



3-Point Stump Grinder

for

Compact Tractors

Operator's Manual
Set-Up Assembly
Maintenance
Parts Information



Read this Manual Before Use

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REFERENCE INFORMATION

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

Serial Number....._____

YOUR 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 (“Tractor”).

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.

Improper operation can cause serious injury or death.

Pre-operation

- This attachment is designed to be used for grinding stumps from just above ground level to below ground level. **NEVER** use this machine for any other purpose.
- Read the operator's manual for the "Compact Tractor". **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.).
- Only use attachment with a tractor equipped with a Roll Over Protection System (ROPS) and seatbelt.

Operation

- Avoid loose fitting clothing. Clothing or hair caught in moving parts may lead to serious injury or death.
- Avoid wood dust inhalation. Wear an approved respirator (minimum N95 type) or operate with an enclosure that provides similar protection.
- Always wear eye protection that meets ANSI z87.1 or operate with an enclosure that provides similar protection.
- To protect the operator from hearing loss, ear protection is required unless the tractor is equipped with a noise reduction cab that meets OSHA 1910.95 standard.

Operation (continued)

- Hydraulic connections may be hot after use. Use gloves if connecting or disconnecting after use.
- Check and be sure all operating controls are in neutral before starting the engine.
- Keep people away from tractor, 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 with seatbelt fastened when using the attachment.
- Before leaving the operators position, disengage PTO 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.

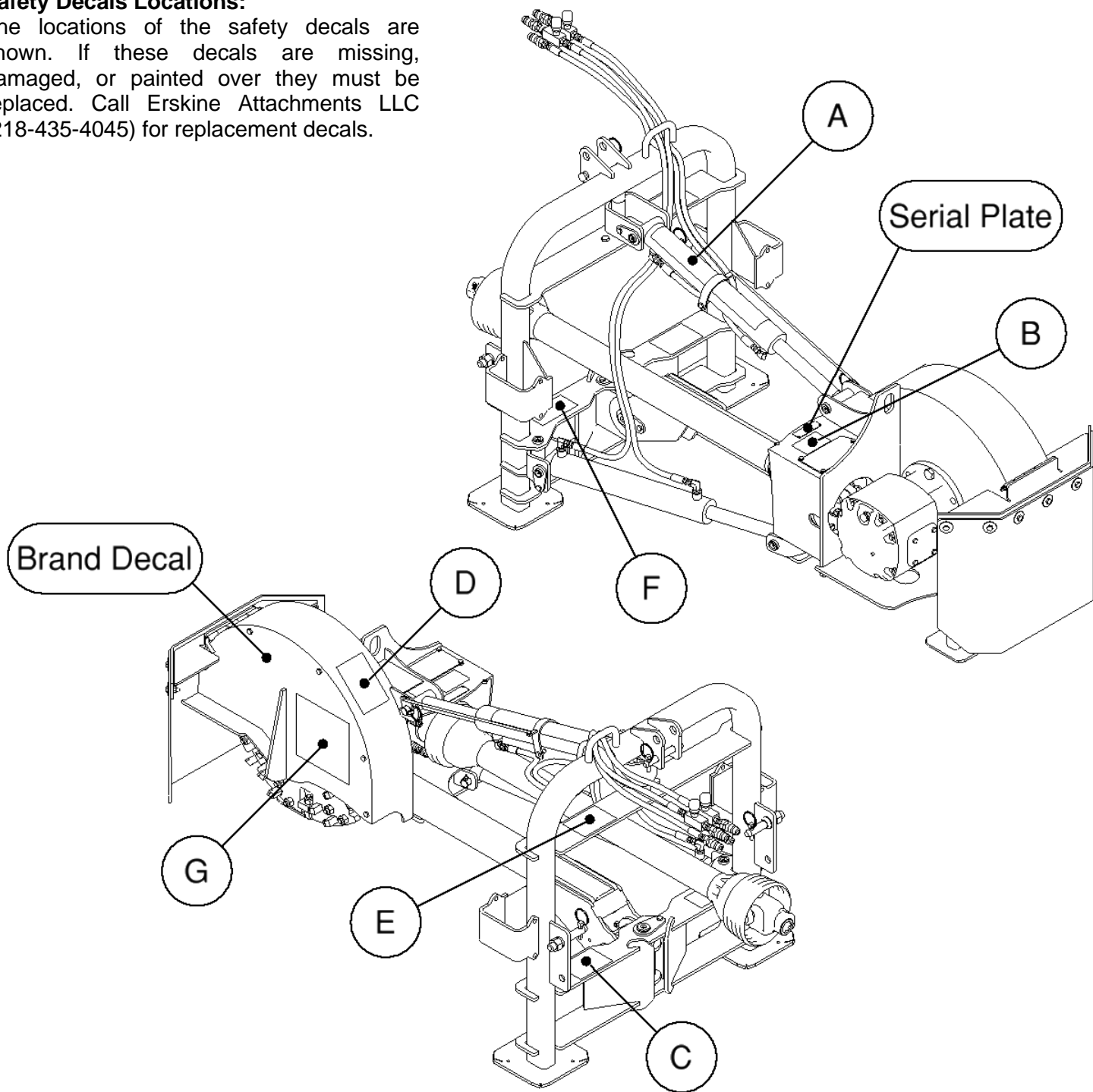
SERIAL NUMBER AND SAFETY DECAL LOCATIONS

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.

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.



SERIAL NUMBER AND SAFETY DECAL LOCATIONS

(A)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----

Part number: 421955
Location: Top of lift cylinder
Quantity: 1

(B)



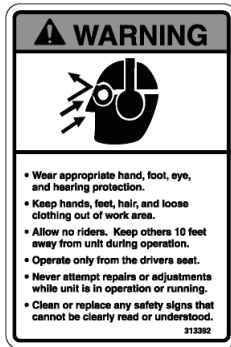
Part number: 420855
Location: Top of driveline shield
Quantity: 1

(C)



Part number: 421518
Location: LH side of bottom frame plate
Quantity: 1

(D)



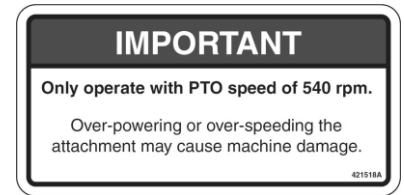
Part number: 313392
Location: Back of wheel cover
Quantity: 1

(E)



Part number: 200001
Location: LH side of top frame plate
Quantity: 1

(F)



Part number: 421518
Location: RH side of bottom frame plate
Quantity: 1

(G)



Part number: 316078
Location: LH side of wheel cover
Quantity: 1

Small Brand Decal

Location: Both sides of wheel cover
Quantity: 2

MOUNTING INSTRUCTIONS

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

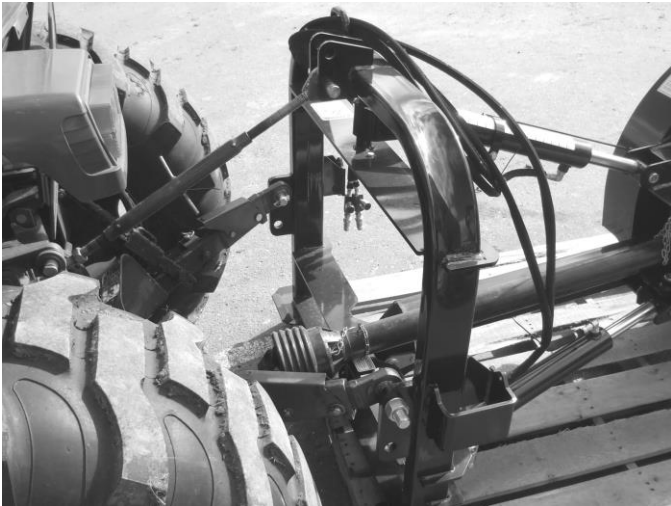


1. Use the step, safety treads, and grab handles to get on and off of the tractor.

2. Sitting in the operator's seat, fasten the seatbelt.

3. Drive the tractor to the front of the stump grinder. Align the tractor 3-point arms with the attachment mounting pins.

4. Stop the engine and engage the park brake.



5. Connect the lower 3-point links to the stump grinder using the provided pins. Ensure that the lower arms are stabilized to prevent side-to-side movement.

6. Check that the lower lift arms are an equal height off the ground, and adjust if needed (refer to your tractor's operator's manual).



7. Connect the tractor top link to the frame of the stump grinder using the provided pins. There are two holes in the top clevis. Use the hole that fits your tractor hitch category and allows for proper adjustment of the attachment.

8. Adjust the tractor top link so that the frame of the stump grinder sits vertically on the ground.

9. Apply a liberal amount of all-purpose grease to the tractor PTO shaft.

MOUNTING INSTRUCTIONS

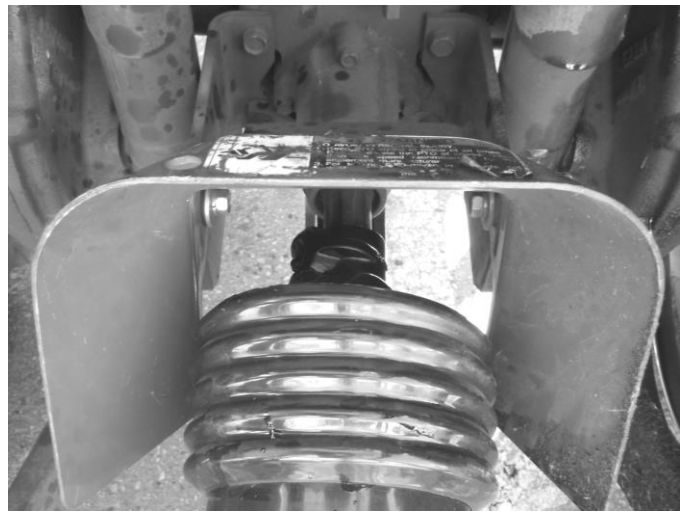
10. Compress the quick release pin on the attachment driveline and align the splines with the PTO shaft. Slide the universal joint of the driveline onto the PTO shaft until the quick release pin locks the driveline into place (usually about 1.5" to 2" on the tractor PTO shaft).
11. Attach the safety chain to the tractor. Check that the opposite end of the chain is connected to the driveline shield.
12. Push and pull on the yokes at both ends to verify that the driveline is secured to the tractor and stump grinder.

⚠ WARNING The tractor must be equipped with working PTO shield. Never adjust or move the driveline when connected to the tractor and the tractor's PTO drive is engaged to avoid serious injury or death.

⚠ WARNING Make sure PTO driveline and 3pt arms with all appropriate pins are locked in place to avoid serious injury or death.

13. Ensure that the tractor drawbar does not interfere with the stump grinder or driveline through the full range of motion. Check the drawbar and driveline for clearance when raising the attachment for the first time.
14. Connect the hydraulic couplers to the tractor auxiliary hydraulics. (For auxiliary hydraulics location, refer to your tractor's operator's manual.)
15. Verify that the hydraulic hoses are clear of any potential pinch points through the full range of motion, and secure the hoses to the top of the frame if necessary. Hose routing will depend on your specific tractor.

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

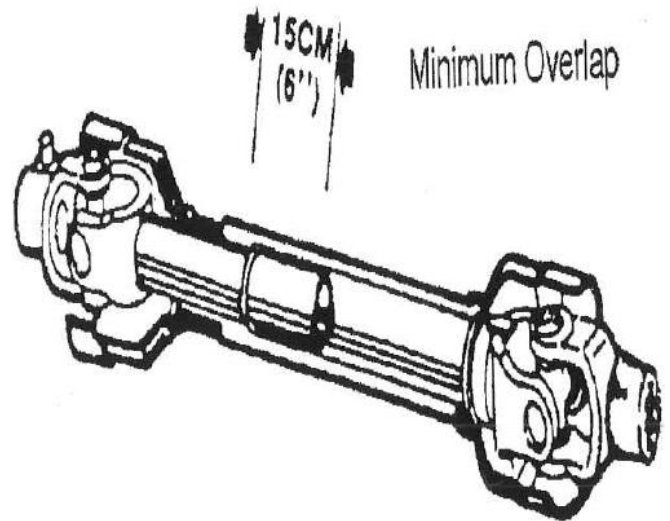


INSTRUCTIONS FOR SHORTENING THE DRIVELINE

⚠ WARNING The tractor must be equipped with working PTO shield. Never adjust or move the driveline when connected to the tractor and the tractor's PTO drive is engaged to avoid serious injury or death.

In some cases, it may be necessary to shorten the PTO assembly to match your particular tractor. This is done as follows:

1. Fully raise the stump grinder cutting wheel and swing the stump grinder to be centered. This position gives the shortest distance between the tractor and gearbox shafts. Shut down the tractor, leaving the attachment in position of shortest distance between the shafts. Securely block the attachment in this position.
 2. Pull the driveline apart. Attach the outer (female) section to the tractor PTO shaft. Make sure the driveline is locked into place.
 3. Hold the driveline sections parallel to each other to determine if they are too long. Each section should stop approximately 3" short of reaching the universal joint shield on the opposite section. If the shaft is too long, measure back 3" from the universal joint and mark it on the opposite end. Do this on both ends of the driveline.
- IMPORTANT:** Do not cut until steps 4 and 5 are completed.
4. Raise and lower the stump grinder cutting wheel and swing side to side to determine the position with the greatest distance between the PTO shaft and the gearbox input shaft. Shut the tractor off, leaving the stump grinder in the position of greatest distance between the shafts. Securely block the attachment in this position.
 5. Hold the driveline sections parallel to each other and check for a minimum overlap of 6". Overlap will be the distance between the marks.



6. If the driveline needs to be cut, remove the marked section of the driveline and shield with a hack saw.
7. Apply multi-purpose grease to the inside and outside of both driveline ends and slide them together.
8. Install the driveline on the tractor and stump grinder.
9. Raise, lower, and swing the stump grinder cutting wheel to check that the PTO assembly does not jam. If it does, cut equal amount off from each end.
10. Check and make sure the swinging draw bar on the tractor does not contact the driveline. The draw bar can either be moved forward or removed on most tractors (refer to your tractor's owner's manual).

OPERATING INSTRUCTIONS

IMPORTANT: Prior to operation, remove any obstructions such as rocks or branches from the work area that might be picked up and thrown. Avoid contact between the cutting wheel and metallic objects, rocks, and other objects harder than a stump.

1. With the operator in the seat of the tractor and the seat belt fastened, start the engine.
2. Using the auxiliary hydraulics, raise the cutting wheel.
3. Stop the engine and engage the parking brake.
4. Remove the retaining pin from the parking stand, flip the parking stand to the operating position, and reinsert the pin.
5. Return to the seat of the tractor, fasten seatbelt, and start the engine.
6. Raise the 3pt arms to lift the attachment off of the ground.
7. Position the tractor so that the stump grinder cutting wheel is above the stump and the cut will be made on the side of the stump nearest to the tractor. Lower the stump grinder so that the frame rests on the ground, and engage the tractor parking brake.

⚠ WARNING To avoid serious injury or death due to rollover, **NEVER** position the tractor sideways on a hill. If a stump is on a hill, position the tractor on the downhill side of the stump.

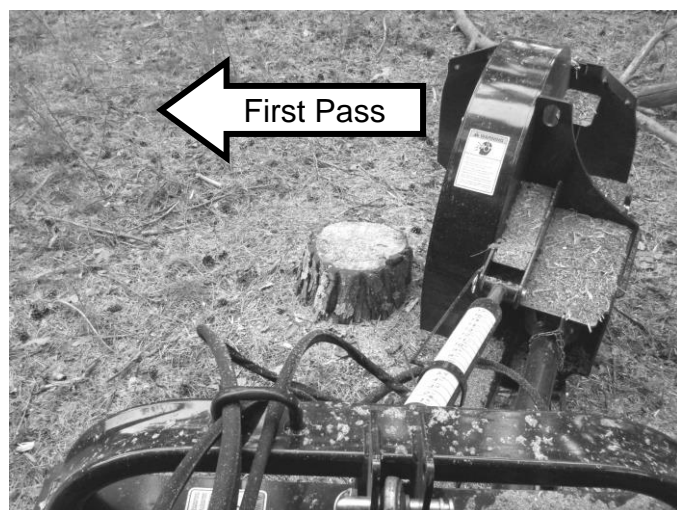
8. With the engine RPM at an **idle**, engage the tractor PTO. Gradually throttle the engine up to operating RPM.

IMPORTANT: Do not engage or disengage PTO at full throttle.

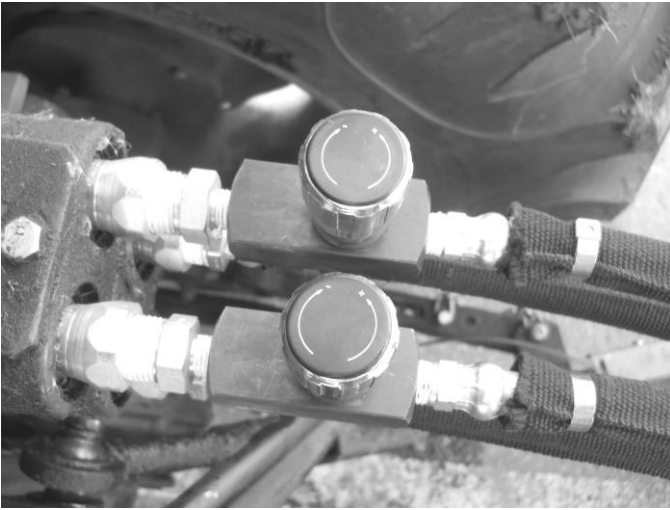
IMPORTANT: Do not engage PTO with stump grinder frame raised off of the ground.

9. Using the tractor auxiliary hydraulic controls, swing the cutting wheel to the far right side (looking back at stump) and lower it to where it will make a 3 to 6 inch cut.

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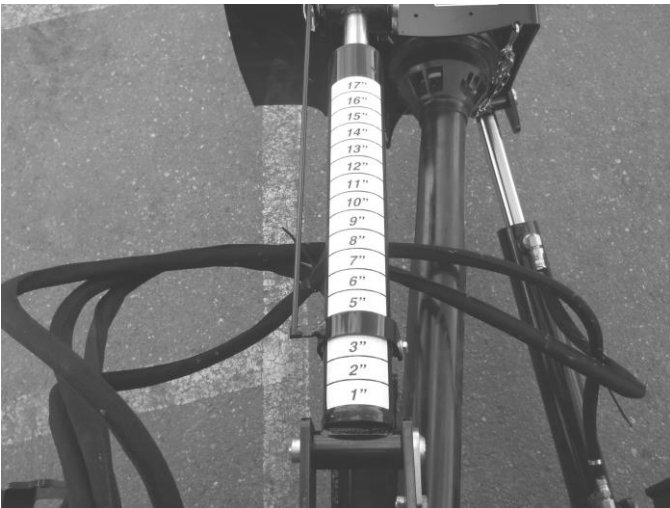
OPERATING INSTRUCTIONS



10. Swing the cutting wheel from right to left to make the first pass across the stump. The size of the cut that can be made per pass will depend on the tractor and type of stump being cut. Tractors with more power can make larger cuts more easily. Find the cut size that allows your tractor to run the most smoothly and efficiently.

NOTE: The swing speed can be adjusted using the two flow control knobs on the stump grinder hydraulic lines. Each knob controls one swing direction. It is recommended to start with both knobs set at the slowest speed (turned nearly all the way clockwise) and adjust the speed up by turning the knobs counter-clockwise as needed.

NOTE: If the attachment tends to chatter on the return stroke (left to right), suitcase weights can be mounted on the frame for additional stability (see page 12). Reducing cutting speed or depth of cut can also reduce attachment chattering.



11. After completing the first pass, lower the stump grinder for the next pass, using the cylinder extension gauge as a reference. Every 1 inch on the gauge is about 1.5 to 2 inches of cutting depth.

12. Make the next cut, this time swinging from left to right.

13. Continue to make passes along the stump, cutting 3 to 6 inches with each pass, until the cutting wheel is grinding the stump 3 to 6 inches below the ground.

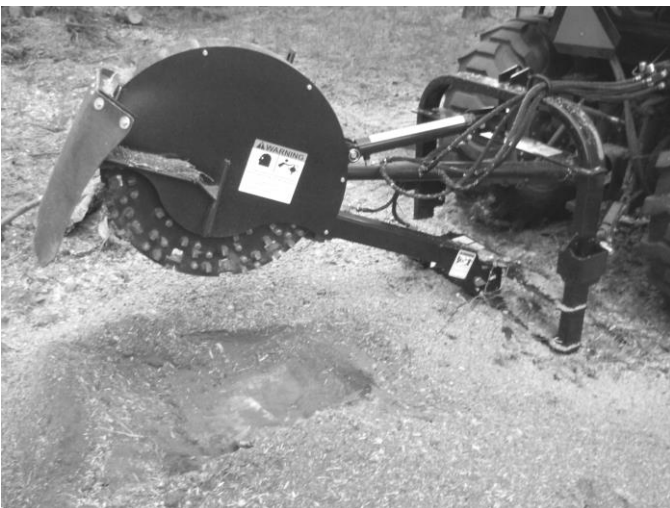
14. If necessary, raise the cutting wheel and swing it to the far right, lift the stump grinder frame slightly off of the ground, and back the tractor up to the new face of the stump.

15. Lower the frame to the ground, and repeat steps 8 through 12 to grind the next portion of the stump.

16. Reposition the tractor and repeat the process as many times as necessary to remove the entire stump.

17. Use the same process to remove and surface roots in the area around the removed stump.

18. Once the entire stump and all surface roots have been removed, throttle the tractor engine down to an idle and disengage the tractor PTO.



OPERATING INSTRUCTIONS

Weight Brackets

⚠ WARNING Never use an attachment that is heavier than the rated lift capacity of the tractor 3-point arms. Instability can lead to serious injury or death.

The stump grinder has weight brackets on each side of the frame that can be used to add weight for increased down pressure on the frame.

Counterweights and retaining pins are not supplied with the stump grinder or offered as optional equipment.

The two brackets are each designed to fit two John Deere 42 lb. or two 70 lb. suitcase weights. Other brands may also work with the weight brackets.

IMPORTANT: The maximum allowable weight limit is 140 lbs. (63.5 kg) per side and 280 lbs. (127 kg) total for the unit.

JD 42 lb. suitcase weight P/N R66949
JD 70 lb. suitcase weight P/N BM19780

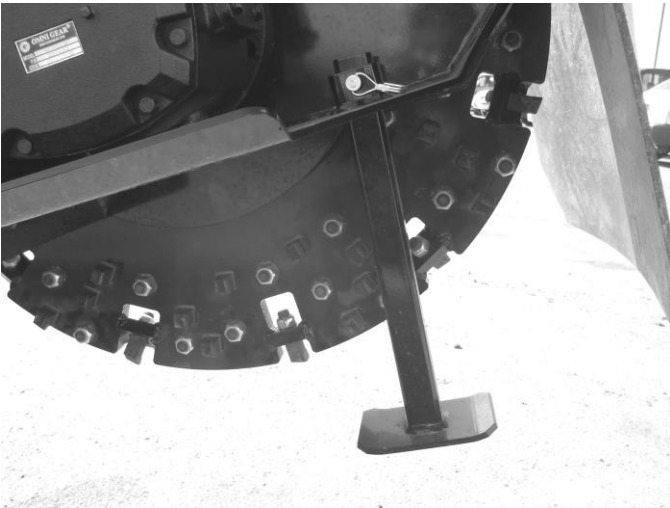


UNHOOKING THE STUMP GRINDER

Use the following procedure to unhook and store the stump grinder when not in use.



1. Park the tractor and stump grinder on a solid, level surface and lower the 3pt arms so that the stump grinder frame sits on the ground.
2. Turn off the engine and engage the parking brake.
3. Remove the retaining pin from the parking stand, flip the parking stand to the parking position, and reinsert the pin.
4. Return to the tractor's operator's seat and start the engine.



5. Using the auxiliary hydraulics, slowly lower the cutting wheel until the parking stand rests on the ground and tension is taken off of the top link pin.
6. Turn off the engine and disconnect the stump grinder hydraulic couplers from the tractor.
7. Unhook the driveline from the tractor PTO by compressing the quick release pin on the driveline yoke and sliding the driveline off of the PTO shaft.
8. Disconnect the upper and lower 3pt links from the stump grinder.



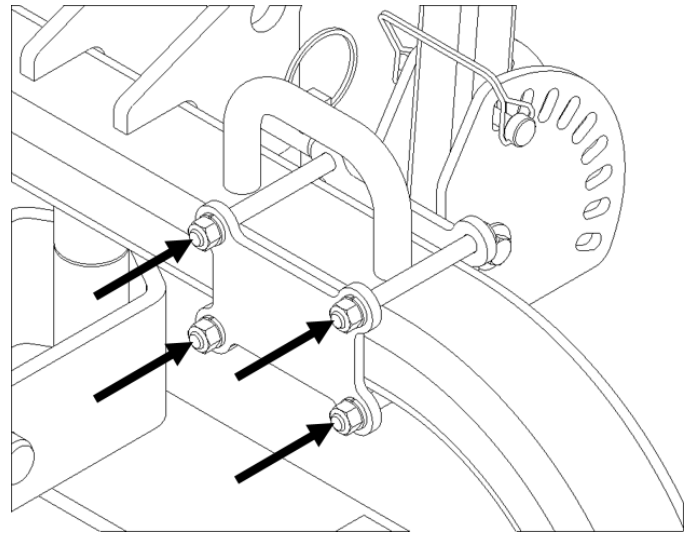
9. With everything disconnected, return to the tractor's operator's seat, start the engine, and slowly drive the tractor forward away from the stump grinder until certain that every part of the tractor is clear of the attachment.
10. When storing for a long period of time (end of season), store the stump grinder in a dry place with the driveline off of the ground. Clean the stump grinder thoroughly and repair/replace any damaged or worn parts or paint. This will help ensure that the stump grinder will be in the best working condition the next time it is used.

OPTIONAL CONTROL VALVE

The following details the setup and operation of the optional external control valve for tractors that have only one auxiliary hydraulic remote.

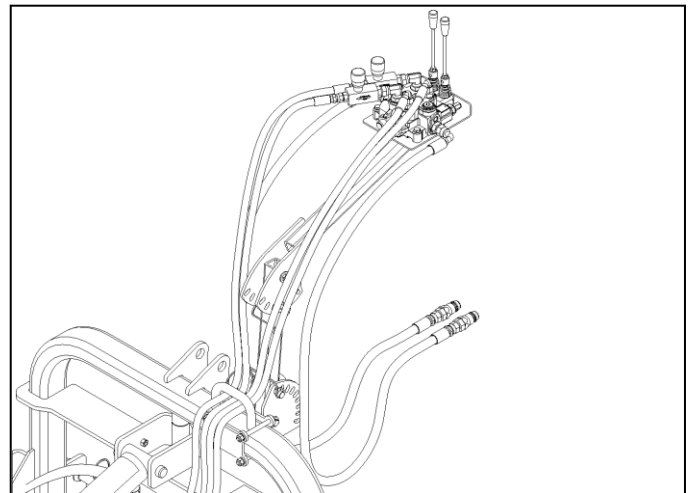
Installation

1. Position the base of the control arm in a location on the top of the stump grinder frame that is best suited to the tractor and the operator.
2. Install (4) 3/8 x 2.17" bolts, lock washers, and nuts.
3. Slide the base to the desired position if needed, and tighten all hardware.



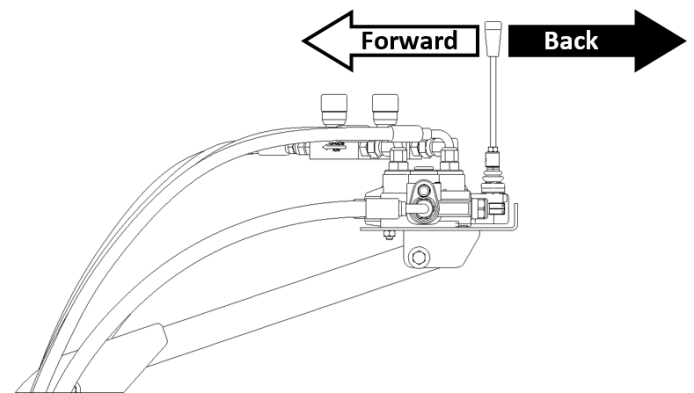
Operation

1. Using the adjustable joints and pins provided, position the control arm so that the controls can be easily accessed from the tractor seat and the valve and arm do not contact any part of the tractor when the stump grinder is raised and lowered.
2. With the operator in the seat of the tractor and the seatbelt fastened, start the engine.
3. Engage the tractor auxiliary hydraulic flow and lock the flow in the "on" position.



NOTE: Oil only flows through the valve in one direction. If the controls do not operate the attachment, reverse the direction of the auxiliary hydraulic flow OR switch the hydraulic couplers in the tractor hydraulic ports and run the auxiliary hydraulic flow in the same direction.

4. Use the levers on the stump grinder valve to operate the lift and wing functions of the attachment.
5. Follow the "OPERATING INSTRUCTIONS" on pages 10-12 of this manual to remove stumps.

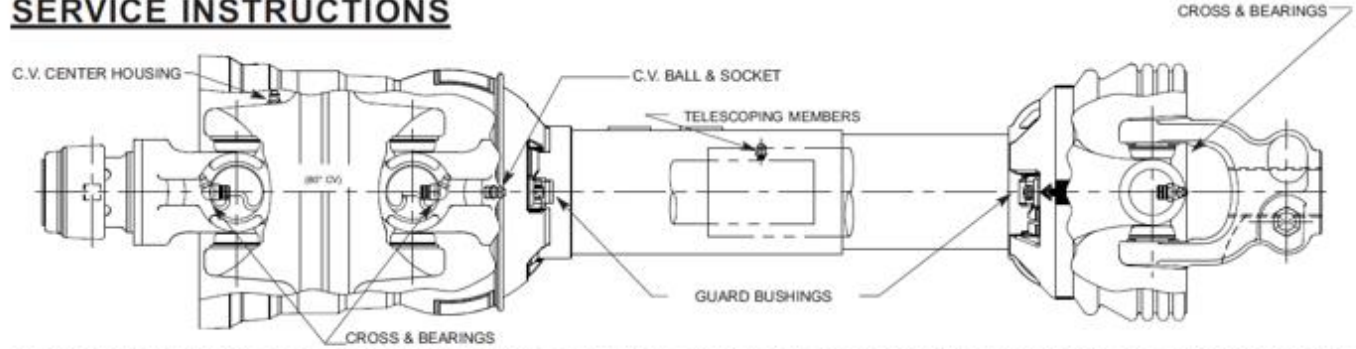


Direction	LH Lever	RH Lever
← Forward	Lower Cutting Wheel	Swing Left
→ Back	Raise Cutting Wheel	Swing Right

NOTE: Controls are listed as viewed from the operator's seat while facing the stump grinder.

ROUTINE MAINTENANCE

SERVICE INSTRUCTIONS



LUBRICATE ALL FITTINGS WITH A GOOD QUALITY LITHIUM SOAP COMPATIBLE E.P. GREASE MEETING THE N.L.G.I. #2 SPECIFICATIONS AND CONTAINING NO MORE THAN 1% MOLYBDENUM DISULFIDE.

AN E.P. GREASE MEETING THE N.L.G.I. #2 SPECIFICATIONS AND CONTAINING 3% MOLYBDENUM DISULFIDE MAY BE SUBSTITUTED IN THE TELESCOPING MEMBERS ONLY.



LOCATION	STANDARD INTERVAL	EXTENDED LUBE INTERVAL	LEVER ACTION PUMPS
CROSS & BEARINGS	*8 HRS.	50 HRS.	5
TELESCOPING MEMBERS	8 HRS.	50 HRS.	8-10
CV BALL & SOCKET	*8 HRS.	50 HRS.	5
CV CENTER HOUSING	24 HRS.	50 HRS.	30
CE & NON-ROTATING GUARD BUSHINGS (1000 RPM MAX.)	8 HRS.	50 HRS.	5

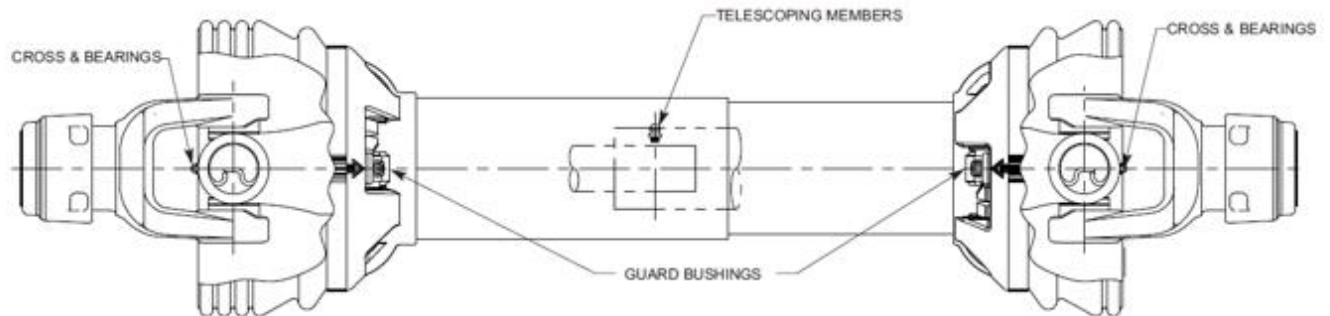
*CONSTANT ANGLE APPLICATIONS MAY REQUIRE A LUBE INTERVAL OF 4 HOURS

ROTATING GUARD BUSHINGS SHOULD BE LUBRICATED UPON REPLACEMENT

CAUTION!! REPLACEMENT PARTS ARE NOT LUBRICATED

REPLACEMENT PARTS MUST BE LUBRICATED AT TIME OF ASSEMBLY AND DURING USE PER THE LUBE RECOMMENDATIONS

SERVICE INSTRUCTIONS



LUBRICATE ALL FITTINGS WITH A GOOD QUALITY LITHIUM SOAP COMPATIBLE E.P. GREASE MEETING THE N.L.G.I. #2 SPECIFICATIONS AND CONTAINING NO MORE THAN 1% MOLYBDENUM DISULFIDE.

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LOCATION	STANDARD INTERVAL	EXTENDED LUBE INTERVAL	LEVER ACTION PUMPS
CROSS & BEARINGS	*8 HRS.	50 HRS.	5
TELESCOPING MEMBERS	8 HRS.	50 HRS.	8-10
CE & NON-ROTATING GUARD BUSHINGS (1000 RPM MAX.)	8 HRS.	50 HRS.	5

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ROTATING GUARD BUSHINGS SHOULD BE LUBRICATED UPON REPLACEMENT

CAUTION!! REPLACEMENT PARTS ARE NOT LUBRICATED

REPLACEMENT PARTS MUST BE LUBRICATED AT TIME OF ASSEMBLY AND DURING USE PER THE LUBE RECOMMENDATIONS

ROUTINE MAINTENANCE

⚠ WARNING Lower the stump grinder to rest on the skid shoes, disengage the PTO, set the parking brake, shut down the engine, remove the key, relieve the hydraulic pressure to the attachment, 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 and set screws can loosen after initial usage. After the first hour of operation check all bolts and set screws. Continue to check for loose hardware every **10 hours** of operation.

LUBRICATION

Lubrication Legend



Multipurpose spray lube



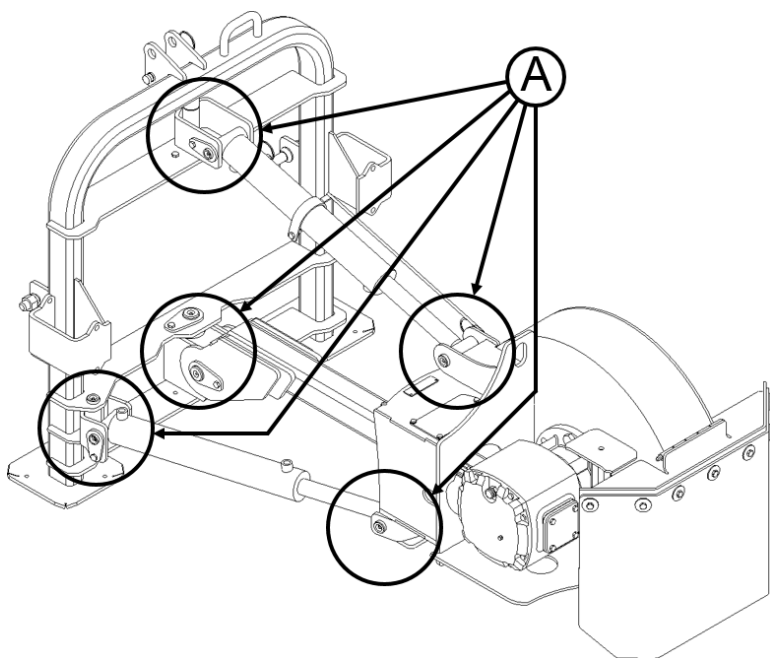
No. 2 Lithium base gun grease



Multipurpose oil lube

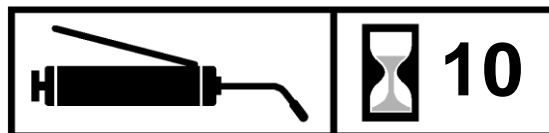


Intervals at which lubrication is required



IMPORTANT: These are requirements. It is the responsibility of the owner/operator to make sure the attachment is serviced on a daily basis. Improper maintenance can cause extensive damage to the attachment and/or your equipment.

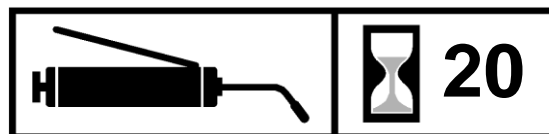
Use No. 2 lithium base gun grease when lubricating all the attachment grease fittings.



Grease all (9) pivot pins [A] every 10 hours.

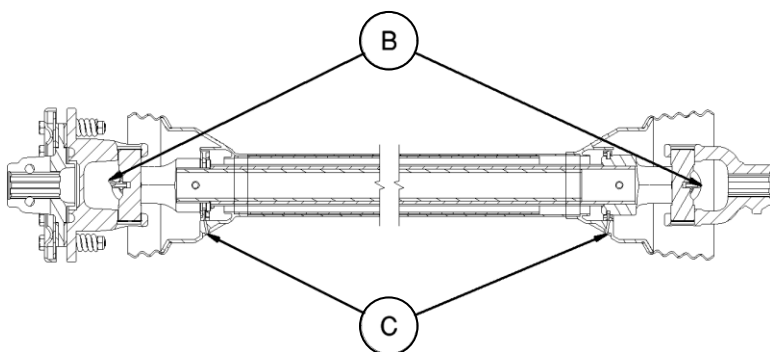
- 2 pins at arm hinge
- 2 pins at base of lift cylinder
- 1 pin at rod end of lift cylinder
- 2 pins at base of swing cylinder
- 2 pins at rod end of swing cylinder

Grease driveline U-Joints [B] every 10 hours



Grease driveline inner tube bearings [C] every 20 hours.

Clean profile of inner tube of driveline, coat with a light film of grease, and reassemble every 20 hours.



ROUTINE MAINTENANCE

Gearbox Oil Check and Fill

Add 80W-90 EP or 85W-140 EP gear lube to gearbox as needed. Oil capacity is approximately 96 oz.

To check the oil level, lower the cutting wheel so that the parking stand rests on the ground. Remove the level check plug [A]. Oil must be level with the check plug hole. To add oil, remove the fill plug [B] and add lube until it starts to come out of the check plug hole. Reinstall the check plug and the fill plug.

Oil should be changed after the first 50 hours of operation, and yearly thereafter. To drain the oil from the gearbox, remove the drain plug [C] on the bottom side of the gearbox.

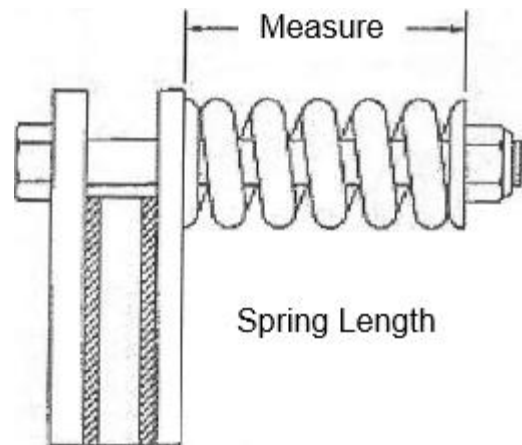
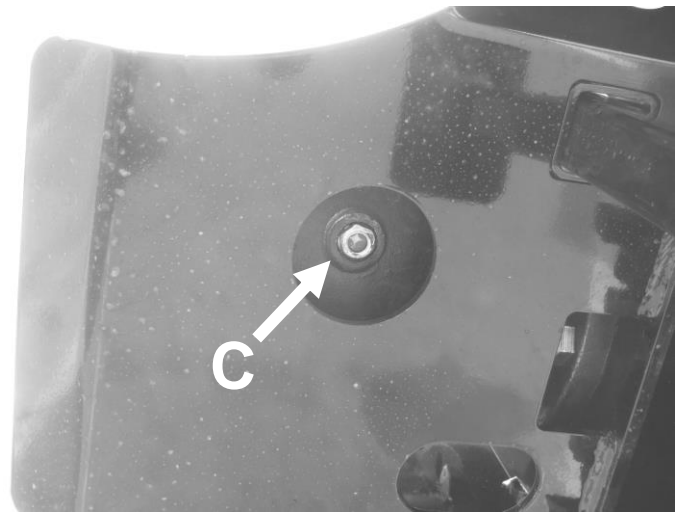
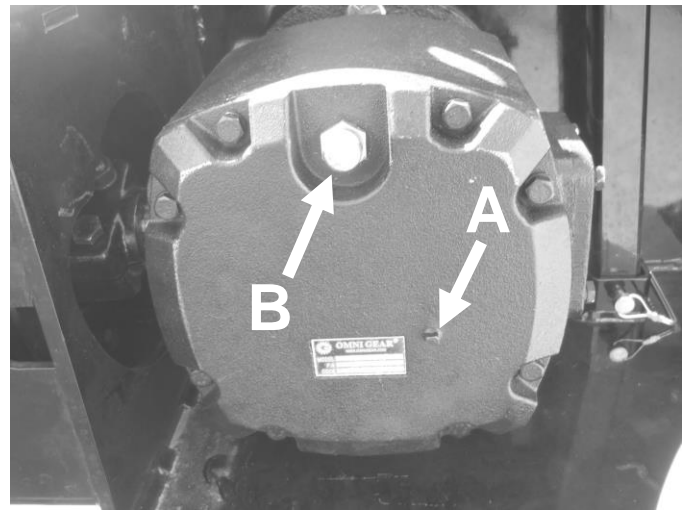
IMPORTANT: Fluids such as engine oil, gear lube, and hydraulic fluid must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks be cleaned in a specific manner. Check local, state, and federal regulations for correct disposal methods.

Slip Clutch Adjustment

⚠ CAUTION Slip clutch may be hot. Allow clutch to cool before servicing.

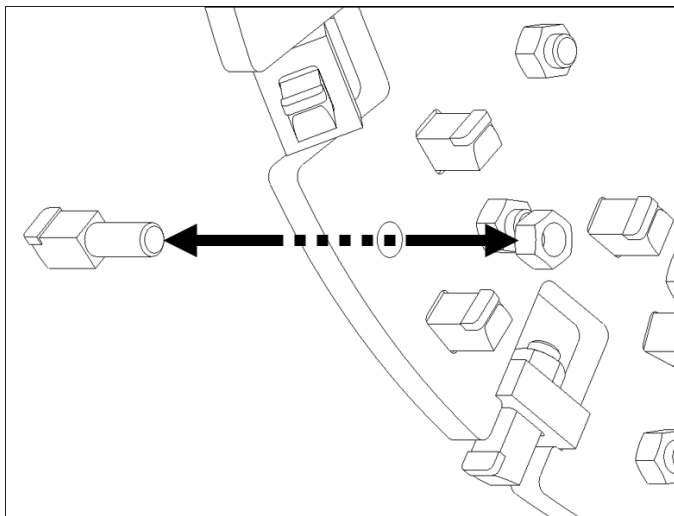
The slip clutch is factory preset to the correct torque for protecting the attachment and tractor. For adjustment, use the following steps.

1. Measure the length of all springs, then loosen all (8) clutch bolts to remove all tension from the springs.
2. Hold the clutch hub solid and turn the shaft to make sure the clutch slips. If the clutch does not slip, disassemble the clutch and clean with a clutch cleaning solution.
3. Reassemble the clutch once cleaned.
4. Tighten each of the (8) bolts until the springs are all evenly compressed to the original length.



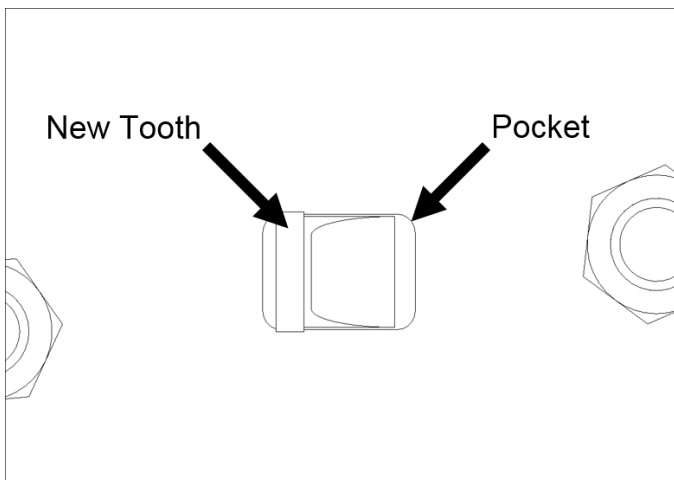
IMPORTANT: If the clutch continues to slip excessively when the springs are compressed to original length, check the friction discs for excessive wear. Discs are 1/8" thick when new. Replace discs after there is 1/16" wear.

ROUTINE MAINTENANCE



Carbide Tooth Maintenance

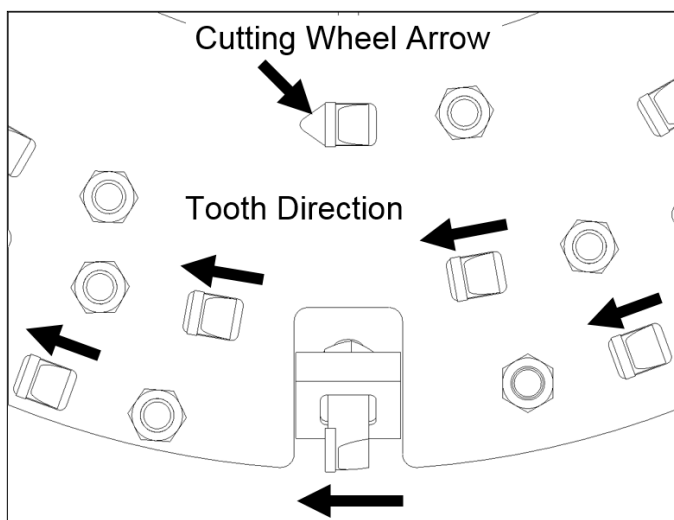
- Avoid hitting stones and other hard objects, especially during the first few hours of use with new teeth. New teeth are razor sharp and more prone to chipping when hitting hard objects. Once the edges have worn slightly, they will be less prone to chipping.
- Teeth near the outer edge of the wheel will wear more quickly than teeth near the center of the wheel.
- Check teeth for damage or wear every 2 hours of use. Replace individual teeth as necessary using only genuine Erskine™ replacement teeth.



Carbide Tooth Replacement

⚠ WARNING Always wear safety glasses when performing this operation. Hardened tools can shatter causing injury.

1. With the tractor parked, parking brake engaged, PTO disengaged, engine off, stump grinder frame resting on the ground, and stump grinder arm supported by safety jacks, inspect the cutting teeth for damage and wear.
2. To replace a tooth, remove the lock nut from the threaded portion of the tooth and remove the tooth from the cutting wheel.
3. Remove any dirt or debris from the pocket where the old tooth was removed.
4. Insert the new tooth into the hole so that it sits in the pocket of the cutting wheel facing in the same direction as the other teeth.



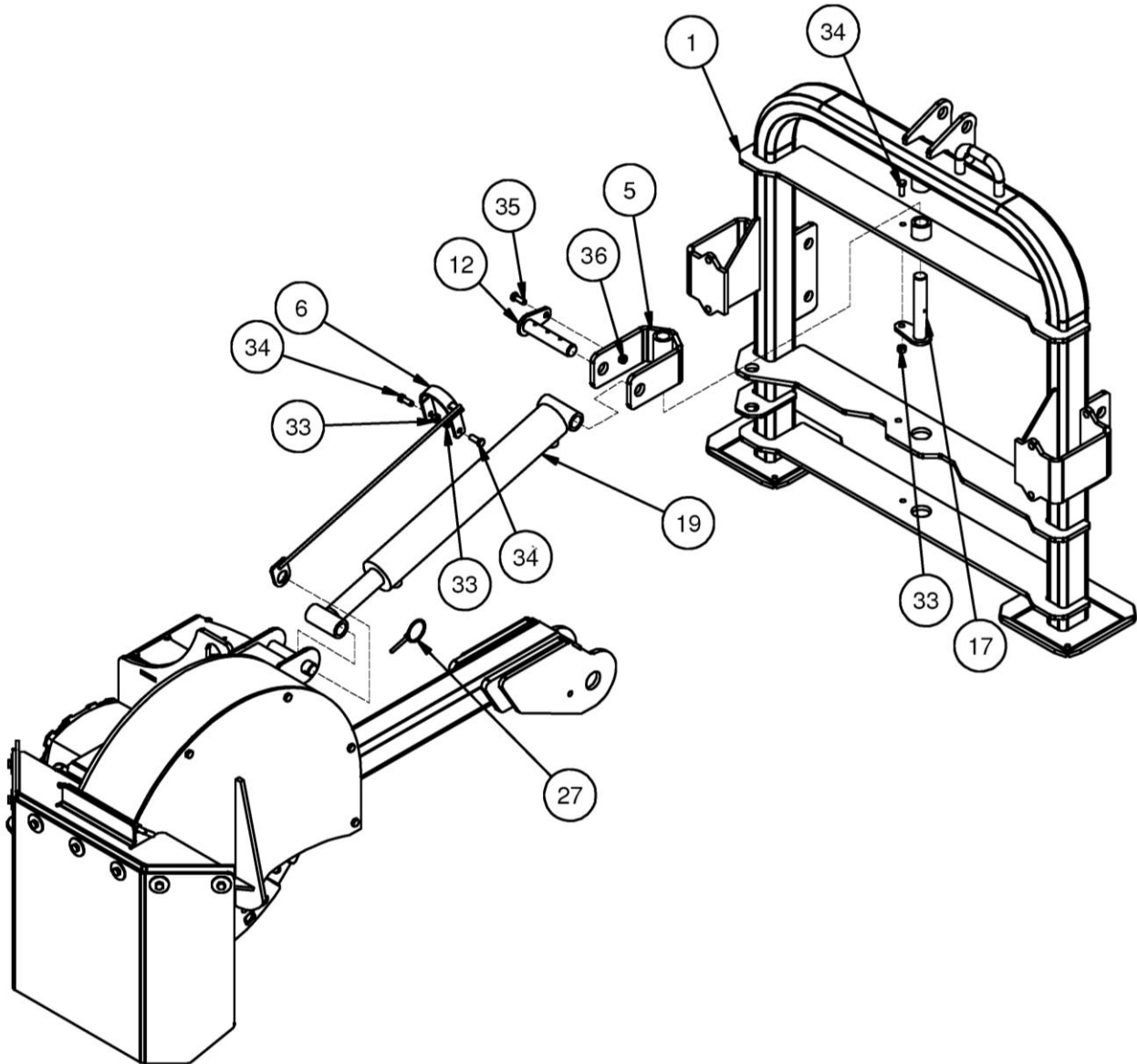
IMPORTANT: Be sure all teeth are pointed with the cutting tip facing the direction that the arrows in the cutting wheel point.

5. Holding the new tooth in the pocket, install a new lock nut on the threaded portion of the tooth.

IMPORTANT: Always use a new lock nut when installing a new tooth on the cutting wheel.

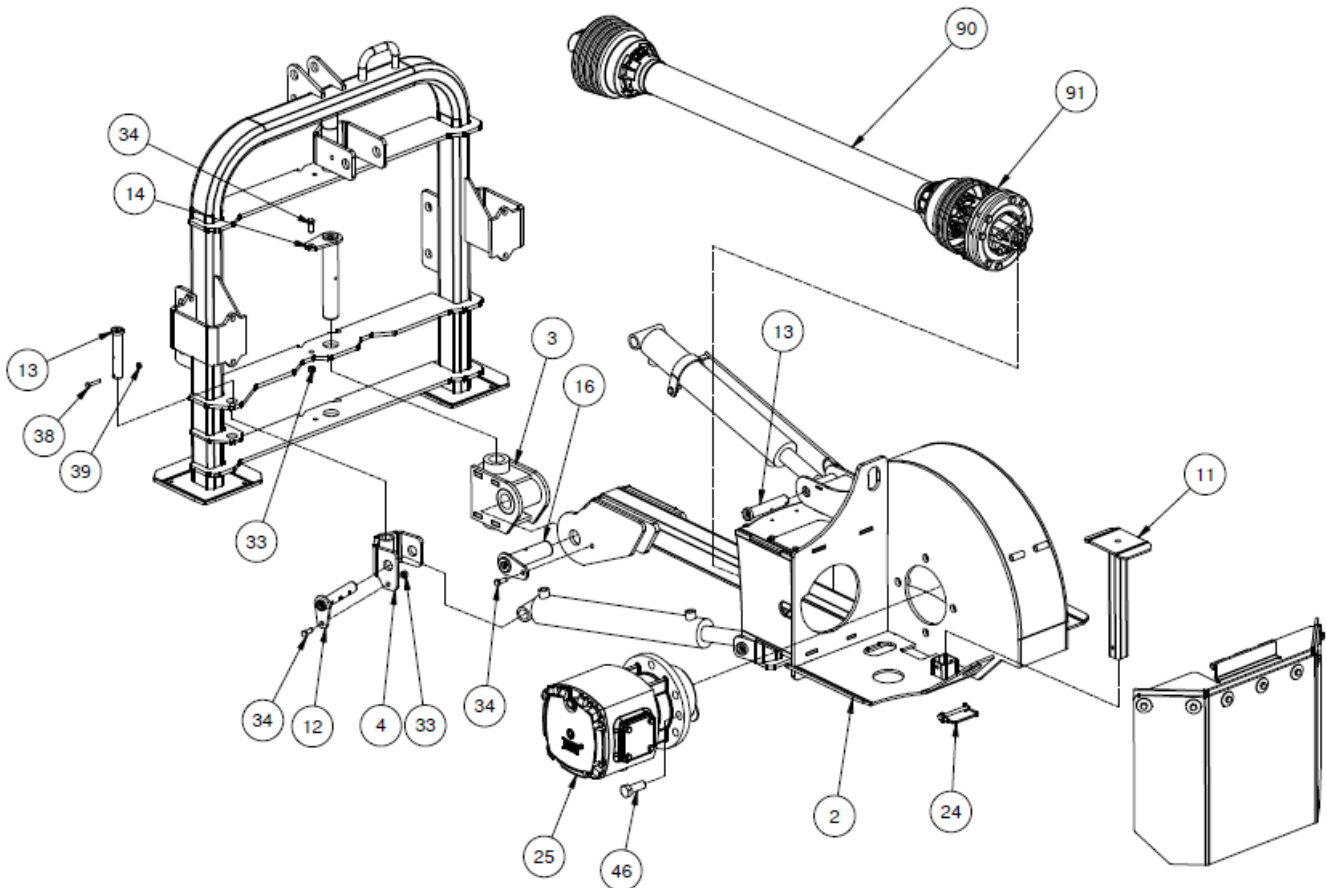
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
	1	421996	KIT HARDWARE 3PT STUMP GRINDER	
1	1	421900	FRAME 24 W/A	
	1	422000	FRAME 34 W/A	
5	1	421906	KNUCKLE LONG W/A	
6	1	421909	DEPTH GAUGE W/A	
12	2	318731	PIN 1 X 4.88 GRS W/A Z	
17	1	421298	PIN 1 X 5.75 GRS W/A Z	
19	2	421974	CYLINDER 2.5 X 17 B-B	
27	1	315308	PIN LYNCH 1/4 X 1-3/4	
33	13	37212	NUT REV LOCK	3/8 NC
34	12	13105	BOLT HEX	3/8 X 1 NC GR 5
35	1	13207	BOLT HEX	1/2 X 1-1/4 NC GR 5
36	1	37214	NUT REV LOCK	1/2 NC



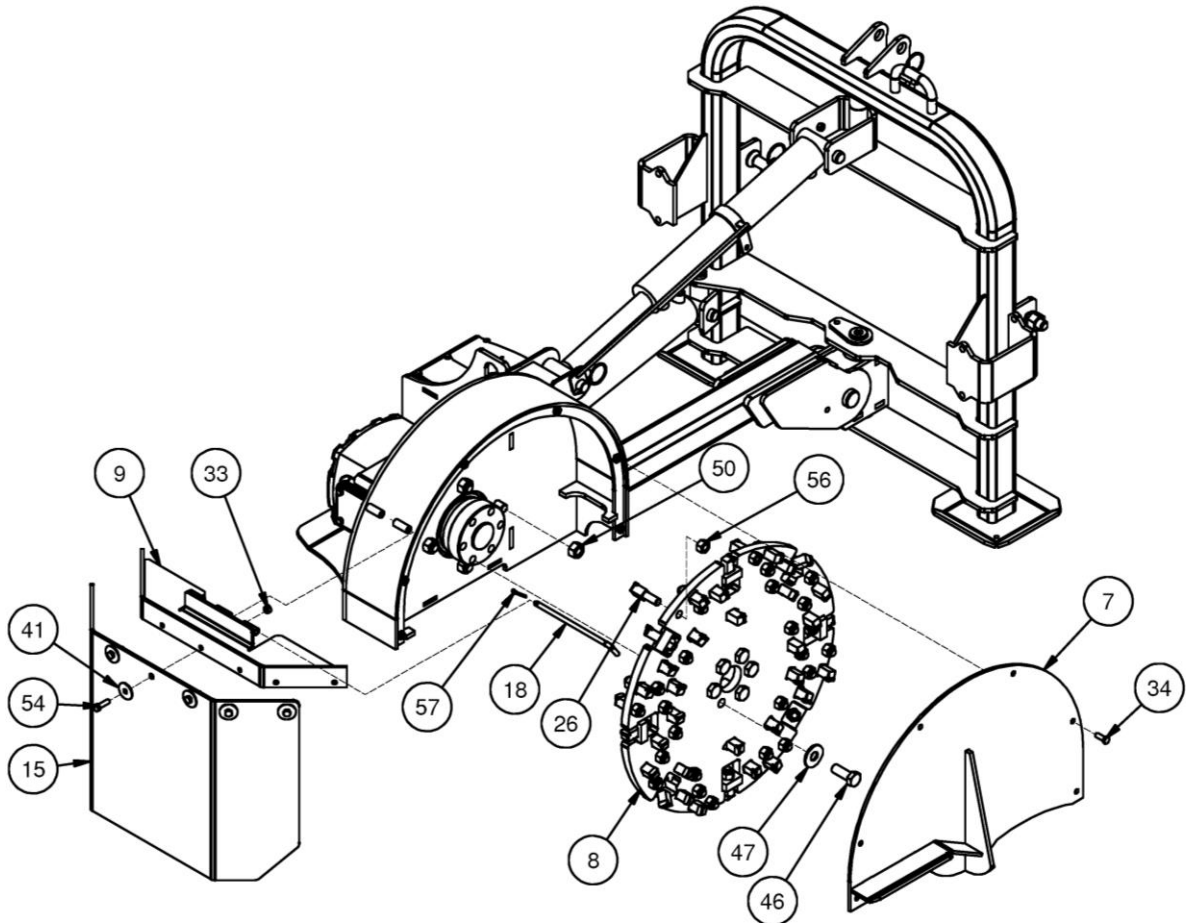
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
	1	421996	KIT HARDWARE 3PT STUMP GRINDER	
2	1	421901	ARM 24 W/A	
	1	422001	ARM 34 W/A	
3	1	421903	KNUCKLE MAIN W/A	
4	1	421904	KNUCKLE W/A	
11	1	421908	PARK STAND 24 W/A	
	1	422003	PARK STAND 34 W/A	
12	2	318731	PIN 1 X 4.88 GRS W/A	
13	4	421980	PIN CLEVIS 1 X 4.75 GRS Z	
14	1	421979	PIN 1.50 X 8.25 GRS W/A Z	
16	1	421977	PIN 1.5 X 5.25 GRS W/A Z	
24	3	300581	PIN SNAPPER 5/16 X 3	
25	1	421972	GEARBOX RC-100F 1:1.46 FLGD	
33	14	37212	NUT REV LOCK	3/8 NC GR 5
34	13	13105	BOLT HEX	3/8 X 1 NC GR 5
38	3	13009	BOLT HEX	1/4 X 1-1/2 NC GR 5
39	3	37210	NUT REV LOCK	1/4 NC GR 5
46	10	15361	BOLT HEX	3/4 X 2 NC GR 8 YZ
90	1	421973	DRIVELN CAT4 6T X 6T X 60 8 CLUTCH	SG 24 ONLY 2-DISC
	1	422032	DRIVELN CAT6 6T X 6T X 60 8 CLUTCH	SG 34 ONLY 4-DISC
91	1	420897	CLUTCH PLATE 8 (160mm) 2 PER	



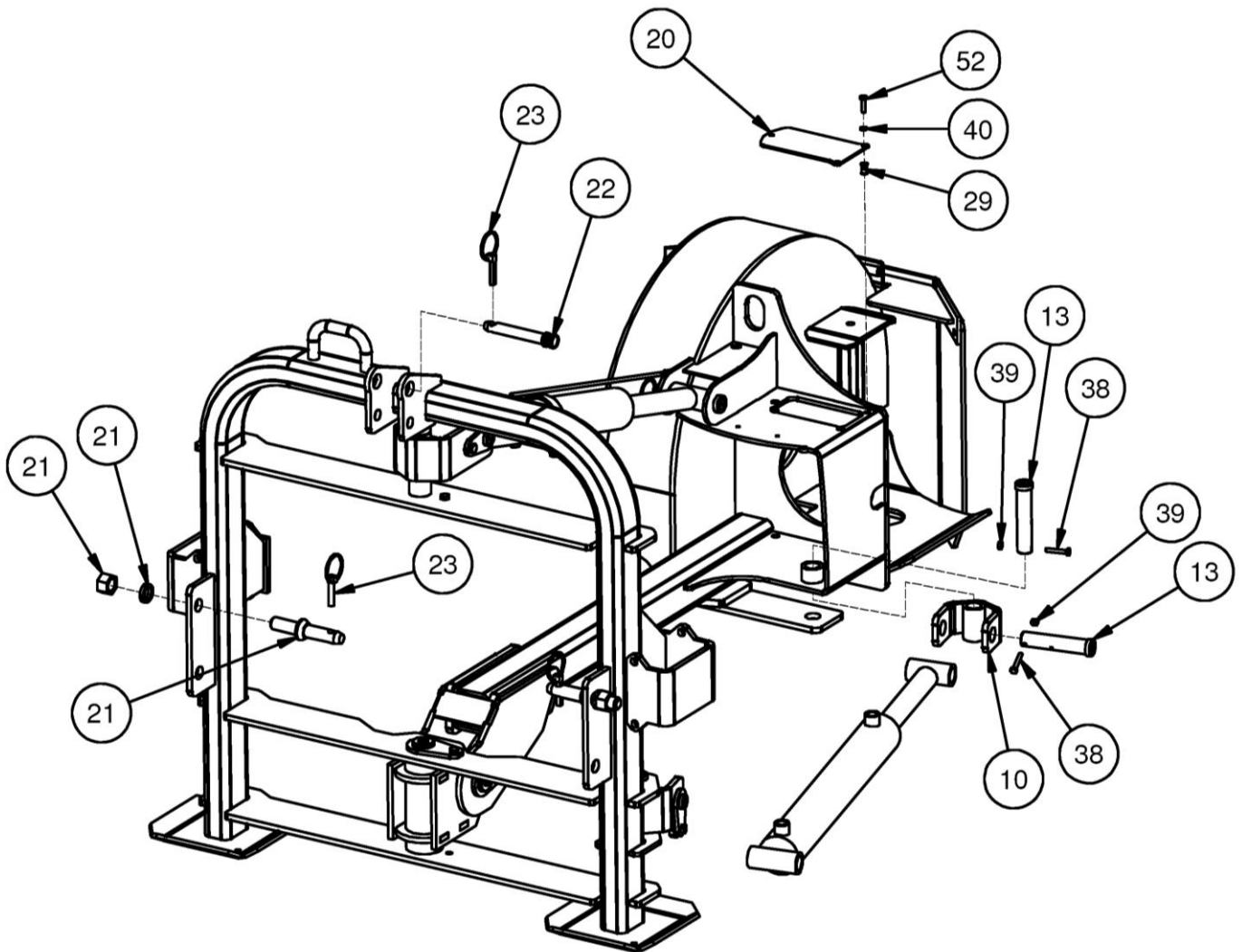
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
	1	421996	KIT HARDWARE 3PT STUMP GRINDER	
7	1	421902	WHEEL COVER 24 W/A	SG24
	1	422002	WHEEL COVER 34 W/A	SG34
8	1	421910	CUTTING WHEEL 24 W/A	SG24
	1	422004	CUTTING WHEEL 34 W/A	SG34
9	1	421907	SHIELD MOUNT 24 W/A	SG24
	1	422005	SHIELD MOUNT 34 W/A	SG34
15	1	421981	SHIELD RUBBER SG24	SG24
	1	422028	SHIELD RUBBER SG34	SG34
18	1	421982	PIN BENT .38 X 8 W/HOLE Z	
26	58	421966	TOOTH CARBIDE 3SG	SG24 (KIT 421997)
	92	421966	TOOTH CARBIDE 3SG	SG34 (KIT 421997)
33	14	37212	NUT REV LOCK	3/8 NC GR 5
34	13	13105	BOLT HEX	3/8 X 1 NC GR 5
41	7	33220	WASHER FENDER	3/8 X 1-1/2
46	10	15361	BOLT HEX	3/4 X 2 NC GR 8 YZ
47	6	33018	WASHER FLAT	3/4"
50	4	37217	NUT REV LOCK	3/4 NC GR 5
54	7	13107	BOLT HEX	3/8 X 1-1/4 NC GR 5
56	58	37312	NUT TOP LOCK 5/8-18 UNF GRD C	SG24 (KIT 421997)
	92	37312	NUT TOP LOCK 5/8-18 UNF GRD C	SG34 (KIT 421997)
57	1	65105	PIN COTTER 5/32 X 1-1/2	



PARTS INFORMATION

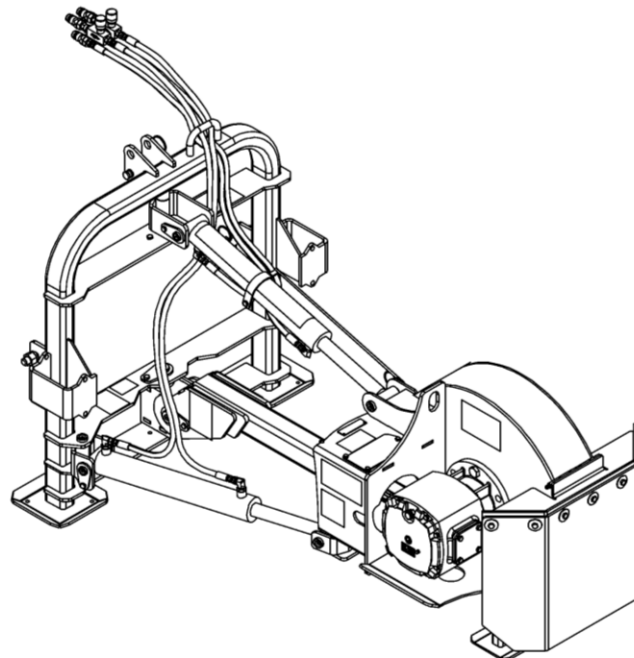
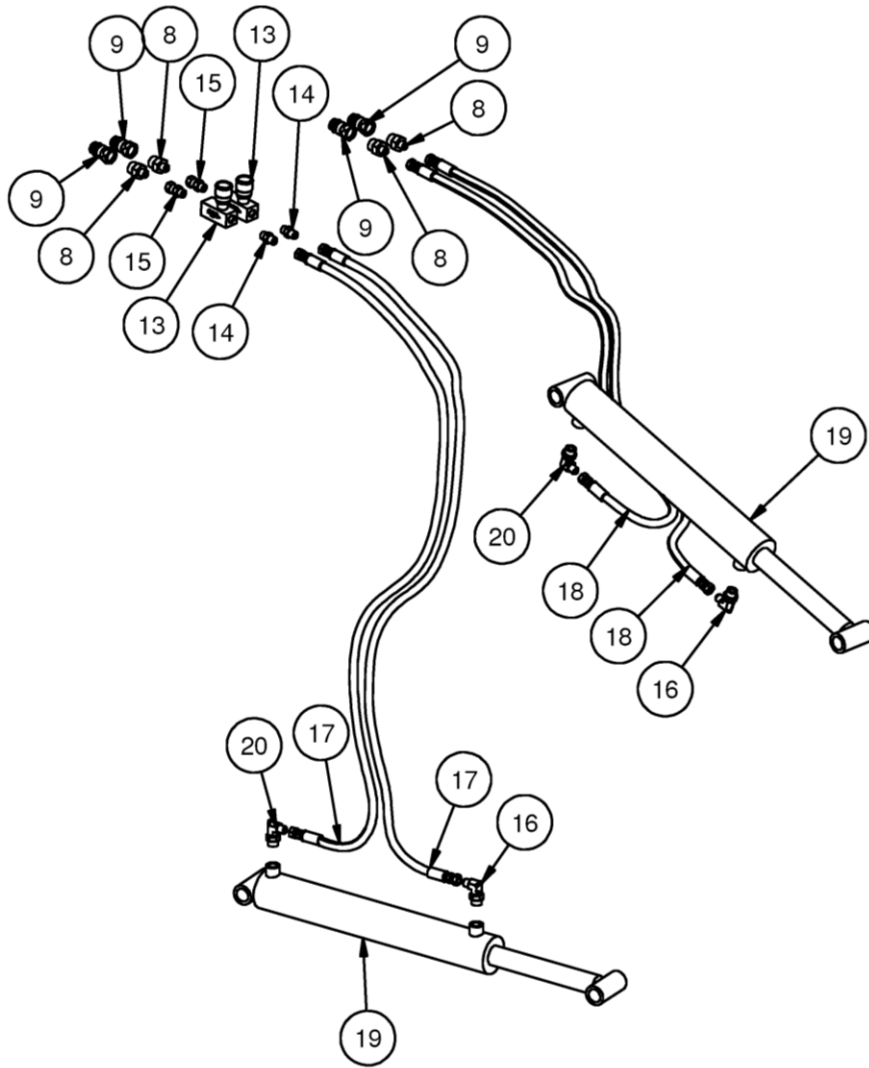
ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
	1	421996	KIT HARDWARE 3PT STUMP GRINDER	
10	1	421905	KNUCKLE SHORT W/A	
13	4	421980	PIN CLEVIS 1 X 4.75 GRS Z	
20	1	421988	PLATE COVER 24 PAINTED	
	1	422030	PLATE COVER 34 PAINTED	
21	2	100944	PIN 3PT LIFTCAT#1 7/8	
22	1	300460	PIN 3PT CAT#1 TOP 3/4 X 3-7/8	SG24
	1	104511	PIN 3PT CAT#2 TOP 1 X 4-3/8	SG34
23	3	104432	PIN LYNCH 7/16 X 1-3/4	
29	3	330765	THREADED INSERT 1/4-20 UNC YZ	
38	3	13009	BOLT HEX	1/4 X 1-1/2 NC GR 5
39	3	37210	NUT REV LOCK	1/4 NC GR 5
40	3	33618	WASHER LOCK	1/4"
52	3	13005	BOLT HEX	1/4 X 1 NC GR 5



PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
	1	421995	KIT HOSE 3PT STUMP GRINDER	
8	4	201522	ADPT STR 10MB-6MJ	COUPLERS
9	4	200248	COUPLER HYD PPT 1/2-10OR M	
13	2	421983	VALVE FLOW CONTROL 3SG	
14	2	311673	ADPT STR 6MB-6MJ	FLOW CONTROL
15	2	330751	ADPT STR 6MB-6JFX	FLOW CONTROL
16	2	320089	ADPT ELB 8MB-6MJ-90	CYL ROD ENDS
17	2	421993	HOSE 1/4 X 84 6FJX-6FJX	SWING CYL
18	2	421994	HOSE 1/4 X 60 6FJX-6FJX	LIFT CYL
19	2	421974	CYLINDER 2.5 X 17 B-B	
20	2	300839	ADPT REST ELB 8MB-6MJ-90-.04	CYL BASE ENDS

PARTS INFORMATION

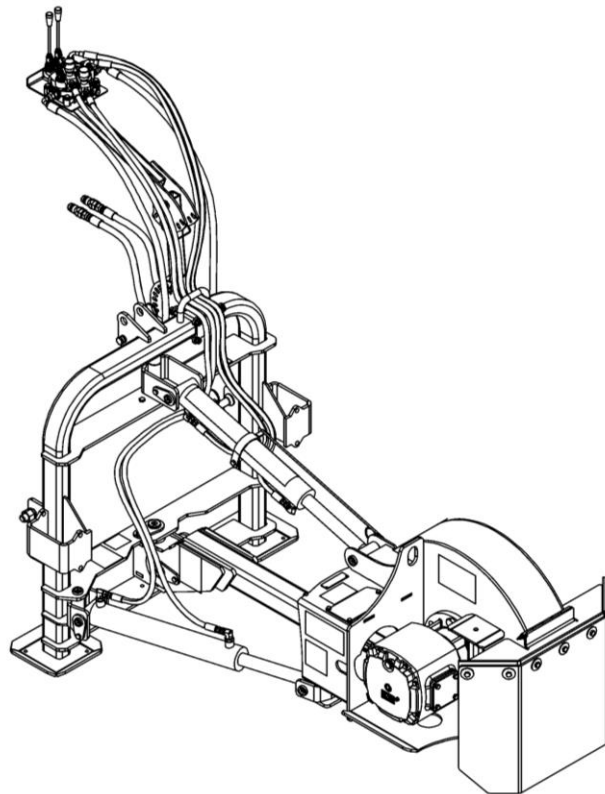
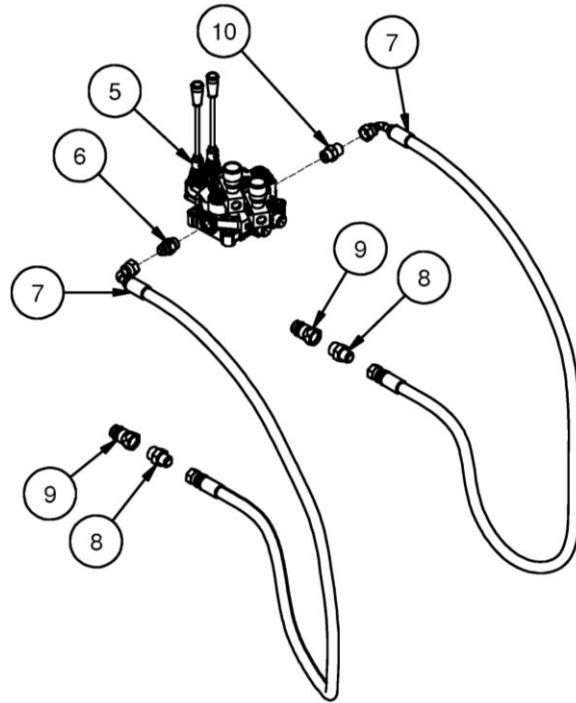


PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
		421998	OPT EXT CTRL PACKAGE	
1	1	421911	CONTROL MOUNT W/A	
2	1	316850	TUBE SQ .19 X 1.5 X 16 W/H & Z	
3	1	421912	CONTROL ARM W/A	
4	1	421913	CONTROL BASE W/A	
5	1	421984	VALVE 3SG 2 LEVER W/CHECK	
6	1	421986	PLATE CTRL MOUNT PAINTED	
7	2	300581	PIN SNAPPER 5/16 X 3	
8	3	13114	BOLT HEX	3/8 X 2-3/4 NC GR 5
9	5	33008	WASHER FLAT	3/8"
10	2	37212	NUT REV LOCK	3/8 NC GR 5
13	4	13119	BOLT HEX 3/8 X 4 NC GR 5	SG24
	4	13123	BOLT HEX 3/8 X 5 NC GR 5	SG34
14	3	37211	NUT REV LOCK	5/16 NC GR 5
15	5	36306	NUT HEX FULL	3/8 NC GR 5
16	5	103880	WASHER LOCK	3/8"
17	3	202031	BOLT HEX	5/16 X 1-1/2 NC GR 5

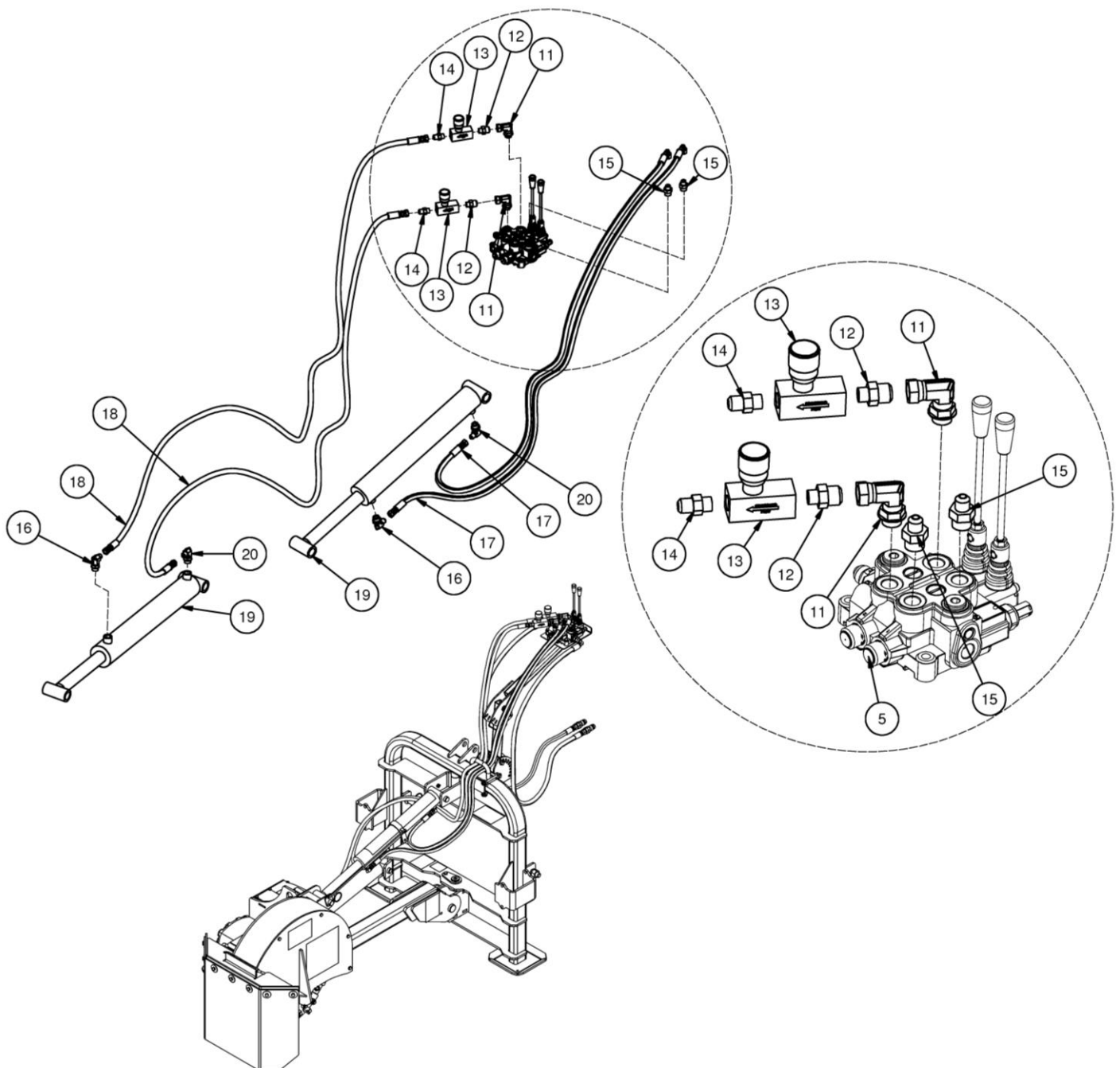
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
	1	422038	KIT HOSE 3PT STUMP GRINDER OPT CTRL	OPT PKG 421998
5	1	421984	VAVLE MANUAL 2 LEVER	
6	1	318896	ADPT STR 8MB-8MJ CHECK	COMES WITH VALVE
7	2	422037	HOSE 3/8 X 54 8FJX-8FJX-90	LEAD HOSES
8	2	201523	ADPT STR 10MB-8MJ	COUPLERS
9	2	200248	COUPLER HYD PPT 1/2-10OR M	
10	1	300273	ADPT STR 8MB-8MJ	PRESSURE PORT



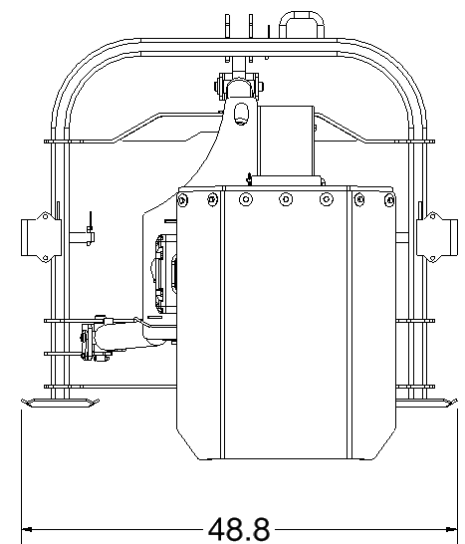
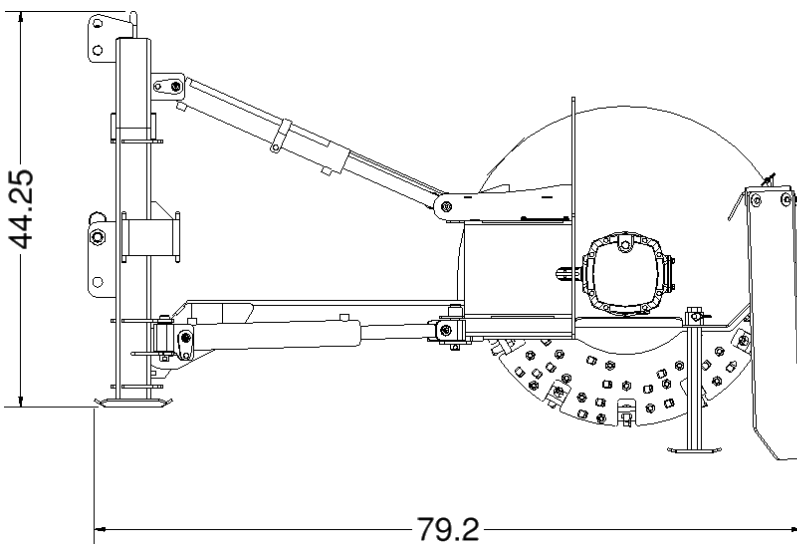
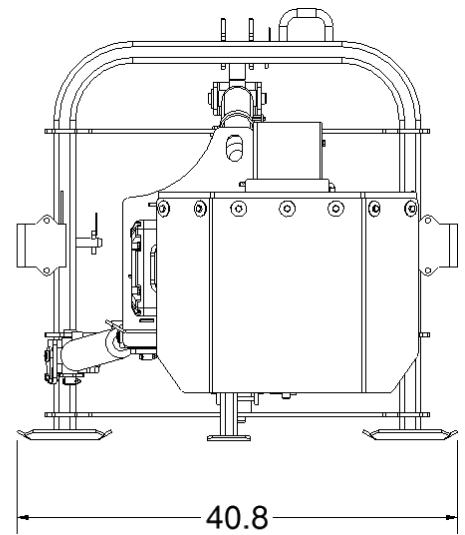
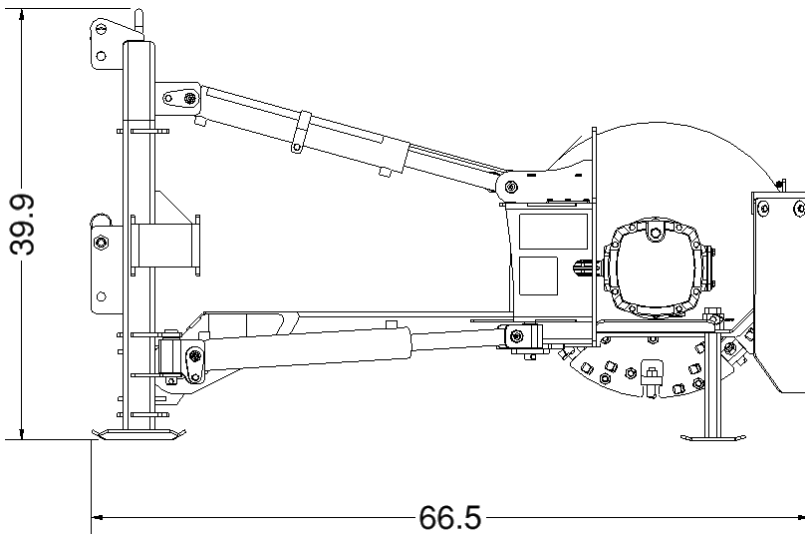
PARTS INFORMATION

ITEM	QTY	PART NO.	DESCRIPTION	STOCK NO.
	1	422038	KIT HOSE 3PT STUMP GRINDER OPT CTRL	OPT PKG 421998
5	1	421984	VALVE MANUAL 2 LEVER	
11	2	330572	ADPT ELB 8MB-8FJX-90	VALVE SWING
12	2	300558	ADPT STR 6MB-8MJ	
13	2	421983	VALVE FLOW CONTROL 3SG	
14	2	311673	ADPT STR 6MB-6MJ	FLOW CONTROL
15	2	201925	ADPT STR 8MB-6MJ	VALVE LIFT
16	2	320089	ADPT ELB 8MB-6MJ-90	CYL ROD ENDS
17	2	422035	HOSE 1/4 X 60 6FJX-6FJX-90	LIFT CYL
18	2	421993	HOSE 1/4 X 84 6FJX-6FJX	SWING CYL
19	2	421974	CYLINDER 2.5 X 17 B-B	
20	2	300839	ADPT REST ELB 8MB-6MJ-90-.04	CYL BASE ENDS



GENERAL SPECIFICATIONS

Model	3SG24	3SG34
Tractor PTO HP	25-60	45-90
Cutting Wheel Diameter	24"	34"
Number of Teeth	58	92
Cutting Wheel Speed	810 RPM	
Cutting Height (Above Ground)	24"	26"
Cutting Depth (Below Ground)	12"	14"
Swing Arc	65°	
Hitch	Cat. I or II	Cat. II
Hydraulic Remotes Required	2	
Input Speed	540 RPM	
Operating Weight	740 lbs.	1050 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	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

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 421999
Erskine Attachments LLC

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