



Soil Conditioner

For

Skid Steer 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 these numbers 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

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.

Call Before You Dig
1-888-258-0808



SAFETY

Improper operation can cause serious injury or death.

Pre-operation

- This attachment is designed for light tilling and windrowing in dirt only. 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.
- 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 near attachment 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.

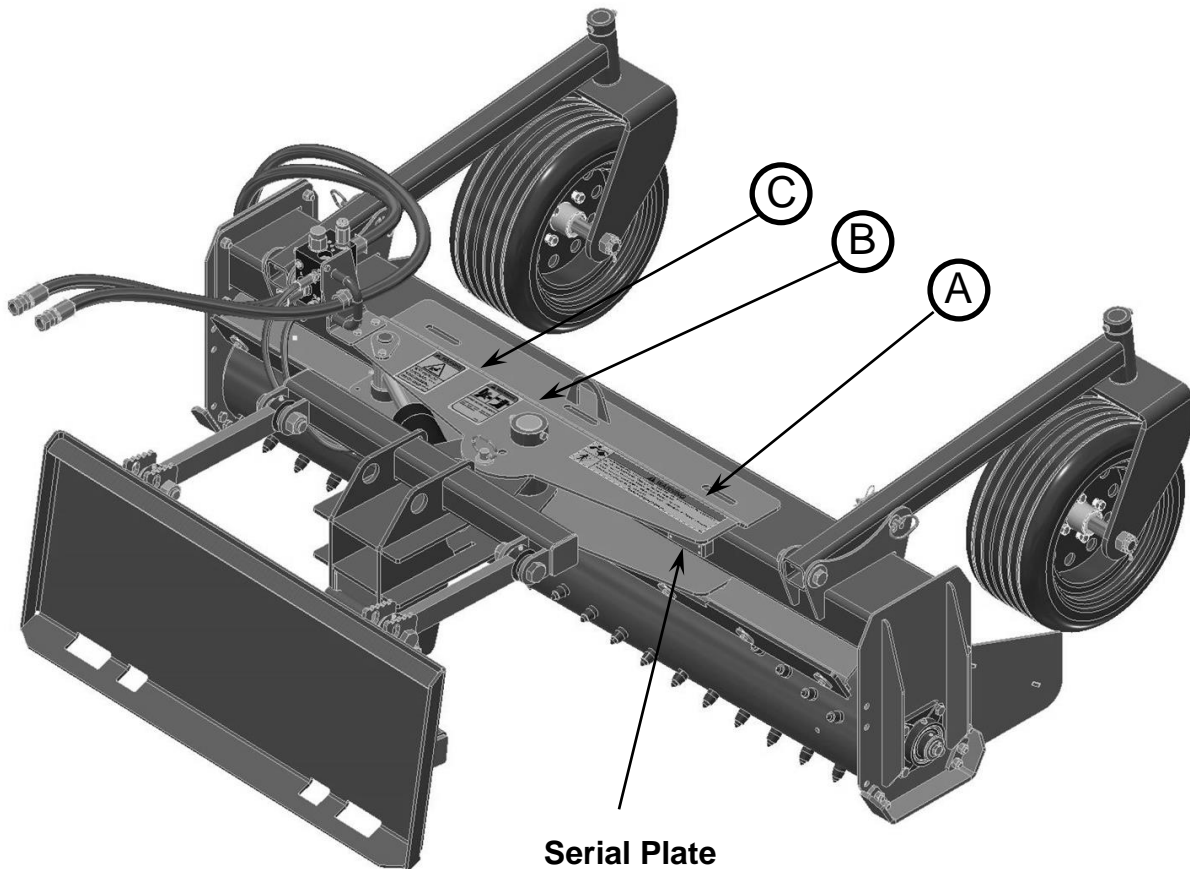
Maintenance

- **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 your 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 top near main pivot

Quantity: 1

(B)



Part Number: 203234

Location: On top near main pivot

Quantity: 1

Small Brand Decal

Location: On each endplate

Quantity: 2

(C)



Part Number: 200001

Location: On top of pivot frame

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 (see page 16 of this manual), use the following procedure to mount the attachment to the loader for user operation.

⚠ WARNING Coupler wedges or pins must extend through the holes in the attachment mounting plate. Levers must be fully down and locked. Failure to secure wedges or pins can allow 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 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 12FJX (1-1/16" Female JIC Swivel) fittings on the ends of the lead hoses.

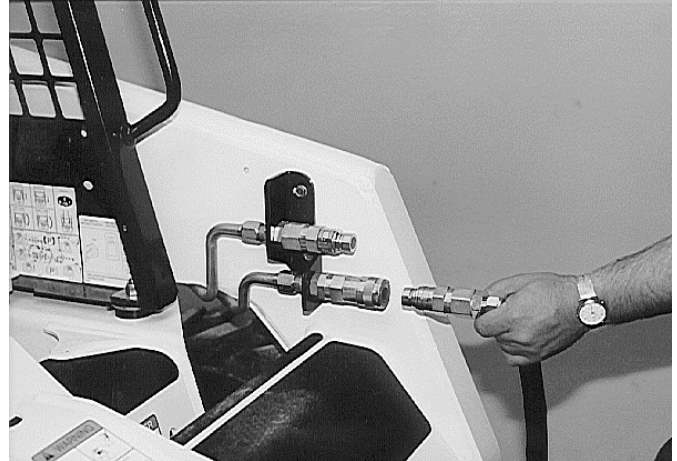
8. Connect the wire harness to the loader's wire harness receptacle. (Disregard if a pistol grip controller is supplied with the attachment.)

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 the above instructions in a reverse order to dismount the attachment from the loader.



OPERATING INSTRUCTIONS

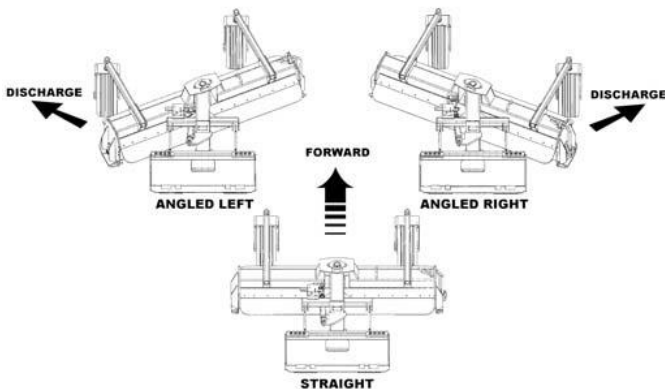


Getting Started

1. Before using the attachment, survey the entire area carefully to make sure that there aren't any obstructions that may interfere with operation or damage the attachment.

IMPORTANT: 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 attachment at a very shallow depth, just touching the soil. Large windrows could cause damage or premature wear to the rotor. Pick up the windrows before they become too large.

NOTE: If the soil is very hard and/or compacted, break up the ground before using the attachment.



2. With the operator in the seat of the loader, seat belt fastened, and seat bar lowered (if so equipped), start the engine.
3. Using the loader's tilt function, tilt the mounting plate forward away from the loader. This is the position that will fully raise the drum of the attachment off of the ground for the transporting position.
4. Fully lower the loader's boom arms. With the throttle set at idle, engage the hydraulic drive, then gradually increase the throttle to operating speed.

Hydraulic Controls

All functions can be activated by the steering lever switches on the loader (if loader is equipped), or with the pistol grip control harness.

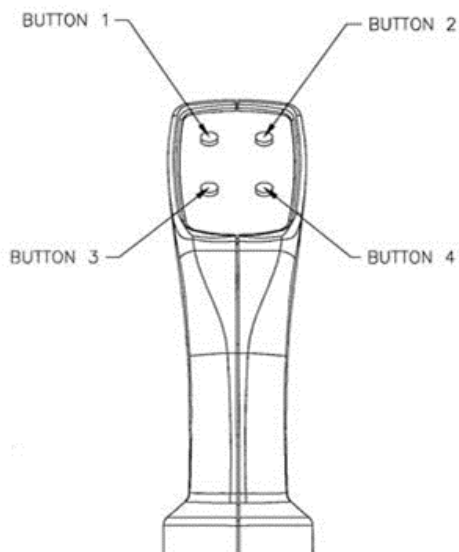
NOTE: Your loader must have the attachment control kit installed to make use of the lever switches.

The previously installed pistol grip allows the operator to engage all functions. (See "Set-Up Assembly" on page 16 of this manual.)

Functions are activated as follows:

- Button 3 swings the attachment LEFT
- Button 4 swings the attachment RIGHT

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



OPERATING INSTRUCTIONS

Adjusting Working Depth

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

The attachment working depth can be changed by adjusting the loader tilt and lift, hitch pin, or the wheel supports.

Adjustment by loader tilt and lift:

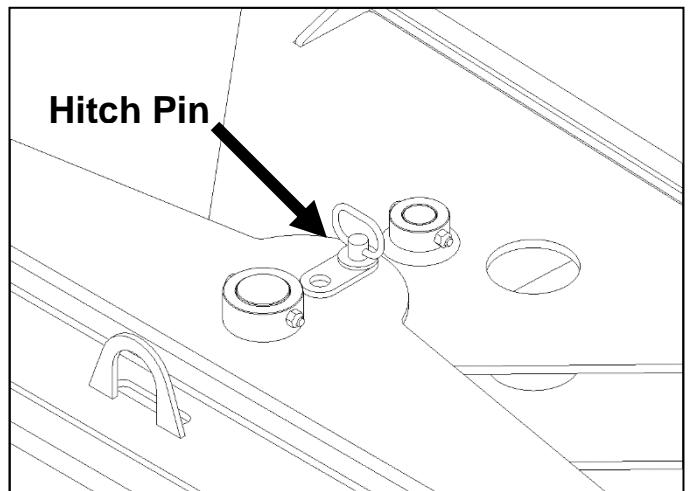
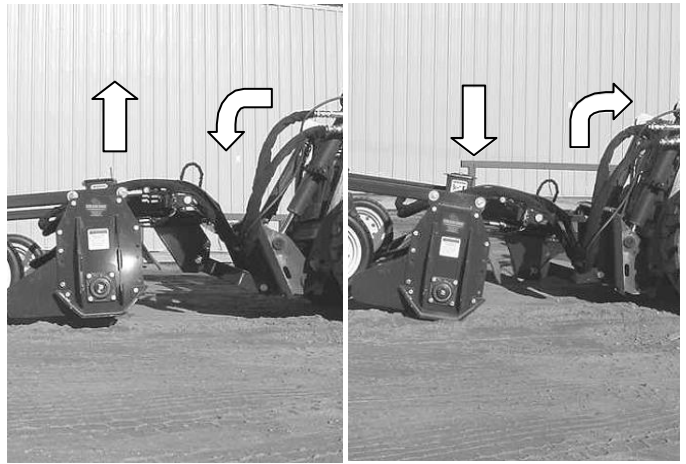
To adjust the attachment working depth by using the loader's tilt function, tilt the mounting plate backward towards the loader to till deeper. Tilt the mounting plate away from the loader to till shallower. The attachment working depth can further be adjusted by moving the loader arms up or down.

Adjustment by hitch pin:

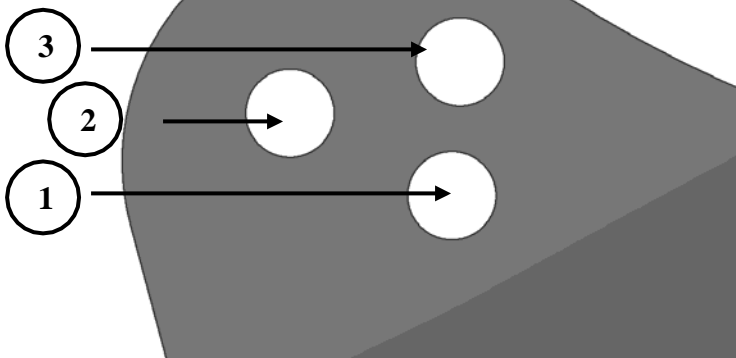
Working depth can be adjusted manually by removing the center hitch pin, pushing one side of the attachment either forward or backward, depending on the desired angle, and reinstalling the pin.

Adjustment by wheel supports:

1. Remove the hitch pin from the wheel support leg and set aside.
2. Adjust the wheel support leg to desired depth (refer to figure below for corresponding depth in inches).
3. Reinstall the pin and safety clip in the wheel support leg.

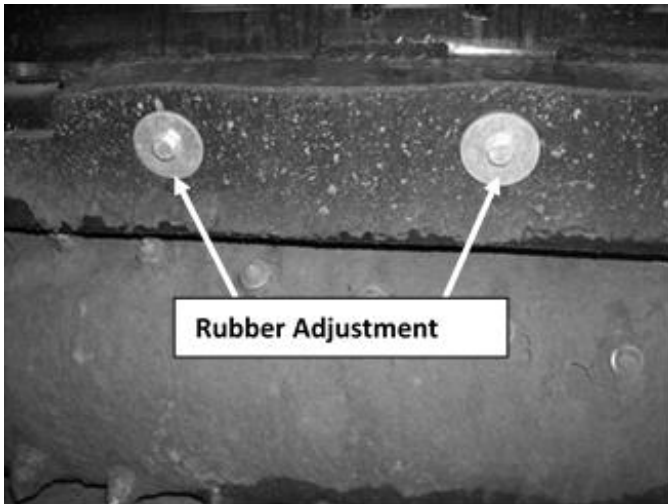


Depths in Inches



Top of Soil Conditioner

OPERATING INSTRUCTIONS



Adjusting the Rubber Shield

The rubber shield can be adjusted up to 2", to better suit the type of soil you are conditioning. To adjust the rubber shields, loosen all shield bolts, move the rubber shield to the desired location and retighten the bolts.

If the shield is higher when referenced to the drum, there is more material able to pass over the drum and discharge out the back of the attachment. The reverse effect is true when the shield is lower. (This is especially helpful when tilling in rocky conditions.)



Removing Obstructions from Rotor

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

Leveling the Area

Leveling is done while 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.

Shutting Down

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 MAINTENANCE

⚠ WARNING Lower the attachment to rest flat on the ground, 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 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 and set screws can loosen after initial usage. After the 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

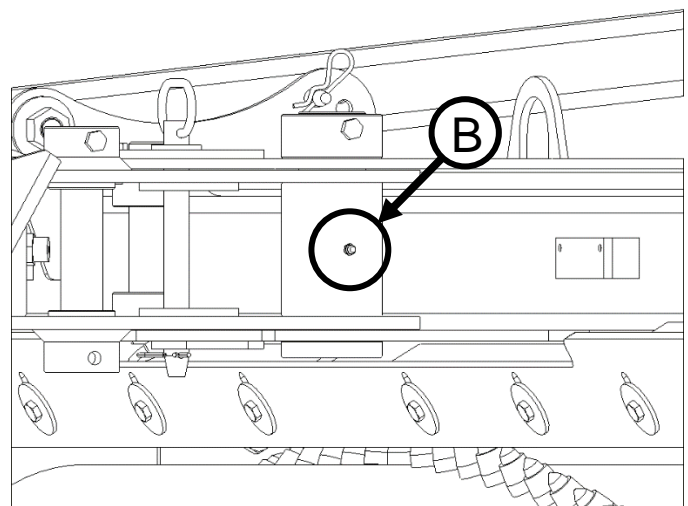
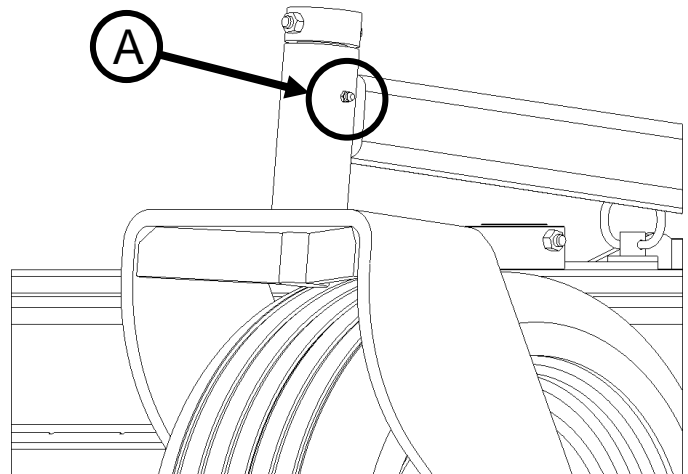
Lubrication Legend	 Multipurpose spray lube	 No. 2 Lithium base gun grease	 Clean engine oil	 Intervals at which lubrication is required
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Use No. 2 lithium base gun grease when lubricating all attachment grease fittings.

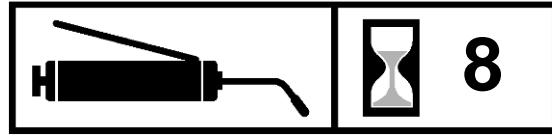
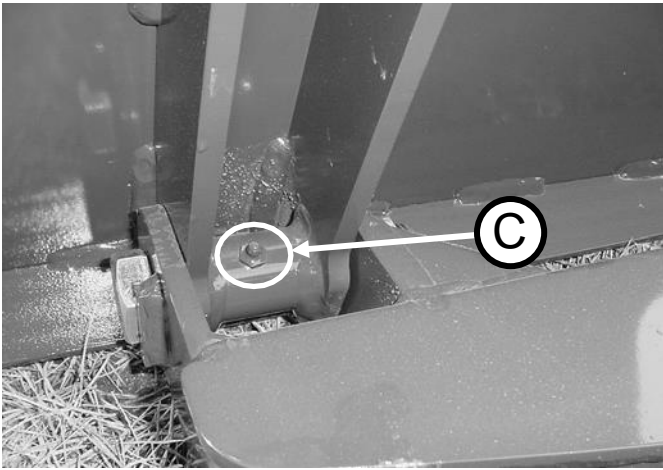
	
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Grease the (2) caster wheel bushings **[A]** after every **8 hours** of operation.

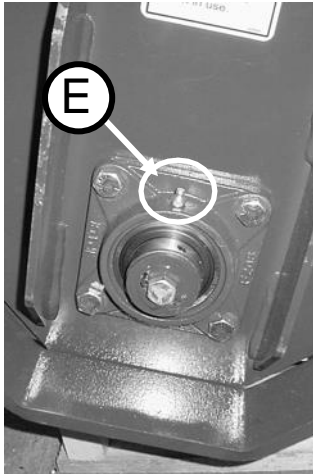
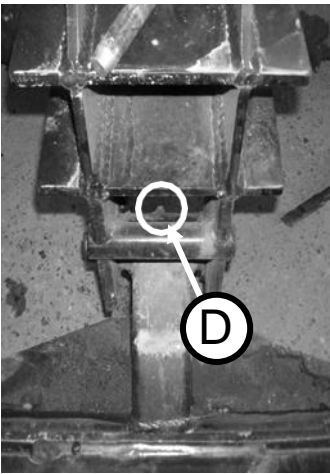
Grease the (1) center pivot bushing **[B]** after every **8 hours** of operation.



ROUTINE MAINTENANCE

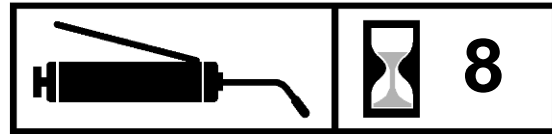


Grease the (2) lower mounting plate pivot bushings [C] after every **8 hours** of operation.



Grease the lift pivot pin [D] after every **8 hours** of operation.

NOTE: Pivot pin [D] found on floating mount models only.



Grease the rotor bearing [E] after every **80 hours** of operation.

IMPORTANT: Do not over-grease rotor bearing. Only add **two pumps** of grease every greasing interval.



Repack each castor wheel bearing **annually** using the following steps:

1. Remove each wheel from castor by removing cotter pin, slotted nut, and axle pin.
2. Clean all bearing components and repack using high quality grease.
3. Reassemble all bearing components and install new seals.
4. Reinstall each wheel in castor by reinserting the axle pin and reinstalling the slotted nut and cotter pin.

SET-UP ASSEMBLY

Caster Wheel Installation

The soil conditioner is shipped with the caster wheels arms pinned backwards on the unit.

After cutting the banding, it will be necessary to remove the pins on the attachment. The caster wheels and arms need to be flipped and bolted onto the attachment using the hardware provided.

⚠ CAUTION Avoid heavy lifting that could cause injury. Use a hoist or two people and proper lifting techniques.

The caster wheels on the attachment are adjustable in 1" increments. Use the pin and appropriate holes for the desired adjustment height, as shown in the "Operating Instructions" on page 10 in this manual.

Wire Harness Installation

If the soil conditioner was ordered with the hydraulic angling package, a wire harness is required to activate the angling feature. If the loader is equipped with an attachment control package, an appropriate harness should be installed from the factory.

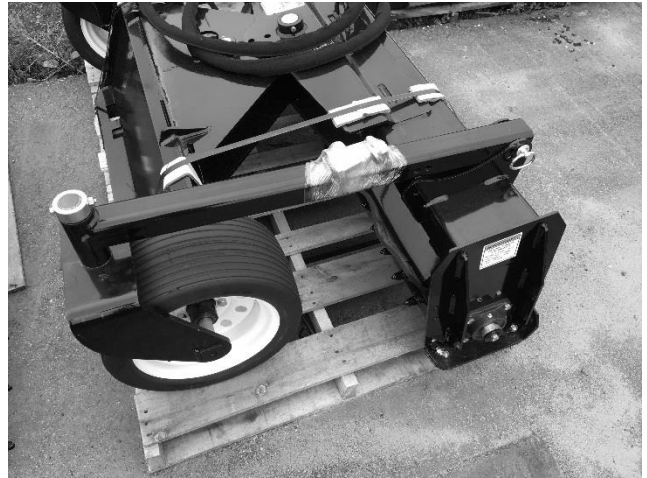
If the attachment was ordered with the pistol grip control harness, use the following steps to install the harness on the loader:

1. Install the control handle on either steering lever, whichever you prefer, with (2) hose clamps.

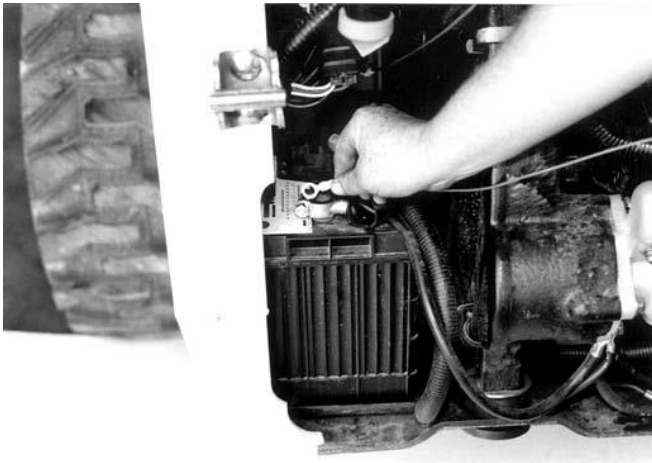
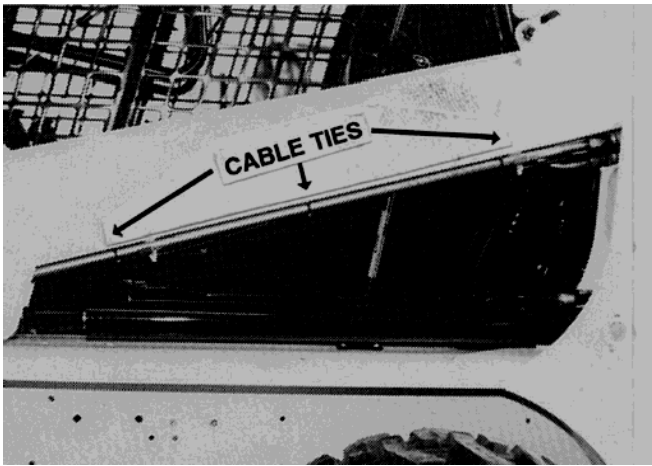
NOTE: The control handle bracket can be positioned several different ways. The recommended position is shown.

2. Put a cable tie around the wiring harness and the steering lever.
3. Install the wire harness receptacle bracket on the loader arm or near the hydraulic quick couplers.

NOTE: It may be necessary to make an adapter bracket in order to attach the wire harness to the loader.



SET-UP ASSEMBLY



4. Route the wiring harness back along the tube lines on the loader arms and fasten with cable ties.
5. Open the rear door and pull the excess wiring into the engine compartment.
6. Raise the operator cab (see loader's operator's manual for the correct procedure).
7. Connect the red fused wire to the positive battery terminal or to a suitable accessory wire with a minimum rating of 5 amps. Route the wiring along the loader main frame toward the front of the loader.
8. Fasten the control handle wiring harness connector to the main wiring harness connector.

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.

9. Lower the cab (see loader's operator's manual for the correct procedure).

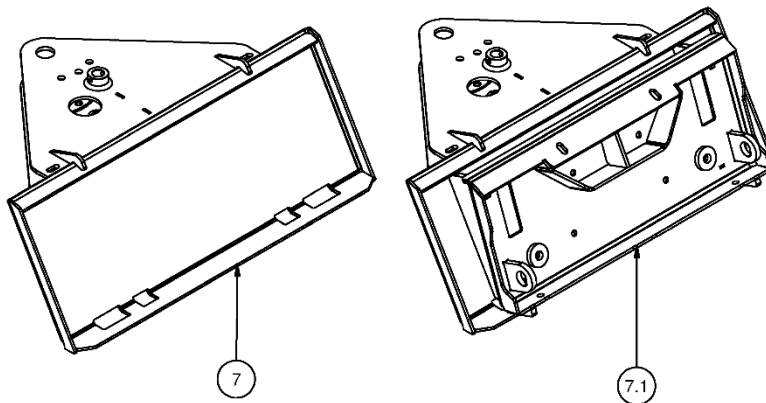
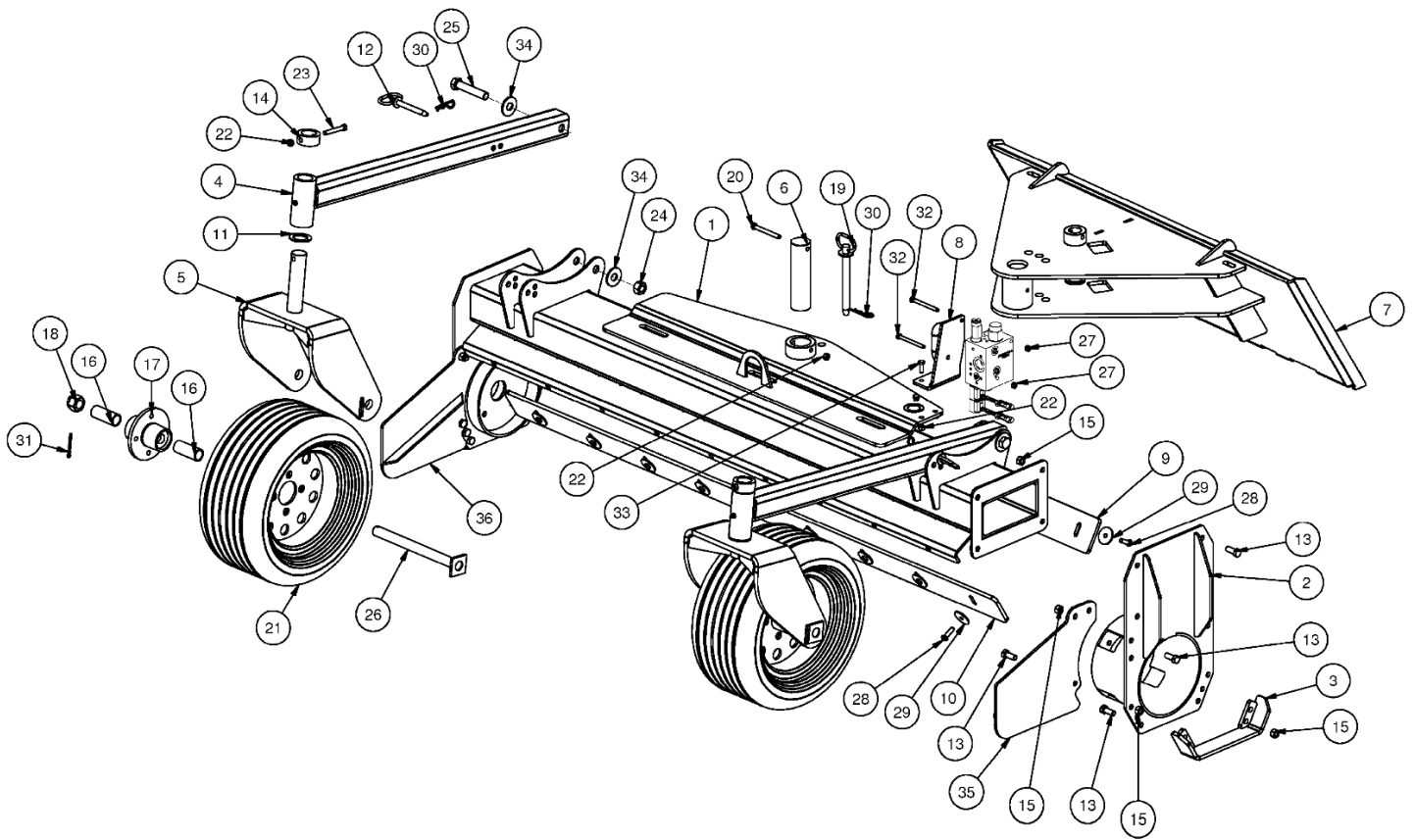
NOTE: Be sure the control handle wire harness is properly positioned as the cab is lowered.

SOIL CONDITIONER RIGID FRAME PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	319151	FRAME MAIN HYD 72" W/A	
	1	319150	FRAME MAIN HYD 84" W/A	
	1	340400	FRAME MAIN HYD 96" W/A	
2	1	319153	SIDE PLATE W/A	
3	2	420007	SKID SHOE W/A	
4	2	420008	ARM WHEEL W/A	
5	2	317055	CASTER W/A	
6	1	319193	PIN 2.00 X 7.31 W/H Z	
7	1	319157	MNT PLATE RIGID W/A	
7.1	1	422178	MNT FRAME RIGID MULTIHOOG W/A	MULTIHOOG MOUNT
8	1	319196	VALVE BLOCK MOUNT W/A	
9	1	319198	SHIELD RUBBER BACK 72	
	1	319197	SHIELD RUBBER BACK 84	
	1	340415	SHIELD RUBBER BACK 96	
10	1	420017	SHIELD RUBBER FRONT 72	
	1	420016	SHIELD RUBBER FRONT 84	
	1	340412	SHIELD RUBBER FRONT 96	
11	2	201325	WASHER MB 1-1/2 10GA NARROW	
12	2	201929	PIN LIFT ARMS 1/2 X 3-1/2	
13	12	13207	BOLT HEX	1/2 X 1 1/4 NC GR 5
	4	13207	BOLT HEX 1/2 X 1 1/4 NC GR 5	OPT WING PKG ONLY
14	2	317101	BUSHING 2.25 X 1.52 X 1.00 W/H Z	
15	12	37214	NUT HEX LOCK	1/2 NC
	4	37214	NUT HEX LOCK 1/2 NC	OPT WING PKG ONLY
16	4	317103	BUSHING 1.25 X 1.02 X 3.00 Z	
17	2	317105	HUB WHEEL 4-BOLT W/ZERK	
	2	317136	BRG WHEEL INNER	INCLUDED WITH HUB
	2	317137	SEAL GREASE 1.215 X 1.983 DB	INCLUDED WITH HUB
	4	317138	BOLT WHEEL 1/2 X 1-3/4 UNF GR5	INCLUDED WITH HUB
18	2	313850	NUT CASTLE 1" - 14 UNS PLATED	
19	1	320235	PIN HITCH 3/4 X 6	
20	1	13117	BOLT HEX	3/8 X 3 1/2 NC GR 5
21	2	317056	WHEEL/TIRE POLYUR 18 X 8.50-12	
22	7	37212	NUT HEX LOCK	3/8 NC
23	2	13114	BOLT HEX	3/8 X 2 3/4 NC GR 5
24	2	37217	NUT HEX LOCK	3/4 NC
25	2	13369	BOLT HEX	3/4 X 4 NC GR 5
26	2	317133	WHEEL AXLE PAINTED	
27	2	37211	NUT HEX LOCK	5/16 NC
28	17 (72") 21 (84") 24 (96")	13107	BOLT HEX	3/8 X 1 1/4 NC GR 5
29	17 (72") 21 (84") 24 (96")	202830	WASHER LARGE 3/8 X 1 3/4	
30	3	200064	PIN CLIP #11 1/8 X 2 5/8	
31	2	65127	PIN COTTER 3/16 X 2	
32	2	13067	BOLT HEX	5/16 X 3-1/2 NC GR 5
33	2	103116	BOLT HEX	3/8 X 1 NC GR 5
34	4	33018	WASHER FLAT	3/4"

New style Soil Conditioner S/N break 1028481 and after

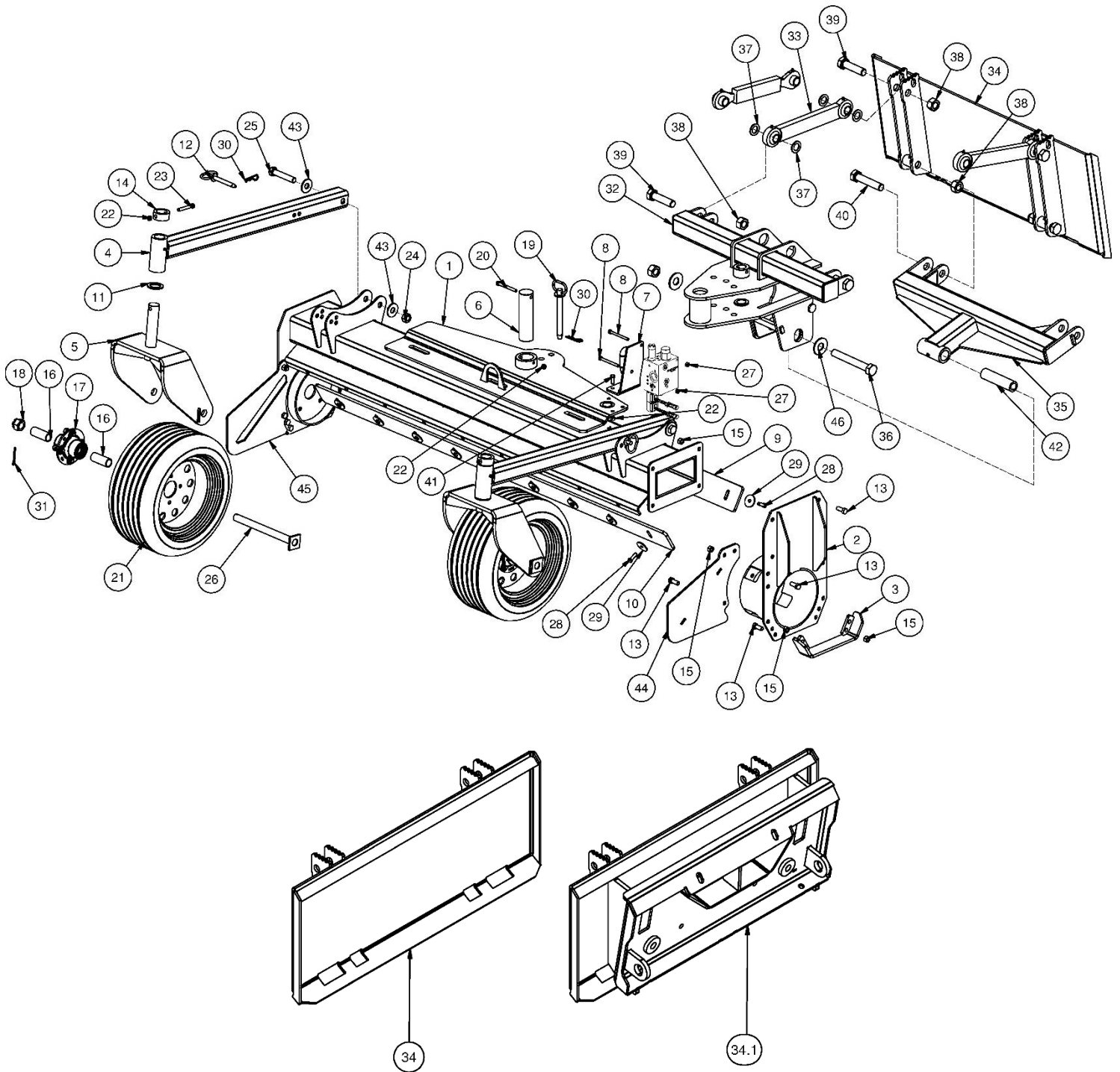
SOIL CONDITIONER RIGID FRAME PARTS INFORMATION



SOIL CONDITIONER FLOAT FRAME PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	319151	FRAME MAIN HYD 72" W/A	
	1	319150	FRAME MAIN HYD 84" W/A	
	1	340400	FRAME MAIN HYD 96" W/A	
2	1	319153	SIDE PLATE W/A	
3	2	420007	SKID SHOE W/A	
4	2	420008	ARM WHEEL W/A	
5	2	317055	CASTER W/A	
6	1	319193	PIN 2.00 X 7.31 W/H Z	
7	1	319196	VALVE BLOCK MOUNT W/A	
8	2	13067	BOLT HEX 5/16 X 3-1/2 NC GR 5	HYDRAULIC OPTION
9	1	319198	SHIELD RUBBER BACK 72	
	1	319197	SHIELD RUBBER BACK 84	
	1	340415	SHIELD RUBBER BACK 96	
10	1	420017	SHIELD RUBBER FRONT 72	
	1	420016	SHIELD RUBBER FRONT 84	
	1	340412	SHIELD RUBBER FRONT 96	
11	2	201325	WASHER MB 1-1/2 10GA NARROW	
12	2	201929	PIN LIFT ARMS 1/2 X 3-1/2	
13	12	13207	BOLT HEX	1/2 X 1 1/4 NC GR 5
	4	13207	BOLT HEX 1/2 X 1 1/4 NC GR 5	OPT WING PKG ONLY
14	2	317101	BUSHING 2.25 X 1.52 X 1.00 W/H Z	
15	12	37214	NUT HEX LOCK	1/2 NC
	4	37214	NUT HEX LOCK 1/2 NC	OPT WING PKG ONLY
16	4	317103	BUSHING 1.25 X 1.02 X 3.00 Z	
17	2	317105	HUB WHEEL 4-BOLT W/ZERK	
	2	317136	BRG WHEEL INNER	INCLUDED WITH HUB
	2	317137	SEAL GREASE 1.215 X 1.983 DB	INCLUDED WITH HUB
	4	317138	BOLT WHEEL 1/2 X 1-3/4 UNF GR5	INCLUDED WITH HUB
18	2	313850	NUT CASTLE 1" - 14 UNS PLATED	
19	1	320235	PIN HITCH 3/4 X 6	
20	1	13117	BOLT HEX	3/8 X 3 1/2 NC GR 5
21	2	317056	WHEEL/TIRE POLYUR 18 X 8.50-12	
22	7	37212	NUT HEX LOCK	3/8 NC
23	2	13114	BOLT HEX	3/8 X 2 3/4 NC GR 5
24	2	37217	NUT HEX LOCK	3/4 NC
25	2	13369	BOLT HEX	3/4 X 4 NC GR 5
26	2	317133	WHEEL AXLE	
27	2	37211	NUT HEX LOCK 5/16 NC	HYDRAULIC OPTION
28	17 (72") 19 (84") 24 (96")	13107	BOLT HEX	3/8 X 1 1/4 NC GR 5
29	17 (72") 19 (84") 24 (96")	202830	WASHER LARGE 3/8 X 1 3/4	
30	3	200064	PIN CLIP #11 1/8 X 2 5/8	
31	2	65127	PIN COTTER 3/16 X 2	
32	1	319154	FLOATING PIVOT MOUNT W/A	
33	2	319049	UPPER CONTROL ARM	REPLACED 319070
	2	319070	UPPER CONTROL ARM W/A	OBSOLETE
34	1	319155	MOUNTING PLATE FLOATING W/A	
34.1	1	422177	MOUNTING FRAME FLOATING MULTIHOOG W/A	MULTIHOOG MOUNT
35	1	319156	BOTTOM MOUNT FLOATING W/A	
36	1	13478	BOLT HEX	1 X 7-1/2 NC GR 5
37	8	421584	PLATE SPACER DRIVE PULLEY Z	
38	7	37219	NUT HEX LOCK	1 NC
39	4	13469	BOLT HEX	1 X 4 NC GR 5
40	2	13473	BOLT HEX	1 X 5 NC GR 5
41	2	103116	BOLT HEX	3/8 X 1 NC GR 5
42	1	319192	BUSHING 1.50 x 1.03 x 6.00 Z	
43	4	33018	WASHER FLAT	3/4"
44	1	319152	WING LH NEW W/A	OPT WING PKG ONLY
45	1	319149	WING RH NEW W/A	OPT WING PKG ONLY
46	2	33022	WASHER FLAT	1"

SOIL CONDITIONER FLOAT FRAME PARTS INFORMATION



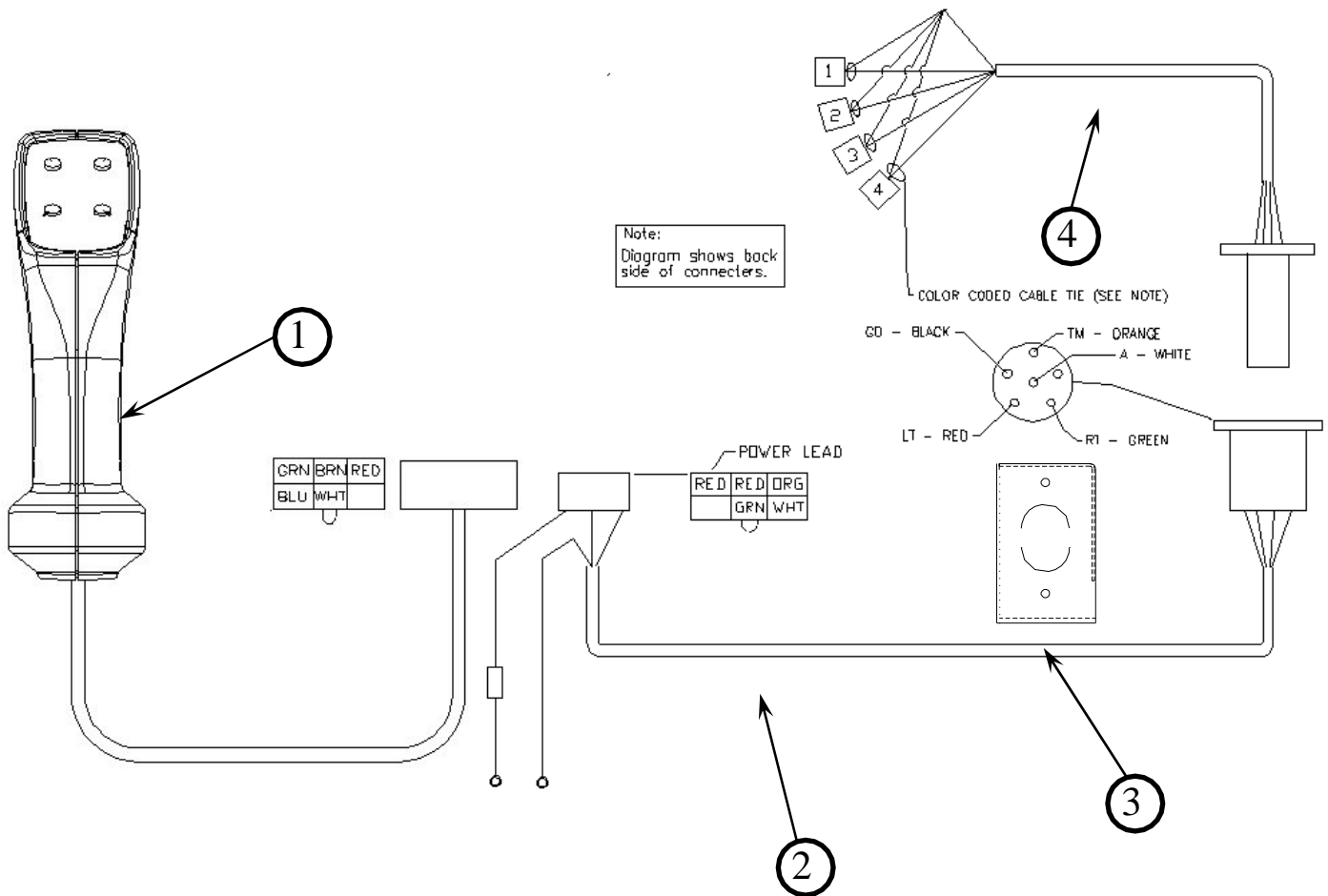
SOIL CONDITIONER HYDRAULIC PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
1	1	319002	ROTOR 72" W/A	
	1	319003	ROTOR 84" W/A	
	1	340401	ROTOR 96" W/A	
2	1	319085	BRG 1-1/2 F-BOLT FLG B-TYPE	
3	1	319124	WASHER SHAFT END PAINTED	
4	1	319125	WASHER BOLT LOCK PAINTED	
5	1	319118	MOTOR HYD 19 CID 6K SERIES	
6	2	201527	ADPT STR 16MB-12MJ	
7	1	300588	CYLINDER 3 X 6 BUSHING-BUSHING	HYDRUALIC OPTION
8	1	319194	PIN 1.25 X 7.31 W/H Z	HYDRUALIC OPTION
9	1	300104	PIN 1.25 X 5.125 W/A	HYDRUALIC OPTION
11	1	319104	VALVE ASSEMBLY	HYDRUALIC OPTION
12	1	64137	PIN ROLL 3/16 x 1.5	
13	1	13207	BOLT HEX	1/2 X 1 1/4 NC GR 5
14	4	13209	BOLT HEX	1/2 X 1 1/2 NC GR 5
15	8	37214	NUT HEX LOCK	1/2 NC
16	4	13210	BOLT HEX	1/2 X 1 3/4 NC GR 5
17	1	319199	HOSE 3/4 X 40 12FJX-12MB	LEAD (72" & 84" ONLY)
	1	340424	HOSE 3/4 X 48 12FJX-12MB	LEAD (96" ONLY)
18	1	319134	ADPT UNION 12FB-12FB	
19	1	319160	HOSE 3/4 X 92 12MB-12FJX	LEAD
20	1	300586	HOSE 3/4 X 134 12FJX-12FJX	RETURN
21	1	13114	BOLT HEX	3/8 X 2 3/4 NC GR 5
22	2	37212	NUT HEX LOCK 3/8 NC	HYDRUALIC OPTION
23	1	320089	ADPT ELB 8MB-6MJ-90	HYDRUALIC OPTION
24	1	201925	ADPT STR 8MB-6MJ	HYDRUALIC OPTION
25	1	103116	BOLT HEX 3/8 X 1 NC GR 5	HYDRUALIC OPTION
26	1	319044	HUB PLATE SC W/A	PARTS ONLY (INC IN ROTOR W/A)
27	6	319123	BOLT WHEEL 1/2 X 1 NF	PARTS ONLY (INC IN ROTOR W/A)
29	2	300587	HOSE 1/4 X 29 6FJX-6MB	CYLINDER - HYD OPT

VALVE INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
3	1	300296	LOGIC ELEMENT	
5	1	320475	VALVE - DIRECTIONAL	
7	2	300297	VALVE - CHECK	
8	2	300796	COIL VALVE 12V ECOIL #8	REPLACED D-COILS
	2	320096	VALVE - COIL DIRECTIONAL 12V	REPLACED BY E-COIL
9	1	300298	VALVE - PRESSURE RELIEF	

WIRE HARNESS PARTS INFORMATION



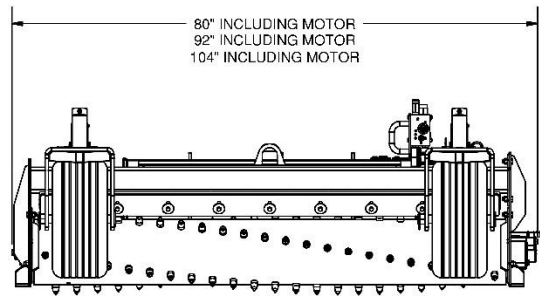
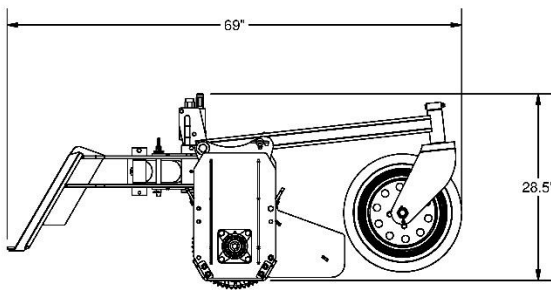
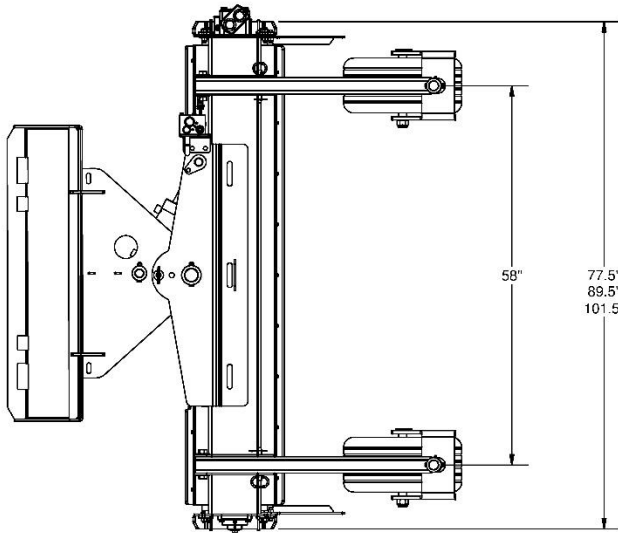
REF.	PART NO.	DESCRIPTION	QTY.
	315128	COMPLETE HARNESS – generic (shown).....	1
1	315110	PISTOL GRIP – handle assembly w/ harness.....	1
2	315126	LOADER HARNESS – assembly.....	1
3	202489	RECEPTACLE BRACKET – loader harness.....	1
4	315127	BLOWER HARNESS – assembly.....	1

Optional Harnesses (not shown):

315090	14-PIN UNIVERSAL – for Bobcat® Loaders
315152	14-PIN UNIVERSAL – for Case® & New Holland® Loaders
320084	14-PIN UNIVERSAL – for John Deere® Loaders
200008	8-PIN – for Caterpillar® A series Loaders
315153	8-PIN – for ASV® Loaders
315339	8-PIN – for Caterpillar® B series High-Flow Loaders

GENERAL SPECIFICATIONS

Model	SC72	SC84	SC96
Rotor Width	72"	84"	96"
Angling	Manual 25°	Manual 25°	Manual 25°
Hydraulic Angling	Optional	Optional	Optional
Wheels/Tires	18 x 8.50 Polyurethane	18 x 8.50 Polyurethane	18 x 8.50 Polyurethane
Teeth	Carbide	Carbide	Carbide
Recommended Hydraulic Flow	15 to 33 GPM	15 to 33 GPM	15 to 33 GPM
Mounting Plate	Universal	Universal	Universal
Operating Weight Rigid model	900 lbs.	950 lbs.	1000 lbs.
Operating Weight Float model	1050 lbs.	1100 lbs.	1150 lbs.



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	4,700	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

TROUBLESHOOTING

Problem	Possible Cause	Solution
Poor soil conditioning performance	Hydraulic leak or restricted flow	Check hydraulic lines and motor for leaks or pinch points.
	Insufficient hydraulic flow from loader	Check loader relief and flow rate by performing a flow rate test.
	Loose motor bolts	Check bolts on motor for proper torque.
	Poor operating technique	Follow "Operating Instructions" on pages 9-11 in this manual and adjust conditioner settings as needed. Gaining more experience operating the attachment will make it easier to achieve the desired results.
Attachment rotates in wrong direction	Couplers installed backwards	Reverse couplers on lead hoses.
Hydraulic couplers do not engage properly	Couplers on attachment and loader are incompatible	Check that couplers on attachment and loader are same brand and style.

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.

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P/N 300658
Erskine Attachments LLC

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