

OPERATOR'S MANUAL

SEEDBED FINISHER

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WIL-RICH
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WARRANTY

The only warranty Wil-Rich gives and the only warranty the dealer is authorized to give is as follows:

We warrant products sold by us to be in accordance with our published specifications or those specifications agreed to by us in writing at time of sale. Our obligation and liability under this warranty is expressly limited to repairing, or replacing, at our option, within 12 months after date of retail delivery, any product not meeting the specifications. ***We make no other warranty, express or implied and make no warranty of merchantability or of fitness for any particular purpose.*** Our obligation under the warranty shall not include any transportation charges or costs or installation or any liability for direct, indirect or consequential damage or delay. If requested by us, products or parts for which a warranty claim is made are to be returned transportation prepaid to our factory. Any improper use, operation beyond rated capacity, substitution of parts not approved by us, or any alteration or repair by others in such manner as in our judgment affects the product materially and adversely shall void this warranty. ***No employee or representative is authorized to change this warranty in any way or grant any other warranty.***

Wil-Rich reserves the right to make improvement changes on any of our products without notice.

When warranty limited or not applicable: Warranty on hoses, cylinders, hubs, spindles, engines, valves, pumps or other trade accessories are limited to the warranties made by the respective manufactures of these components. Rubber tires and tubes are warranted directly by the respective tire manufacturer only, and not by Wil-Rich.

Warranty does not apply to any machine or part which has been repaired or altered in any way so as in the our judgment to affect its reliability, or which has been subject to misuse, negligence or accident.

A Warranty Validation and Delivery Report Form must be filled out and received by Wil-Rich to initiate the warranty coverage.

WARRANTY CLAIMS PROCEDURE

1. The warranty form must be returned to Wil-Rich within fifteen (15) working days from the repair date.
2. Parts returned to Wil-Rich without authorization will be refused. The parts must be retained at the dealership for ninety (90) days after the claim has been filed. If the Service Department would like to inspect the parts, a packing slip will be mailed to the dealer. The packing slip must be returned with the parts. The parts must be returned prepaid within thirty (30) days of receiving authorization. After the parts are inspected and warranty is verified, credit for the return freight will be issued to the dealer.
3. Parts that will be scrapped at the dealership will be inspected by a Wil-Rich Sales Representative, District Sales Manager or Service Representative within the ninety (90) day retaining period.

PERSONAL SAFETY IS IMPORTANT!

ALL PERSONNEL INVOLVED WITH THE ASSEMBLY AND/OR OPERATION OF THIS EQUIPMENT MUST BE INFORMED OF PROPER SAFETY PROCEDURES. OPERATOR'S AND ASSEMBLY MANUALS PROVIDE THE NECESSARY INFORMATION. IF THE MANUAL IS LOST FOR A PARTICULAR IMPLEMENT, ORDER A REPLACEMENT AT ONCE. OPERATOR'S AND ASSEMBLY MANUALS ARE AVAILABLE AT NO CHARGE UPON REQUEST.

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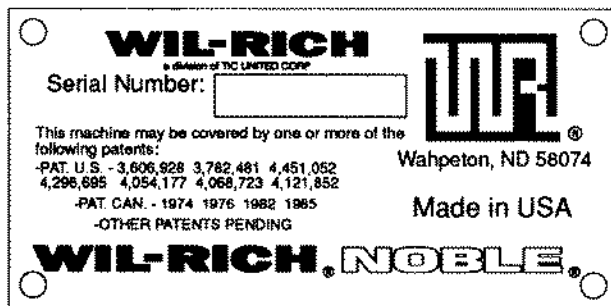
TO THE OWNER

The Seedbed Finisher has a standard equipment a clearance lighting package. If your Seedbed Finisher is not equipped with this package, it can be ordered by contacting your local dealer or the factory directly.

It is the responsibility of the user to read the Operator's Manual and comply with the safe and correct operating procedures as pertains to the operation, lubrication and maintenance of the product according to the information outlined in the Operator's Manual.

If this machine is used by an employee or is loaned or rented, make certain that the operator(s), prior to operating, is instructed in safe and proper use and reviews and understands the Operator's Manual.

The user is responsible for inspecting his/her machine and for having parts repaired or replaced when continued use of this product would cause damage or excessive wear to the other parts. The word NOTE is used to convey information that is out of context with the manual text; special information such as specifications, techniques, reference information of supplementary nature.



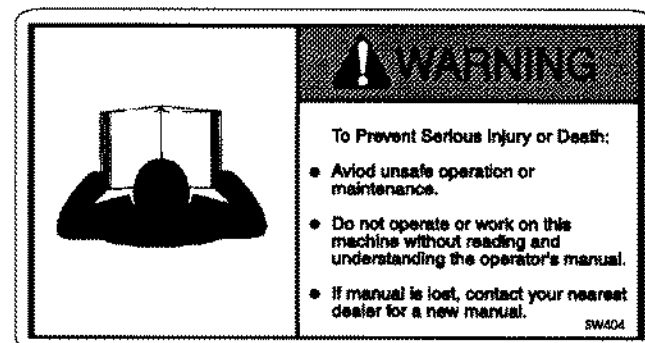
When in need of parts, always specify the model and serial number. Write this number in the space provided. The serial number plate is located on the main frame in the front right corner of 3-PT. models.

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MODIFICATIONS

It is the policy of Wil-Rich to improve its products whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring obligation to make such changes, improvements on any equipment sold previously.



INTRODUCTION

SEEDBED FINISHER FEATURES

Rugged frame with channel and tubular steel members gives the strength needed to work behind big tractors at high speeds.

Choice of sizes: 4-row rigid, 12ft. 6in.; 6-row hydraulically folding-wing type, 19ft. 3in.; 8-row hydraulically folding-wing type, 25ft. 10in.

Two-rank Shank or Tine tooling; with 8-inch spacing pre-conditions the soil ahead of the cutting reels. They vibrate rapidly to shatter clods and mix soil and crop residue.

Folding-wing models; are equipped with hydraulic cylinders as standard. The wings may be locked rigid for leveling or may be allowed to float for better work in rolling field conditions.

Leveling crank; enables the operator to adjust the seedbed finisher to the tractor drawbar height as well as to transfer weight from reels to leveler boards or baskets as desired.

Spiral 5-bar reels; with blades of high quality plowshares steel for exceptional reliability, chop stalks and clods and thoroughly mix residue and soil.

Reel bearings; are cartridge-type, regreasable, triplesealed, self-aligning ball bearings (two per reel). Reel bearings are equipped with wear guards and grease fitting guards.

Heavy-duty spike-tooth center sections; have five ranks of teeth that further pulverize and loosen soil. Chain suspension linkage keeps working depth constant across the entire width of cut - even in rough terrain.

Transport wheels; are used for depth control of the reels and raising the machine for fast turns in the field and convenient road transport. Your 6 and 8 row machine is equipped with tires that are 9:5L-15 for best floatation. The wheel tread for the 4 and 6 row is 78 inches. For the 8 row inner wheels it is 78 inches and for the outer wheel it is 116 inches.

Rolling baskets; are ideal for uniform chemical incorporation. They stir and firm the soil and provide a ready-to-plant surface.

Metal leveling boards; are mounted on leaf springs and are reversible for longer life.

GENERAL

The Seedbed Finisher is a trailing type 4-row. The 6-row and 8-row are folding-wing type machines.

Working widths of 12ft 6in (4-row), 19ft 3in (6-row) and 25ft. 10in (8-row) are available.

The recommended tractor drawbar height for average conditions is 17 inches. Tractor horsepower requirements is 30-40 hp for each 2-row unit with recommended operating speed at 4-6 mph.

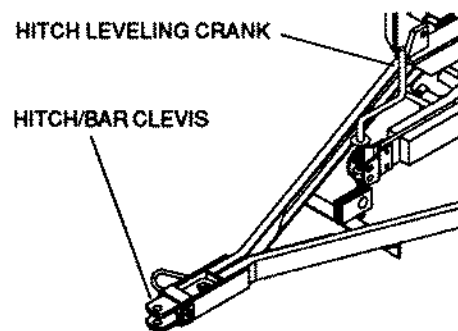


CAUTION! Care must be exercised when hitching the seedbed finisher to the tractor to prevent injury to the hands or fingers.

HITCH ADJUSTMENT

For proper performance, the hitch leveling crank should be adjusted so that the seedbed finisher frame is level in operation.

The seedbed finisher is equipped with a combination hitch bar and hitch clevis as standard equipment.



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Change the hitch bar or clevis by removing the 7/16 x 3 inch roll pin and welded pin. Rotate hitch bar or clevis and reinstall attaching hardware.

FRAME AND REELS

Check and tighten all frame bolts securely after the first day of operation.

TINE AND SHANK UNITS

Check and tighten all bolts securely on your unit.

During the first few weeks of operation check all bolts periodically and retighten as required paying special attention to the reel assembly.

DEPTH CONTROL

Depth control is obtained by clamping a stop collar onto the cylinder piston rod. Hydraulic cylinder Stop Packages are standard equipment. The packages contain collars that are the following widths; 3/4in., 1in., 1-1/4in., 1-1/2in., and 2in.

IMPORTANT: On 6 and 8 row models, use the same size and number of collars on each cylinder.

HITCH SAFETY CHAIN

When transporting on public roadways, the safety chain package provided must be used.

It is recommended that a safety hitch pin be used. The safety hitch pin is available from your dealer.

SAFETY

Safety decals appear at various locations on your machine. These decals are provided for your safety and must be kept clean. Replace any decal that becomes worn, damaged, painted over, or otherwise difficult to read. Replacement decals are available through your dealer.

BEFORE OPERATING

Use extreme care when making adjustments.

When working under or around the machine always lower shanks to the ground.

After servicing, be sure all tools, parts, or servicing equipment is removed from the machine.

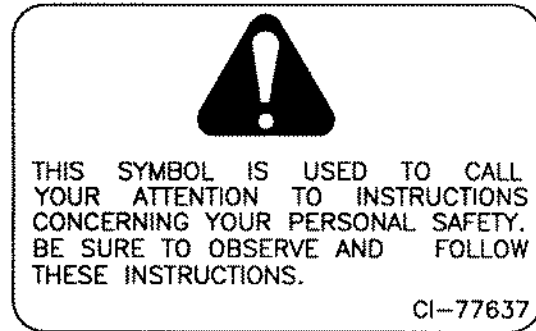
Before and during operation be sure no one is on or around the implement. Serious injury can result from improper use.

Reduce speed when cornering on field ends and when operating on or across dead furrows.

Do not attempt to remove any obstruction while the machine is in motion.

Use extreme care when operating close to ditches, fences, or on hillsides.

No one other than the operator should ride on the tractor.



HYDRAULICS

Inspect all hydraulic hoses and fittings for cracks and abrasions at least once a year. Tighten or replace as needed.

When connecting the hoses to the cylinders, tubing, or fittings; always use one wrench to prevent the hose from twisting and another wrench to tighten the union. Excessive twisting will shorten the hose life.

Do not over-tighten hydraulic fittings, excessive torque may cause them to crack.

Care must be taken to prevent twisting when tightening hose connections. Straighten any hose that appears twisted immediately. A twisted hose can burst under pressure.

Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. To find a leak under pressure use a small piece of cardboard or wood. *Never use your hand!*

ON-HIGHWAY OPERATION

Always place the machine in the transport position.

Comply with your state and local laws governing highway safety when moving machinery on a highway.

Reduce road speed on corners.

Drive at a reasonable speed to maintain complete control of the machine at all times.

A S.M.V. emblem must be used at all times while traveling on public roads.

PREPARATION

Before using the Seedbed Finisher a careful inspection must become routine. A check must be made to insure that all hardware is securely tightened and moving parts properly lubricated.

Tighten all loose nuts and bolts and replace any bent or broken parts.

When tightening bolts, they must be torqued to the proper number of foot-pounds as indicated in the table, unless specified. It is important that all bolts be kept tight.

On new machines, all nuts and bolts must be rechecked after a few hours of operation.

TORQUE IN FOOT POUNDS

BOLT DIA	3/8	1/2	5/8	3/4	7/8	1
HEX HEAD	9/16	3/4	15/16	1-1/8	1-5/16	1-1/2
UNC GRADE	2	18	45	89	160	252
	5	30	68	140	240	360
	8	40	100	196	340	528
UNF GRADE	2	21	51	102	178	272
	5	32	70	168	264	392
	8	48	112	216	368	792

GRADE 8



GRADE 5



GRADE 2



CI-75623

When replacing a bolt, use only a bolt of the same grade or higher.

Bolts with no markings are grade 2.

Grade 5 bolts furnished with the machine are identified by three radial lines on the head.

Grade 8 bolts furnished with the machine are identified by six radial lines on the head.

All U-bolts are grade 5.

TIRE INFLATION

The use of the proper air pressure is the most important factor in satisfactory performance and maintenance of implement tires. Underinflation will damage the cord body of the tire and cause a series of diagonal breaks in the fabric in the sidewall area.

If the tire buckles or wrinkles, the air pressure must be increased to the point where the sidewalls remain smooth while operating.

Check the air pressure every two or three weeks and do not allow pressure to drop to a point where buckling or wrinkling of the tire may be possible.

NOTE: DO NOT OVERINFLATE TIRES.

WHEEL BOLTS

It is recommended that all wheel bolts be checked for tightness before using and again after one day of use. Paint or rust can work out causing the wheel to become loose. Check periodically to be sure the wheel bolts are tight.

HYDRAULICS

Check lift and wing folding linkages and cylinders for proper alignment and operation. On new machines check that the hydraulic system has been properly charged and purged.

LUBRICATION

Make sure the seedbed finisher is properly lubricated. See maintenance, pages 9-10.

BEARING ASSEMBLIES

IMPORTANT - The spindle nut on all hub and spindle assemblies is preset at the factory. Road transport and field working will seat the bearings and may require additional adjustment. After 20 hours of machine operation remove the dust cap and check the bearing tightness of all hub and spindles. Remove the cotter pin and rotate the tire while tightening the spindle nut. Tighten until the drag in the tire assembly stops the tire rotation. Locate the cotter pin hole in the spindle and loosen the spindle nut enough to allow insertion of the cotter pin. Replace cotter pin and dust cap.

TRACTOR PREPARATION

Refer to the operator's manual furnished with your tractor for recommended adjustments and weight distribution.

When using a seedbed finisher, the tractor drawbar must always be pinned in the center to allow for more stability.

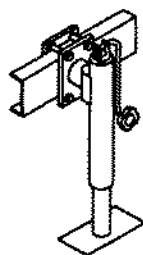
NOTE: CHECK YOUR TRACTOR'S HYDRAULIC FLUID LEVEL AFTER CYCLING HYDRAULICS AND FILLING NEW CYLINDERS AND LINES. REFILL IF NECESSARY.

HITCHING

After backing your tractor into position, attach the hitch to the tractor drawbar, using a hitch pin of adequate strength for the tractor - implement combination. Lock the pin in place to prevent loss (particularly when transporting). The safety chain must be used for road transport.

Connect the seedbed finisher's hydraulic hoses to the proper couplers in your tractor.

NOTE: AN OPTIONAL POLE JACK MAKES THE HITCHING OPERATIONS EASIER.



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TRANSPORTING

A S.M.V. (Slow Moving Vehicle) emblem must be used at all times while traveling on public roads.

NOTE: BEFORE RAISING OR LOWERING WINGS, BE SURE WING LOCK PINS HAVE BEEN REMOVED AND PROPERLY STORED.

NOTE: USE EXTREME CAUTION WHEN WORKING AROUND OVERHEAD POWER TRANSMISSION LINES.

NOTE: SET TRACTOR THROTTLE TO IDLE WHEN UNFOLDING WINGS.

NOTES: ALWAYS INSTALL CHANNEL LOCKS IN THE MAIN LIFT CYLINDERS FOR ROAD TRANSPORT. (See Fig. 2).

NOTE: ALWAYS PLACE THE MACHINE IN THE TRANSPORT POSITION, ALWAYS USE WING LOCK PINS (See Fig.1.) AND CYLINDER CHANNEL LOCKS. (See Fig.2.) NEVER DEPEND ON YOUR TRACTOR'S HYDRAULIC SYSTEM TO CARRY THE WEIGHT OF THE IMPLEMENT WHILE TRANSPORTING.

Reduce speed when cornering and when traveling over rough and/or uneven ground. Drive at a reasonable speed to maintain complete control of the machine at all times.

Comply with your state and local laws governing highway safety when moving machinery on a highway.



WING IN TRANSPORT POSITION

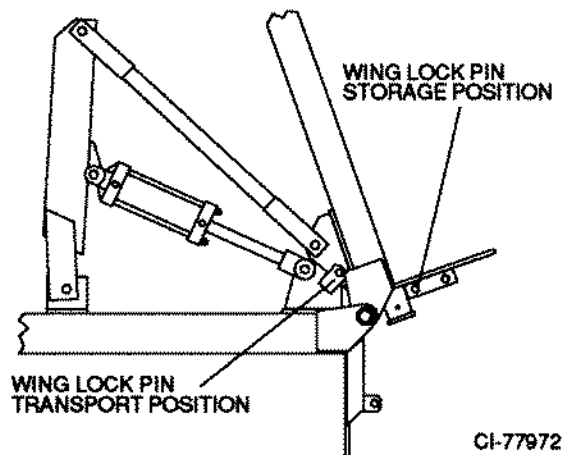


FIG. 1

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CHANNEL LOCK

When transporting, extend the hydraulic cylinder fully and install the cylinder channel lock as shown.

Before attempting to operate the hydraulic cylinder, be sure to remove the channel lock.

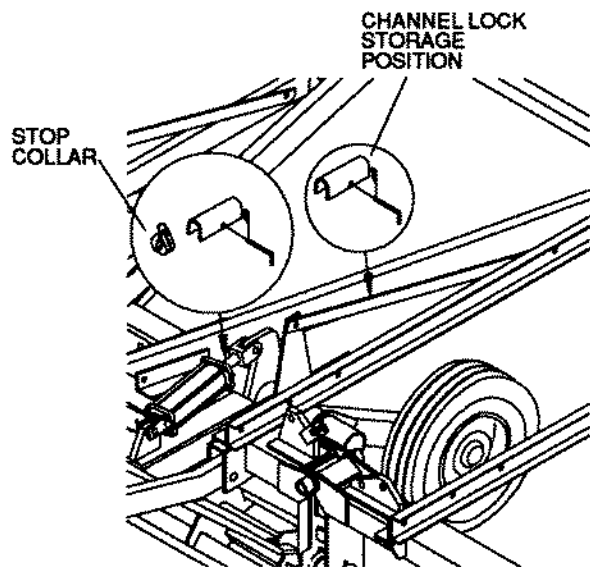


Fig. 2

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When preparing for field operation, remove the cylinder channel lock from the hydraulic cylinder. Store the channel lock on the rear bar brace.

MAIN FRAME DEPTH ADJUSTMENT

The main frame depth on the Seedbed Finisher is regulated by a pair of hydraulic cylinders located in the wheel well area.

The main frame depth is controlled by the use of stop collars. A stop collar kit is supplied with a variety of sizes to give you various depths.

NOTE: EACH TIME THE DEPTH OF THE MAIN FRAME IS CHANGED BY ADDING OR DELETING STOP COLLARS, THE MACHINE MUST BE LEVELED AGAIN, FROM THE FRONT TO THE REAR BY USE OF THE LEVELING SCREW.

NOTE: THE CYLINDER STOP COLLARS MUST BE SET EQUALLY ON THE 2 MAIN FRAME CYLINDERS. FAILURE TO DO SO CAN TWIST THE MAIN AXLES AND/OR FRAME.

WING ADJUSTMENTS

WING DEPTH

The operational depth of the wing is controlled by the main frame setting.

WING LEVELING

The wings are leveled to the main frame using the shims provided. Shims are required in both the main and rear bar hinges (See Figs. 3 & 4).

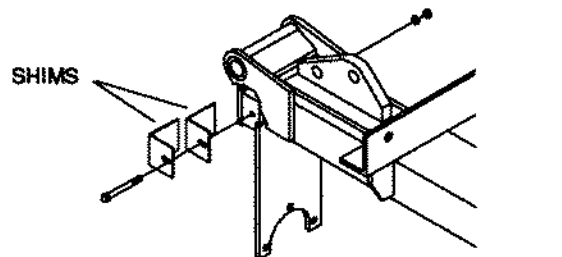


Fig. 3 Main Frame Hinge

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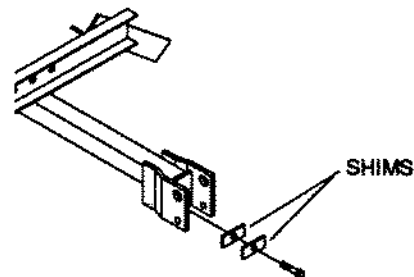


Fig. 4 Rear Bar Hinge

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WINGS IN WORKING POSITION

The wings can be locked in the level position or they can be allowed to float up, by putting the lock down pins in the storage holes, and the tractor hydraulics in a float mode.

There are lock down pins in both the rear bar and main frame hinges. Be sure both are in the desired position. (See Fig. 5 & 6.)

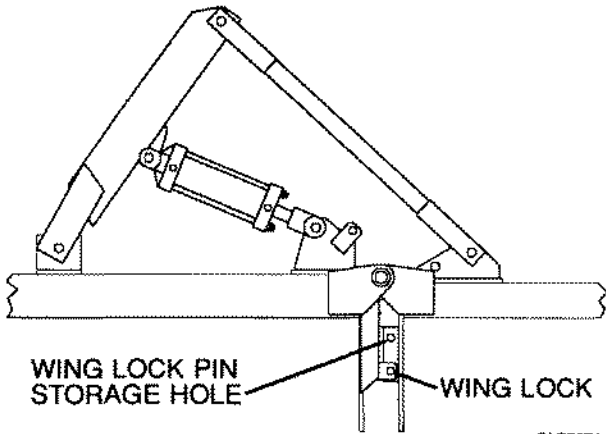


Fig. 5 Main Frame

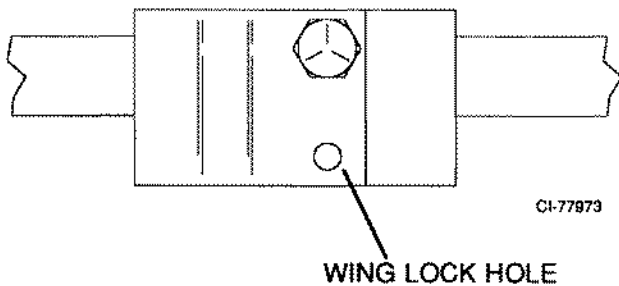
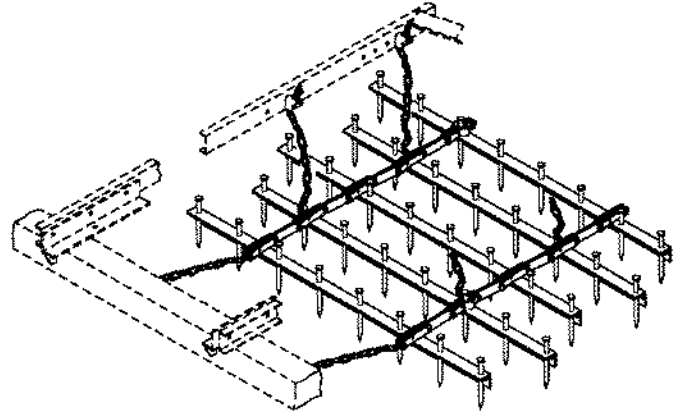


Fig. 6 Rear Bar

When folding the wings, be sure to remove both front and rear lock down pins.

SPIKE TOOTH HARROW

Adjust all the chains equally. On hanger chains for spike-tooth sections, leave one or more links of slack to allow the harrow to flex. The spike tooth height is adjustable to compensate for wear.



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	<p>! DANGER</p> <p>STAND CLEAR AT ALL TIMES:</p>	<ul style="list-style-type: none"> • Never walk or stand in the path of the wings. • Completely lower wings before performing service or adjustments. • Failure to do so will result in serious injury or death. <p>41106</p>
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TINE AND SHANK DEPTH ADJUSTMENT

Hole #1 was designed for use with the danish tine attachment. This position sets the tine slightly below the depth of the reel. See fig. 8.

Hole #2 was designed for use with the spring shank attachment. This position sets the shank slightly below the depth of the reel. See fig. 8.

The attachments may be used in the opposite holes.

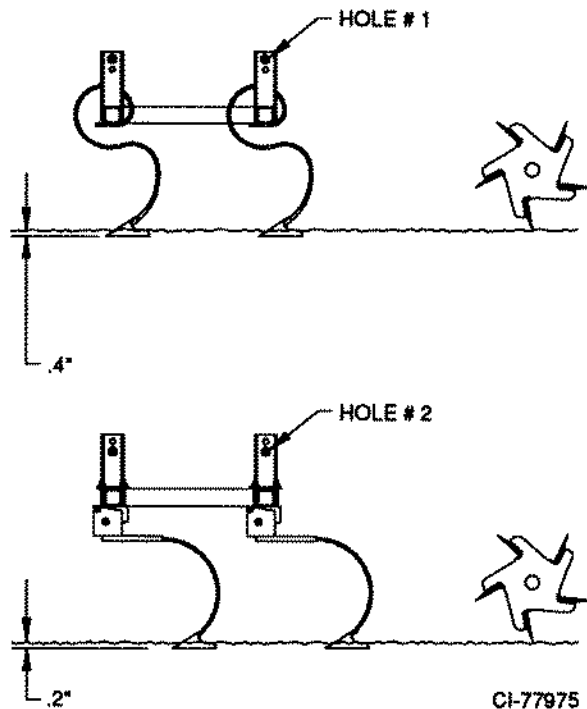
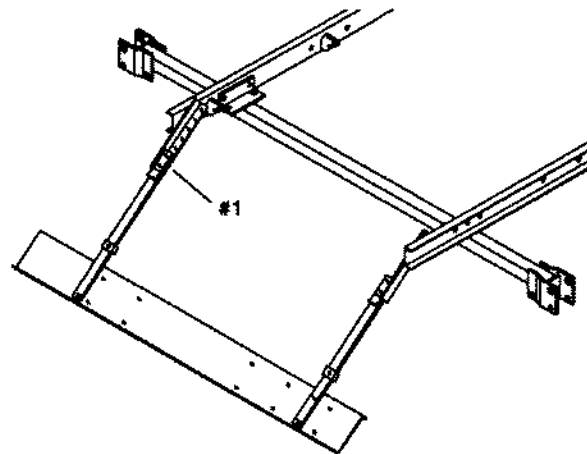


Fig. 8

LEVELING BOARD



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Fig. 9

#1 - Recommended starting position. This position will keep the boards level with the ground. See fig. 9.

Keep the frame as level as possible.

The leveling boards are reversible for longer life.



CAUTION! Carry weight of the machine on transport wheels whenever possible in order to save the boards from abnormal abuse.

ROLLING BASKET

Down pressure on the baskets can be adjusted by using any of the adjustments at "A", "B" or "C". See fig. 10.

The adjustments at "A" are used to change the down pressure on the baskets by changing the amount of the compression on the spring.

Adjustments "B" and "C" also affect down pressure by changing the position of the arm relative to the frame.

The front basket can be raised or lowered by loosening the attaching hardware between the arm and the pivot bracket and moving the jam nuts to the adjusting screw "D".

It is suggested that the front basket be positioned a little higher than the rear basket. Retighten attaching hardware to specified torque after the adjustment is made.

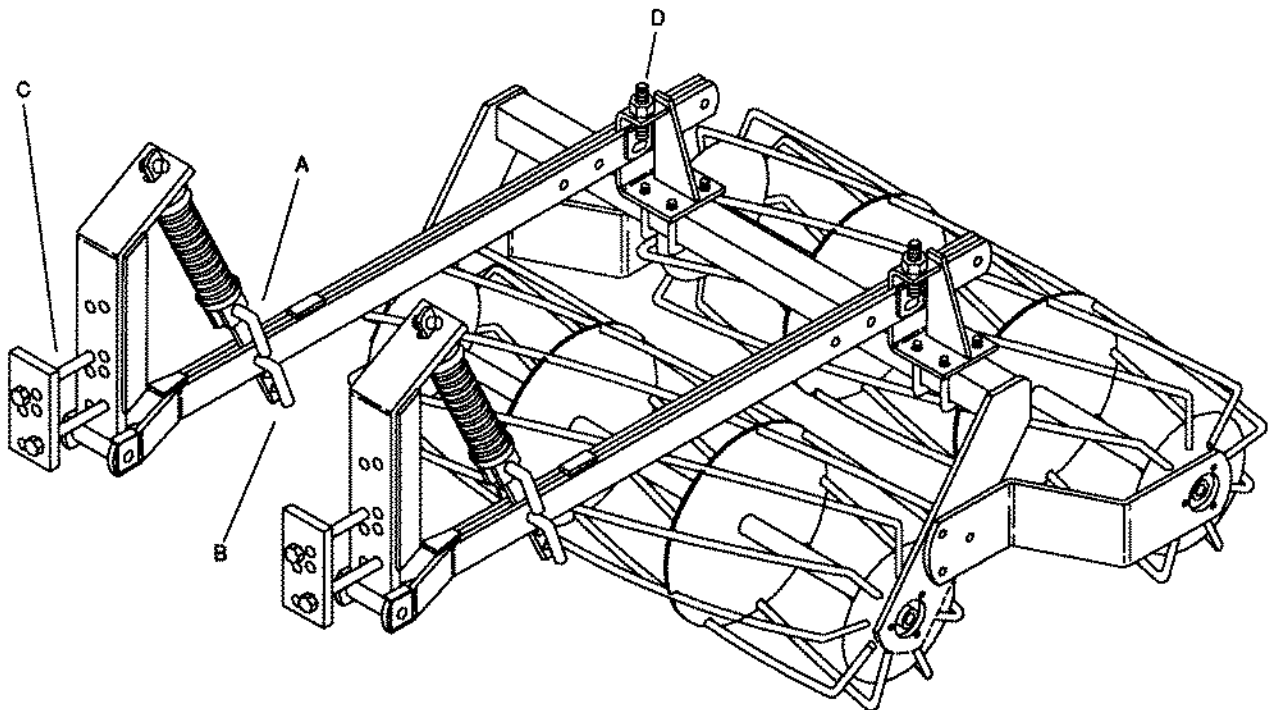


Fig. 10

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RIGID GAUGE WHEEL

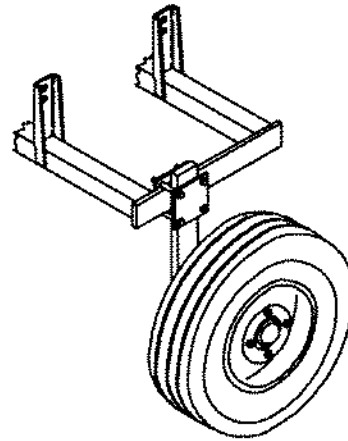


Fig. 11

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Be sure to operate this machine in a level position.

Be careful when turning so you do not side load the gauge wheels.

Adjust gauge wheel height by loosening 1/2x3-1/2" cap screw and sliding the wheel arm up or down as needed in the clamp.

The gauge wheel uses a 18x9.5-8 4-ply rated flotation type tire. Maintain tire inflation at 30 psi air pressure. Check pressure frequently.

MAINTENANCE

Periodic checks must be made to assure that all nuts and bolts remain securely tightened. Loose hardware is easily bent or lost and can cause excessive wear on parts. Replace any bent or broken bolts as soon as they are discovered.

Clean off any dirt or grease that may accumulate on moving parts at regular intervals. This will prevent any abrasive action which could cause excess or premature wear. Thoroughly inspect the implement for loose or broken parts and adjust or replace as necessary.

It is important that the implement be regularly lubricated as recommended to obtain the most efficient operation. Proper lubrication helps prevent down-time due to excessive wear and increases machine life.

CYLINDER SHAFTS

If cylinder shafts are left exposed for any extended period of time, they must be coated with grease to protect them from rust and corrosion.

1. HUB & SPINDLE ASSEMBLIES

Each hub and spindle assembly comes with a grease fitting installed in the hub. These should be greased once a week during steady use. **CAUTION - DO NOT OVER GREASE!**

2. HINGE

Each wing has one grease fitting which is greaseable only when the wing is UNFOLDED. These should be greased every 50 hours.

3. REEL BEARINGS

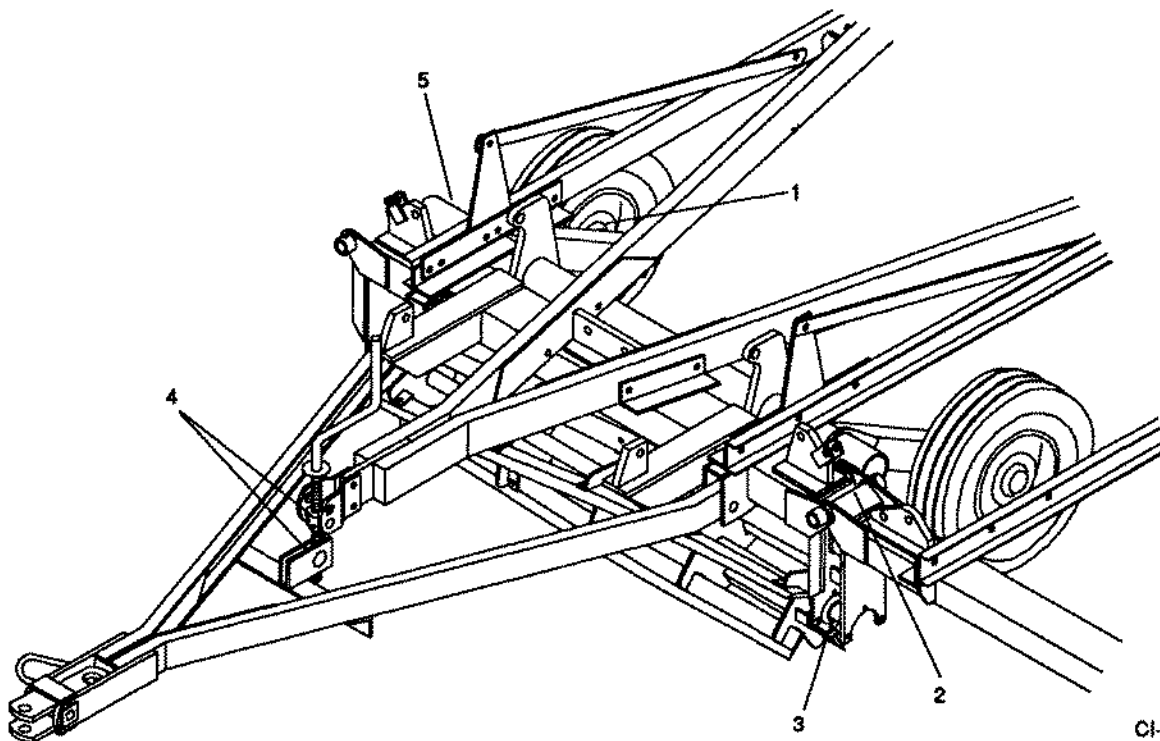
Each reel has 2 grease fittings protected by a grease fitting guard. These should be greased every 100 hours.

4. LEVELING SCREW

The leveling screw assembly has 2 grease fittings. One on the hitch screw trunion and one on the threaded trunion. Both should be greased every 10 hours.

5. AXLE CAPS

All axle caps must be greased once a day with a good quality grease. Lower machine onto the shovel points to relieve pressure on the caps to make greasing easier.



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Fig. 12

OPTIONAL EQUIPMENT

STORAGE

NOTE: IF POSSIBLE STORE YOUR SEEDBED FINISHER INSIDE.

At the end of a season, clean the implement thoroughly to remove any trash, soil or dirty grease which could hold moisture and cause premature rusting. Repaint any chipped, bare, or rusted areas to prevent any further deterioration. Inspect the machine for any worn or broken parts and adjust or replace as required.

See your dealer for any parts and/or service which may be needed.

Thoroughly lubricate all grease fittings at the end of the season's use and again before the first operation of the next season.

Avoid possible damage to the hydraulic system by lowering the machine onto the shanks and relieve the pressure on the system. Doing this will also prevent damage to the tires by removing the seedbed finisher's weight.

Coat the shovels with grease and place boards under the points to prevent the shovels from settling into the ground.

4" SWEEP



6" SWEEP



8" SWEEP



REVERSIBLE SPIKE

GOOSE FOOT SHOVEL



4" SHOVEL



7" SHOVEL

Fig. 13

Shovels should be used for general tillage, seedbed preparation and weed eradication.

Spikes are recommended for deep penetration, hard soil conditions, killing of quack grass and other grassy weeds, and also for general tillage. These spikes are reversible for longer wear.

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Poor or uneven penetration.	Incorrect leveling adjustments on main frame or wings.	See leveling, page 5.
	Hydraulic malfunction - air in lines, cylinders or hoses leaking or not installed properly.	Check for oil leakage in cylinders, hoses and fittings. Make sure all hydraulic cylinders and hoses are properly connected.
	Worn shovel points.	Replace shovels if wear is severe.
	Tires not equally inflated.	See tire inflation, page 3.
Settling of entire implement from raised position.	Leaking cylinder.	Replace cylinder seals.
	Leaking tractor hydraulic control valve.	See tractor manual.
Wings lowering too rapidly.	Incorrect cylinder installed, should have 1/16" dia. integral restrictor cylinder.	See Wing Lift Circuitry in assembly manual and install correct cylinder.
Machine will not pull straight, (skewing).	Seedbed Finisher not level.	See leveling page 5.
	Incorrect shank placement.	Check shanks for proper location, see Assembly Manual.
	Tires not equally inflated.	See tire inflation, page 3.

