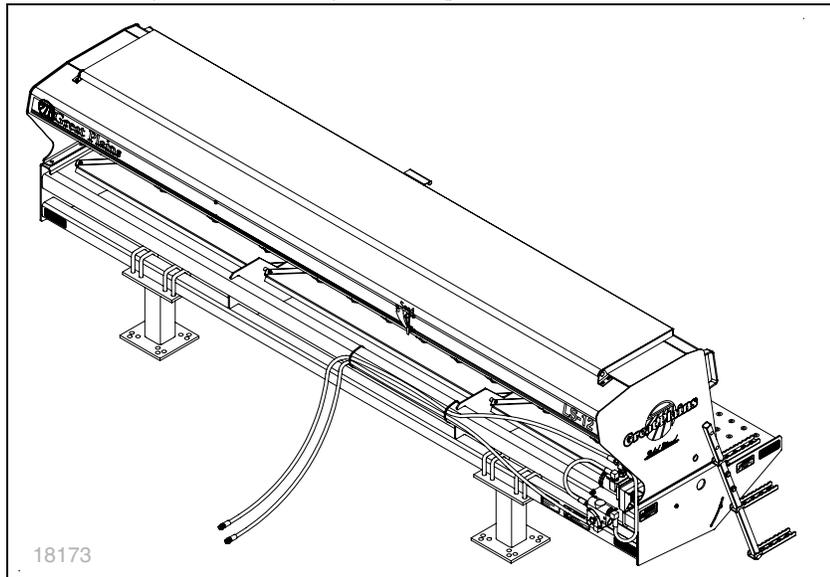


Operator Manual

LS10 and LS12
Levee Seeder



Read this manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!



Illustrations may show optional equipment not supplied with standard unit.

ORIGINAL INSTRUCTIONS



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Printed 5/6/19

117-055M

Machine Identification

Record your machine details in the log below. If you replace this manual, be sure to transfer this information to the new manual.

If you or the dealer have added options not originally ordered with the machine, or removed options that were originally ordered, the weights and measurements are no longer accurate for your machine. Update the record by adding the machine weight and measurements with the option(s) weight and measurements.

Model Number	
Serial Number	
Machine Height	
Machine Length	
Machine Width	
Machine Weight	
Year of Construction	
Delivery Date	
First Operation	
Accessories	<hr/> <hr/> <hr/>

Dealer Contact Information

Name: _____

Street: _____

City/State: _____

Telephone: _____

Email: _____

Dealer's Customer No.: _____



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov



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Safety Information

Look for Safety Symbol



The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Be Aware of Signal Words

Signal words designate a degree or level of hazard seriousness. The signal words are:

DANGER

DANGER Indicates an imminent hazard which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING

WARNING Indicates a potential hazard which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION

CAUTION Indicates a potential hazard which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

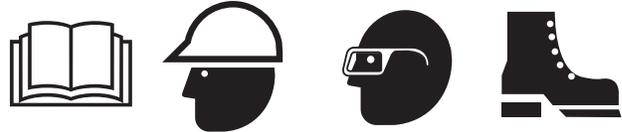
NOTICE Indicates that equipment or property damage could result if instructions are not followed.

 **NOTE:** Useful information related to the preceding topic.

Prepare for Emergencies

1. Be prepared if a fire starts.
2. Keep a first aid kit and fire extinguisher handy.
3. Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.

Before Getting Started



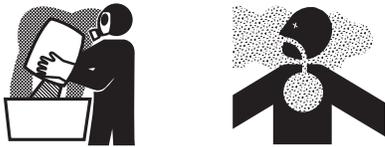
1. Read this manual in its entirety before attempting to start and operate the machine.
2. Only use operators that are thoroughly trained by the owner or trained by someone with the owner's consent. The operator must be familiar with all functions of the tractor and attachments, and be able to handle emergencies quickly.
3. Maintain attention on operation at all times. Do not operate if using a smart phone, tablet, or similar electronic device, and never operate machine while impaired by alcohol, medication, any controlled substance, or while fatigued.
4. Do not ever allow passengers to ride the machine at any time, for any reason.
5. Before operation, make sure that all tractor cab levers are in their neutral positions and that the parking brake is engaged.
6. Check brakes, link pins, and other mechanical parts for wear before using machine.
7. Never wear loose or bulky clothing around machine. Use additional safety equipment, such as hard hats, eye and ear protection, safety boots, etc., as needed.
8. Do not modify the machine. Unauthorized modification can result in unsafe conditions that lead to machine damage or personal injury.

Operation



1. Always stop the tractor, put in Park and turn off engine before leaving the cab. Dismounting from a moving tractor can cause serious injury or death.
2. Never leave the tractor cab unattended while the implement is running. Remove key and turn off tractor before exiting the tractor cab.
3. Watch your surroundings at all times. Do not operate with bystanders nearby, and avoid contacting overhead obstructions.
4. Check that all guards and shields are undamaged, installed, and secure before operating implement.
5. Keep children out of the work area. Do not operate or turn on machine while children are in the area.
6. Do not operate near ditches, holes, steep slopes, embankments, or other surfaces which may collapse under the machine's weight or tip the machine over.
7. Never stand between tractor and implement unless parking brake is applied.

Handling and Disposing of Chemicals



Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.

1. Read chemical manufacturer's instructions carefully, and then take appropriate precautions before use.
2. Wear protective clothing.
3. Wash hands and face before eating after working with chemicals. Shower as soon as application is completed for the day.
4. Apply only with acceptable wind conditions. Make sure wind drift of chemicals will not affect any surrounding land, people or animals.
5. Dispose of unused chemicals and chemical waste as specified by the manufacturer. Observe all the local ordinances and regulations in your area.

Operation Noise Hazard

1. Use proper ear protection like headphones or earplugs while working.

Maintenance



1. Understand procedure before doing work. Use proper tools and equipment.
2. Work in a clean, dry area.
3. Lower the implement. Put tractor in Park, turn off engine. To prevent unauthorized starting, remove key before performing maintenance or service work.
4. Make sure all moving parts have stopped and all system pressure is relieved.
5. Relieve hydraulic pressure before disconnecting hydraulic lines or performing any work on the system.
6. Do not work underneath any hydraulically supported components. Hydraulics can settle, leak, or be accidentally lowered. If working underneath hydraulically supported components is necessary, secure implement with stands or suitable blocking beforehand.
7. Disconnect electronic monitor and lighting harness from the tractor before servicing or adjusting electrical systems.
8. Before welding, disconnect electronic monitor and lighting harness from the tractor. Protect hydraulic lines. Avoid fumes from heated paint.
9. Remove buildup of grease, oil, or debris.
10. Remove all tools and unused parts from implement before operation.

Tire Safety

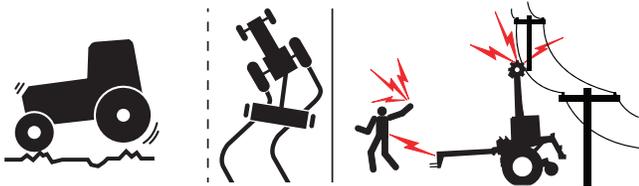
1. Check tires for cuts, bulges, and correct pressure. Replace worn or damaged tires.
2. Tire changing can be hazardous and must be performed by trained personnel using correct tools and equipment.
3. Tire explosion and/or serious injury can result from over inflation. Do not exceed tire inflation pressures.
4. When removing and installing wheels, use wheel-handling equipment adequate for weight involved.
5. Tighten wheel bolts only to the specified torque.

High Pressure Fluids



1. Escaping fluid from holes in hydraulic lines is difficult to spot. Do not use your hands or bare skin to search for suspected leaks; instead, use a piece of cardboard or wood. If injured by escaping hydraulic fluid, see a medical professional immediately. Exposure can result in gangrene or severe allergic reaction.
2. Check that hydraulic fittings are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
3. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.

Transporting



1. As with transporting any piece of heavy machinery, comply with all local laws and regulations before and during transport process.
2. Transport only at recommended transport speed for implement. Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.
3. Before towing implement on roads, make sure to empty out all material from the hoppers or boxes.
4. Know transport height and width of implement.
5. Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.
6. Keep clear of overhead power lines and other obstructions when transporting.
7. Reduce speed when turning, and make as wide a turn as possible. Turning tractor too tight can cause implement to tip over.
8. When towing on a trailer, secure implement with tie downs and chains.
9. When towing on a trailer, sudden braking can cause a trailer to swerve and upset. Reduce speed if trailer is not equipped with brakes.

Safety Chain

1. Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
2. Replace chain if any links or end fittings are broken, stretched or damaged.
3. Do not use safety chain for towing.

Safety Lights and Devices

1. Always use safety lighting. Slow-moving tractors and towed machinery can create a hazard when driven on public roads. They are difficult to see, especially at night.
2. If equipped, use flashing warning lights and turn signals whenever driving on public roads.
3. Use safety devices provided with implement.
4. Keep safety lights and signs clean and visible from front and rear of machine.
5. Keep lights in operating condition.

Shutdown and Storage

1. Park the tractor and implement on a solid, level surface where children normally do not play.
2. Put tractor in park or set the parking brake. Turn off engine and remove switch key to prevent unauthorized starting.
3. Wait for all components to come to a complete stop before leaving the operator's seat.
4. Detach the tractor. Secure the implement using blocks.

Proper Waste Disposal

1. Dispose of waste properly to avoid threatening the environment and ecology. Potential harmful waste includes oil, fuel, filters, and batteries.
2. Use a leak-proof container for draining fluids. Do not use a food or beverage container that may be mistaken for a consumable product.
3. Do not drain or pour waste onto the ground, down a drain, or into any water source.
4. Contact your local environmental or recycling center for the proper way to recycle or dispose of waste.

Safety Decals

Your seeder comes equipped with all safety decals in place.

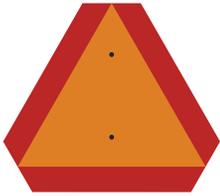
Read and follow decal directions. Keep all safety decals clean and legible. Replace all damaged, faded, or missing decals.

Order new decals from your Great Plains dealer. Refer to this section for proper decal placement.

When ordering new parts or components, also request corresponding safety decals.

Slow Moving Vehicle Reflector

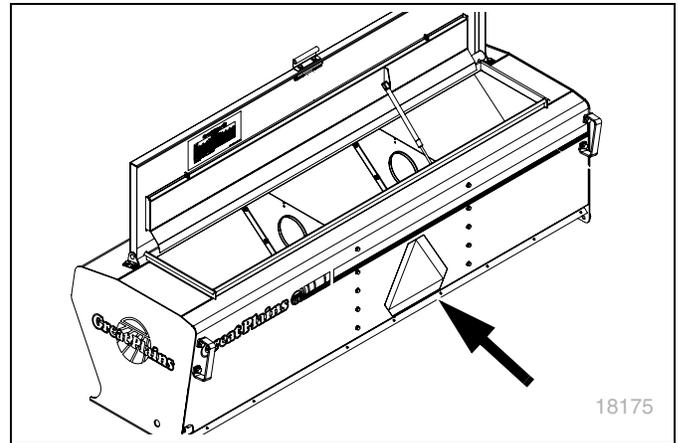
818-003C



On the back of seeder box, in center;
1 total

To install new decals:

- Clean area on which decal is to be placed.
- Peel backing from decal. Press firmly on surface, being careful not to cause air bubbles under decal.

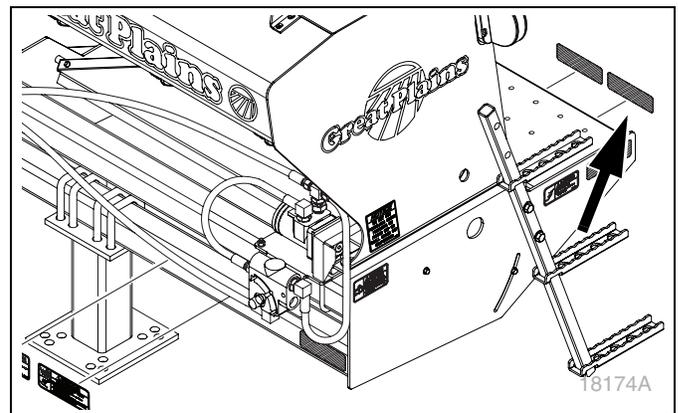


Red Reflectors

838-266C



Reflectors at rear on both ends of walkboard;
2 reflectors total

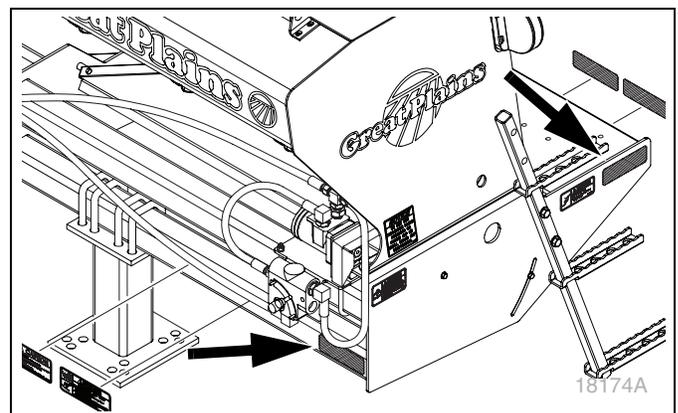


Amber Reflectors

838-265C



Reflectors on both left and right sides of seeder;
four reflectors total

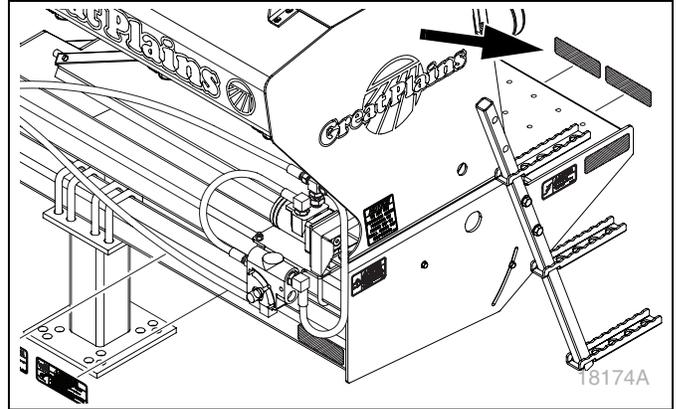


Daytime Reflectors

838-267C



Reflectors at rear on both ends of walkboard, inside red reflectors;
2 reflectors total

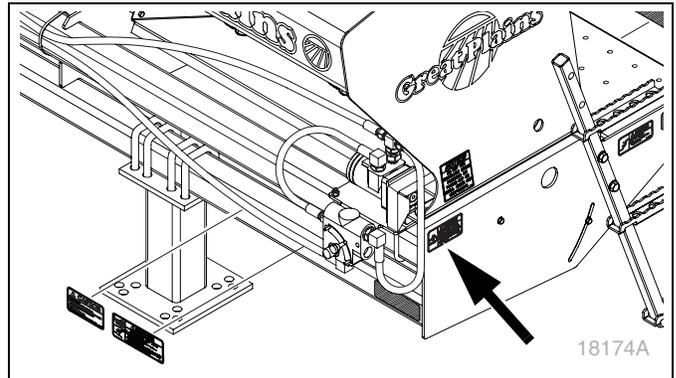


Warning: Moving Chain Hazard

818-860C



On left side end of frame;
1 total

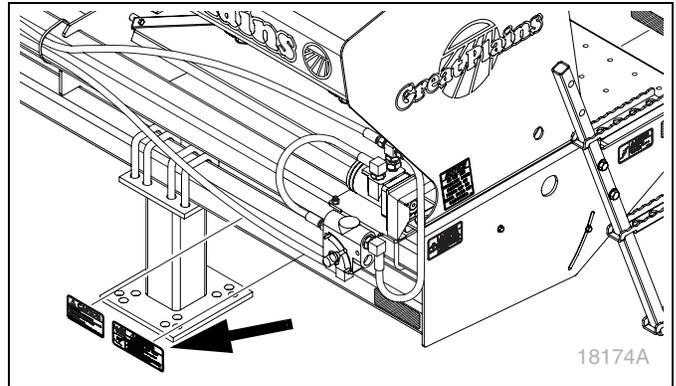


Warning: High Pressure Fluid Hazard

838-094C



On front of frame on left side;
1 total

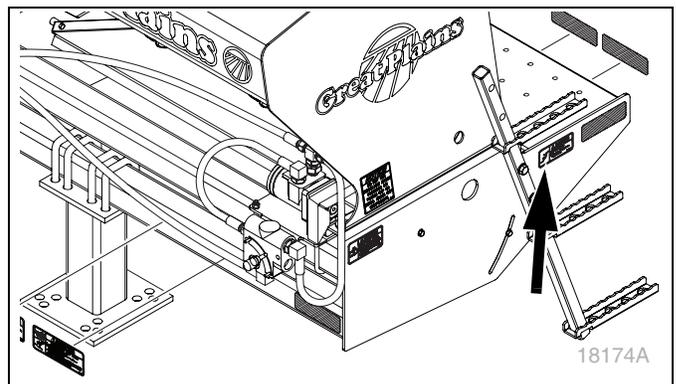


Warning: Falling Hazard

838-102C



On both ends of frame, near walkboard;
1 total



Caution: General Instructions

818-717C



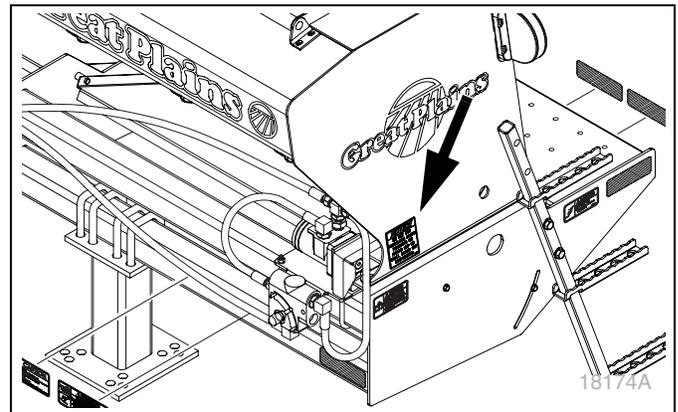
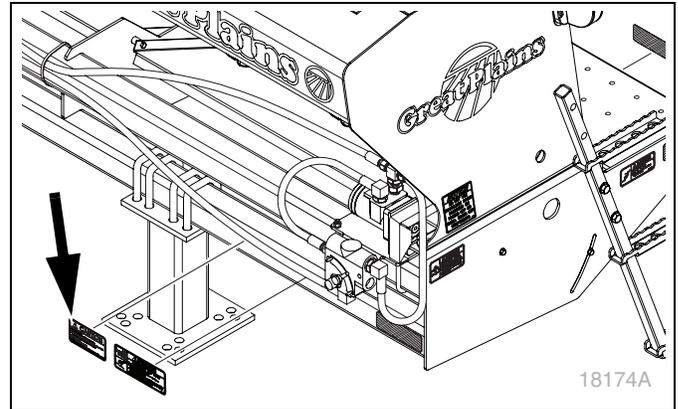
On front of frame on left side;
1 total

Notice: Lubrication Instructions

858-679C



On each end of seeder box;
2 total





Introduction

The LS10 and LS12 are mounted seeding implements designed to seed small grains on newly constructed levees. The seeder is designed to be mounted on a levee plow. A variable-rate hydraulic motor drives seeding. Seeding rates are adjusted by varying the speed of the hydraulic motor and tractor speed.

Intended Usage

Use this seeder in conjunction with a levee plow, tandem disk, offset disk or one-way plow to seed small grains or forages in a wide variety of applications.

Using This Manual

This manual will familiarize you with safety, assembly, operation, adjustments, troubleshooting and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The information in this manual is current at printing. Some parts may change to assure top performance.

Definitions

Right-hand and left-hand as used in this manual are determined by facing the direction the machine will travel while in use unless otherwise stated.

Owner Assistance

If you need customer service or repair parts, contact a Great Plains dealer. They have trained personnel, repair parts, and equipment specially designed for Great Plains products.

Your machine's parts were specially designed and should only be replaced with Great Plains parts. Always use the serial and model number when ordering parts from your Great Plains dealer. Record your seeder model and serial number on the inside cover of this manual for quick reference.

Your Great Plains dealer wants you to be satisfied with your new machine. If you do not understand any part of this manual or are otherwise dissatisfied,

Discuss the matter with your dealership service manager.

If you are still unsatisfied, seek out the owner or general manager of the dealership.

If the issue is not resolved, please contact:

Great Plains Service Department
1525 E. North St.
PO Box 5060
Salina, KS 67402-5060

Or go to www.greatplainsag.com and follow the contact information at the bottom of your screen for our service department.

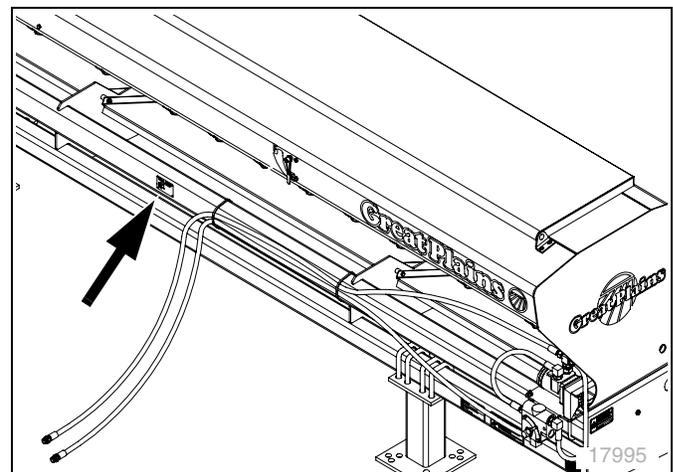
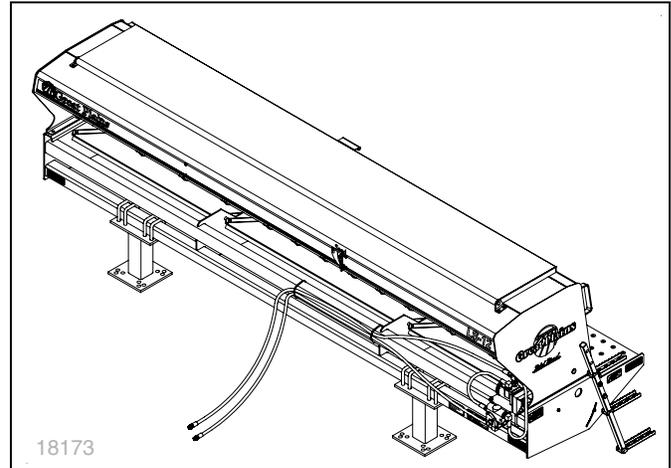


Figure 1
Serial Number Plate

Preparation and Setup

This section will help you prepare your tractor and seeder for use. Before field operation, you must assemble the seeder onto a tillage implement and hookup the hydraulic hoses.

Prestart Checklist

- Read and understand “**Safety Information**” on page 1.
- Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
- Check that all safety decals and reflectors are correctly located and legible. Replace decals if damaged. See “**Safety Decals**” on page 4.

Tools Required

- Forklift or hoist
- General hand tools
- 3/4-inch bolts and nuts

Mount Seeder on Plow

⚠ DANGER

Crushing hazard:

You will be severely injured or killed if the seeder falls on you. Secure seeder to lifting equipment so seeder cannot fall. Do not walk or place any part of your body under the seeder as the seeder is being lifted.

⚠ WARNING

Obey all safety instructions from lifting equipment manufacturer. Be sure lifting equipment has enough capacity to lift seeder.

1. Secure seeder to forklift or hoist. Lift seeder over plow.
2. Position using flat bars (A) under plow frame and use 3/4-inch bolts to clamp seeder to plow frame.
3. Remove ladders from side of seeder. Install ladders to seeder through top set of holes in ladder.

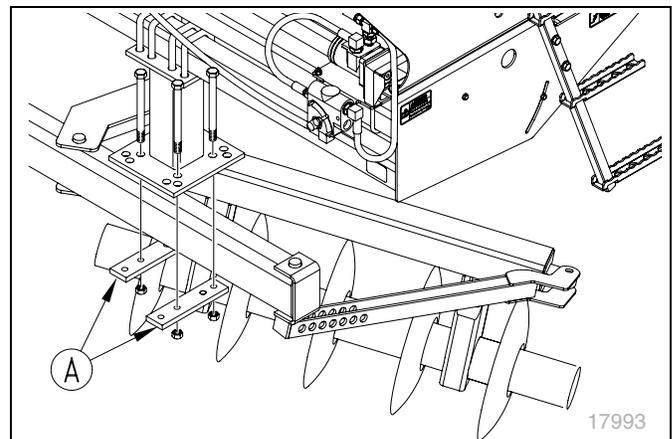


Figure 2
Clamp Seeder to Plow

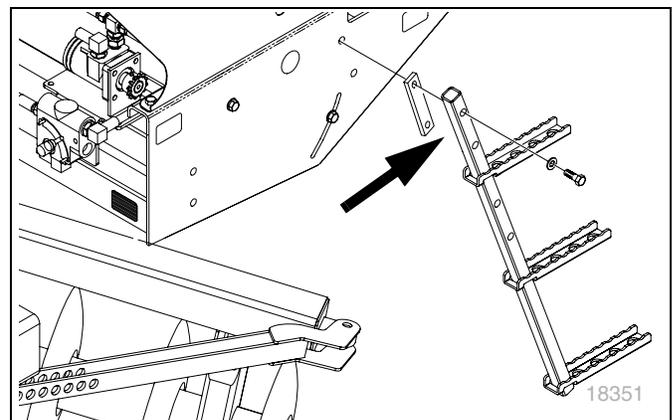


Figure 3
Reposition Ladder for Field Position

Hydraulic Hose Connections

WARNING

High Pressure Fluid Hazard:

Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek immediate medical assistance from a doctor that is familiar with this type of injury.

Connect the hose coming from the flow-control valve (1) on the seeder to the pressurized side of the remote circuit.

Connect return line to sump (2).

Check that the seed-cup shaft on the seeder is rotating in the correct direction. When standing on the left-hand side of seeder, the shaft should rotate counterclockwise. If necessary, switch hoses at outlets.

NOTE: For tractors with open center hydraulic systems, refer to your tractor manufacturer's recommendation before connecting the hydraulics on this unit.

For future reference, refer to the plastic hose holder to distinguish hoses.

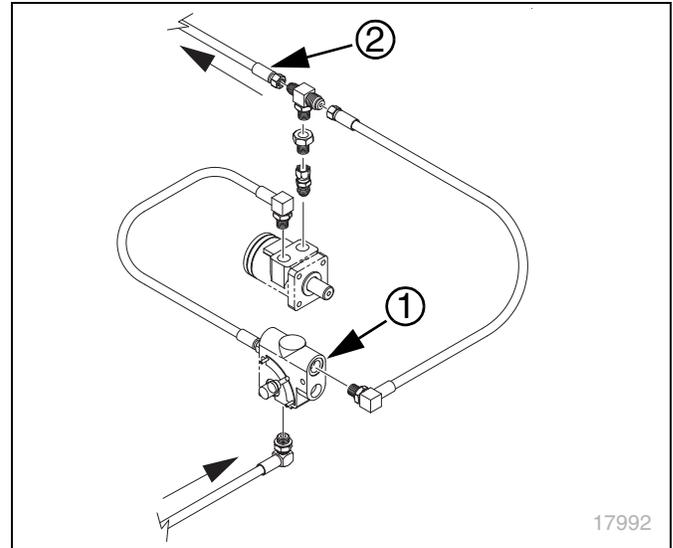


Figure 4
Hydraulic Connections

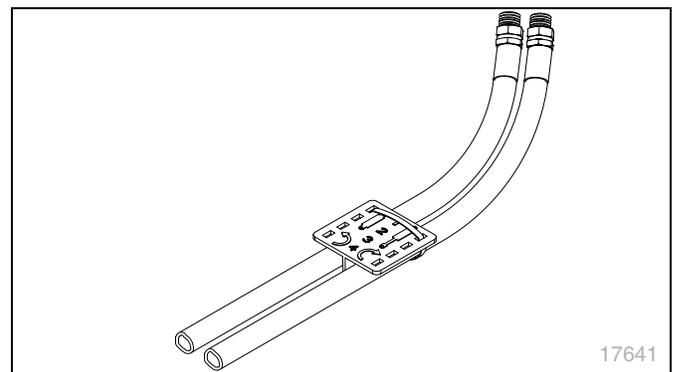


Figure 5
Hydraulic Hose Label



Operating Instructions

This section covers general operating procedures. Experience, machine familiarity, and the following information will lead to efficient operation and good working habits. Always operate farm machinery with safety in mind.

Prestart Checklist

DANGER

Falling Hazard:

Watch your step when walking on seeder ladder and walkboard. Falling from seeder could cause severe injury or death.

WARNING

High Pressure Fluid Hazard:

Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek immediate medical assistance from a doctor that is familiar with this type of injury.

- Read “**Safety Information**” beginning on page 1 carefully.
- Check all bolts, pins and fasteners. See on “**Torque Value Chart**” on page 21.
- Lubricate as recommended areas listed under “**Lubrication**” on page 16.
- Check seeder for worn or damaged parts. Repair or replace parts before going to the field.
- Check hydraulic hoses and fittings for leaks. Repair or replace before going to the field.
- Check that seed cups and drive are working properly and free from foreign material.

Field Operation

WARNING

Always park implement with plow wings swept back and rear parking stand in the parking position for maximum stability.

1. Mount seeder on levee plow or other compatible tillage implement. Position using flat bars (A) under plow frame and use 3/4-inch bolts to clamp seeder to plow frame.
2. Connect hydraulic hoses to tractor outlets. See “**Hydraulic Hose Connections**” on page 9.
3. Fill seeder box with clean seed.
4. Set and calibrate seeding rate as explained under “**Seeding Rate Adjustment**” on page 13.
5. Adjust seed-distribution door to the desired position. Refer to “**Distribution Panels**” on page 14.
6. Check that seed-cup-door handles are set the same across the drill. Refer to “**Seed Cup Doors**” on page 13.
7. Pull forward, lower implement, engage hydraulic drive and begin seeding.

Transporting

WARNING

Transporting implement at high speeds or with a tractor without enough ballast could lead to loss of vehicle control. Loss of vehicle control could lead to serious road accidents, injury and death. Do not exceed 20 mph. Refer to tractor operator manual for ballast requirements.

Before transporting seeder:

Unload seeder box - The seeder can be transported with a full box of grain, but the added weight will increase stopping distance and decrease maneuverability. Unload seeder box before transporting if at all possible.

Road rules - Comply with all federal, state and local laws when traveling on public roads.

Clearance - Remember that the seeder is wider than the tractor. Allow for safe clearance.

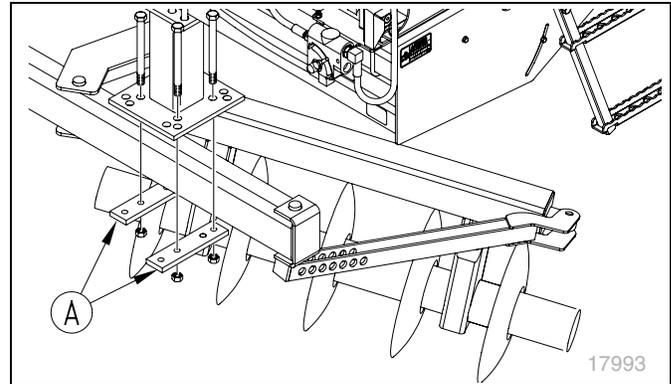


Figure 6
Clamp Seeder to Plow

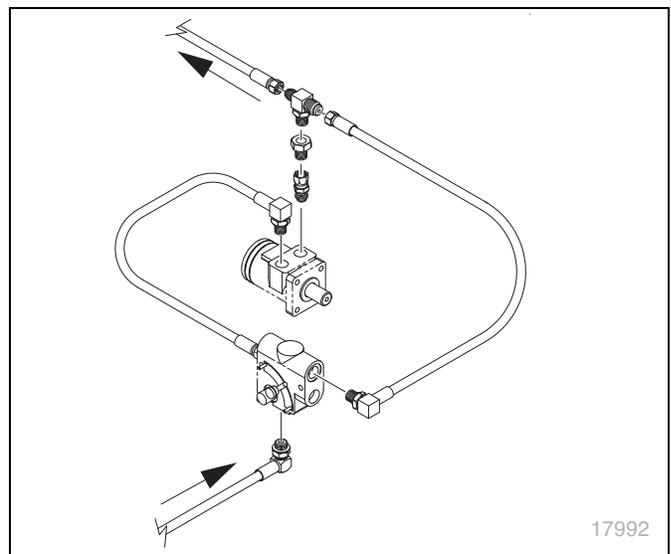


Figure 7
Hydraulic Connections

Parking

WARNING

Always park implement with plow wings swept back and rear parking stand in the parking position for maximum stability.

For information on long-term storage, refer to **“Storage”** on page 17.

1. Park the implement on a level, solid surface.
2. Lower the implement to the ground.
3. Relieve hydraulic pressure.
4. Shut off the tractor.
5. Disconnect the hydraulic hoses from the tractor outlets. Position hoses on seeder frame so hose ends are off the ground.
6. Place the rear parking stand in position as shown.
7. Unhitch the levee plow from the tractor.

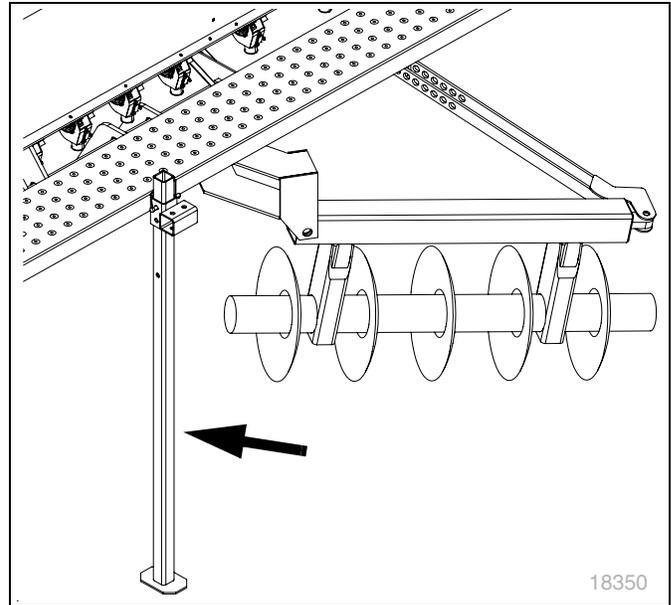


Figure 8
Rear Parking Stand



Adjustments

Seeding Rate Adjustment

To calibrate the seeding rate, the seeder and plow must be hooked to the tractor that will be used in the field and the hydraulic drive must be hooked to the tractor remotes.

NOTICE

Calibrate the seeding rate with a full box of seed.

1. Find your desired seeding rate and ground speed on the seeding rate chart, page 14. Determine how many shaft rpms are needed for your seeding rate and ground speed.
2. With the tractor parked and idling in neutral, adjust the tractor throttle up to field rpm.
3. Engage the hydraulic drive. Count the number of seed-cup-shaft revolutions per minute by using a tachometer.
4. Stop the hydraulic drive.
5. If the shaft is turning too slowly or quickly, loosen the black knob (1) and adjust flow control on the hydraulic drive.
6. Use the lever (2) to change rpms.
 - a. Move down to increase rpms.
 - b. Move up to reduce rpms.
7. When satisfied with the flow-control setting, lock the black knob.

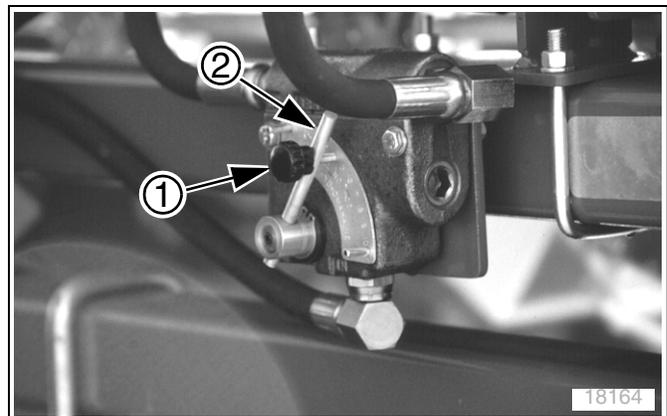


Figure 9
Flow Control Dial

Seed Cup Doors

For rice and other small grains, move the seed-cup-door handles to the highest position.

For larger seeds, lower the handles to the second or third position to reduce seed cracking.

For seed-cup clean out, move the handles to the fourth, wide-open position.

Make sure all handles are in the same position before seeding.

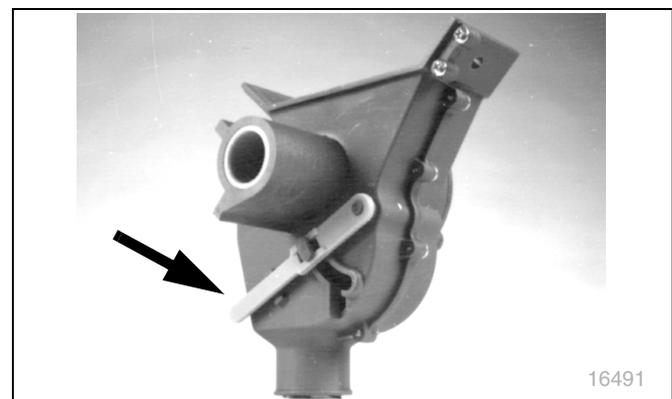


Figure 10
Seed-Cup-Door Handle

Seeding Rate Chart

	Ground Speed MPH	Seed-Cup Shaft RPM									
		5	10	15	20	25	30	35	40	45	50
		Pounds per Acre									
Long Grain Rice Lamont Variety 47 lbs/bu	1	145	291	436	582	727	872	1018	1163	1309	1454
	2	73	145	218	291	364	436	509	582	654	727
	3	48	97	145	194	242	291	339	388	436	485
	4	36	73	109	145	182	218	254	291	327	364
	5	29	58	87	116	145	174	204	233	262	291
	6	24	48	73	97	121	145	170	194	218	242
	7	21	42	62	83	104	125	145	166	187	208
	8	18	36	55	73	91	109	127	145	164	182
	9	16	32	48	65	81	97	113	129	145	162
	10	15	29	44	58	73	87	102	116	131	145

Short Grain Rice 43 lbs/bu	1	153	305	458	611	764	916	1069	1222	1374	1527
	2	76	153	229	305	382	458	534	611	687	764
	3	51	102	153	204	255	305	356	407	458	509
	4	38	76	115	153	191	229	267	305	344	382
	5	31	61	92	122	153	183	214	244	275	305
	6	25	51	76	102	127	153	178	204	229	255
	7	22	44	65	87	109	131	153	175	196	218
	8	19	38	57	76	95	115	134	153	172	191
	9	17	34	51	68	85	102	119	136	153	170
	10	15	31	46	61	76	92	107	122	137	153

Distribution Panels

Seed is metered onto one of three distribution panels. The panels distribute seed behind the levee plow. The angle of these panels are adjustable.

To adjust the distribution panels:

1. Loosen the bolts in the rear panel slots.
2. Adjust the panel to the desired position and tighten the bolts.

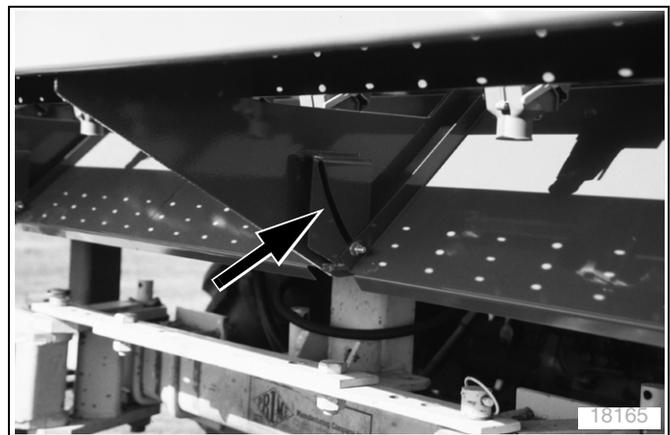


Figure 11
Distribution Panels



Troubleshooting

Problem	Solution
Actual metering rate is different than desired	Check seed-rate chart for proper seed-cup-shaft rpms for your seeding rate. Refer to “Seeding Rate Chart” on page 14.
	Adjust flow control on hydraulic drive. Refer to “Seeding Rate Adjustment” on page 13.
	Calibrate flow to hydraulic drive when seeder box is full of seed. Refer to “Seeding Rate Adjustment” on page 13.
	Check that seed-cup shaft is rotating in the correct direction. If not, reverse direction of flow to hydraulic drive by switching hoses at tractor outlets. Refer to “Hydraulic Hose Connections” on page 9.
Excessive seed cracking	Position seed-cup handles to a lower notch. Refer to “Seed Cup Doors” on page 13.
	Check that seed-cup shaft is rotating in the correct direction. If not, reverse direction of flow to hydraulic drive by switching hoses at tractor outlets. Refer to “Hydraulic Hose Connections” on page 9.
Drill box not emptying evenly	Certain models do not have the same number of cups between each divider of bulkhead. The section with more cups will empty sooner.



Maintenance and Lubrication

Maintenance

Proper servicing and maintenance is the key to long implement life. With careful and systematic inspection, you can avoid costly maintenance, downtime and repair.

Always turn off and remove tractor key before making any adjustments or performing any maintenance.

WARNING

Crushing Hazard:

You may be severely injured or killed by being crushed under the falling implement. Always lower plow to the ground before servicing the implement.

WARNING

High Pressure Fluid Hazard:

Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek immediate medical assistance from a doctor that is familiar with this type of injury.

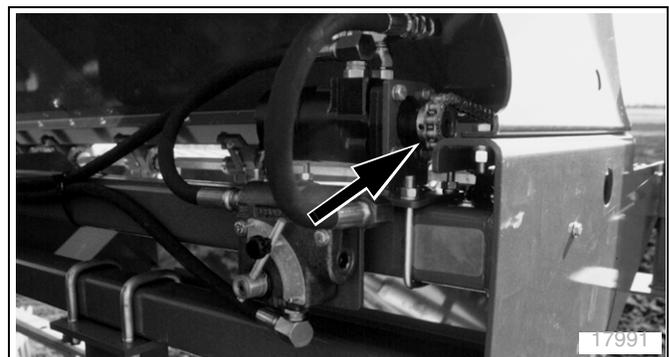
1. After using the seeder for several hours, check all bolts to be sure they are tight.
2. Adjust the idlers to remove excess slack from the drive chain.
3. Lubricate areas listed under “**Lubrication**” on page 16.
4. Clean the seeder on a regular basis. Regular and thorough cleaning lengthen equipment life and reduce maintenance and repair.
5. Inspect hydraulic hoses for cuts, cracks, and aging. Check fittings for evidence of leaks.
6. Replace any worn, damaged, or illegible safety decals. Order new decals from your Great Plains dealer. Refer to “**Safety Decals**” on page 4.

Lubrication

Drive Chain



Type of Lubrication: Chain Lube
Quantity: Coat thoroughly



Storage

⚠ WARNING

Always park implement with plow wings swept back and rear parking stand in the parking position for maximum stability.

⚠ WARNING

Do not use ladder or walkboard when unit is not hitched to tractor.

Store seeder where children do not play. If possible, store implement inside for longer life.

1. Clean seeder as necessary. Be sure the seed box is cleaned completely before storing.
2. Lubricate as indicated under “**Lubrication**” on page 16.

Removing Seeder from Plow

⚠ DANGER

Crushing hazard:

You will be severely injured or killed if the seeder falls on you. Secure seeder to lifting equipment so seeder cannot fall. Do not walk or place any part of your body under the seeder as the seeder is being lifted.

⚠ WARNING

Obey all safety instructions from lifting equipment manufacturer. Be sure lifting equipment has enough capacity to lift seeder.

1. Reposition the ladders for use as stands. Remove the ladders from the side of the seeder. Install the ladders to the seeder through the lower set of holes in the ladder.
2. Secure the seeder to the forklift or hoist.
3. Disassemble the flat bars (A) that secure the seeder to the plow frame.
4. Lift the seeder off the plow.

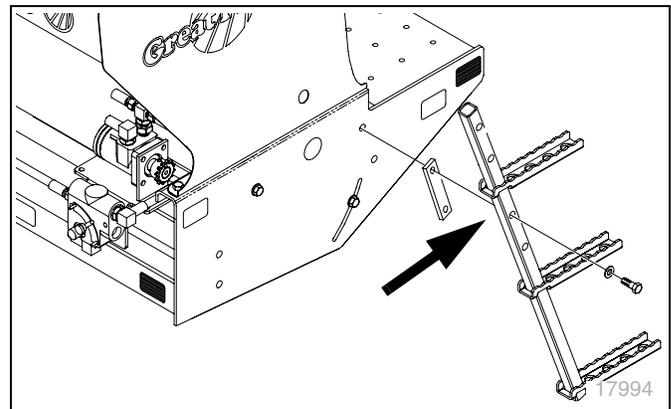


Figure 12
Reposition Ladder

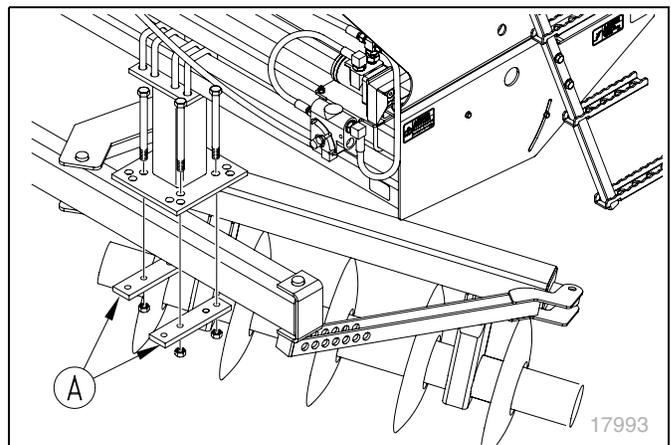


Figure 13
Disassemble Flat Bars



Specifications and Capacities

	LS10	LS12
Seed Cups per Seeder	10	12
Weight, Levee Seeder Only	1163 pounds	1395 pounds
Working Width	10 feet	12 feet
Transport Width	10 feet 4 inches	12 feet 6 inches
Height, Levee Seeder Only	7 feet 2 inches	7 feet 2 inches
Box Capacity	24 bushels	29 bushels
Tractor Requirements	One hydraulic remote	One hydraulic remote



Pre-Delivery Instructions

Install Lights

The lights and harnesses may be installed or may be shipped in a box to prevent damage to the lighting system during transport and loading.

NOTICE

If the seeder is delivered with the lights and harnesses not installed, the dealer must install the lights and harnesses on the seeder before selling the drill.

Amber Lights Installation

1. On one end of the seeder, remove the handle (1). Keep the hardware.
2. If necessary, install an amber light (2) on a bracket (3) with two 1/4 inch self-tapping screws (4).
3. Install the light bracket and handle onto the seeder with the hardware removed earlier, two hex flange bolts (5), flat washers (6), and hex flange nuts (7).
4. Repeat the above steps for the other side of the seeder.

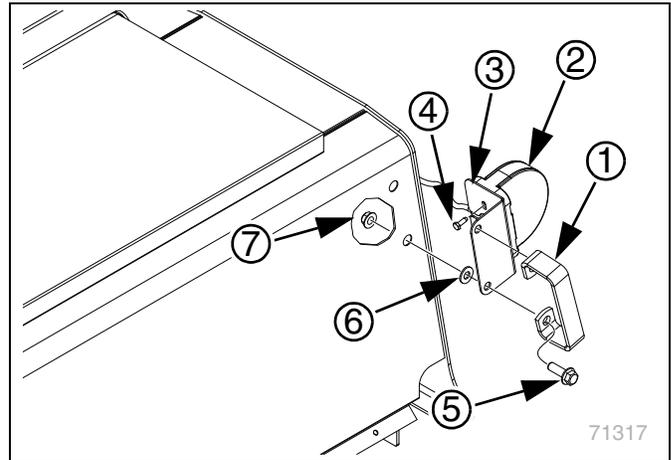


Figure 14
Amber Light Installation

Red Lights Installation

1. Install a red light (1) to a bracket (2) with two 1/4 inch self-tapping screws (3). Make sure the red light will be toward the rear of the seeder when installed.
2. Install the bracket to the walkboard with two 3/8 inch round head bolts (4).
3. Secure one bolt with a flat washer (5), lock washer (6), and nut (7).
4. Secure the other bolt with a hose clip (8), lock washer, and nut.
5. Repeat the above steps for the other red light.

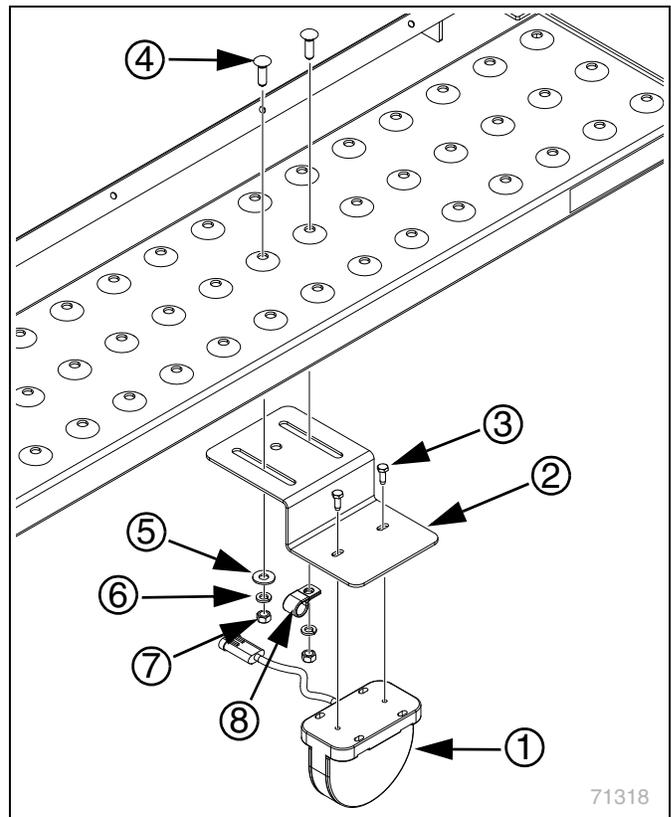


Figure 15
Red Light Installation

Harness Installation

1. At the front-center of the frame, install the harness holder (1) with a 3/8 inch u-bolt (2), lock washers (3), and nuts (4).
2. If not already assembled, install the light harness enhance module (5) to the harness holder with two 1/4 inch bolts (6) and hex flange nuts (7).
3. Connect the light wishbone harness and harness lead to the enhance module.
4. Connect the 3-pin connectors on the wishbone harness to the red lights. Route the harness through the hose clips.
5. Connect the 2-pin connectors on the wishbone harness to the amber lights.

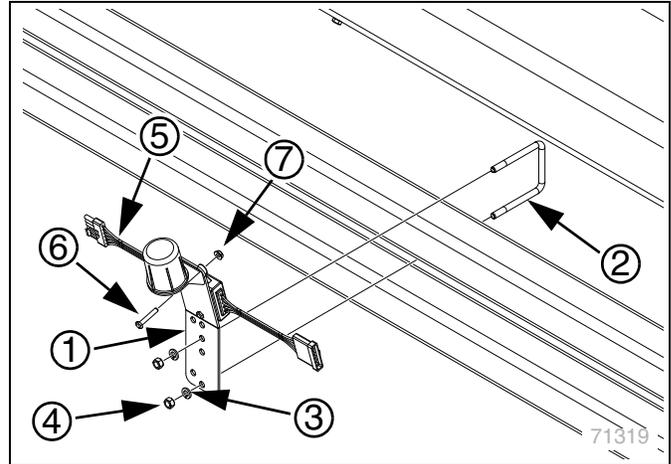


Figure 16
Harness Holder Installation

CAUTION

Harness Damage Hazard:

Make sure all wiring harnesses are secured to the machine to prevent damage to the harnesses which can result in injury to the operator or damage to the machine.

NOTICE

Wire Damage Risk:

Make sure all harnesses are secured to machine. To prevent damage to harnesses, do not stretch wires and do not let wires drag on the ground.



Appendix

Torque Value Chart

Bolt Size in-tpi ^a	Bolt Head Identification					
						
	Grade 2		Grade 5		Grade 8	
	N-m ^b	ft-lb ^d	N-m	ft-lb	N-m	ft-lb
1/4-20	7.4	5.6	11	8	16	12
1/4-28	8.5	6	13	10	18	14
5/16-18	15	11	24	17	33	25
5/16-24	17	13	26	19	37	27
3/8-16	27	20	42	31	59	44
3/8-24	31	22	47	35	67	49
7/16-14	43	32	67	49	95	70
7/16-20	49	36	75	55	105	78
1/2-13	66	49	105	76	145	105
1/2-20	75	55	115	85	165	120
9/16-12	95	70	150	110	210	155
9/16-18	105	79	165	120	235	170
5/8-11	130	97	205	150	285	210
5/8-18	150	110	230	170	325	240
3/4-10	235	170	360	265	510	375
3/4-16	260	190	405	295	570	420
7/8-9	225	165	585	430	820	605
7/8-14	250	185	640	475	905	670
1-8	340	250	875	645	1230	910
1-12	370	275	955	705	1350	995
1 1/8-7	480	355	1080	795	1750	1290
1 1/8-12	540	395	1210	890	1960	1440
1 1/4-7	680	500	1520	1120	2460	1820
1 1/4-12	750	555	1680	1240	2730	2010
1 3/8-6	890	655	1990	1470	3230	2380
1 3/8-12	1010	745	2270	1670	3680	2710
1 1/2-6	1180	870	2640	1950	4290	3160
1 1/2-12	1330	980	2970	2190	4820	3560

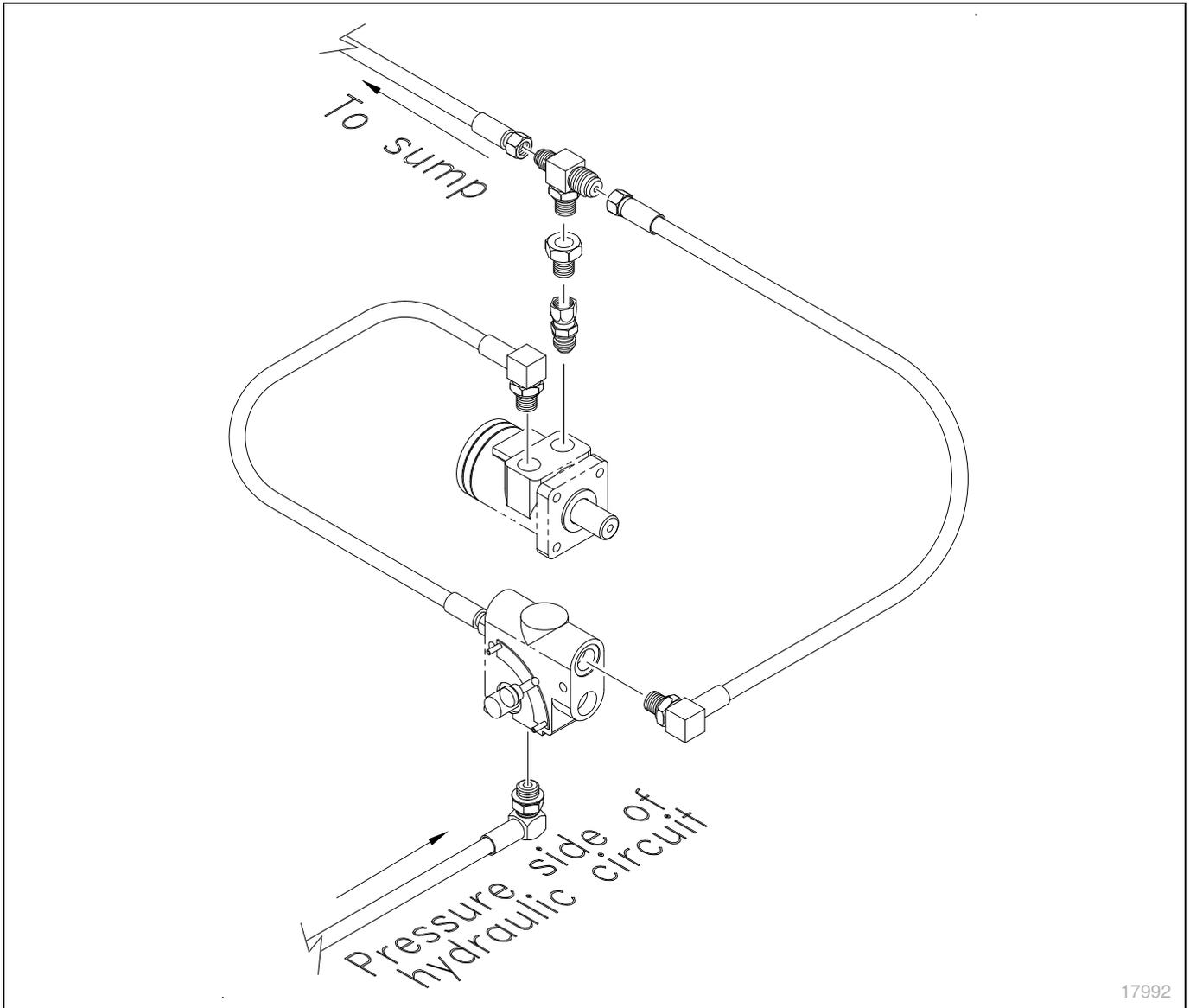
Bolt Size mm x pitch ^c	Bolt Head Identification					
						
	Class 5.8		Class 8.8		Class 10.9	
	N-m	ft-lb	N-m	ft-lb	N-m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

- a. in-tpi = nominal thread diameter in inches-threads per inch
- b. N·m = newton-meters
- c. mm x pitch = nominal thread diameter in mm x thread pitch
- d. ft-lb = foot pounds

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

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Hydraulic Schematics



Warranty

Great Plains (a division of Great Plains Manufacturing, Inc.) warrants to the original purchaser that this Great Plains unit will be free from defects in material and workmanship for a period of one year from the first use date when used as intended and under normal service and conditions for personal use; ninety days for custom/commercial or rental use. This Warranty is limited to the replacement of any defective part by Great Plains and the installation by the dealer of any such replacement part. Great Plains reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship.

The following items and/or conditions are **not covered under warranty**: failures resulting from abuse or misuse of the equipment, failures occurring as a result of accidental damage or acts of God, failures resulting from alterations or modifications, failures caused by lack of normal maintenance as outlined in the operator's manual, repairs made by non-authorized personnel, items replaced or repaired due to normal wear (such as wear items and ground engaging components), repeat repair due to improper diagnosis or repair by the dealer, temporary repairs, service calls and/or mileage to and from customer location, overtime premium, or unit hauling expenses. The warranty may be voided if the unit is towed at speeds in excess of 20 miles per hour (32 kilometers per hour), or is used in soils with rocks, stumps, or other obstructions.

Great Plains reserves the right to make changes in materials or design of the product at any time without notice. The warranty shall not be interpreted to render Great Plains liable for damages of any kind, direct or consequential or contingent to property. Furthermore, Great Plains shall not be liable for damages resulting from any cause beyond its control. This warranty does not extend to crop loss, losses caused by planting or harvest delays or any expense or loss of labor, supplies, rental machinery, or for any other reason.

No other warranty of any kind whatsoever express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This warranty is not valid unless the unit is registered with Great Plains within 10 days from the date of the original purchase.

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