

OWNER'S/ OPERATOR'S MANUAL

MODEL NO.'s
TC8-FL
TC8-SS



CAUTION

For Safe Operation
Read Rules And
Instructions Carefully

SINO LEEINGLES, PIDA AYUDA
A AIGUIEN QUE SI LO LEA
PARA QUE LE TRADUZCA LAS
MEDIDAS DE SEGURIDAD.



TREE CLIPPER FOR SKID STEER AND TRACTOR FRONT LOADER

Safety Instructions

Tractor Preparation

Operating Instructions

Assembly & Mounting

Maintenance

Repair Parts

⚠ CAUTION ⚠

**THE FOLLOWING SAFETY PRECAUTIONS SHOULD BE THOROUGHLY UNDERSTOOD
BEFORE ATTEMPTING TO BEGIN ASSEMBLING THIS MACHINE**

1. Select an area for assembly that is clean and free of any debris which might cause persons working on the assembly to trip.
2. Do not lift heavy parts or assemblies. Use crane, jack, tackle, fork trucks or other mechanical devices.
3. Preview the assembly instructions in your operator's manual before proceeding further.
4. If the assembly instructions call for parts or assemblies to be blocked up, use only blocking material that is in good condition and is capable of handling the weight of the assembly to be blocked. Also insure that the blocking material is on a clean, dry surface.
5. Never put hands, or any part of body, under blocked up assemblies if at all possible.
6. After completing assembly, thoroughly inspect the machine to be sure that all nuts, bolts, hydraulic fittings or any other fastened assemblies have been thoroughly tightened.
7. Before operating the machine, thoroughly read the operation section of your operator's manual.
8. Before operating, read the maintenance section of your operator's manual to be sure that any parts requiring lubrication, such as gearboxes, are full, to avoid any possible damage.
9. **Before operating equipment – If you have any questions regarding the proper assembly or operation, contact your dealer or representative.**

TABLE OF CONTENTS

WARRANTY	2
SAFETY INFORMATION	3
SAFETY SIGNS	13
PREPARATION INSTRUCTIONS	15
OPERATING INSTRUCTIONS	18
OWNER SERVICE	20
TROUBLE-SHOOTING GUIDE	22
OPTIONAL HYD. MULTIPLIER VALVE INSTRUCTIONS	24
PARTS DRAWINGS & LISTS	27

SINO LEEINGLES, PIDA AYUDA A
AIGUIEN QUE SI LO LEA PARA QUE
LE TRADUZCA LAS MEDIDAS DE
SEGURIDAD.

STATEMENT OF POLICY

It is the policy of Worksaver, Inc. to improve its products where it is possible and practical to do so. Worksaver, Inc. reserves the right to make changes or improvements in design and construction at any time, without incurring the obligation to make these changes on previously manufactured units.

TO THE OWNER:

Read this manual before using your Tree Clipper. This manual is provided to give you the necessary operating and maintenance instructions for keeping your Tree Clipper in top operating condition. Please read this manual thoroughly. Understand what each control is for and how to use it. Observe all safety signs on the machine and noted throughout the manual for safe operation of implement. Keep this manual handy for ready reference.

Like all mechanical products, it will require cleaning and upkeep.

Use only genuine Worksaver, Inc. service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model and serial number of your Tree Clipper here:

Model: _____ Serial Number: _____

RETAIL CUSTOMER'S RESPONSIBILITY

It is the Retail Customer and/or Operator's responsibility to read the Operator's Manual, to operate, lubricate, maintain, and store the product in accordance with all instructions and safety procedures. Failure of the operator to read the Operator's Manual is a misuse of this equipment.

It is the Retail Customer and/or Operator's responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to other parts or cause a safety hazard.

It is the Retail Customer's responsibility to deliver the product to the authorized Worksaver Dealer, from whom he purchased it, for service or replacement of defective parts which are covered by warranty. Repairs to be submitted for warranty consideration must be made within forty-five (45) days of failure.

It is the Retail Customer's responsibility for any cost incurred by the Dealer for traveling to or hauling of the product for the purpose of performing a warranty obligation or inspection.

LIMITED WARRANTY

Worksaver warrants to the original purchaser of any new Tree Clipper (Models TC8-FL and TC8-SS), that the equipment be free from defects in material and workmanship for a period of six (6) months for non-commercial, state, and municipalities. Use sixty (60) days for commercial use from date of retail sale.

Replacement or repair parts installed in the equipment covered by this warranty are warranted for sixty (60) days from the date of purchase of such part or to the expiration of the applicable new equipment warranty period, whichever occurs later.

Such parts shall be provided at no cost to the user during regular working hours. Worksaver reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES

Worksaver's obligation under this warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed, including implied warranties of merchantability and fitness for a particular purpose and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Worksaver; duty; taxes; charges for normal service or adjustments; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery of equipment or parts resulting from acts beyond the control of Worksaver.

THIS WARRANTY SHALL NOT APPLY:

1. To vendor items which carry their own warranties, such as hydraulic cylinders, tires, and tubes.
2. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
3. If parts not made or supplied by Worksaver have been used in connection with the unit, if, in sole judgement of Worksaver such use affects its performance, stability, or reliability.
4. If the unit has been altered or repaired outside of an authorized Worksaver dealership in a manner which, in the sole judgement of Worksaver affects its performance, stability or reliability.
5. To normal maintenance service and normal replacement items such as gearbox lubricant, hydraulic fluid, worn blades, or to normal deterioration of such things as belts and exterior finish, due to use or exposure.
6. To expendable or wear items such as teeth, chains, sprockets, belts, springs and other items that in the company's sole judgement is a wear item.

NO EMPLOYEE OR REPRESENTATIVE OF WORKSAVER IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY WORKSAVER'S SERVICE MANAGER, POST OFFICE BOX 100, LITCHFIELD, ILLINOIS 62056-0100.

To the Owner/Operator/Dealer

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

BEFORE YOU START!!

**Read the safety messages on the implement and shown in your manual.
Observe the rules of safety and common sense!**



THIS SYMBOL MEANS

- ATTENTION!
- BECOME ALERT!
- YOUR SAFETY IS INVOLVED!

THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY WARNING MESSAGES. CAREFULLY READ EACH WARNING MESSAGE THAT FOLLOWS. FAILURE TO UNDERSTAND AND OBEY A SAFETY WARNING, OR RECOGNIZE A SAFETY HAZARD, COULD RESULT IN AN INJURY OR DEATH TO YOU OR OTHERS AROUND YOU. THE OPERATOR IS ULTIMATELY RESPONSIBLE FOR THE SAFETY OF HIMSELF, AS WELL AS OTHERS, IN THE OPERATING AREA OF THE TRACTOR AND ATTACHED EQUIPMENT.

UNDERSTAND SIGNAL WORDS

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or the manufacturer directly.

IMPORTANT SAFETY INFORMATION!

Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, skid steer, or forklift, before assembly or operating, to acquaint yourself with the machines. It is the implement owner's responsibility, if this machine is used by any person other than yourself, is loaned or rented, to make certain that the operator, prior to operating:

1. Reads and understands the operator's manuals.
2. Is instructed in safe and proper use.



The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to using. If there is something in this manual you do not understand, ask your supervisor, or your dealer, to explain it to you.

SAFETY INSTRUCTIONS (continued)



EQUIPMENT SAFETY GUIDELINES



Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.



In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.



Replace any CAUTION, WARNING, DANGER or instruction safety sign that is not readable or is missing. Location of such safety signs is indicated in this booklet.



Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.



Review the safety instructions with all users annually.



This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**



Operate the loader attachment only with a tractor equipped with an approved Roll-Over Protective System (ROPS). Always wear your seat belt on tractors equipped with a ROPS. Serious injury or even death could result from falling off the tractor – particularly during a turnover when the operator could be pinned under the ROPS or the tractor. Keep foldable ROPS systems in “locked up” position at all times.



Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question – **DON'T TRY IT.**



Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.










In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and Operation Instructions in each of the appropriate sections of the Tractor, Skid Steer, and Implement Manuals. Pay close attention to the Safety Signs affixed to the Tractor, Skid Steer, and the Implement.

SAFETY INSTRUCTIONS (continued)



SAFETY TRAINING

-  Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.
-  In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.
-  It has been said, “The best safety device is an informed, careful operator.” We ask you to be that kind of an operator. It is the operator’s responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.
-  Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, before assembly or operating, to acquaint yourself with the machines. It is the equipment owner’s responsibility, if this machine is used by any person other than yourself, is loaned or rented, to make certain that the operator, prior to operating:
1. Reads and understands the operator’s manuals.
 2. Is instructed in safe and proper use.
-  Know your controls and how to stop tractor, engine, and loader quickly in an emergency. Read this manual and the one provided with your tractor or skid steer.
-  Train all new personnel and review instructions frequently with existing workers. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
-  Do not allow children to operate this machine.

SAFETY INSTRUCTIONS (continued)



SAFETY SIGNS



Keep safety signs clean and legible at all times.



Replace safety signs that are missing or have become illegible.



Replaced parts that displayed a safety sign should also display the current sign.



Safety signs are available from your Distributor or Dealer Parts Department or the factory.

How to Install Safety Signs:



Be sure that the installation area is clean and dry.



Be sure temperature is above 50°F (10°C).



Decide on the exact position before you remove the backing paper.



Remove the smallest portion of the split backing paper.



Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.



Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.



Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.



STARTING AND STOPPING SAFETY



Be certain the tractor or skid steer is in neutral or park position before starting engine.



Always shut off power unit and shift to “Park” or set brakes when leaving unit. Always lower bucket or attachment to ground, relieve all hydraulic pressure. Remove key when leaving equipment unattended. Park in level area.















Before operating equipment: if you have any questions regarding the proper assembly or operation, contact your dealer or representative.

SAFETY INSTRUCTIONS (continued)



OPERATIONAL SAFETY

-  The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to using. If there is something in this manual you do not understand, ask your supervisor, or your dealer, to explain it to you.
-  Most accidents occur because of neglect or carelessness. Keep all helpers and bystanders fifty feet (50') from an operating power unit and attached equipment. Only properly trained people should operate this machine. It is recommended the tractor be equipped with a Rollover Protection System (ROPS) and a seat belt that is used. Always stop the tractor, skid steer, or forklift, set brake, shut off the engine, remove the ignition key, and lower loader and attachment to the ground before dismounting. Never leave equipment unattended with the engine running.
-  Please remember it is important that you read and heed the safety signs on the front loader attachment and loader, and the safety rules set forth. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
-  Be sure power unit is in good condition. Read all the safety precautions and make sure all operators are familiar with the safety rules of operation.
-  Know your controls and how to stop the power unit and engine quickly in an emergency. **READ THIS MANUAL AND THE ONE PROVIDED WITH YOUR TRACTOR AND LOADER, SKID STEER OR FORKLIFT.**
-  When the use of hand tools is required to perform any part of assembly, installation, adjustment, maintaining, repairing, removal, or moving the implement, be sure the tools used are designed and recommended by the tool manufacturer for that specific task.
-  Personal protection equipment including safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving the attachment.
-  Always use two people to handle heavy, unwieldy components during assembly, installation, removal, or moving the loader attachment.
-  Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintaining, repairing, removal, or moving the implement.
-  The use of any loader attachment is **NOT** recommended on tractor with a tricycle wheel arrangement. Tricycle type tractors are unstable for front loader use.
-  A heavy load can cause instability in driving a power unit. Make sure the front or rear of the power unit is properly counter-balanced with weights. Always drive slowly – especially around turns. An unstable power unit could steer badly and possibly tip over, causing injury or death.
-  Do not allow others to ride on the power unit with an operator. Riders are subject to injury such as being struck by foreign objects or being thrown off. Riders obstruct the operator's view resulting in unsafe operation. **Never allow anyone to ride on the implement!**

SAFETY INSTRUCTIONS (continued)



OPERATIONAL SAFETY (continued)



Before you operate any equipment, check over all pins, bolts and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.



Do not work under a raised loader unless it is securely blocked or held in position. Do not depend on the power unit hydraulic system to hold the implement in place.



Operate the loader controls smoothly, avoiding jerky operation. Stop loader gradually when lowering or lifting loads.



Beware of low electrical wires when loader is raised. Serious injury or death can result if contact is made.



When cutting limbs or trees on a slope, always approach the material with the power unit facing uphill.



Only use a power unit equipped with a ROPS cab or rollover protective structure. Keep foldable ROPS systems in “locked up” position at all times. Keep seat belt fastened.



Move tractor wheels to the widest recommended settings to increase stability.



Keep all bystanders at a safe distance. REMEMBER FALLING LIMBS OR TREES CAN ROLL OR TUMBLE.



Do not handle loads that exceed the weight limitations of the loader.



Carry the loads slowly and as low as possible to the ground. Avoid excessive speed during operation.



For operator safety, always keep load in front of power unit. NEVER position load back over operator. ALWAYS BE CAREFUL!



Beware of lift clearance when raising loader to maximum height.

















Keep alert and watch the rear as well as the front when working with the loader.

SAFETY INSTRUCTIONS (continued)



OPERATIONAL SAFETY (continued)

-  When maneuvering close to buildings or passing through narrow areas, be sure to allow sufficient clearance for the power unit, loader, and tree clipper. Drive slowly.
-  Operate loader from operator's seat only. Remain at controls until operating cycle is complete.
-  Use extreme care when working on inclines and hillsides. Operate up and down (not across) on intermediate slopes. Avoid sudden starts and stops.
-  Do not operate close to ditches, creeks or holes. Slow down when operating over rough ground.
-  Allow for additional length of loader and load on power unit while turning.
-  Keep load centered on tree clipper and loader. Unbalanced loads increase possibility of tipping or roll-over.
-  When cutting branches, be aware of branches that might contact power unit or operator.
-  Periodically clear the equipment of brush, twigs or other materials to prevent buildup of dry combustible materials.
-  Because it is possible that this equipment may be used in dry areas or in the presence of combustibles, special precautions should be taken to prevent fires, and fire-fighting equipment should be readily available.
-  Do not lift or carry anyone on loader or in bucket or on attachment.
-  ALWAYS lower loader to the ground or block securely before performing any maintenance work.
-  Always keep power unit on solid footing when operating loader. Avoid loose fill, rocks, and holes.
-  Observe Safety Recommendations in loader instruction manual.
-  Inspect the entire machine periodically as indicated in the Maintenance Section of this manual. Look for loose fasteners, worn or broken parts, pinched hydraulic hoses, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order.

SAFETY INSTRUCTIONS (continued)



TRANSPORT SAFETY



Comply with state and local laws governing highway safety and movement of farm machinery on public roads.



The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.



When driving the tractor and equipment on the road or highway under 20 mph (32 kph) at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.



Always be sure the implement is in the proper raised position for transport.



Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.



Plan your route to avoid heavy traffic.



Always install transport locks, pins or brackets before transporting.



Do not drink and drive!



Watch for traffic when operating near or crossing roadways.



Turn curves or go up or down hills only at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractor's weight is on the front wheels to maintain safe steerage. Slow down on rough or uneven surfaces, and loose gravel.



Use extreme care and maintain minimum ground speed when transporting on hillside, over rough ground and when operating close to ditches or fences. Be careful when turning sharp corners.



Never allow riders on either power unit or implement. Falling off can kill.



Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.



Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.














Keep the brake pedals latched together at all times. NEVER USE INDEPENDENT BRAKING AS LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT.

SAFETY INSTRUCTIONS (continued)



MAINTENANCE SAFETY

-  Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
-  Follow good shop practices.
 - Keep service area clean and dry.
 - Be sure electrical outlets and tools are properly grounded.
 - Use adequate light for the job at hand.
-  Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
-  Before working on this machine, drive to a level area, disengage the PTO, lower implement or loader (or if working underneath, raise and block securely), shut off the engine, relieve all hydraulic pressure, set the brakes, and remove the ignition keys.
-  Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.
-  Never work under equipment unless it is blocked securely. Never depend on hydraulic system to keep implement in raised position.
-  Keep all persons away from operator control area while performing adjustments, service, or maintenance.
-  Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance.
-  Periodically tighten all bolts, nuts and screws and check that all cotter pins are properly installed to ensure unit is in a safe condition. Check bolt torque chart when tightening bolts and nuts.
-  When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.
-  Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. If injured by escaping hydraulic fluid, see a doctor at once. Gangrene and death can result. Without immediate medical treatment, serious infection and reactions can occur.

SAFETY INSTRUCTIONS (continued)



MAINTENANCE SAFETY (continued)



After servicing, be sure all tools, parts and service equipment are removed.



Check to ensure all safety signs are installed and in good condition. (See safety sign section for location drawing.)



Do not allow grease or oil to build up on any deck or platform.



Never replace hex bolts with less than grade five bolts unless otherwise specified, i.e. shear bolts. Refer to bolt torque chart for head identification marking.



Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.



If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.



A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



STORAGE SAFETY



Following operation or when unhooking, stop the tractor, set the brakes, shut off the engine, relieve all hydraulic pressure and remove the ignition keys.



Store the unit in an area away from human activity.



Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.



Do not permit children to play on or around the stored unit.



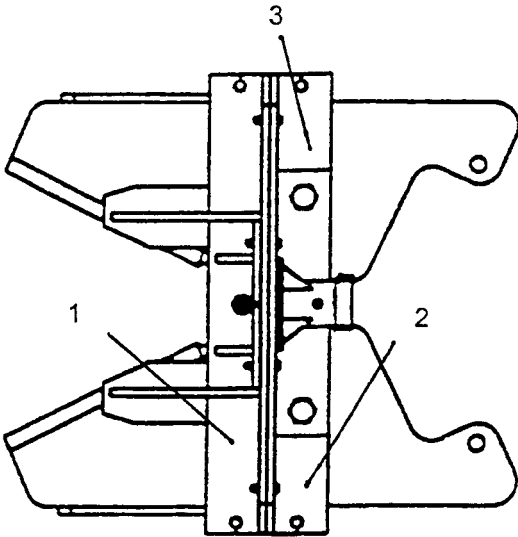
Make sure all parked machines are on a hard, level surface and engage all safety devices.



If blocking is used, make sure it is solid and secure before leaving area.

SAFETY SIGNS

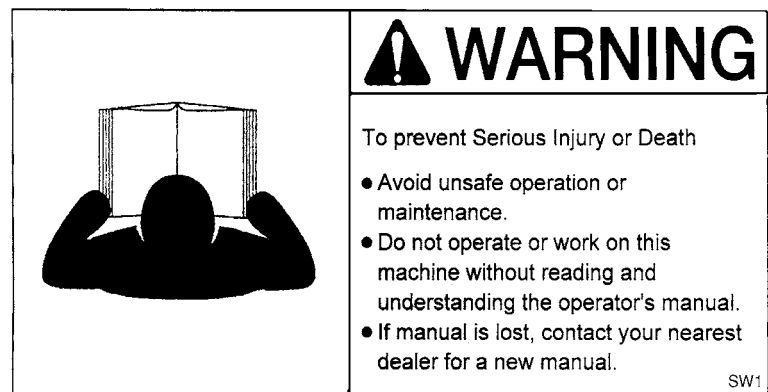
The types of Safety Signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various Safety Signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.



1. PART #101161



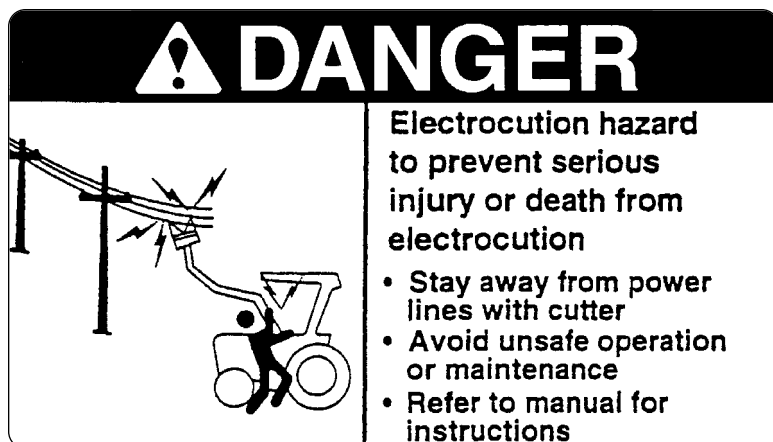
2. PART #101122



3. PART #101170

REMEMBER: If Safety Signs have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized distributor or factory.

SAFETY SIGNS (continued)



PART #101162



PART #101027

**OBEY ALL
SAFETY
WARNINGS**

NOTE:

If Safety Sign is missing or damaged, replace immediately.



- Read and follow owner's manual before installing, operating, or performing maintenance on this attachment. Observe safety recommendations in manual.
- Do not exceed weight limit of attachment or tractor.
- Do not lift or carry anyone on attachment.
- Attachment should be used with the proper weight package on front of tractor or with a loader installed. When handling loads on both ends of tractor, load rear first and unload last.
- Set wheels wide for increased stability.
- Never raise load to extreme heights on steep inclines.
- When handling large round bale, keep load as low as practical to maximize tractor stability.
- Make sure large round bale transported on tractor rear three point hitch attachment does not obstruct visibility of tractor's flashing lights or SMV sign.
- Do not stand or work under raised attachment.
- Stop engine, lower arms, relieve all hydraulic pressure, and lock brakes before leaving operator's seat.
- Failure to observe the above precautions can result in serious injury or death.

101277

INSTRUCTIONS

TRACTOR AND SKID STEER REQUIREMENTS AND PREPARATION

The tree clipper is designed to cut trees or limbs that are up to 8.0 inches in diameter.

The tree clipper has a 5" bore x 8.0" stroke hydraulic cylinder to power the alloy steel shear blades. The tree clipper head is rotated with a 2 1/2" bore x 10" stroke hydraulic cylinder.

The tree clipper is available in two models.

The model TC8-FL is designed to mount on farm tractor front-end loaders. Optional brackets are available to fit most popular quick coupler front-end loaders.

The model TC8-FL is recommended for tractors with a minimum PTO horsepower rating of 40 hp.

Tractors need to have a minimum hydraulic pressure of 2000 PSI.

The model TC8-SS is designed to mount on skid steer units equipped with the universal quick-attach bucket or attachment connection.

Skid steer units and tractors with only one pair of remote hydraulic outlets will require an optional hydraulic shuttle valve kit.

Check the power unit's hydraulic system. Be sure the hydraulic oil and filter have been serviced according to manufacturer's recommendations. Refer to your tractor or loader operator's manual or dealer for any adjustments necessary to put the hydraulic system in good working order.

Be sure tires and rims are in good condition. Inflate tires to the proper recommended air pressure.

It is recommended that a ROPS (Roll-Over Protection Structure) and a seat belt be installed on all tractors. Contact your local dealer for a ROPS for your tractor.



WARNING!

Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS systems in "locked up" position at all times.



CAUTION!

Be sure your tractor and loader, or skid steer is in good condition. Read all the safety precautions and make sure all equipment operators are familiar with the safety rules of operation.

NOTE: Worksaver does **NOT** recommend the use of any loader attachment on tractors with a tricycle wheel arrangement.

The operator is responsible for the safe operation of this equipment. The operator must be properly trained. Operators should be familiar with the tractor, loader and loader attachment, and all safety practices before starting operation. Read the safety rules and safety signs on pages 3-14.



WARNING!



A heavy load can cause instability in driving a power unit. Make sure the rear of the tractor is properly counterbalanced with weights. Always drive slowly – especially around turns. An unstable power unit could steer badly and possibly tip over, causing injury or death.

ASSEMBLY

Refer to the "exploded views" on pages 27-29 of this manual.

Carefully follow instructions for final assembly.

Before attempting assembly check the following items. Having all the needed parts and equipment readily at hand will speed up your assembly task and will make the job as safe as possible.

- Check for fasteners and pins that were shipped with the tree clipper.
- Have a fork lift or loader along with chains and safety stands that are sized for the job ready for the assembly task.
- Have a minimum of 2 people at hand during assembly.
- Check to see that all nuts are tightened.

Check your loader to make sure it is in good working order. Check all frame mounting bolts to make sure they are tight.

Loaders that attach to the tractor frame rails should have a cross-tie installed for stability.

ASSEMBLY – TRACTOR LOADERS PIN ON ATTACHMENT

Remove the bucket from your front end loader. Check your loader to make sure it is in good working order.

Assemble the two (2) lift brackets on the main frame (Ref. #1) with the 5/8" x 3" I.D. U-bolts. Leave the U-bolts loose.

INSTRUCTIONS (continued)

ASSEMBLY – TRACTOR LOADERS PIN ON ATTACHMENT (continued)

NOTE: The lift channel brackets are supplied with 1" diameter pins to fit your loader. If your loader requires 1¹/₈" pins, it will be necessary for the hole diameter in the channel brackets to be drilled out to 1⁵/₃₂" (1.156") and ask your dealer to order 1¹/₈" diameter pins. The 1¹/₈" pins are part #830318. Be sure to indicate if two or four 1¹/₈" pins are required.

If your loader requires 1¹/₄" diameter pins, please ask your dealer to order adapter bushings (part #830319). Be sure to indicate how many adapter bushings are required.

NOTE: The Ford (New Holland) models 7109, 7209, 7210, 7309, 7310 and 7410 Pin Type Loaders require special brackets. Also, Rhino (Alamo) models 2410 and 2491. Order #830330 bracket kit.

NOTE: For loaders that require brackets that provide additional roll back, order #830335 (1" pins).

NOTE: Loaders with only one hydraulic cylinder in the center of the loader to tilt the bucket or attachment may be used with the addition of an optional center bracket (order bracket #830320).

Connect the assembly to the loader arms using the bottom hole in the channel and attach the upper control cylinder to the top hole in the lift channels. Center the main frame (side to side) with your loader arms and tighten the four (4) 5/8" x 3" U-Bolts.

The lower hole positions in the lift channels can be used to obtain more angle movement. However, if the frame becomes too parallel with the loader lift arms, the loader may not have enough power (mechanical advantage) to bring the frame back.

NOTE: Generally, it is not recommended to have the tilt cylinders located any closer than 10-12 inches to the main loader lift arms. **Check the spacing of mounting pins on your loader bucket and use this as a guide.**

If tilt cylinders are located too close to the loader arms, they may go "over center" when fully extended. If this happens, damage may occur to the cylinders and/or mounting brackets.

ASSEMBLY – QUICK ATTACH

If your tractor loader has a bucket Quick Attach feature, check with your dealer on the availability of adapter brackets for your brand and model loader.

Measure the width of the front adapter on your loader and locate the Quick Attach brackets on the main frame. Locate these brackets so the main frame will be centered on your loader.

Tighten the U-bolts that connect the brackets to the main frame.

SKID STEER MOUNTING

Remove the bucket from your skid steer unit and connect the main frame of the tree clipper to the universal quick-attach coupler.

The model TC8-SS have a universal quick-attach bracket welded on the frame. No special brackets are required. Make sure latch pins engage slots to lock the frame in place.



To help prevent personal injury, stand clear of frame and loader. Keep feet away from underside of main frame.

ASSEMBLY – SKID STEER AND TRACTOR LOADERS

Raise the tree clipper main frame approximately 6 inches above the floor and block under the frame with the frame vertical. Shut the power unit off.

Attach the tree clipper pivot boom assembly with the four (4) 5/8" U-bolts.

NOTE: It is suggested on tractor front loaders to locate the boom to either the right or left side to improve visibility of the clipper. (The tractor hood sometimes blocks visibility when cutting trees off at ground level.)

Restart the power unit and tilt the pivot boom so the pivot tube is about horizontal. Attach the tree clipper head with the two (2) 1/2 x 2 bolts and two (2) 1/2 x 3 1/2 bolts.

Tighten all mounting bolts.

Connect the hydraulic cylinders to the proper hydraulic remote outlets using high quality hydraulic hose of the proper length. The hoses need to be short enough to keep out of the way and long enough to allow the tree clipper to operate through its range of movement.

NOTE: The large 5" x 8" hydraulic cylinder on the tree clipper head has #8 "O-ring" fittings. Adapters are included for 1/2" pipe thread hose fittings.

The 2 1/2" x 10" hydraulic cylinder used to rotate the tree clipper head had 1/2" "Pipe Thread" fittings.

NOTE: It is recommended that the hoses to the 5" x 8" cylinder be 1/2" diameter. The hoses to the 2 1/2" x 10" rotating cylinder can be 3/8" or 1/4" diameter.

NOTE: There are hose clamps welded on the pivot boom frame to keep the hoses out of the way and to minimize the chance of hoses being entangled with limbs.

INSTRUCTIONS (continued)

ASSEMBLY (continued)

Route the hoses (not supplied) back to your tractor/loader remote hydraulic couplers. Be sure to allow a loop of hose just behind the attachment to allow for the tilt angles that will be encountered. Make sure that the hoses are routed so they will not be pinched or snagged by attachment pivot arms, loader, or tractor parts. Fasten the hoses securely so they will remain in the correct position and not drop down where they could be pinched or sheared.

Use a good thread sealant. (**DO NOT USE TEFLON TAPE** as this could cause hydraulic system problems in your tractor or power unit.)

After making the hose connection between the tractor/skid remote outlets and the hydraulic cylinders, operate the tree clipper cylinders several times to work the air out of the system.

Check hydraulic fluid level in your tractor or skid steer after filling the cylinders and hoses.



Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury.

DO NOT use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks.

Stop engine and relieve pressure before connecting or disconnecting lines.

Tighten all connections before starting engine or pressurizing lines.

If any fluid is injected into the skin, obtain medical attention immediately, or gangrene may result.

SKID STEER HYDRAULICS and tractors with only one pair or remote hydraulic outlets

Power units with only one pair of remote hydraulic outlets will need a shuttle valve or other hydraulic outlet splitting device to provide the equivalent of two pair of remote hydraulic outlets.

The model TC-8-SS (Skid Steer model) has a solenoid valve in the system as standard equipment.

You can order the 811360 optional solenoid kit for installing the Tree Clipper on tractors that have only one pair of remote hydraulic outlets. The hoses from the solenoid valve to the tractor remote outlets are not supplied.

Refer to page 24 for detailed instructions to install the optional solenoid valve package.

PRE-OPERATION CHECKLIST

(OWNER/OPERATOR RESPONSIBILITY)

- ____ Review and follow safety rules and safety signs on pages 3 through 14.
- ____ Check that the tree clipper is properly and securely attached to tractor loader or skid steer.
- ____ Lubricate all grease fitting locations.
- ____ Check that all hardware is properly installed.
- ____ Check that no one enters the area of machine operation. Always work at a safe distance from roads, built-up areas, or populated places.
- ____ Know your controls and how to stop tractor, engine and PTO quickly in an emergency. **READ THIS MANUAL AND THE ONE PROVIDED WITH YOUR POWER UNIT.**
- ____ To avoid accident or injury, do not allow anyone to operate this equipment without proper instructions. Any person who operates this equipment must be instructed in and be capable of the safe operation of the tractor, skid steer, attachment and all controls.

SAFETY INSTRUCTIONS

Observe all instruction and safety decals on the tree clipper. These safety signs are shown for reference. Read them carefully before using the tree clipper. Replace any decals that may be faded or damaged.

Make sure all operators have read the Owner's/Operator's Manual and are familiar with the instructions and the safety rules of operation.



Beware of low electrical wires when loader and tree clipper are raised. Serious injury or death can result if contact is made.



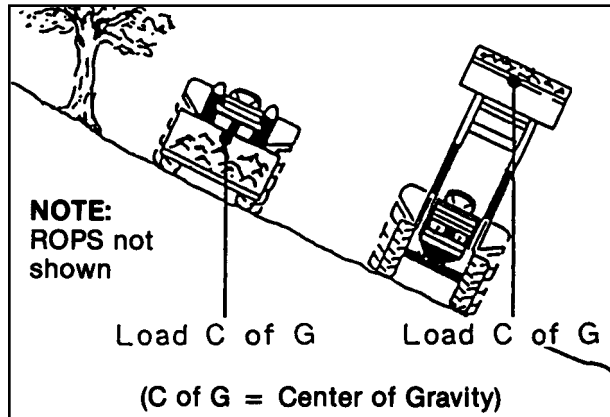
Never allow anyone to be near the work area. Falling trees or limbs could cause serious injury or death.

OBEY ALL SAFETY WARNINGS!

OPERATING INSTRUCTIONS

SAFETY INSTRUCTIONS (cont.)

Be sure tractor is properly counter-balanced with weights before attempting to operate the tree clipper attachment.



When working on side hills, **DO NOT RAISE LOADER TOO HIGH.** Keep an eye on terrain changes. Keep load low.

OPERATE LOADER SAFELY

- Improper use of loader can cause serious injury or death.
- Become familiar with controls.
- Be sure anyone operating the loader is aware of safe operation and potential hazards. Read and observe safety recommendations in loader manual.
- Operate loader from operator's seat only. Remain at controls until operating cycle is complete.
- Stop loader gradually when lowering or lifting loads.
- Use particular care when working on inclines and hillsides.
- Avoid holes, ditches, and obstructions which may cause tractor/loader to tip.
- Allow for additional length of loader and tree clipper on tractor/skid steer while turning.
- Never allow anyone to walk or work under a raised loader.
- Be sure that people, livestock, or pets are not standing near the machine while operating.
- Do not handle loads that exceed the weight limitations of the loader.
- Carry the loads slowly and as low as possible to the ground.
- Operate the loader hydraulic controls smoothly, avoiding jerky operation.
- When cutting trees or limbs on a slope, always approach the tree with the tractor facing uphill.
- Only use a tractor or power unit equipped with a ROPS cab or roll-over protective structure.
- Travel slowly over rough ground or when making turns.
- Lower bucket or attachment to ground when loader is unattended.

OPERATION

Only qualified people familiar with this manual should operate this machine. Operator should wear hard hat, safety glasses, and safety shoes. It is recommended that tractor be equipped with Roll-Over Protective System (ROPS) and a seat belt be used. (A four post ROPS or a ROPS equipped with a heavy duty sun shade works best.) Check for ditches, stumps, holes, or other obstacles that could upset tractor or damage the tree clipper. Always turn off tractor engine, set parking brake, lower loader to ground and relieve hydraulic pressure before dismounting tractor.

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.

It has been said, "The best safety device is an informed, careful operator". We ask you to be that kind of an operator.

The designed and tested safety of this machine depends on it being operated within the limitations as explained in this manual. Be familiar with and follow all safety rules in the manual, on the tree clipper and on the tractor or skid steer.

The safe operation of this machine is the responsibility of the owner/operator. The operator should be familiar with the tree clipper and power unit and all safety practices before starting operation. Read the safety rules on pages 3-12.

OPERATING INSTRUCTIONS (continued)

CUTTING TREE LIMBS

Approach the limb to be cut with the shear blades open. Position the open blades and maneuver the tractor so the limb fully enters the blade opening. Avoid impact with the limb, impact could cause damage to the tree clipper. Stop the tractor and apply the brakes. Operate the hydraulic remote control valve lever to close the tree clipper blades. The limb will shear off and fall away from the tree and tree clipper head.

NOTE: If several limbs on the same tree are to be cut, always cut the lower limbs first. It may be necessary to remove the cut limbs to obtain access to the higher limbs.

The tree clipper can be used to move cut limbs. Place the open blades around a thicker part of the limb and close the blades just enough to pinch the limb. Then back the power unit away from the tree and place the cut limb in an out-of-the-way location.

The tree clipper is designed for cutting trees and limbs. DO NOT attempt to carry large limbs or stack limbs with tree clipper.

A grapple rake is the proper tool to carry and stack trees and limbs.

When trimming limbs, always rotate the blades so the clipper head is at a right angle to the limb. DO NOT cut limbs directly overhead.

When operating on hilly ground, try to approach the tree with the tractor or skid steer facing up hill. This makes it easier to back away and not become “trapped” against the tree.

NOTE: Tree limbs often grow in odd shapes. These limbs will sometimes twist and roll as the shearing operation is almost complete. Examine the limb to be cut and determine which way it will go when cut. Try to position the power unit and tree clipper so the limbs fall away from the power unit and operator.

NOTE: When a large limb needs to be cut and it may fall on a fence or other object, cut smaller pieces of the limb off and work back to the tree.

NOTE: It is recommended that a heavy 3 pt. implement be mounted on the 3 pt. hitch to add weight to the rear tractor tires. This is especially important when operating on hilly ground and it is necessary to back up hill.

UNEVEN TERRAIN



Beware of lift clearance when raising loader and tree clipper to maximum height.



Do not operate on steep slopes.

Do not stop, start or change directions suddenly on slopes.

Use extreme care and reduce ground speed on slopes and rough terrain.

Watch for hidden hazards on the terrain during operation.

CUTTING TREES

Always cut trees from a direction that will allow tree to fall away from the operator.

Do not attempt to cut trees larger than 8” in diameter.

When cutting at ground level, tilt the clipper head slightly forward to keep the hydraulic cylinder off the ground. Drop the clipper head to the ground in front of the tree and then move the power unit forward until the clipper blades engage the tree. This allows the weight of the cutter to sink the 2” sled bars into the ground and allows you to cut the tree at a lower level. When sliding the clipper head on to a tree, avoid impact with the tree. Impact could cause damage to the clipper head.

Plan ahead and cut the tree in a direction that will allow the tree to fall away from the operator and power unit. To help fall the tree away from the operator, trim limbs on the clipper side of the tree. Clear the cut limbs, then tilt the clipper head slightly forward, drop the blades to the ground and slide on to the tree and clip.

Be sure cutting is complete prior to opening the blades.

If blades get stuck in a tree, DO NOT TRY TO FORCE them out by pulling back or tilting. Damage to the tree clipper head or frame members may occur. It is recommended to chop or saw the wood around the blades to free the blades. Always be aware of the direction the tree may fall.

Most front loaders and skid steer units can apply down pressure on the attachment. DO NOT APPLY excessive down pressure on the clipper head or over tilt the mount. The tree clipper is not designed to accept the full load of tractor and loader or skid steer.

When operating on hilly ground, try to approach the tree with the tractor or skid steer facing up hill. This makes it easier to back away and not become “trapped” against the tree.

NOTE: The tree clipper is designed for cutting trees and limbs. DO NOT attempt to carry trees or pile trees with the tree clipper. A grapple rake is the proper tool to carry and pile trees.

NOTE: Most symmetrical shaped trees will fall to the side when cut with a tree clipper. Trees that lean or have a heavy side will usually fall in that direction. On a windy day, the wind may change or determine which way the tree will fall. Always be aware of the factors that determine the direction a tree may fall.

OWNER SERVICE

MAINTENANCE



Always stop the tractor or skid steer, set brake, shut off engine, remove key, and lower loader to ground before attempting to service. Never leave equipment unattended with engine running.



Do not work under a raised loader unless it is securely blocked or held in position. Do not depend on the hydraulic system to hold loader and attachment in place.

If the machine is used in heavy duty conditions, the maintenance operations must be carried out more frequently.

Thoroughly clean the grease zerks before servicing. Dirt mixed with lubricant will rapidly wear parts and destroy bearings. Keep it clean.

Lubricate the blade pivot bolts every 8 hours of use. Lubricate the pivot arm bushings every 16 hours of use.

Check the pins at the ends of the loader arms. Make sure they are locked in place with the linchpins.

Periodically check all bolts to make sure they are tight.

Check hydraulic hoses. Make sure they are not chafed or pinched. Replace any damaged hose.

Check hydraulic hoses and fittings for leaks. Repair any leaks immediately. Never use your hand to check for a hydraulic leak when system is under pressure.

Replace any worn or damaged parts immediately. Do not use attachment with any damaged parts.

**REPLACE SAFETY SIGNS
IF DAMAGED OR MISSING.**

TRANSPORTING



When traveling on public roads, whether at night or during the day, use accessory light and devices for adequate warnings to operators of other vehicles. Comply with all federal, state and local laws.

Carry load low.

Check visibility. If visibility is impaired, reduce speed or consider other means of transport.

Allow for additional length of loader on tractor while turning.

Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.

When traveling over rough or hilly terrain or when making turns, slow down and use extra care.












Read all the safety warnings in the front of this manual and in the manual of tractor or skid steer unit.

STORAGE

- At the end of the working season or when the tree clipper will not be used for a long period, it is good practice to clean off any dirt or grease that may have accumulated.
- Lubricate all pivot points on Tree Clipper before storing.
- Inspect the tree clipper for loose, damaged or worn parts and adjust or replace if needed.
- Sand areas where paint is chipped or worn and repaint to prevent rust.
- Always store in a safe place away from children or livestock.
- Storage location should be level and solid to make hitching and unhitching easy.

SERVICE INSTRUCTIONS (continued)

UNIFIED INCH BOLT AND CAP SCREW TORQUE VALUES

SAE Grade and Head Markings	NO MARK	1 or 2 ^b	5	5.1	5.2	8	8.2
							
SAE Grade and Nut Markings	NO MARK	2	5		8		
							

Size	Grade 1				Grade 2 ^b				Grade 5, 5.1, or 5.2				Grade 8 or 8.2			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
1/4	3.7	2.8	4.7	3.5	6	4.5	7.5	5.5	9.5	7	12	9	13.5	10	17	12.5
5/16	7.7	5.5	10	7	12	9	15	11	20	15	25	18	28	21	35	26
3/8	14	10	17	13	22	16	27	20	35	26	44	33	50	36	63	46
7/16	22	16	28	20	35	26	44	32	55	41	70	52	80	58	100	75
1/2	33	25	42	31	53	39	67	50	85	63	110	80	120	90	150	115
9/16	48	36	60	45	75	56	95	70	125	90	155	115	175	130	225	160
5/8	67	50	85	62	105	78	135	100	170	125	215	160	240	175	300	225
3/4	120	87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	190	140	240	175	190	140	240	175	490	360	625	450	700	500	875	650
1	290	210	360	270	290	210	360	270	725	540	925	675	1050	750	1300	975
1-1/8	400	300	510	375	400	300	510	375	900	675	1150	850	1450	1075	1850	1350
1-1/4	570	425	725	530	570	425	725	530	1300	950	1650	1200	2050	1500	2600	1950
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2150	1550	2700	2000	3400	2550
1-1/2	1000	725	1250	925	990	725	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

^a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

^b Grade 2 applies for hex cap screws (not hex bolts) up to 152 mm (6-in.) long. Grade 1 applies for hex cap screws over 152 mm (6-in.) long, and for all other types of bolts and screws of any length.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

TROUBLE-SHOOTING GUIDE

PROBLEM: TREE CLIPPER WILL NOT OPERATE

POSSIBLE SOLUTIONS:

- Remote hydraulic connection fittings not compatible. Check for proper fitting.
- Hydraulic system may not be supplying rated pressure. Consult your dealer.
- Hydraulic system may not be delivering its rated volume of oil due to wear. Hydraulic pump may need to be repaired.
- Hydraulic valve on tractor or skid steer not engaged.
- Hydraulic selector valve may be improperly plumbed. See assembly instructions.

PROBLEM: CUTTER WILL NOT CUT COMPLETELY THRU TREE

POSSIBLE SOLUTIONS:

- Bushing may be loose. Contact Company.
- Cylinder clevis on rod end may need to be extended. Blades should barely touch. DO NOT OVEREXTEND!
- Hose size is too small. Hoses to tree clipper head cylinder should be $\frac{1}{2}$ ".
- Hydraulic system on tractor too small for tree clipper (minimum of 2000 PSI required).
- Hydraulic system may not be delivering its rated volume of oil due to wear. Hydraulic pump may need to be repaired.
- Tree cutter blades are pushing tractor or skid steer back when shearing. Reposition tractor or skid steer and set brakes or apply some forward pressure as blades are shearing.

PROBLEM: HYDRAULIC OIL OVERHEATS

POSSIBLE SOLUTIONS:

- Hydraulic oil level in tractor or skid steer reservoir may be low.

- Hydraulic oil or oil filter in tractor or skid steer may be dirty. Change oil and filter according to tractor manufacturer's recommendations.
- Hydraulic oil reservoir of skid steer may be small. Allow time for oil to cool down.

PROBLEM: HYDRAULIC HOSE FAILURE

POSSIBLE SOLUTIONS:

- Hydraulic relief pressure setting is very high and may cause hydraulic hose failure.
- Hoses are worn or frayed – replace hose.
- Hose rating may be too low for hydraulic system pressure. Replace with higher rated hoses.
- Hose being pinched – reroute hose and refasten.

PROBLEM: BLADES DO NOT LINE UP

POSSIBLE SOLUTIONS:

- Bushing may be loose. Contact Company.
- Blades could be bent by operator applying too much down pressure or getting blades stuck and using loader to twist them free. If blades become stuck – use chain saw to cut tree or limb to free blades.

PROBLEM: CUTTER WILL NOT ROTATE

POSSIBLE SOLUTIONS:

- Check hydraulic pressure. Minimum of 2000 PSI is required.
- Hydraulic selector valve may be improperly plumbed. See instructions.
- Pivot boom tube may be bent by operator applying too much down pressure or by trying to work stuck blades out of tree with loader.

TROUBLE-SHOOTING GUIDE (continued)

PROBLEM: CUTTER IS LOOSE ON MOUNT OR MOUNT IS LOOSE ON LOADER

POSSIBLE SOLUTIONS:

- Bolts that connect tree clipper head assembly to pivot frame are loose or worn. Tighten or replace bolts.
- U-bolts that connect pivot frame to main frame may be loose or worn. Tighten or replace U-bolts

NOTE: If bolts are loose or damaged, it could be that they were never properly tightened. It also could be that the operator is impacting the tree clipper into limbs or trees during operation.

- Tree clipper mount may not be properly latched on tractor or skid steer loader. Check lock pins.
- Skid steer “hand” (latching frame) and/or locking pins may be worn.

PROBLEM: BLADES DO NOT CLOSE COMPLETELY

POSSIBLE SOLUTIONS:

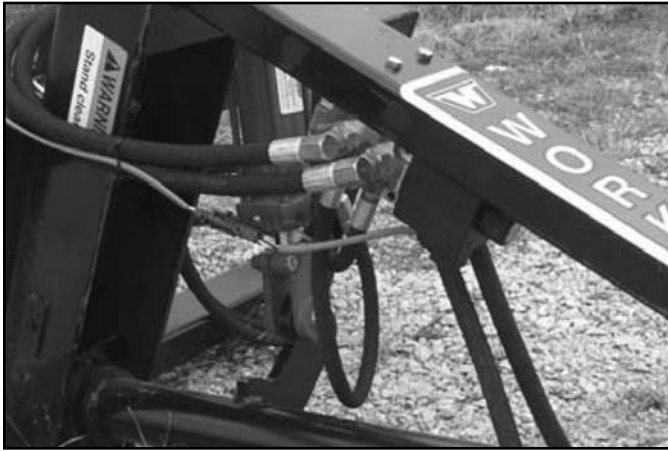
- Cylinder clevis on rod end may need to be extended. Blades should barely touch. DO NOT OVEREXTEND!
- Hydraulic cylinder not fully extending – check oil reservoir for proper oil level.

-
-
- ✓ Keep children away from danger all day, every day.
 - ✓ Please work, drive, play, and live each day with care and concern for your safety and that of your family and fellow citizens.

**OBEY ALL
SAFETY WARNINGS!!**

INSTALLATION INSTRUCTIONS

OPTIONAL MULTIPLIER VALVE



Install the valve to the under side of the 4 x 2 tube using (2) $\frac{5}{16}$ x 5" long hex bolts, lock washers and nuts.



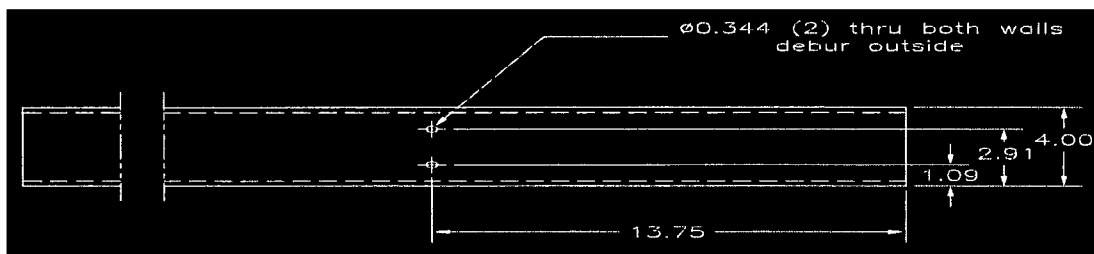
The coil on the steel bodied valve faces forward, toward the clipper head.



Connect the two $\frac{1}{2}$ x 36" long hydraulic hoses to the side ports on the multiplier valve as shown, and to the 5 x 8 hydraulic cylinder ports. Both hose ends are O-ring fittings and require no thread sealant.



Connect the two $\frac{3}{8}$ x 24" long hoses to the bottom ports on the multiplier valve as shown, and to the $2\frac{1}{2}$ x 10 hydraulic cylinder that does the rotation function. Apply a small amount of paste type thread sealant to the hose end threads before installing them in the cylinder ports.



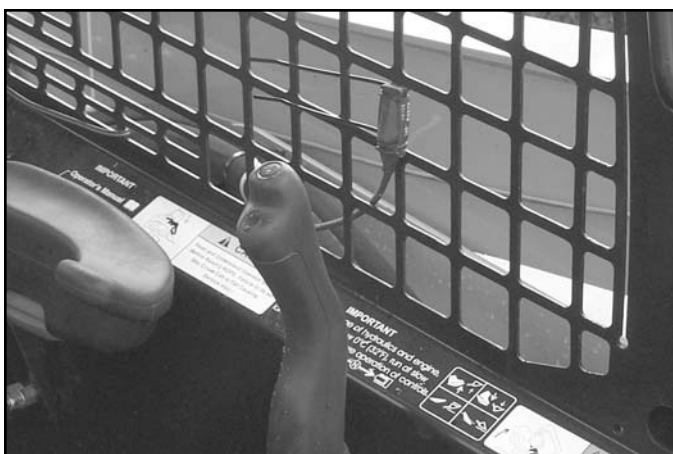
If the 4 x 2 tube has not been predrilled for installing the valve mounting plate and cover plate, it will be necessary to layout and drill (2) $\frac{11}{32}$ dia. holes through the 4.0" width of the tube. You can simplify the procedure by locating the first hole, then use the valve as a template and match drill the holes.

OPTIONAL MULTIPLIER VALVE INSTALLATION (continued)



Connect the two $\frac{1}{2}$ x 108" long hoses to the side ports on the valve as shown, and to the hydraulic remote outlets on the skid steer. Hydraulic couplers (FIG. D) that match the couplers on the skid steer are to be furnished by the customer. The hose ends are $\frac{1}{2}$ " NPT (pipe) threads. Apply a small amount of paste type thread sealant. The hoses (FIG. C) should be routed and retained by the hose clamp block on the rear formed channel. Route the hoses (FIG. B) so they pass through near the centerline of the attachment plate lower pivot. This reduces the amount of hydraulic hose movement as the clipper is tilted forward and back.

Connect the 9 ft. length of electrical cable to the valve, and route it along the hydraulic hoses. Use plastic ties and attach the cable to the hoses to protect it during service.



Attach the electrical switch to a convenient location in the operators station of the skid steer. Route the electrical supply wires to the battery or auxiliary electrical block. Attach the red (+) wire to the positive (+) side of the electrical system or battery terminal. Connect the other wire to the negative (-) side.

OPTIONAL MULTIPLIER VALVE INSTALLATION (continued)



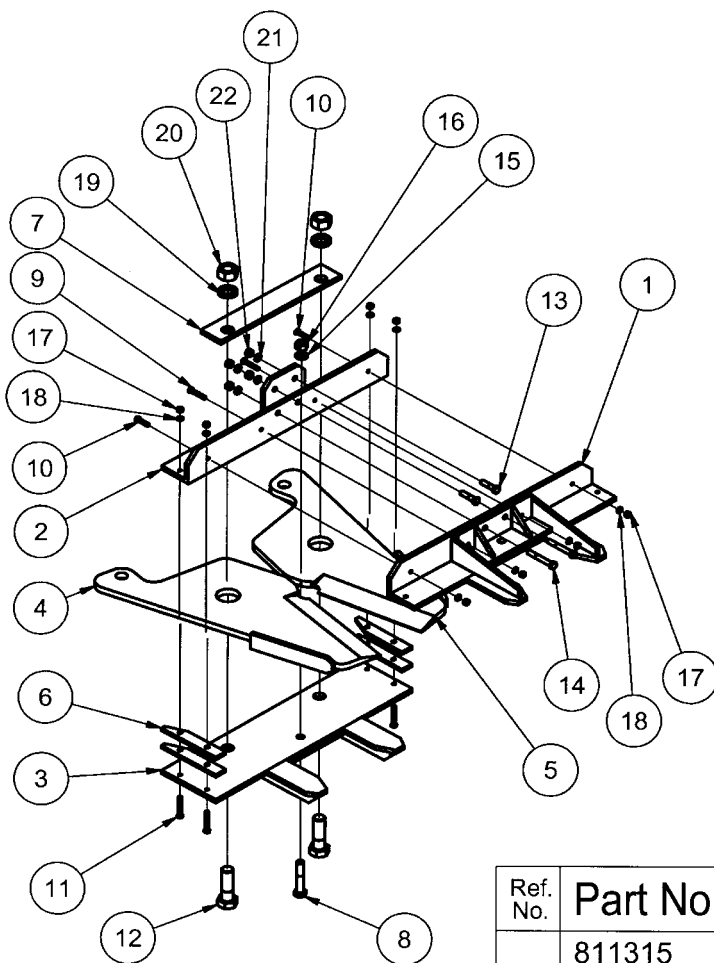
Connect and route the 16 ft. cable between the switch and the 9 ft. cable. The 16 ft. cable must be routed along the skid steer lift arms adjacent to the hydraulic lines so the length requirement of the electrical cable does not change as the arms are raised and lowered. Use plastic ties to attach the cable in place.

The electrical switch and 16 ft. cable can be left on the skid steer when the clipper is detached.

OPERATION INSTRUCTIONS

OPTIONAL MULTIPLIER VALVE

Normal operation of the skid steer hydraulic control will operate the clipper shear function. Depressing and holding the switch will transfer the hydraulic function from the shear function to the rotation function. Only one function will operate at a time. **Do not use the rotation function to twist a limb or tree with the shear closed.** To do so, can spring the shear blades such that they will no longer shear directly opposite one another. This will cause poor or incomplete shearing.

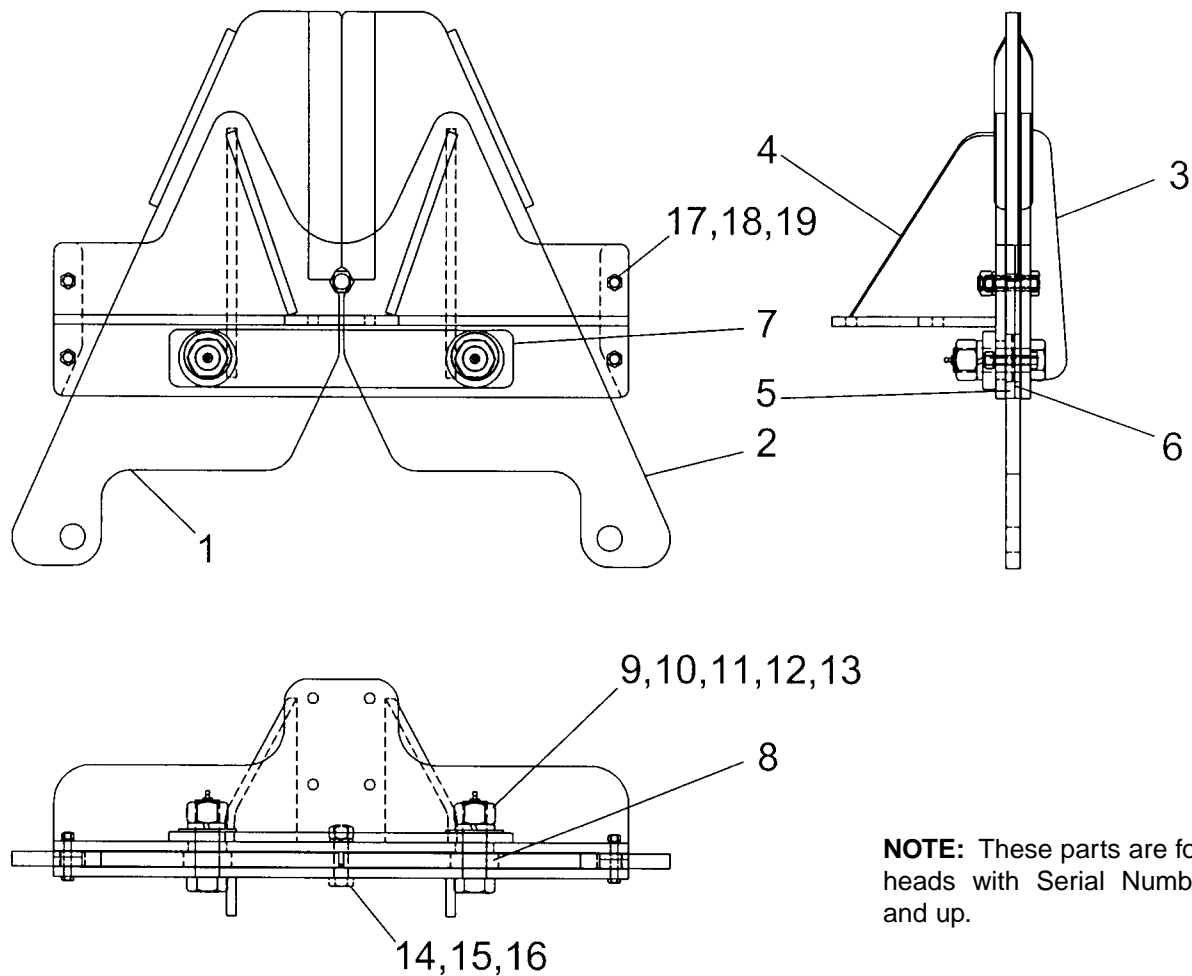


TREE CLIPPER HEAD PARTS DRAWING & LIST

NOTE: These parts are for clipper heads prior to Serial Number 2066.

Ref. No.	Part No.	Description	No. Req'd.
	811315	Complete Tree Clipper Head Assembly	1
1	811319	Front Angle Weldment	1
2	811318	Rear Angle Weldment	1
3	811321	Bottom Plate Weldment	1
4	811316	Right Hand Blade Weldment	1
5	811317	Left Hand Blade Weldment	1
6	811324	Spacer	4
7	811322	Top Plate	1
8	2503137	Bolt 3/4"-10NC x 4" Hex Head Gr. 5	1
9	2503299	Bolt 3/8"-16NC x 2" Hex Head Gr. 5	2
10	2503300	Bolt 3/8"-16NC x 1 1/2" Hex Head Gr. 5	2
11	2503205	Bolt 3/8"-16NC x 2 1/2" Hex Head Gr. 5	4
12	2503301	Bolt 1 1/4"-7NC x 4" Hex Head Gr. 8	2
13	2503118	Bolt 1/2"-13NC x 2" Hex Head Gr. 5	2
14	2503264	Bolt 1/2"-13NC x 3 1/2" Hex Head Gr. 5	2
15	2502001	Washer 3/4" Springlock	1
16	2500002	Nut 3/4"-10NC Full Hex	1
17	2500004	Nut 3/8"-16NC Full Hex	8
18	2502008	Washer 3/8" Springlock	8
19	2502012	Washer 1 1/4" Springlock	2
20	2500066	Nut 1 1/4"-7NC Full Hex	2
21	2502002	Washer 1/2" Lockwasher	4
22	2500003	Nut 1/2"-13NC Full Hex	4

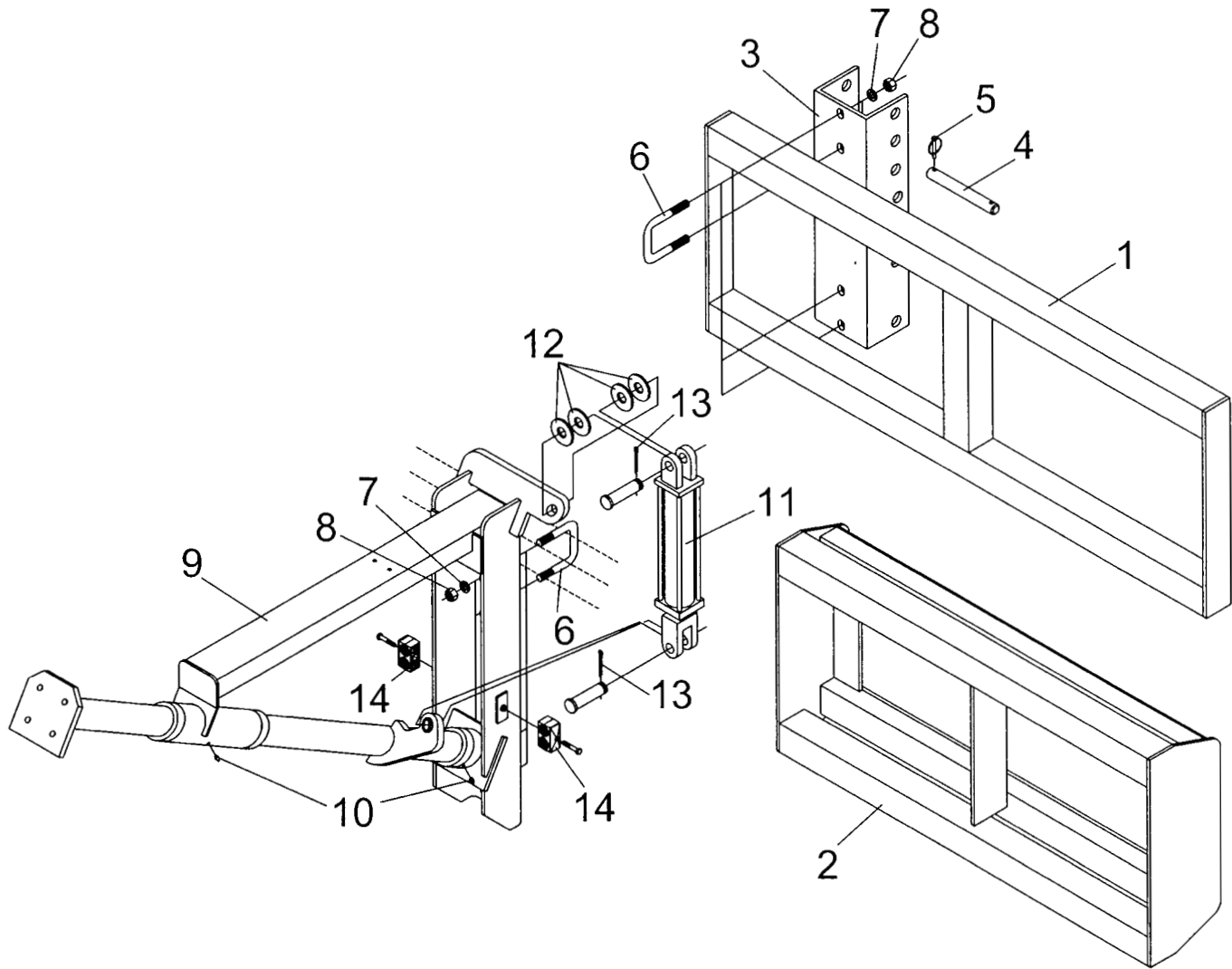
TREE CLIPPER HEAD PARTS DRAWING & LIST



NOTE: These parts are for clipper heads with Serial Number 2066 and up.

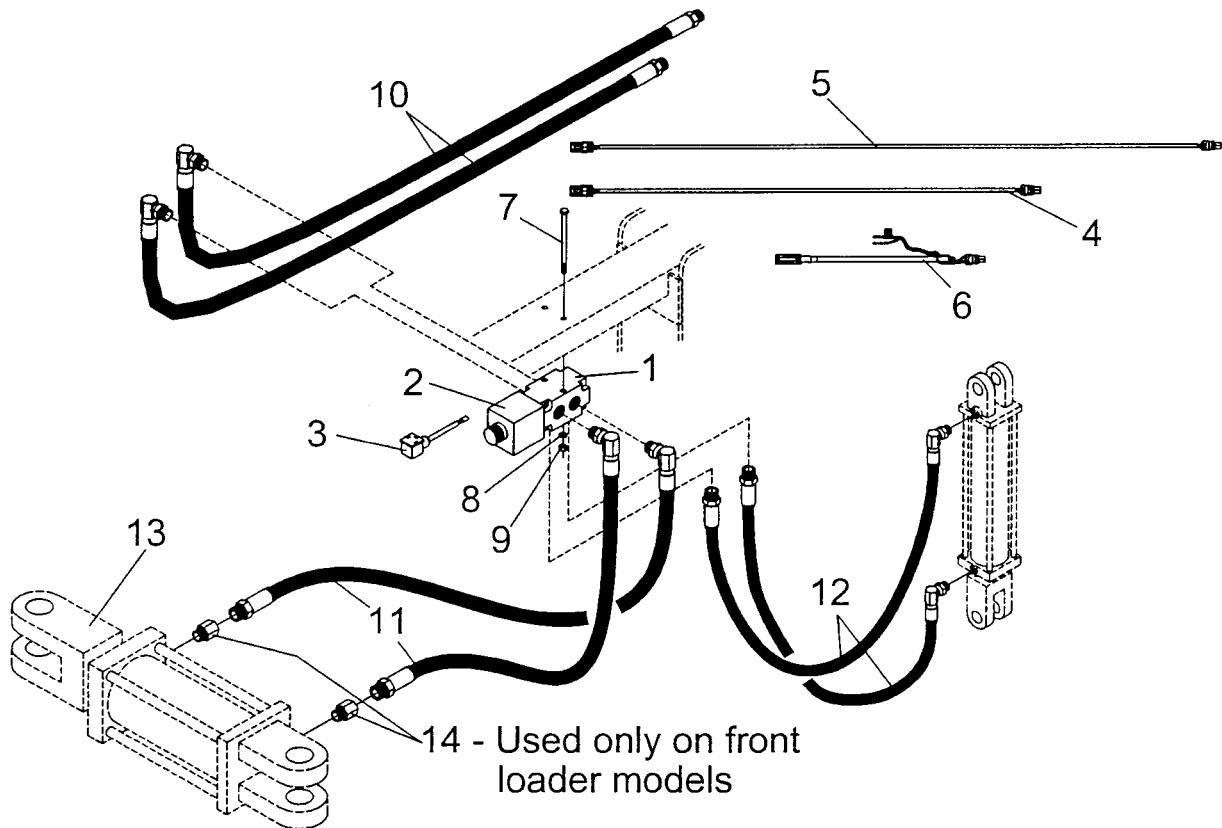
Ref. No.	Worksaver Part No.	Description	Mfg. No.	No. Req'd.
	811350	Comp. Clipper Head Assy. w/Hyd. Cylinder		1
1	811351	Blade Weldment - Left	661-1ASM	1
2	811352	Blade Weldment - Right	661-2ASM	1
3	811353	Bottom Plate Weldment	661-3ASM	1
4	811354	Top Plate Weldment	661-4ASM	1
5	811355	Spacer - 1/2"	661-7	2
6	811356	Spacer - 5/16"	661-8	2
7	811357	Front Support Mount	661-10	1
8	811358	Bushing - Eccentric	661-11	2
9	811359	Pivot Bolt w/Lube Hole	661-13	2
10	2501010	Washer 1 1/4" Flat		2
11	2502012	Washer 1 1/4" Springlock		2
12	2500066	Nut 1 1/4"-7NC Full Hex		2
13	2504049	Grease Fitting 5/16" Press		2
14	2503308	Bolt 3/4"-10NC x 3 1/2" Hex Head Gr. 5		1
15	2502001	Washer 3/4" Springlock		1
16	2500002	Nut 3/4"-10NC Full Hex		1
17	2503222	Bolt 1/2"-13NC x 2 1/2" Hex Head Gr. 5		4
18	2502002	Washer 1/2" Lockwasher		4
19	2500003	Nut 1/2"-13NC Full Hex		4

TREE CLIPPER PARTS DRAWING & LIST



Ref. No.	Part No.	Description	No. Req'd.
1	811302	Main Frame, Front Loader (TC8-FL Only)	1
2	811306	Main Frame, Skid Steer (TC8-SS Only)	1
3	830317	Lift Bracket (TC8-FL Only)	2
4	830309	Pin, Lift (TC8-FL Only)	4
5	590034	Linch Pin 1/4" (AK-61)(TC8-FL Only)	8
6	830214	U-Bolt 5/8"-11NC 3" x 4 1/2"	Var.
7	2502007	Washer 5/8" Springlock	Var.
8	2500013	Nut 5/8"-11NC Full Hex	Var.
9	811330	Pivot Weldment	1
10	2504049	Drive Zerk 5/16"	2
11	2504215	Cylinder, Hydraulic 2 1/2 x 10	1
12	2501014	Washer 1" Medium Flat SAE	4
13	2504007	Pin, Cotter 3/16" x 1 3/4"	2
14	2505586	Hose Clamp Assembly	2

HYDRAULIC MULTIPLIER VALVE KIT PARTS DRAWING & LIST



Ref. No.	Part No.	Description	No. Req'd.
1	2505636	Valve Assembly (Includes Items #2 & #3)*	1
2	2505637	Coil Only	1
3	2505638	3" Connector Cable	1
4	2505623	Cable - 9 Ft.	1
5	2505624	Cable - 14 Ft.	1
6	2505625	Switch Assembly	1
7	2503298	Bolt 5/16"-18NC x 5" Hex Head Gr. 2	2
8	2502011	Washer 5/16" Springlock	2
9	2500011	Nut 5/16"-18NC Full Hex	2
10	2504214	Hydraulic Hose 1/2" x 108"	2
11	2504218	Hydraulic Hose 1/2" x 36"	2
12	2504219	Hydraulic Hose 3/8" x 24"	2
13	811323	Hydraulic Cylinder 5 x 8 (Supplied with Clipper Head)	1
14	2505528	Adapter 1/2"NPT to 3/4" O-Ring	2
N/S	2505544	Tie Wrap	10

*Newer models after July 2005

⚠ SAFETY PRECAUTIONS ⚠

**MOST ACCIDENTS OCCUR BECAUSE OF NEGLIGENCE OR CARELESSNESS.
AVOID NEEDLESS ACCIDENTS BY FOLLOWING ALL OF THE SAFETY PRECAUTIONS LISTED BELOW.**

- Machinery should be operated only by those who are responsible and are authorized to do so.
- Stop the engine, lower all equipment, lock the brakes, and remove the ignition key before dismounting from the tractor.
- Never stand between tractor and implement while tractor is being backed to hitch.
- Loose fitting clothing should not be worn, to avoid catching on various parts.
- Detach implement in area where children normally do not play.
- When performing adjustments or maintenance on an implement, first lower it to the ground or block it securely at a workable height.
- Only a qualified operator should be permitted on tractor when in operation; no riders allowed.
- Make certain everyone is in the clear before starting tractor or raising or lowering equipment.
- Operate the tractor and implement only while seated in the driver's seat.
- Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.
- A heavy load can cause instability of the tractor. Use extreme care during road travel. Slow down on turns and watch out for bumps. Tractor may need front counterweights to counter-balance the weight of the implement.
- Reduce speed on hillsides or curves so there is no danger of tipping.
- Avoid driving too close to the edge of ditches or creeks.
- Do not transport implement on public roads without reflectors and slow moving vehicle emblem in daylight and with approved warning lights at night and other periods of poor visibility.
- Due to the width of some implements, use extra caution on highways, farm roads, and when approaching gates.
- Always be sure the implement is in the proper position for transport.
- Keep alert and watch the front as well as the rear when working with the implement.

OWNER'S/ OPERATOR'S MANUAL

MODEL NO.'s

TC8-FL

TC8-SS

APRIL 2007

TREE CLIPPER

**WHEN ORDERING REPAIR PARTS,
ALWAYS GIVE THE
FOLLOWING INFORMATION:**

1. PART NUMBER
2. PART DESCRIPTION
3. MODEL NUMBER
4. NAME OF ITEM

**MAKE EVERY DAY
A HOLIDAY
FROM ACCIDENTS!**

WORKSAVER, INC.

P.O. BOX 100 LITCHFIELD, IL 62056-0100 (217) 324-5973
WEB: <http://www.worksaver.com> E-MAIL: sales@worksaver.com