

SWISHER

MANUFACTURING QUALITY LAWN CARE EQUIPMENT SINCE 1945

Owner's Manual

ACR-500

ACR-500S



ACREAGE RAKE



IMPORTANT
*Read and follow all
Safety Precautions
and Instructions
Before Operating this
Equipment.*



ATV ACCESSORIES

**ASSEMBLY
OPERATION
MAINTENANCE**

Made In CHINA

1602 CORPORATE DRIVE PO BOX 67 WARRENSBURG, MISSOURI 64093
PH 660.747.8183 FAX 660.747.8650
swisherinc.com

LIMITED WARRANTY

The manufacturer's warranty to the original consumer purchaser is: This product is free from defects in materials and workmanship for a period of one (1) year from the date of purchase by the original consumer purchaser. We will repair or replace, at our discretion, parts found to be defective due to materials or workmanship. This warranty is subject to the following limitations and exclusions:

- 1) Commercial Use The warranty period for any product used for commercial or rental is limited to ninety (90) days from the date of original purchase.

- 2) Limitations This warranty applies only to products which have been properly assembled, adjusted, and operated in accordance with the instructions contained within this manual. This warranty does not apply to any product of Swisher Mower and Machine Co., Inc., that has been subject to alteration, misuse, abuse, improper assembly or installation, or shipping damage.

- 3) Exclusions Excluded from this warranty are normal wear, normal adjustments, and normal maintenance.

In the event you have a claim under this warranty, you must return the product to an authorized service dealer. All transportation charges, damage, or loss incurred during transportation of parts submitted for replacement or repair under this warranty shall be borne by the purchaser. Should you have any questions concerning this warranty, please contact us toll-free at 1-800-222-8183. The model number, serial number, date of purchase, and the name of the authorized Swisher dealer from whom you purchased the mower will be needed before any warranty claim can be processed.

THIS WARRANTY DOES NOT APPLY TO ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND ANY IMPLIED WARRANTIES ARE LIMITED TO THE SAME TIME PERIODS STATED HEREIN FOR ALL EXPRESSED WARRANTIES. Some states do not allow the limitation of consequential damages or limitations on how long an implied warranty may last, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights, which vary from state-to-state. This is a limited warranty as defined by the Magnuson-Moss Act of 1975.

SAFETY PRECAUTIONS



This Safety Alert Symbol indicates important messages in this manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury.

Read this manual completely. Failure to observe the following safety instructions could result in serious injury or death.

- Read the manual. Learn to operate this machine safely.
- 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.
- Do not operate the attachment if it has been dropped or damaged in any manner. Repair as necessary.
- Stop and inspect the equipment if you strike an object. Repair if necessary, before restarting.
- Dress properly. Do not operate when bare foot or wearing open sandals.
- Do not operate the machine while under the influence of alcohol or drugs.
- Never tamper with safety devices. Check their proper operation regularly.
- Operate attachments up and down slopes. There is a significant risk of overturns when operating across slopes.
- **Never make adjustments or repairs with the ATV engine running.**
- When not in use, keep in a dry place.
- Oil moving parts from time to time with household lubricant.

PRE-ASSEMBLY:

Approximate assembly time of this product is $\frac{3}{4}$ of an hour.

Helpful Tip: Read all instructions before starting to assemble.

TOOLS REQUIRED FOR ASSEMBLY

- (1) Pliers
- (2) 14mm Wrenches
- (2) 19mm Wrenches
- (1) 24mm Wrench

REMOVE ALL PARTS FROM CARTONS

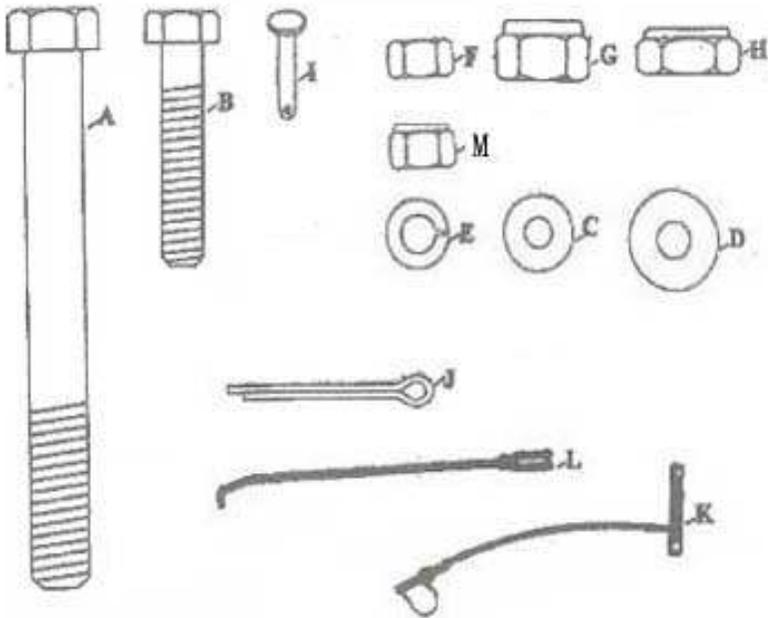
- 1. Remove the hardware packs and all parts from the cartons.
- 2. Layout and identify parts included in carton contents. (see parts listing below)
- 3. Layout and identify parts included in the hardware pack. (see parts listing below)
- 4. IF ANY PARTS ARE MISSING FROM PACKAGING
Contact Mfg. at (800) 222-8183 for missing hardware or instructions.

CARTON CONTENTS:

Ref #	Part #	Qty	Description (metric size in mm)
1	11298	1	Axle Assembly
2	11299	2	Rake Wheel Arm
3	11300	2	Tire/Wheel Assembly
4	11301	1	Tongue Assembly
5	11302	2	Lift Arm
6	RRL-500	4	Rake Tine Wheels
7	11303	1	Lift Handle



HARDWARE PACK CONTENTS:
 (Photo of Parts not Actual Size)



Ref #	Part #	Qty	Description (metric size in mm)
A	NA*	2	Hex Bolt M12 X 110
B	NA*	4	Hex Bolt M8 X 50
C	NA*	2	Flat Washer diameter 6
D	NA*	1	Teflon Washer diameter 8
E	NA*	4	Lock-Washer, diameter 8
F	NA*	4	Hex Nut M8
G	NA*	2	Nylock Nut M12
H	NA*	8	Nylock Nut M16
I	NA*	2	Clevis Pin diameter 6 x 25
J	NA*	4	Cotter Pin diameter 2 x 20
K	11304	2	Lift Cable Pivot Bar
L	11305	2	Lifting Rod
M	NA*	1	Nylock Nut M8
N	NA*	1	Hitch Pin with Clip (Not Shown)

*Standard hardware purchase locally

OPTIONAL ACCESSORIES:

Check with Retailer where you purchased this product for these optional attachments.
 Or you may call the mfg at (800) 222-8183 for accessories and replacement parts.

<u>Part/Item#</u>	<u>Description</u>
HTC-500	Sweeper Hitch Attachment for towing sweepers Replacement Rake Tine Reel

ASSEMBLY INSTRUCTIONS

ASSEMBLING THE ACREAGE RAKE

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 M8 x 50mm hex bolts(B), two diameter 8mm lock washers(E) and two M8 hex nuts(F). Fully tighten connections.

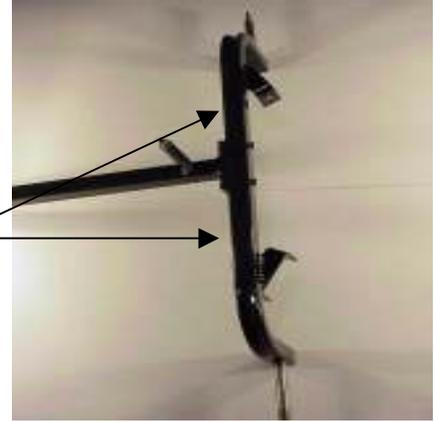


Figure 1

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 M16 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 M8 x 50mm (B) hex bolts, two diameter 8mm lock washers(E) and two M8 hex nuts(F) .

Fully tighten connections.



Figure 3

STEP 4: ATTACH CABLE PIVOT BAR

Attach the two lift cable pivot bars (K) to the diameter of 19mm x length of 118mm shaft on the tongue assembly. Install each pivot bar on top of shaft, use a diameter 8mm Teflon washer (D) between the two bars, then secure with a M8 nylock nut (M) . The cables and lock pins should be positioned facing the rear of rake. **See figure 4.**



Figure 4

STEP 5: ATTACHING LIFT ROD

Attach the diameter 6mm round end of the lift rod(L) to the diameter 6mm hole on the inside of lifting handle. Secure with diameter 6mm flat washer(C), then cotter pin. **See figure 5.**



Figure 5

STEP 6: ATTACH CLEVIS TO PIVOT BAR - Attach the clevis pin(I) on the end of lift rod (opposite end of lift handle). Then attach the clevis to the cable pivot bar from STEP 4, secure with diameter 6mm x 25mm clevis pin(I) into diameter 6mm hole. **See figure 6.**

Do not insert cotter pin 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 M12 x 110mm hex bolt(A) and M12 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. Narrow space is recommended when using Sweeper attachment.



Figure 7

STEP 8: ATTACHING RAKE ARMS

Insert the rake wheel arm(#2) into the lift arm from in STEP 7. Secure rake wheel arm to the lift arm using lock pin attached to end of the lift cable. **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 M16 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.



Figure 11

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.

STEP 12: Remove diameter 6mm x 25mm clevis pin (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 cable does not have slack when lift handle is in back notch of lift assembly, adjustment is needed. Remove diameter 6mm x 25mm clevis pin and rotate clevis until there is slack in lifting cable. 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.

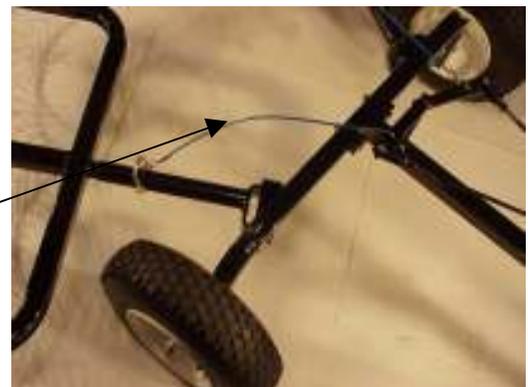


Figure 13

OPERATION AND MAINTENANCE

SETTING RAKE TINE WHEELS FOR THATCHING VS. RAKING

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

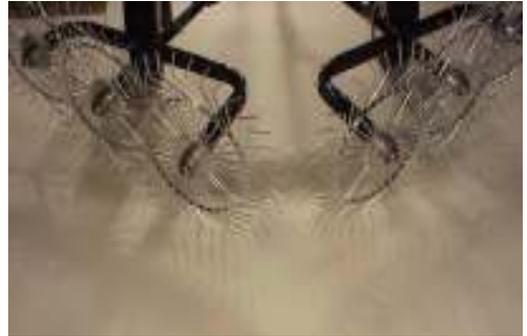


Figure 14

Flip Each Arm 180 degrees

2. To position rake tine wheel assembly for thatching, remove lock pin from both lift arms and remove both rake tine wheel assemblies from rake. Take the left rake tine wheel assembly, flip it over (rotate 180 degrees), and install on the right lift arm. Take the right rake tine wheel assembly, flip it over, and install on the left lift arm. See **figure 15**. Note the position of the tines. Make certain tips rotate in the same direction – towards the center of the rake.

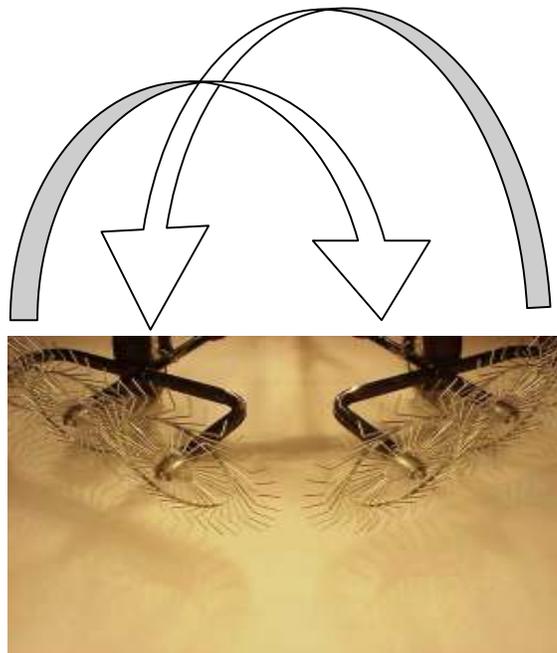


Figure 15

MAINTENANCE AND RECOMMENDATIONS FOR BEST RESULTS

Operating Tip:

Rake works for picking up Acorns or similar small particles other than grass/leaves

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 step for raking vs. de-thatching.
Remove rake wheel and fully turn around, then replace rake wheel tine.
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.



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ATV ACCESSORIES

**WHEN ORDERING PARTS, PLEASE HAVE THE
FOLLOWING INFORMATION AVAILABLE:**

- * **PRODUCT -** _____
- * **SERIAL NUMBER -** _____
- * **MODEL NUMBER -** _____
- TYPE -** _____
- * **PART NUMBER WITH PAINT CODE**
- * **PART DESCRIPTION**

TELEPHONE - 1-800-222-8183
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