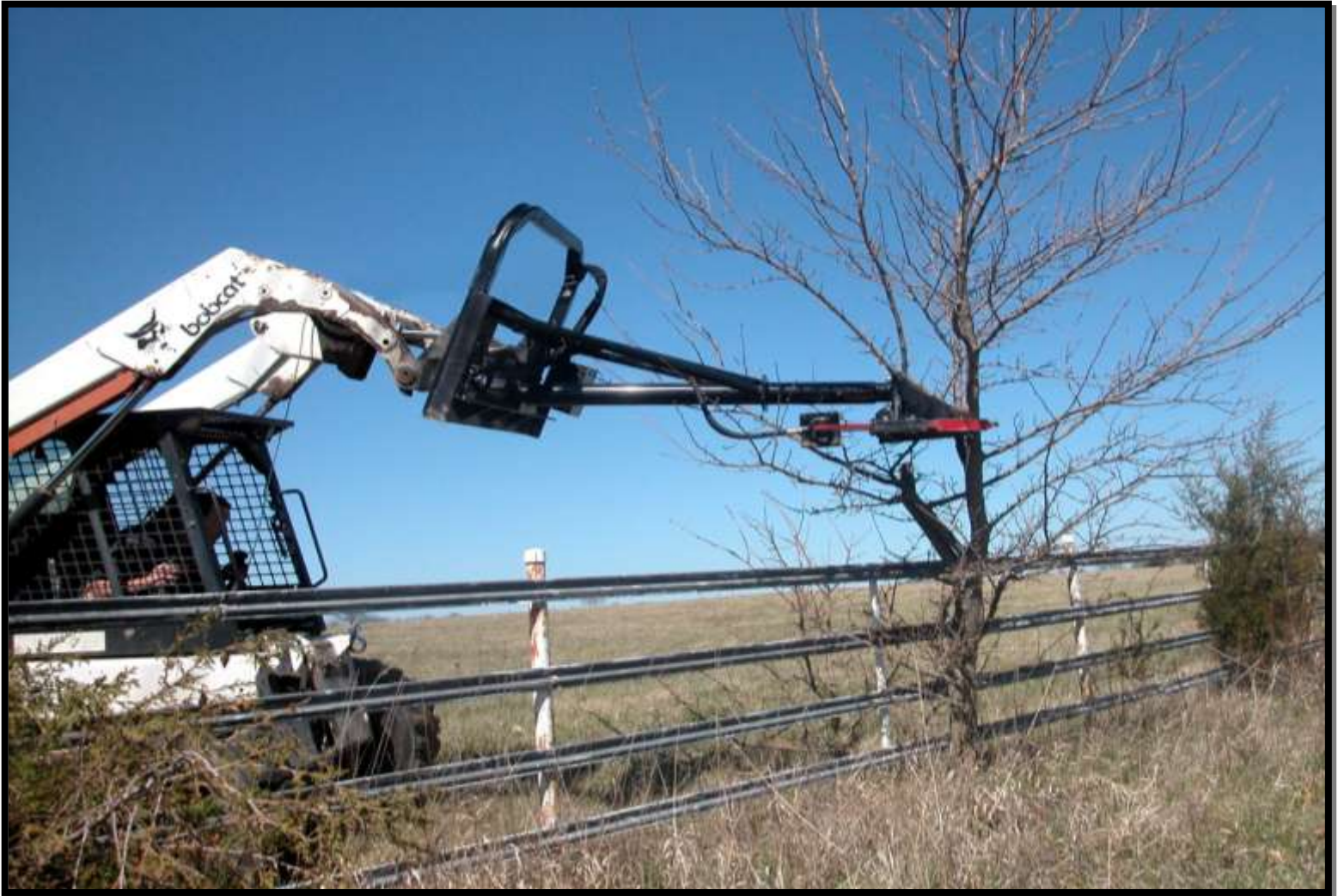




*TREE-HRC1*

# Heavy Duty High-Reach Tree Clipper



## Operators Manual & Warranty Information

Do not discard.

Must accompany each unit. **Registration card must be filled out and sent in prior to first use.**

**Fill out and keep for your records:**

**Date purchased:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Serial Number:** \_\_\_\_\_

**Purchase price:** \$ \_\_\_\_\_

**Purchased from:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Warranty card postmarked:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Purchase notes:** \_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Fabricators of quality hay bale handling equipment.

## NEW FROM TRI-L MANUFACTURING, INC...

***Want a Tree-Free Fence Row?***  
**Get the Upper Hand With the New High-Reach Tree Clipper**



*Cuts trees & brush  
up to 8" diameter hardwood;  
up to 11" diameter softwood!*



*Power Rotator feature rotates head for limb cutting!*



*Leaves a clean cut  
at ground level!*



*6' Long Reach keeps tires & operator away from brush and thorns!*



**Tri-L Manufacturing, Inc.**

is proud to introduce the new

**TREE-HRC1**

**High-Reach Tree Clipper**

for the skid steer mount on your tractor!

- Don't let trees overrun your pastures, fields, & fence rows!
- Remove unwanted trees without disturbing the ground!
- Don't waste time & energy with an awkward chainsaw!
- Clear roads, trails, and paths that were once impassable!
- Don't leave behind stumps and scrap that can puncture tires!

**Fully Plumbed / Assembled / Ready to Use!**

Includes:

Heavy Duty Contractor Mount • Power Rotator • Heavy Duty Clipper Head  
(Tractor mount units DO NOT include hoses and fittings between the unit and your tractor)

**Tri-L Manufacturing, Inc.**

3295 N. State Hwy NN

P.O. Box 2029

Ozark, MO 65721

**Phone:** 417-581-8999

**Fax:** 417-485-4224

**Email:** [info@tri-l.com](mailto:info@tri-l.com)



**TREE-HRC1**  
**Heavy Duty High-Reach Tree Clipper**  
**Operator's Manual**

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## INTRODUCTION

Thank you for purchasing your new TREE-HRC1 Heavy Duty High-Reach Tree Clipper. We hope you will enjoy years of productive use from it. This equipment is designed to be mounted on a Roll Over Protective System (ROPS)-equipped tractor or skid-steer loader. The TREE-HRC1 Heavy Duty High-Reach Tree Clipper is designed to trim trees, limbs, brush, and other hard-to-reach wood debris. No other use is intended.

Please read and understand this manual thoroughly before operation.

## WARRANTY

### *FULL ONE-YEAR WARRANTY OF MODEL TREE-HRC1 HEAVY DUTY HIGH REACH TREE CLIPPER*

Within one year from the date of purchase, if this product fails due to a defect in material or workmanship, it may be sent back with prior authorization to the manufacturer. Customer is responsible for any shipping charges. Components manufactured by others are subject to the warranties of that manufacturer. Warranty does not cover damage incurred by use or misuse of the equipment, or damage that occurs to the item after it has left the manufacturer. Damages that result from lack of normal maintenance or neglect will not be covered under warranty. *Any* modifications made to the unit void the warranty.

Please read all instructions carefully before operating this piece of equipment.

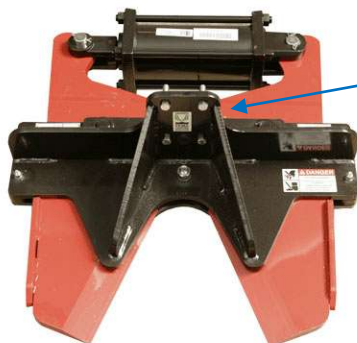
This warranty gives you specific legal rights, and you may have other rights, which may vary from state to state.

## REGISTRATION

Registration card must be completed and mailed back to Tri-L *prior* to first use of equipment. We respect your privacy. Your personal information will never be shared without permission.

If your registration card is lost or misplaced, please contact Tri-L Manufacturing, Inc. for a replacement. Again, the registration card must be completed fully and mailed back *prior* to first use of this piece of equipment.

**NOTE:** The 4-digit serial number is located on the back side (the cylinder side) of the clipper plate, on the inside front cover of this manual, and on your warranty card.



Serial number is  
on the back side of  
this plate.

## **SAFETY**

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**



THIS SYMBOL MEANS:

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

## **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, if you require additional copies of this manual, or if the manual is damaged, please contact your dealer or Tri-L Manufacturing, Inc, P.O. Box 2029, Ozark, MO 65721. Phone: 417-581-8999. Fax: 417-485-4224.



## *Safety—You Can Live With It*

### **EQUIPMENT SAFETY GUIDELINES**

Safety of the operator is one of the main concerns in designing 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 personal injury. Study the following precautions and insist those working with you, or for you, read and follow them as well.

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 decal that is not readable or is missing. Locations of such decals are indicated in this manual.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

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 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 how it works.

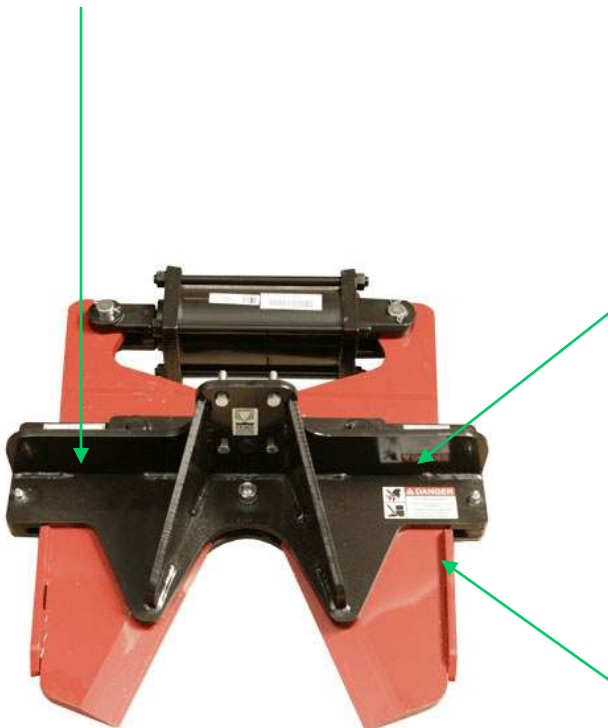
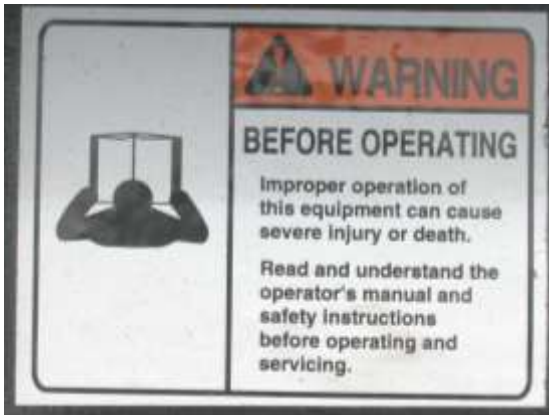
To prevent injury or death, use a tractor or skid-steer equipped with a Roll Over Protective System (ROPS). Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

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.**



## SAFETY SIGN LOCATIONS

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**.





## SAFETY SIGN LOCATIONS, Continued

**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 DECAL CARE**

- Keep safety decals and signs clean and legible at all times.
- Replace safety decals and signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety decals or signs are available from your distributor or dealer parts department, or the factory.

## **HOW TO INSTALL SAFETY DECALS**

- Be sure that the installation area is clean and dry.
- Decide on the exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the decal 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 decal in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.



**REMEMBER:** Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact the local authorized dealer or the manufacturer.



## **BEFORE OPERATION**

- Carefully study and understand this manual.
- Do not wear loose-fitting clothing, which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- It is recommended that suitable protective hearing and sight protectors are worn (ear plugs and safety glasses).
- Keep bolts tightened to the specified torque.
- Assure that all tires are inflated evenly.
- Give the unit a visual inspection for any loose bolts, worn parts, or cracked welds, and make the necessary repairs. Follow the maintenance safety instructions included in this manual.
- Be sure that there are no tools lying on or in the equipment.
- Do not use the unit until you are sure that the area is clear, especially of children and animals.
- 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.
- Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself with your new equipment.
- Use a tractor equipped with a Roll Over Protective System (ROPS) and fasten your seat belt before starting the engine.
- The manufacturer does not recommend usage of tractor with ROPS removed.
- Move tractor wheels to the widest recommended settings to increase stability.



## DURING OPERATION

- Beware of bystanders, **particularly children and animals!** Always look around to make sure that it is safe to start the engine or move the unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED**—Do not carry passengers anywhere on, or in the tractor or equipment except as required for operation.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate, or adjust your equipment while it is moving.
- When halting operation, even periodically, set the tractor brakes, shut off the engine and remove the ignition key.
  - **DO NOT** operate near the edge of drop-offs or banks.
  - **DO NOT** operate on steep slopes as overturn may result.
  - Operate up and down (not across) intermediate slopes.  
Avoid sudden starts and stops.
- Pick the most level possible route when transporting across fields. **KEEP UNIT IN LOWERED POSITION WHEN TRANSPORTING.** Avoid the edges of ditches or gullies and steep hillsides.
- Be extra careful when working on inclines.
- Periodically clear the equipment of brush, twigs or other materials to prevent buildup of dry combustible materials.
- Maneuver the tractor at safe speeds.
- **AVOID OVERHEAD WIRES OR OTHER OBSTACLES. CONTACT WITH OVERHEAD LINES COULD CAUSE SERIOUS INJURY OR DEATH.**
- Avoid loose fill, rocks and holes; they can be dangerous for equipment operation or movement.
- Allow for unit length when making turns.
- **DO NOT WALK OR WORK UNDER RAISED COMPONENTS OR ATTACHMENTS UNLESS SECURELY POSITIONED AND BLOCKED.**
- Keep all bystanders, pets, and livestock clear of the work area.
- Operate the unit from the operator's seat only.
- Never stand alongside of unit with engine running or attempt to start engine and / or operate machine while standing alongside of unit.
- Never leave running equipment unattended.
- As a precaution, always recheck the equipment after each day's operation. Correct all problems. Follow the maintenance safety procedures.



## FOLLOWING OPERATION

- Following operation, or when detaching, stop the tractor, set the brakes, disengage the PTO and all power drives, shut off the engine and remove the ignition keys.
- Store the unit in an area away from human activity.
- Do not store 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.



## HIGHWAY AND TRANSPORT OPERATION

- Adopt safe driving practices.
- Keep the brake pedals latched together at all times. **NEVER USE INDEPENDENT BRAKING AS LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT.**
- Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum.
- Reduce speed prior to turns to avoid the risk of overturning.
- Avoid sudden uphill turns on steep slopes.
- Always keep the tractor in gear to provide engine braking when going downhill. Do not coast.
- Do NOT drink and drive.
- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during the daylight and nighttime transport.
- 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 at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.
- Plan your route to avoid heavy traffic.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.



## **HIGHWAY AND TRANSPORT OPERATION, Continued**

- Watch for obstructions overhead and to the side while transporting.
- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc.

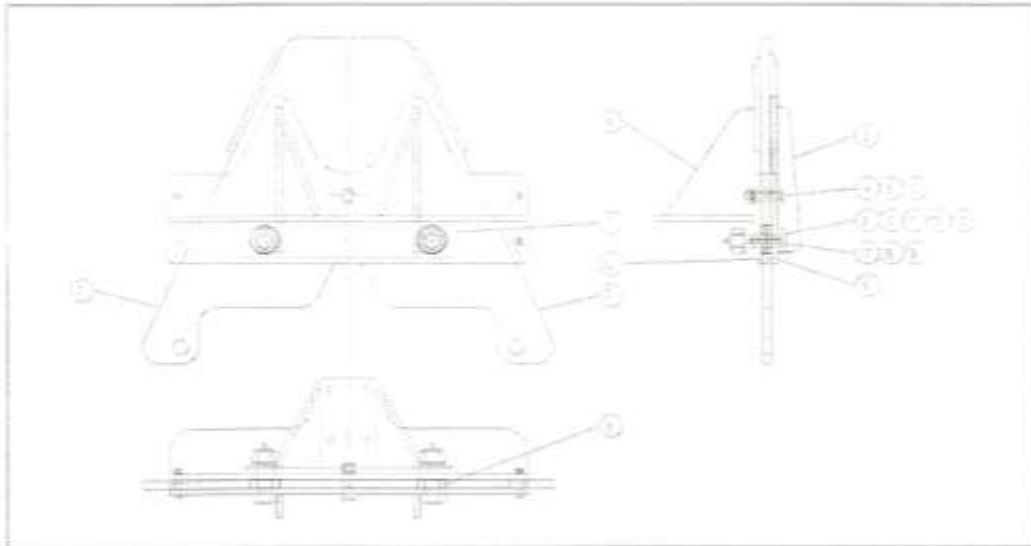


## PERFORMING MAINTENANCE

- Good maintenance is your responsibility. Poor maintenance is an invitation for trouble.
- Make sure there is plenty of ventilation. Never operate the engine of the unit in a closed building. The exhaust fumes can cause asphyxiation.
- Before working on this machine, stop the tractor or skid steer, set the brakes, lower the loader bucket and clipper, disengage the PTO and all power drives, shut off engine and remove the ignition keys.
- Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.
- Always use a safety support and block the wheels. Never use a jack to support the machine.
- Use extreme caution when making adjustments.
- Follow the torque chart in this manual when tightening bolts and nuts.
- Never use your hands to locate a hydraulic leak on attachments. Use a small piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate the skin.
- Before disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure.
- Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. If injured by escaping hydraulic fluid, see a doctor immediately. Gangrene can result from neglect of such injuries. Without immediate medical treatment, serious infection and reactions can occur.
- Replace all shields and guards after servicing and before moving.
- After servicing, be sure all tools, parts, and service equipment are removed.
- Do not allow grease or oil to build up on equipment.
- Never replace hex bolts with less than grade five bolts and grade eight bolts for the large pivot bolts. Refer to the 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.

## PARTS LIST FOR CLIPPER HEAD

ITEM	QTY	PART NO.	DESCRIPTION
1	1	661-1ASM	BLADE WELDMENT- LEFT
2	1	661-2ASM	BLADE WELDMENT- RIGHT
3	1	661-3ASM	BOTTOM PLATE WELDMENT
4	1	661-4ASM	TOP PLATE WELDMENT
5	2	661-7	SPACER- 1/2"
6	2	661-8	SPACER- 5/16"
7	1	661-10	FRAME BACK PLATE
8	2	661-11	BUSHING- ECCENTRIC
9	2	661-13	PIVOT BOLT- W/ LUBE HOLE
11	2	MP130	LOCKWASHER- 1-1/4"
12	2	MP131	HEX NUT 1-1/4"
13	2	MP109	GREASE FITTING- 5/16" PRESS-IN
14	1	MP123	HHCS- 3/4-10 X 3.5 GR5
15	1	MP133	LOCKWASHER- 3/4"
16	1	MP135	HEX NUT- 3/4-10
17	4	MP142	HHCS- 1/2"-16 X 2.5 GR5
18	4	MP145	LOCKWASHER- 1/2"
19	4	MP147	HEX NUT- 1/2"-16



## BOLT TORQUE

### *Checking Bolt Torque*

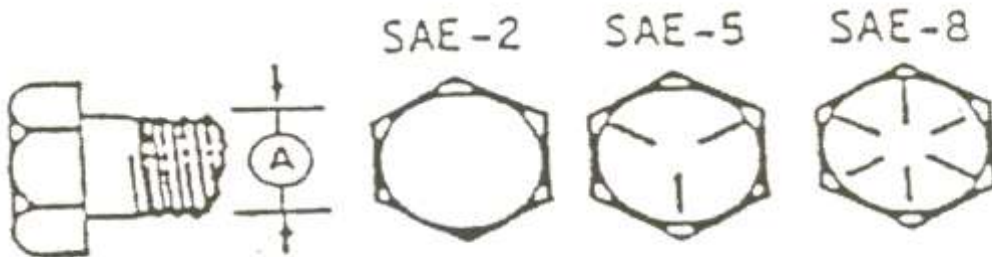
The table shown below gives correct torque values for various bolts and cap screws. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace with the same strength bolt.

### *Torque Specifications*

Bolt Diameter		Bolt Torque		
"A"	Lb. – Ft.	SAE 5	Lb. – Ft.	SAE 8
3/8"	33	(45)	45	(63)
1/2"	80	(110)	115	(155)
3/4"	290	(390)	400	(540)
1-1/4"	1120	(1140)	1820	(2457)

Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

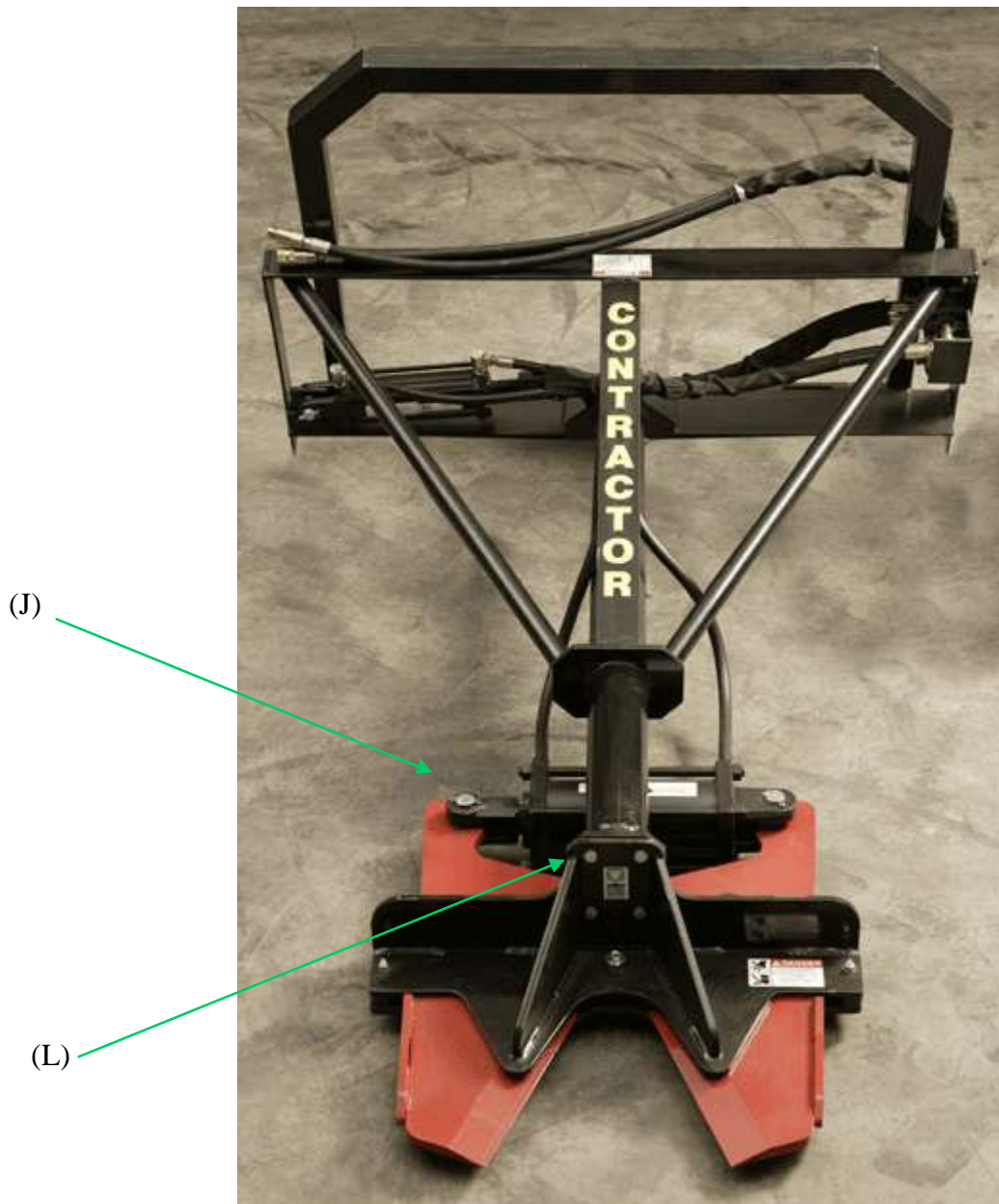
\*Torque value for bolts and cap screws are identified by their head markings.



## **SKID STEER MOUNT AND INSTALLATION INSTRUCTIONS**

1. Connect the Heavy Duty Clipper plate (L) to the plate on the mount (J) using the four bolts, nuts, and lock washers provided — 4-1/2" x 2".
2. Connect the hydraulic cylinders to the proper hydraulic remote outlets using high-quality hydraulic hoses of the proper length. The hoses need to be short enough to keep out of the way, and long enough to allow the High-Reach feature to be fully utilized.

**NOTE:** Large 5" x 8" cylinder uses a size #8 o-ring fitting. Smaller rotating 3" x 5" cylinder uses a size 1/2" pipe thread fitting.



## **SOLENOID VALVE HOOK-UP INSTRUCTIONS**

1. Connect wiring harnesses to solenoid valve and switch assembly.
2. Mount switch on the control handle that activates hydraulic flow to solenoid valve. Try to mount in a position so both the handle and switch can be activated with the same hand. Cable ties are included to assist in mounting switch. Other methods, not included, may be required to mount switch.
3. Attach red power wire to a keyed power source that is *hot* only with ignition switch in the *on* position. This will prevent battery drainage when vehicle is not in use.
4. The black ground wire may be connected to the vehicle frame or engine block. Metal to metal contact is required for a secure ground.
5. When auxiliary hydraulics are activated, the hydraulic flow is directed to the cutting cylinder. When momentary switch is depressed, the hydraulic flow will be diverted to the rotating cylinder. When the momentary switch is released, flow will be diverted back to cutting cylinder.

## **HOSES AND FITTINGS GUIDE**

Ports C1 and C4—Connect two 1/2" x 6' hoses to 5" x 8" cutting cylinder

2 ea — #10 o-ring x 1/2" straight swivel in valve

2 ea — #8 o-ring x 1/2" straight swivel in 5" x 8" cutting cylinder

Ports C2 and C3—Connect 3/8" x 36" & 3/8" x 48" hoses to rotating cylinder

1 ea — #10 o-ring x 1/2" straight swivel in C2

1 ea — #10 o-ring x 3/8" 90° elbow in C3

1 ea — 1/2" x 3/8" 90° elbow in C2 fitting

2 ea — 1/2" x 3/8" 90° elbows in rotating cylinder

Ports P1 and P2—Connect Two Supply Hoses 1/2" x 6' to Auxiliary Outlets

1 ea — #10 o-ring x 1/2" 90° elbow in P1

1 ea — #10 o-ring x 1/2" straight swivel in P2

1 ea — 1/2" x 1/2" 90° elbow in P1 fitting

## OPERATING INSTRUCTIONS

1. Do not attempt to cut hardwood trees larger than 8” in diameter.
2. If blades get stuck in tree, do not try to force out by pulling back or tilting. Chop wood around blade to free blade. Be aware of direction the tree may fall.
3. When cutting at ground level, tilt cutter slightly forward to keep hydraulic cylinder in rear of clipper off ground. Drop clipper to ground in front of tree and then slide clipper under the tree. This allows the weight of the cutter to sink the sleds into the ground and allow you to cut the tree at lower levels.
4. When sliding clipper onto tree, avoid impact with tree. Impact will cause damage to the clipper.
5. Cut tree from direction that will allow tree to fall away from operator.
6. A minimum hydraulic pressure of 2000 PSI is required to operate the 5” x 8” hydraulic cylinder.
7. Check all nuts and bolts each time before operation to assure proper torque (see bolt torque chart). Grease all zerks before each operation.
8. When using for high-reach trimming, do not tilt the loader back too far. The clipper should always be in less than a vertical position. Do not cut limbs directly overhead.
9. When side trimming, always rotate the blades toward the vertical position. This will allow you to place clipper at a right angle to the limb. Cuts must be perpendicular to limb.
10. Use caution when attaching and disconnecting to mounts. Do not apply extra pressure to the rotator and base plate by over-tilting the mount.
11. To help fall tree away from operator, trim limbs on side of operator prior to clipping tree. Tilt cutter slightly forward, drop your ground and slide onto tree and clip. **CAUTION:** It is not always possible to control the direction the tree falls.
12. Be sure cutting is complete prior to opening blades.
13. If your mount utilizes a support chain, chain should be tight at all times during operation.
14. The TREE-HRC1 High-Reach Clipper is designed for cutting trees. Do not attempt to carry trees or pile brush with clipper.

## **TROUBLE SHOOTING**

<b>PROBLEM</b>	<b>SOLUTION</b>
Cutter will not cut completely through tree.	Blades may not be closing completely. Cylinder clevis on rod end may need to be extended. Blades should barely touch. <b>DO NOT OVER-EXTEND! DO NOT EXTEND CLEVIS MORE THAN ½ TURN AT A TIME.</b> Bushing may be loose. Contact company.
Blades do not line up.	Bolts may be loose. Tighten according to bolt torque chart. Bushing may be loose. Contact company.
Cylinder will not operate.	Check hydraulic pressure. Minimum of 2000 PSI required.
Cutter will not rotate.	Check hydraulic pressure. Minimum of 2000 PSI required.
Cutter is loose on mount.	Bolts on mounting plate may be loose. Tighten according to bolt torque chart.
Blades do not close completely.	Cylinder clevis on rod end may need to be extended. Blades should barely touch. <b>DO NOT OVER-EXTEND! DO NOT EXTEND CLEVIS MORE THAN ½ TURN AT A TIME.</b>
One blade tip is longer than the other.	This is our self-centering feature. If cut is against the right blade the right blade tip will extend further than the left. Opposite is true if cut is against the left blade.





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**[www.TRI-L.com](http://www.TRI-L.com)**