



## **Acreage Rake**

### **OWNER'S MANUAL**



#### **WARNING:**

Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

**Model# ACR-500T**

Thank you very much for choosing this product! For future reference, please complete the owner's record below:

Model: \_\_\_\_ACR-500T\_\_\_\_ Purchase Date: \_\_\_\_\_

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. The manufacturer cannot be responsible for issues arising from modification. We strongly recommend this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted us to determine if it can or should be performed on the product.

For technical questions please call **1-218-943-6296**.

## INTENDED USE

Rake works for dethatching and raking up small debris as well as grass or light leaves.

## TECHNICAL SPECIFICATIONS

Reel size: 20"

Raking Path: 60"

Tires: 12" Pneumatic

## GENERAL SAFETY RULES



**WARNING:** Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury.



**CAUTION:** Do not allow persons to operate or assemble this acreage rake until they have read this manual and have developed a thorough understanding of how the acreage rake works.



**WARNING:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## SAVE THESE INSTRUCTIONS

## WORK AREA

- **Keep work area clean**, free of clutter and well lit. Cluttered and dark work areas can cause accidents.
- **Keep children and bystanders** away while operating an acreage rake. Distractions can cause you to lose control, so visitors should remain at a safe distance from the work area.
- **Be alert of your surroundings.** Using an acreage rake in confined work areas may put you in a dangerous situation.

## PERSONAL SAFETY

- **Stay alert**, watch what you are doing and use common sense when using an acreage rake. Do not use an acreage rake while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating an acreage rake may result in serious personal injury.
- **Dress properly.** Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts. Do not operate when bare foot or wearing open sandals.
- **Use safety apparel and equipment.** Use safety goggles or safety glasses with side shields which comply with current national standards, or when needed, a face shield. Use a dust mask in dusty work conditions. This applies to all persons in the work area. Also use non-skid safety shoes, hardhat, heavy-duty work gloves, dust collection systems, and hearing protection when appropriate.

## ACREAGE RAKE USE AND CARE

- **Do not modify the acreage rake in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the acreage rake was designed.
- **Always check of damaged or worn out parts before using the acreage rake.** Broken parts will affect the acreage rake operation. Replace or repair damaged or worn parts immediately.
- **Do not exceed the acreage rake load capacity.**
- **Distribute the load evenly.** Uneven loads may cause the acreage rake to tip, resulting in personal injury to the operator or others.
- **Use the acreage rake on flat and level surfaces** capable of supporting the acreage rake and its maximum load. Pulling or pushing a load on a slanted or uneven surface can result in loss of control.
- **Store idle acreage rake.** When the acreage rake is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before re-use.

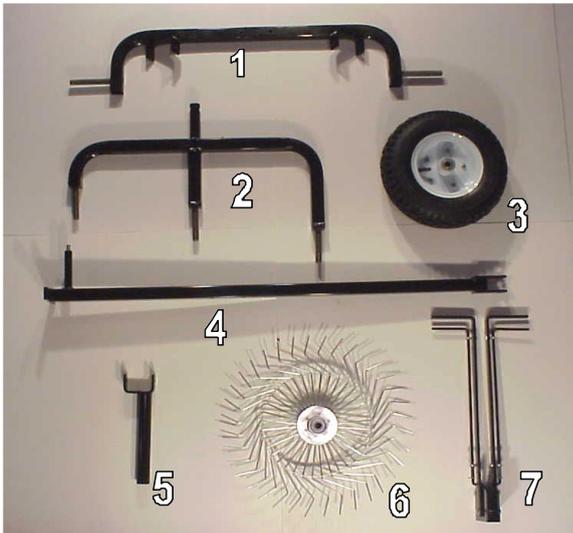
# ASSEMBLY

## TOOLS REQUIRED FOR ASSEMBLY

- (1) Pliers
- (2) 1/2" Wrenches
- (2) 3/4" Wrenches
- (1) 7/8" Wrench

## REMOVE ALL PARTS FROM CARTONS

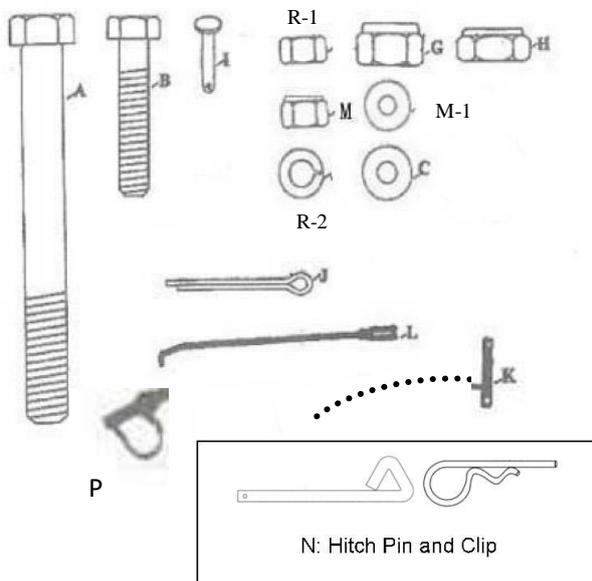
1. Remove the hardware packs and all parts from the cartons.
2. Layout and identify parts included in carton contents. (See parts listing below)
3. Layout and identify parts included in the hardware pack. (See parts listing below)
4. IF ANY PARTS ARE MISSING FROM PACKAGING  
Contact Mfg. at 218-943-6296



Ref#	Qty	Description
1	1	Axle Assembly
2	2	Rake Wheel Arm
3	2	Tire/Wheel Assembly
4	1	Tongue Assembly
5	2	Left & Right Lift Arm (1 ea.)
6	6	Rake Tine Wheel
7	1	Lift Handle

## HARDWARE PACK CONTENTS:

(Photo of Parts not Actual Size)

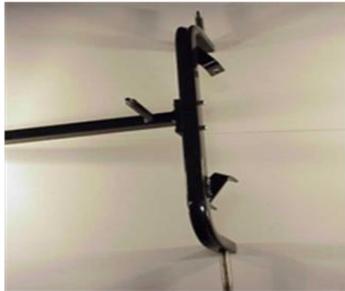


Ref#	Qty	Description
A	2	Hex Bolt 1/2" x 4-1/2" or M12 x 120
B	4	Hex Bolt 5/16" x 2"
C	2	Flat Washer 1/4"
G	2	Nylock Nut 1/2" or (M12)
H	8	Nylock Nut 9/16"
I	2	Clevis Pin 1/4" x 1" or (6 x 25)
J	4	Cotter Pin 1/16" x 5/8"
K	2	Chain Bar with Chain
L	2	Lift Rod
M	4	Nylock Nut 5/16"
M-1	4	5/16" Flat Washer
N	1	Hitch Pin with Clip
P	2	Clevis Lock Pin
R-1	1	Nylock Nut M10
R-2	1	Flat Washer

## Assembly

### STEP 1: ATTACH TONGUE TO AXLE

Place tongue assembly (#4) and axle assembly (#1) on a flat surface. Position the tongue so that the diameter of 19mm x length of 118mm shaft welded to the tongue is straight up. Orientate the axle (#1) so the lift arm hinges welded to the axle face away from the tongue. See figure 1. Connect the tongue (#4) to the axle (#1) using two 5/16"x2" hex bolts (B), two 5/16"x2 nylock nuts (M) and two 5/16"x2 flat washers (M-1). Fully tighten connections.



**Figure 1**

### STEP 2: ATTACH WHEELS TO AXLE

Assemble the tire/wheel assembly (#3) (inflation valve stem facing out) onto axle, securing the tire/wheel with one 9/16" nylock nut (H). See figure 2. Repeat on opposite side of axle. CAUTION: DO NOT over tighten the lock nut; this can result in damage to the bearings in the wheel hub. When properly tightened, the wheel should spin freely.



**Figure 2**

### STEP 3: ATTACH LIFT HANDLE TO TONGUE

Attach the lift handle (#7) to the top of the tongue (#4) where two holes are located. See figure 3 for position of lift handle on tongue. Secure using two 5/16"x2" (B) hex bolts, two 5/16" nylock nuts (M) and two 5/16"x2 flat washers (M-1). Fully tighten connections.



**Figure 3**

**STEP 4: ATTACH CABLE PIVOT BAR**

Attach the two lift chain bars (K) to the 19mm x 118mm shaft on the tongue assembly. Install each chain bar on top of shaft; use a M10 nylock nut (R-1) and a flat washer (R-2). The chains should be positioned facing the rear of rake. See figure 4.



**Figure 4**

**STEP 5: ATTACHING LIFT ROD**

Attach the end of the lift rod (L) to the 1/4" hole on the inside of lifting handle. Install 1/4" flatwasher (C). Secure with cotter pin. See figure 5.



**Figure 5**

**STEP 6: ATTACH CLEVIS TO PIVOT BAR**

Attach the clevis (opposite end of lift handle) to the chain bar with chains (K) from STEP 4, secure with diameter 1/4" x 1" clevis pin (I). See figure 6.

Do not insert cotter pin (J) until adjustment procedure in STEPS 11 to 13. Repeat STEPS 5 and 6 for second lifting rod.



**Figure 6**

### **STEP 7: ATTACH LIFT ARMS TO AXLE**

Attach the lift arm (#5) to the wheel axle (#1) using 1/2" x 4-1/2" hex bolt (A) and 1/2" nylock nut (G). See figure 7.

Repeat on opposite side.

Usage Note: Note the lift arm offset in figure 7. Assembling lift arms with the offset towards inside will make a narrower space when raking.



**Figure 7**

### **STEP 8: ATTACHING RAKE ARMS**

Insert the rake wheel arm (#2) into the lift arm (#5) from in STEP 7. Secure rake wheel arm to the lift arm using clevis lock pin (#P). See figure 8 for rake arm position.

Repeat procedure for the rake arm on opposite side.



**Figure 8**

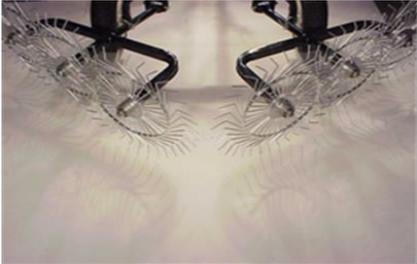
### **STEP 9: ATTACH RAKING WHEELS**

Attach three rake tine wheels (#6) to rake wheel axle arm (#2) as shown in figure 9. Secure with one 9/16" nylock nut (H). Make certain that tines on all three wheels are pointed in the same direction. Look at tips of rake tines for direction.



**Figure 9**

**CAUTION:** Do not over tighten locknut as it will cause bearing damage in the rake tine wheel hub. Rake tine wheel should spin freely. Assemble opposite side.  
**Make certain that the three rake tine wheels on opposite side are positioned as shown in figure 10. All rake tine tips should rotate towards center in same direction.**



**Figure 10**

## **ADJUST THE OPERATING HEIGHT of LIFT ARMS**

NOTE: Adjustments may be needed based on the height of the towing vehicle hitch.

Step 10: Attach the Acreage Rake to the towing vehicle hitch.

Follow Steps 11, 12, and 13 for each lift arm.

These steps are to make sure rake reel tines will: (1) lift high enough for towing clearance, and (2) rake tines will reach the ground properly for raking or de-thatching.

**Step 11:** Position one lift handle fully forward. The handle should position itself in the most forward notch on the lift handle. (See figure 11). Now check that the rake tines are high enough off the ground for towing clearance when rake assembly is not in use. If handle is fully forward and the rake tines are not lifting high enough off ground for clearance when towing, go to next step for needed adjustment.



**Figure 11**

**STEP 12:** Remove clevis pin (I) (from STEP 6) and rotate clevis in either direction to achieve the desired stopping position or lifting height. Reinstall Clevis Pins when finished. See figure 12.



**Figure 12**

**Step 13:** Move lift handle to the rear position on lift assembly. This is the operating/down position for the rake tine wheels. The cable should have little slack in it when in operating position. See figure 13. If chain does not have slack when lift handle is in back notch of lift assembly, adjustment is needed. Remove clevis pin (P) and rotate clevis until there is slack in lifting chain. No adjustment needed after this step.

NOTE: This step allows the rake tine wheel assembly to float when being used on uneven ground. It is ok if the lift handle does not go all the way to most forward notch after this step.



**Figure 13**

## OPERATION

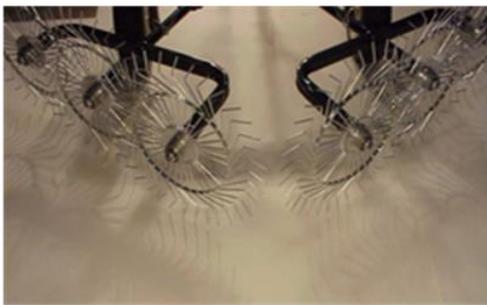


### WARNING:

- Keep the operating speed LOW!!!! Do not operate over 5 MPH (8KMH).
- Allow only responsible adults who are familiar with these instructions to operate this machine. Never allow children to operate this machine.
- Be sure the area is clear of other people before operating. Children are often attracted to the machine and the operating activity. **Never assume that children will remain where you last saw them.** Keep children under the watchful care of another responsible adult.
- Follow tire inflation printed on tires. Never inflate tires higher than the MAX PSI printed on tires.
- Lift tires when making turns. Take wide turns.

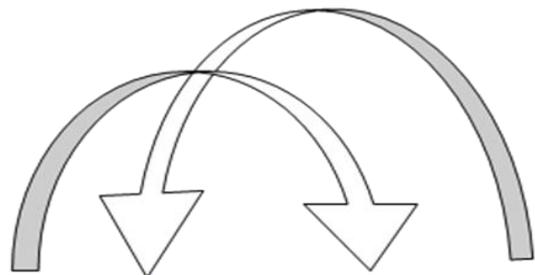
### SETTING RAKE TINE WHEELS FOR THATCHING VS. RAKING

Acreage rake has been assembled for raking. See figure 14. Note the direction of the tine tips.



**Figure 14**

**Flip Each Arm 180 degrees**



**Figure 15**

#### **To position rake tine reels for dethatching:**

Remove lock pin from both lift arms and remove both rake tine wheel assemblies from the rake. Take the left rake tine wheel assembly, flip it over (rotate 180 degrees), and install on the right lift arm.

Take the right tine rake wheel assembly, flip it over, and install on the left lift arm. SEE FIGURE 15. Note the position of tines. Make certain the tips rotate in the same direction – towards the center of the rake.

## MAINTENANCE

- **Maintain your acreage rake.** It is recommended that the general condition of any acreage rake be examined before it is used. Keep your acreage rake in good repair by adopting a program of conscientious repair and maintenance. If any abnormal vibrations or noise occurs, have the problem corrected before further use. Have necessary repairs made by qualified service personnel.
- Oil moving parts from time to time with household lubricant.

## RAKE TINE WHEEL MAINTENANCE:

Following these recommendations will make the raking wheels last longer.

1. It is recommended to mow or cut grass to 3" or less before raking or de-thatching.
2. Rake Wheel Tine Recommendation:

When in operating position, try adjusting the height of rake tine wheels so raking tines contact ground lightly. Keep the lifting cable almost tight when operating if possible.

For deep raking or de-thatching, allow raking tines fully down on ground.

3. Rotate rake tine wheels from time to time:

Flip rake tines 180° as in Figure 15 for raking vs. de-thatching.

Remove rake wheel and fully turn around. **This will keep tines from bending in one direction.**

**Since all grasses are different, you may need to rotate rake wheels more often when used in thicker grasses.**

For replacement parts and technical questions, please call **1-218-943-6296**.

## WARRANTY

**12 months limited Parts warranty**



PO Box 203  
Miltona, MN 56354  
Made in Taiwan