

# Mini Dozer Blade

For

# Mini Skid Steer Loaders And Mini Track Loaders

Operator's Manual
Set-Up Assembly
Maintenance
Parts Information



3-4

5-6

USER'S MOUNTING INSTRUCTIONS	7-8
OPERATING INSTRUCTIONS	0.40
ROUTINE MAINTENANCE	44 40
SET-UP ASSEMBLY	40
PARTS INFORMATION	1/10
GENERAL SPECIFICATIONS	19
BOLT TORQUE INFORMATION	20
NOTES	24 22
WARRANTY	၁၁
REFERENCE INFORMATION  Write the serial number for your attachment in the spaces below. Alvanumber when calling for service or parts.	ways refer to this serial
Serial Number	-
YOUR ATTACHMENT DEALER	
ADDRESS:	
PHONE:	

SAFETY

CONTACT:

SERIAL NUMBER/DECAL LOCATION

**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 dirt, rock, and other loose materials on loaders with a Rated Operating Capacity (ROC) of 1000 pounds or less only. This machine is not designed for snow removal. 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 or use with an 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.
- Always stay in the operator position when using the attachment.

### **Operation (continued)**

- Keep people away from loader and attachment when in use. This attachment has moving parts.
- **NEVER** operate near embankments or terrain that is so steep that rollover could occur.
- Before leaving the operator 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.

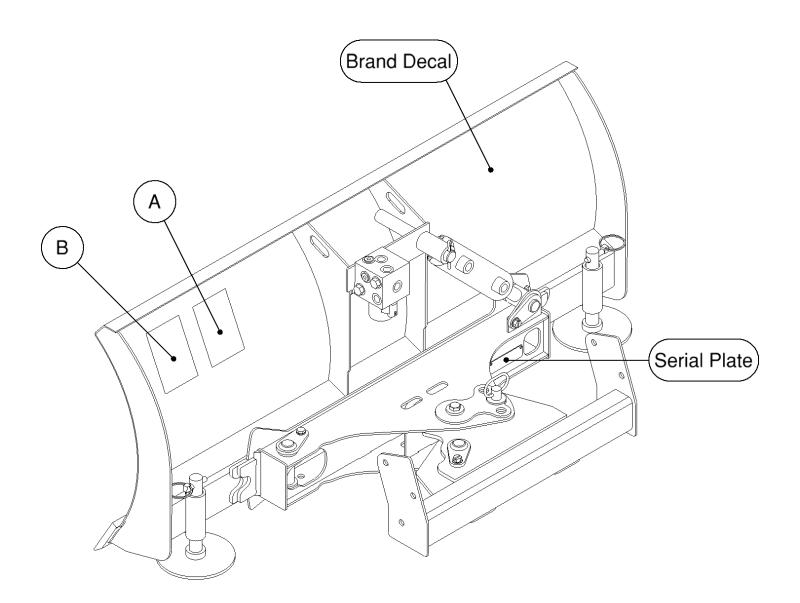
### **Maintenance**

- 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



Part number: 200001

Location: On back of moldboard, LH side

Quantity: 1

AVOID INJURY OR DEATH

Avoid pinch points. Keep body parts away from attachment while in operation.

Part number: 203234

Location: On back of moldboard, LH side

Quantity: 1

### **Small Brand Decal**

Location: On back of moldboard, RH side

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.

**IMPORTANT:** This attachment is not designed to be used on loaders with a Rated Operating Capacity (ROC) of more than 1000 pounds.

# Instructions for mounting to a ride-on mini skid steer:

- 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 the seat bar, fasten the seat belt, make sure all controls are in neutral, and start the engine.
- 3. Drive the loader to the rear of the attachment. Put the loader quick attach coupler into the attachment mounting bracket.
- Tilt the loader coupler back a small amount until it is fully engaged with the attachment mounting bracket.
- 5. Stop the engine and engage the park brake.
- Exit the loader and secure the coupler locking mechanism that locks the attachment to the loader.

# Instructions for mounting to a walk-behind mini skid steer:

- 1. Standing at the operator's station, make sure all controls are in neutral, and start the engine.
- Drive the loader to the rear of the attachment. Put the loader quick attach coupler into the attachment mounting bracket.
- 3. Tilt the loader coupler back a small amount until it is fully engaged with the attachment mounting bracket.
- 4. Stop the engine and engage the park brake.
- 5. Walk to the front of the loader and secure the coupler locking mechanism that locks the attachment to the loader.

### **USER'S MOUNTING INSTRUCTIONS**

### **Connecting Hydraulics:**

1. 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 (3/4" Female JIC Swivel) fittings on the ends of the lead hoses.

- 2. If the attachment is equipped with the hydraulic angle option, connect the attachment wire harness to the loader wire harness receptacle.
- 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 specific 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 the above instructions in the reverse order to dismount the attachment from the loader.







### OPERATING INSTRUCTIONS

**IMPORTANT:** The dozer blade is not designed for snow removal.

**NOTE:** For maximum control, the dozer blade should be operated with the loader arms fully lowered.

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 and/or cutting edge, depending on the application.

**NOTE:** The mini dozer blade skid shoes provide stability. For proper operation of the attachment, the skid shoes should be adjusted so that the bottom of the skid shoes are even with the bottom of the cutting edge (see page 12 in the "Routine Maintenance" section of this manual).

3. Activate the loader's auxiliary hydraulics to operate the mini dozer blade tilt and angle (if hydraulic angle package is equipped) functions.

4. On models equipped with the hydraulics angle package, the mini dozer blade is equipped with a diverter valve to switch the oil flow between the tilt and angle functions. When the loader's auxiliary hydraulics are activated, the primary (default) function is the dozer blade tilt (up and down).

### OPERATING INSTRUCTIONS

5. To operate the mini dozer blade's angle (left and right) function, energize the diverter valve coil by pressing and holding the appropriate steering lever button (see loader's operator's manual) if the loader is equipped with an attachment control kit, or by pressing and holding the toggle switch if the attachment was shipped with the toggle switch harness. While holding the button/switch, activate the loader's auxiliary hydraulics to angle the attachment left and right. Release the button/switch to return to the tilt function.

**NOTE:** If the mini dozer blade does not angle, experiment with another button until the button that energizes the diverter is found. If no button can be found, use a 12V test light to identify the correct button and confirm that power is reaching the coil.

**NOTE:** To switch the default function from tilt to angle, there are two plugs on the valve block that must be switched with two hoses as follows:

- T1 & T2 swap location of plug and hose
- L1 & L2 swap location of plug and hose
- Once the operator is familiar with the attachment's controls, fully lower the loader's lift arms and position the attachment so that it rests on the skid shoes and/or cutting edge, depending on the application.
- 7. Slowly drive the loader forward.
- 8. Use the mounting plate tilt function along with the dozer blade tilt and angle functions to obtain the desired grade and to increase the loader's traction.



### **Leveling the Ground**

- 1. Fully lower the loader's lift arms.
- 2. Angle the mini dozer blade to the desired position.
- 3. Use the loader's mounting plate tilt function to change the position of the mini dozer blade cutting edge while driving forward to level the ground.

### Digging into a Slope

- 1. Fully lower the loader's lift arms.
- 2. Angle the dozer blade to the desired position.
- Use the loader's mounting plate tilt function along with the dozer blade's tilt and angle functions to obtain the desired grade angle, keep an even dozing depth, and to increase the loader's traction while driving forward to cut a slope.

### **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.

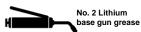
It is the operator's responsibility to make daily inspections of the loader and attachment for damage, loose bolts, fluid leaks, or anything else that could cause a potential service or safety problem. Preventive maintenance is the easiest and least expensive type of maintenance.

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

### LUBRICATION

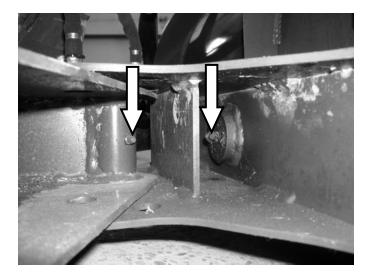
Lubrication Legend







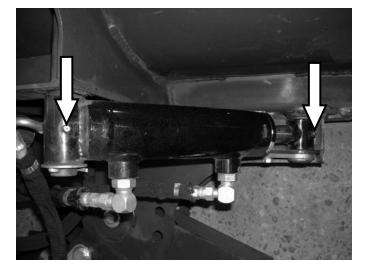




Use No. 2 lithium base gun grease when lubricating all attachment grease fittings.



Grease the angle pivot pin and tilt pivot pin every **8 hours** of operation.



Grease both tilt cylinder zerks every **8 hours** of operation.

Grease both angle cylinder zerks (if equipped) every **8 hours** of operation.

### **ROUTINE MAINTENANCE**

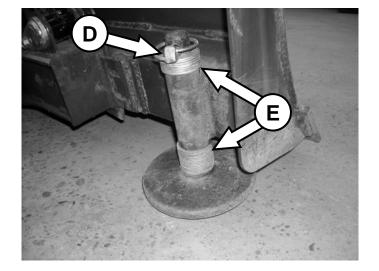
### **Cutting Edge Replacement**

- 1. With the mini dozer blade mounted on the loader, position the attachment with the skid shoes resting on blocks.
- 2. Remove the nuts and plow bolts from the cutting edge, and remove the cutting edge from the mini dozer blade.
- 3. Align the new cutting edge with the plow bolt holes.
- 4. Reinstall the plow bolts and nuts, and torque to 125-140 ft.-lbs.

### **Skid Shoe Height Adjustment**

- 1. Raise the attachment off of the ground and securely block in place.
- 2. Remove the lynch pin **[D]** from the first skid shoe and slide the skid shoe out of the mount bushing.
- Install spacer washers [E] on the skid shoe so that the bottom of the skid shoe is even with the bottom of the cutting edge, 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.

**NOTE:** The mini dozer blade can be operated without the skid shoes installed, if so desired.



### **SET-UP ASSEMBLY**







### **Toggle Switch Harness Installation**

Mounting the toggle switch control harness will vary from loader to loader. Use the following instructions as a general guide. It may be necessary to drill holes to mount pieces of this harness. Mounting hardware is not included.

- 1. Mount the wire harness receptacle to the loader arm near the hydraulic quick couplers.
- 2. Route the wire harness back along the loader arms and fasten with cable ties.
- Open the rear door to access the battery compartment. Pull the excess wire harness into the engine compartment.
- 4. Connect the red fused wire to the positive (+) battery terminal, or to a suitable accessory wire with a minimum rating of 5 amps.
- 5. Connect the black wire to the negative (-) battery terminal, or to a frame ground.
- 6. Connect the toggle switch harness connector to the main wire harness connector.
- 7. Mount the toggle switch in a convenient location near the operator's station.

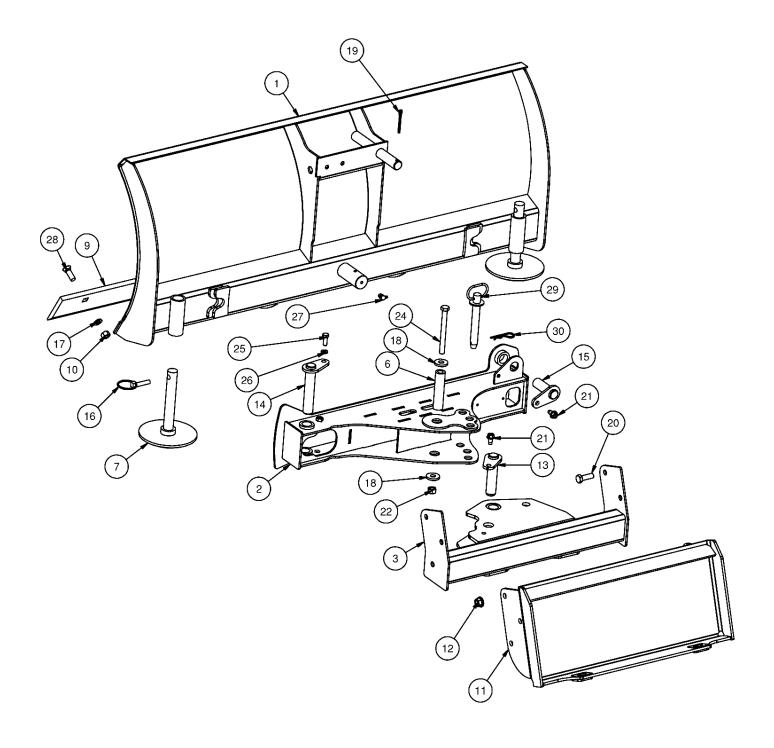
**IMPORTANT:** Secure the wire harness in place with plastic cable ties, making sure it is clear of extra hot areas or any moving parts of the engine or loader. <u>Pinched, stretched, or melted wire harnesses are not covered under warranty.</u>

8. Close the rear door.

**IMPORTANT:** Be sure the wire harness is properly positioned to prevent pinching when closing the door.

# PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	400100	DOZER MOLDBOARD 48 W/A	
2	1	400101	DOZER SUBFRAME W/A	
3	1	400103	DOZER MOUNT W/A	
6	1	400143	BUSHING SWIVEL	
7	2	100301	SKID SHOE	
9	1	400111	CUTTING EDGE 1/2 X 4 X 49.5 BOLT ON	
10	5	36110	NUT HEX FULL	1/2 NC GR 5
11	1	400000	MOUNT FRAME TORO MINI W/A	OPTIONAL MOUNT PACKAGE
	1	400001	MOUNT FRAME ASV MINI W/A	OPTIONAL MOUNT PACKAGE
	1	400002	MOUNT FRAME BC MINI W/A	OPTIONAL MOUNT PACKAGE
	1	300283	MOUNT FRAME UNIV MINI W/A	OPTIONAL MOUNT PACKAGE
	1	330622	MOUNT FRAME AVANT MINI W/A	AVANT MNT MINI PKG 330753
12	6	0167011	NUT FLG TOP LOCK 1/2 NC GR 8 YZ	OPTIONAL MOUNT PACKAGE
13	1	400041	PIN 1 X 4 W/A	HYDRAULIC ANGLING OPT
14	1	316026	PIN 1 X 5 W/A	HYDRAULIC ANGLING OPT
15	1	313460	PIN 1 X 2.5	
16	2	104432	PIN LYNCH 7/16	
17	5	33626	WASHER LOCK	1/2"
18	2	313321	WASHER .53ID X 1.375OD X .199	
19	1	65127	PIN COTTER 3/16 X 2	
20	6	15209	BOLT HEX - 1/2 X 1-1/2 - UNC - GR 8	OPTIONAL MOUNT PACKAGE
21	2	32467	BOLT FLG THRD RLNG	3/8 X 3/4 - UNC - GR 5
22	7	37214	NUT HEX	1/2 - UNC - GR 5 - REV LOCK
24	1	13223	BOLT HEX	1/2 X 5 - UNC - GR 5
25	1	103116	BOLT HEX	3/8 X 1 - UNC - GR 5
26	1	103880	WASHER LOCK	0.375 - GR 5
27	1	60104	ZERK 1/8 NPT 90 DEGREE	
	1	60107	ZERK 1/4-28 90 DEGREE	OLD STYLE ONLY
28	5	22643	BOLT PLOW	1/2 X 1.5 - UNC - GR 5 - PLAIN
29	1	300284	PIN HITCH 3/4 X 5	MANUAL ANGLING (STANDARD)
30	1	200064	PIN CLIP #11 1/8 X 2 5/8	MANUAL ANGLING (STANDARD)



# PARTS INFORMATION

### **MANUAL ANGLE HYDRAULIC SYSTEM**

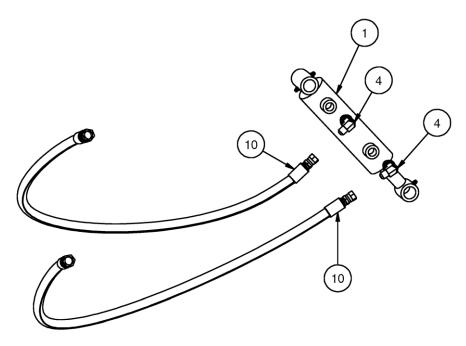
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	400074	CYLINDER 2 X 4 W/BUSHINGS	
4	2	320089	ADPT ELB 8MB-6MJ-90	
10	2	400194	HOSE 3/8 X 70 8FJX-6FJX	

### **OPTIONAL HYDRAULIC ANGLE SYSTEM**

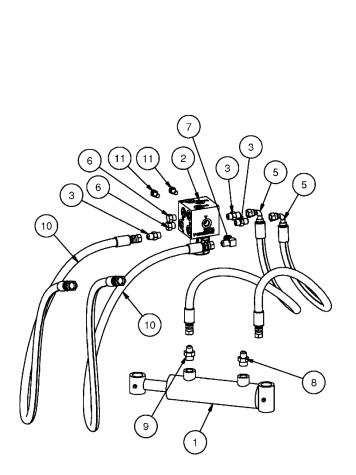
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	2	400074	CYLINDER 2 X 4 W/BUSHINGS	
2	1	317078	VALVE ASSEMBLY	
3	5	311673	ADPT STR 6MB-6MJ	
4	2	320089	ADPT ELB 8MB-6MJ-90	
5	4	400195	HOSE 1/4 X 24 6FJX-6FJX-90	
6	2	320102	ADPT 6MB-PLUG	
7	1	201539	ADPT ELB 6MB-6MJ-90	
8	1	300404	ADPT STR 8MB-6MJ ORFICE .030	
9	1	201925	ADPT STR 8MB-6MJ	
10	2	400194	HOSE 3/8 X 70 8FJX-6FJX	
11	2	13103	BOLT HEX	3/8 X 3/4 NC GR 5

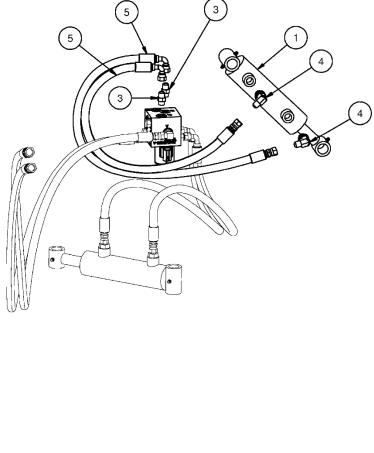
# PARTS INFORMATION

### **MANUAL ANGLE**

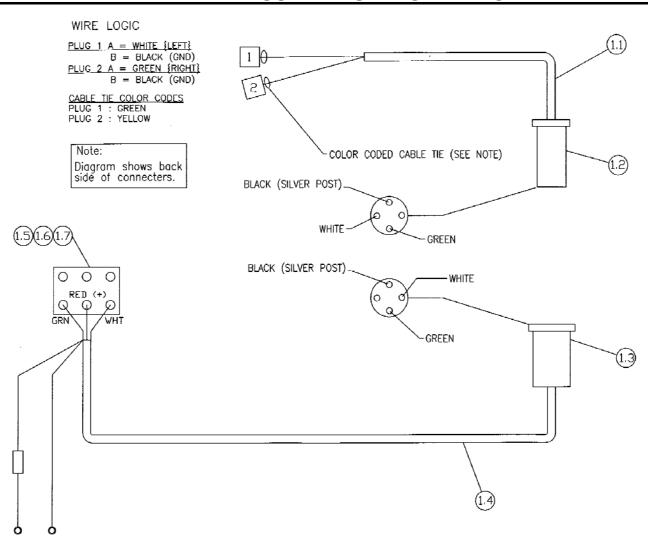


### **OPTIONAL HYDRAULIC ANGLE**





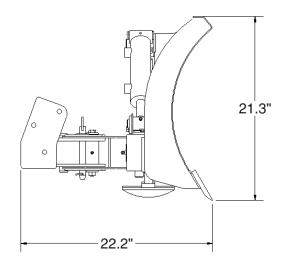
### **WIRE HARNESS PARTS INFORMATION**

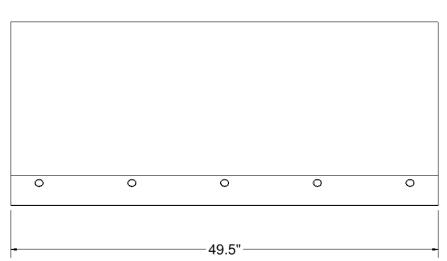


REF.	PART NO.	DESCRIPTION	QTY
1	300248	PKG WIRE HRN GENERIC MINI	1
1.1	300244	HRN WIRE LOWER MINI	1
1.2	200083	CONN 4-WAY TRAILER MALE	1
1.3	200079	CONN 4-WAY TRAILER FEMALE	1
1.4	300243	HRN WIRE UPPER MINI	1
1.5	102913	SWITCH DPDT	1
1.6	202040	SWITCH BOX W/BRACKET 1812	1
1.7	202039	SWITCH BOX COVER 1812/600FM	1
2	300247	BRKT WR HRN GEN MINI PAINTED	1

# **GENERAL SPECIFICATIONS**

Model	Mini Dozer Blade
Working Width	49.5"
Overall Height	21.3"
Tilt Angle	10°
Side Angle	25°
Cutting Edge	1/2" x 4" Bolt-On
Operating Weight (w/out mount)	210 lbs.





All dimensions are in INCHES.

### **BOLT TORQUE INFORMATION**

Torque-Tension Relationships for SAE J429 Grade Bolts

Nominal				SAE J429 Grade 5		SAE J429 Grade 8			
Thread	Clamp	Tightening	Torque	Clamp Tightening Torque		Clamp	Tightening Torque		
Size	Load (lbs)	K = .15	K = .20	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	I 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

# **NOTES**

# **NOTES**



# **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



P/N 300431
Erskine Attachments LLC

Date Printed: 2/22/2021

Printed in U.S.A.