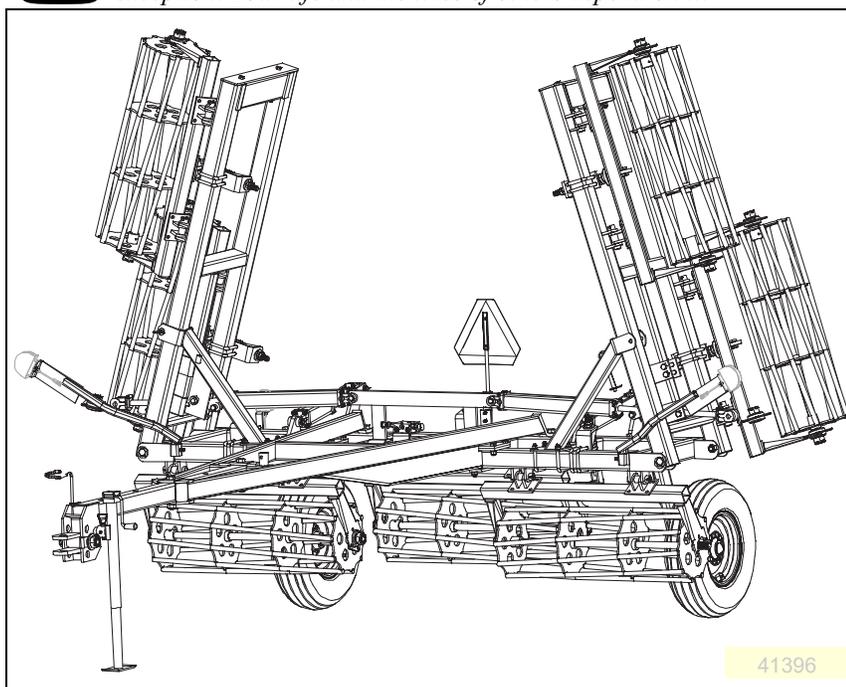


Operator Manual

Series I 2112, 2115, 2317, 2320, 2322,
2325, 2327, 2330, 2332 & 2335
Seedbed Conditioner



Read the operator's 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 2021-04-14

540-072M

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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Important 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.

DANGER indicates an imminently hazardous situation 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 indicates a potentially hazardous situation 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 indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



Prepare for Emergencies

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



Be Familiar with Safety Decals

- ▲ *Read and understand "Safety Decals" on page 5, thoroughly.*
- ▲ *Read all instructions noted on the decals.*
- ▲ *Keep decals clean. Replace damaged, faded and illegible decals.*



Wear Protective Equipment

- ▲ *Wear protective clothing and equipment.*
- ▲ *Wear clothing and equipment appropriate for the job. Avoid loose-fitting clothing.*
- ▲ *Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection such as earmuffs or earplugs.*
- ▲ *Because operating equipment safely requires your full attention, avoid wearing entertainment headphones while operating machinery.*



Handle Chemicals Properly

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

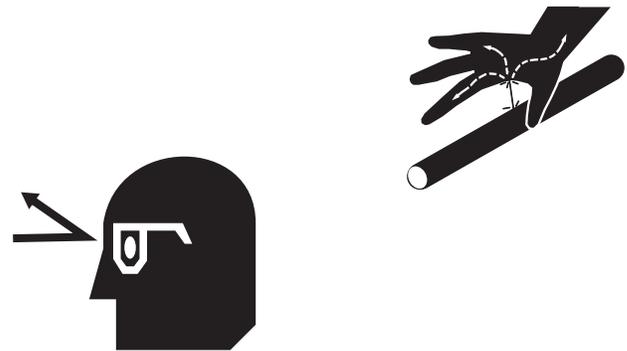
- ▲ *Read and follow chemical manufacturer's instructions.*
- ▲ *Wear protective clothing.*
- ▲ *Handle all chemicals with care.*
- ▲ *Avoid inhaling smoke from any type of chemical fire.*
- ▲ *Store or dispose of unused chemicals as specified by chemical manufacturer.*



Avoid High Pressure Fluids

Escaping fluid under pressure can penetrate the skin, causing serious injury.

- ▲ *Avoid the hazard by relieving pressure before disconnecting hydraulic lines.*
- ▲ *Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.*
- ▲ *Wear protective gloves and safety glasses or goggles when working with hydraulic systems.*
- ▲ *If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury.*



Use Safety Lights and Devices

Slow-moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.

- ▲ *Use flashing warning lights and turn signals whenever driving on public roads.*
- ▲ *Use lights and devices provided with implement*



Keep Riders Off Machinery

Riders obstruct the operator's view. Riders could be struck by foreign objects or thrown from the machine.

- ▲ *Never allow children to operate equipment.*
- ▲ *Keep all bystanders away from machine during operation.*



Transport Machinery Safely

Maximum transport speed for implement is 20 mph (32 kph), 13 mph (22 kph) in turns. Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

- ▲ *Do not exceed 20 mph. Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.*
- ▲ *Comply with state and local laws.*
- ▲ *Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.*
- ▲ *Carry reflectors or flags to mark Seedbed Conditioner in case of breakdown on the road.*
- ▲ *Keep clear of overhead power lines and other obstructions when transporting. Refer to transport dimensions under “SC Specifications and Capacities” on page 20.*
- ▲ *Do not fold or unfold the Seedbed Conditioner while the tractor is moving*

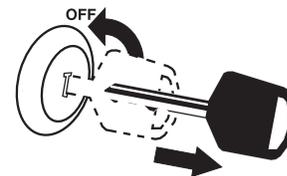
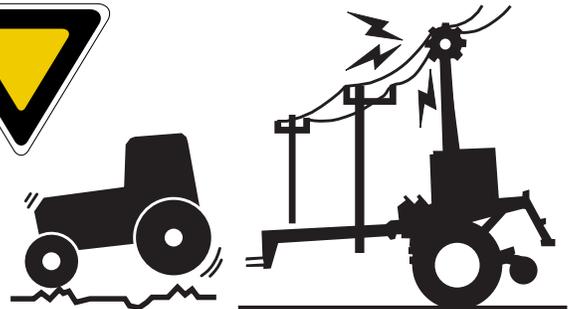
Shutdown and Storage

- ▲ *Lower Seedbed Conditioner, put tractor in park, turn off engine, and remove the key.*
- ▲ *Secure Seedbed Conditioner using blocks and supports provided.*
- ▲ *Detach and store machine in an area where children normally do not play.*

Tire Safety

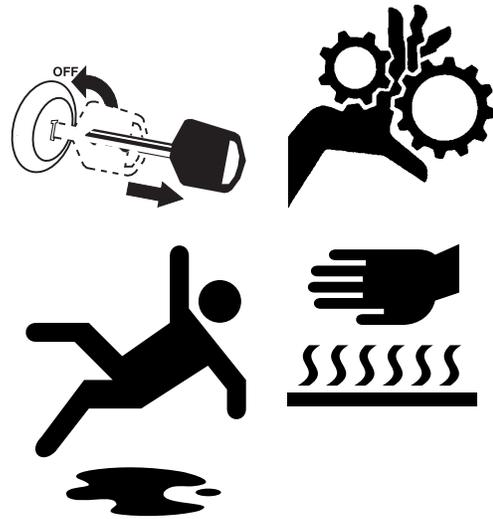
Tire changing can be dangerous and should be performed by trained personnel using correct tools and equipment.

- ▲ *When inflating tires, use a clip-on chuck and extension hose long enough for you to stand to one side—not in front of or over tire assembly. Use a safety cage if available.*
- ▲ *When removing and installing wheels, use wheel-handling equipment adequate for weight involved.*



Practice Safe Maintenance

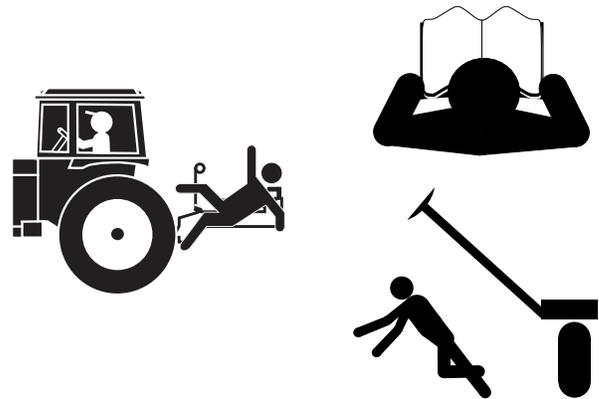
- ▲ *Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.*
- ▲ *Work in a clean, dry area.*
- ▲ *Lower the machine, put tractor in park, turn off engine, and remove key before performing maintenance.*
- ▲ *Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on machine.*
- ▲ *Inspect all parts. Make sure parts are in good condition and installed properly.*
- ▲ *Remove buildup of grease, oil or debris.*
- ▲ *Remove all tools and unused parts from machine before operation.*



Safety At All Times

Thoroughly read and understand the instructions in this manual before operation. Read all instructions noted on the safety decals.

- ▲ *Be familiar with all machine functions.*
- ▲ *Operate machinery from the driver's seat only.*
- ▲ *Do not leave Seedbed Conditioner unattended with tractor engine running.*
- ▲ *Do not stand between the tractor and machine during hitching.*
- ▲ *Keep hands, feet and clothing away from power-driven parts.*
- ▲ *Wear snug-fitting clothing to avoid entanglement with moving parts.*
- ▲ *Watch out for wires, trees, etc., when folding and raising machine. Make sure all persons are clear of working area.*

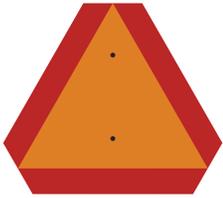


Safety Decals

Safety Reflectors and Decals

Your implement comes equipped with all lights, safety reflectors and decals in place. They were designed to help you safely operate your implement.

- ▲ *Read and follow decal directions.*
- ▲ *Keep lights in operating condition.*
- ▲ *Keep all safety decals clean and legible.*
- ▲ *Replace all damaged or missing decals. Order new decals from your Great Plains dealer. Refer to this section for proper decal placement.*



818-055C Slow Moving Vehicle Reflector

On the back of the center frame;
1 total



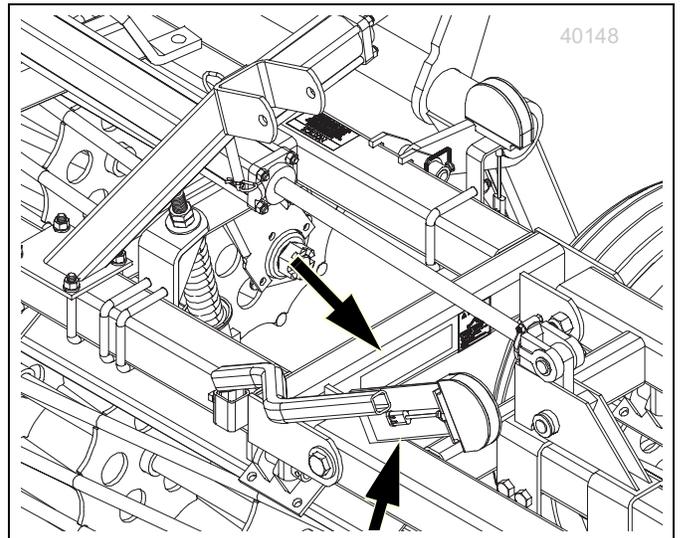
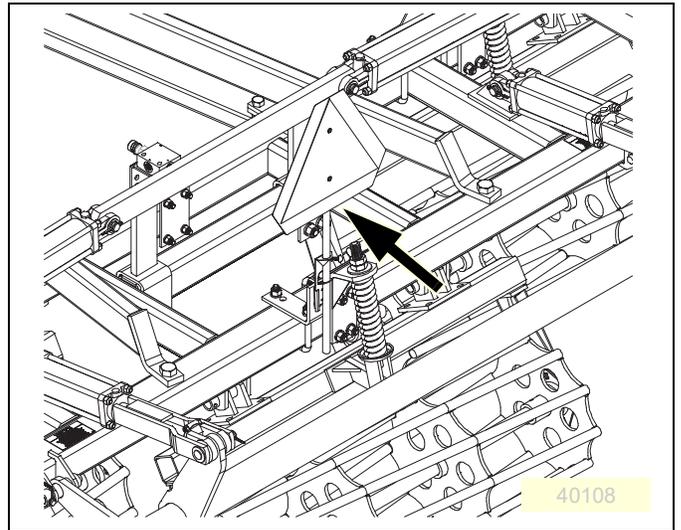
838-615C Amber Reflectors

One on front of light bracket and one on outside of center frame (both sides);
4 total

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

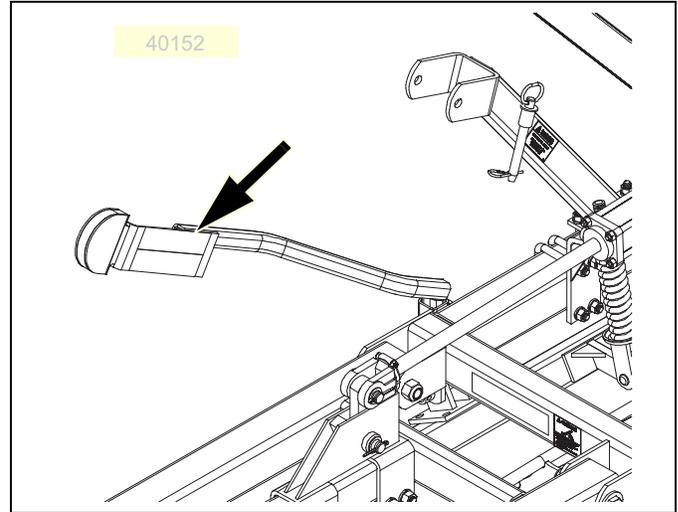
To install new decals:

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



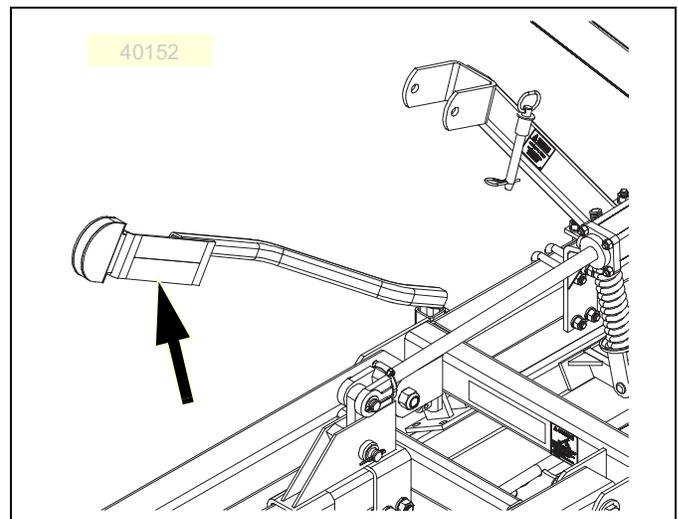
**838-614C
Red Reflectors**

On rear of light brackets (top);
2 total



**838-603C
Orange Reflectors**

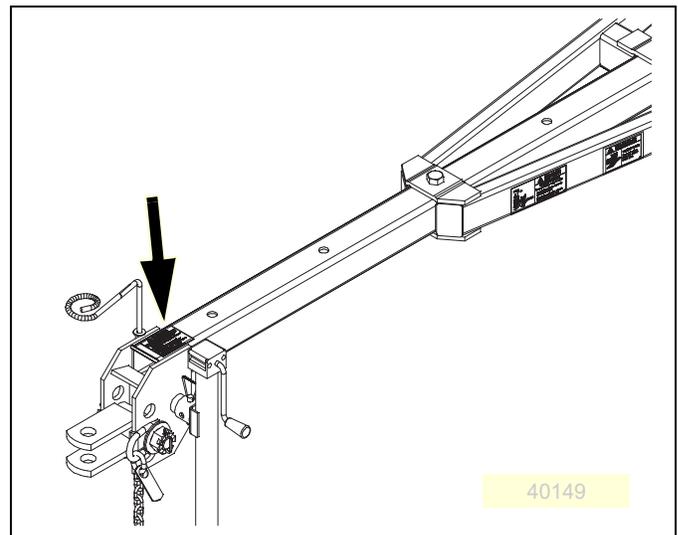
On rear of light brackets (bottom);
2 total

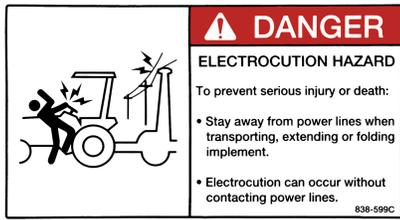


 CAUTION
<ol style="list-style-type: none"> 1. Read and Understand the Operator's Manual before using machine. 2. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging or fitting. 3. Keep hands, feet, hair and clothing away from earth-working points and blades. 4. Do not allow riders. 5. Clean reflectors, SMV and lights before transporting. 6. Install safety locks before transporting or working beneath components. 7. Add extra lights and use pilot vehicle when transporting during times of limited visibility. 8. Use hazard flashers in tractor when transporting. 9. Install safety chain when attaching to tractor. 10. Review safety instructions with all operators annually. 838-598C
<p>WARNING: Cancer and Reproductive Harm • www.P65Warnings.com</p>

**838-598C
Caution: Read Operator's Manual**

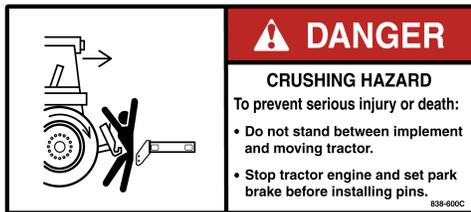
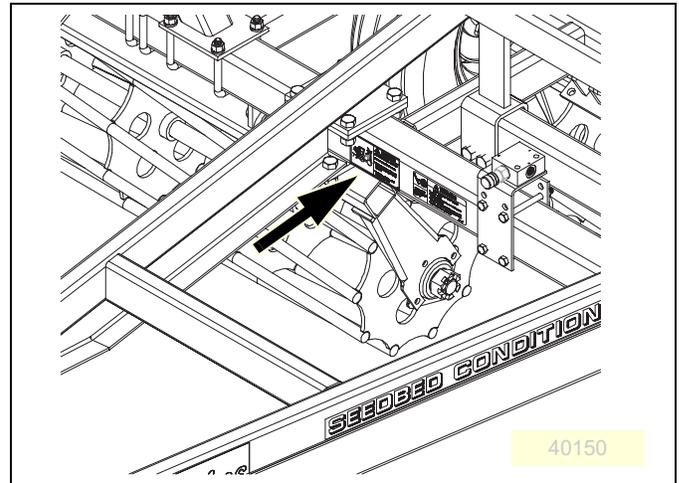
On front of hitch;
1 total





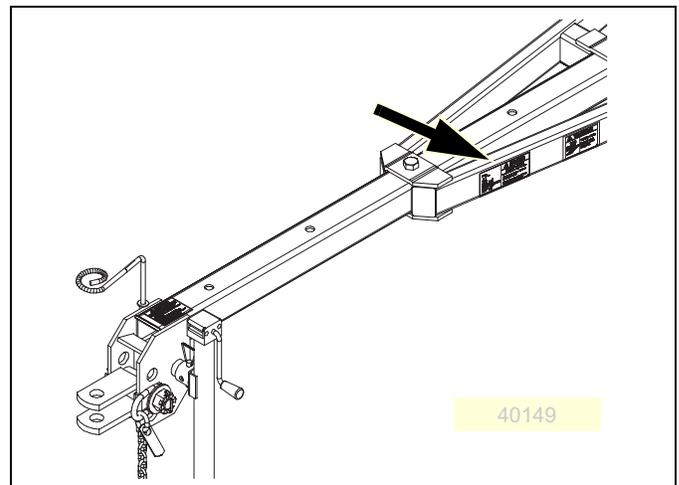
838-599C
Danger: Electrocution Hazard

Front side of center frame (right);
 1 total Models 2317-2335



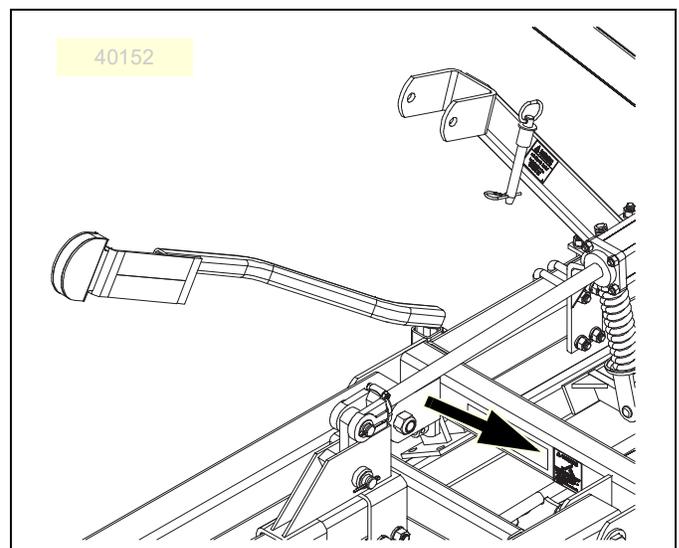
838-600C
Danger: Crushing Hazard

On front of hitch frame (front);
 1 total



838-602C
Warning: Overhead Wing Hazard

On outside center frame (both sides);
 2 total Models 2317-2335

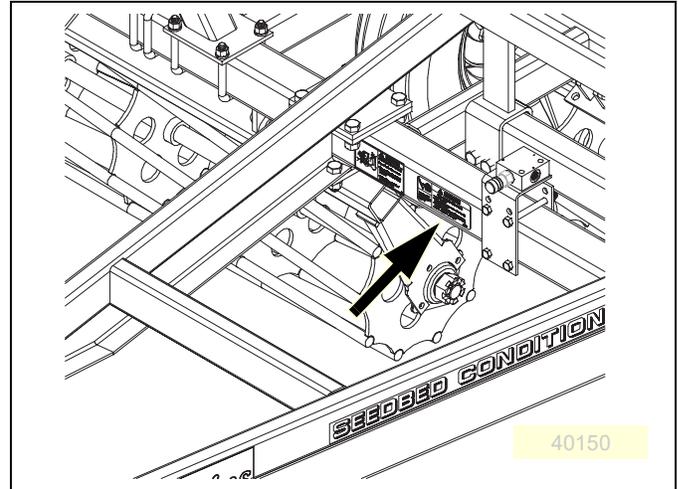




838-094C

Warning: High Pressure Fluid

Front side of center frame (left);
1 total



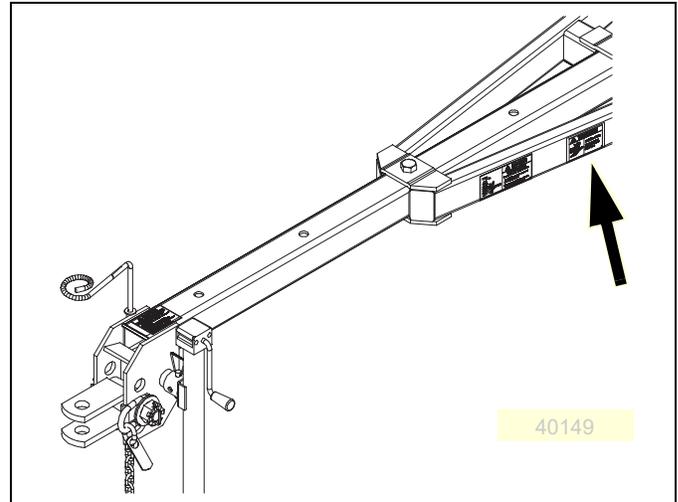
40150



838-611C

Warning: Hand Crushing

On front of hitch frame (rear);
1 total



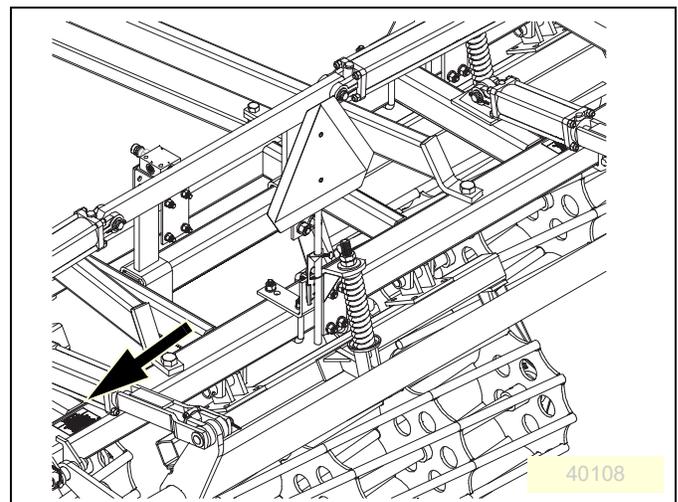
40149



838-613C

Notice: Transport Lock

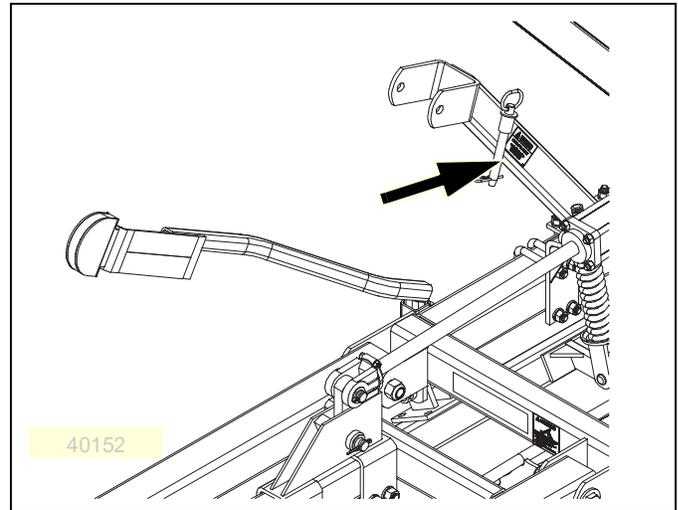
On outside center of center frame (both sides);
2 total



40108

**838-612C****Warning: Wings Could Fall Suddenly**

On back of wing stop (both sides);
2 total Models 2317-2335





Introduction

Great Plains welcomes you to our growing family of new product owners. The 2112-2335SC have been designed with care and built by skilled workers using quality materials. Proper setup, maintenance, and safe operating practices will help you get years of satisfactory use from the machine. See “SC Specifications and Capacities” for machine tillage widths.

Models Covered

2112SC	1-section
2115SC	1-section
2317SC	3-section
2320SC	3-section
2322SC	3-section
2325SC	3-section
2327SC	3-section
2330SC	3-section
2332SC	3-section
2335SC	3-section

Description of Unit

The 2112-2335SC is a soil firming and conditioning tool. Working width ranges from 12 to 35 feet. The implement is designed to pull behind a host machine, or on its own to create a firm seedbed for optimum seed germination while also leveling ridges and breaking clods.

Document Family

540-072Q	Pre-Delivery Manual
540-072M	Operator Manual (this document)
540-072P	Parts Manual

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.

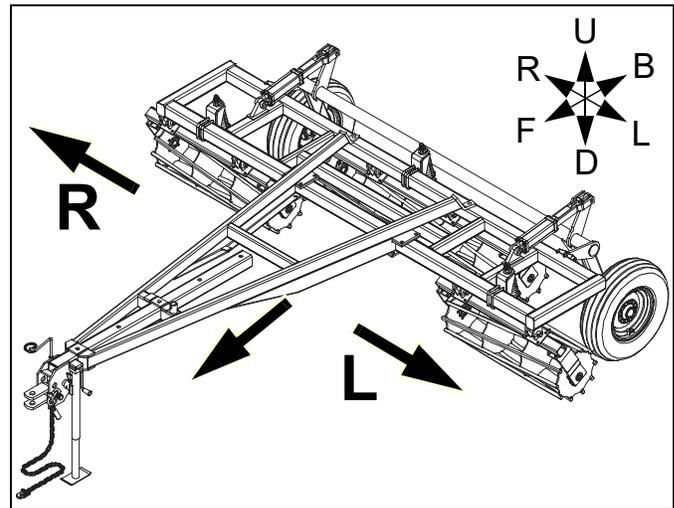
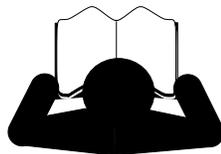


Figure 1
2112SC Seeded Conditioner

42290

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

Definitions

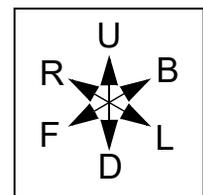
The following terms are used throughout this manual.

NOTICE

A crucial point of information related to the preceding topic. Read and follow the directions to remain safe, avoid serious damage to equipment and ensure desired field results.

 Useful information related to the preceding topic.

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. An orientation rose in some line art illustrations shows the directions of: Up, Back, Left, Down, Front, Right.



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.

Refer to Figure 2

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. The serial-number plate is located on the left end of the top front tool bar.

Record your Seedbed Conditioner model and serial number here for quick reference:

Model Number: _____

Serial Number: _____

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 not satisfied with the service received, please take the following actions.

3. Discuss the matter with your dealership service manager. Make sure they are aware of any problems so they can assist you.
4. If you are still unsatisfied, seek out the owner or general manager of the dealership.

Further Assistance

Great Plains Manufacturing, Inc. wants you to be satisfied with your new 2112-2335SC. If for any reason you do not understand any part of this manual or are otherwise dissatisfied with the product please contact:

Great Plains Service Department
1525 E. North St.
P.O. 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.

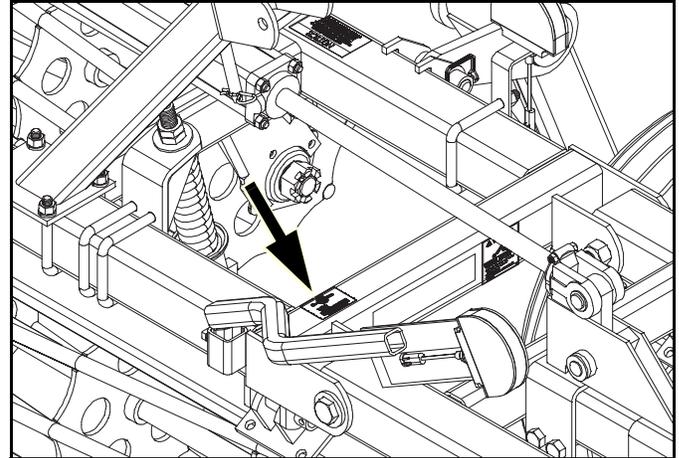


Figure 2
Serial Number Plate

41397



Preparation and Setup

This section helps you prepare your tractor and 2112-2335SC seedbed conditioner for use, and covers tasks that need to be done seasonally, or when the tractor/Seedbed Conditioner configuration changes.

Before using the Seedbed Conditioner in the field, you must hitch it to a suitable tractor, inspect systems and level the Seedbed Conditioner. Before using the Seedbed Conditioner for the first time, and periodically thereafter, certain adjustments and calibrations are required.

Prior to Going to the Field Checklist

Complete this checklist before routine setup:

- Read and understand “**Important Safety Information**” on page 1.
- Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
- Make sure your tractor horsepower matches the implement you are pulling. This is important so the implement can do the best possible job.
- Clean all hydraulic couplings and connect to tractor as shown on page 13 and 14.
- If machine is folded, remove the transport pins from wing stops. (DO NOT remove pins if the wing is leaning against the pins or putting pressure on the pins. Use the hydraulics to pull the wings in completely before unpinning them.) Once the pins are removed, slowly untold the unit. Make sure no one is under the wings during the unfolding process.
- Check again for hydraulic leaks and watch that hoses do not get pinched in hinges, wing stops, etc.
- After the machine is completely unfolded, raise and lower the seedbed conditioner several times to purge air from the hydraulic system. Again check for hydraulic leaks and tighten or replace if necessary.
- Check safety chain hookup. Make sure all warning lights are hooked up and functioning correctly.
- Check that all grease fittings are in place and lubricated. See “**Lubrication**” on page 18. The hubs will come pre-greased and will not need greased at this time.
- Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See “**Safety Decals**” on page 5.
- Inflate tires to pressure recommended and tighten wheel bolts as specified. See “**Tire Inflation Chart**” on page 20.

Spring Pre-load Adjustment

Refer to Figure 3

- Be sure shipping block is removed from each spring assembly.
1. Loosen jam nut ① and set spring pre-load to 8 3/8” by adjusting nut ②. Re-tighten jam nut ①.
 2. Put transport locks in place and refold the machine slowly. Put wing stop pins in place. Always use the transport pins when moving from field to field. You are now ready to go to the field.

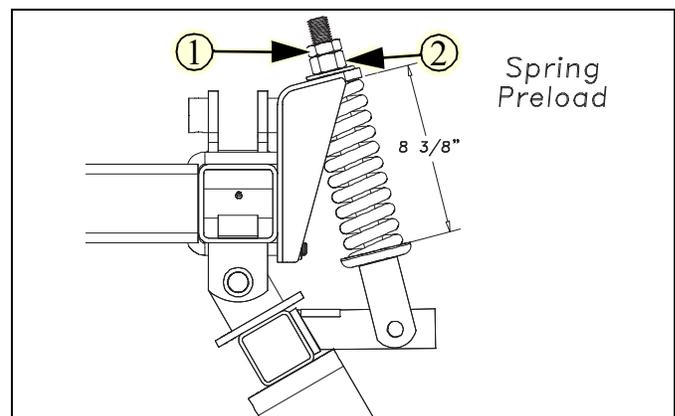


Figure 3
Basket Spring Pre-load

40846

Hitching Tractor to Seedbed Conditioner

⚠ DANGER

Crushing Hazard:

Do not stand or place any body part between Seedbed Conditioner and moving tractor. You may be severely injured or killed by being crushed between the tractor and Seedbed Conditioner. Stop tractor engine and set parking brake before attaching cables and hoses.

To prevent soil compaction on rows, set tractor wheels between rows. For hillsides and steep slopes, set tractor wheels as wide as possible for maximum stability.

1. Raise tractor three-point arms (if equipped) clear up to clear Seedbed Conditioner.
2. For TWO-WHEEL DRIVE and MFWD tractors, pin drawbar in fixed center position for field and transport. For FOUR-WHEEL DRIVE and TRAC-DRIVE tractors, leave one hole clearance on each side of drawbar for field position, hitch damage may occur if pinned solid. Pin in center position for transport to maintain maximum steering control.

Refer to Figure 4

3. Use jack (1) to raise and lower Seedbed Conditioner tongue.
4. Back tractor draw bar into alignment with hitch (2).
5. Secure with locking hitch pin.
6. Secure safety chain (3) to an anchor on the tractor or pulling implement.

Refer to Figure 5

7. After hitching tractor to Seedbed Conditioner, store jack on storage tube (4) on top of Seedbed Conditioner hitch frame.

Load Sway Hazard:

Lock drawbar swing to center position to minimize any side-to-side sway to assure proper tracking in the field, and safe road travel. See “**Transporting**” on page 16, for safe transporting

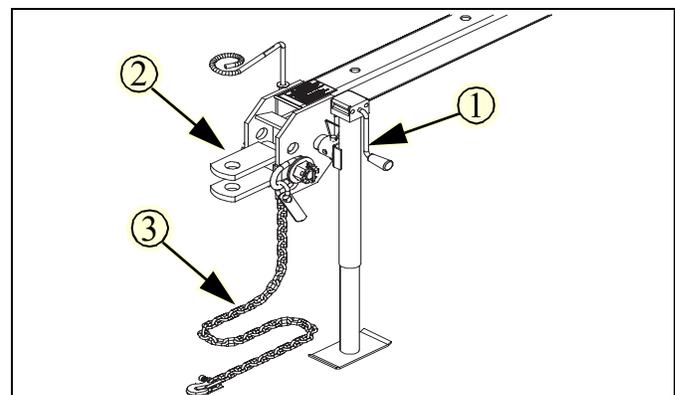
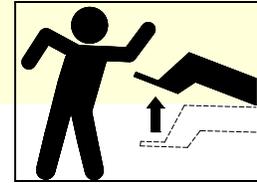


Figure 4
Jack & Hitch Clevis

42291

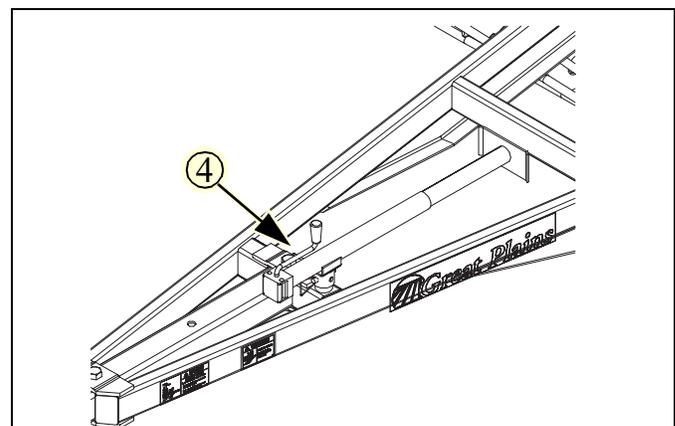


Figure 5
Jack in Storage

42292

Hydraulic Hose Hookup

Great Plains hydraulic hoses are color coded to help you hookup hoses to your tractor outlets. Hoses that go to the same remote valve are marked with the same color.

Color	Hydraulic Function
Yellow	Lift & Fold (2 hoses)

⚠ WARNING

High Pressure Fluid Hazard:

Relieve pressure before disconnecting hydraulic lines. Use paper or cardboard, NOT BODY PARTS, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury. If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury. Only trained personnel should work on system hydraulics.



Refer to Figure 6

Hose Handles

To distinguish hoses on the same hydraulic circuit, refer to, “**Hydraulic Hose Hookup**” on page 14. The hose under an extended symbol feeds a cylinder base end. The hose under a retracted-cylinder symbol feeds a cylinder rod end.

Clean all hydraulic couplings and hook hoses to tractor.

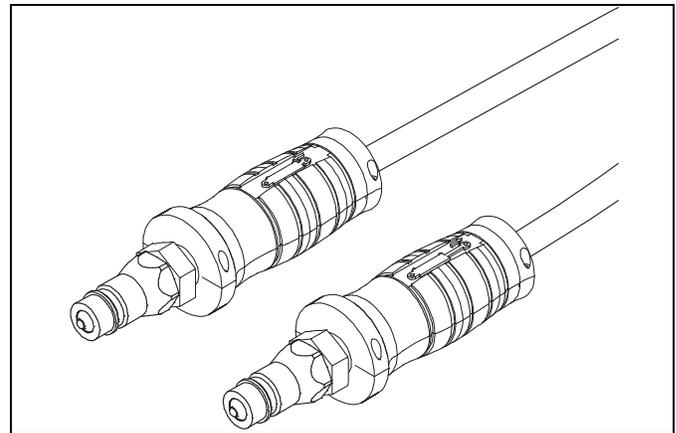


Figure 6
Hose Handles

25463

Electrical Hookup

Refer to Figure 7

Your Seedbed Conditioner is equipped with North American Lights.

Plug the lighting connector into the tractor outlet.

Test the lights and signalling prior to highway movement.



Figure 7
North American Connector

36051



Operating Instructions

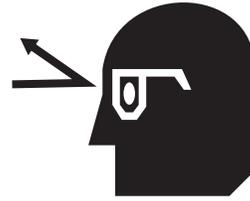
This section covers general operating procedures. Experience, machine familiarity, and the following information will lead to efficient operation and good working habits. Always operate farm machinery with safety in mind.

Pre-Start Checklist

Perform the following steps before transporting the Seedbed Conditioner to the field.

- Carefully read “**Important Safety Information**” on page 1.
- Lubricate Seedbed Conditioner as indicated under “**Lubrication**” on page 18.
- Check all tires for proper inflation.
- Check all bolts, pins, and fasteners. Torque as shown in “**Tire Inflation Chart**” on page 20.
- Check Seedbed Conditioner for worn or damaged parts. Repair or replace parts before going to the field.

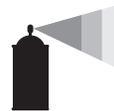
Check hydraulic hoses, fittings, and cylinders for leaks. Repair or replace before going to the field.



WARNING

High Pressure Fluid Hazard:

Relieve pressure and shut down tractor before connecting, disconnecting or checking hydraulic lines. Use a piece of paper or cardboard, **NOT BODY PARTS**, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury. If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury.



Transporting

See “**Hitching Tractor to Seedbed Conditioner**” on page 13 before transporting the Seedbed Conditioner.

Check Tractor Capacity and Configuration

- Know the weight of your Seedbed Conditioner (see table on specification page).
- Consult your tractor manual for 3-point limitations.
- Add weights to tractor as required.

When determining the weight of your Seedbed Conditioner, be sure to include the weight of any options.

Transport Checklist

- Plan the route. Avoid steep hills. Keep Clearances in mind.
- Make all electrical and hydraulic connections. See “**Hitching Tractor to Seedbed Conditioner**” on page 13.
- Raise Seedbed Conditioner.
- Be sure all transport locks are installed.
- Always have lights on for highway operation.
- Comply with all federal, state and local safety laws when traveling on public roads.

Travel with caution. Allow safe clearance.

Remember that the Seedbed Conditioner is wider than the tractor.

General Operation and In-Field Adjustments

1. Remove the transport pins and unfold machine. Make sure the fold cylinders are fully extended to allow the wings to fully flex in the field.
2. If machine has the optional hydraulic down pressure option, you will need a dedicated closed-center circuit to the seedbed conditioner. Adjust the tractor flow rate to the low side and engage the hydraulic lever for constant flow. For seedbed conditioners with Ser# 1001HH-1030HH, adjust the pressure reducing valve to your conditions with a gauge reading of 600 to 900psi. The higher the pressure the more down pressure on the wing sections. For Serial#1031HH and higher, See “**Hydraulic Down Pressure (S/N 1031HH+)**” on page 16 for setup instructions.
3. When turning around on end rows, it is ok to leave the seedbed conditioner on the ground. The hitch pole should be extended far enough to prevent the seedbed conditioner from contacting the host machine during turns.

Hydraulic Down Pressure (S/N 1031HH+)

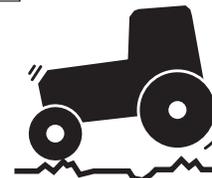
Refer to Figure 8

- Note: This setup procedure is for tractors with closed-center or pressure compensated flow hydraulic systems. Open center hydraulics not supported.

WARNING

Loss of Control Hazard:

Use a tractor rated for the load. Add tractor ballast as needed. Do not exceed 20 mph. Towing the Seedbed Conditioner with a vehicle that is not adequate, or at high speeds, could lead to loss of vehicle control. Loss of vehicle can result in a serious road accident, severe injury or death. Check that your tractor has enough to handle the weight of the Seedbed Conditioner. Refer to your tractor’s operator manual for capacities and ballast requirements.



4. Adjust the bypass/pressure reducing valve by turning knob ①, Figure 1, clockwise all the way in and then backing out 1 full turn.
5. On tractor, adjust flow-control valve to low side of flow rate.
 - 📖 The faster the flow of oil through the system the greater potential for oil heating, premature wear or tractor damage.
6. Lock the fold hydraulic lever for continuous downward oil flow.
7. Adjust bypass/pressure reducing valve knob ② on implement so the pressure gauge reads 1200 psi. Never exceed 1400 psi.
8. While watching pressure gauge, slowly open valve knob ① until gauge reads 1100 psi. Pressure might rise and then fall off as knob is opened. If pressure exceeds 1400 psi during this step, the tractor flow is too high, reduce tractor flow. Lock valve knob ① at 1100 psi.
9. Finally adjust valve ② to the desired wing down pressure setting of 300 to 400 psi. Never exceed 700 psi.
10. In field operation, Lock the fold hydraulic lever for continuous downward oil flow. If wings are running too high, increase pressure setting, knob ②, to level machine. If center is too high, decrease pressure setting with knob ② on valve. Never leave tractor valve centered when unfolded with machine in motion. Machine damage may occur when wings flex up or down.

⚠ CAUTION

Never leave tractor valve centered when unfolded with machine in motion. Machine damage may occur when wings flex up or down

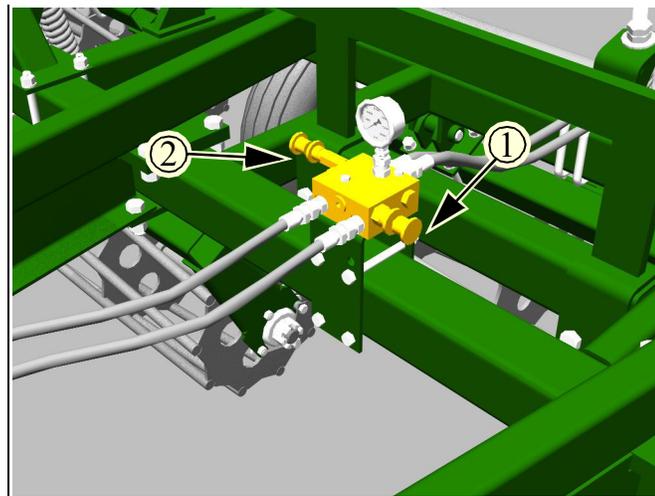


Figure 8
Hydraulic Down Pressure (S/N 1031HH+)

42294



Maintenance and Lubrication

Maintenance

1. Always use the transport lock when working on or doing maintenance to the seedbed conditioner. If folded, be sure your wing stop pins are in place. Read and understand all safety decals on your equipment.
2. During the first season of operation check your bolts for tightness.
3. Replace or rotate worn parts as needed -- hinge bolts, clevis pins, bearings, etc.
4. Check and tighten or replace any hydraulic leaks. Check hoses for any leaks. It is important that there are no leaks on the equipment.
5. Check wheel bearings occasionally for excessive endplay.
6. Grease wheel bearings sparingly. Over greasing may cause damage to seals and reduce the life of the bearing. Grease hinge points periodically. Reel Bearings are maintenance free & do not require greasing.

7. If machine is stored outdoors over the winter months, it is a good idea to fold the machine then set it down on the ground so all the cylinders are retracted to protect the cylinder rods. This will extend the life of the cylinder seals and reduce internal and external leaks.

By following and maintaining a routine service and lubrication program, your tillage equipment will give you many years of service.

For the most current manual information, visit Great Plains website listed below. For more information on operating, adjusting or maintaining your Great Plains Discovator, assistance is available. Contact:

**Great Plains Service Department
1525 E. North St.
P.O. 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.

Lubrication

 Multipurpose spray lube	 Multipurpose grease lube	 Multipurpose oil lube	 50	Intervals (service hours) at which lubrication is required
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Wheel Bearing Hub

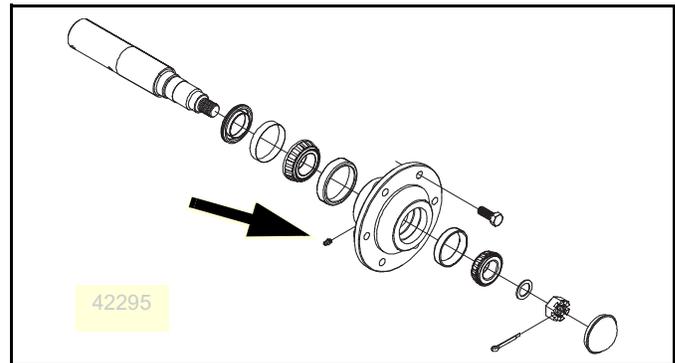
	 50
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1 zerk on each hub;
2 total

Type of Lubrication: Grease

Quantity: Sparingly, Do Not Over Grease, may cause damage seal.

Repack wheel bearings annually or every 2500 acres.



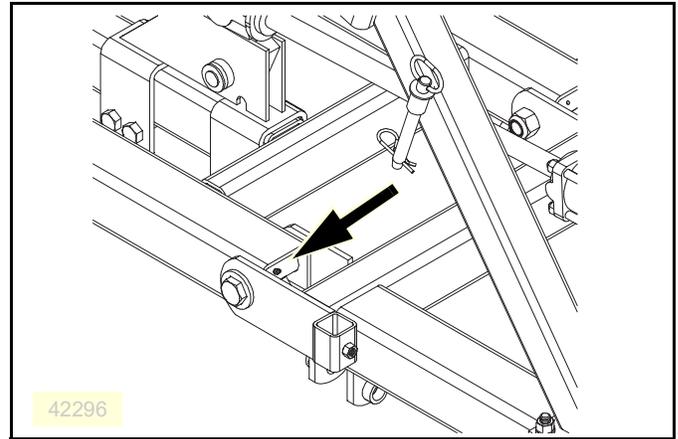
All Hinge Points

		10
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On all hinge points

Type of Lubrication: Grease

Quantity: Until grease emerges





SC Specifications and Capacities

Model No.	2112SC	2115SC	2317SC	2320SC	2322SC
Tillage Width	12' 11" (363cm)-13' 7" (414cm)	15' 5" (469cm)-16' 1" (489cm)	17' 1" (520cm)-18' 5" (561cm)	19' 7" (596cm)-20' 11" (637cm)	22' 1" (672cm)-23' 5" (713cm)
Center Section	13' 3" (402cm)	15' 9" (480cm)	10' 9" (328cm)	10' 9" (328cm)	10' 9" (328cm)
1st Wing	N/A	N/A	3' 9" (114cm)	5' 0" (152cm)	6' 3" (191cm)
Transport Width	14' 3" (433cm)	16' 10" (512cm)	15' 0" (457cm)	15' 0" (457cm)	15' 0" (457cm)
Transport Height	N/A	N/A	7' 11" (241cm)	9' 1" (276cm)	10' 3" (311cm)
Number of Baskets	3	3	5	5	5
Tire Size	9.5 LX15 8 PLY	9.5 LX15 8 PLY	9.5 LX15 8 PLY	9.5 LX15 8 PLY	9.5 LX15 8 PLY
Weight	1701 lbs. (772 kg)	2025 lbs. (919 kg)	2675 lbs. (1213 kg)	3040 lbs. (1379 kg)	3435 lbs. (1558 kg)
Model No.	2325SC	2327SC	2330SC	2332SC	2335SC
Tillage Width	23' 9" (724cm)-25' 9" (785cm)	26' 3" (800cm)-28' 3" (861cm)	28' 9" (876cm)-30' 9" (937cm)	31' 3" (951cm)-33' 3" (1012cm)	33' 9" (1029cm)-35' 9" (1090cm)
Center Section	10' 9" (328cm)	10' 9" (328cm)	10' 9" (328cm)	13' 3" (404cm)	13' 3" (404cm)
1st Wing	7' 3" (221cm)	8' 6" (259cm)	9' 9" (297cm)	9' 9" (297cm)	11' 0" (335cm)
Transport Width	15' 0" (457cm)	15' 0" (457cm)	15' 0" (457cm)	17' 6" (533cm)	17' 6" (533cm)
Transport Height	11' 5" (347cm)	12' 7" (384cm)	13' 9" (419cm)	13' 9" (419cm)	14' 11" (454cm)
Number of Baskets	7	7	7	7	7
Tire Size Center	9.5 LX15 8 PLY	9.5 LX15 8 PLY	9.5 LX15 8 PLY	9.5 LX15 8 PLY	9.5 LX15 8 PLY
Weight	3600 lbs. (1633 kg)	4200 lbs. (1905 kg)	4560 lbs. (2068 kg)	4955 lbs. (2248 kg)	5320 lbs. (2413 kg)

With a continued commitment to constantly improving our products, these specifications are subject to change without notice.

Tire Inflation Chart

Tire Inflation Chart		
Wheel	Tire Size	Inflation
Transport/ Center	9.5L x 15" 8-Ply	303 kPa 44 psi
Transport/ Center	11.5L x 15" 8-Ply	248 kPa 36 psi

Tire Warranty Information

All tires are warranted by the original manufacturer of the tire. Tire warranty information is found in the brochures included with your Operator's and Parts Manuals or online at the manufacturer's web sites listed below. For assistance or information, contact your nearest Authorized Farm Tire Retailer.

Manufacturer Web site

- Firestone www.firestoneag.com
- Gleason www.gleasonwheel.com
- Titan www.titan-intl.com
- Galaxy www.atgtire.com
- BKT www.bkt-tire.com

Hydraulic Connectors and Torque

Refer to Figure 9 (a hypothetical fitting)

Leave any protective caps in place until immediately prior to making a connection.

- NPT** - National Pipe Thread
Note tapered threads, no cone/flare, and no O-ring.
- ① Apply liquid pipe sealant for hydraulic applications. Do not use tape sealant, which can clog a filter and/or plug an orifice.
- JIC** - Joint Industry Conference (SAE J514)
Note straight threads ④ and the 37° cone ⑤ on “M” fittings (or 37° flare on “F” fittings). Use no sealants (tape or liquid) on JIC fittings.
- ORB** - O-Ring Boss (SAE J514)
Note straight threads ⑤ and elastomer O-Ring ⑦.
Prior to installation, to prevent abrasion during tightening, lubricate O-Ring with clean hydraulic fluid.
- ③ Use no sealants (tape or liquid) on ORB fittings.
ORB fittings that need orientation, such as the ell depicted, also have a washer ⑧ and jam nut ⑨ (“adjustable thread port stud”). Back jam nut away from washer. Thread fitting into receptacle until O-Ring contacts seat. Unscrew fitting to desired orientation. Tighten jam nut to torque specification.

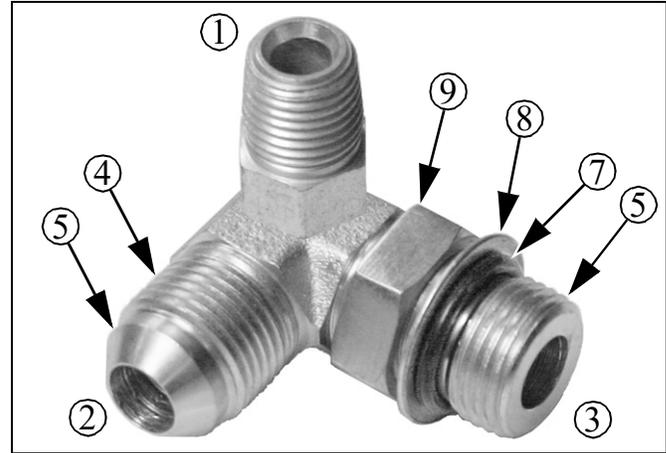


Figure 9
Hydraulic Connector ID

31282

Fittings Torque Values			
Dash Size	Fitting	N-m	Ft-Lbs
-4	1/4-18 NPT	1.5-3.0 turns past finger tight	
-5	1/2-20 JIC	19-20	14-15
-5	1/2-20 ORB w/jam nut	12-16	9-12
-5	1/2-20 ORB straight	19-26	14-19
-6	9/16-18 JIC	24-27	18-20
-6	9/16-18 ORB w/jam nut	16-22	12-16
-6	9/16-18 ORB straight	24-33	18-24
-8	3/4-16 JIC	37-53	27-39
-8	3/4-16 ORB w/jam nut	27-41	20-30
-8	3/4-16 ORB straight	37-58	27-43

Torque Values 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.

25199

Torque Values Chart	
Wheel Bolt Torque Values	1/2"-20 (75-85ft-lbs)
Wheel Bolt Torque Values	9/16"-18 (80-90ft-lbs)
Wheel Bolt Torque Values	5/8"-18 (85-95ft-lbs)



WARRANTY

Great Plains (a division of Great Plains Manufacturing, Inc.) warrants to the original purchaser that this Great Plains machine will be free from defects in material and workmanship for a period of one year (Parts & Labor) from the first use date when used as intended for personal use; ninety days for custom/commercial or rental use.

Second year limited warranty covers Parts ONLY (personal usage only, excluding labor and wear items). This warranty is limited to the replacement of any defective part by Great Plains. 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 the abuse or misuse of the equipment, failures occurring as a result of accidental damage or Force Majeure, 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 including, but not limited to, disc blades, chisel points, tires, bushings, and scrapers), repeat repair due to improper diagnosis or improper 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 failures occurring from 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 expressed 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 registered by a certified Great Plains dealer.

Effective July 15, 2020

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838-599C, decal	7
838-600C, decal	7
838-602C, decal	7
838-603C, reflector	6
838-611C, decal	8
838-612C, decal	9
838-613C, decal	8
838-614C, reflector	6
838-615C, reflector	5



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