

# W & A

## 3 POINT HITCH PULVAMIZER

### NO. 3604

# OPERATOR'S MANUAL

TO THE OWNER:

Congratulations on your purchase of a new W & A 3 point Hitch Pulvamizer . Your selection is an indication of your awareness of the need for intensive engineering, research, design, durability and dependability that has gone into its production.

Be sure to read all the instructions in this manual before placing the machine in use. Safety precautions along with adjustments should be learned and also taught to anyone who operates the machine. Remember, an implement which is properly maintained, adjusted, and safely operated saves time, labor and money.

After the operating season, thoroughly clean your machine and inspect it. Preventive maintenance pays dividends. Your dealer has original equipment parts which assure proper fit and best performance.

Thank you for purchasing this W&A product.

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For your convenience, please fill in the following:

Model: \_\_\_\_\_ Serial No. \_\_\_\_\_

Dealer Name: \_\_\_\_\_ Date Purchased \_\_\_\_\_



*Quality Products from*

# W & A MANUFACTURING COMPANY

P.O. Box 5238, Pine Bluff, Arkansas 71611

Phone: (870) 534-7420

Fax: (800) 336-1318

Website: [www.wamfgco.com](http://www.wamfgco.com)

# NOTES

# SAFETY

SI NO LEE INGLES, PIDA AYUDA A AIGUIEN QUE SI LO LEA PARA QUE LE TRADUZCA LAS MEDIDAS DE SEGURIDAD.



THIS SYMBOL MEANS

**-ATTENTION!**

**-BECOME ALERT!**

**-YOUR SAFETY IS INVOLVED!**

## SIGNAL WORDS:

The signal words DANGER, WARNING and CAUTION are used with the safety messages in this manual and with each safety sign. They are defined as follows:

**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. The color for DANGER is RED.

**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. The color for WARNING is ORANGE.

**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. The color for CAUTION is YELLOW.

- Safety of the operator and bystanders is one of the main concerns in designing and developing our products. However, every year 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 manual. To avoid personal injury or death, study the following precautions and insist those working with you, or for you, follow them.



If you have any questions not answered in this manual, require additional copies or the manual is damaged, please contact your dealer or W & A Manufacturing Company, P. O. Box 5238, Pine Bluff, Arkansas 71611. (Telephone) 870-534-7420, (FAX) 870-534-1318. Manuals can also be found at [www.wamfgco.com](http://www.wamfgco.com)



This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury or death. Follow the Safety Requirements!



## GENERAL SAFETY REQUIREMENTS



- Before operating your W & A 3 pont Hitch Pulvamer, thoroughly read and understand your operator's manual. If you do not understand any portion of the operator's manual, contact your dealer or W & A Manufacturing Company immediately.
- Never operate the machine under the influence of alcohol or drugs, or while you are otherwise impaired.
- 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.**
- Clear the area of people, especially children, before starting unit.
- Do not allow anyone to ride on any part of the equipment for any reason.
- If safety signs are missing, unreadable, or damaged, they should be replaced. See list of safety signs. Keep safety signs clean and legible. Do not paint over safety signs.
- Furnish this manual to the new owner if the machine is sold.
- Inspect machine daily for worn parts, hydraulic leaks, frayed hoses, and make necessary repairs. Tighten all bolts and make sure all fasteners are in place.
- Unauthorized modifications to the machine may impair the function and/or safety and affect machine life. Make NO unauthorized modifications. DO NOT REMOVE orifice fittings from hydraulic cylinders.
- Never stand between implement and tractor when hitching. Extreme care should be used to prevent injury to the hands or fingers. *Stop tractor engine and set brake before installing hitch pins.*
- Lower wings, unit and front & rear parking stands and relieve hydraulic pressure before servicing, unplugging, adjusting, leaving, or storing machine.
- Raised equipment can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.
- Do not read, eat, drink, talk or text or use a mobile phone while using this equipment.
- Review the safety instructions with all users annually.



## TRANSPORTING



- Comply with all federal, state, and local laws for implement transport on public roads.
- Watch for obstructions overhead and to side while transporting.
- Travel speed should be such that you maintain complete control and machine stability at all times.
- Make sure that the brake pedal latch is engaged. You must lock brake pedals together for road travel.
- Slow down and signal before turning. Pull over to allow faster traffic to pass.
- Never transport machine unless hydraulic systems are completely charged with hydraulic oil and transport safety locks are engaged.
- Raised wings can contact electric utility lines and overhead obstructions. Severe shock, injury, or death can result. Electrocution can occur without direct contact. Drive carefully. Measure overall transport height and be sure of clearance.
- When transporting on a road or highway, use adequate warning symbols, reflectors, and SMV (slow moving vehicle) emblem and appropriate lighting to meet local regulations. Avoid transporting at night or low light conditions.



## OPERATIONS



- Never start or operate machine unless sitting on tractor seat.
- Always make sure hydraulic system is fully charged with oil before use. Failure to bleed the system of all air can cause folded wings or entire machine to drop suddenly.
- Make sure front of tractor is properly weighted for safe steering control and operation.
- Clear the area of people, especially children, before starting the unit.
- Do not allow anyone to stand between tractor and implement when hitching.
- Do not operate hydraulic wings and/or arms until you are sure all bystanders are clear of area.
- Coulter, disk and marker blades are sharp. Use extreme care when adjusting or servicing. Keep hands and feet from beneath blades.



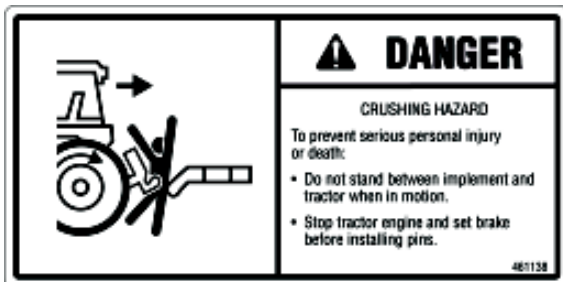
## SERVICE / MAINTENANCE



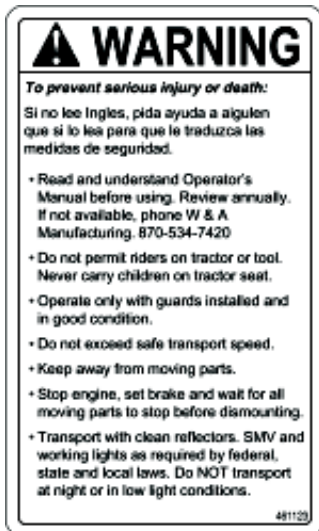
- Before working on this machine stop the tractor, set the brakes, disengage the PTO and power drive, shut off the engine and remove the ignition key.
- Securely block machine when working on or under it. To prevent injury in case of hydraulic failure or inadvertent lowering by another person, unfold wings and arms and securely block. Never use a jack to support the implement.
- Always use the proper tools or equipment for the job.
- Properly tighten all hardware.
- Relieve pressure from hydraulic system before servicing or disconnecting from tractor.
- Inspect all hydraulic hoses and components to be sure they are in good condition and that all connections are tight.
- Escaping hydraulic oil under pressure can produce enough force to penetrate the skin, causing serious personal injury or infection. Before applying pressure to the system, be sure all connections are tight and that lines, pipes, and hoses are not damaged. Before disconnecting lines, be sure to relieve all pressure. Hydraulic oil escaping from a very small hole can be almost invisible. Wear proper eye and hand protection and use a piece of cardboard or wood - not your hands - to search for suspected leaks. If injured by escaping hydraulic oil, **seek emergency medical attention immediately**. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
- When remote cylinders are connected to the hydraulic system, cycle the control lever about three times to remove air from the cylinder and hoses. With air in the system, raised equipment can drop accidentally and cause personal injury or damage.
- Never use machine until all guards and safety devices are securely in place.
- After servicing, be sure all tools, parts and service equipment are removed.
- 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.

# 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 dealer or W & A Manufacturing Company.



DANGER - Crushing Hazard  
Sign Number 461138  
Located on Reel Frame near left side pull pin.



WARNING - Operator's Manual -- Sign Number 461123  
Located near Crushing Hazard sign on Reel Frame.

Yellow Reflector -- Sign Number 461200. Two required.  
One at each end of front side of reel frame.

Red Reflector -- Sign Number 461201. Two required.  
One at each end of rear side of reel frame.

# LUBRICATION & MAINTENANCE



Lower Wings and Unit Before Servicing, Adjusting or Leaving Unit.

## DAILY OR AFTER 10 HOURS OF OPERATION:

Grease reel bearings.

## WEEKLY OR AFTER 50 HOURS OF OPERATION:

Retighten all bolts and check that all fasteners and keepers are in place and secure. Special attention should be given to bolts holding blades on reels.

## PERIODICALLY:

Thoroughly clean and inspect your Pulvamer. Tighten all bolts as needed and check that all fasteners and keepers are in place and secure.

Check gauge wheel tires for proper inflation and bolts for tightness.

Be sure all hydraulic connections are tight and hoses are not worn or damaged. Hydraulic oil leaking under pressure can penetrate the skin and cause infection or other injury.

### TO PREVENT PERSONAL INJURY:

Relieve all pressure before disconnecting lines. Before applying pressure, make sure all connections are tight and in good condition. Never use your hand to check for suspected leaks under pressure. Wear proper eye and hand protection and use a piece of cardboard or wood for this purpose. If injured by leaking fluid, SEE YOUR DOCTOR IMMEDIATELY.

Check cylinder pins and hitch pins for wear and replace as required.

Grease all bearings before storing implement for an extended period of time.

Review safety instructions with all operators annually.



# ADJUSTMENTS & OPERATION



Lower Wings and Unit Before Servicing, Adjusting, or Leaving Unit.

1. Make all adjustments on a flat level service.



Install proper ballast on front of tractor to insure safe and proper steering at all times.

2. Adjust harrow chains to allow harrow to be pulled by reel frame with no pull on harrow frames. Secure with klik pins.
3. Adjust tension springs on dragboard legs to give boards sufficient down pressure to firm the soil as desired.
4. Set gauge wheels to allow machine to work at desired depth.
5. This machine is designed to operate at a speed of no more than 7 miles per hour. To insure long machine life, DO NOT OPERATE AT FASTER SPEED.
6. Never attempt to turn with machine in down or working position.

## SAFETY FIRST



**ACCIDENTS  
DON'T JUST HAPPEN  
THEY ARE CAUSED**

# ASSEMBLY



EXTREME CARE SHOULD BE USED DURING ASSEMBLY TO PREVENT INJURY TO HANDS, FINGERS AND FEET.

1. Mount main frame to 3 point hitch of tractor.
2. Install right hand and left hand Stand Channels to reel frame angles with 5/8" x 1-1/2" hex bolts, lock washers and hex nuts. Insert Rear Parking Stands into tubing holders at ends of Stand Channels and secure with 1/2" x 5-1/2" Safety Lock Pins provided.
3. Locate and secure front angle harrow frame to channels using 5/8" x 1-1/2" bolts.
4. Locate and secure rear tubing harrow frame to channels using 5/8" x 1-1/2" bolts.
5. Install Rear Connecting Angles (29-1/4" Long) from angles on Front Angle Harrow Holder to center angles of Rear Tubing Harrow Holder using 5/8" x 1-1/2" hex bolts.



EXTREME CARE SHOULD BE USED WHEN HITCHING BAR TO TRACTOR TO PREVENT INJURY TO HANDS OR FINGERS. DO NOT STAND BETWEEN THE TOOL BAR AND TRACTOR WHEN IT IS IN MOTION. STOP TRACTOR ENGINE AND SET BRAKE BEFORE INSTALLING PINS.



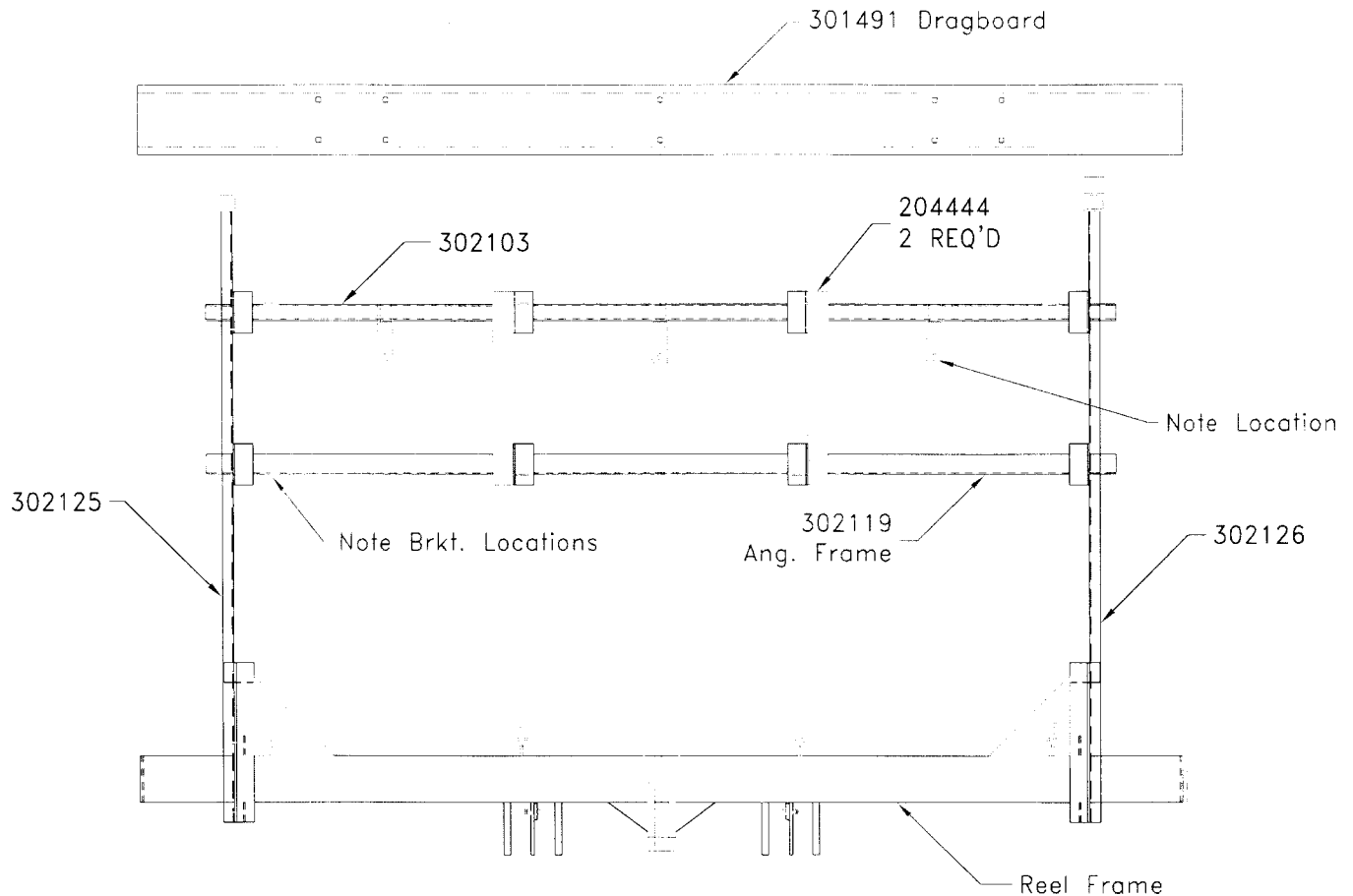
DO NOT ALLOW RIDERS ON IMPLEMENT AT ANY TIME.

6. Unroll harrow sections and position behind reel frame. Connect harrow pull links to reel frame with 5/8" x 2-1/4" Knurled and Threaded Clevis Pins and 5/8" lock nuts.
7. Place Harrow Lift Chains through chain slots on harrow carrying frames. Secure chains in place with 1/4" klik pins.
8. Attach gauge wheel assemblies to reel frame at proper locations using bolts and backing plates provided. (Optional equipment)



EXTREME CARE SHOULD BE USED DURING ASSEMBLY TO PREVENT INJURY TO HANDS, FINGERS AND FEET.

9. Attach drag board legs to harrow carrying frame with 1/2" x 3" bolts and lock nuts. NOTE: These bolts serve as pivot points for drag boards and should not be overtightened.
10. Put the 5/8" x 8" bolt through the 5/8" concave washer and the 7" coil compression spring and then insert through the hole in the attaching bracket on the harrow carrying frame. Secure to drag board leg with 5/8" lock nut.
11. Attach drag board to legs using 1/2" x 1-1/4" carriage bolts, nuts and lock washers.



**USE ONLY**

**W & A REPLACEMENT PARTS**



**W & A Manufacturing Company**

**1810 Ohio Street                      P.O. Box 5238  
PINE BLUFF, ARKANSAS 71611**

**Phone (870) 534-7420**

**Fax (800) 336-1318**

***www.wamfgco.com***

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## PARTS MANUAL



### 3 POINT PULVAMIZER

Model No. 3604 -- 4 Row



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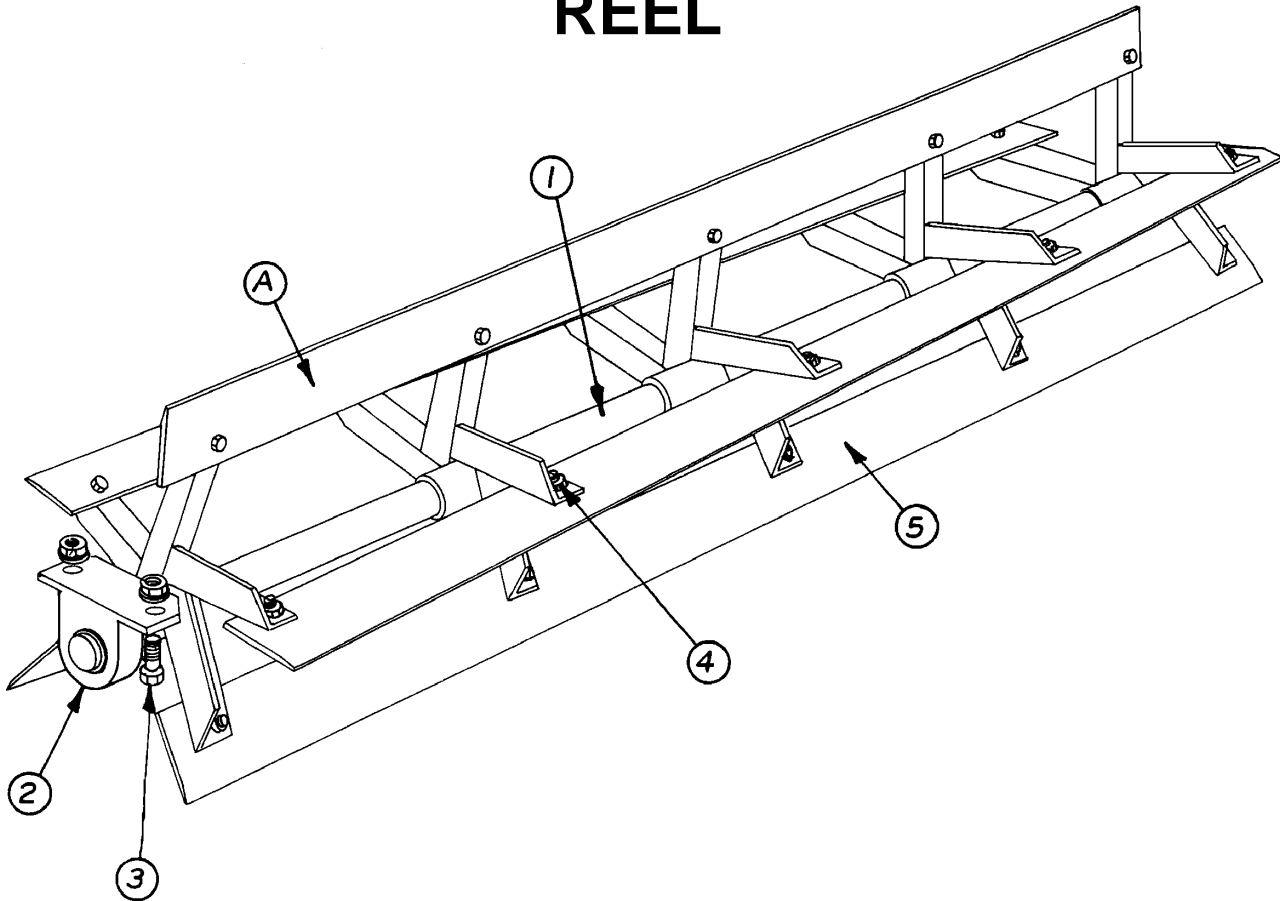
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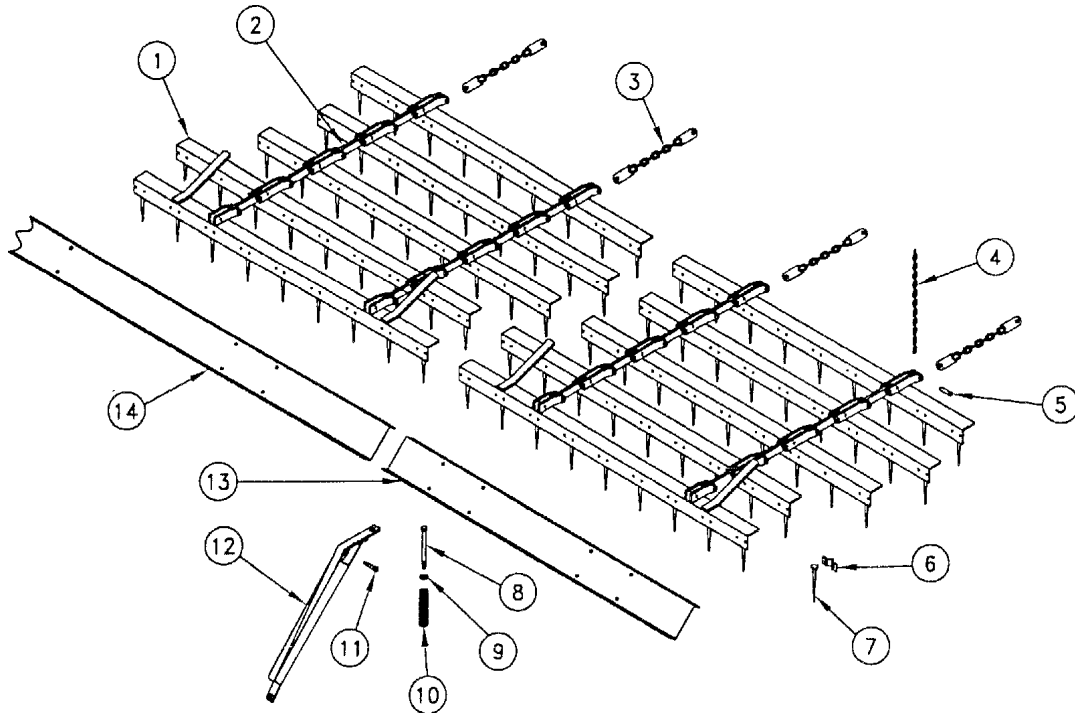
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# REEL



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>WT. LBS.</u>	<u>DESCRIPTION</u>	<u>QTY. REQ'D</u>
A	770020	235	Spiral 6 ft Reel Complete w/Bearings .....	1
1	300451	116	Spiral 77" Reel Shaft w/5 support brackets .....	1
2	482101	4	1-15/16" Pillow Block & Bearing Complete .....	2
-	481215	1	1-15/16" Bearing w/Lock Collar.....#G1115-KRRB-S1115K .....	2
-	480006	3	Pillow Block for 1-15/16" Bearing .....	2
3	411562	¼	Hex Bolt -- 5/8" x 2½" NC - Gr 5 - Zinc .....	4
-	410009	-	Lock Nut -- 5/8" NC - Gr 2 - Zinc .....	4
-	413010	-	Flat Washer -- 5/8" - Zinc.....	4
4	411211	¼	Hex Bolt -- 5/8" x 1¼" NC - Gr 2 - Zinc .....	25
-	410009	-	Lock Nut -- 5/8" NC - Gr 2 - Zinc .....	25
5	200539	20	Spiral Pulvamer Blade x 72" .....	5

# HARROWS & DRAGBOARDS



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>WT. LBS.</u>	<u>DESCRIPTION</u>	<u>QTY. REQ'D</u>
1	773018	250	Complete 6' Harrow Section for N3P .....	2
2	773012	2	Harrow Conn. Link w/Bushings - (7¾" Long) .....	16
-	401055	-	Spring Bushing for Harrow Pull Piece - 5/8" ID .....	-
3	300583	3¾	Pull Piece w/Bushings - N3P Harrow....(15 Link) .....	4
4	402015	1	High Test Chain -- 1/4" x 19 Link.....(Carburized) .....	8
-	416204	-	Klik Pin -- 1/4" - Zinc .....	8
5	416633	¼	Clevis Pin Knurled & Threaded -- 5/8" x 2¼" - Zinc .....	40
-	410009	-	Lock Nut -- 5/8" NC - Gr 2 - Zinc .....	40
6	200550	½	Harrow Tooth Bracket .....	90
-	411143	-	Hex Bolt -- 3/8" x 1¼" NC - Gr 2 - Zinc .....	180
7	472007	-	Harrow Tooth -- 5/8" x 7½" .....	90
8	411237	1	Hex Bolt -- 5/8" x 8" NC - Gr 2 - Zinc .....	3
-	410009	-	Lock Nut -- 5/8" NC - Gr 2 - Zinc .....	3
9	202350	-	Cup Washer for Spring .....	3
10	471006	1½	Compression Spring.....(1½" OD x 6½") .....	3
11	411551	¼	Hex Bolt -- 1/2" x 3" NC - Gr 5 - Zinc .....	3
-	410008	-	Lock Nut -- 1/2" NC - Zinc .....	3
12	300388	17	Dragboard Bracket (Pulv) .....	3
-	411729	-	Carriage Bolt -- 1/2" x 1¼" NC - Gr 2 - Zinc .....	6
-	412008	-	Hex Nut -- 1/2" - 13 - Gr 2 - Zinc .....	6
-	413508	-	Lock Washer -- 1/2" - Zinc .....	6
13	301491	71	13'0" Metal Dragboard .....	1

# WARRANTY

W & A Manufacturing Company warrants all products manufactured and sold by it to be free of defects in material and workmanship and to perform as represented, subject to the following conditions

- (A) Warranty applies only if installed and operated according to instructions.
- (B) Written authorization must be obtained prior to return of material for inspection. Material is to be returned prepaid.
- (C) Warranty does not apply to labor for parts replacement, nor does it apply to damage by accident, abuse, misuse or failure caused by not operating according to instructions.
- (D) Warranty is void if changes are made in the product in the field by other than a W & A representative or by instructions from the factory.

**W & A Manufacturing Company reserves the right at any time to make changes in the design, materials and/or specifications of any of its products without thereby becoming liable to make similar changes in equipment previously manufactured.**

Written authorization must be obtained prior to the return of any equipment purchased from W & A Manufacturing Company. No penalties will be charged if equipment had been placed on display by a W & A representative or if reasons for return are errors or faults of W & A Manufacturing Company. If return is for the benefit of the customer and the equipment is returned by prepaid freight in a new, unused and resalable condition, credit (based on original purchase price) will be issued less a 10% fee for restocking and other handling expenses.



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