



Mini Soil Conditioner

For

Mini Skid Steer Loaders

And

Mini Track Loaders

Operator's Manual

Set-Up Assembly

Maintenance

Parts Information



Read this Manual Before Use

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REFERENCE INFORMATION

Write the correct information for your attachment in the spaces below. Always use this serial number when calling for service or parts.

Serial Number....._____

YOUR ATTACHMENTS 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

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.

Call Before You Dig
1-888-258-0808



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.

SAFETY

Improper operation can cause serious injury or death.

Pre-operation

- This attachment is designed to be used for seedbed preparation by leveling and pulverizing the top layer of soil. It is not designed to be used as a deep soil tiller. **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. Always call before you dig (1-888-258-0808). When you call, you will be directed to a location in your state/city for information about buried lines (electric, telephone, cable TV, water, sewer, gas, etc.).

Operation

- Always wear eye protection that meets z87.1 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.

Operation (continued)

- Keep people away from loader, attachment and discharge when in use. This attachment sends objects flying and has rotating parts. **NEVER** direct discharge toward people – rocks and debris can be thrown.
- **NEVER** operate near embankments or terrain that is so steep that rollover could occur.
- Always stay in the operator position when using the attachment. If you are using a walk-behind loader, stay behind the loader at the controls while operating.
- Before leaving the operators position, disengage hydraulic drive, lower the attachment to rest flat on the ground, stop engine, set park brake, and wait for all motion to stop.
- **NEVER** place hands in the discharge area or clear debris while the 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.

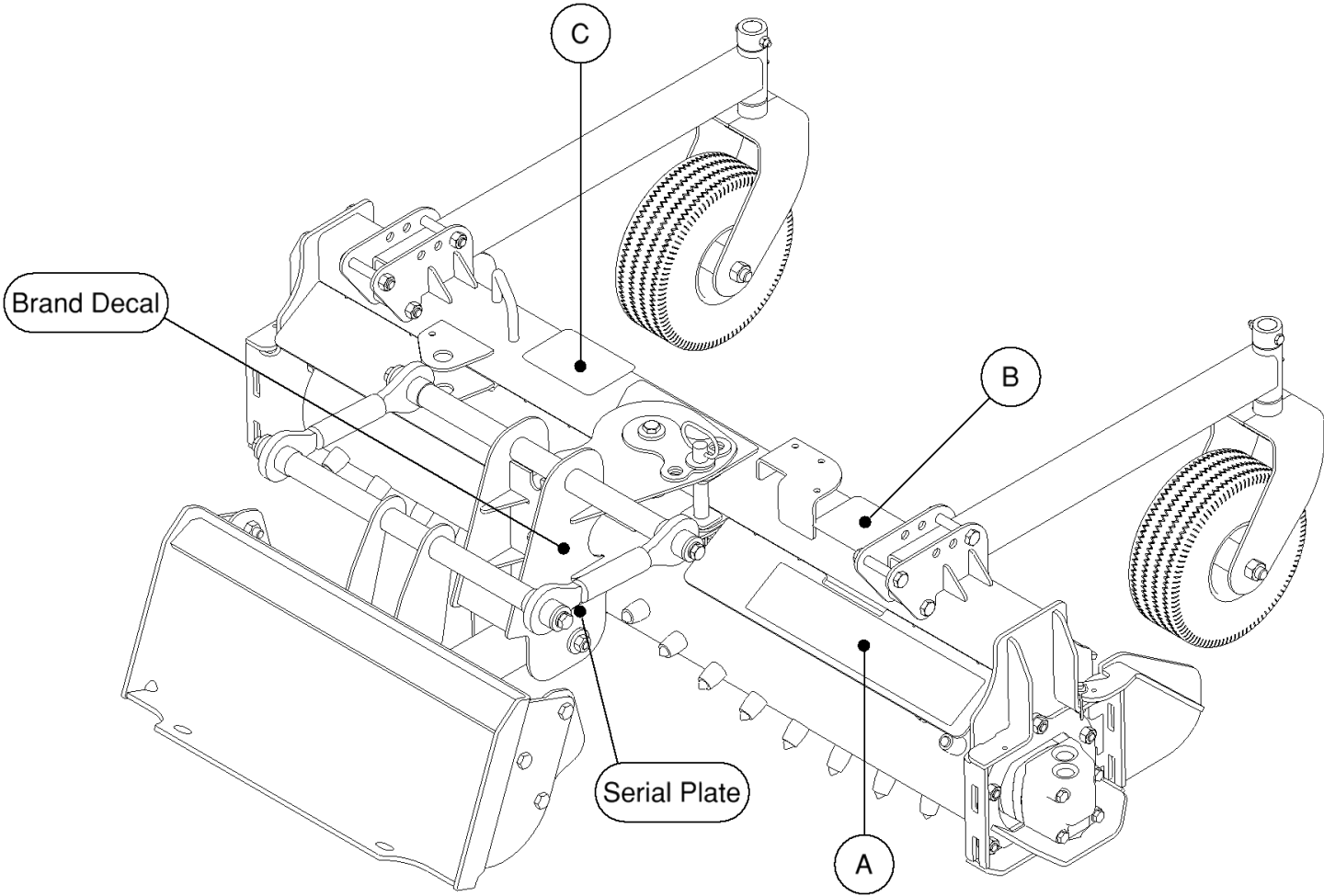
Maintenance

- **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

(A)



Part Number: 400294

Location: On right rear of main frame

Quantity: 1

(B)



Part Number: 203234

Location: On right top of main frame

Quantity: 1

(C)



Part Number: 200001

Location: On left top of main frame

Quantity: 1

Mini Brand Decal

Location: On each side of sub 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 INSTRUCTIONS FOR MOUNTING THE MINI SOIL CONDITIONER

After uncrating the attachment, use the following procedure to mount the attachment to the loader.

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

Instructions for mounting to a ride-on mini skid loader:

1. Use the step, safety treads, and grab handles to get on and off the loader.
2. Sitting in the operator's seat, lower seat bar and fasten the seat belt and with the controls in a neutral position, start the engine.
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. 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 loader:

1. Standing at the operator's station with the controls in a neutral position, start the engine.
2. 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 backward a small amount until it is fully engaged in 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 INSTRUCTIONS FOR MOUNTING THE MINI SOIL CONDITIONER

Attaching Hydraulics:

1. Connect the hydraulic quick couplers from the attachment to the loader. Be sure to thread the hoses through the hose holder on the loader. Bungee straps can be used as an alternate method of securing the hoses.

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.

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.

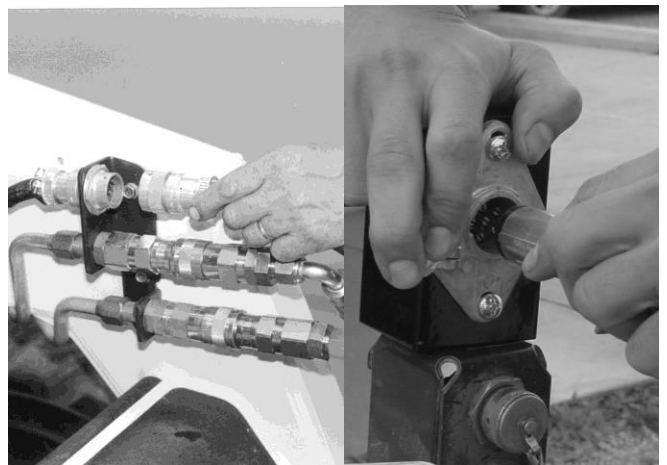
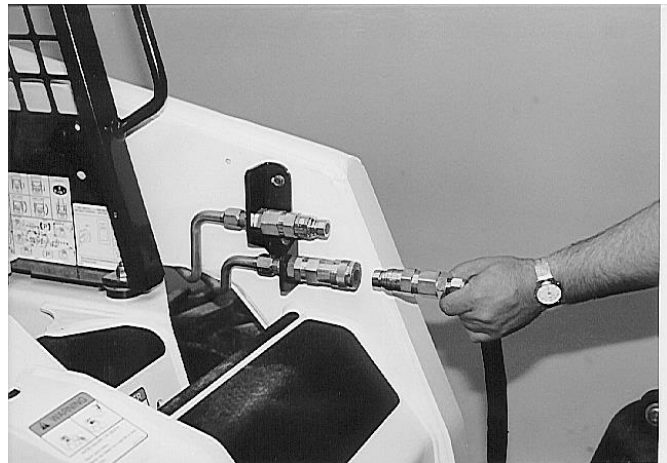
2. If equipped with the hydraulic angle option, connect the attachment wire harness to the loader wire harness receptacle.
3. Make sure the hoses are properly routed to fit your specific loader. If the hoses are not routed correctly, hoses may get pinched or rub on tires. Be sure to check the hose routing 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.

4. Connect the attachment wire harness to the loader wire harness receptacle.

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.



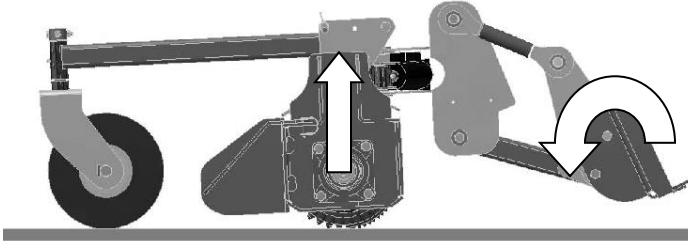
NOTE: Attachment is shipped with 12FJX (1-1/16" Female JIC Swivel) fittings on the ends of the lead hoses.

OPERATING THE MINI SOIL CONDITIONER

IMPORTANT: Always operate the attachment with the loader arms fully lowered. (see diagrams below)



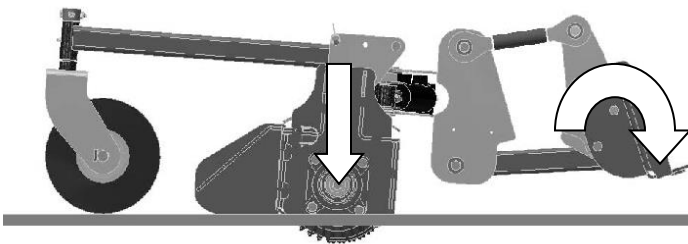
CORRECT LOADER ARM POSITION



(Loader arms fully lowered)
Rolling plate forward = less depth



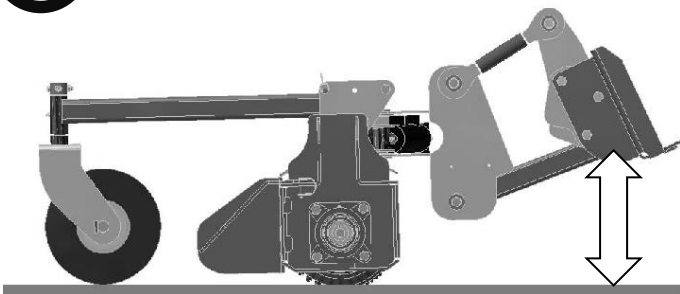
CORRECT LOADER ARM POSITION



(Loader arms fully lowered)
Rolling plate back = more depth



INCORRECT LOADER ARM POSITION



(Loader arms raised)
Float links will not operate correctly

Getting Started

1. If the soil is very hard or compacted, break up the ground before using this attachment.
2. Before starting work in an area, be sure to survey the entire area carefully so that there aren't any obstructions that may interfere with the operation or damage the attachment.

IMPORTANT: Do not operate in soils with rocks larger than 6" as this can damage the rotor and teeth.

3. With the operator at the operator's station, the seat belt fastened and the seat bar lowered (if so equipped), start the engine.
4. Using the loader's tilt function, tilt the mounting plate fully backward. Raise the boom as needed to allow the rotor to clear the ground. This is the position that will fully raise the drum for transporting.

Normal Operation

1. Position the loader where the work is to be done.
2. Fully lower the loader's arms, engage the hydraulic drive with the throttle set at idle.
3. Tilt the mounting plate forward until the attachment wheels rest on the ground and support the attachment.
4. Increase the throttle to 100% for maximum power when ready to work.

IMPORTANT: Do not operate the Mini Soil Conditioner at excessive ground speeds as this can cause excessive wear or damage.

Adjusting Working Depth – Floating Style

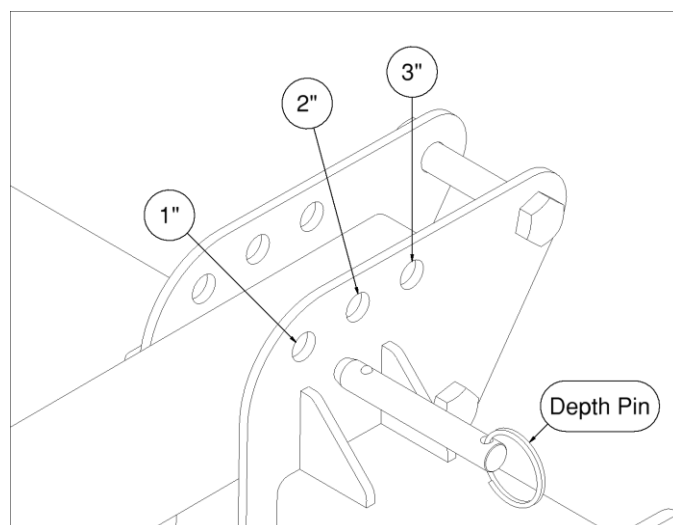
Adjust the working depth by using the loader's tilt function. By tilting the mounting plate backward towards the loader, the rotor will till deeper. By tilting the mounting plate away from the loader, the rotor will till shallower.

OPERATING THE MINI SOIL CONDITIONER

Adjusting Working Depth – Rigid Style

Adjust the working depth by moving the quick-release pins to the desired holes in the wheel arm supports. See figure for approximate working depth of each pin setting.

Once depth pins are set, depth adjustments can be made during operation by adjusting the tilt of the loader mount plate. By tilting the mounting plate backward towards the loader, the rotor will till deeper. By tilting the mounting plate away from the loader, the rotor will till shallower.

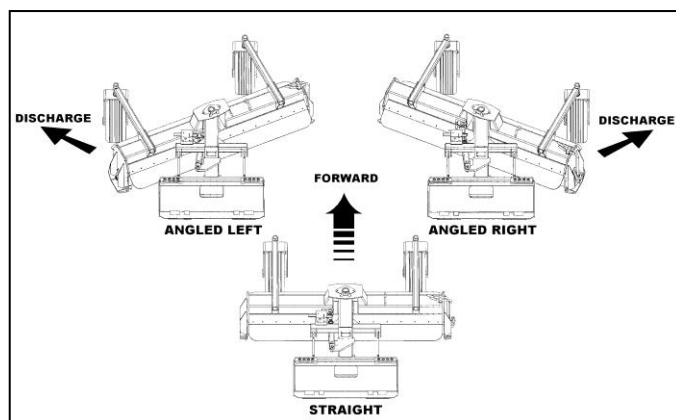


Angling the Rotor

The angle of the rotor is controlled by manual angle adjustment or the optional hydraulic cylinder (by utilizing the electric controls).

Manual angling is accomplished by removing the hitch pin and pushing one side of the rotor frame either forward or backward, depending on which direction is desired. Then, line up the hole at the desired position and replace the pin.

⚠ WARNING Never manually angle the mini soil conditioner while it is running. Disengage the hydraulic drive, engage the park brake, and shut off the engine before manually angling.



Hydraulic Controls

Attachment angle functions can be activated by the steering lever switches in the loader (if loader is equipped), or with the generic control harness.

NOTE: Your loader must have the attachment control kit installed to make use of the lever switches.

NOTE: For steering lever functions, refer to your loader's operator's manual.

The generic control harness allows the operator to angle the attachment side to side by moving the switch while the auxiliary hydraulics are engaged.

OPERATING THE MINI SOIL CONDITIONER

Clearing

Usually, clearing an area of rocks is the final operation, except for areas that have abundant rocks. When clearing rocks, it is necessary to set the Mini Soil Conditioner at a very shallow depth, just touching the soil. Pick up the windrows before they become too large.

NOTE: Remove the windrow side wing when windrowing with the mini soil conditioner.

Tilling

Tilling is the main operation of the mini soil conditioner.

While tilling, the drum should counter-rotate against the direction of travel (see figures).

The tilling depth should be 1 to 2 inches in order to loosen the soil. Rock jamming could occur if the rotor depth is too great. Deep tilling should only be done in an area that is rock free.

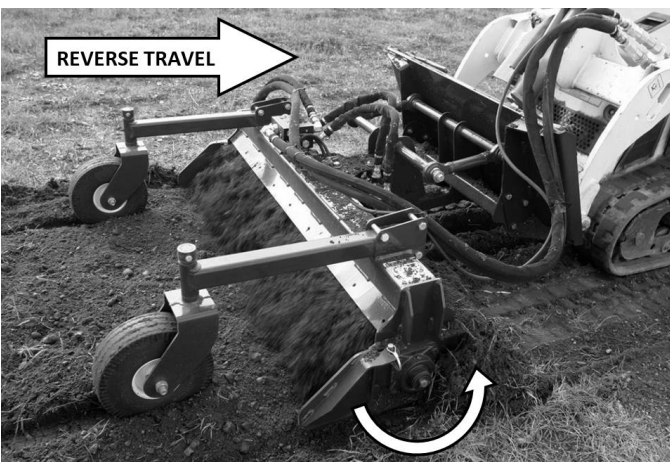
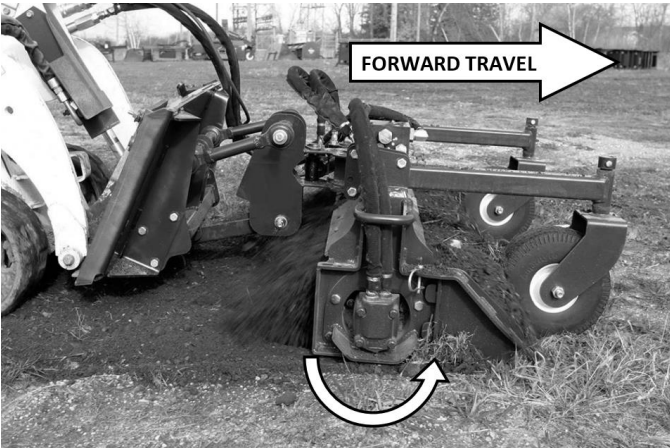
If the rotor stops turning due to hydraulic relief, the overload could be caused by a rock or root caught between the rotor and frame. In order to remove the obstruction, reverse the rotor. If this fails to remove the obstruction, disengage the hydraulics, shut off the loader, and remove the obstruction.

Leveling

Leveling is done when tilling. Shallow settings give a smoother seedbed, while deeper settings level the ground better.

Experience will give the operator a better feel for the best settings to use in each situation.

IMPORTANT: When shutting down the attachment, always throttle down the loader before shutting off the auxiliary hydraulics. Failure to do this may damage the attachment.



ROUTINE MINI SOIL CONDITIONER MAINTENANCE

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

It is the operator's responsibility to make daily inspections of the attachment and loader 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 and set screws can loosen after initial usage. After first hour of operation check all bolts and set screws. This must also be done daily before operation. If nuts or bolts are missing or damaged, replace immediately.

LUBRICATION

Lubrication Legend



Multipurpose spray lube



No. 2 Lithium base gun grease



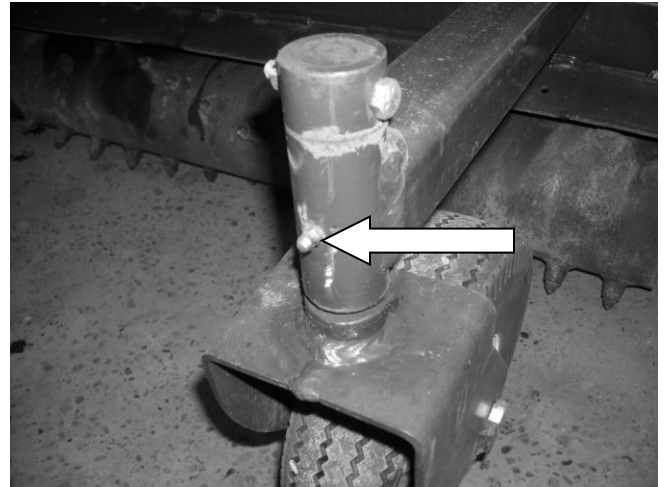
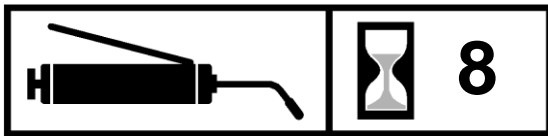
Multipurpose oil lube



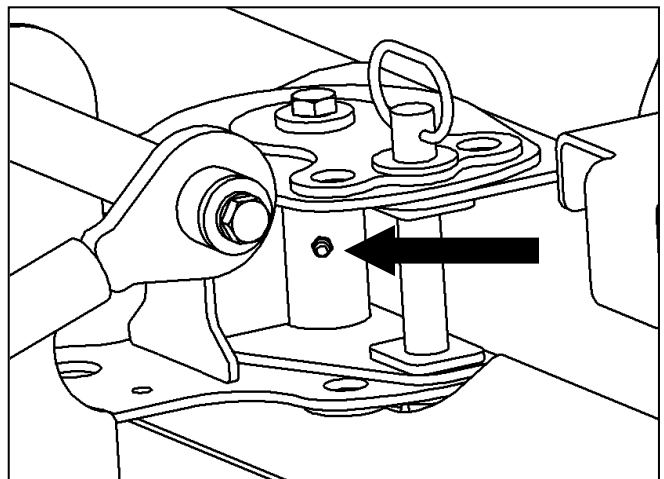
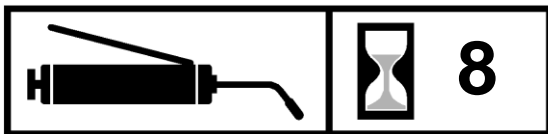
Intervals at which lubrication is required

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

Grease both caster wheel bushings after every **8 hours** of operation.



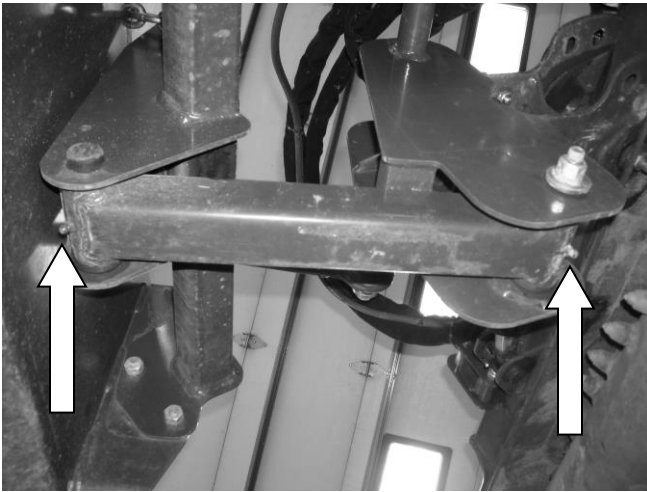
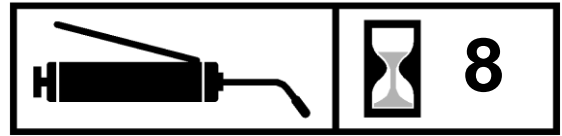
Grease the center pivot bushing after every **8 hours** of operation.



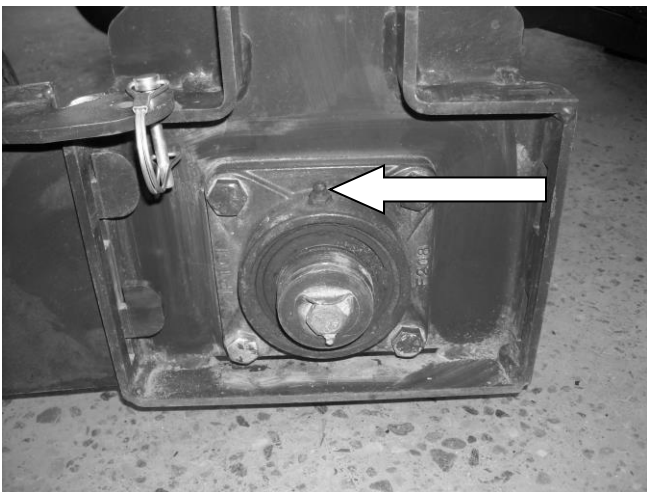
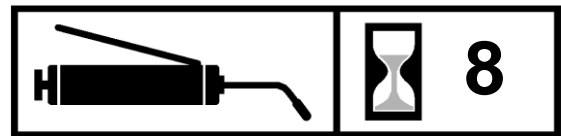
ROUTINE MINI SOIL CONDITIONER MAINTENANCE

Lubrication (continued)

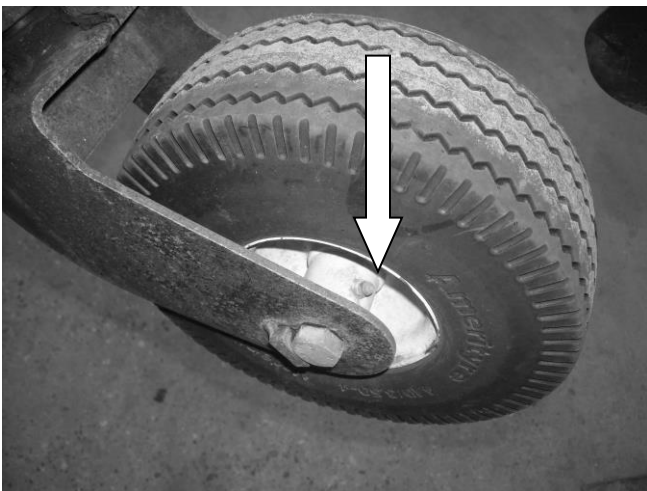
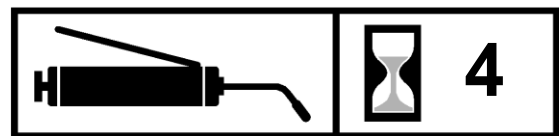
Grease both lower float arm pivot bushings after every **8 hours** of operation.



Grease the rotor bearing after every **8 hours** of operation.

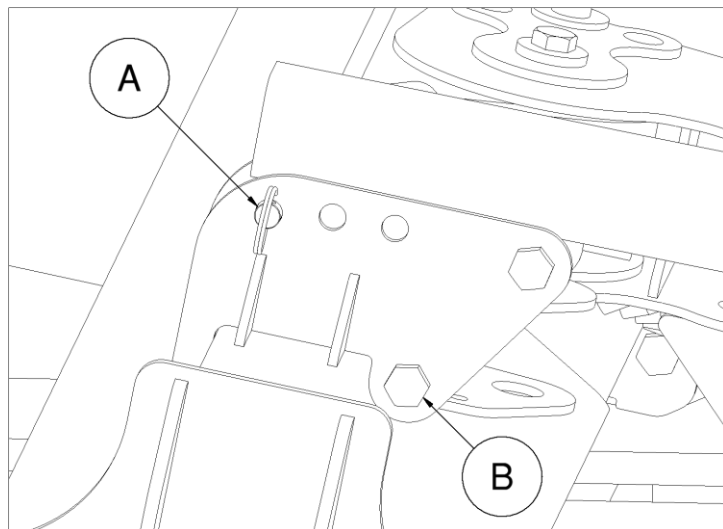


Grease the wheel bearings after every **4 hours** of operation.

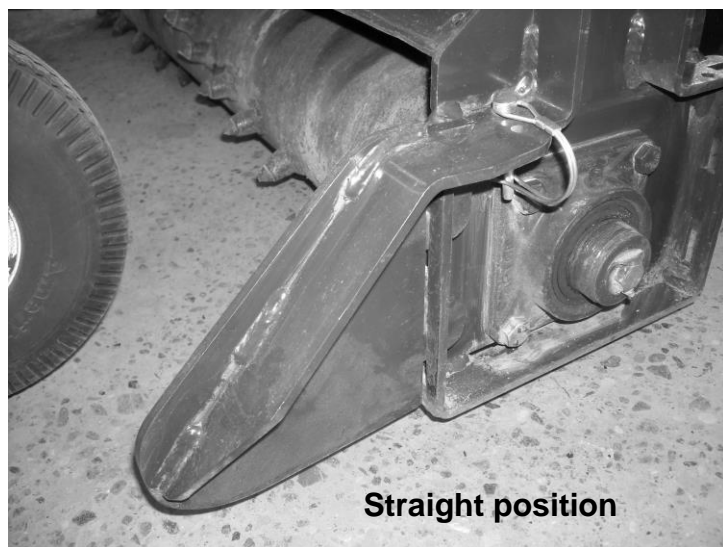


SET UP ASSEMBLY OF THE MINI SOIL CONDITIONER

The mini soil conditioner is shipped with the caster wheel arms in a reversed position. To place them in the working position, remove the pin or bolt from hole **A** and remove the wheel arm fully. Align the arm bushing in hole **B** with the tire out in front of the attachment, and install the bolt in hole **B**. Reinstall the depth pin/bolt in hole **A**.

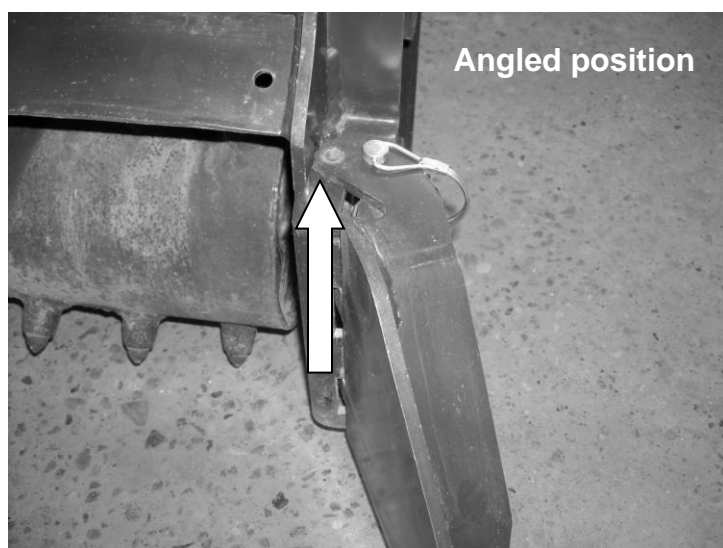


The side wings can be installed on the front side of the frame (for forward movement) or the back side (for backward movement) depending on the desired mode of work. To switch them from front to back, you will need to swap them end for end. (i.e. the right front wing will mount on the left rear).



The side wings have two holes for mounting in a straight position or an angled position. The angled position is convenient when windrowing material to either the right or left side. It is recommended that you remove the wing on the windrow side to prevent damaging it.

NOTE: The mini soil conditioner can be operated with both wings removed if desired.



SET UP ASSEMBLY OF THE GENERIC CONTROL HANDLE HARNESS



Mounting the generic control handle wire harness will vary from loader to loader. Use these instructions as a general guide. You may need 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 wiring harness back along the loader arms and fasten with cable ties.
3. Open the rear door to access the battery compartment. Pull the excess wiring 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 control handle wiring harness connector to the main wiring harness connector.
7. Mount the control handle in a convenient location near the operator's station.



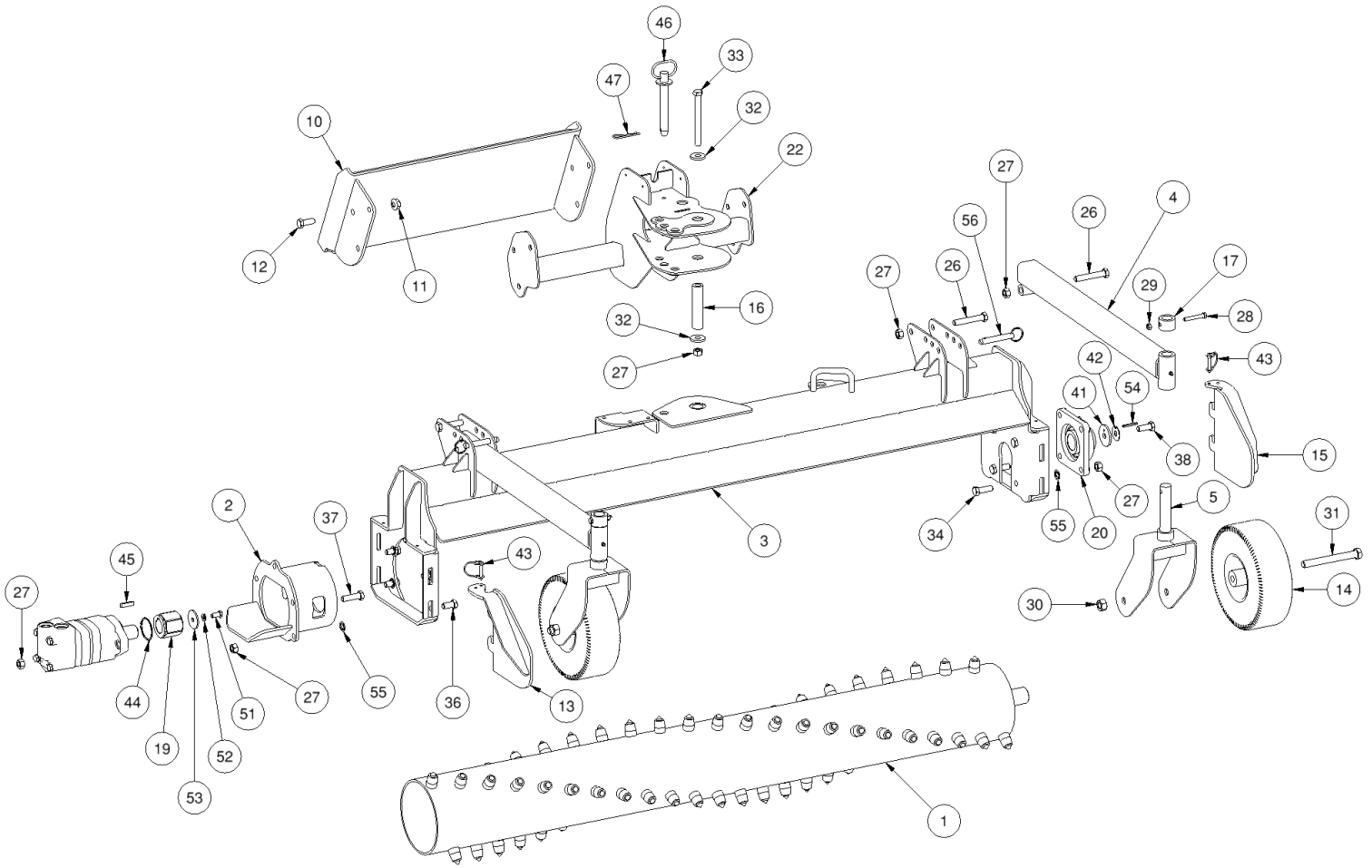
IMPORTANT: Secure the wiring harness in place with plastic cable ties, making sure it is clear of extra hot areas or any moving parts on the engine or loader. Pinched, stretched, or melted wire harnesses are not covered under warranty.

8. Close the rear door.

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



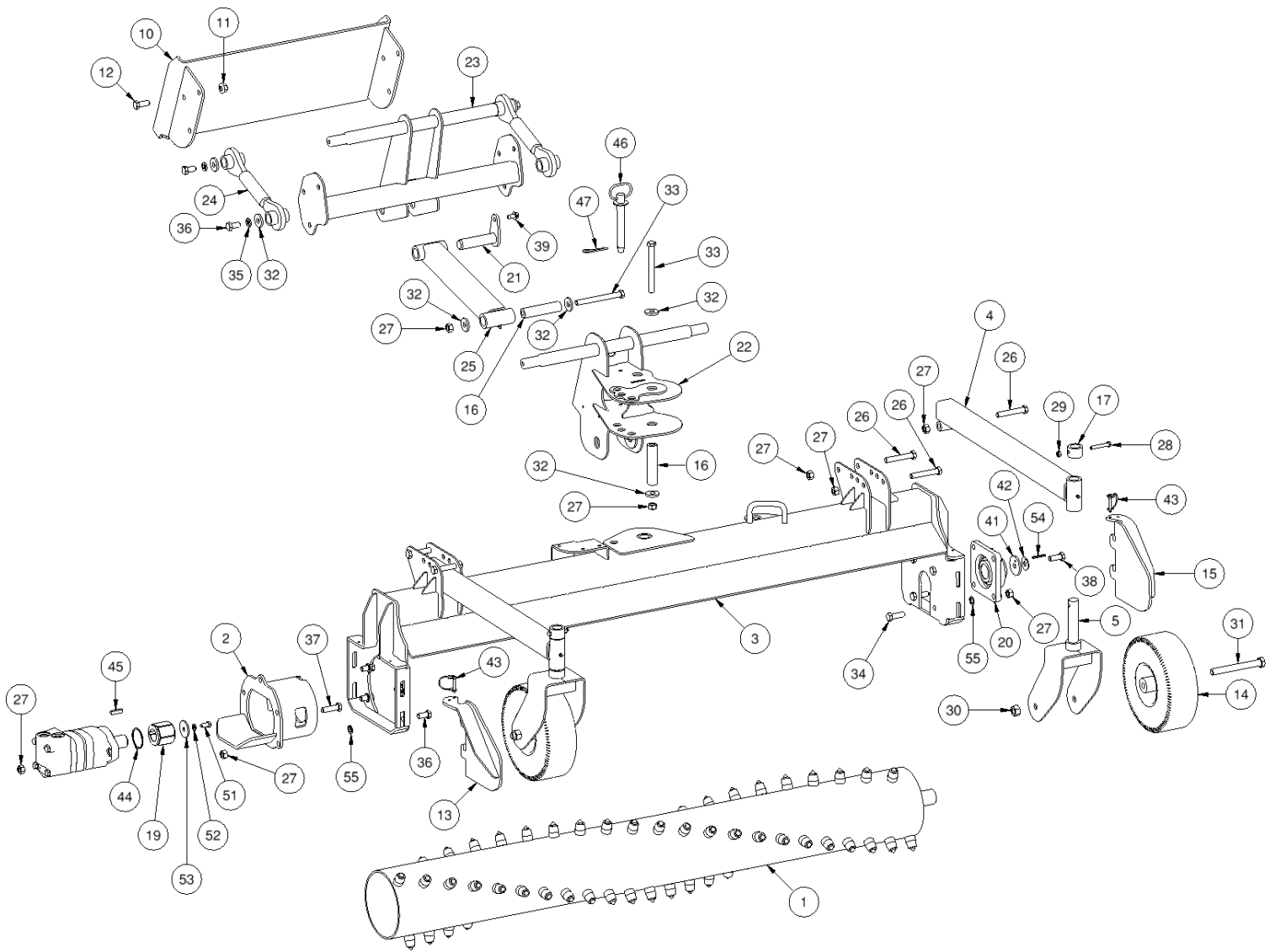
MINI SOIL CONDITIONER RIGID PARTS INFORMATION



MINI SOIL CONDITIONER RIGID PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NUMBER
1	1	400201	DRUM 48 W/A	
	1	400212	DRUM 60 W/A	
2	1	400200	MOTOR MOUNT W/A	
3	1	400203	MAIN FRAME 48 W/A	
	1	400213	MAIN FRAME 60 W/A	
4	2	400204	TIRE ARM W/A	
5	2	400205	TIRE SPINDLE W/A	
10	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 ADPT MNT PKG 330753
11	6	0167011	NUT FLG TOP LOCK 1/2 NC GR 8 YZ	OPTIONAL MOUNT PACKAGE
12	6	15209	BOLT HEX - 1/2 X 1-1/2 - UNC - GR 8	OPTIONAL MOUNT PACKAGE
13	1	400209	WING RH W/A	
14	2	400235	WHEEL ASSM 9.75	
15	1	400210	WING LH W/A	
16	1	400143	BUSHING SWIVEL	
17	2	400244	BUSHING SPINDLE STOP	
19	1	316032	DRIVE BLOCK HEX 1.25 BORE	
20	1	319085	BRG 1-1/2 F-BOLT FLG B-TYPE	
22	1	400283	SUB FRAME MINI SOIL COND RIGID W/A	
26	4	13215	BOLT HEX	1/2 X 3 - UNC - GR 5
27	16	37214	NUT HEX	1/2 - UNC - GR 5 - REV LOCK
28	2	13061	BOLT HEX	5/16 X 2 - UNC - GR 5
29	2	37211	NUT HEX	5/16 - UNC - GR 5 - REV LOCK
30	2	37216	NUT HEX	5/8 - UNC - GR 5 - REV LOCK
31	2	13324	BOLT HEX	5/8 X 5.5 - UNC - GR 5
32	2	313321	WASHER .53ID X 1.375OD X .199	
33	1	13223	BOLT HEX	1/2 X 5 - UNC - GR 5
34	4	13209	BOLT HEX	1/2 X 1.5 - UNC - GR 5
36	5	13205	BOLT HEX	1/2 X 1 - UNC - GR 5
37	2	13210	BOLT HEX	1/2 X 1.75 - UNC - GR 5
38	1	13207	BOLT HEX	1/2 X 1.25 - UNC - GR 5
41	1	319124	WASHER SHAFT END PAINTED	
42	1	319125	WASHER BOLT LOCK PAINTED	
43	2	300285	PIN SNAPPER 1/4 X 1.38	
44	1	313333	RING SNAP EXT 2 X .063	
45	1	300419	KEY 5/16 X 1-1/4	
46	1	300284	PIN HITCH 3/4 X 5	MANUAL ANGLING (STANDARD)
47	1	200064	PIN CLIP #11 1/8 X 2 5/8	MANUAL ANGLING (STANDARD)
51	1	13103	BOLT	3/8 X 3/4 - UNC - GR 5
52	1	103880	WASHER LOCK	3/8 - GR 5
53	1	202830	WASHER LARGE HEAVY 3/8	
54	1	64137	PIN ROLL 3/16 X 1.5	
55	9	330774	NUT PUSH-ON 1/2"	
56	2	331367	PIN QUICK-RELEASE 1/2 X 2-1/2	

MINI SOIL CONDITIONER FLOAT PARTS INFORMATION

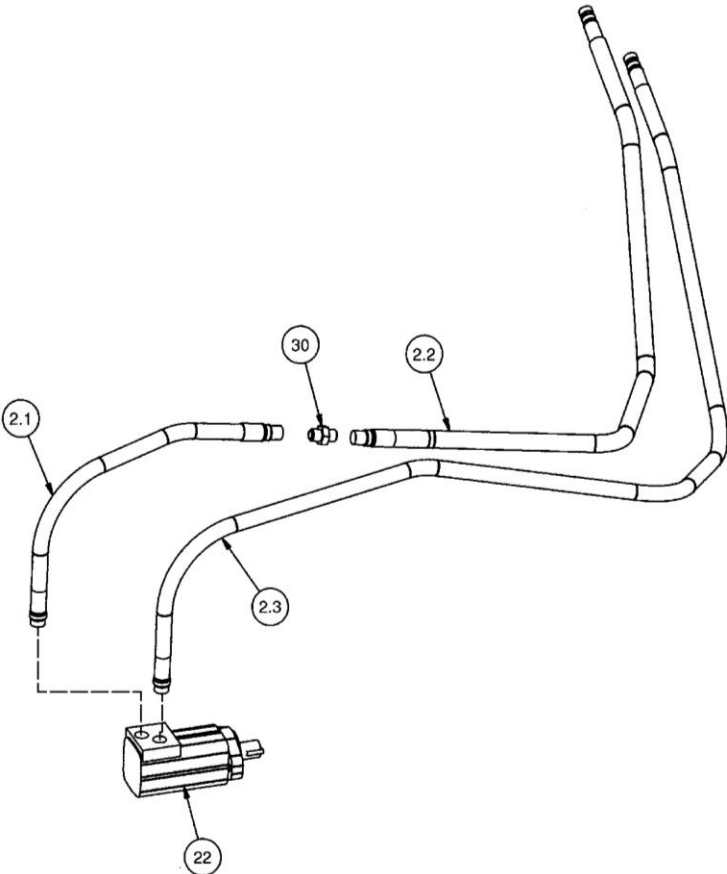


MINI SOIL CONDITIONER FLOAT PARTS INFORMATION

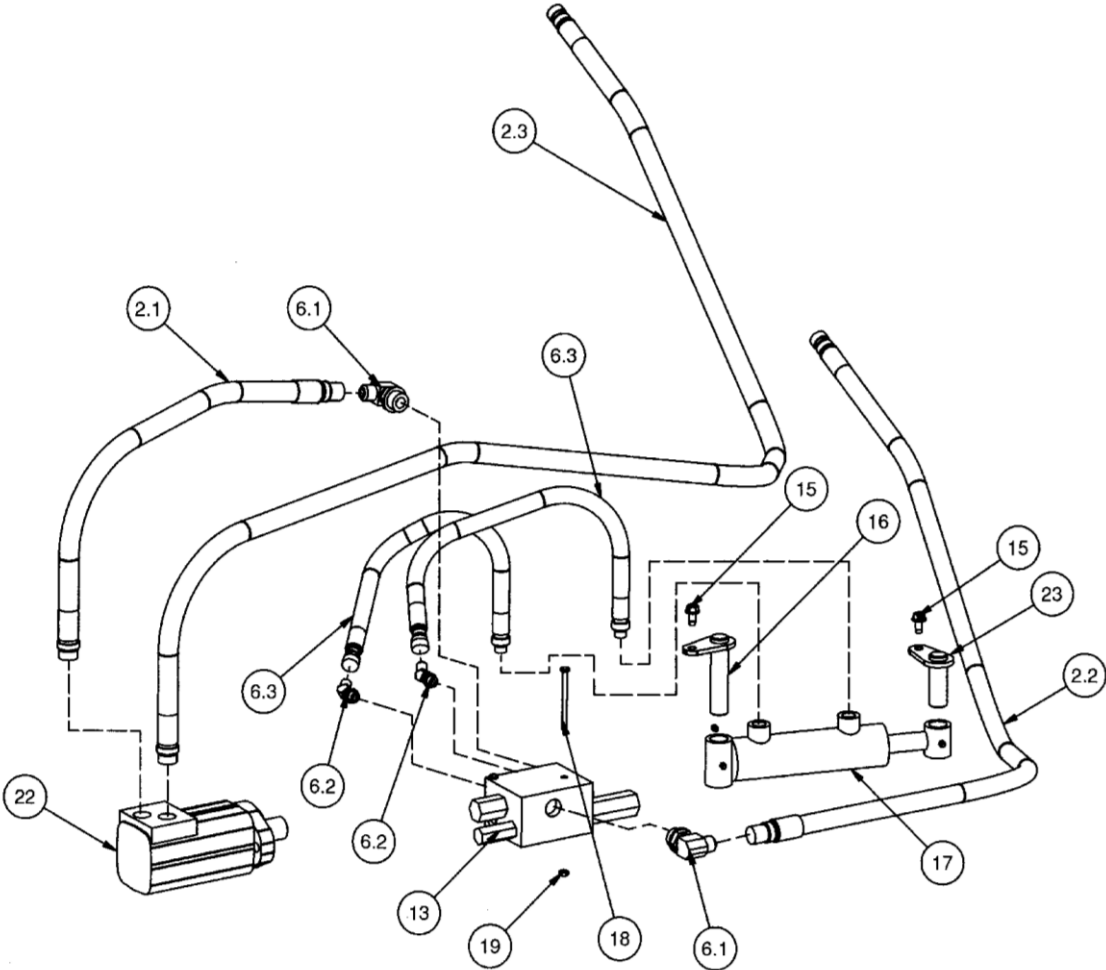
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NUMBER
1	1	400201	DRUM 48 W/A	
	1	400212	DRUM 60 W/A	
2	1	400200	MOTOR MOUNT W/A	
3	1	400203	MAIN FRAME 48 W/A	
	1	400213	MAIN FRAME 60 W/A	
4	2	400204	TIRE ARM W/A	
5	2	400205	TIRE SPINDLE W/A	
10	1	400000	MOUNT FRAME TORO MINI W/A	OPTIONAL MOUNT PACKAGE
	1	400001	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 ADPT MNT PKG 330753
11	6	0167011	NUT FLG TOP LOCK 1/2 NC GR 8 YZ	OPTIONAL MOUNT PACKAGE
12	6	15209	BOLT HEX - 1/2 X 1-1/2 - UNC - GR 8	OPTIONAL MOUNT PACKAGE
13	1	400209	WING RH W/A	
14	2	400235	WHEEL ASSM 9.75	
15	1	400210	WING LH W/A	
16	2	400143	BUSHING SWIVEL	
17	2	400244	BUSHING SPINDLE STOP	
19	1	316032	DRIVE BLOCK HEX 1.25 BORE	
20	1	319085	BRG 1-1/2 F-BOLT FLG B-TYPE	
21	1	400041	PIN 1 X 4 W/A	
22	1	400202	SWIVEL SUB FRAME W/A	
23	1	400206	MOUNT FRAME W/A	
24	2	400207	FLOAT ARM TOP W/A	
25	1	400208	FLOAT ARM W/A	
26	6	13215	BOLT HEX	1/2 X 3 - UNC - GR 5
27	19	37214	NUT HEX	1/2 - UNC - GR 5 - REV LOCK
28	2	13061	BOLT HEX	5/16 X 2 - UNC - GR 5
29	2	37211	NUT HEX	5/16 - UNC - GR 5 - REV LOCK
30	2	37216	NUT HEX	5/8 - UNC - GR 5 - REV LOCK
31	2	13324	BOLT HEX	5/8 X 5.5 - UNC - GR 5
32	8	313321	WASHER .53ID X 1.375OD X .199	
33	2	13223	BOLT HEX	1/2 X 5 - UNC - GR 5
34	4	13209	BOLT HEX	1/2 X 1.5 - UNC - GR 5
35	4	33626	WASHER LOCK	0.5 - GR 5
36	9	13205	BOLT HEX	1/2 X 1 - UNC - GR 5
37	2	13210	BOLT HEX	1/2 X 1.75 - UNC - GR 5
38	1	13207	BOLT HEX	1/2 X 1.25 - UNC - GR 5
39	1	32467	BOLT FLG THRD RLNG	3/8 X 3/4 - UNC - GR 5
41	1	319124	WASHER SHAFT END PAINTED	
42	1	319125	WASHER BOLT LOCK PAINTED	
43	2	300285	PIN SNAPPER 1/4 X 1.38	
44	1	313333	RING SNAP EXT 2 X .063	
45	1	300419	KEY 5/16 X 1-1/4	
46	1	300284	PIN HITCH 3/4 X 5	MANUAL ANGLING (STANDARD)
47	1	200064	PIN CLIP #11 1/8 X 2 5/8	MANUAL ANGLING (STANDARD)
50	5	60105	ZERK GREASE 1/4-28 STR	
51	1	13103	BOLT	3/8 X 3/4 - UNC - GR 5
52	1	103880	WASHER LOCK	3/8 - GR 5
53	1	202830	WASHER LARGE HEAVY 3/8	
54	1	64137	PIN ROLL 3/16 X 1.5	
55	9	330774	NUT PUSH-ON 1/2"	

MINI SOIL CONDITIONER PARTS INFORMATION

Manual Option



Hydraulic Option



MINI SOIL CONDITIONER PARTS INFORMATION

MANUAL OPTION

ITEM	QTY	PART NUMBER	DESCRIPTION	STOCK NUMBER
2.1	1	400287	HOSE 1/2X34 10MB-10FJX	
2.2	1	400288	HOSE 1/2X80 10FJX-8FJX	
2.3	1	400289	HOSE 1/2X112 10MB-8FJX	
22	1	200170	MOTOR	
30	1	300214	ADPT NIPPLE 10MJ-10MJ	

HYDRAULIC OPTION

ITEM	QTY	PART NUMBER	DESCRIPTION	STOCK NUMBER
2.1	1	400287	HOSE 1/2X34 10MB-10FJX	
2.2	1	400288	HOSE 1/2X80 10FJX-8FJX	
2.3	1	400289	HOSE 1/2X112 10MB-8FJX	
6.1	2	300215	ADPT ELB 12MB-10MJ-90	
6.2	2	320086	ADPT ELB 6MB-6MJ-90	
6.3	2	400286	HOSE 3/8 X 24 8MB-6FJX	
13	1	319104	VALVE ASSEMBLY	
15	2	32467	BOLT FLG THRD RLNG	3/8 X 3/4 - UNC - GR 5
16	1	400041	PIN 1 X 4 W/A	
17	1	400074	CYLINDER 2 X 4 W/BUSHINGS	
18	2	13067	BOLT HEX	5/16 X 3.5 - UNC - GR 5
19	2	37211	NUT HEX	5/16- UNC - GR 5 - REV LOCK
22	1	200170	MOTOR	
23	1	313460	PIN 1 X 2.5	

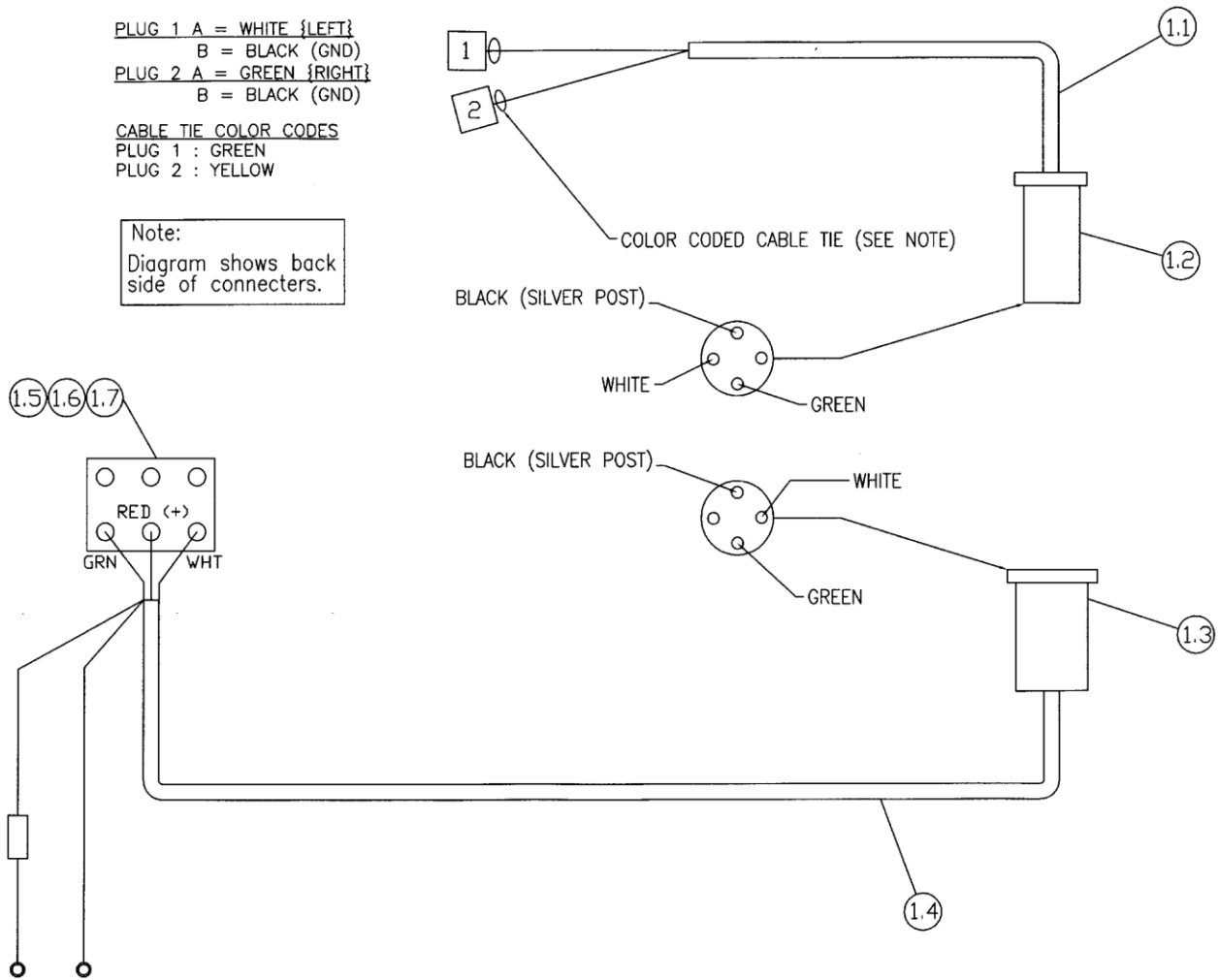
WIRE HARNESS PARTS INFORMATION

WIRE LOGIC

PLUG 1 A = WHITE {LEFT}
 B = BLACK (GND)
 PLUG 2 A = GREEN {RIGHT}
 B = BLACK (GND)

CABLE TIE COLOR CODES
 PLUG 1 : GREEN
 PLUG 2 : YELLOW

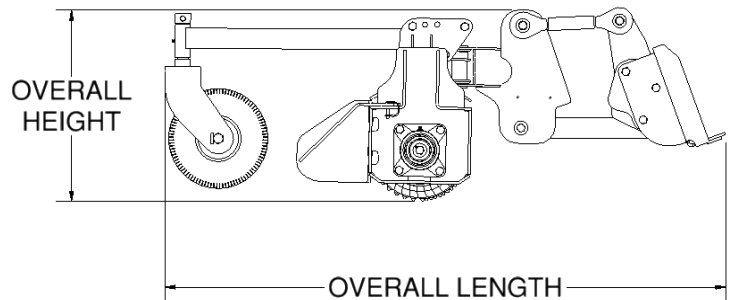
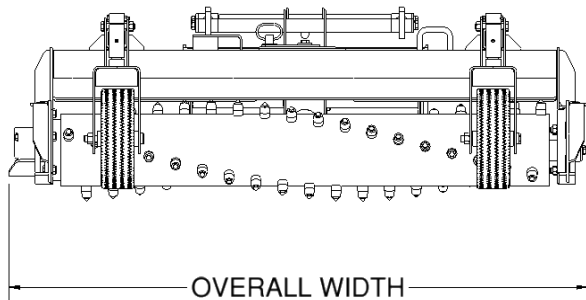
Note:
 Diagram shows back side of connectors.



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
1.8	300247	BRKT WR HRN GEN MINI PAINTED	1

MINI SOIL CONDITIONER GENERAL SPECIFICATIONS

Model	Mini SC 48 Rigid	Mini SC 48 Float	Mini SC 60 Rigid	Mini SC 60 Float
Working Width	48"		60"	
Working Width Angled	43.5"		54.4"	
Overall Width	56.75"		68.75"	
Overall Length	49"	55.5"	49"	55.5"
Overall Height	18"	19"	18"	19"
Frame Style	Rigid	Float	Rigid	Float
Angling	Manual 25° right and left (Optional Hydraulic)			
Teeth	54 Carbide tipped		68 Carbide tipped	
Operating Weight	345 lbs.	380 lbs.	370 lbs.	405 lbs.
Rated Flow	9-17 GPM			
Loader Size	Up to 1,600 lbs. ROC			



All dimensions are in INCHES.

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
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 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



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 manner

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
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Erskine Attachments LLC

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