



# **Inverted Log Splitter**

For

**Skid Steer Loaders**

**Operator's Manual**  
**Maintenance**  
**Parts Information**



**Read this Manual Before Use**

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**REFERENCE INFORMATION**

**Write the serial number for your attachment in the spaces below. Always refer to this serial number when calling for service or parts.**

Serial Number.....\_\_\_\_\_

**YOUR ATTACHMENT DEALER**

\_\_\_\_\_  
**ADDRESS:**

\_\_\_\_\_  
**PHONE:**

\_\_\_\_\_  
**CONTACT:**

**NOTE:** *Erskine Attachments LLC reserves the right to make improvements in design or changes in specifications at any time without notice and without incurring any obligations to install them on units previously sold.*

# SAFETY

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**DO NOT use or perform maintenance on this machine until this manual has been read and understood. In addition, read the Operation and Maintenance Manual(s) pertaining to the attachment and the attachment carrier (“Loader”).**

The user is responsible for inspecting the machine daily, and for having parts repaired or replaced when continued use of the machine would cause damage, excessive wear to other parts or make the machine unsafe for continued operation.

If an operating procedure, tool device, maintenance or work method not specifically recommended is used, you must satisfy yourself that it is safe for you and others. You must also ensure that the attachment will not be damaged or made unsafe by the procedures you choose.

Erskine Attachments LLC cannot anticipate every possible circumstance that might involve potential hazard. The safety messages found in this manual and on the machine are therefore not all inclusive.

The signal words **CAUTION**, **WARNING**, or **DANGER** are used to indicate hazards.

**⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**⚠ DANGER** Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.

The word **IMPORTANT** is used in the text when immediate damage will occur due to improper technique or operation.

The word **NOTE** is used to convey information that is out of context with the manual text; special information such as specifications, techniques, reference information, and other information of a supplementary nature.

## Improper operation can cause serious injury or death.

### Pre-operation

- This attachment is designed for splitting wood only. **NEVER** use this machine for any other purpose.
- Read the operator's manual for the "Skid Steer Loader." **NEVER** allow untrained people to operate.
- Operating instructions must be given to everyone before operating this attachment and at least once a year thereafter in accordance with OSHA regulations.
- **NEVER** exceed the maximum recommended input power or speed specifications for the attachment. Over-powering or over-speeding the attachment may cause personal injury and/or machine damage.
- Keep all shields, guards, and covers in place.
- Do not modify equipment or add attachments that are not approved by Erskine Attachments LLC.
- Use adequate safety warning lights and devices as required by local regulations. Obey all local laws and regulations regarding machine operation on public property.

### Operation

- Always wear eye protection that meets ANSI z87.1 standard or use with a loader enclosure that provides similar protection.
- Hydraulic connections may be hot after use. Use gloves if connecting or disconnecting after use.
- Check and be sure all operating controls are in neutral before starting the engine.
- Keep people away from loader and attachment when in use. This attachment has moving parts.

### Operation (continued)

- **NEVER** operate near embankments or terrain that is so steep that rollover could occur.
- Always stay in the operator position when using the attachment.
- Before leaving the operators position, lower the attachment to rest flat on the ground, make sure wedge is in fully open position, stop engine, relieve hydraulic pressure to the attachment, set park brake, and wait for all motion to stop.
- **NEVER** place hands near moving parts or clear debris while engine is running. Stay clear of wedge opening.

### Avoid High Pressure Fluids Hazard



- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Avoid the hazard by relieving the pressure before disconnecting hydraulic lines.
- Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks. Wear protective gloves and safety glasses or goggles when servicing or performing maintenance on hydraulic systems.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.

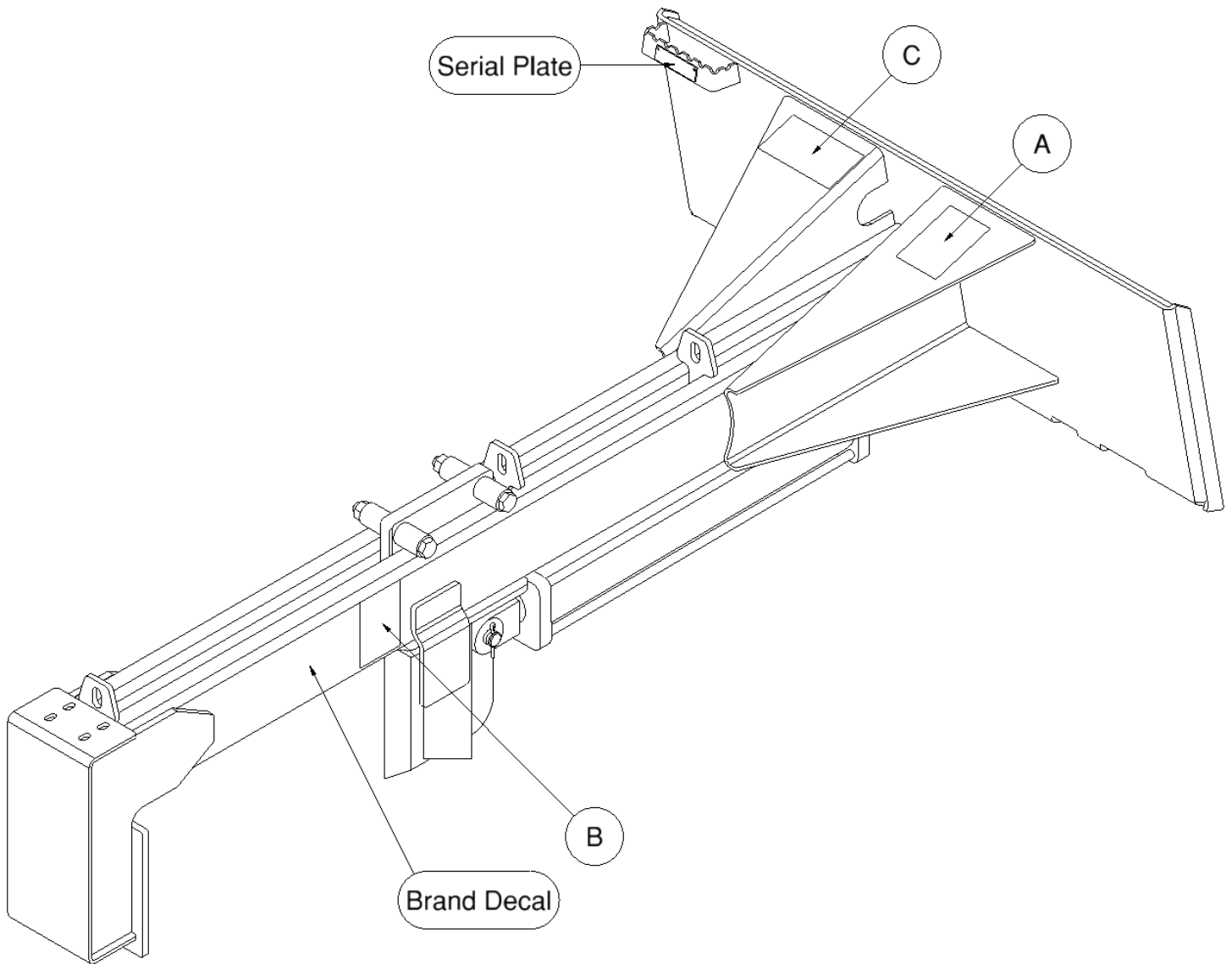
### Maintenance

- **NEVER** make adjustments, lubricate, clean, or perform any service on the machine while it is in operation.
- Make sure the attachment is serviced on a daily basis. Improper maintenance can cause serious injury or death in addition to damage to the attachment and/or your equipment.

# SERIAL NUMBER AND SAFETY DECAL LOCATIONS

## Serial Number Location:

It is important to refer to the serial number of the attachment when making repairs or ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use different procedures in doing a specific operation.



# SERIAL NUMBER AND SAFETY DECAL LOCATIONS



**Part number: 200001**

**Location:** On top of mount bracket

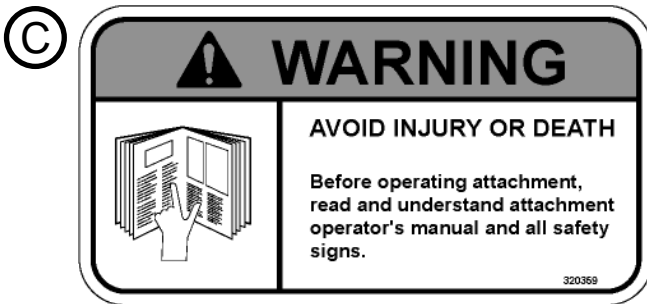
**Quantity: 1**



**Part number: 203234**

**Location:** On both sides of frame

**Quantity: 2**



**Part number: 320359**

**Location:** On top of mount bracket

**Quantity: 1**

**Small Brand Decal**

**Location:** On both sides of frame

**Quantity: 2**

**Safety Decals Locations:**

The locations of the safety decals are shown. If these decals are missing, damaged, or painted over they must be replaced. Call Erskine Attachments LLC (218-435-4045) for replacement decals.

## USER'S MOUNTING INSTRUCTIONS

After the initial set-up assembly is completed, use the following procedure to mount the attachment to the loader for user operation.

**⚠ WARNING** Coupler wedges or pins must extend through holes in attachment. Levers must be fully down and locked. Failure to secure wedges or pins can allow the attachment to come off and cause injury or death.



1. Use the step, safety treads, and grab handles to get on and off the loader and attachment.

2. Sitting in the operator's seat, lower seat bar (if so equipped) and fasten the seat belt.

3. Drive the loader to the rear of the attachment. Put the loader quick attach coupler into the attachment mounting bracket.

4. Tilt the loader coupler backward a small amount until it is fully engaged in the attachment mounting bracket.

5. Stop the engine and engage the park brake.

6. Secure the coupler locking mechanism that attaches the attachment to the loader.



## USER'S MOUNTING INSTRUCTIONS

7. Connect the hydraulic quick couplers from the attachment to the loader.

**IMPORTANT:** Wipe the ends of the hydraulic quick couplers (both lead and loader) with a rag to remove any possible contamination. Contamination can cause hydraulic components to fail and is not covered under warranty.

**IMPORTANT:** Make sure the quick couplers are fully engaged. If the quick couplers do not fully engage, check to see that the couplers are the same size and brand. Do not force the quick couplers together.

**NOTE:** See the loader's operator's manual for auxiliary hydraulic specifications and connection instructions.

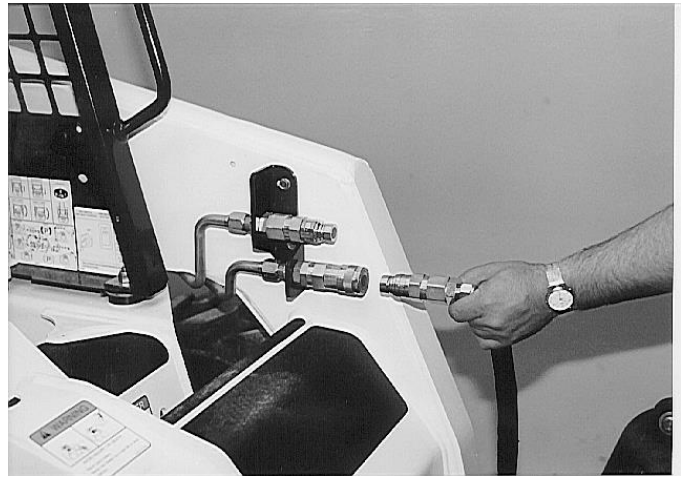
**NOTE:** Attachment is shipped with 8FJX (1/2" Female JIC Swivel) fittings on the ends of the lead hoses.

8. Make sure the hoses are properly routed to fit your specific loader. If the hoses are not routed correctly, hoses may get pinched or rub on tires. Be sure to check the hose routing through the full range of intended motion of the attachment before operating it.

More than one routing may be acceptable depending on the loader. Pick the routing that best suits your loader.

**IMPORTANT:** Proper hose routing is the responsibility of the owner and/or operator. Pinched or stretched hoses are not covered under warranty.

Mounting is now complete and you are ready to use the attachment. Use reverse order of above instructions to dismount the attachment from the loader.





# OPERATING INSTRUCTIONS



1. With the operator in the seat of the loader, the seat belt fastened, and the seat bar lowered (if so equipped), start the engine.

2. Raise the attachment slightly off of the ground.

3. Activate the loader's auxiliary hydraulics to open and close the splitting wedge.

4. Position the skid steer and log splitter above the log to be split. Always split from the end of the log along the grain.

**IMPORTANT:** Never split a log across the grain. This log splitter is not designed for cross-grain splitting, and doing so may damage the splitter.

5. With the splitting wedge in the fully open position, lower the splitter over the log, aligning the log in the center of the wedge track. If the log is angled or off to one side, the split will be uneven or the log may slip out of the splitter.



6. Close the splitting wedge to split the log.

7. Open the wedge and move on to the next log to be split.

**NOTE:** The inverted log splitter can be equipped with an optional 4-way splitter wedge. The 4-way wedge bolts onto the splitter in place of the standard 2-way wedge.



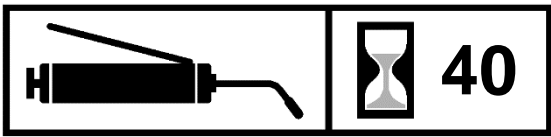
## ROUTINE MAINTENANCE

**⚠ WARNING** Lower the attachment to rest flat on the ground, make sure wedge is in fully open position, shut down the engine, relieve the hydraulic pressure to the attachment, set the park brake, and wait for all motion to stop before leaving the operator's seat to perform service of any kind.

It is the operator's responsibility to make daily inspections of the loader and attachment for damage, loose bolts, fluid leaks, or anything else that could cause a potential service or safety problem. Preventive maintenance is the easiest and least expensive type of maintenance.

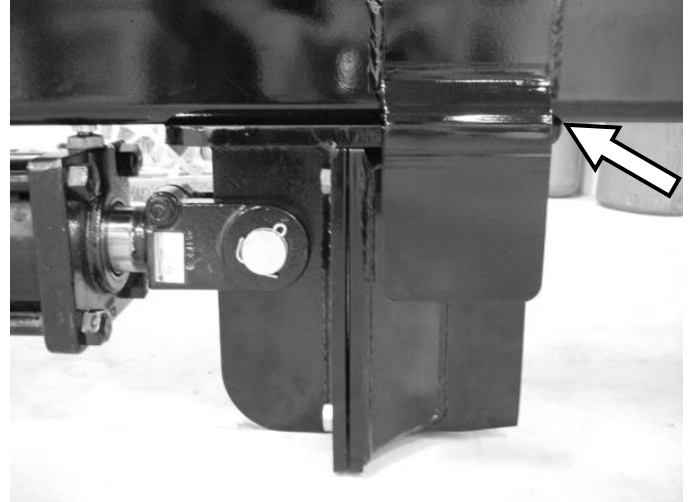
**IMPORTANT:** Bolts can loosen after initial usage. After the first hour of operation check all bolts.

Periodically clean debris and small wood chips off of the log splitter.



Grease frame slide after every **40 hours** of operation.

It is recommended to coat the slide with a light layer of grease before long periods of storage to prevent rusting.



# BOLT TORQUE INFORMATION

## Torque-Tension Relationships for SAE J429 Grade Bolts

Nominal Thread Size	SAE J429 Grade 2			SAE J429 Grade 5			SAE J429 Grade 8		
	Clamp Load (lbs)	Tightening Torque		Clamp Load (lbs)	Tightening Torque		Clamp Load (lbs)	Tightening Torque	
		K = .15	K = .20		K = .15	K = .20		K = .15	K = .20
<b>Unified Coarse Thread Series</b>									
1/4-20	1,300	49 in-lbs	65 in-lbs	2,000	75 in-lbs	100 in-lbs	2,850	107 in-lbs	143 in-lbs
5/16-18	2,150	101	134	3,350	157	210	4700	220	305
3/8-16	3,200	15 ft-lbs	20 ft-lbs	4,950	23 ft-lbs	31 ft-lbs	6,950	32.5 ft-lbs	44 ft-lbs
7/16-14	4,400	24	30	6,800	37	50	9,600	53	70
1/2-13	5,850	36.5	49	9,050	57	75	12,800	80	107
9/16-12	7,500	53	70	11,600	82	109	16,400	115	154
5/8-11	9,300	73	97	14,500	113	151	20,300	159	211
3/4-10	13,800	129	173	21,300	200	266	30,100	282	376
7/8-9	11,425	125	166	29,435	321	430	41,550	454	606
1-8	15,000	187.5	250	38,600	482.5	640	54,540	680	900
<b>Unified Fine Thread Series</b>									
1/4-28	1,500	55 in-lbs	75 in-lbs	2,300	85 in-lbs	115 in-lbs	3,250	120 in-lbs	163 in-lbs
5/16-24	2,400	112	150	3,700	173	230	5,200	245	325
3/8-24	3,600	17 ft-lbs	22.5 ft-lbs	5,600	26 ft-lbs	35 ft-lbs	7,900	37 ft-lbs	50 ft-lbs
7/16-20	4,900	27	36	7,550	42	55	10,700	59	78
1/2-20	6,600	41	55	10,200	64	85	14,400	90	120
9/16-18	8,400	59	79	13,000	92	122	18,300	129	172
5/8-18	10,600	83	110	16,300	128	170	23,000	180	240
3/4-16	15,400	144	193	23,800	223	298	33,600	315	420
7/8-14	12,610	138	184	32,480	355	473	45,855	500	668
1-12	16,410	205	273	42,270	528	704	59,670	745	995

Clamp load estimated as 75% of proof load for specified bolts.

Torque values for 1/4 and 5/16 inch series are in inch-pounds. All other torque values are in foot-pounds.

Torque values calculated from formula  $T = KDF$

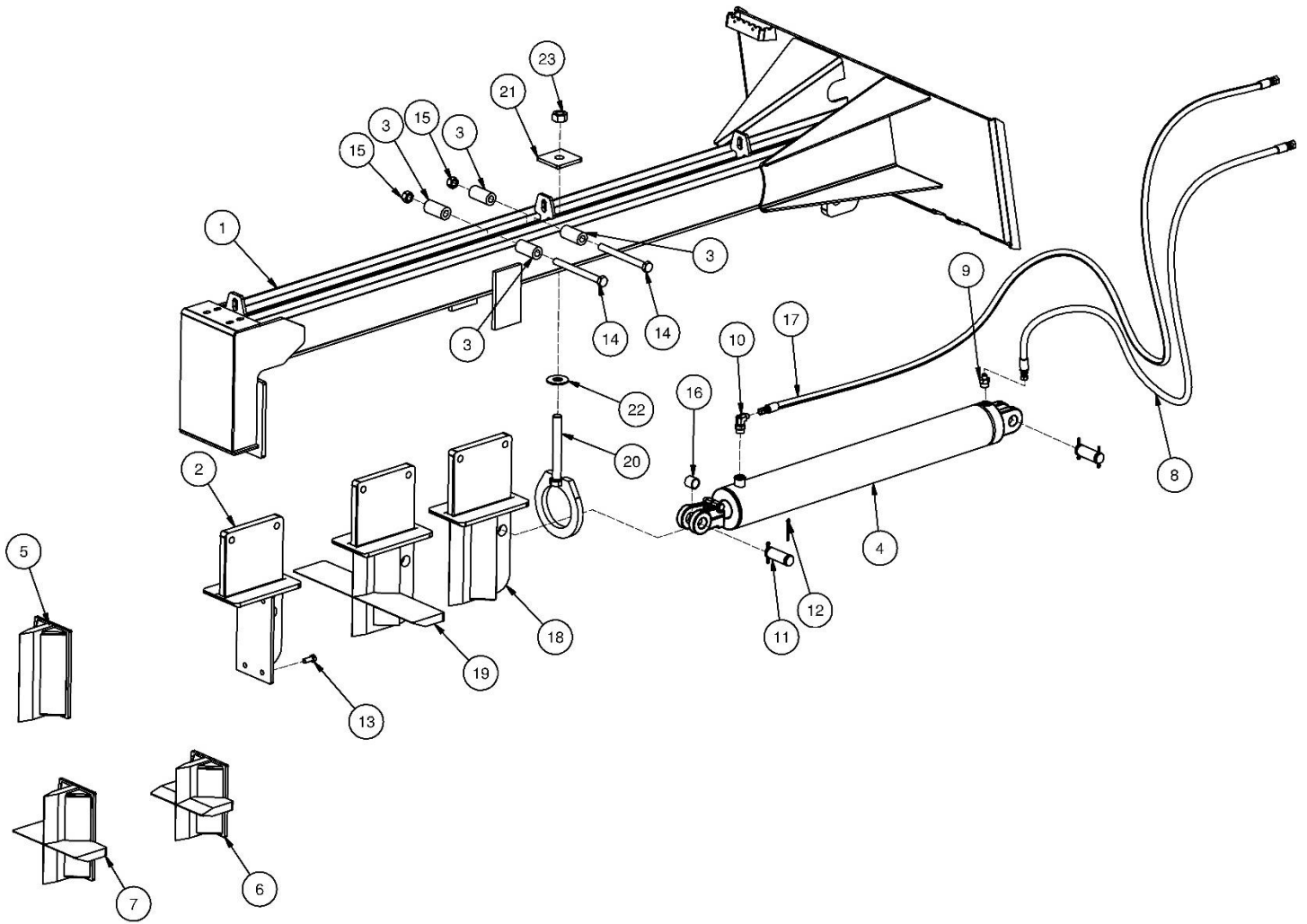
where:  $K=0.15$  for "lubricated" conditions

$K=0.20$  for "dry" conditions

## PARTS INFORMATION

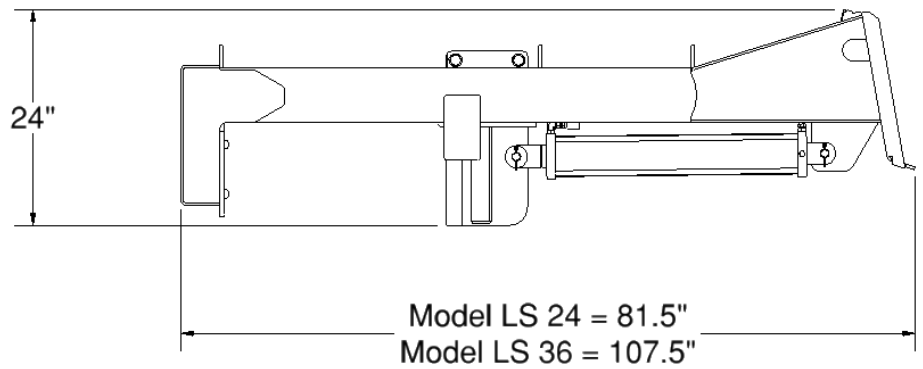
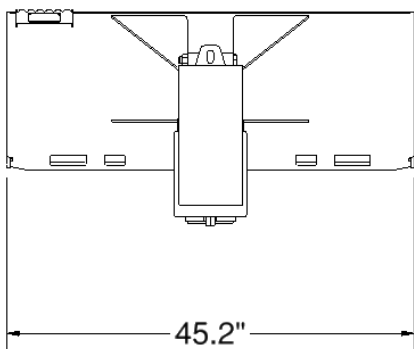
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	313154	FRAME LS24 W/A	LS24 ONLY
	1	313159	FRAME LS36 W/A	LS36 ONLY
2	1	313155	<b>WEDGE HOLDER LS24/LS36 W/A OBLT</b>	<b>REPLACED BY 312700</b>
	1	312700	<b>WEDGE HOLDER LS24/LS36 W/A OBLT</b>	<b>REPLACED BY 312740</b>
3	4	313184	BUSH 1.5 X .78 X 2 Z	LS24 ONLY
	4	312711	BUSHING 1.50 X .78 X 3.00 Z	LS36 ONLY
4	1	312752	CYL 4 X 24 WELDED C-C	LS24 ONLY (REPLACED 313113)
	1	312750	CYL 4.5 X 36 WELDED C-C	LS36 ONLY (REPLACED 313190)
	1	313113	CYLINDER 4 X 24	LS24 ONLY (REPLACED BY 312752)
	1	313190	CYLINDER 4.5 X 36	LS36 ONLY (REPLACED BY 312750)
5	1	313157	<b>WEDGE 2-WAY W/A OBLT</b>	<b>REPLACED BY 312701</b>
	1	312701	<b>WEDGE 2-WAY W/A OBLT</b>	<b>REPLACED BY 312740</b>
6	1	313158	<b>WEDGE 4-WAY W/A OBLT</b>	<b>REPLACED BY 312702 IN OPT PKG</b>
7	1	312702	<b>WEDGE 4-WAY W/A OBLT</b>	<b>REPLACED BY 312736 IN OPT PKG</b>
8	1	313183	HOSE 3/8 X 92 6FJX-8FJX	
9	1	201925	ADPT STR 8MB-6MJ	LS24 ONLY
	1	201522	ADPT STR 10MB-6MJ	LS36 ONLY
10	1	320089	ADPT ELB 8MB-6MJ-90	LS24 ONLY
	1	103330	ADPT ELB 10MB-6MJ-90	LS36 ONLY
11	2	313188	PIN CYLINDER 1 X 3.25 USEABLE	LS24 ONLY
	2	313197	PIN CYLINDER 1.25 X 3.25 USEABLE	LS36 ONLY
12	4	65127	PIN COTTER 3/16 X 2	
13	4	15207	BOLT HEX 1/2 X 1-1/4 NC GR 8	<b>OBSOLETE (USE WITH 312700)</b>
14	2	13375	BOLT HEX 3/4 X 6 NC GR 5	LS24 ONLY
	2	13379	BOLT HEX 3/4 X 8 NC GR 5	LS36 ONLY
15	2	37217	NUT REV LOCK	<b>3/4 NC</b>
16	2	313196	BUSH 1.25 X 1.02 X 1.13	LS24 ONLY
17	1	313185	HOSE 3/8 X 116 6FJX-8FJX	LS24 ONLY
	1	312714	HOSE 3/8 X 128 6FJX-8FJX	LS36 ONLY
18	1	312740	WEDGE 2-WAY W/A	<b>REPLACED 312700 &amp; 312701</b>
19	1	312736	WEDGE 4-WAY W/A	<b>REPLACED 312702 IN OPT PKG</b>
20	1	313130	HANGER CYLINDER LOG SPLITTER	LS36 ONLY
21	1	313140	PLATE .38 X 3.8 X 3.8 W/H PAINTED	LS36 ONLY
22	1	33022	WASHER FLAT 1"	LS36 ONLY
23	1	37219	NUT REV LOCK 1" NC	LS36 ONLY

# PARTS INFORMATION



## GENERAL SPECIFICATIONS

Model	LS 24	LS 36
Hydraulic Cylinder	4" Bore, 24" Stroke	4.5" Bore, 36" Stroke
Wedge Force @ 2000 PSI	13 ton	15 ton
Wedge Force @ 2500 PSI	16 ton	20 ton
Wedge Force @ 3000 PSI	19 ton	25 ton
Operating Weight	600 lbs.	810 lbs.
Overall Width	45.2"	
Overall Length	81.5"	107.5"
Overall Height	24.0"	



All dimensions are in INCHES.

## LIMITED WARRANTY

Erskine Attachments LLC warrants each new machine manufactured by us to be free from defects in material and workmanship for a period of twelve (12) months from date of delivery to the original purchaser.

Our obligation under this warranty is to replace free of charge, at our factory or authorized dealership, any part proven defective within the stated warranty time limit.

All parts must be returned freight prepaid and adequately packaged to prevent damage in transit.

This warranty does not cover:

1. New products which have been operated in excess of rated capacities or negligence
2. Misuse, abuse, accidents or damage due to improperly routed hoses
3. Machines which have been altered, modified or repaired in any manner not authorized by our company
4. Previously owned equipment
5. Any ground engaging tools in which natural wear is involved, i.e. tooth tips, cutting teeth, etc
6. Normal maintenance
7. Fork tines
8. Hydraulic motors that have been disassembled in any manor

In no event will the Sales Representative, Dealership, Erskine Attachments LLC, or any other company affiliated with it or them be liable for incidental or consequential damages or injuries, including but not limited to the loss of profit, rental or substitute equipment or other commercial loss. Purchaser's sole and exclusive remedy being as provided here in above.

Erskine Attachments LLC must receive immediate notification of defect and no allowance will be made for repairs without our consent or approval.

This warranty is in lieu of all other warranties, express or implied by law or otherwise, and there is no warranty of merchantability or fitness purpose.

No agent, employee, or representative of Erskine Attachments LLC has any authority to bind Erskine Attachments LLC to any warranty except as specifically set forth herein. Any of these limitations excluded by local law shall be deemed deleted from this warranty; all other terms apply.

This warranty may not be enlarged or modified in any manner except in writing signed by an executive officer of Erskine Attachments LLC to improve its products whenever it is possible and practical to do so. Erskine Attachments LLC reserves the right to make changes and or add improvements at any time without incurring any obligation to make such changes or add such improvements to products previously sold.

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Erskine Attachments LLC

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