

ATV PULL BEHIND SPREADEROPERATION AND MAINTENANCE MANUAL

Part Number - 352L T070815

INTRODUCTION

TO THE OWNER:

Read this manual before operating your equipment. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all adjustments and operating procedures before attempting to operate the equipment. Replacement manuals can be obtained from your selling dealer.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Please observe all safety information in this manual and safety decals on the equipment.

For replacement parts for the centrifugal pull type spreader ATVS, the customer must use original parts offered from the manufacturer by ordering them directly from manufacturer or authorized dealer. Carrying out the order, it is necessary to have the serial number and model number from the nameplate.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe procedures can cause damage to equipment. The terms <u>CAUTION</u>, <u>WARNING</u> and <u>DANGER</u> are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety.



This Safety-Alert Symbol indicates a hazard and means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



A DANGER Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



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.



A CAUTION Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

IMPORTANT Indicates that failure to observe can cause damage to equipment.

NOTE Indicates helpful information.

IT IS THE PURCHASER AND/OR OPERATOR'S RESPONSIBILITY TO....

Read and understand the information contained in this manual.

Operate, lubricate, assemble and maintain the equipment in accordance with all instructions and safety procedures in

Inspect the equipment and replace or repair any parts that are damaged or worn which under continued operation would cause damage, wear to other parts, or cause a safety hazard.

Return the equipment or parts to the authorized dealer, from where it was purchased, for service or replacement of defective parts that are covered by warranty. (Manufacturer may inspect equipment or parts before warranty claims are honored.)

Payment of all costs incurred by the dealer for traveling to or transporting the equipment for warranty inspection and or claims.

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All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

TO THE PURCHASER:

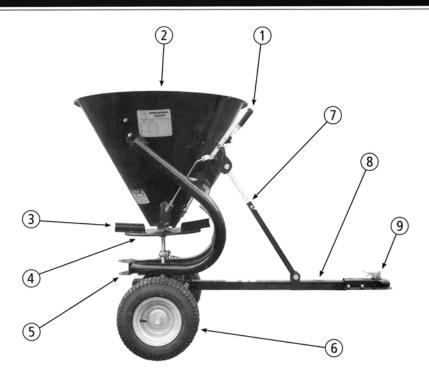
This manual contains valuable information about your new ATV Spreader. It has been carefully prepared to give you helpful suggestions for operating, adjusting, servicing and ordering repair parts.

Keep this manual in a convenient place for quick and easy reference. Study it carefully. You have purchased a dependable and sturdy spreader, but only by proper care and operation can you expect to receive the service and long life designed and built into it.

Sometime in the future your spreader may need new parts to replace those that are worn or broken. If so, go to your dealer and provide him with the model and part number.

CUSTOMER INFORMATION

Name		
Purchased From		
Date Purchased		
Model No.		
Serial No		



SPECIFICATIONS

43.6
175
41"
51"
59"
35"
2"
16 x 6.5-8
26'-40'
from 7 - 15 acres

- 1. Regulating lever
- 2. Hopper
- 3. Distributor vanes
- 4. Spreader disc
- 5. Steel frame
- 6. Tires
- 7. Leveling arm
- 8. Tongue
- 9. Tongue connection

INTRODUCTION

The centrifugal pull type spreaders are used for the distribution of solid, granular fertilizers and seeds in the field. They can be used with small/ medium power tractors or with ATV-quad.

It is recommended to **carefully read this operator's manual**, and follow the recommendations to help ensure safe and efficient operation with the spreader. This manual has been written, in order to give the customer all the information and safety rules on the spreader, as well as to keep the spreader in good running condition.

The manual must be kept on hand in case of any questions you can refer to the manual for help and answers. It is necessary to replace the manual if it gets lost or damaged.

If there are any questions about the manual, or if the drawings/ sketches are not clear enough, please call the manufacturer or dealer of the spreader. We are always available for any questions you may have in trying to understand the manual.

USING THIS MANUAL

This manual gives all the information for the use and maintenance of the spreader. Properly using the spreader and good maintenance will extend the life of the spreader. Some pictures in the manual show details or accessories that could be different from those of your machine, some components could be removed, in order to assure the clearness of the pictures.

Some important warning labels are put on the spreader for the safety of the customer and should remain in good visual condition. Please be aware of these labels and replace if they get faded or come off.

For replacement parts for the centrifugal pull type spreader ATVS, the customer must use original parts offered from the manufacturer (see pages 18-19 for available OEM parts) by ordering them directly from manufacturer or authorized dealer. Carrying out the order, it is necessary to have the serial number and model number from the nameplate.

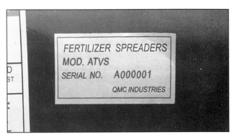
INFORMATION ON THE MACHINE

The spreader in this manual has been designed and made exclusively for distribution of solid, granular fertilizers and seeding the field. Their use is particularly indicated for the garden, lawn, and additional seeding uses. These spreaders are usually used during the day. If it is required to be used at night or with poor visibility, it must be used with a lighting system of a tractor or the equipment the spreader is connected to.

Any modifications made to this spreader will void the warranty and relieve the manufacturer of any damages caused. Using the spreader at night is not recommended.

NAME PLATE

On every spreader there is a nameplate affixed with the model number and serial number. When spare parts are needed, it is very important to refer to the type of machine and the serial number on the nameplate



CHARACTERISTICS OF THE MACHINE

The pull-type spreader ATVS distributes media completely with steel spreader disc with four adjustable vanes in five different positions. This model obtains the maximum spreading precision and uniformity in the distribution, depending on the kind of product that must be spread.



(continued on next page)

4



The feeding of the disc is by gravity through two openings located on the bottom of the hopper, inside of which an agitator is applied, preventing lumps. A shield is placed in front of the disc to prevent spreading in the front side of the spreader.



The media delivery is controlled by properly opening the shutters in the hopper bottom, through lock devices operated by a lever. The spreader and the agitator are connected through a gear box on the axle between the wheels, so as to allow a speed of the disc, directly proportionate to the speed of the spreader. To activate disc, pin must be placed in axle and to stop rotation you must remove the pin.



IMPORTANT SAFETY INFORMATION

The following safety recommendations are to insure your safety: Therefore it is necessary to read them carefully, memorizing and always applying them.

The present warnings in this manual are exclusively how to use the spreader safely. All below instructions must be integrated by common sense and by people with experience in working with the spreader and work safety to prevent accidents.

The spreader must be used by a single operator, 18 years or older. All the listed instructions must be carefully respected.

Any modifications or changes to the spreader without written authorization from the manufacturer excludes the manufacturers of any and all liabilities.

CHECK THE CORRECT FUNCTIONING OF THE MACHINE, BEFORE EACH USE.

General Advice:

- Read this manual carefully before proceeding to start, operate, or maintain the spreader.
- The manual must always be handy, so as to consult it, in order to check the working cycle and safety information. In case of loss or damage, it will be necessary to ask for another copy.

WARNING

Any maintenance work or cleaning must be done with the spreader on the ground (in stable conditions), turn engine of tractor or ATV-quad off and remove key.

 All safety labels must be followed. If warning labels are not readable because of wear and tear, warning labels should be replaced as shown on page 8-9.



The operator, during the period of use, maintenance, repair, handling or storing of the spreader, must wear proper safety attire and follow safety instructions as listed in the manual.

- During loading phase, there is the danger of powder inhalation produced by fertilizer mixing. It is suggested to use tractors with filters in the ventilation system of the cabin, or use suitable safety masks like powder masks or masks with filters.
- The spreader is designed for being used by a single operator who, during the use, must always stay in the drivers seat.
- Never work with this spreader if you are tired, sick or under the influence of alcohol, drugs, or medication.



Climbing on the hopper or transporting someone when the spreader is in motion is forbidden. Do not let anyone inside the hopper for any reason.

- Keep the spreader clear of foreign bodies (debris, tools, rocks, miscellaneous items), as they could damage the spreader as well as the operator. Unit should be cleaned after each use due to possible corrosiveness of material spread. Clean the hopper and the distributor after each use of the spreader.
- Check tractor or ATV-quad to insure that it is in good working condition prior to connecting the spreader.
- Before connecting or disconnecting spreader to a tractor or ATV ensure that the spreader is stable on compact and level ground and hopper is empty.

WARNING

During transport, operation, stocking, and servicing operators must follow all safety warnings and labels for all equipment involved at all times. NOTE

The Manufacturer and distributor is not liable for damages or injury caused by improper use of the spreader.

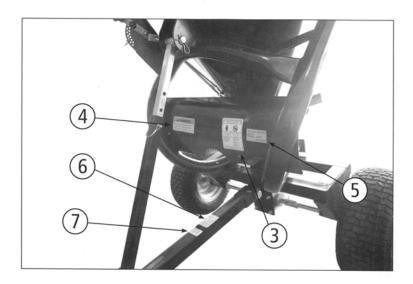
THE MANUFACTURER IS NOT RESPONSIBLE IN CASE OF:

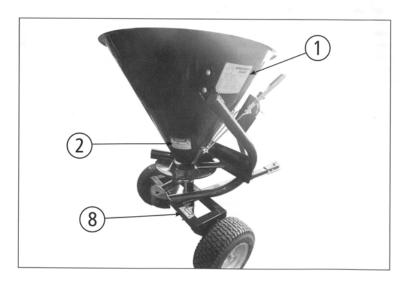
- · Improper use of the spreader
- Not keeping the spreader well maintained
- Using parts not specific to the product
- Not following all the instructions
- Not following all rules during use

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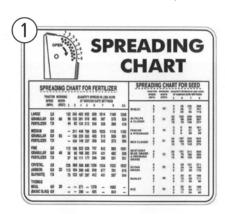
ATTENTION! STAY ALERT! YOUR SAFETY IS INVOLVED!

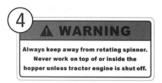
Replace Immediately if Damaged!





ATTENTION! STAY ALERT! YOUR SAFETY IS INVOLVED! Replace Immediately if Damaged!



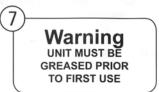


Fertilizer Spreaders Mod. ATVS Serial NO. A000001 QMC Industries





DANGER TOXIC CHEMICAL HAZARD





OPERATING

OPERATION OF THE SPREADER

- Check the spreader before use. Only use if it is in good working condition.
- Before using the spreader, be sure that all safety devices are correctly placed and in case of any breakdowns or damage to the protective guard, replace it immediately.



During work, please be sure that for a radius of 162 feet there are no obstacles including people or animals. When you work in proximity of roads or public places, it is **ABSOLUTELY MANDATORY to keep** away from people and to increase your precautions.



The operator must prevent coming into the danger area and to work with maximum caution. If anybody comes up, please stop the tractor or ATV-quads's engine immediately.

- Before every use of the spreader, please always check the wear of the vanes and the spreader disc. Check that **CAUTION** all the hardware are in place and tight.
- Never leave the spreader unattended while moving.
- Keep the spreader in good operating condition and perform regular maintenance checks.

TRANSFER ON THE ROAD



Not for highway use or transport.

Remember that while moving on public roads, special attention is required, which is noted on the registration book of the tractor or ATV-quad. Choose an appropriate speed especially when the street is crowded, winding or sloping.

If the spreader hides the back signaling lights of the tractor or ATV-guad, it is necessary to put a light bar and/or some back signaling sign.

While moving spreader from a working location to another, the gearbox must be disengaged by removing pin from axle stopping rotation of the disc as shown in the picture.





Before use, please check that gear box and all zerks adequately greased (see page 14).



During the use of the machine, be sure that for a radius of 162 feet there are no people or animals. If anyone comes up, please stop the tractor or ATV-quad engine immediately.

Recommendations for correct distribution

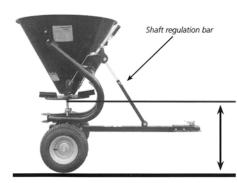
- Please test the lb./acre that you wish to spread before starting to work.
- · When spreading in humid conditions, a humid media could not be spread uniformly or correctly. Clogging and inaccurate distribution will occur.
- · Avoid spreading during windy days, in order to improve the uniformity of the distribution.

CONNECTING # ADJUSTMENTS

CONNECTING

The spreader (ATVS) can be hitched to most type of tractor or ATV-quad with a 2" ball. To make the connection, it is necessary to put the ball hitch in the coupler on the spreader, locking it by pushing the lock handle towards the bottom. Check and regulate the length of the leveling arm, so that the spreader disc is, as parallel as possible, to the ground, in order to get a uniform and regular distribution of vour media.

Remove the spring pin, as shown with the arrow in the picture below and move the leveling arm in to the optimal position, in correspondence with the present holes and replace the pin in the new position.



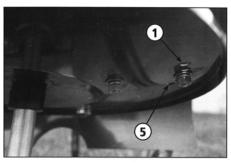
Correct position of spreading disc

ADJUSTMENTS

It is not possible to have an exact spreading chart for the centrifugal equipment, as the distributed quantity depends on the speed, on the radius of distribution, on the quality and humidity of the media and on the roughness of the land. The media must always be stored properly to keep its physical characteristics unchanged. It is necessary to set the regulation lever of the spreader, before starting the operation of distribution, adding in the possible limits, to keep it constant for all its duration. The spreading charts contain the information, in order to determine the quantity to spread in the field; these must be completed by competent operators.

HOW TO ADJUST THE SPREADER VANES

In order to assure an even distribution on both sides of the spreader, depending on the different specific weight of the media used, the distributor vanes on the disc can have a different position. When all the vanes are put in hole 1 (as shown in the picture), the distribution of the media is increased towards the left, compared to the way the tractor is moving. If the vanes are put in hole 5, the distribution will be more towards the right. When moving the vanes from 1 to 5 on the same speed, there will be an increase of the distributing width. This adjustment must be made according to the type of media used.



Spreading disc's distributor vanes regulation

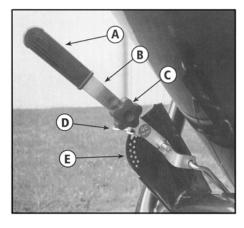
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ADJUSTMENTS / LOADING HOPPER

HOW TO ADJUST THE SPREADER

The spreading is controlled through the regulation lever that moves the opening section on the bottom of the hopper. After consulting the spreading chart, it is necessary to move lever "A" along the graduated scale "E" and blocking it in the chosen position with the pin"D".



In order to spread from both sides (position 1), "A" and "B (not visible in picture)" levers must be in the same position, connected through the knob "C". In order to carry out the spreading only through the left side (position 2), it is necessary to disconnect the two levers removing the "C" knob, set lever "B (not visible in picture)" in the chosen position, given by the spreading chart, and bring lever "A" towards the higher part in order to close the shutter of the right side. In order to spread only one on to the right side (position 3), you have to move lever "B (not visible in picture)" up, in and regulate the quantity to spread with lever "A".



HOPPER LOAD

It is advised, not to carry out the hopper loading manually, but to use a lifter or suitable mechanical means.



The hopper must be loaded only after having hitched the spreader to the ATV-quad.

Do not drive for long distances with a full load. Do not put full bags of media in the hopper during transportation or during spreading. Do not overload the capacity of the spreader and compress the media.



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SPREADING FERTILIZER

SPREADING MEDIA IN THE FIELD



The operator must wear proper safety attire during periods of use, maintenance, repair, transport, or storing of the spreader.

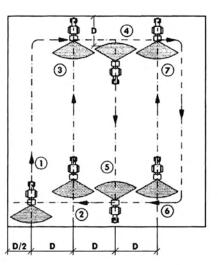
After having hitched the spreader to the ATV-quad/tractor and having carried out the necessary adjustments, it is possible to begin work.

Engage the axle with the pin, so that the spreader can begin rotating by turning wheels, only when you are ready to use the spreader.



There are various ways to spread media in the field. One of the simplest methods is as follows:

- Positioning the ATV-quad/tractor at the beginning of the field you intend to work, to a distance (D/2) that is the half of the working width that is used (point 1)
- Driving in the field distributing the media on all the perimeter
- Stopping the ATV-quad/tractor at one distance (D) from point 1, equivalent to the set working width (point 2)
- Beginning the spreading proceeding in line, straight to point 3
- Turn the ATV-quad/tractor and drive a (D) distance, equal to the working width (point 4)
- Repeat procedure until all the plot is covered



SPREADING MISTAKES

COMMON MISTAKES

- Drive speed
- Incorrect spreading width
- The spreading disc is not in a horizontal position compared to the land
- Drive speed is different to those suggested by the spreading tables, or not suitable for that particular type of media
- · Lack of cleaning on vanes and disc

(continued on next page)

MISTAKES DUE TO MEDIA

- · Poor quality media
- · Wet or very humid media
- Incorrect media composition or it does not correspond to what is suited for spreader
- Presence of excessive media clumps may cause negative yield on spreading
- · Debris in the media

MISTAKES DUE TO THE SPREADER

- · Spreading exits clogged
- Parts of the spreading discs assembly worn away or damaged

GENERAL MAINTENANCE

The general maintenance criteria we suggest are based on company experience and on advice and suggestions from customers. A good maintenance routine keeps operating costs low and allows for a long spreader life.



When working on spreader, whether for maintenance, repair or cleaning, spreader must be on the ground in stabile conditions, ATV-quad/tractor's engine should be turned off, brakes set, keys turned off and removed from ignition.

If damage occurs, the operator must stop the spreader immediately, assess the problem, and proceed with proper actions to fix the spreader. Do not use flammable fluids.

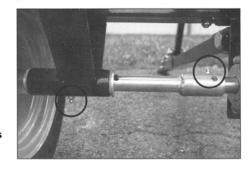
WARNING

When doing maintenance, always wear proper safety attire and follow safety steps in the manual.

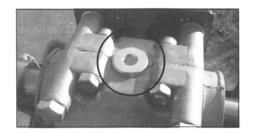
In case of unusual vibrations, verify the conditions of the distributor on the spreading disc, the tightness of all the nuts and bolts and the lubrication of the gear box. For every 8 hours of spreading time, tighten all nuts and bolts. Any excessive vibration of the machine is dangerous and damaging for the entire spreader.

LUBRICATION

Before every use and after every 8 hours of spreading, you must grease the spreader. Be sure that the grease zerks are clean from dirt and debris before injecting with grease. Lubricate with lithium grease at the points, shown in the picture.



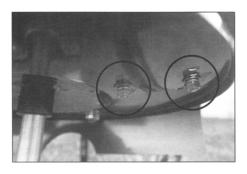
Fill gearbox with "00" grease before use. To access gearbox, flip spreader over. Located in the middle of the gearbox is the plug (pictured below). Remove plug and fill gearbox until full.



MAINTENANCE

REPLACEMENT OF THE DISTRIBUTOR VANES

If the distributor vanes of the disc brake or get damaged, it is necessary to replace them with new ones. Unscrew the nuts and replace the damaged vane.



SPARE PARTS

For replacement parts for the spreader, the customer must use original parts offered (see page 18-19 for serviceable parts list) from the manufacturer by ordering them directly from manufacturer or authorized dealer. When ordering, it is necessary to have the serial number and model number from the nameplate.

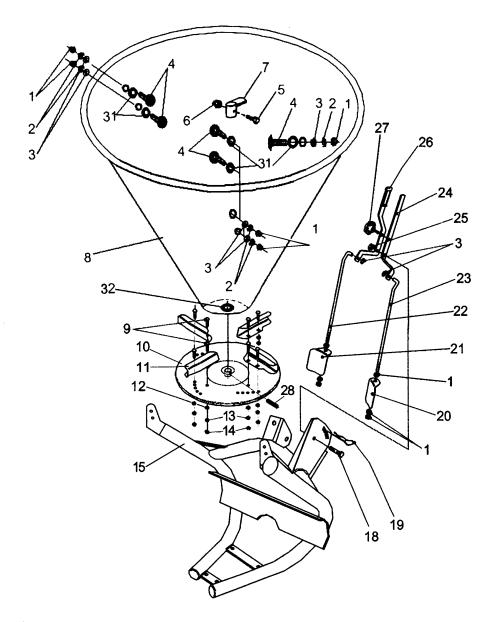
STORAGE

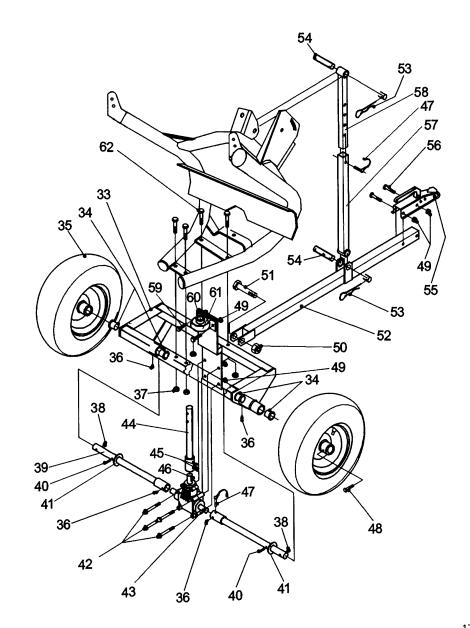
It is good practice to keep up maintenance and fix repairs. Store the spreader in a dry sheltered place, away from any chemicals. Fertilizers are generally corrosive, for this reason, it is important that no particles remain in the spreader for long periods of time. Before storing the spreader, it is important to:

- · Thoroughly wash the spreader and inside the hopper
- Look over the spreader in order to check for any structural damages
- Verify that the safety labels are present, clean and readable, if not replace them
- Grease all mechanical parts (see page 14)

4 ------

PARTS





ATVS Service Part List

M10 Zinc Hex Nut 10mm Zinc Lock Washer 10mm Zinc Flat Washer M10 X 25 Zinc Snap Head Bolt M8 X 45 Zinc Hex Head Bolt M8 Zinc Self-Locking Nut ATVS Agitator ATVS Hopper Tub (5 bu) M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer 8mm Zinc Lock Washer	996M 997M 681M 671M	No No No No No No No Yes Yes No Yes Yes
10mm Zinc Flat Washer M10 X 25 Zinc Snap Head Bolt M8 X 45 Zinc Hex Head Bolt M8 Zinc Self-Locking Nut ATVS Agitator ATVS Hopper Tub (5 bu) M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer	997M 681M	No No No No Yes Yes No Yes
M10 X 25 Zinc Snap Head Bolt M8 X 45 Zinc Hex Head Bolt M8 Zinc Self-Locking Nut ATVS Agitator ATVS Hopper Tub (5 bu) M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer	997M 681M	No No No Yes Yes No Yes
M8 X 45 Zinc Hex Head Bolt M8 Zinc Self-Locking Nut ATVS Agitator ATVS Hopper Tub (5 bu) M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer	997M 681M	No No Yes Yes No Yes
M8 Zinc Self-Locking Nut ATVS Agitator ATVS Hopper Tub (5 bu) M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer	997M 681M	No Yes Yes No Yes
ATVS Agitator ATVS Hopper Tub (5 bu) M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer	997M 681M	Yes Yes No Yes
ATVS Hopper Tub (5 bu) M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer	997M 681M	Yes No Yes
M8 X 16 Zinc Hex Head Bolt ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer	681M	No Yes
ATVS Spreading Disc (Spinner) Distributor Vane 8mm Zinc Flat Washer		Yes
Distributor Vane 8mm Zinc Flat Washer		
8mm Zinc Flat Washer	671M	Vac
		162
8mm 7inc Lock Washer	1 1	No
OHITH ZHIC LUCK WASHEL		No
M8 Zinc Hex Nut		No
ATVS Frame		No
M12 X 35 Zinc Hex Head Bolt		No
4.5mm Zinc Split Pin		No
Left Shutter	766M	Yes
Right Shutter		Yes
		Yes
Left Tie Rod		Yes
Left Lever		Yes
		No
	772M	Yes
		Yes
	7,0	No
		No
	991M	Yes
		No
		No
		No
	1001M	Yes
		No
		No
		No
	1002M	Yes
		Yes
	1003141	No
		No
		No
		No
	- -	No
	 	No
	M8 Zinc Hex Nut ATVS Frame M12 X 35 Zinc Hex Head Bolt 4.5mm Zinc Split Pin Left Shutter Right Shutter	M8 Zinc Hex Nut ATVS Frame M12 X 35 Zinc Hex Head Bolt 4.5mm Zinc Split Pin Left Shutter Right Shutter Right Tie Rod Right Shutter Right Tie Rod Left Lever Right

51	M22 X 80 Zinc Hex Head Bolt		No
52	Assembly Tube	1004M	Yes
53	3mm Zinc Split Pin		No
54	22 X 80 Zinc Pin	1005M	Yes
55	2" Coupler		No
56	M10 X 70 Zinc Hex Head Bolt		No
57	Leveling Arm Outer Tube	1006M	Yes
58	Leveling Arm Inner Tube	1007M	Yes
59	M10 X 25 Zinc Hex Head Bolt		No
60	UC 205 Bearing	1008M	Yes
61	PP205 Bearing Seat	1009M	Yes
62	M12 X 75 Zinc Hex Head Bolt		No

18 _____

WARRANTY

WARRANTY

The manufacturer warrants to the original purchaser that the implement is free from defects in both material and workmanship under normal use and service for a period of one (1) year for noncommercial use. Any use by commercial, state, and municipalities will void warranty.

This Warranty shall not be interpreted to render the Manufacturer liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Manufacturer shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery, or for any other reason.

This Warranty does not apply to any part or product which in the Manufacturer's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been used for purpose for which the product is not designed. Manufacturer reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

Warranty specifications:

- Must show proof of purchase within 1 year of purchase date.
- Photos must be provided to ensure proper warranty claim.
- Claims under this Warranty must be made to an authorized dealer, and must be submitted within 30 days of failure.

The above information must be provided in order for us to process your claim and for you to receive a Return Manufacturers Authorization # (RMA) from manufacturer. Any product determined to be defective and has been issued an RMA # by the manufacturer will be picked up and returned to our facility for complete inspection and disposition of liability. Once a warranty claim is accepted, the manufacturer will issue full credit or exchange the product at no cost to the store or customer.

KEEP FOR YOUR RECORDS

Record the model number, serial number, and the date of purchase with original sales receipt. This information will be helpful to your dealer if parts or service are required.

NODEL NUMBER	
ERIAL NUMBER	
OATE OF PURCHASE	
DEALER	

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NOTES

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