.

### Installing the Tree Catcher

1. Remove the attachment or park the loader. (See Parking Safely in this manual.)




2. Install the tree catcher on the main frame as shown with eight 3/4 - 10 x 2-1/2 hex cap screws, and 3/4 -10 hex nuts (A).

# Servicing

## Service Intervals

### Every 8 hours or daily

- Grease the cylinder.
- Grease the slide weldment.
- Inspect the attachment and hoses for damage and wear. Replace parts as needed.
- Check and tighten all hardware.

### Weekly:

- Inspect the cutting edge and optional cross cut blades for wear. Sharpen as needed. Replace the cross cut blades as needed.

## Lubrication

### Recommended Grease

Standard Lithium

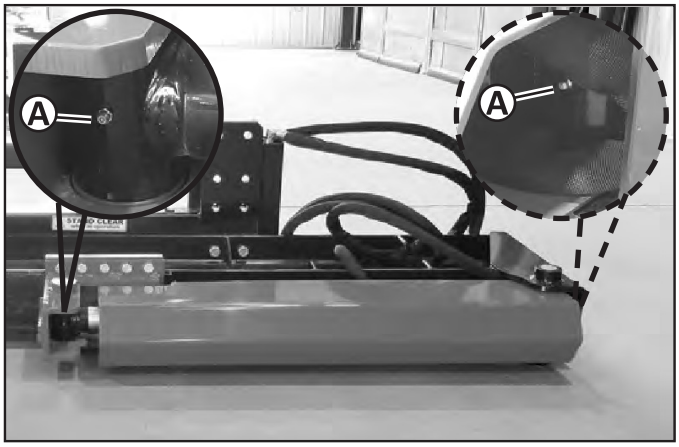
## Greasing the Attachment

1. Park the loader. (See Parking Safely in this manual.)

**WARNING**
**AVOID INJURY!**
**Disconnect the attachment hydraulic hoses from the loader before servicing.**

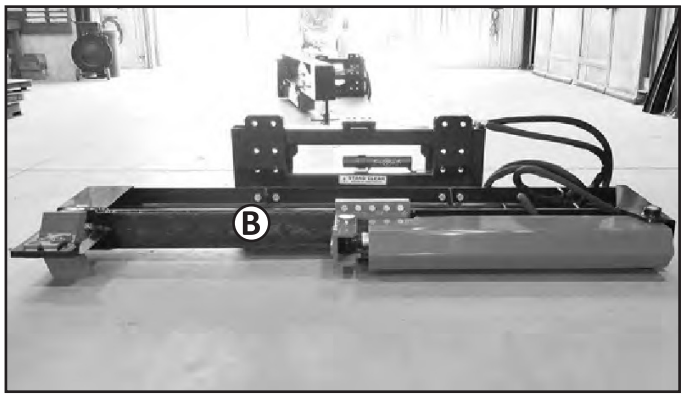
2. Disconnect the attachment hydraulic hoses from the loader.

### Greasing the Hydraulic Cylinder




1. Lubricate the two grease fittings (A) on the ends of the cylinder.

## Greasing the Slide Weldment




1. Apply grease to the boom area (B) as needed to keep the weldment sliding smoothly.

## Replacing the Hydraulic Hoses or Cylinder

***Note: If the attachment was assembled for sideways operation, it may be easier to remove it from the loader and tip it to position the cylinder guard on top for servicing.***

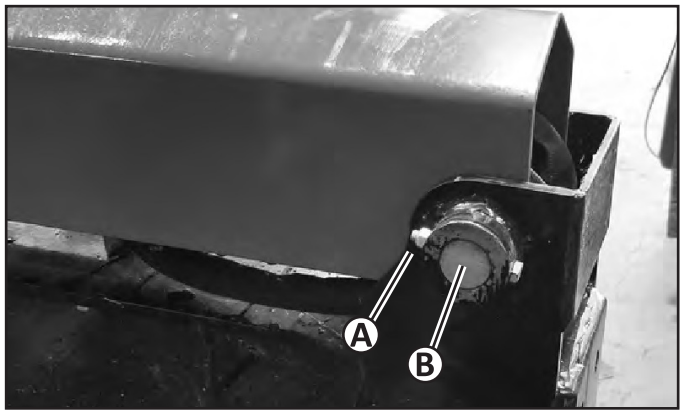
1. Park the loader. (See Parking Safely in this manual.)

**WARNING**
**AVOID INJURY!**
**Disconnect the attachment hydraulic hoses from the loader before servicing.**

2. Disconnect the attachment hydraulic hoses from the loader.

### Remove the Cylinder Guard

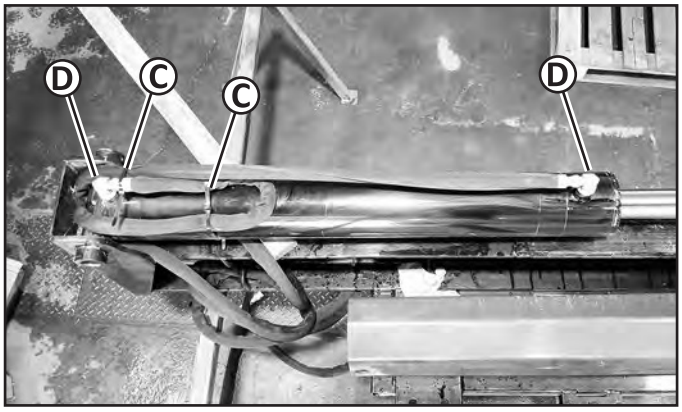
***Note: It may be easier to remove the cylinder mounting pin if you attach a safe lifting device to the guard and cylinder to take the weight off the pin.***



1. Remove the 3/8 - 16 locknut (A) and 3/8 - 16 x 3 hex cap screw securing the cylinder mounting pin.
2. Remove the cylinder mounting pin (B).
3. Slide the guard over and remove it.

### Replacing the Hydraulic Hoses

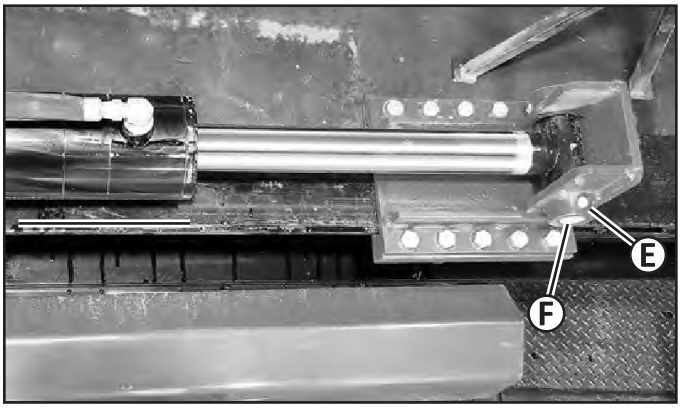
1. Remove the cylinder guard.




2. Remove the tie straps (C) securing the hoses.
3. Disconnect the fitting (D) and remove the hydraulic hose you are replacing.
4. Install the new hose on the cylinder.
5. Install tie straps to secure the hoses.
6. Install the cylinder guard with the mounting pin, bolt and nut.

### Replacing the Hydraulic Cylinder

1. Remove the cylinder guard.
2. Use a safe lifting device to secure the cylinder for removal.
3. Remove the tie straps (C) securing the hoses.
4. Disconnect the fittings (D) and remove the hydraulic hoses from the cylinder.




5. Remove the 3/8 - 16 lock nut (A) and 3/8 - 16 x 3 hex cap screw (E).
6. Remove the rod end cylinder mounting pin (F). Remove the cylinder.
7. Install the new cylinder with the rod end mounting pin, bolt and nut.
8. Install the hoses on the new cylinder.
9. Install tie straps to secure the hoses.
10. Install the cylinder guard with the base end mounting pin, bolt and nut.

## Sharpening the Cutting Edge or Cross Cut Blades

1. Park the loader. (See Parking Safely in this manual.)

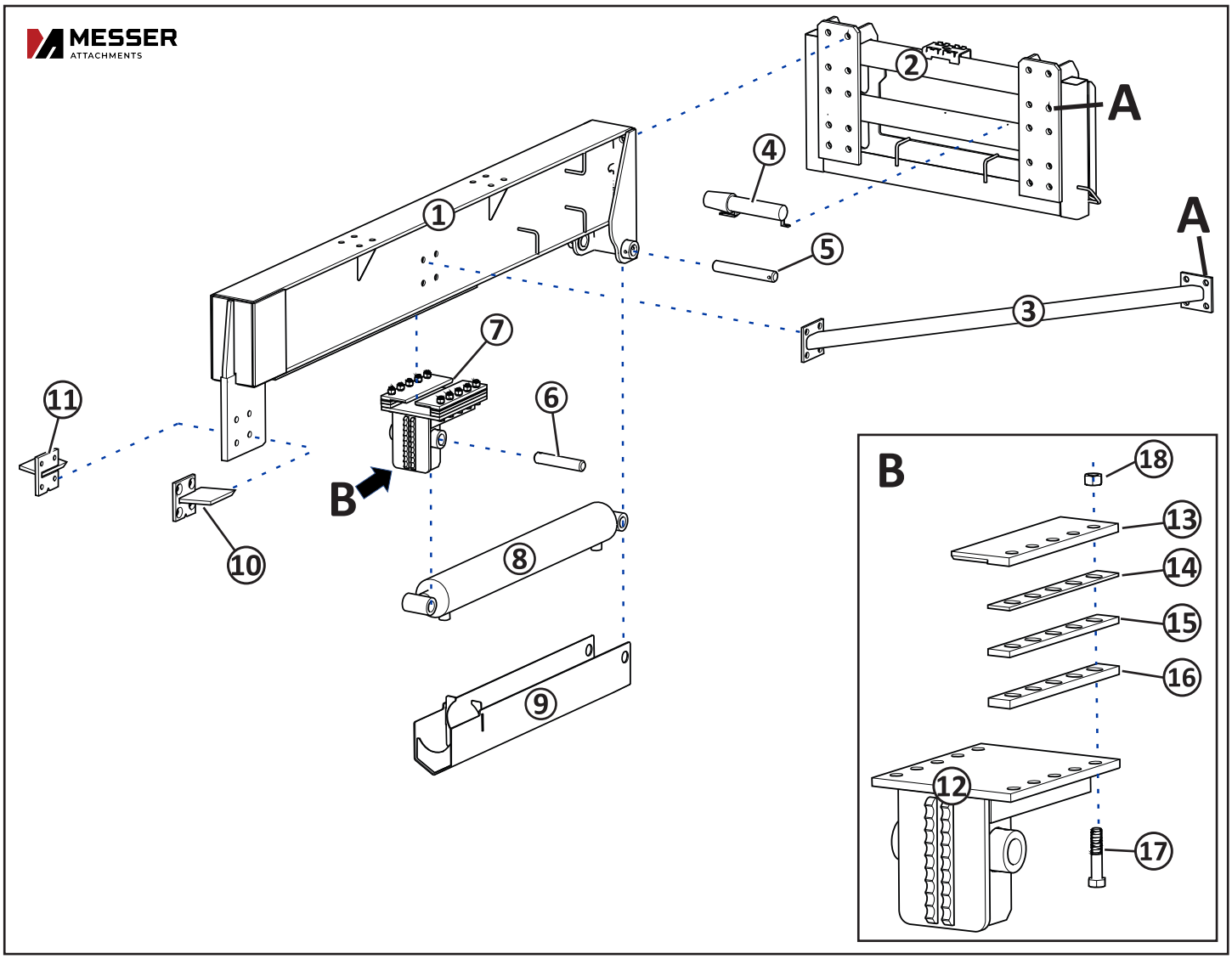
**WARNING**
**AVOID INJURY!**
**Disconnect the attachment hydraulic hoses from the loader before servicing.**

2. Disconnect the attachment hydraulic hoses from the loader.
3. Sharpen with an angle grinder as needed.

## Troubleshooting

| Problem | Action |
|---|---|
| Hydraulic cylinder won't extend or retract. | 1. Check to be sure the attachment hydraulic couplers are fully connected.<br>2. Check the attachment for hydraulic fluid leaks.<br>3. See loader operator's manual to check hydraulic pressure and flow.<br>4. Contact the attachment manufacturer about possible cylinder replacement. |

# Replacement Parts




## Replacement Parts

Contact Messer Attachments LLC for replacement parts. Part numbers may change without notice.

| Item | Qty. | Part Number | Part Description |
|---|---|---|---|
| 1 | 1 | 08952-P | Boom Weldment |
| 2 | 1 | 08950-P | Main Frame Weldment |
| 3 | 1 | 06272-P | Kicker Weldment |
| 4 | 1 | 96128 | Operator Manual large Canister 12 x 3.5 in. |
| 5 | 1 | 08949 | Base End Cylinder Pin |
| 6 | 1 | 08948 | Rod End Pin |
| 7 | 1 | 08946-P | Slider Weldment |

# Replacement Parts

| Item | Qty. | Part Number | Part Description |
|---|---|---|---|
| 8 | 1 | WCT5X36 | Welded Cross Tube - 5 in. Bore x 36 in. Stroke Cylinder |
| 9 | 1 | 08839-P | Cylinder Guard Weldment |
| 10 | 1 | 08175-P | Cross Cuts Left Weldment |
| 11 | 1 | 08173-P | Cross Cuts Right Weldment |
| 12 | 1 | 08947 | Sliding Blade |
| 13 | 2 | 05410 | Guide Plate |
| 14 | 2 | 07870 | .1875 Spacer Plate |
| 15 | 2 | 06286 | .375 Spacer Plate |
| 16 | 2 | 07869 | .5 Saddle Spacer Shim |
| 17 | 10 | | Bolt, 5/8 - 11 x 3 |
| 18 | 10 | | Locknut, 5/8 - 11 |
| * | 1 | | 1/2 Long Arm SKT HX Key-L |
| * | 16 | | Bolt, 3/4 - 10 x 2-1/2 |
| * | 16 | | Nut, 3/4 - 10 |
| * | 16 | | Split Lockwasher, 3/4 |
| * | 10 | | Bolt, 5/8 - 11 x 3 |
| * | 10 | | Top Locknut, 5/8 - 11 |
| * | 2 | | Bolt, 3/8 - 16 x 3 |
| * | 2 | | Top Locknut, 3/8 - 16 |
| * | 4 | | Flat Cap Screw, 3/4 -10 x 2-1/4 |
| * | 2 | | Nut, 1/2 - 13 |
| * | 1 | | Coupler Assembly Female, 1/2" ORB-#8, 3/4"-16 SAE |
| * | 1 | | Nipple Assembly Male, 1/2" ORB-#8, 3/4"-16 SAE |
| * | 1 | | 168.5 in. Hose, 1/2 |
| * | 1 | | 178.5 in. Hose, 1/2 |
| * | 2 | | 90° Screw Fitting |
| * | 2 | | 90° Screw Fitting |

* Part not shown.

# Warranty

## MESSER ATTACHMENTS LLC

### Limited Warranty and Terms and Conditions of Sale

The following limited warranty, and terms and conditions of sale (the "Limited Warranty") apply to all equipment, products, parts, and goods (any of the foregoing are referred to herein as "Equipment") sold by Messer Attachments LLC ("Messer"):

1. Covers All Equipment. Each purchase of Equipment by a purchaser is expressly made conditional on purchaser's assent to the terms and conditions in this Limited Warranty.
2. Limited Warranty. Messer warrants that for a period of 24 months from the date of purchase, the Equipment will remain free from defects in material and workmanship under normal use and proper maintenance. The warranty does not cover damage from operating in excess of rated capacities or normal wear and tear. Messer's obligation under the warranty shall be limited to the repair or replacement (at Messer's option) of the Equipment. Notwithstanding the foregoing, if the Equipment is used for commercial purposes or is rented or leased out by the purchaser, then, the foregoing warranty shall only be for a period of 180 days and not 24 months.
3. No Warranty For Equipment Components From Third Parties. Notwithstanding the limited warranty terms set forth above, MESSER OFFERS NO WARRANTY WHATSOEVER WITH RESPECT TO ANY COMPONENTS OF THE EQUIPMENT MADE OR PROVIDED TO MESSER BY OTHER MANUFACTURERS, PRODUCERS, OR SELLERS (the "Purchased Components"). The sole and exclusive warranty for each the Purchased Components shall be limited to the express written warranty with respect to the Purchased Component as provided by the manufacturer, producer, or seller of such Purchased Component. Messer's responsibility and liability for the Purchased Components shall be limited to the assignment of the Purchased Components' express written warranties applicable to the Purchased Components. Purchased Components include, without limitation, the following: axles, tires and rims; trailer hitch components and jacks; hydraulic pumps, motors, cylinders and components; and bales spears, pallet tines, and bucket teeth.
4. No Other Warranties. THE FOREGOING REPAIR AND REPLACEMENT OBLIGATIONS IN SECTION 2 ARE IN LIEU OF ALL OTHER WARRANTIES, LIABILITIES AND OBLIGATIONS, INCLUDING ALL WARRANTIES OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, EXPRESSED OR IMPLIED IN FACT OR BY LAW, AND STATE MESSER'S ENTIRE AND EXCLUSIVE LIABILITY AND PURCHASER'S EXCLUSIVE REMEDY FOR ANY CLAIM IN CONNECTION WITH THE SALE AND PURCHASE OF EQUIPMENT (AND ALL COMPONENTS THEREOF), THEIR DESIGN, SUITABILITY FOR USE, INSTALLATION OR OPERATIONS.
5. Location of Warranty Repairs. All warranty repairs pursuant to this Limited Warranty shall be made at Messer's corporate manufacturing plant, or other location as determined by Messer, at its discretion. Purchaser shall be responsible for and pay for any transportation expenses necessary for Limited Warranty repairs.
6. Limited Warranty Voidable. The limited warranty herein is void and deemed waived if the purchaser fails to give written notice to Messer of any alleged defect under the limited warranty herein within 20 days of its discovery; or (a) purchaser or parties other than Messer or its authorized representatives attempts to remedy or fix the alleged Equipment defects; or (b) purchaser has used the Equipment for purposes it was not intended to be used for; or (c) purchaser has not operated the Equipment in a manner consistent with Messer's instructions for the Equipment; or (d) the Equipment has been modified, altered, abused, or misused; or (e) the Equipment has been damaged pursuant to accident, fire, flood, or other Act of God.
7. No Consequential Damages. IN NO EVENT SHALL MESSER BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, AND MESSER'S LIABILITY, UNDER NO CIRCUMSTANCES, WILL EXCEED THE PRICE PAID FOR THE EQUIPMENT FOR WHICH LIABILITY IS CLAIMED.
8. Governing Law. This contract shall be governed by the laws of the State of Minnesota.
9. Arbitration. Any controversy or claim arising out of or relating to the limited warranty provided herein, or any alleged breach thereof, shall be settled exclusively by arbitration in accordance with the Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The arbitration shall be conducted in Minneapolis, MN, by one arbitrator selected by Messer and Purchaser, or, if they cannot agree, the President of the American Arbitration Association.