

OWNERS MANUAL

REDHAWK SPREADER

CU 40 CU 50 CU 50F CU 80 CU 100

This unit may have been built with special features. Please provide serial number when ordering parts.

Serial Number:

Model Number:

Purchase Date:

MFG by: Stoltz Mfg., LLC 121 Morgan Way PO Box 527 Morgantown, PA, USA 19543 Tel: (610) 286-5146 WARRANTY Warranty Claim Procedure Warranty Registration Form

SAFETY NOTICE

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LIMITED WARRANTY

Stoltz Mfg., LLC warrants, for six months from the date of purchase, to the original owner, that each spreader is free from defects in either material or workmanship, provided that it has been adequately maintained and used under normal operating conditions.

This warranty covers only those items, parts and assemblies manufactured by Stoltz Mfg., LLC. Parts manufactured by others carry only the warranty offered by the original manufacturer.

Stoltz Mfg., LLC's obligation under this warranty is limited to correcting the defect, without charge, at its factory or as arranged by its Dealer. Before acceptance of any warranty claim, the item must be examined by Stoltz Mfg., LLC and must be found to have been defective. The defective item may be replaced or repaired to fulfill the obligations of this warranty.

This warranty shall not apply to any items damaged through misuse, abuse, accident, repair, overloading or lack of adequate maintenance.

This warranty shall not apply to any items that are worn through normal use. All items that are considered as normal maintenance will not be covered by this warranty, nor will damage caused by failure to perform maintenance. This includes tightening of nuts, bolts, clamps, set screws, etc. **Damage caused by loose fittings is not covered by warranty.**

Stoltz Mfg., LLC shall under no circumstances be liable for any incidental or consequential damages arising from loss of property or other damages or losses owing to the failure or use of Stoltz products beyond the cost of repair or replacement of any defective part.

Stoltz Mfg., LLC makes no warranty of fitness or merchantability. No other warranty, expressed or implied, is made by Stoltz Mfg., LLC beyond the terms expressed herein.

No person, agent or dealer is authorized to give any other warranty on the behalf of Stoltz Mfg., LLC.

WARRANTY CLAIM PROCEDURE

1. Contact Stoltz Mfg., LLC directly or your dealer. <u>Obtain a Return Goods Authorization</u> (**RGA**) number. Your purchase date and serial number will be required.

2. In certain cases, you will be required to return the part or the entire spreader to Stoltz or its dealer for inspection.

3. When parts are returned for inspection, you will be required to pre-pay the freight charges.

4. If parts are shipped by Stoltz Mfg., LLC before a valid warranty request has been accepted, you will be invoiced by Stoltz for the parts. The issuance of an RGA number does not guarantee that the request will be granted.

You must complete and return the Warranty Registration form below within 2 weeks of the purchase date.

NOTE: Read enclosed SAFETY NOTICE before submitting.

Cut Here-----Cut Here

War	ranty Registration Form	m
Return to:		
Stoltz Mfg., LLC		
PO Box 527		
Morgantown, PA 19543		
Please Print or Type:		
Name		
Address		
City:	State:	Zip:
Phone:		
Model Number	Serial Number	Purchase Dat
I hereby confirm that]	l have read the enclosed	I SAFETY NOTICE.
Owners		
Signature:		Date:
Print Name:		

SAFETY NOTICE

The buyer assumes all responsibility for the safe use of this product, as well as the materials spread with it.

This symbol is used to call attention to instructions concerning personal safety. Be sure to observe and follow these instructions.

WARNING: BEFORE ATTEMPTING TO OPERATE THIS SPREADER, READ AND STUDY THE FOLLOWING SAFETY INFORMATION. IN ADDITION, MAKE SURE THAT EVERY INDIVIDUAL WHO OPERATES OR WORKS WITH THE SPREADER IS FAMILIAR WITH THESE SAFETY PRECAUTIONS.

This spreader is intended for off-road usage. Stoltz recommends transporting the spreader between job sites on a trailer. It is the operator's responsibility to ensure that all federal, state, and local safety regulations are adhered to and that over-width permits are obtained if necessary.

WARNING: UNDER NO CIRCUMSTANCES SHOULD THE SPREADER BE TRANSPORTED LOADED ON PUBLIC ROADS.

WARNING: THIS SPREADER IS INTENDED TO PROPEL GRANULAR MATERIALS THROUGH THE AIR AT HIGH SPEEDS! SUCH FLYING MATERIALS MAY BE HAZARDOUS TO PEOPLE, CROPS AND ANIMALS

- DO NOT STAND BESIDE OR BEHIND SPREADER WHILE IN OPERATION
- DO NOT SPREAD MATERIAL INTO A CROP THAT MAY BE DAMAGED
- DO CHECK THE LOCATION OF OTHER PERSONS BEFORE STARTING
- DO CHECK THE FLIGHT PATH OF MATERIALS FOR POSSIBLE IMPACT ON STANDING CROPS OR OTHER PEOPLE
 - DO CHECK THE SPREAD PATTERN FOR UNIFORMITY

DO NOT operate, service, inspect or otherwise handle this spreader until all operators have read this Owner's Manual and have been properly trained in the intended usage of the spreader.

Cover all loads that can spill or blow away. Do not spread dusty materials where dust may create pollution or a traffic visibility problem.

Do not allow minors (children) or inexperienced persons to operate this spreader.

If the spreader becomes clogged, shut off the tractor engine and allow all mechanisms to stop. Relieve hydraulic pressure. Disconnect PTO shaft and hydraulic hoses. Then take

the unit back to the shop or a safe place to clean or work on the spreader as required. Never attempt to pull material from any part of the equipment while it is running.

Always shut off power, block the wheels, disconnect the PTO drive shaft, and unhook hydraulic hoses from the tractor to prevent accidental startup or unexpected movement before working on the machine.

The hydraulic system and oil can get hot enough to cause burns. Wait until oil has cooled before working on the system.

Some parts and assemblies are quite heavy. Before attempting to unfasten any heavy part or assembly, arrange to support it by means of a hoist, by blocking or by use of an adequate arrangement to prevent it from falling, tipping, swinging or moving in any manner which may damage it or injure someone. Always use lifting devices that are properly rated to lift the equipment. Do not lift the loaded spreader. Never lift equipment over people.

If repairs require use of a torch or welder, be sure that all flammable and combustible materials are removed. Fuel or oil reservoirs must be emptied, steam cleaned, and filled with water before attempting to cut or weld them. DO NOT weld or flame cut on any tank containing oil, gasoline, their fumes, or other flammable material, or any container whose contents or previous contents are unknown.

Make sure that material is not concentrated at the rear of the machine before unhitching. Material at the rear of the machine may cause the trailer hitch to tip upward.

Read and understand the precautionary decals on the spreader. Replace any that become defaced, damaged, lost or painted over. Replacement decals can be ordered from your dealer's parts department or from Stoltz by calling 610-350-4322.

Do not clean, adjust, or lubricate while spreader is in motion.

Turn slowly and be careful when traveling on rough surfaces and side slopes, especially with a loaded spreader, as the load may shift causing the unit to tip.

Never allow anyone to ride on any part of the spreader for any reason. Stay out of the hopper while the conveyor is running.

Do not stand on the spinner guard

Make sure that all hydraulic fittings are tight and that all hoses are in good condition. Hydraulic fluid escaping under pressure can have sufficient force to penetrate skin and cause serious injury. Never investigate for hydraulic leaks by using a part of the body to feel for escaping fluid.

Inspect the unit regularly to ensure that all connections and bolts are tight and secure before operating.

Know how to stop the spreader before starting it.

Do not operate the unit unless all shields, covers, and guards are in place.

Make certain that everyone is clear of the spreader before applying power.

Keep hands, feet and clothing away from moving parts. Loose or floppy clothing should not be worn by the operator.

Do not insert a stick, tool or hands into conveyor, spinners or other moving parts

Stay well clear of the spreader's spinners while operating.

Do not breath the dust when spreading dusty materials. Wear a dust mask or other approved respiratory device.

Do not climb on any part of the spreader at any time. Do not use the PTO guard as a step.

Do not step over the PTO shaft. Stay clear of the PTO at all times.

If the unit is equipped with a ladder, be careful in getting on and off the ladder, especially in wet, icy, snowy or muddy conditions. Clean mud, snow or ice from steps and footwear.

Keep PTO shaft telescoping tube shields turning freely. Keep PTO master shield on tractor. Replace any shields that are missing or damaged.

Never operate the PTO above the normal RPM rating. The tractor's PTO <u>MUST</u> match the implement PTO.

Install controls so that they are located for convenient use. Position them so that they do not interfere with any vehicle control, with driver or passenger mobility or with access to or from the vehicle.

Do check the spread pattern to ensure that you are getting a uniform pattern.

Use only properly rated tires.

Do not tow at speeds in excess of 20 MPH when transporting this spreader. <u>Never</u> exceed a safe travel speed.

Observe all applicable traffic laws when transporting on public roadways (where legal to do so). Check local laws for all highway lighting and marking requirements.

Always install a SMV emblem on this spreader for transporting on roadways and keep the emblem clean and bright.

The buyer assumes all responsibility for the safe use of this product, as well as the materials spread with it. If you have any questions regarding the safe and proper use of this spreader or options and attachments, please contact your dealer or the manufacturer at 610-350-4322.

CAUTION: DO NOT WELD ON SPREADER WITHOUT UNHOOKING ALL ELECTRONICS FIRST !!!

WARNING: DO NOT OPERATE ON SIDE SLOPES EXCEEDING 10 DEGREES (5:1 SLOPE) WITH A FULL LOAD. THIS VEHICLE HAS A VERY HIGH CENTER OF GRAVITY.

STOLTZ MFG., LLC PROVIDES GUARDS FOR EXPOSED MOVING PARTS FOR THE OPERATOR'S PROTECTION. HOWEVER, SOME AREAS CANNOT BE GUARDED OR SHIELDED IN ORDER TO ASSURE PROPER OPERATION. THE OPERATOR'S MANUAL AND DECALS ON THE MACHINE ITSELF WARN YOU OF DANGERS AND MUST BE READ AND OBSERVED CLOSELY.

STUDY THE ABOVE SAFETY RULES FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OF DEATH

> For questions, the manufacturer's toll free telephone number is: 1-800-843-8731 (Remember...Safety First)

SECTION I

SPECIFICATIONS

Redhawk (CU) Lime/Fertilizer Spreader

			-	-	<u> </u>
	CU 40	CU 50	CU 50F*	CU 80	CU 100
Max Rated Payload	5 ton	5 ton	5 ton	8 ton	10 ton
Approx. Empty Wt.	2,750 lbs	2,600 lbs	2,900 lbs	3,950 lbs	5,600 lbs
Hopper Capacity	84 cu ft	108 cu ft	168 cu ft	168 cu ft	215 cu ft
Hopper Capacity	67 bu	87 bu	135 bu	135 bu	173 bu
Hopper Length	10 ft	8 ft	10 ft	10 ft	12 ft
Hopper Width	60 in	74 in	78 in	78 in	78 in
Hopper Depth	31 in	42 in	45 in	45 in	45 in
Overall Length	18 ft	16 ft	18 ft	18 ft	20 ft
Overall Width	75 in	76 in	78 in	99 in	102 in
Overall Height	65 in	71 in	79 in	87 in	89 in
Standard Tire Size	11Lx15	11Lx15	11Lx15	19Lx16.1	21.5Lx16.1
Optional Tire Size	13.5Lx15	13.5Lx15	13.5Lx15	21.5Lx16.1	x 14 ply
Wheel Track	70 in	70 in	70 in	80 in	80 in
Hopper Material	CorTen	CorTen	CorTen	CorTen	CorTen
Hopper Floor	HDPE	HDPE	HDPE	HDPE	HDPE

*Fertilizer model

SECTION II

PREPARATION FOR USE

Before operating, read this owners manual completely, paying particular attention to the safety warnings.

<u>Inspection</u>: Before putting your new spreader into service, take a few minutes to be sure it is in proper operating condition after shipment from the factory.

Use the following checklist:

- 1. Visually inspect the unit for obvious damage or any missing parts. Report any problems to Stoltz or your dealer immediately.
- 2. Check hydraulic fittings for possible leaks.
- 3. Check hydraulic hoses for possible chaffing.
- 4. Check belts and chains for alignment and tension.
- 5. Check for loose setscrews in bearings, sheaves and sprockets.
- 6. Check wheel bolt torque.
- 7. Check tire pressure (see recommendations on side wall).
- 8. Check conveyor chain tension. Chain should touch return track at approximately 18 inches behind front idler shaft. Both sides should be equal. Check again after spreading first load. Cotter pin must be in tightener bolt to prevent tightener from vibrating loose.
- 9. Check for any loose items or obstruction in hopper or on spinners, and run machine to be sure it moves freely.

Hydraulic Spinners (If Equipped):

Your spreader is compatible with both open and closed center tractors. Determine if your tractor has open or closed center hydraulics and then:

For <u>Closed Center</u> tractors, the ball valve must be closed (handle in horizontal position). For <u>Open Center</u> tractors, the ball valve must be open (handle in vertical position)



Ball Valve Closed



Speed Control



Ball Valve Open

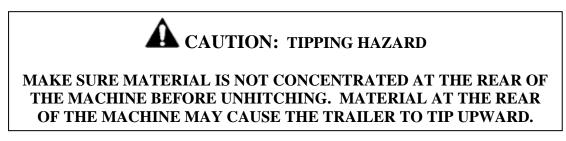
Note that spreaders with self-contained PTO hydraulics will not have this valve.

Spinner speed can be adjusted with the flow control valve. Normal spinner speed is 650-700 RPM, which usually can be achieved with this valve in the #9 position to send 15 gpm to the spinners. Note that tractor RPM must be high enough to pump 15 gpm to the spinners.

SECTION III

SPREADER HOOKUP AND OPERATION

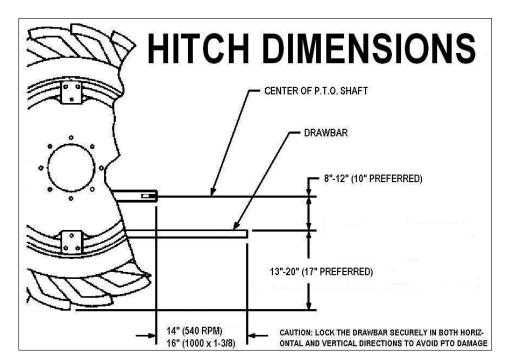
<u>Spreader Hookup</u>: Fasten the spreader hitch to the tractor drawbar with a hitch pin that cannot bounce out. Use a 1" diameter hitch pin to pull the spreader. Secure the drawbar so that the hitch pin hole is located directly below the PTO drive line.



<u>Jack</u>: Remove the weight from the jack (jack is not to be used when spreader is loaded). Lift the jack so that it will be out of the way.

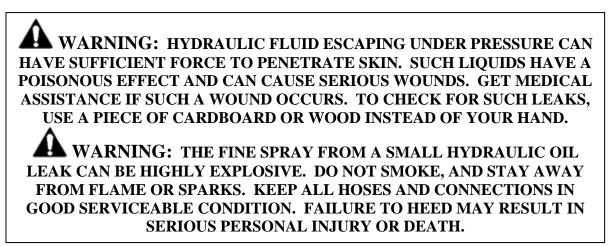
<u>PTO</u>: Before operation and after hitching the tractor to the spreader, connect the PTO drive shaft to the tractor. Slide the spring loaded locking collar on the PTO yoke rearward, and slide the yoke onto the tractor PTO shaft. Release the spring loaded collar. Be sure the pins fall into the grooves of the tractor PTO shaft and that the collar snaps forward into the locking position. Fasten the PTO safety chain to the spreader to prevent rotation of the safety shield during operation.

This spreader must be operated with a 540 RPM PTO, unless specifically configured for a 1000 RPM PTO. The hitch of the spreader is designed for a standard tractor drawbar. Adjust the drawbar according to the diagram.



DANGER: DO NOT OPERATE WITHOUT PTO GUARD ON SPREADER AND ON TRACTOR. MAINTAIN PTO DRIVE SHAFT GUARD TUBES IN OPERATING CONDITION. REPLACE THEM IF DAMAGED AND NOT TURNING FREELY. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

<u>Hydraulics</u>: Route hydraulic hoses through the hose support rod which is mounted to the hitch frame. Connect the hydraulic hoses for the rear gate to the tractor's double acting valve hydraulic system. Move the tractor hydraulic controls to observe proper gate operation. If the controls operate the gate in the opposite direction to what you expect, reverse the hydraulic hose connections at the tractor.



Before loading the spreader, slowly engage the tractor PTO and operate machine at idle speed for several minutes to insure that the spreader is lubricated and operating properly.

<u>Safety Chain</u>: The safety tow chain must be used if the spreader is to be moved at any time on a public roadway. Be sure to adhere to all local/state transportation codes for travel on public roadways with this type of equipment.

For the safety chains to be effective, the installation of the chains should not allow more slack than is necessary for movement during spreader operation. Inspect the safety chains regularly to check the condition of the links and locking/hooking mechanisms. Replace the chains as if one or more links or end fittings are broken, stretched, or otherwise damaged or deformed. If the spreader is equipped with more than one safety chain they should be crossed under the tongue.

<u>Drawbar</u>: Regularly inspect the drawbar for wear and damage. If wear exceeds 1/8" (0.125"), replace the drawbar. Inspect the mounting fasteners and ensure they are properly tightened.

<u>Tires/Wheels</u>: Check wheel lug nuts upon delivery and daily thereafter (every 10 hours of use). Lug nuts should be tightened to 60-70 ft-lbs for 5 ton suspensions, 70-80 ft-lbs for 8 ton suspensions, and 250-265 ft-lbs of torque for 15 ton suspensions. Failure to do so may damage wheel nut seats. Once seats are damaged, it will become impossible to keep nuts tight. Check the tires and inflate to the pressure specified on the tire sidewall.

<u>Walking Beam Travel</u>: Do not bottom out suspension. Damage may occur to implement. The manufacture will not be liable for damage to implement due to improper usage.

<u>Tractor Requirements</u>: The loaded spreader should not weigh more than 1.5 times the weight of the tow vehicle. For hilly terrain, road travel, or other adverse conditions, tractor weight must be equal to gross loaded spreader weight. Do not tow spreader at speeds exceeding 20 mph (32 km/h). Operating speed is dictated by the terrain over which you are traveling. Always use caution. Avoid traveling on slopes or hills that are unsafe.

WARNING: DO NOT TOW SPREADER AT SPEEDS EXCEEDING 20 MPH (32 KM/H). FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

WARNING: OBSERVE ALL APPLICABLE TRAFFIC LAWS WHEN TRANSPORTING SPREADER ON PUBLIC ROADWAYS. CHECK LOCAL LAWS FOR ALL HIGHWAY LIGHTING AND MARKING REQUIREMENTS.

WARNING: INSTALL A SMV EMBLEM ON REAR OF SPREADER FOR TRANSPORTING ON ROADWAYS. KEEP THIS EMBLEM CLEAN AND BRIGHT. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

If you will travel on public roads and it is legal to do so, you must know all rules governing such operation. This will include lighting and brake requirements in addition to traffic rules.

WARNING: PERFORM MAINTENANCE ON LEVEL SURFACE WITH WHEELS BLOCKED. THERE IS NO PARKING BRAKE ON THE SPREADER. BLOCK THE WHEELS PRIOR TO UNHITCHING OR PERFORMING ANY MAINTENANCE ON THE SPREADER. UNCONTROLLED MOVEMENT OF THE SPREADER COULD CAUSE DEATH OR SERIOUS INJURY.

SECTION IV

LOADING YOUR SPREADER

Before loading the spreader:

<u>Center Covers</u>: Center covers have different purposes depending on the type of spreader. Determine if your spreader has a full-length center cover, a half-length center cover, or no center cover.

<u>Full-Length Center Covers</u>: Spreaders with full-length center covers (WLS, Redhawk, CU, RC and BMS 5010 units) should have the inverted V-shaped center cover taken OUT of the spreader when spreading DAMP or Stockpiled materials or light, bulky materials.

Spreaders with full-length center covers should have the center cover put INTO the spreader when spreading GRANULAR (flowable) materials.

Note that the full-length center cover is used in shorter hoppers (10 ft and less) to prevent dry, flowable materials from flowing too fast from the rear gate.

A CAUTION: FAILURE TO REMOVE THE FULL-LENGTH CENTER COVER WHEN SPREADING DAMP OR STOCKPILED LIME MAY RESULT IN DAMAGE TO THE CENTER COVER, CONVEYOR CHAIN, OR OTHER PARTS

<u>Half-Length Center Covers</u>: Spreaders with half-length center covers (BMS units except for the BMS 5010) should have the inverted V-shaped center cover put INTO the spreader when spreading DAMP or Stockpiled materials or when spreading GRANULAR (flowable) materials.

Spreaders with half-length center covers should have the center cover taken OUT of the spreader when spreading light, bulky materials.

Note that the half-length center cover is used in longer hoppers (more than 10 ft) to take weight off of the conveyor and help reduce stress on the driveline.

<u>Spreader with No Center Cover</u>: The Stoltzfus Litter Spreaders (SLS 8016, SLS 8020) are not intended to spread lime and are not supplied with a center cover.

A CAUTION: MAKE SURE THAT THE HOPPER IS DRY BEFORE LOADING WITH FERTILIZER

A CAUTION: DO NOT LEAVE THE SPREADER LOADED FOR EXTENDED PERIODS DURING FREEZING TEMPERATURES AS A FROZEN LOAD COULD RESULT IN SEVERE EQUIPMENT DAMAGE

SECTION V

OPERATING YOUR SPREADER

Use the rate chart provided with your spreader to determine the required combination of gear range setting, ground speed, and gate height to achieve the desired application rate.

<u>WLS Series: All PTO Spreaders (PTO Powered Conveyor and Spinners)</u>: Body chain and spinners start when the PTO is turned on. Drive at a constant ground speed to achieve a consistent application rate.

<u>Redhawk/CU Series:</u> Ground Drive Spreaders with Hydraulic Spinners): Body chain starts when the press wheel is brought into contact with the moving ground wheels. Start the spinners before the conveyor starts. Spreader will compensate for changes in ground speed to maintain a consistent application rate.

<u>BMS/SLS Series:</u> <u>PTO Conveyor, Hydraulic Spinners</u>: Body chain starts when PTO is turned on. Start the spinners before the conveyor starts. Drive at a constant ground speed to achieve a consistent application rate.

<u>Spreaders equipped with PTO Hydraulic Option:</u> Body chain starts when PTO is started and conveyor chain switch is turned on (dump valve is closed to tank). Spinners start when PTO is started.

<u>Spreaders equipped with VRT Option:</u> See third party controller manual.

Shear Hub Instructions (for Spreaders with PTO Conveyors):

Spreaders equipped with PTO driven conveyors are equipped with a shear hub to help protect the PTO driveline and conveyor.

A DANGER: AT NO TIME SHOULD INSTALLATION BE DONE WITH ANYONE ON THE TRACTOR. SHUT THE TRACTOR OFF, REMOVE THE KEY AND DISCONNECT THE DRIVE LINE BEFORE DOING ANY SERVICE ON THIS MACHINE. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

The conveyor is driven by two 3/8" grade 2 bolts. If the bolts shear, replace them with the same length 3/8" grade 2 bolts. DO NOT AUTOMATICALLY JUMP UP TO A HIGHER GRADE BOLT.



Recommended Procedure to Follow if the Bolts Shear:

Check for conveyor obstructions at the gate, in the hopper (if possible) and all along the return track. Check for bent or damaged conveyor slats that may be catching. Open the gate all the way to reduce stress on the driveline. Install new 3/8" grade 2 bolts and attempt to unload the hopper while checking for obstructions.

Once hopper is unloaded and any obstructions have been cleared, make sure the conveyor runs smoothly. Determine if center cover should be installed (see Loading Your Spreader section of manual). Reload spreader and attempt to spread normally. If bolts shear again without hopper or conveyor obstructions, you may install new 3/8" grade 5 bolts. As the shear bolt grade is increased the protection on the machine is going to decrease, and the potential for equipment damage is greater. If grade 5 bolts are shearing without hopper obstructions, it may be necessary to reduce the amount of material being loaded into the hopper. Do not install grade 8 bolts, as that will eliminate the protection provided by the shear hub.

Press Wheel Instructions (for Spreaders with Ground Drive Conveyors):

Ground drive spreaders are equipped with a press wheel to drive the conveyor. The press wheel is operated by a tractor cylinder circuit, and can be lowered or raised to start or stop spreading. Extend the press wheel cylinder fully to ensure contact with both ground wheels during operation.



Depending on the difficulty of the material being spread, it may be necessary to keep a slight downward pressure on the press wheel. Generally this will be required to break free a packed load of lime. Once the conveyor is moving the pressure on the press wheel can be reduced and the press wheel remote should be moved to the float position.

The press wheel operates best with 8 psi air pressure.

Never back up the spreader with the press wheel engaged.

SECTION VI

CALIBRATING YOUR SPREADER

Calibration consists of two steps:

- 1. Proper spread pattern of material across the field, and
- 2. Applying the correct amount of material to the field.

Spread Pattern Testing Overview:

- 1. Inspect and repair machine
- 2. Lay out test pans
- 3. Pull spreader across test pans
- 4. Collect material from pans
- 5. Examine spread pattern
- 6. Make any necessary adjustments
- 7. Repeat steps 3 6, if necessary.

<u>Step 1 – Inspect and Repair Machine:</u>

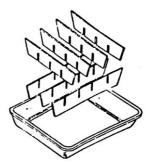
WARNING: CONTACT WITH SPINNERS AND OTHER MOVING PARTS IS VERY DANGEROUS. GREAT CAUTION MUST BE USED WHEN WORKING AROUND THE SPREADER. ALL GUARDS MUST REMAIN IN PLACE. DO NOT ADJUST WHILE MACHINERY IS MOVING, WEAR EYE PROTECTION, AND AVOID DISCHARGE FROM SPINNERS. DO NOT RIDE ON MOVING SPREADER.

- Inspect and repair/replace any component that is damaged or not working properly.
- Clean the rear end, spinners and blades.
 - Determine the density (pounds per cubic foot) of material as accurately as possible.
 - To determine density (pounds per cubic foot), weigh 5 gallons of material and multiply by 1.50. Remember not to include the weight of the container.
- Fill the hopper with enough material to cover the rear gate.

<u>Step 2 – Lay out Test Pans</u>:

In the field, lay out 11 pans in a level row. One pan should be on the center line to be driven and five should be on each side, ten feet apart. This will catch material up to 50 feet on each side of the spreader when you drive over the center pan.

We recommend using the spread pattern test kit described below.



Contents of Spread Pattern Test Kit (Part # 29754)							
Qty.	Description	Qty.	Description				
11	Plastic Pans	1	Funnel				
33	Long Divider	1	Test Kit Instructions				
44	Short Divider	100	Data Sheets				
1	Tube Rack Assy.	9	Flags				
1	Tool Box						

Do not test if wind velocity is over 5 mph. If a wind exists, try to spread directly with or into the wind.

Before starting across the pans, drive about 500 feet to settle the material onto the chain and against the gate.

Step 3 – Pull Spreader Across Test Pans:

- Open the gate according to the application rate chart on the spreader. You should calibrate your spreader at the same rate you will actually be applying to the field.
- Starting about 100 feet from the pans, start the conveyor and spinners and begin spreading.
- Spread across the pans and continue for another 100 feet.

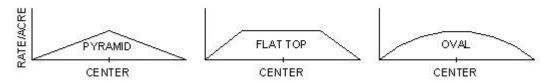
<u>Step 4 – Collect Material from Pans:</u>

- The contents of the test pans must now be emptied into a set of test tubes, or equal size containers. One pan per container.
- The spread pattern test kits contain 11 test tubes with a rack for standing the tubes and measuring the volume in each.

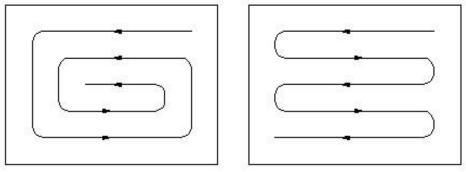
<u>Step 5 – Examine Spread Pattern:</u>

- Line the test tubes up in the same order as the pans.
- The level of the material in the tubes gives you a clear picture of the spread pattern on the ground.
- You will find it very helpful to graph the results. The spread pattern test kits include graph paper for this purpose.

Acceptable spread patterns are shown below:



The recommended driving method is shown below:

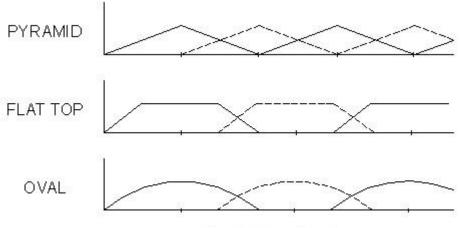


Perimeter Method

Switch Back Method

It is recommended that the perimeter driving method be used whenever possible, as this method compensates for non-symmetrical patterns by blending the right side of the pattern with the left side of the adjacent pattern and vice versa. However, when the only practical driving method is the switch back method, the driver should be aware that non-symmetrical patterns are amplified by blending right side on right and left side on left.

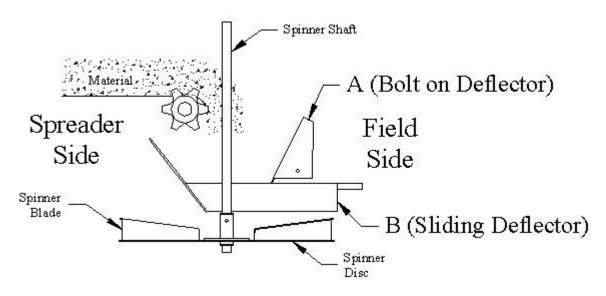
The ideal spread pattern overlap is shown below:



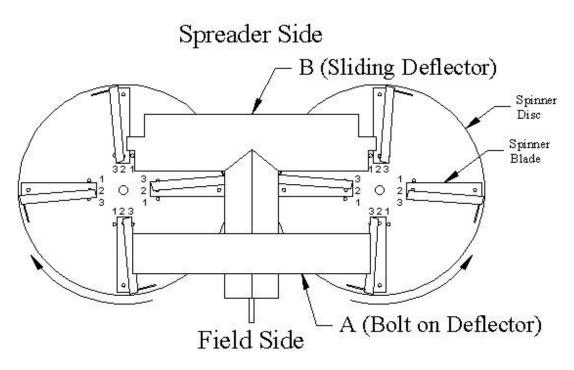
Ideal Pattern Overlap

<u>Step 6 – Make any Necessary Adjustments:</u>

As the material falls out of the hopper onto the spinners, the deflectors (especially B), should guide the material so the center of the flow hits the spinner disc beside (or slightly in front of) the spinner shaft. This is an important adjustment to make when switching between high rates of lime and low rates of fertilizer.

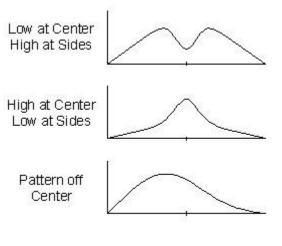


CAUTION: SPREADER MUST BE SPREAD PATTERN TESTED PRIOR TO PUTTING INTO USE EACH SEASON. DUE TO MATERIAL VARIATIONS, SPREAD PATTERN TESTING IS RECOMMENDED WHENEVER MATERIALS OR SPREAD RATES ARE CHANGED. STOLTZ MFG., LLC CANNOT BE LIABLE FOR CROP LOSS DUE TO AN IMPROPERLY ADJUSTED SPREADER. The basic adjustments for changing your spread pattern are shown in the drawings below. Sliding deflector B is the primary means of adjustment. If that does not prove adequate, the spinner blades can also be pivoted to make the final adjustments to the pattern.



To reduce the side and increase the center of the spread pattern, push adjustable deflector B towards the spreader. To increase the side and decrease the center of the spread pattern, pull adjustable deflector B towards the field side.

Unacceptable spread patterns, along with corrective actions, are shown below:



Corrective Guidelines:

- 1. Move both deflectors A and B forward
- 2. Increase spinner RPM

1. Move deflector B backward (field side)

2. Decrease spinner RPM

1. Check center divider. Straighten or center if required

2. Spinner blade settings should be identical on each spinner

3. Check all parts for condition and correct adjustment

If adjusting the deflector does not solve the problem, the spinner blades can be moved to correct the spread pattern (note: only adjust 1 blade at a time on each spinner disc):

- Blades moved to hole #1 will produce a higher-center pattern
- Hole #2 is the standard setting
- Blades moved to hole #3 will produce a higher-side pattern

SECTION VII

APPLICATION RATE CALCULATIONS

Note: For best results, use a lower speed body chain drive and a greater gate opening to reduce the resistance on the body chain and reduce stress on the gate.

Density Calculation:

Weigh one gallon of the material (remember to subtract the weight of the container). Multiply that weight by 7.5 to get the density in pounds per cubic foot.

Alternatively, weigh a 5 gallon bucket of the material (remember to subtract the weight of the container). Multiply that weight by 1.5 to get the density in pounds per cubic foot.

If the density (pounds per cubic foot) of your material is different from those on the chart, adjust the rates on the chart as follows:

Fertilizer	Add or subtract to the 65 lb numbers
80 lb/cu. ft.	Add 23%
75 lb/cu. ft.	Add 15%
70 lb/cu. ft.	Add 8%
65 lb/cu. ft.	Use the numbers on the chart
60 lb/cu. ft.	Subtract 8%
55 lb/cu. ft.	Subtract 15%
50 lb/cu. ft.	Subtract 23%

Lime	Add or subtract to the 100 lb numbers
110 lb/cu. ft.	Add 10%
100 lb/cu. ft.	Use the numbers on the chart
90 lb/cu. ft.	Subtract 10%

The rates on the chart are calculated based on a 40 foot driving interval. If your material will not spreader 40 feet, your rate per acre will increase as follows:

Driving on 35 ft intervals increases the chart rates by 12.5% Driving on 30 ft intervals increases the chart rates by 25% Driving on 25 ft intervals increases the chart rates by 37.5%

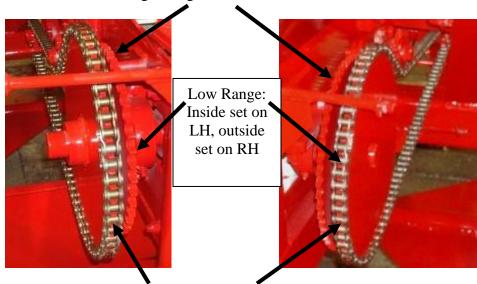
Redhawk (CU) Rate Chart:

Use the following chart for initial spreader settings:

Material:	LIN	1E (95 lb/c	u.ft.)	FERTILI	ZER (65	lb/cu.ft.)	COMF	POST (50 lb	/cu.ft.)
Range: Gate (in) 10	Low <u>Ib/ac</u> 4,200	High <u>Ib/ac</u> 7,000	Low/ Low <u>Ib/ac</u> 1,750	Low <u>Ib/ac</u> 2,880	High <u>Ib/ac</u> 4,800	Low/ Low <u>Ib/ac</u> 1,200	Low <u>Ib/ac</u> 2,200	High <u>Ib/ac</u> 3,680	Low Low Ib/ac 920
9	3,760	6,280	1,570	2,590	4,320	1,080	1,990	3,320	830
8 7	3,360 2,920	5,600 4,880	1,400 1,220	2,300 2,010	3,840 3,360	960 840	1,750 1,530	2,920 2,560	730 640
6	2,520	4,200	1,050	1,720	2,880	720	1,320	2,200	550
6 5 4	2,080 1,680	3,480 2,800	870 700	1,440 1,150	2,400 1,920	600 480	1,100 860	1,840 1,440	460 360
3	1,240	2,080	520	860	1,440	360	640	1,080	270
3 2 1	840 400	1,400 680	350 170	570 280	960 480	240 120	430 210	720 360	180 90
			Speed <u>Range</u> High Low Low/Low	# 60 chain <u>Left Side</u> inside pair inside pair outside pair	e.	# 50 chain <u>Right Side</u> inside pair outside pair outside pair			

Changing Gear Ranges:

Gear ranges are selected by moving the roller chains between the different sets of sprockets*:



High Range: Inside set on both sides

Low/Low Range: Outside set on both sides

* Note that on older units and units equipped with PTO spinners you may need to remove roller chain links on the right side of the unit when changing ranges.

	Variable Density Rate Chart (lbs/acre) Stoltzfus Redhawk Spreaders Gearing: High Range								24 Inch Chain 18 Inch Press Wheel Diameter 40 ft Spread Width										
		Mater 20	ial Dei 25	nsity (ll 30	b/cu. ft 35	t) 40	45	50	55	60	65	70	75	80	85	90	95	100	105
																		-	
	9	1,387	1,733	2,080	2,426	2,773	3,120	3,466		4,160	4,506	4,853	5,200	5,546	5,893	6,240	6,586	6,933	7,279
•	8	/	1,541	1,849	1	2,465	2,773		3,389	3,697	4,006	4,314	4,622	4,930	5,238		5,854	/	6,471
Gate Height (in)	7	1	1	1,618	1,887	2,157	2,426			3,235	1	3,775	1		4,583	4,853		1	5,662
ght	6	924		1,387	1,618	1,849	2,080		2,542	2,773	3,004			3,697	3,929	4,160	4,391	4,622	4,853
Iei	5	770	963	1,155	1,348	1,541		1,926		2,311	2,504		2,889	3,081	3,274	3,466	3,659		4,044
le I	4	616	770	924	1,078	1,232	1,387	1,541	1,695	1,849	2,003	2,157	2,311	2,465		2,773	2,927	3,081	3,235
Gat	3	462	578	693	809	924	-			1,387	1,502	1,618		1,849	1,964		2,195		2,426
•	2	308	385	462	539	616	693	770	847	924	1,001	1,078	1,155	1,232	1,310	1,387	1,464	1,541	1,618
	1	154	193	231	270	308	347	385	424	462	501	539	578	616	655	693	732	770	809
	9[Gearin 832		w Rang 1,248	-	1,664	1,872	2,080	2,288	2,496	2,704	2,912	3,120	3 379	3,536	3,744	3,952	4,160	4,368
	8	739	924	1,248	1,430	1,004		1.849	2,288	2,490		2,912	2,773	2.958	3.143	· ·	3,513		3,882
	7	647	809	971	1,132	1,479	,	1,618	/	1,941	2,403		2,773		,	2,912	3,074	· ·	3,397
Gate Height (in)	6	555	693	832	971	1,109	1,430	1	1,779	1,664	2,103	2,203		2,388	2,750	2,912	1	1 A A A A A A A A A A A A A A A A A A A	2,912
igh	5	462	578	693	809	924		1,155		1,387	1,502		1,733		1,964	2,490			2,912
He	1	370	462	555	647	739	832	924	1,271	1,109	1,302	1,018	1,733	1,479	1,571	1,664		· ·	1,941
ate		277	347	416	485	555	624	693	763	832	901	971	1,040	1,109	1,371	1,004	1,730	1,849	1,941
Ü	$\frac{3}{2}$	185	231	277	324	333 370	416	462	508	555	601	647	693	739	786	832	878	924	971
	1	92	116	139	162	185	208	231	254	277	300	324	347	370	393	416	439	462	485
	Gearing: Low Low Range																		
	9	347	433	520	607	693	780	867	953	1,040		1,213		1,387			1,647		1,820
	8	308	385	462	539	616 520	693	770	847	924	1,001	1,078	1,155	1,232	1,310	1,387	1,464		1,618
Gate Height (in)	1	270	337	404	472	539	607 520	674	741	809	876	944	1,011	1,078	1,146	-	1,281	-	1,415
lgh	2	231	289	347	404	462	520	578	636	693	751	809	867	924	982		1,098		1,213
Hei	2	193	241	289	337	385	433	481	530	578	626 501	674 520	722	770	818	867	915	963	1,011
te	4	154	193	231	270	308	347	385	424	462	501	539	578	616	655	693	732	770	809
Ga	3	116	144	173	202	231	260	289	318	347	376	404	433	462	491	520	549	578	607
	2	77	96	116	135	154	173	193	212	231	250	270	289	308	327	347	366	385	404
	1	39	48	58	67	77	87	96	106	116	125	135	144	154	164	173	183	193	202
R	1 39 48 58 67 77 87 96 106 116 125 135 144 154 164 173 183 193 202 Rate chart is for initial settings only. Actual results will vary with material and should be double checked in the field.																		

SECTION VIII

LUBRICATION AND MAINTENANCE

<u>Grease Zerks</u>: One or two shots with a hand-held grease gun is sufficient to lubricate and to keep dust and moisture out of the bearings. DO NOT OVER LUBRICATE! This may force out bearing seals allowing dust and moisture to enter and thus cause excessive wear.

<u>Telescoping Chain Tighteners & Drag Chain Slack:</u> Use telescoping tighteners to adjust drag chain slack. Measure the distance from the front idler shaft to the point where the drag chain first lifts off the return track. A distance of 18 inches should be maintained between these two points. Adjust the chain accordingly to obtain the right measurement. Be sure both sides are adjusted equally. If chain tighteners are near the point of maximum adjustment, retract the tighteners all the way. Remove as many links as necessary and readjust chain. <u>Note:</u> <u>Remove links in pairs only.</u> Retighten to proper adjustment.

<u>Check Wheel Bearings</u>: Thoroughly clean all the parts in solvent and check for rough bearings or cracked spindles. Clean and inspect the brake drums, linings and mechanisms (when applicable). Repack bearings by squeezing grease between the rollers. Do not over-tighten spindle nut when reassembling (Note: Do NOT remove wheel hubs with wheels and tires attached).

<u>Driveline Gearbox (if equipped)</u>: The driveline gearbox is fill-for-life and does not need oil changes. The gearbox is filled with a polyalkaline glycol (PAG) synthetic oil such as Mobil Glygoyle 460. Please note that PAG oils are NOT COMPATIBLE with any other types of oil, and oils must not be mixed. If changing a unit to another type of oil, the unit must be thoroughly flushed out with the new oil.

<u>Spinner Gearboxes (if equipped)</u>: An initial oil change should be made after the first 50 hours of operation. Subsequent oil changes should be made at 2000 hour intervals or annually, whichever comes first.

<u>Spinner Shafts:</u> Check chain coupler set screws for tightness. Check bearing locking collars for tightness.

<u>Suspension</u>: Give the zerks on the walking beam suspension one or two shots of grease daily with a hand-held grease gun. Grease the spring bolts on spring suspensions

<u>Drawbar</u>: Regularly inspect the drawbar for wear and damage. If wear exceeds 1/8" (0.125"), replace the drawbar. Inspect the mounting fasteners and ensure they are properly tightened.

END OF SEASON STORAGE

Following a few simple guidelines for end of season storage will help prolong the life of your spreader:

- 1. Clean all material out of the hopper.
- 2. Sand and paint all bare spots.
- 3. Perform maintenance and lubrication.
- 4. Oil tank (if equipped) should be drained, flushed, and refilled annually or whenever oil shows any signs of breaking down. Discoloration of oil is one sign of breakdown. Oil is universal tractor fluid.
- 5. Change oil filters (if equipped).
- 6. Check all bearings. If shaft can be moved 1/32" in the bearing, replace the bearing. Make sure locking collars are tight.
- 7. Check sprockets. Steel sprockets that are worn to a sharp point should be replaced. Cast iron sprockets that show excessive wear should be replaced.
- 8. Check set screw tightness on spinner shaft chain coupler sprockets.
- 9. Store out of weather. Spreaders should be stored under a roof if possible.
- 10. If spreader is stored outside, lubrication recommendations should be performed once a month.

SECTION XIV

REPLACEMENT PARTS LISTS

When ordering parts, refer to the drawings that follow.

Using the item number on the drawings, look up the part number on the part number list for that drawing

Call your local Stoltzfus Dealer to order parts. If you purchased your spreader directly from the factory, call 610-350-4322 to order parts.

All parts will be shipped UPS unless they are too big, or you wish to make other arrangements.

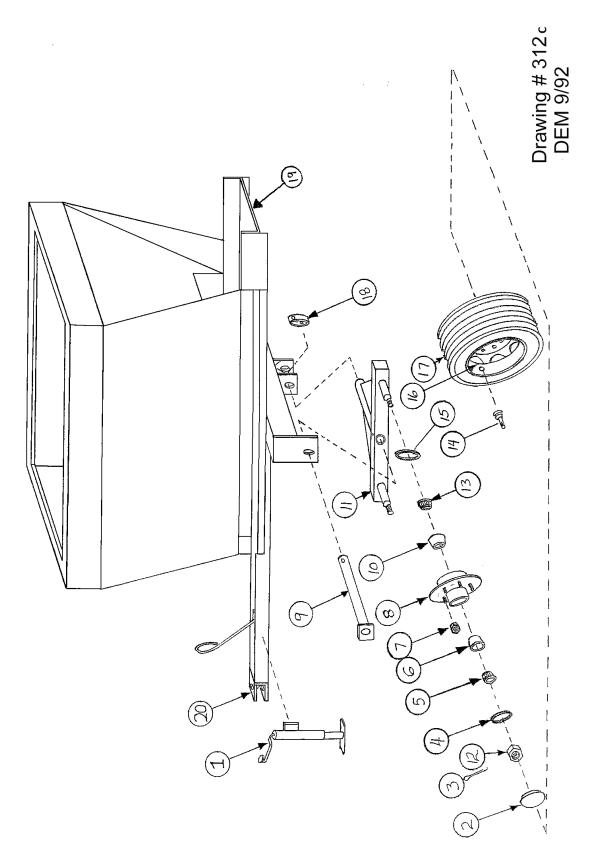
All prices are FOB Morgantown, PA. Freight charges will be extra.

All appropriate federal, state and local taxes will also be added.

Minimum parts order for shipping: \$ 10.00.

A 10 percent restocking charge will be added to all returned parts. No restock charge will be charged for exchanged parts.

Note: Some parts are labeled NAP - non-available part. This means that the part (such as nuts, bolts, cotter pins, etc) should be available locally.



5 TON WALKING BEAM UNDERCARRIAGE

	PART NUM	DESCIPTION
1	65272	Jack, 2000 lb
2	15491	Hub Cap: 5-ton
3	905936	Cotter Pin 1/8" x 1-1/2" lg.
4	10413	Flat Washer: 7/8 ID
5	15490	Bearing, Outer Cone
6	15493	Outer Cup (included in hub)
7	19125	Lug Nut
8	19122	Hub: Plain w/Cup, 5 Ton
	19123	Hub: Brake w/Cup, 5 Ton
	151420	Wheel Stud, 9/16-18 (not shown)
	15453	Brake Drum (not shown)
	15451	Brake Cluster, LH (not shown)
	15452	Brake Cluster, RH (not shown)
9	560010	Walking Beam Shaft Weldment
10	15494	Inner Cup (included in hub)
11	560016	Walking Beam Spindle Assembly
	15066	Spindle
12	11550	Nut: Castle 7/8" –14 UNF 2B
13	15488	Bearing, Inner Cone
14	NAP	Valve
15	15487	Grease Seal (5-ton hub)
16	0419660	Wheel: 15 x 10 for 11L & 13.5L
17	11Lx15	Tire Only, 11L
	9700	Tire & Wheel Assembly (16 & 17)
18	115	Collar (included w/560010)
19	65767	Flooring, 1/4" x 23-11/16" (if applicable, by the foot)
	9300	Flooring, 1/4" x 29-11/16" (if applicable, by the foot)
	9105	Flooring, 1/2" x 23-11/16" x 98-3/4" (if applicable)
20	64681	Clevis Assembly, CAT 3

Parts for Drwg #312c Rev 3/5/21 BJH

8 TON WALKING BEAM UNDERCARRIAGE

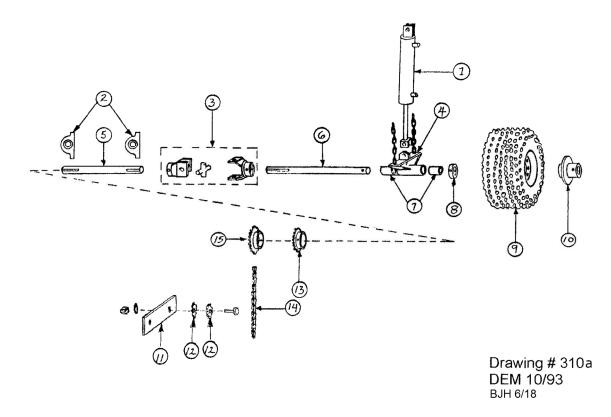
DRW	PART	DESCRIPTION
NUM	NUM	
1	65273	Jack Weldment
2	15438	Hub Cap
3	905936	Cotter Pin
4	10413	Flat Washer 7/8"
5	15436	Bearing, Outer Cone
6	15441	Outer Cup (included in hub)
7	15443	Lug nut
8	280671	Hub
	20867	Wheel Stud, 9/16"-18 (not shown)
	15429	Brake Drum, 13" (not shown)
	15427	Brake Cluster, LH (not shown)
	15428	Brake Cluster, RH (not shown)
9	WLSOP025	Walking Beam Shaft Weldment
10	15434	Inner Cup (included in hub)
11	WLSOP016	Walking Beam Spindle Assembly
	65475	Spindle (bolt-in)
	280986P	Spindle (weld-in)
12	11550	Castle Nut
13	15442	Bearing, Inner Cone
14	NAP	Valve
15	15433	Grease Seal
16	1077210	Wheel
17	19LX16.1	Tire 10 PLY
	9400	19L x 16.1 Tire & Wheel Assembly
18	421	Set Collar
	260	H H Bolt 3/8" x 3-1/2"
	136	Hex Nut 3/8" – 16
	461	Lock Washer, 3/8"
19	65767	Flooring, 1/4" x 23-11/16" (if applicable, by the foot)
	9300	Flooring, 1/4" x 29-11/16" (if applicable, by the foot)
	9110	Flooring, 1/2" x 23-11/16" x 122-3/4" (if applicable)
20	64681	Clevis Assembly, CAT 3

Parts for Drwg #312c Rev 3/5/21 BJH

15 TON WALKING BEAM UNDERCARRIAGE

	PART NUM	DESCRIPTION
1	64276	Jack, 12,000#
2	152016	Hub Cap
2	P943303	Bolts for Hub Cap
	3905945	Cotter Pin
4	P301856	Flat Washer
5	P752387	Bearing, Outer Cone
6	N/A	Outer Cup (included in hub)
7	P201636	Lug nut
8	L8013008	Hub
	65740	Brake Drum (not shown)
	65739L	Brake Cluster, LH (not shown)
	65739R	Brake Cluster, RH (not shown)
9	WLSOP025	Walking Beam Shaft Weldment
10	N/A	Inner Cup (included in hub)
11	WLSOP063	Walking Beam Spindle Assembly
	Q1008SP	Spindle (bolt-in)
12	P251720	Castle Nut
13	P752388	Bearing, Inner Cone
14	NAP	Valve
15	P602260	Grease Seal
16	161W18C20	Wheel
17	9098	Tire 14 PLY
	9650A	21.5 x 16.1 Tire & Wheel Assembly
18	421	Set Collar
	260	H H Bolt 3/8" x 3-1/2"
	136	Hex Nut, 3/8" – 16
	461	Lock Washer, 3/8"
19	65767	Flooring, 1/4" x 23-11/16" (if applicable, by the foot)
• •	9300	Flooring, 1/4" x 29-11/16" (if applicable, by the foot)
20	64834	Perfect Hitch Assy (Pintle Eye), CAT 4

Parts for Drwg #312c Rev 3/5/21 BJH



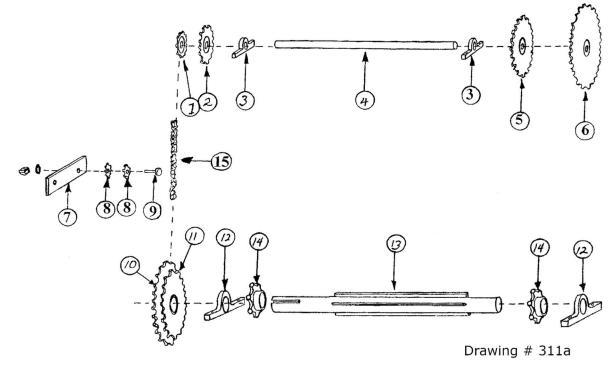
DRW PART DESCRIPTION

NUM NUM

1	064201 1504NW	Hydraulic Cylinder, 2" x 4" (used after early 2005) Hydraulic Cylinder, 1-1/2" x 4" (used before early 2005)
	064184	Hydraulic Cylinder, 2" x 2" (specialty units only)
	064183	Hydraulic Cylinder, 2" x 6" (specialty units only)
	1506NW	Hydraulic Cylinder, 1-1/2" x 6" (specialty units only, before early 2005)
2	152	Bearing: 1-3/16" Pillow Block
3	2201	Yoke Assembly
4	560083	Bearing Mount Tube Weldment (70" or greater wheel track)
	AG4566	Bearing Mount Tube Weldment (less than 70" wheel track)
	66718	Press Wheel Safety Chain (17 links, standard wheel tracks)
	355	Chain, ¼", bulk (by the foot, specialty wheel tracks)
5	560064	Shaft: 1-3/16" x 34"
6	562604	Shaft: 1-3/16" x 19-3/4" (70-1/2 WT) CU40/50
	AG2486	Shaft: 1-3/16"x16-1/2" (64" WT) CU50F, CU50 Narrow
	562601	Shaft: 1-3/16" x 23-1/4" (78 WT) CU80
	AG2494	Shaft: 1-3/16" x 21-1/2" (72 WT) CU80 Narrow
	AG3597	Shaft: 1-3/16" x 24-1/2" (80 WT) CU100
		Call for units with custom wheel tracks
7	SS384820	Bronze Bushing

8	371	Set Collar: 1-3/16"
9	064177	Tire & Wheel Assembly, 18" (used since mid 2005)
	9025	Tire & Wheel Assembly, 16" (used before mid 2005)
	9027	Wheel
	9028	Inner tube
	9029	Tire
10	064191	Press Wheel Hub Weldment (for 18" tire, used since mid 2005)
	560084	Press Wheel Hub Weldment (for 16" tire, used before mid 2005)
11	64712	Double #50 Tightener Assembly
12	333	Sprocket, Idler: 5/8" Bore, #50
13	50B181X188	Sprocket w/ Hub: 1-3/16" Bore (after July 2010)
	50B151X188	Sprocket w/ Hub: 1-3/16" Bore (before July 2010)
14	5084RC	#50 Roller Chain, CU40/50F (after June 2017)
	5056RC	#50 Roller Chain, CU50 (after June 2017)
	5086RC	#50 Roller Chain, CU80 (after June 2017)
	5092RC	#50 Roller Chain, CU100 (June 2017 to August 2021)
	5094RC	#50 Roller Chain, CU100 (after August 2021)
	320	#50 Roller Chain, bulk, by the foot
	476	Connector Link
	477	Offset Link
15	50B121X188	Sprocket w/Hub: 1-3/16" Bore

PRESS WHEEL DRIVE PARTS



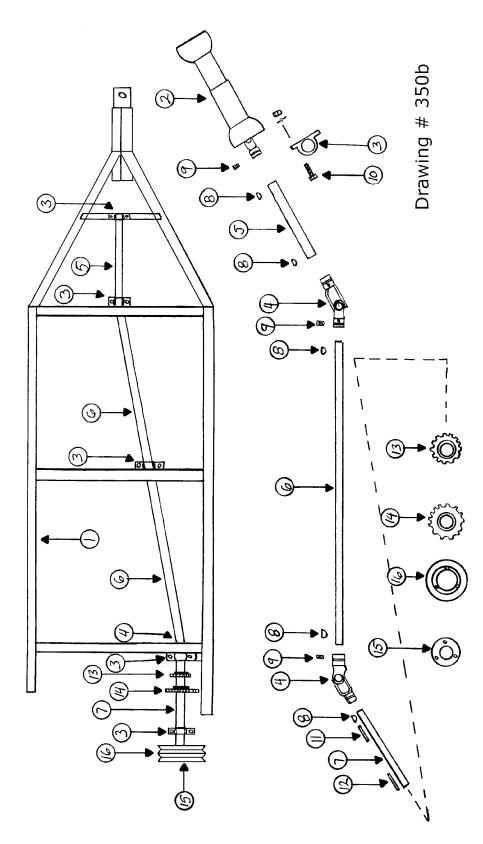
DRW	PART	DESCRIPTION
NUM	NUM	

- 1 60B121X188 Sprocket w/Hub: 1-3/16" Bore
- 2 60B241X188 Sprocket w/Hub: 1-3/16" Bore
- 3 152 Bearing: 1-3/16" Pillow Block
- 4 V325 Shaft: Rear Driveline 1-3/16" x 35"
- 5 50B541X188 Sprocket w/ Hub: 1-3/16" Bore (after July 2010)
 - 50B451X188 Sprocket w/ Hub: 1-3/16" Bore (before July 2010 and on units with PTO spinners until June 2017)
- 6 50B601X188 Sprocket w/Hub: 1-3/16" Bore
- 7 339A Idler Arm
- 8 334 Sprocket, Idler: 5/8" Bore, #60
- 9 NAP Bolt: 5/8" x 4" w/ Lock Washer & Nut

AG1675 LH Double Tightener Assembly (Items 7, 8, & 9)

- 10 60541X500 Sprocket w/Hub: 1-1/2" Bore
- 11 60B451X500 Sprocket w/Hub: 1-1/2" Bore
- 12 See WLS/CU (24" Conveyor) Spreader Chain Drive Drawing
- 13 See WLS/CU (24" Conveyor) Spreader Chain Drive Drawing
- 14 See WLS/CU (24" Conveyor) Spreader Chain Drive Drawing
- 15 6087RC #60 Roller Chain, CU40 to 80 (June 2017 to January 2021)
 - 6089RC #60 Roller Chain, CU100 (after June 2017), CU40 to 80 (after Jan 2021)
 - 321 #60 Roller Chain, bulk, by the foot
 - 478 Connector Link
 - 479 Offset Link

Parts for Drwg #311b Rev 5/17/22 NAM



DRW PART DESCRIPTION

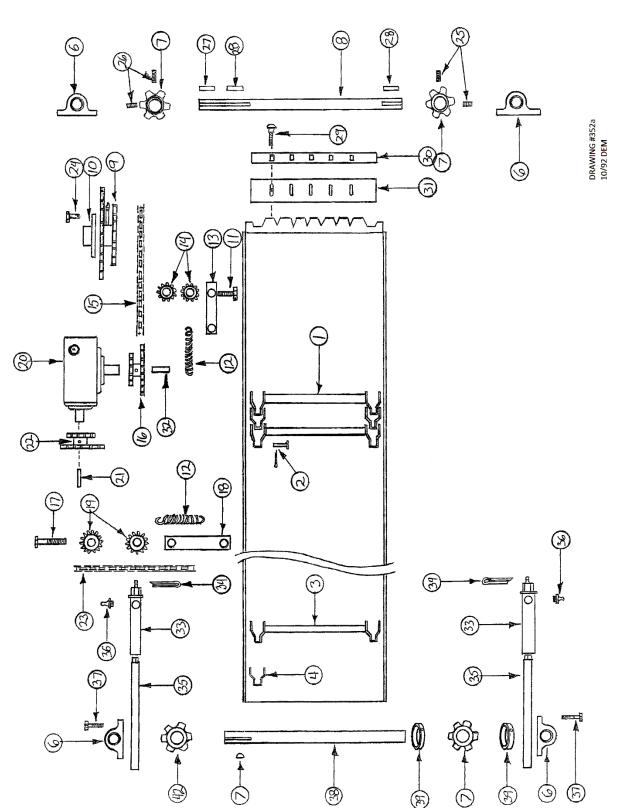
NUM NUM

1 N/A Frame PTO Complete, 540 RPM 2 2200 Cross & Bearing Kit (2200 PTO) 044439 391002 Spreader End Yoke (2200 PTO) 391003A **Outer Shield Assy** 385454A Inner Shield Assy PTO Complete, 1000 RPM 65574 66576 Cross & Bearing Kit (2200 PTO) Spreader End Yoke (2200 PTO) 66575 PTO Complete, 540 RPM (used prior to Jan 1997) 166 Bearing: 1-3/16" Pillow Block (used prior to Oct 2010) 3 152 Bearing: 1-3/16" Flange (used after Oct 2010) 155 PTO Tower Assy (used after Oct 2010) AG1290 2201 Yoke Assembly: 1-3/16" 4 5 Shaft: Front Driveline (confirm length when ordering – custom units could vary): Shaft: Front Driveline: 1-3/16" x 43-3/4" (WLS & BMS after 8/13) AG2101 22015 Shaft: Front Driveline: 1-3/16" x 44-1/2" (BMS units 1/97 to 8/13) 22016 Shaft: Front Driveline: 1-3/16" x 46-1/2" (WLS units 1/97 to 8/13) Shaft: Front Driveline: 1-3/16" x 20" (prior to Jan 1997 with pn 166 PTO) V213 Shaft: Middle Driveline (confirm length when ordering – custom units could vary): 6 1-3/16 x 60" (6.5' Hopper) V2122 1-3/16 x 77-1/2" (8' Hopper) V212 WLSOM015 1-3/16 x 101" (10' Hopper) 1-3/16 x 93-1/4" (CU 100) AG3588 1-3/16 x 172" (16' Hopper) V323A 1-3/16 x 219" (20' Hopper) AG1941 Shaft: Rear Driveline (confirm length when ordering – custom units could vary): 7 V219 Shaft: Rear Driveline: 1-3/16" x 34" (540 RPM mech. spinners, WLS) V219M Shaft: Rear Driveline: 1-3/16" x 35" (1000 RPM mech. spinners, WLS) AG1876 Shaft: Rear Driveline: 1-3/16" x 35" (mech. spinners, BMS) Shaft: Rear Driveline: 1-3/16" x 37" (mech. spinners, WLS80 before 1/18) V220A Shaft: Rear Driveline: 1-3/16" x 14" (hyd. spinners) V218 AG3587 Shaft: Rear Driveline: 1-3/16" x 65-1/4" (CU 100) Woodruff Key: 5/16 x 1-1/8" 8 127 9 Allen Screw: 3/8" x 3/8" 107 10 111 Bolt: 1/2" x 1-3/4" 390 Lock Washer, 1/2" Hex Nut, 1/2" 113 11 106 Key: 1/4" x 3" Key: 1/4" x 1-3/4" 12 259 13 50B131X188 Sprocket w/Hub: 1-3/16" Bore (540/1000 RPM WLS/CU) 50B131X188 Sprocket w/Hub: 1-3/16" Bore (1000 RPM BMS) 50B161X188 Sprocket w/Hub: 1-3/16" Bore (540 RPM BMS)

14	50B181X188	Sprocket w/ Hub: 1-3/16" Bore (540/1000 RPM WLS/CU)
	50B181X188	Sprocket w/Hub: 1-3/16" Bore (1000 RPM BMS)
	50B221X188	Sprocket w/Hub: 1-3/16" Bore (540 RPM BMS)

- Bushing: P1 1-3/16" 15 P11.188
- 16 2TB56
- Sheave (540 rpm) Sheave (1000 rpm) 2TB42

Parts for Drwg #350b Rev 4/19/23 BJH



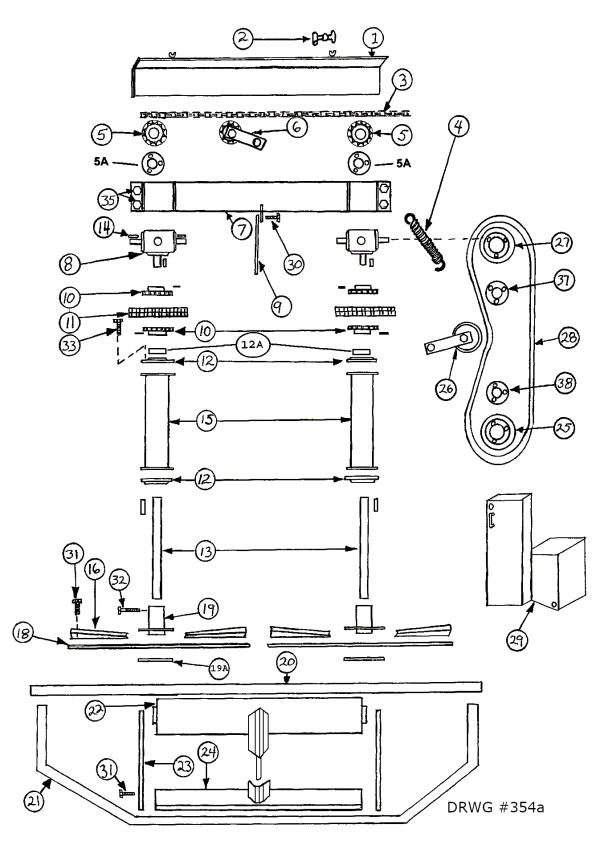
WLS/CU (24" CONVEYOR) SPREADER CHAIN DRIVE

	PART NUM	DESCRIPTION	
1	V207A	Drag Chain w/Slat Every 2 nd Link (by the foot)	
-	V207B	Drag Chain w/Slat Every Link (by the foot)	
		Chain length is 2 x hopper length $+ 2-1/2$ feet	
		WLS 20: 15-1/2 ft	
		WLS/CU 50: 18-1/2 ft	
		WLS/CU 40, 50F, 80: 22-1/2 ft	
		WLS/CU 100: 26-1/2 ft	
2	D667XP	Pin Only for D667X	
	D667XKEYS	Cotter Key Only for D667X	
3	V208	D667X Repair Link w/ Paddle	
4	D667XLO	D667X Link only	
6	151	Bearing: 1 ¹ / ₂ " Pillow Block	
7	V022	Sprocket: Bored w/Keyway & Set Screw	
8	V204	Rear Drive Shaft: 1-1/2" x 35"	
	V203	Rear Drive Shaft: 1-1/2" x 37-1/2" (certain units before 1992)	
	WLS58037	Shaft Weldment: 1-1/2" x 35" (includes 7, 28, and fins)	
Note:	Items 9 to 24 no	ot used on ground drive spreaders	
9	V013D	Double Shear Sprocket: 6035 & 6040 (540 rpm)	
	V013E	Double Shear Sprocket: 6045 & 6060 (1000 rpm)	
10	V015	Shear Hub: 1.5"	
11	NAP	Bolt: 5/8" x 4" w/ Lock washer & Nut	
12	338	Tension Spring	
13	339A	Idler Arm	
14	334	Sprocket, Idler: 5/8" Bore, #60 (single)	
	V034A	Double Idler Assembly, Low Rate (Includes 11, 13, & 14)	
15	6045RC	Roller Chain: #60 44-1/4" lg. (540 rpm)	
	478	Roller Chain: #60 Connecting Link	
	479	Roller Chain: #60 Offset Link	
16	V012	Double Sprocket: 6018 – 6012 (540rpm)	
	V014	Double Sprocket: 6014 – 6012 (1000 rpm)	
17	NAP	Bolt: 5/8" x 4"	
18	AG1107L	Idler Arm	
19	330	Idler Sprocket 5/8" Bore, #50	
	V033	Double 50 Tightener Assembly: Includes #17 – 19	
20	120	Gear Box: 15:1	
	AG1103	Conversion Shim (Req for units built before mid 2014)	
21	122	Key: 3/16" x 2"	
22	V018	Sprocket Double: 5026-5022	
23	5036RC	Roller Chain: #50 35-9/16"	
	476	Roller Chain: #50 Connecting Link	
24	477	Roller Chain: #50 Offset Link	
24	NAP	Bolt: $3/8$ " x 1-1/2" (grade 2) w/ Lock washer & Nut	
25	NAP	Allen Screw: 1/2" x 3/8"	

26	NAP	Allen Screw: 1/2" x 1/2"
27	267	Key: 3/8" x 1 1/2"
28	104A	Key: 3/8" x 2 5/16"
29	NAP	Carriage Bolt: 7/16" x 1-1/2" w/Lock washer & Nut
30	WLS58012	Return Wiper Clamp
31	WLS58009	Return Wiper Rubber Flaps: 3" x 19-1/8"
32	373	Key: 5/16" x 2"
33	V011	Drag Chain Tightener: Outer
34	NAP	Cotter pin
35	V010	Drag Chain Tightener: Inner
	V011A	Tightener Assembly (includes 33 & 35)
36	351	Grease Zerk: 1/8" Straight
37	NAP	Bolt: 1/2" x 3" w/ Lock, Flat washer & Nut
38	V206	Idler Shaft: 1-1/2" x 33
	V023B	Front Shaft Assy (includes 7, 38, 39)
39	115	Set Collar: 1-1/2"
41	130	Woodruff Key: 3/8" x 1-1/2"

Parts for Drwg #352a Rev 3/5/21 BJH

MECHANICAL 24" SPINNER DRIVE (IF EQUIPPED)

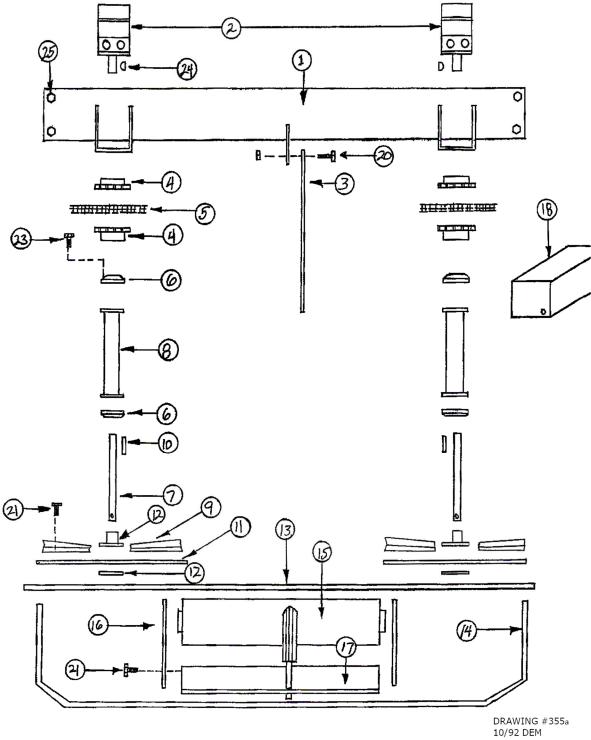


DRW PART DESCRIPTION NUM NUM

1	WLS58508	Spinner Chain Shield Weldment, 31" long	
	AG6855	Spinner Chain Shield Weldment, 33" lg, straight spinners after Mar 2021	
	AG1738	Spinner Chain Shield Weldment, 37" lg, BMS	
2	WJ202	Mini Rubber Hood Latch	
3	6063RC	#60 Roller Chain, WLS Spreaders (straight spinners)	
	6059RC	#60 Roller Chain, CU Spreaders (tilted spinners)	
	6068RC	#60 Roller Chain, BMS Spreaders	
	478	Connector link, #60 RC	
4	338	Tension Spring	
5	64524	Sprocket, 18 Tooth	
5A	64525	Bushing, QD, 1" Bore	
6	V042	Tightener Assembly	
	339B	Idler Arm	
	331	Sprocket, Idler, 5/8" bore, #60	
	NAP	Bolt: 5/8" x 2-3/4" w/Flat, Lock Washers & Nut	
7	NAP	Head Frame Assembly	
	VR205B	Head Frame, 35-1/2" long, straight spinners pre March 2021	
	AG6852	Head Frame, 33" long, straight spinners after March 2021	
	AG2211	Head Frame, 35-1/2" long, tilted spinners	
	VR209	Gear Box Mounting Plate (4 req)	
	F102D	Divider Mount	
8	F100	Gear Box, 1:1 Ratio	
9	F102	Divider Plate	
10	50B161A	Sprocket: 1" bore	
11	50210RC	Roller Chain: 50-2	
	482	Connector link #50-2 RC	
12	158	Bearing 1" Flange	
13	F025	Spinner Shaft: 1" x 25-1/2" lg	
14	427	Key: 1/4" x 1-1/8"	
15	F101	Spinner Mount Weldment, Weld-on	
	F101A	Spinner Mount Assembly, Weld-on	
	AG2347L&R	Spinner Mount Weldment, WLS bolt-on, straight	
	AG2348L&R	Spinner Mount Assembly, WLS bolt-on, straight	
	AG1110L&R	Spinner Mount Weldment, Bolt-on, tilted	
	562401L&R	Spinner Mount Assembly, Bolt-on, tilted	
	AG4795L&R	Spinner Mount Weldment, BMS bolt-on, straight	
	AG5506L&R	Spinner Mount Assembly, BMS bolt-on, straight	
16	F007L	Spinner Blade: Left SS	
	F006R	Spinner Blade: Right SS	
	F007LM	Spinner Blade: Left Mild Steel	
	F006RM	Spinner Blade: Right Mild Steel	
	-	r Blade Kits	
	F007LRSS	Blade Kit: Left & Right (Stainless)	

	F007LR	Blade Kit: Left & Right (Mild)		
18	F008	Spinner Disc: 24" x 11 ga.		
19	F009	Spinner Hub Weldment		
	64695	Hub Washer, Sq Bottom		
20	F106	Splash Shield 10 x 60 (5-ton)		
	F109	Splash Shield 10 x 72 (8-ton)		
	AG1743	Splash Shield:10 x 78 (BMS)		
21	560105CT	Bumper WLS/CU		
	F105M	Bumper, BMS		
22	F103ACT	Pattern Adjustment Weldment (WLS/CU)		
	P103ACT	Pattern Adjustment Weldment (BMS)		
23	560123CT	Deflector & Bumper Mount (WLS/CU Bolt-on Spinners)		
	F105A	Deflector & Bumper Mount (WLS/CU, Weld-on spinners)		
	WLS58123	Deflector & Bumper Mount (BMS)		
	WLS58119L	CT/RCT Bumper Bolt-on Mount/Bracket (WLS/CU, not shown)		
	WLS58119L	&R Bumper Bolt-on Mount/Bracket (BMS, not shown)		
24	F104BCT & 1	F105BCT Deflector Assembly (WLS/CU)		
	P104BCT	Deflector Assembly (BMS)		
25	2TB56	Double V Sheave (540 RPM PTO)		
	2TB42	Double V Sheave (1000 RPM PTO)		
26	V031	Belt Tightener Assembly		
	329	Idler Sheave		
27	2TB50	Double V Sheave (540 RPM PTO)		
	2TB62	Double V Sheave (1000 RPM PTO)		
28	2GBB60	Belt		
29	WLS58500	Belt & Gear Box Shield Group (WLS)		
	AG2215	Belt Shield Weldment (CU)		
	AG2945	Belt & Gear Box Shield Group (BMS)		
30	NAP	1/4" x 1" Bolt W/Lock Washer and Nut		
31	126 & 923	3/8" x 1" Bolt W/Locknut		
32	159 & 921	5/16" x 2" Bolt W/Locknut		
33	138,139,460	7/16" x 1-1/2" Bolt W/Lock Washer and Nut		
35	110,390,113	1/2" x 1-1/4" Bolt W/Lock Washer and Nut		
36	428	3/8" x 7/8" Bolt W/Lock Washer and Nut (Gear Box Bolt, not shown)		
37	P11	Bushing: 1"		
38	P11.188	Bushing: 1-3/16"		

Parts for Drwg #354a Rev 3/5/21 BJH

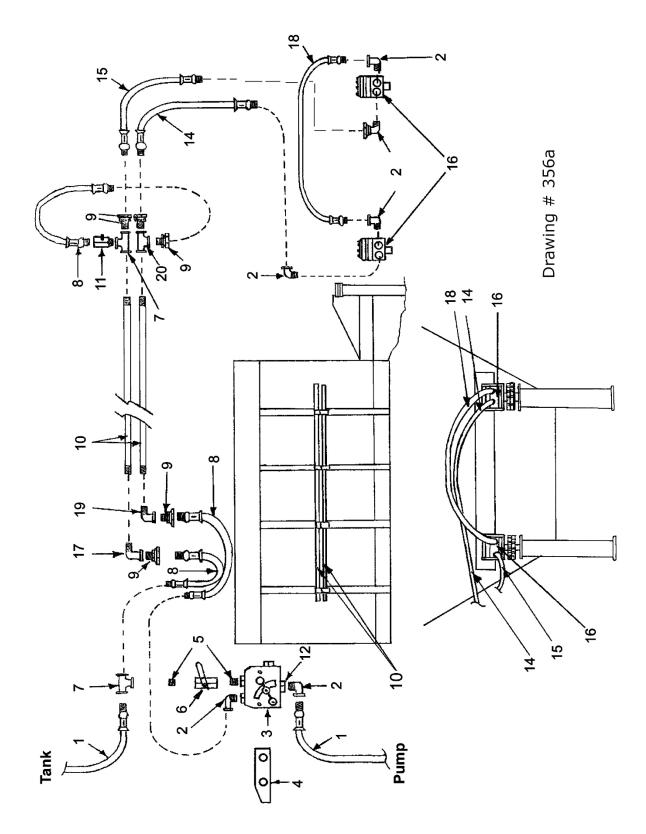


DRW PART DESCRIPTION NUM NUM

1	NAP	Head Frame Assembly
	F108CCT	Head Frame: Hyd Spinner (CU/WLS)
	AG3131	Head Frame: Hyd Spinner (CU/WLS with Shredder Option)
	P108C	Head Frame: Hyd Spinner (BMS)
	AG3196	Head Frame: Hyd Spinner (BMS with Shredder Option)
	64356	Hydraulic Motor Mounts (2 req)
	AG3197L&R	Hydraulic Motor Mounts (BMS with Shredder Option)
	F102D	Divider Mount
2	65937	Spinner Motor (replaces older motors)
	C3269X10X8	Adapter, #10 ORB Male to 1/2 NPTF (not shown, required when
		replacing motors with pipe thread ports used prior to May 2010)
3	WLSOM008	Hinged Center Divider (CU/Redhawk)
	F102	Divider Plate (WLS)
4	50B161A	Sprocket w/Hub 1" Bore
5	50210RC	Roller Chain #50-2 9 3/8" 15 P
5A	482	Connector Link #50-2 RC
6	158	Bearing 1" Flange
7	F025	Spinner Shaft: 1" x 25-1/2" lg
8	Weld-o	on Spinner Mounts
	F101	Spinner Mount Weldment
	F101A	Spinner Mount Assembly
		n, Tilted Spinner Mounts (CU/WLS/RC)
		Spinner Mount Weldment
		Spinner Mount Assembly
		n, Straight Spinner Mounts (BMS)
		Spinner Mount Weldment
		Spinner Post Assembly
		n, Straight Spinner Mounts (WLS)
		Spinner Post Assembly
		Spinner Post Assembly
9	F007L	Spinner Blade: Left SS
	F006R	Spinner Blade: Right SS
	F007LM	Spinner Blade: Left Mild Steel
	F006RM	Spinner Blade: Right Mild Steel
	-	r Blade Kits
	F007LRSS	Blade Kit: Left & Right (Stainless)
10	F007LR	Blade Kit: Left & Right (Mild)
10	427	Key: 1/4" x 1-1/8"
11	F007	Spinner Disc: 24" x 7 ga.
12	F009	Spinner Hub Weldment
	64695	Hub Washer, Sq Bottom

13 F106 Splash Shield 10 x 60 (5-ton)			
F109 Splash Shield 10 x 72 (8-ton)			
AG1743 Splash Shield 10 x 78 (BMS)			
14 560105CT Bumper, WLS/CU	1		
F105M Bumper, BMS			
15 F103ACT Pattern Adjustment Weldment (WLS/CU)			
AG1495 Pattern Adjustment Weldment (WLS 100)			
P103ACT Pattern Adjustment Weldment (BMS – 1 ¹ / ₂ " Rear Shaft)			
AG3260 Patter Adjustment Weldment (BMS – 2" Rear Shaft)			
16 560123CT Deflector & Bumper Mount (WLS/CU Bolt-on Spinners)			
F105A Deflector & Bumper Mount (WLS/CU, Weld-on spinners)			
WLS58123 Deflector & Bumper Mount (BMS)			
WLS58119LCT/RCT Bumper Bolt-on Mount/Bracket (WLS/CU, not show	wn)		
AG4916L&R Bumper Bolt-on Mount/Bracket (WLS/CU w/ shred			
WLS58119L&R Bumper Bolt-on Mount/Bracket (BMS, not shown)			
17 F1045BCT Deflector Assembly (WLS/CU)			
P104BCT Deflector Assembly (BMS)			
18 AG5700 Gear Box Shield for Hydraulic Spinners (WLS)			
AG5990 Gear Box Shield for Hydraulic Spinners (WLS 1000 rpm Lo	ow Rate)		
AG2640 Gear Box Shield for Hydraulic Spinners (BMS)			
20 NAP Bolt: 1/4" x 1" w/ Lock Washer & Nut			
21 NAP Bolt: 5/16" x 1" w/ Lock Washer & Nut			
22 NAP Bolt 5/16" x 2" w/ Lock Washer & Nut			
23 NAP Bolt: 7/16" x 1-3/4" w/ Lock Washer & Nut			
24 131 Woodruff Key: 1/4" regular type			
25 NAP Bolt: 1/2" x 1-1/2" w/ Lock Washer & Nut			
26 NAP Bolt: 3/8" x 7/8"			

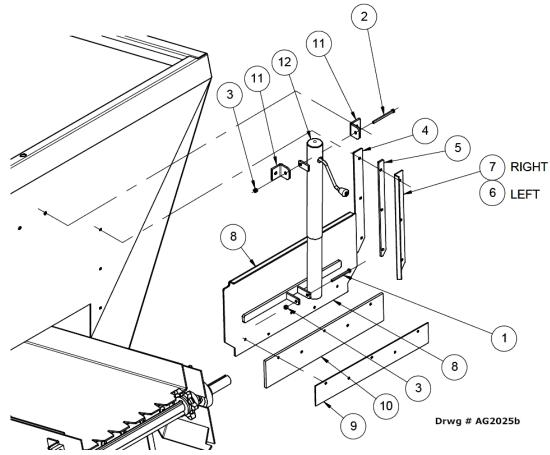
Parts for Drwg #355a Rev 3/8/21 BJH



	PART	DESCRIPTION
NUM	NUM	
1	N/A	
2	N/A	
3	64743	Valve: Hydraulic Flow Control 16gl.
4	AG3002	Hydraulic Control Decal
5	N/A	
6	367	Ball Valve: 1/2"
	368	Ball Valve: 3/4"
7	N/A	
8	N/A	
9	N/A	
10	N/A	
11	LT500W	Check Valve; 1/2" (gresen)
12	N/A	
13	N/A	
14	N/A	
15	N/A	
16	N/A	Spinner Motor (see Spinner Drives page)
17	N/A	
18	N/A	
19	N/A	
20	N/A	

Parts for Drwg #356a Rev 3/8/21 BJH

24" CONVEYOR REAR GATE (AFTER 3/2015)

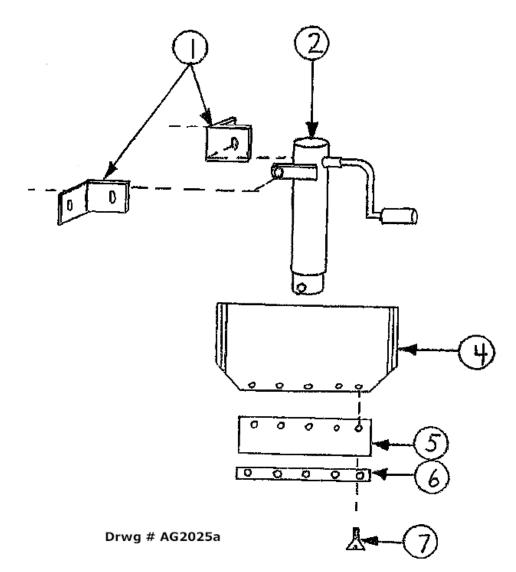


DRW	PART	DESCRIPTION
NUM	NUM	

- 2 833 Bolt, 5/16-18 X 4
- 3 921 Nylock, 5/16-18
- 4 AG2012 Hopper Spacer
- 5 AG2013 Gate Spacer
- 6 AG2014L Gate Track, Left
- 7 AG2014R Gate Track, Right
- 8 AG2015 Gate Weldment (for manual jack opener)
- AG1415 Gate Weldment (for linear actuator opener)
- 9 V243 Gate Belt Retainer
- 10 V248 Gate Meter Belt 4-3/4 x 24-1/4
- 11 WLS58657 Jack Mounting Angle
- 12 WLS58658 Gate Jack WA
- 64884 Linear Actuator, 10"

Parts for Drwg #AG2025a Rev 3/9/21 BJH

WLS/CU REAR GATE (PRIOR TO 3/2015)



DRW	PART	DESCRIPTION
NUM	NUM	

I	WLS58657	Jack Mounting Angle
2	WLS58658	Jack Weldment
4	WLS58654	Gate Weldment
5	V248	Gate Metering Belt
6	V243	Belt Retainer
7	143	Flathead Bolt: 1/4" x 1
	444	Lock Washer: 1/4"
	412	Hex Nut: 1/4"

Parts for Drwg #AG2025a Rev 3/9/21 BJH

SECTION XV

OPTIONS/CUSTOM COMPONENTS (If Applicable)

NOTES:

<u>Contact Information:</u> PHONE: 800-843-8731 +610-350-4322 international Fax: 610-350-4216 email: <u>info@stoltzmfg.com</u>