

# **Snow Blade V2**

For

**Skid Steer Loaders** 

Operator's Manual
Set-Up Assembly
Maintenance
Parts Information



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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.

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.

Throughout this manual, reference may be made to the left hand (LH) and right hand (RH) side. These terms are used as viewed from the operator's seat facing front. 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 machine is designed for moving snow and light materials 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

- 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.
- Always stay in the operator's position when using the attachment.

#### **Operation (continued)**

- NEVER operate near embankments or terrain that is so steep that rollover could occur.
- Before leaving the operator's position, lower the attachment to rest flat on the ground, 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.

#### **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.

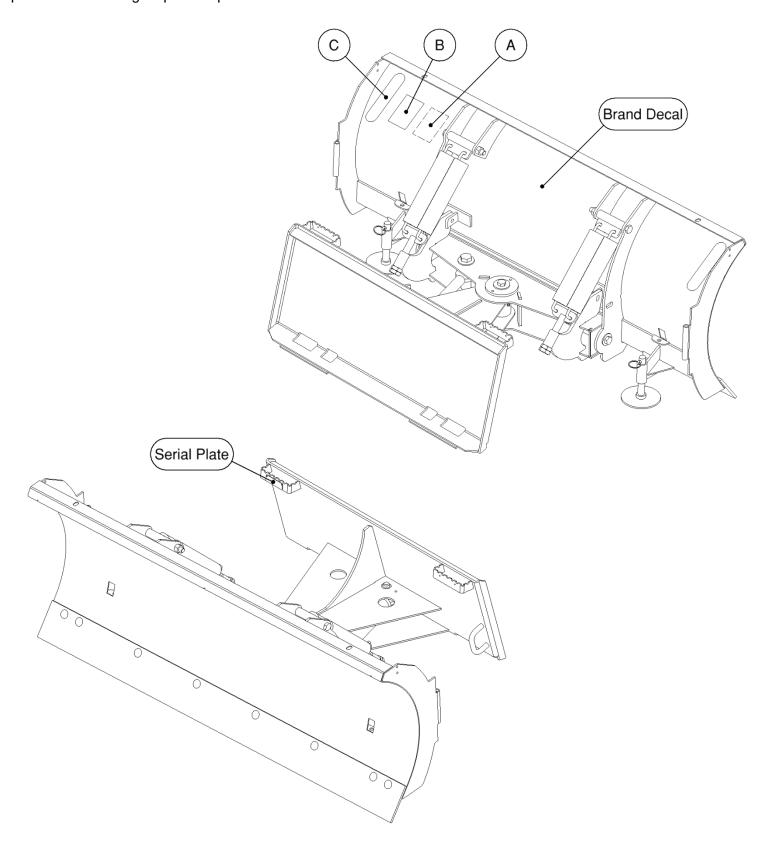
#### Maintenance

- 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



DO NOT USE PARTS OF YOUR BODY TO CHECK FOR LEAKS

HIGH PRESSURE OIL CAN ENTER YOUR BLOODSTREAM

SEEK MEDICAL ATTENTION IMMEDIATELY IF THIS HAPPENS

READ OWNER'S MANUAL BEFORE OPERATING EQUIPMENT

Part number: 200001

Location: On back of moldboard, LH side Quantity: 1 (Hydraulic Models Only)



Part number: 203234

Location: On back of moldboard, LH side

Quantity: 1



Part number: 300245 (Yellow Reflector) Location: On back of moldboard, both ends

Quantity: 2

**Large Brand Decal** 

Location: Centered on back of moldboard

Quantity: 1

#### **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.

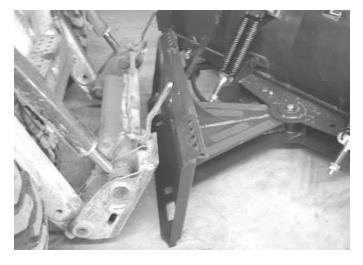
## **USER'S MOUNTING INSTRUCTIONS**

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

▲ 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 <u>full range</u> of intended motion of the attachment <u>before</u> 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.

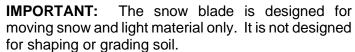
Mounting is now complete and the attachment is ready for operation. Use reverse order of above instructions to dismount the attachment from the loader.



### OPERATING INSTRUCTIONS

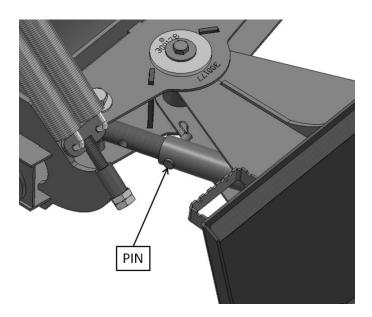






#### **Snow Removal**

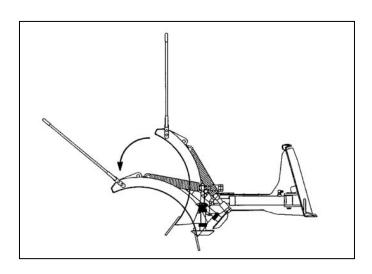
- 1. With the operator in the seat of the loader, the seat belt fastened, and the seat bar lowered (if so equipped), start the engine.
- 2. With the loader lift arms fully lowered, tilt the attachment forward to rest on the skid shoes.
- 3. Drive the loader forward to push snow.
- 4. Use the loader lift and tilt functions to increase traction and adjust the pitch of the attachment.
- 5. On hydraulic angling models, activate the auxiliary hydraulics to angle the attachment left or right to the desired position.
- On manually angling models, stop the loader, turn off the engine, and engage the park brake. Then remove the angle linkage pin, push the blade to the desired angle, and reinstall the pin in the nearest pin hole location.



#### Trip Springs

The snow blade is equipped with trip springs which allow the moldboard to tilt forward when it strikes an obstruction. This helps to protect the attachment and the obstruction from damage.

To reset the trip springs after striking an obstruction, raise the loader lift arms to lift the attachment slightly off of the ground, or slowly drive the loader backward a few feet.

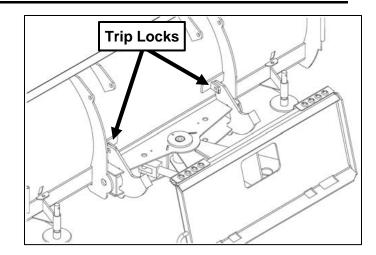


## **OPERATING INSTRUCTIONS**

#### **Light Material Removal**

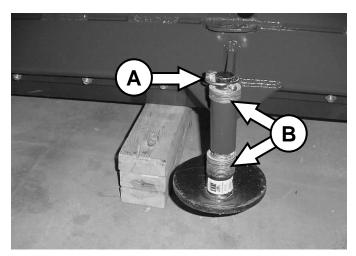
The snow blade may be used for light material grading. In order to use the attachment for this purpose, install bolts and lock nuts in both of the trip locks to lock the moldboard in the upright position.

**IMPORTANT:** DO NOT use the attachment for snow removal with bolts installed in the trip locks. Serious damage may occur to the attachment as well as other equipment and/or road surfaces.



#### **Skid Shoe Height Adjustment**

- 1. Raise the attachment off of the ground and block up securely.
- 2. Remove the lynch pin [A] from the first skid shoe and slide the skid shoe out of the mount bushing.
- 3. Install spacer washers **[B]** on the skid shoe to achieve the desired cutting edge height, and slide the skid shoe back into the mount bushing.
- 4. Store remaining spacer washers on top of the mount bushing, an install the lynch pin to secure the skid shoe and washers in place.
- 5. Repeat steps 2-4 for the other skid shoe. Make sure both skid shoes are set to the same height.



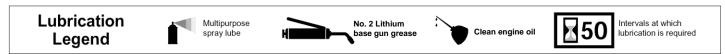
#### **ROUTINE MAINTENANCE**

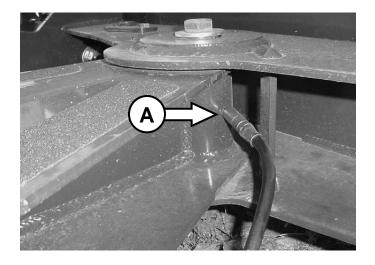
A WARNING Lower the attachment to rest flat on the ground, shut down the engine, relieve the hydraulic pressure to the attachment, set the park brake, and wait for all motion to stop before leaving the operator's seat to perform service of any kind.

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.

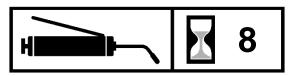
**IMPORTANT:** Bolts can loosen after initial usage. After the **first hour** of operation check all bolts.

#### **LUBRICATION**





Use No. 2 lithium base gun grease when lubricating all attachment grease fittings.

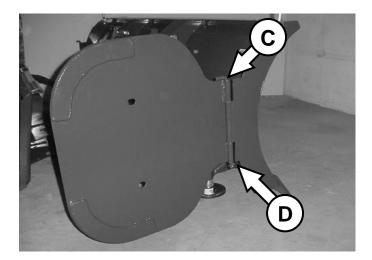


Grease the pivot bushing zerk [A] every 8 hours of operation.

# SET-UP ASSEMBLY

#### Wing Kit Installation

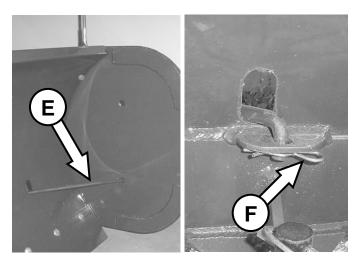
 Align the RH wing with the bushing on the RH end of the moldboard and install the wing pin [C] and cotter pin [D] to secure the wing to the moldboard.



2. Rotate the wing to the operating position.

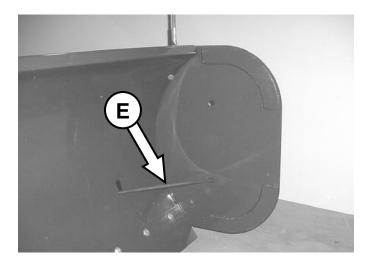


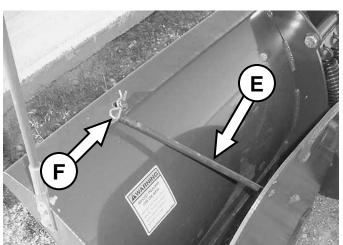
3. Slip one end of the wing brace [E] into the bottom hole in the wing, then insert the other end of the wing brace into the rod bracket on the back side of the moldboard. Secure the wing brace with a clip pin [F].



4. Repeat steps 1-3 for the LH wing on the LH end of the moldboard.

## **SET-UP ASSEMBLY**





#### Wing Storage

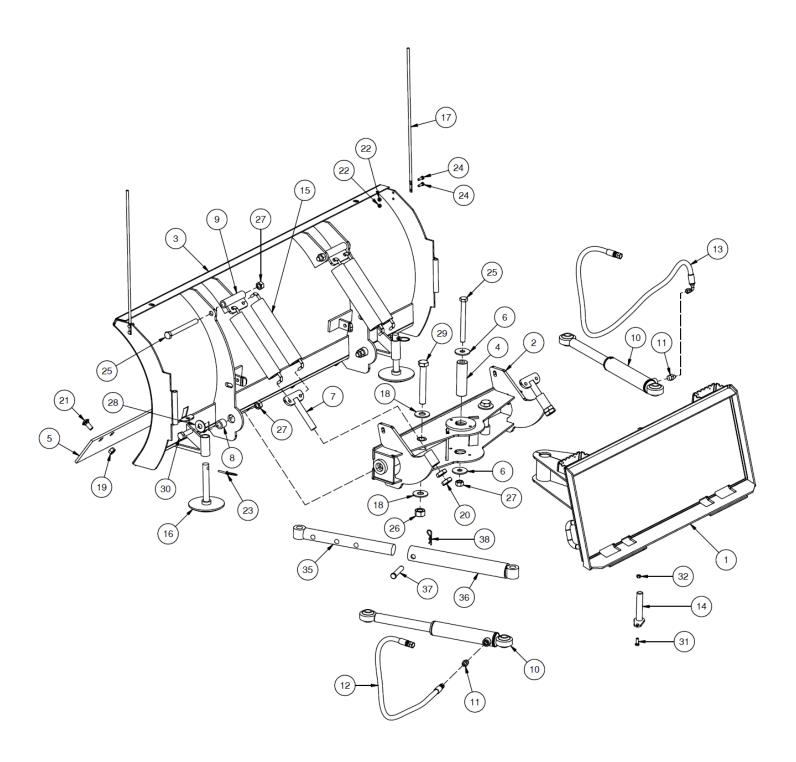
1. After installation, the wings can be locked behind the moldboard when not in use.

**IMPORTANT:** The wings cannot be stored for the 72" model snow blade. The wings on the 72" model must be completely removed when not in use.

- 2. Disconnect the wing braces **[E]** from the moldboard.
- 3. Rotate the wings behind the moldboard.
- 4. Slip one end of the wing brace through the top hole in the wing, and insert the other end of the wing brace into the hole in the top of the moldboard.
- 5. Secure the wing braces to the moldboard with the clip pins **[F]**.

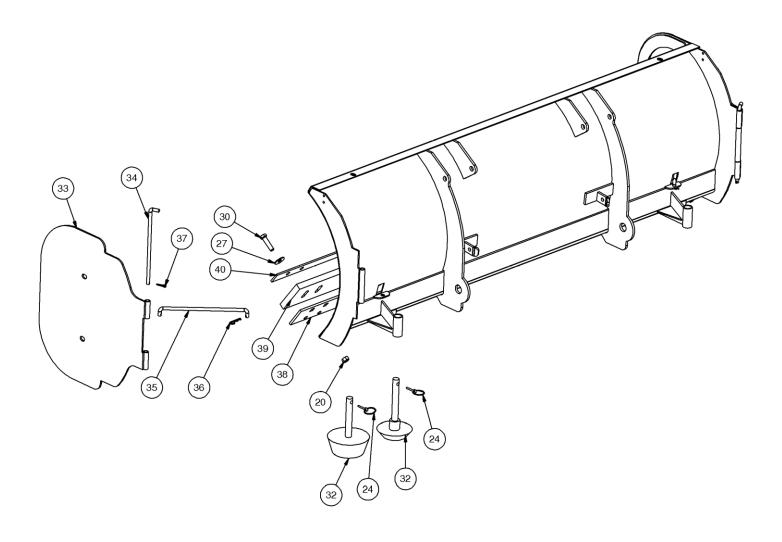
# PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	341582	MOUNT PLT SNOWBLADE V2 W/A	
2	1	341580	SUBFRAME SNOWBLADE V2 W/A	
3	1	300033	MOLDBOARD 72 W/A	
	1	300034	MOLDBOARD 84 W/A	
	1	300035	MOLDBOARD 96 W/A	
	1	300090	MOLDBOARD 108 W/A	
4	1	300022	BUSHING 1.73 X .88 X 5.94	
5	1	300016	CUTTING EDGE B 3/8 X 72	
	1	300017	CUTTING EDGE B 3/8 X 84	
	1	300018	CUTTING EDGE B 3/8 X 96	
	1	300092	CUTTING EDGE B 3/8 X 108	
6	2	300085	WASHER PLATE .81 X 2.50 X .18 Z	
7	2	300058	TENSIONER SPRING W/A	
8	2	300064	BUSHING 1.38 X .88 X 1.13	
9	2	300026	MOUNT SPRING W/A Z	
10	2	331379	CYLINDER 2 X 8 X 20.5 SPEEBALLS	SINGLE ACTING
	2	331401	SEAL KIT CYLINDER 331379	PARTS ONLY
11	2	300404	ADPT REST STR 8MB-6MJ .030	
12	1	300081	HOSE 3/8 X 80 8FJX-6FJX	
13	1	300143	HOSE 3/8 X 98 8FJX-6FJX-90	
14	2	316026	PIN 1 X 5 W/A	
15	4	100303	SPRING EXT 2.38 OD X 15	
16	2	100301	SKID SHOE 6" STANDARD	
17	2	100302	KIT MARKER SNOWBLADE	KIT INCLUDES PAIR
18	4	33022	WASHER FLAT	1"
19	8 (72") / 9 (84") / 10 (96") / 11 (108")	37216	NUT HEX	5/8 NC
20	4	36220	NUT HEX JAM	1 NC
21	8 (72") / 9 (84") / 10 (96") / 11 (108")	201452	BOLT CARRIAGE	5/8 X 1-1/2 NC GR5
22	4	37211	NUT REV LOCK	5/16 NC
23	2	315308	PIN LYNCH 1/4 X 1-3/4	INCLUDED W/ SKID SHOES
24	4	13055	BOLT HEX	5/16 X 1 NC GR5
25	3	15378	BOLT HEX	3/4 X 7-1/2 NC GR8 YZ
26	2	37219	NUT REV LOCK	1 NC
27	5	37217	NUT HEX	3/4 NC
28	2	33018	WASHER FLAT	3/4"
29	2	13477	BOLT HEX	1 X 7 NC GR5
30	2	13363	BOLT HEX	3/4 X 2-1/2 NC GR5
31	2	13105	BOLT HEX	3/8 X 1 NC GR5
32	2	37212	NUT REV LOCK	3/8 NC
35	1	300145	SUPPORT W/H SNOWBLADE W/A	MANUAL ANGLING ONLY
36	1	300170	SUPPORT ADJ SNOWBLADE W/A	MANUAL ANGLING ONLY
37	1	300167	PIN CLEVIS .75 X 3.5	MANUAL ANGLING ONLY
38	1	200064	PIN CLIP #11 1/8 X 2 5/8	MANUAL ANGLING ONLY



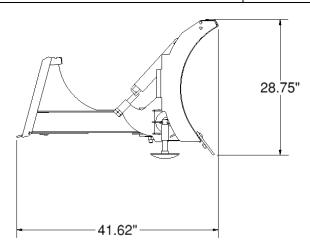
# PARTS INFORMATION

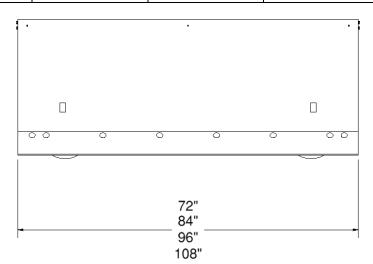
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
20	(8)72" (9)84" (10)96" (11)108"	37216	NUT HEX	NUT REV LOCK 5/8 NC
24	2	315308	PIN LYNCH 1/4	INCLUDED WITH SKID SHOES
27	(8)72" (9)84" (10)96" (11)108"	33016	WASHER FLAT	5/8"
29	4	33018	WASHER FLAT	3/4"
30	(8)72" (9)84" (10)96" (11)108"	13313	BOLT HEX	5/8 X 2-1/2 NC GR 5
32	2	300086	SKID SHOE HEAVY DUTY	HEAVY DUTY SKID SHOE PKG
	2	315467	SKID SHOE 6" URETHANE	URETHANE SKID SHOE PKG
33	2	300067	WING SNOWBLADE W/A	WING KIT PKG ONLY
34	2	300075	PIN WING PIVOT	WING KIT PKG ONLY
35	2	300068	ROD WING SNOWBLADE	WING KIT PKG ONLY
36	2	200064	PIN CLIP #11 1/8 X 2 5/8	WING KIT PKG ONLY
37	2	65076	PIN COTTER 1/8 X 1	WING KIT PKG ONLY
38	1	300111	CUTTING EDGE EXTENSION 72	RUBBER & URETHANE PKG
	1	300112	CUTTING EDGE EXTENSION 84	RUBBER & URETHANE PKG
	1	300113	CUTTING EDGE EXTENSION 96	RUBBER & URETHANE PKG
	1	300114	CUTTING EDGE EXTENSION 108	RUBBER & URETHANE PKG
39	1	300095	CUTTING EDGE URE 72"	URETHANE PKG
	1	300096	CUTTING EDGE URE 84"	URETHANE PKG
	1	300097	CUTTING EDGE URE 96"	URETHANE PKG
	1	300098	CUTTING EDGE URE 108"	URETHANE PKG
	1	300612	CUTTING EDGE RUBBER 72"	RUBBER PKG
	1	300613	CUTTING EDGE RUBBER 84"	RUBBER PKG
	1	300614	CUTTING EDGE RUBBER 96"	RUBBER PKG
	1	300615	CUTTING EDGE RUBBER 108"	RUBBER PKG
40	1	300099	PLATE BACKING 72	RUBBER & URETHANE PKG
	1	300100	PLATE BACKING 84	RUBBER & URETHANE PKG
	1	300101	PLATE BACKING 96	RUBBER & URETHANE PKG
	1	300102	PLATE BACKING 108	RUBBER & URETHANE PKG



# **GENERAL SPECIFICATIONS**

Model	72	84	96	108	
Working Width (Straight / Fully Angled)	72" / 62.75" @ 30°	84" / 73.25" @ 30°	96" / 83.75" @ 30°	108" / 94.25" @ 30°	
Overall Height	28.75"				
Trip Type	Moldboard				
Number of Trip Springs	4				
Cutting Edge	3/8" x 6"				
Cylinders	2" x 8", 3000 psi				
Operating Weight	590 lbs.	625 lbs.	660 lbs.	710 lbs.	





All dimensions are in INCHES.

Torque-Tension Relationships for SAE J429 Grade Bolts

Nominal SAE J429 Grade 2 SAE J429 Grade 5 SAE J429 Grade 8									
Thread	Clamp Tightening Torque		Clamp Tightening Torque		Clamp Tightening Torque		Torque		
Size	Load (lbs)			Load (lbs)	K = .15	K = .20	Load (lbs)	K = .15	K = .20
	Unified Coarse Thread Series								
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
			Unified	Fine Thread	Series				
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 ¼ 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



# **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 twenty-four (24) 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.

Erskine Attachments LLC P.O. Box 1083 Alexandria, MN 56308 Phone (218) 435-4045 Fax (218) 435-5293



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