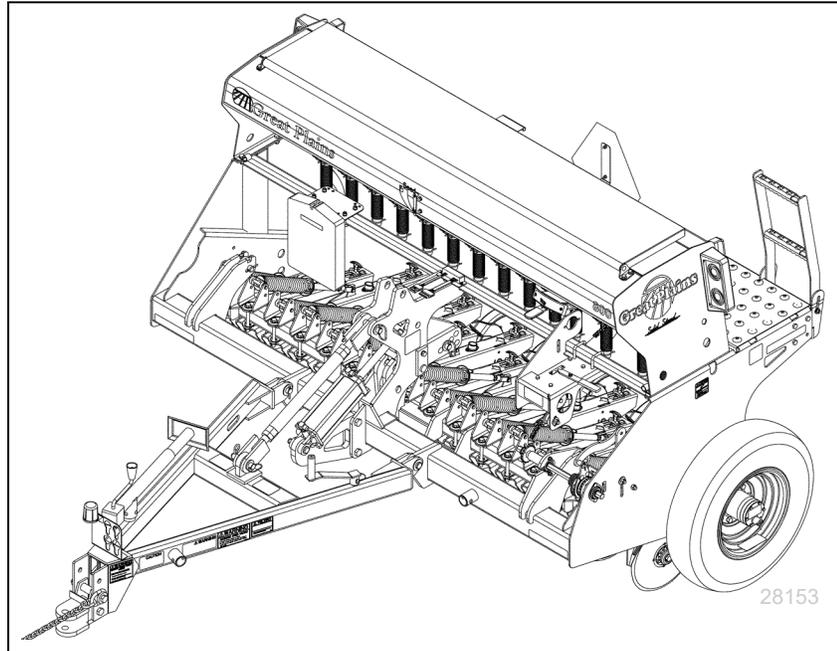


# Operator Manual

Model 800  
8-Foot End Wheel Drill



*Read the operation 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 2025-07-16

175-057M

## 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.

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

## Dealer Contact Information

**Name:** \_\_\_\_\_

**Street:** \_\_\_\_\_

**City/State:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Dealer's Customer No.:** \_\_\_\_\_

California Proposition 65
 <b>WARNING:</b> Handling passenger or off-highway motor vehicle parts can expose you to chemicals such as phthalates and lead, which can cause cancer and reproductive harm. To minimize exposure, service the vehicle in a well-ventilated area, wear gloves, and wash your hands. For more information see <a href="http://www.P65Warnings.ca.gov/motor-vehicle-parts">www.P65Warnings.ca.gov/motor-vehicle-parts</a> .



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Printed in the United States of America



## 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, and the color Safety Red, indicate 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, and the color Safety Orange, indicate 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, and the color Safety Yellow, indicate a potential hazard 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.*



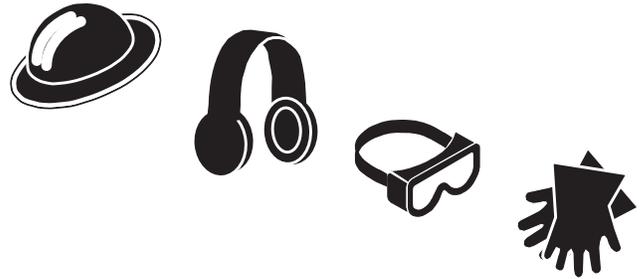
### Be Familiar with Safety Decals

- ▲ *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.

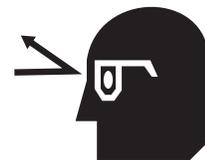
- ▲ *Do not use liquid seed treatments with the 800.*
- ▲ *Read and follow chemical manufacturer's instructions.*
- ▲ *Wear protective clothing.*
- ▲ *Handle all chemicals with care.*
- ▲ *Avoid inhaling smoke from any type of chemical fire.*
- ▲ *Never drain, rinse or wash dispensers within 100 feet (30m) of a freshwater source, nor at a car wash.*
- ▲ *Store or dispose of unused chemicals as specified by chemical manufacturer.*
- ▲ *Dispose of empty chemical containers properly. Laws generally require power rinsing or rinsing three times, followed by perforation of the container to prevent re-use.*



## Avoid High Pressure Fluids

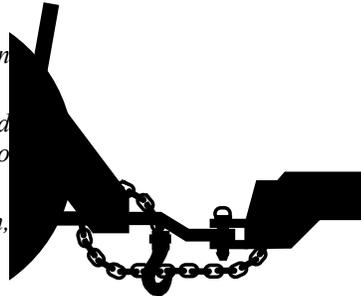
Escaping fluid under pressure can penetrate the skin, causing serious injury.

- ▲ *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 attention from a physician familiar with this type of injury.*



## Use A Safety Chain

- ▲ Use a safety chain to help control drawn machinery should it separate from tractor drawbar.
- ▲ Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
- ▲ Attach chain to tractor drawbar support or other specified anchor location. Allow only enough slack in chain to permit turning.
- ▲ Replace chain if any links or end fittings are broken, stretched or damaged.
- ▲ Do not use safety chain for towing.



## 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.



## 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.

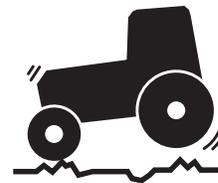
- ▲ Use flashing warning lights and turn signals whenever driving on public roads.
- ▲ Use lights and devices provided with implement.



## Transport Machinery Safely

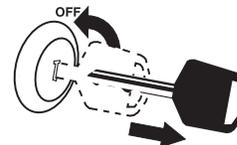
Maximum transport speed for implement is 20 mph (30 kph). Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

- ▲ Ensure towing vehicle weighs at least  $\frac{2}{3}$  (67%) of gross implement weight.
- ▲ Do not exceed 20 mph (30 kph). Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if drill is not equipped with brakes.
- ▲ Comply with state and local laws.
- ▲ Carry reflectors or flags to mark drill in case of breakdown on the road.



## Shutdown and Storage

- ▲ Park on level ground.
- ▲ Unhitch and store the drill in an area where children normally do not play.



## Tire Safety

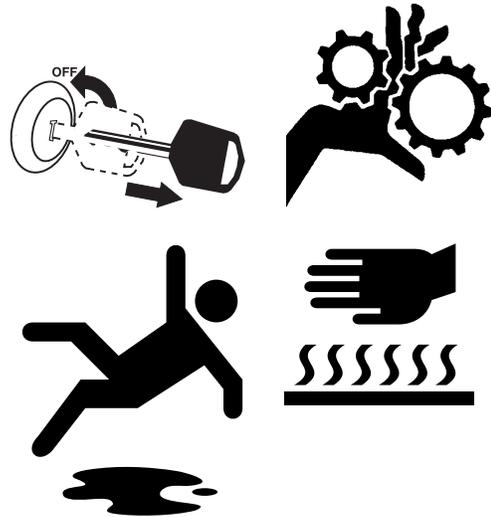
Tire changing can be dangerous and should be performed by trained personnel using correct tools and equipment.

- ▲ *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

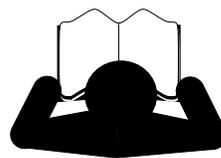
- ▲ *Understand procedure before doing work. Use proper tools and equipment. Refer to this manual.*
- ▲ *Work in a clean, dry area.*
- ▲ *Lower the drill, put tractor in park, turn off engine, and remove key before performing maintenance. If work must be performed with implement raised, use blocks or jackstands rated for the drill weight.*
- ▲ *Make sure all moving parts have stopped and all system pressure is relieved.*
- ▲ *Allow drill to cool completely.*
- ▲ *Disconnect battery ground cable (-) before servicing or adjusting electrical systems.*
- ▲ *Welding: Disconnect battery ground. Avoid fumes from heated paint.*
- ▲ *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 drill 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 drill functions.*
- ▲ *Operate machinery from the driver's seat only.*
- ▲ *Do not leave drill unattended with tractor engine running.*
- ▲ *Do not stand between the moving tractor and drill during hitching.*
- ▲ *Keep hands, feet and clothing away from power-driven parts.*
- ▲ *Wear snug-fitting clothing to avoid entanglement with moving parts.*
- ▲ *Make sure all persons are clear of working area.*



## Safety Decals

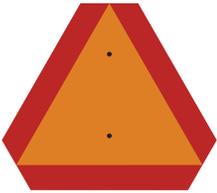
### Safety Reflectors and Decals

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

#### Reflector: Slow Moving Vehicle (SMV)

818-055C



At center of walkboard;  
1 total

See “Transport” on page 17.

#### Reflectors: Red

838-266C



On rear face of walkboard, left and right ends, outside daytime reflectors;  
2 total

See “Transport” on page 17.

#### Reflectors: Amber

838-265C

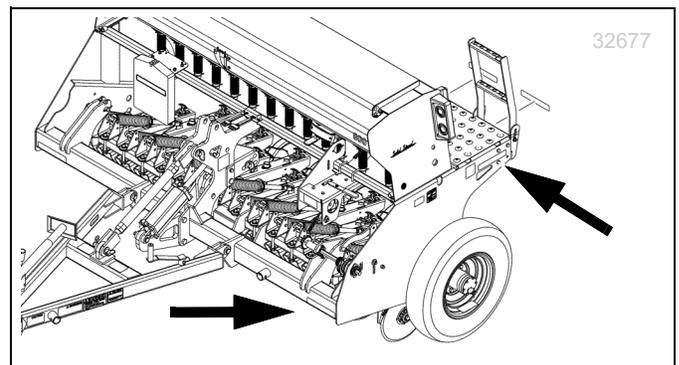
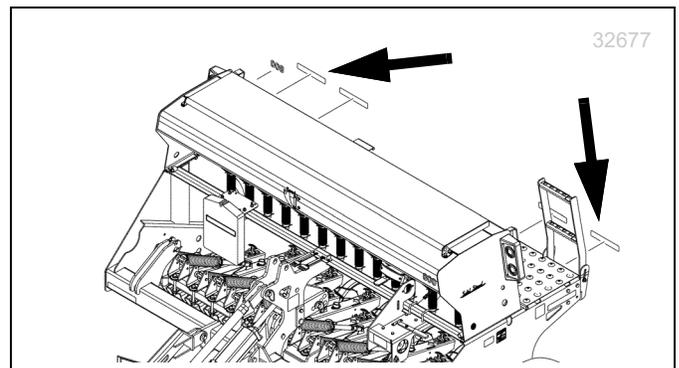
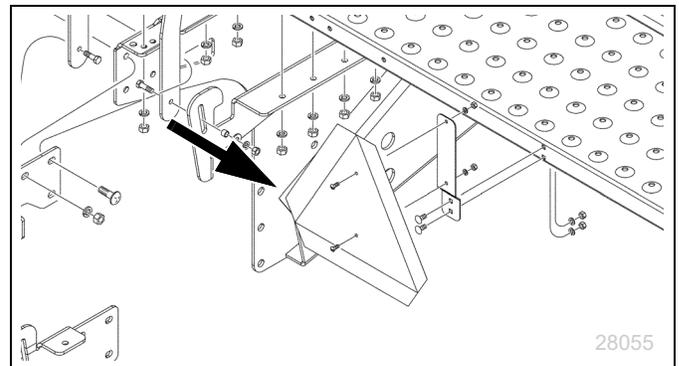


On side frames at walkboard ends, and on front face of front tool bar at left & right ends;  
4 total

See “Transport” on page 17.

To install new decals:

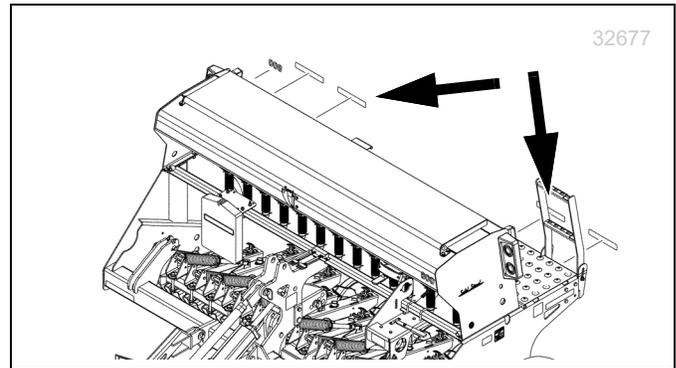
1. Clean the area on which the decal is to be placed.
2. Peel backing from decal. Press firmly on surface, being careful not to cause air bubbles under decal.



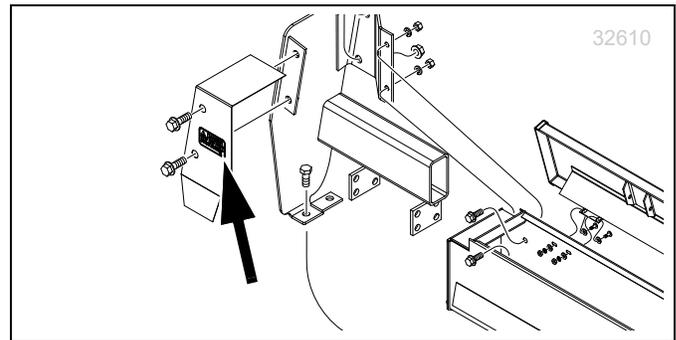
**Reflectors: Daytime****838-267C**

On rear face of walkboard, left and right ends, inside red reflectors;  
2 total

See “**Transport**” on page 17.

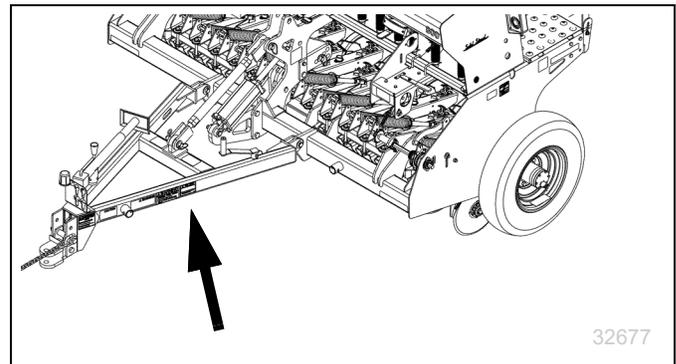
**Danger: Moving Chain (Option)****818-518C**

On chain guard of Small Seeds option;  
1 total

**Danger: Cannot Read English****818-557C**

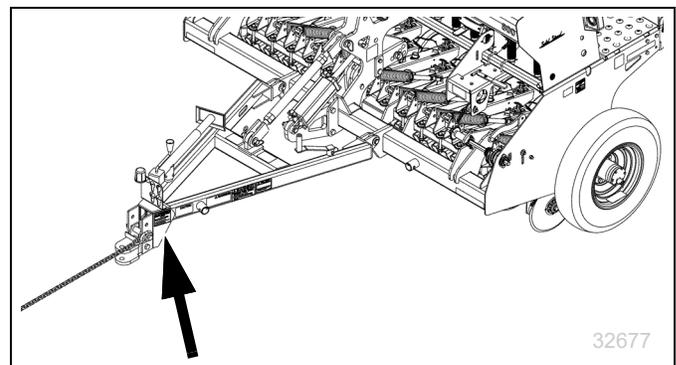
On left tongue tube near hitch;  
1 total

This decal advises Spanish speakers to seek assistance from someone who reads English.

**Warning: Negative Tongue Weight****818-019C**

On left side of hitch;  
1 total

See “**Hitching**” on page 12.



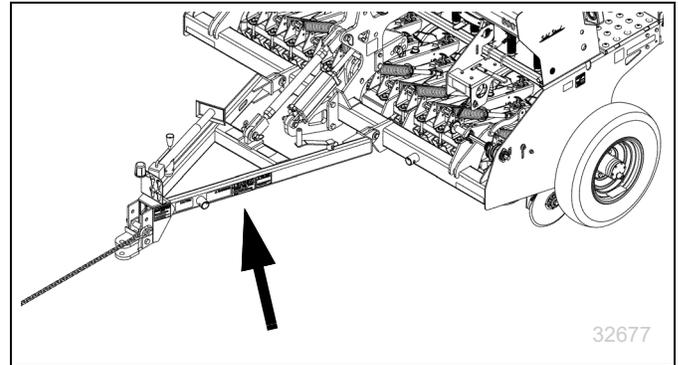
**Warning: Speed**

818-188C



On left tongue tube near hitch;  
 1 total

See “Transport” on page 17.

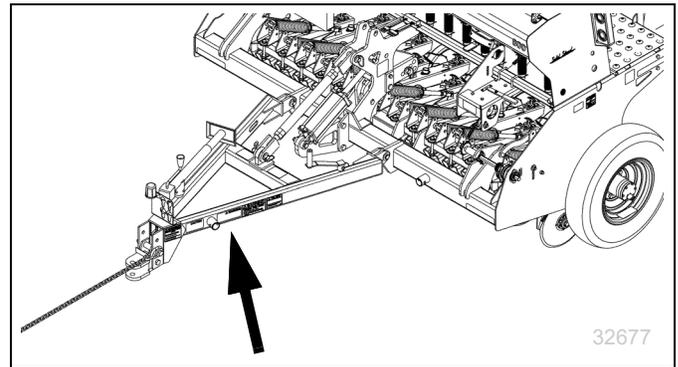
**Warning: High Pressure Fluid**

838-094C



On left tongue tube near hitch;  
 1 total

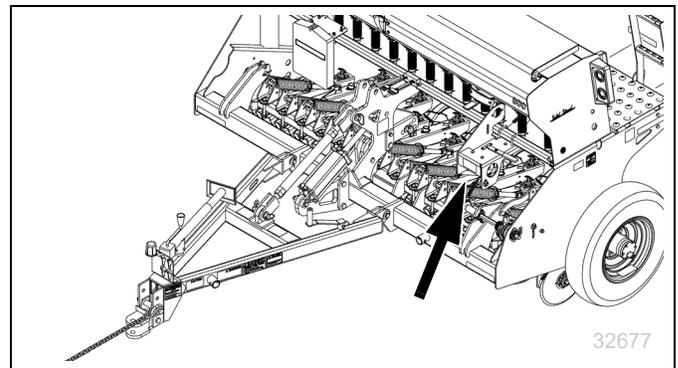
See “Hitching” on page 12.

**Warning: Moving Parts**

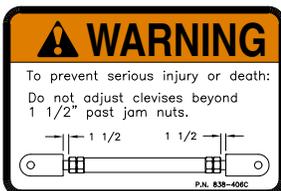
818-860C



On front face of gearbox cover;  
 1 total

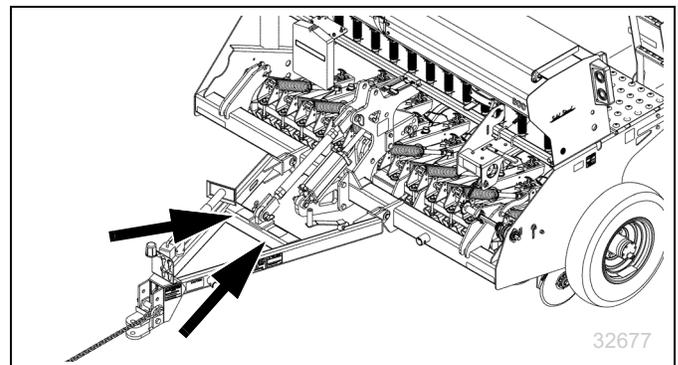
**Warning: Clevis Adjustment**

838-406C



On tongue cross-tube near turnbuckle;  
 2 total

See “Leveling the Drill” on page 13.



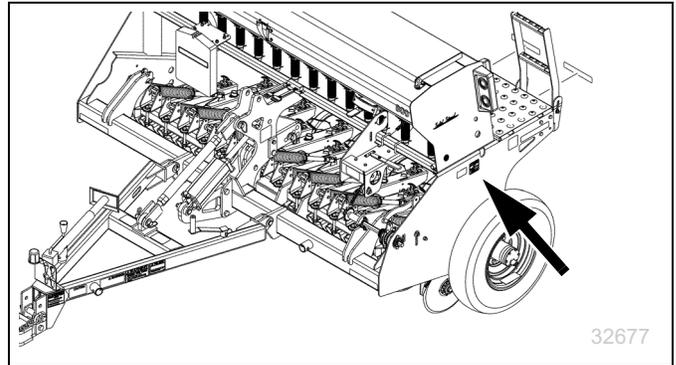
**Caution: Tires Not A Step**

818-398C



On side frames above tires;  
2 total

See Cautions on page 18.

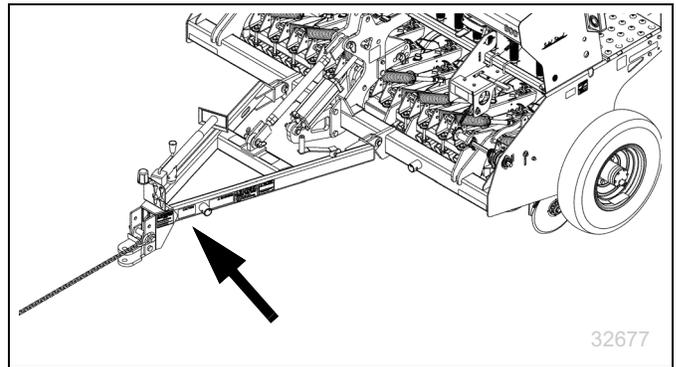
**Caution: General**

818-719C



On left tongue tube near hitch;  
1 total

See "Important Safety Information" on page 1.

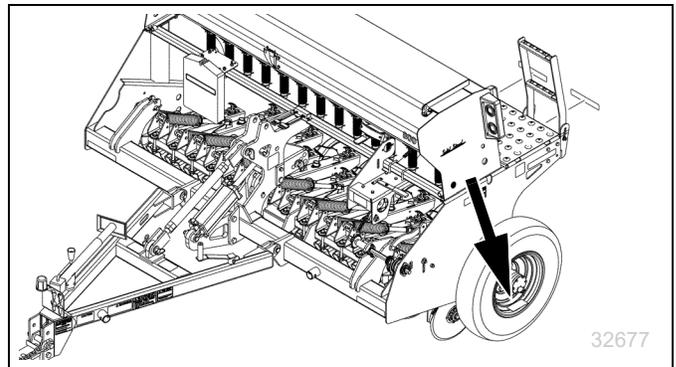
**Caution: Tire Pressure and Torque**

848-021C



On rim of each end wheel;  
2 total

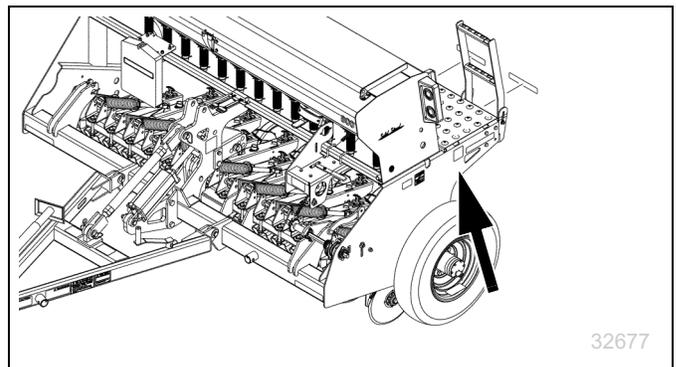
On older drills with 858-783C decals, request replacement decals from your dealer.

**Caution: Falling Hazard**

838-258C



On side frames near walkboard;  
2 total





## Introduction

Great Plains welcomes you to its growing family of new product owners. Your 8-Foot End Wheel Drill has 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.

### Description of Unit

The 800 is a towed seeding implement. This drill has a working width of 7.5 feet (2.3m). The drill has straight arm, double disc 00 Series openers. The opener discs make a seed bed, and seed tubes mounted between the discs place seed in the furrow. Press wheels following the opener discs close the furrow and gauge opener seeding depth. A T-handle on the opener body makes seeding depth adjustments.

The metering system is driven from the left end wheel. Seeding rates are adjustable with rate adjustment handles and a Drive Type gearbox for the main seed box.

### Intended Usage

Use this implement to seed production-agriculture crops in conventional or minimum tillage applications.

### Models Covered

This manual applies to Great Plains drill models:

800-1506	15-row 6-inch (15.2 cm)
800-1275	12-row 7.5-inch (19.1 cm)

Standard 800 Models have a main seed box. Fertilizer and/or Smalls Seeds capability may be added.

### Using This Manual

This manual familiarizes 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.



Figure 1  
800 End Wheel Drill

29565

### Document Family

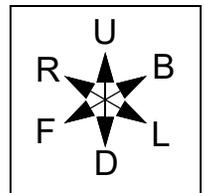
175-075M	Operator Manual (this document)
175-075P	800 Parts Manual
175-075B	Seed Rate Manual

### NOTICE

**Identifies an Economic (not a Safety) Risk:** *NOTICE provides a crucial point of information related to the current topic. Read and follow the instructions to avoid damage to equipment and ensure desired field results.*

 This form sets off useful information related to the current topic, or forestalls possible misunderstanding.

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.



#### Parts Manual QRC

The QR Code to the left will take you to this machine's parts manual. Use your smart phone or tablet to scan and start viewing.



#### Product Manuals QRC

The QR Code to the left will take you to Great Plains' catalog of product manuals. Use your smart phone or tablet to scan and start viewing.

## 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 side of the drill frame below the front of the seed box.

Record your drill model and serial number here for quick reference:

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

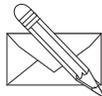
Your Great Plains dealer wants you to be satisfied with your new machine. If you do not understand any part of this manual or are not satisfied with the service received, please take the following actions.

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

For further assistance write to:

## Product Support

Great Plains Mfg. Inc., Service Department  
PO Box 5060  
Salina, KS 67402-5060



gp\_web\_cs@greatplainsmfg.com  
785-823-3276

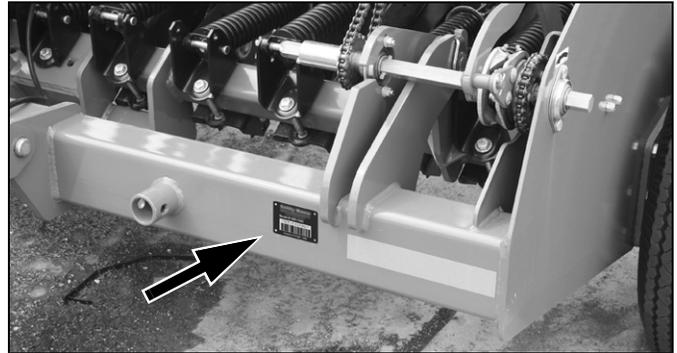


Figure 2  
Serial Number Location

32591



## Preparation and Setup

This section helps you prepare your tractor and drill for use. Before using the drill in the field, you must hitch the drill to a suitable tractor and also setup the drill.

### Pre-Setup Checklist

1. Read and understand “**Important Safety Information**” on page 1.
2. On a new drill, verify that Pre-Delivery items have been completed (page 60).
3. Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
4. De-grease cylinder rods and reconnect hoses if these steps taken at previous storage.
5. Check that all grease fittings are in place and lubricated. See “**Lubrication and Scheduled Maintenance**” on page 43.
6. Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See “**Safety Decals**” on page 5.
7. Inflate tires to pressure recommended and tighten wheel bolts as specified. See “**Appendix A - Reference Information**” on page 53.



**Negative Tongue Weight Hazard:**  
This drill can have positive and negative tongue weight, which can work the hitch pin loose during transport. To avoid serious injury or death due to a road accident, always check that the drill is hitched before raising the openers. Lower the openers before unhitching.

### Hitch Preparation

#### Adjusting the Drill Hitch

Adjust the drill hitch to match tractor drawbar height so your drill frame runs level in the field.



#### Crushing

**Hazard:**  
You may be severely injured or killed by being crushed between the tractor and drill. Do not stand or place any part of your body between machines being hitched. Stop tractor engine and set parking brake before installing hitch pin.

Refer to Figure 3

1. Back your tractor up as if hitching to the drill. Park the tractor several yards from the drill. Set the brake and turn off the tractor.
2. Crank the drill jack until the top of the drill box is parallel with the ground. Compare the height of the drill hitch to your tractor drawbar.
3. If necessary, adjust the drill hitch to match your tractor drawbar. To adjust the hitch, remove the  $\frac{3}{4}$  in nuts, bolts and washers. Reposition and re-install the clevis hitch.

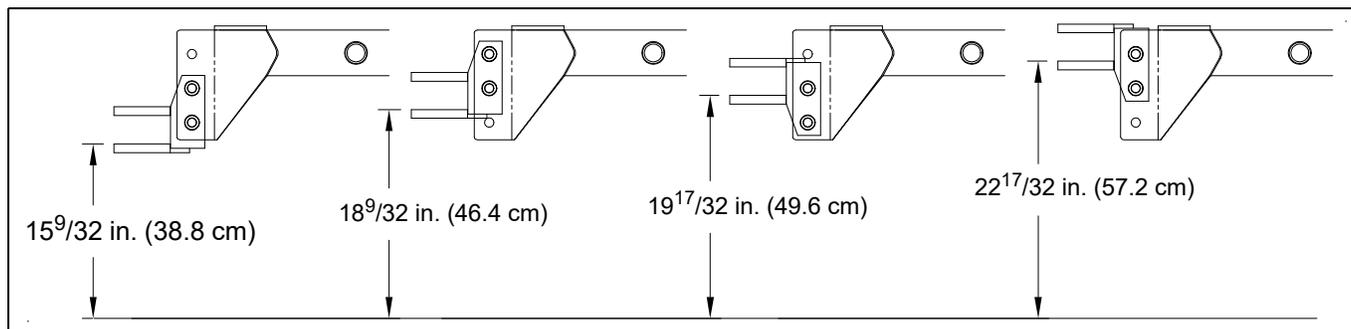


Figure 3  
Clevis Hitch Positions

18544

## Hitching

1. Slowly back the tractor toward the drill. When within a few yards of the drill, stop and park the tractor.

### **WARNING**

#### **Crushing**

*You may be severely injured or killed by being crushed between the tractor and drill. Do not stand or place any part of your body between machines being hitched. Stop tractor engine and set park brake before installing hitch pin.*

2. Crank the drill jack until the drill hitch matches the tractor drawbar height.
3. Continue backing the tractor until the drawbar and hitch are aligned. Stop and park the tractor. Adjust the drill-tongue height until you can install the hitch pin.
4. Install a hitch pin. Install a retaining clip to keep the pin from working out of the hitch.
5. Secure the drill safety chain to an anchor on the tractor capable of pulling the drill.

#### **Refer to Figure 4**

6. Use crank to raise jack foot. Remove pin and jack. Store jack on top of tongue.



### **WARNING**

**Negative Tongue Weight Hazard:**  
*This drill can have positive and negative tongue weight, which can work the hitch pin loose during transport. To avoid serious injury or death due to a road accident, always check that the drill is hitched before raising the openers. Lower the openers before unhitching.*

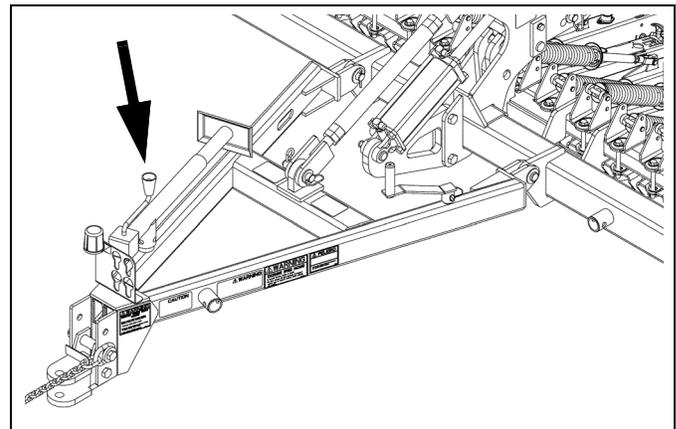


Figure 4  
Jack on Storage Stob

32600

## Electrical Connections

#### **Refer to Figure 5**

7. Plug drill electrical lead into tractor seven-pin connector. If your tractor is not equipped with a seven-pin connector, contact your dealer for installation.

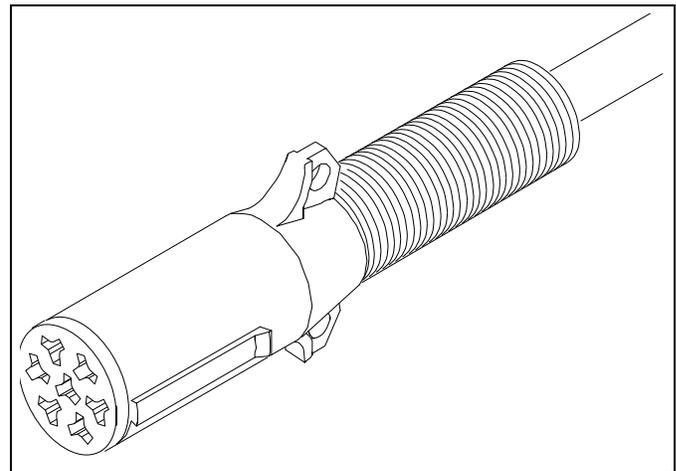


Figure 5  
Lighting Connector

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## Hydraulic Hose Hookup

### **WARNING**

Only trained personnel should work on system hydraulics!

Escaping fluid under pressure can have sufficient pressure to 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 leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. If an accident occurs, seek immediate medical attention from a physician familiar with this type of injury.

#### Refer to Figure 6

Hydraulic hoses have directional handles and are color coded to help you hookup hoses to your tractor outlets. Hoses that go to the same remote valve pair are marked with the same color.

Color	Hydraulic Function
Blue	Transport Lift Cylinders

To distinguish hoses on the same hydraulic circuit, refer to the symbols on the handles. Hose under extended-cylinder symbol feeds cylinder base ends. Hose under retracted-cylinder symbol feeds cylinder rod ends.

- Set tractor circuit for opener lift to float.
- Plug cylinder base and rod end hoses into circuit extend and retract ports.

## Leveling the Drill

Use hitch turnbuckle to level drill.

#### Refer to Figure 7

- Loosen jam nuts ① on hitch turnbuckle.
- Turn turnbuckle to shorten or lengthen until top of drill frame is parallel to the ground, being careful not to extend clevises beyond turnbuckle.
- Retighten jam nuts on turnbuckle.

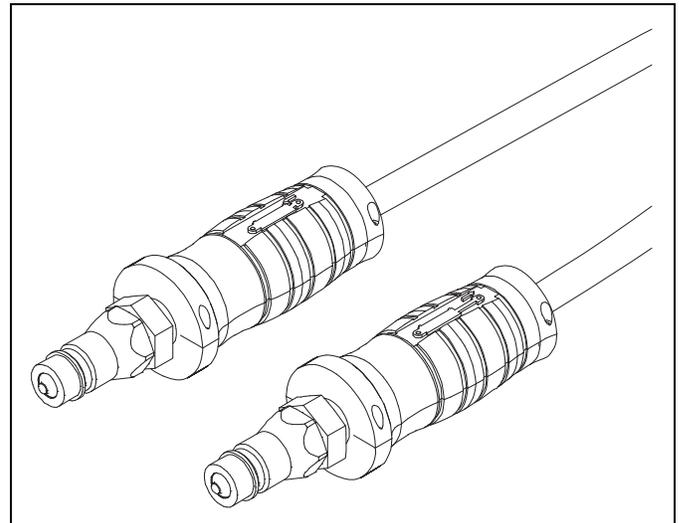
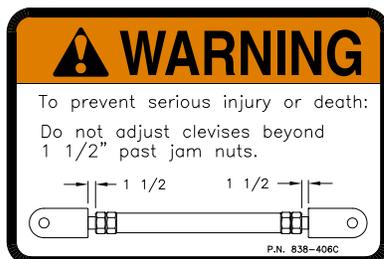


Figure 6  
Hose Handles

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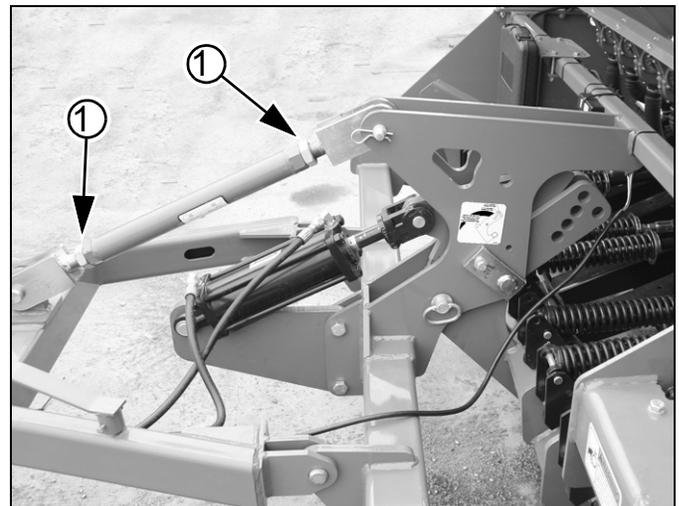


Figure 7  
Leveling 800

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# Operating Instructions

This section covers general operating procedures. It assumes that setup items have been completed.

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

## General Description

Field operations are controlled by a tractor cab hydraulic lever. When openers are lowered, a mechanical clutch engages, and the left end wheel drives the seed meter shaft.

Seed and fertilizer meters operate at a rate proportional to ground speed, as set by sprockets and/or rate handle, based on the rate charts, and calibration.

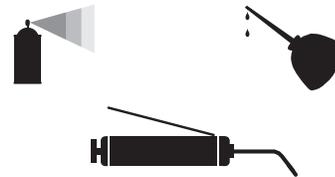
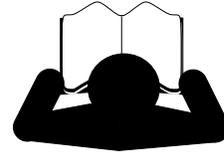
Seeding depth and furrow coverage are controlled by drill down pressure and row unit setup.

## Pre-Start Checklist

- q Lubricate the drill as indicated under Lubrication, “**Maintenance and Lubrication**” on page 37.
- q Check the tires for proper inflation according to “**Tire Inflation Chart**” on page 53.
- q Check for worn or damaged parts and leaks. Repair or replace before going to the field.
- q Check all nuts, bolts and screws. Tighten bolts as specified on “**Torque Values Chart**” on page 55.

### **WARNING**

**High Pressure Fluid Hazard:**  
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 attention from a physician familiar with this type of injury.



## Raising Openers for Transport

The opener sub-frame is on a dedicated hydraulic circuit. The openers raise and lower as a group, controlled from a tractor cab lever.

The following instructions presume that the openers are lowered, and need to be raised for transport.

### **WARNING**

**Loss of Control Hazard:**  
*Failure of the hydraulic cylinder during transport causes the openers to drop suddenly, which could lead to serious road accidents, injury or death. To prevent an accident, always install the pivot-stop pin in the transport-lock position before transporting the drill.*

### Opener Pivot Stop

1. Hitch the drill to a suitable tractor. See “**Hitching**” on page 12.

### **WARNING**

**Negative Tongue Weight Hazard:**  
*Raising openers on an unhitched drill causes the drill tongue to rise suddenly, which could cause serious injury or death. Be certain that drill is hitched securely to your tractor drawbar and the safety chain is securely attached to tractor before raising openers.*

2. Retract the opener lift cylinder to fully raise the openers. Put the tractor circuit control in Neutral to hold cylinder position.

### Refer to Figure 8

3. Note which lettered (A-E) down-pressure pin hole ① was previously in use. This is likely to be the same hole used for the next planting.
4. Remove the pin from that down-pressure adjustment hole.
5. Insert and secure the pin ② in its transport lock position ③.

- ☞ If you are not transporting on the drill’s own wheels, the hitch tongue can be elevated to vertical to reduce the length of the drill. See “**Storage**” on page 25 for folding instructions.

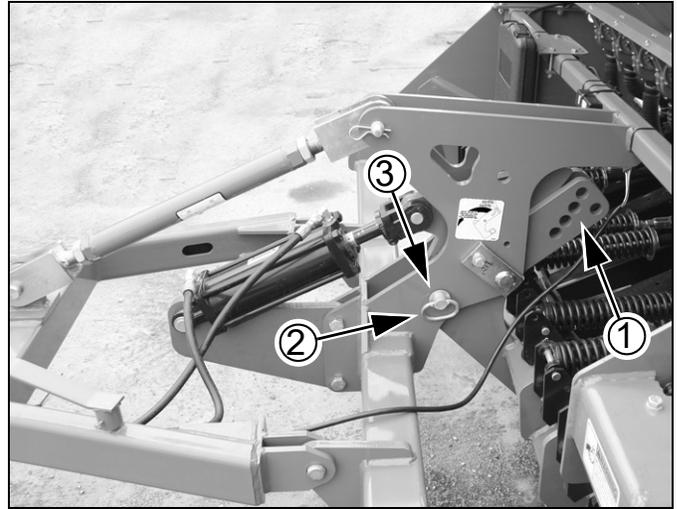


Figure 8  
Opener Locking Mechanism

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## Lock-Out Hub

Refer to *Figure 9* and *Figure 10*

- Disengage the lock-out hub on the left end-wheel. Pull out on the cross-pin, lifting it out of the deeper detents. Rotate it 90 degrees and release it into the shallower detents. The drive is immediately disengaged.

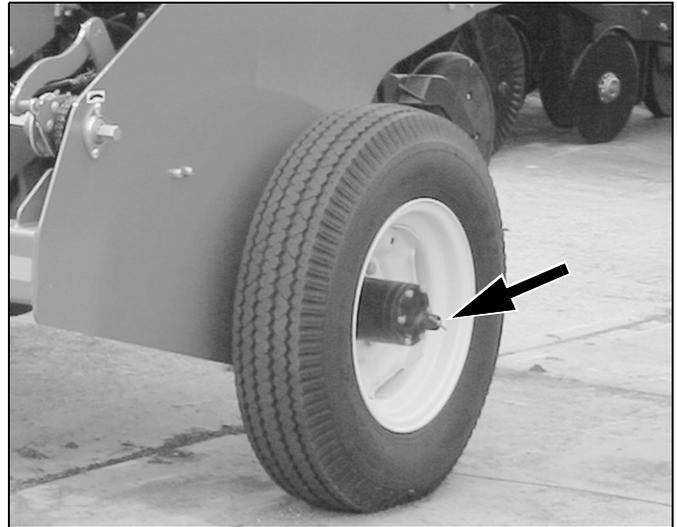


Figure 9  
Wheel Hub Locked-Out

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- To re-engage the lock-out hub for planting, pull out on the cross pin, rotate it 90 degrees, and release it into the deeper detents.

 The cross-pin may not fully seat when released into the deep detents. It self-seats during the next rotation of the wheel.

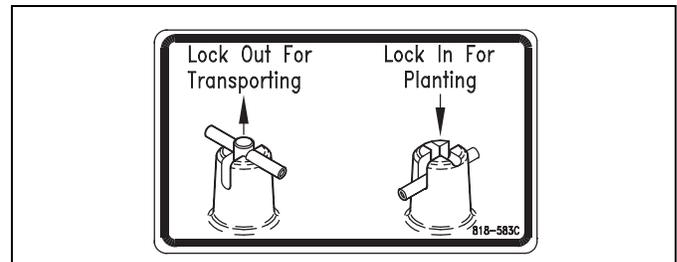


Figure 10  
Lock-Out Hub Pin

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## Transport

### **WARNING**

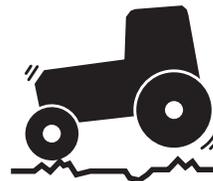
Towing the drill at high speeds or with a vehicle that is not heavy enough could lead to loss of vehicle control. Loss of vehicle control could lead to serious road accidents, injury and death. To reduce the hazard:

- ▲ Do not exceed 20 mph (30 kph).
- ▲ Do not tow a drill that, when fully loaded, weighs more than 1.5 times the weight of the towing vehicle.

In the following table, multiply the total drill weight by 0.67 ( $\frac{2}{3}$ ) to determine minimum tractor weight.

### Weights for Tractor Requirements

		Drill Weight (Pounds / Kilograms)	
Drill Model	Configuration	800-1275	800-1506
Standard Drill	empty	2379 lbs / 1079 kg	2579 lbs / 1170 kg
For Full Main Box Seed Load, add...	material load	+1024 lbs / +464 kg	+1024 lbs / +464 kg
Add for Fertilizer option	empty material load	+370 lbs / +168 kg +640 lbs / +290 kg	+390 lbs / +177 kg +640 lbs / +290 kg
Add for Small Seeds option	empty material load	+150 lbs / +68 kg 122 lbs / 55 kg	+160 lbs / +73 kg 122 lbs / 55 kg
Maximum Configuration: (Main Seed and Fertilizer loaded, Small Seeds Installed)	full	4584 lbs / 2079 kg	4815 lbs / 2184 kg



### Transport Checklist

Before transporting the drill, check the following items:

- q Transport only with a tractor of proper size. See "**Specifications and Capacities**" on page 53.
- q **Safety Chain in Place** (page 11) - Attach safety chain to an anchor on tractor.
- q **Drill Securely Hitched** (page 11)
- q **Openers Raised and Locked Up** (page 15).
- q **Tires** (page 53) - Check that all tires are properly inflated
- q **Lockout Hub** (page 16) - Disengaged.
- q **Bystanders** - Check that no one is in the way before moving. Do not allow anyone to ride on the drill.
- q **Warning Lights** - Always use tractor and drill warning lights in transport.
- q **Clearance** (page 53) - Know the maximum dimensions of the drill in transport and follow a route that provides adequate clearance from all obstructions.
- q **Stopping Distance** - Allow sufficient stopping distance and reduce speed prior to any turns or maneuvers. If the drill is transported full, allow extra stopping distance.
- q **Road Rules** - Comply with all national, regional and local laws when transporting on public roads.

## Opener Operation

Opener sub-frame is on a dedicated hydraulic circuit. The openers raise and lower as a group, controlled from a tractor cab lever.

The following instructions presume that the openers are raised and locked up for transport.

### **⚠ DANGER**

#### **Crushing**

**Hazard:** Stop tractor engine, set park brake, and remove key before adjusting or servicing openers. You will be seriously injured or killed if you are caught between raising openers and drill frame. Keep all bystanders well away during drill operation.

## Lowering and Raising Openers

Refer to Figure 11

1. Determine the down-pressure pin hole ①, (lettered A-E), to be used for the current conditions. If you have no preference developed, plan to use hole "E". See page 29 for further information.
  2. With the drill hitched to a suitable tractor, retract the lift cylinder slightly to free the pin ② in its transport lock hole ③ position.
  3. Put the tractor circuit control in neutral to hold cylinder position.
  4. Remove the pin from the transport lock position and transfer it to the desired down-pressure adjustment hole. Secure the pin.
  5. Extend the circuit to lower the openers.
  6. When the lift cylinder has reached the end of its travel, set the tractor circuit lever to Neutral to hold it there.
-  Do not set the circuit to Float, or down pressure is significantly reduced.

At the start of planting, stop early in the first pass and check drill level. The most consistent planting is achieved when the drill frame is level with the ground, and the tops of the opener frames are level with the ground.

If planting is unsatisfactory in tractor tire tracks, see "**Opener Height**" on page 31.

Check periodically during planting. Drill weight changes as seed and fertilizer are applied.

### **⚠ WARNING**

**Negative Tongue Weight Hazard:** Always lower the openers for unhitching.

After first initial operation of the drill, inspect the opener mounting bolt and nut for proper torque. This check should be repeated before each drilling season. See "**Opener Mounting Bolt**" on page 48 for additional information on torque and maintenance.

### **⚠ WARNING**

**Negative Tongue Weight Hazard:** Be certain that drill is hitched securely to your tractor drawbar and the safety chain is securely attached to tractor before raising openers. Raising openers on an unfolded, unhitched drill causes drill tongue to rise suddenly, which could cause serious injury or death.

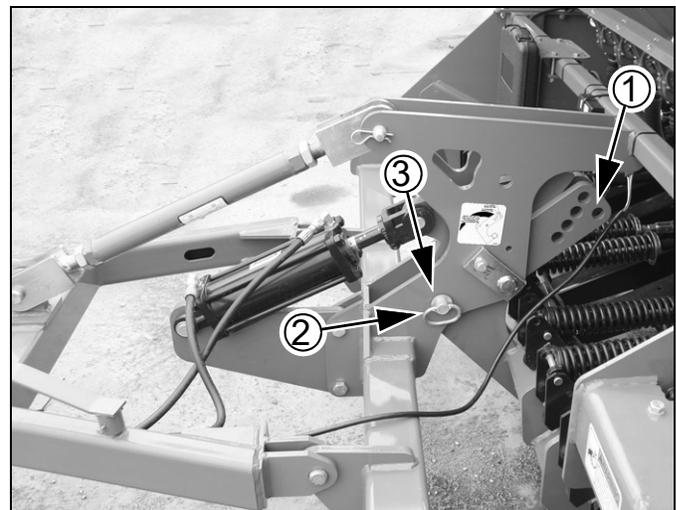
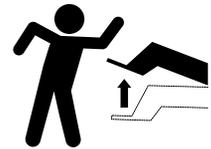


Figure 11  
Unlocking Openers

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### **⚠ CAUTION**

**Falling Hazard:** Do not stand on wheels or tires. At higher down-forces and/or on hard surfaces, lowered openers can reduce wheel traction or allow wheels to spin freely. This could cause a fall resulting in injury.

## Loading Materials

Fully loaded with dense seed, the drill weighs an additional 1024 lbs (464 kg). Include this weight when checking tractor capability.

The drill must be hitched for seed loading.

Load slightly more material than needed, because consumption rates can vary between compartments even though the furrow rates are identical.

### Main Seed Box ① Loading

1. Check that all meter doors are positioned for the seed size, and not set for clean-out. Refer to Seed Rate Manual. If loading prior to transport, set them to position 1 (smallest seed).
2. Install or remove optional seed plugs as desired for the row spacing planned. Refer to Seed Rate Manual.
3. If loading prior to transport, and calibration has not yet been done, set Seed Rate Handle to 0. At 0, and with the doors at 1, no seed can leak during transport.
4. The main seed box lid handle is also a latch. It needs to pivot up to release the lid.
5. Load seed evenly into seed boxes.
6. To reduce wear, remove main shaft drive chains for small seed boxes.

### Loading Fertilizer ②

Fully loaded with dense fertilizer, the drill weighs an additional 640 lbs (290 kg). Include this weight when checking tractor capability.

Load fertilizer after transport if possible. Some spillage can occur through meters during transport, even with the drive system disengaged.

1. Check that fertilizer clean-out door is closed and all latches are secure.
2. If loading prior to transport, and calibration has not yet been done, set Rate Adjuster to 0. At 0, no fertilizer can leak during transport.
3. The fertilizer lid is held closed by a spring-loaded bumper. Lift smartly at the handle to release it.
4. Load fertilizer evenly into fertilizer compartment.
5. To reduce wear, remove drive chain for seed box not used.

### Small Seeds Box ③ Loading

1. If loading prior to transport, and calibration has not yet been done, set Seed Rate Handle to 0. At 0, no seed can leak during transport.
2. Take all necessary materials safety precautions if the seed is treated.

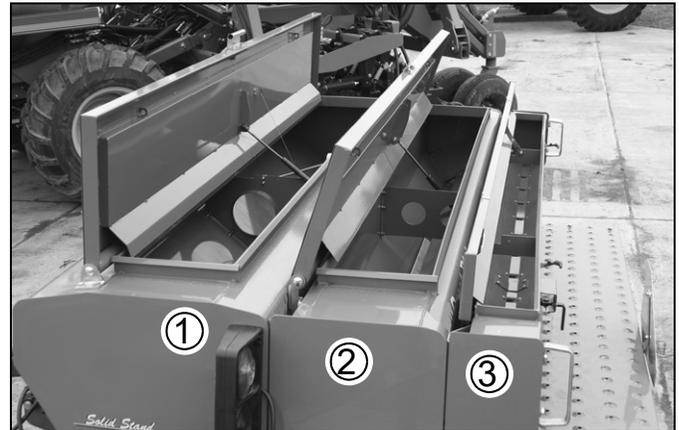


Figure 12  
Boxes Open

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**Possible Agricultural Chemicals**

Take all necessary materials safety precautions when loading dusty seed, treated seed or fertilizer.



3. The Small Seeds lid is held closed by two external rubber latches. Pull them up and to the rear to release the lid.
4. Load seed evenly into seed boxes.
5. To reduce wear, remove main shaft drive chains for main seed boxes.

## Setting Materials Rates

Seeding and application rates are independent for all boxes (changing rates on one does not affect the others). Rate setting steps, and rate calibration, are different for each box.

- See **“Setting Main Box Seed Rate”** in Seed Rate Manual.
- See **“Setting Fertilizer Rate”** in Seed Rate Manual.
- See **“Small Seeds Rate”** in Seed Rate Manual.

All of the boxes use fluted-feed meters. Actual rates frequently vary from chart rates due to variations in materials, conditions and application speed. Calibration is strongly encouraged. It is also wise to monitor material consumption in the field, both to confirm the calibration, and to catch any stoppages or other malfunctions.

Calibration is described in the rate setting topics of the **“Adjustments”** section.

 No meters operate if the lock-out hub is disengaged. Be sure to re-engage the hub after transport and calibration.

## Initial Seeding Depth

Refer to **Figure 13**

1. Set opener seeding depth by adjusting press-wheel height ①. To adjust, first raise openers slightly, then lift and slide T handles ② on top of openers. Adjust all press wheels to the same height. T handles adjust at  $\frac{1}{4}$ in (6.4mm) seeding depth change per minimum handle step.
  - For more shallow seeding, slide T handles forward ⑥ toward implement.
  - For deeper seeding, slide T handles backward ⑦ away from implement.
2. While seeding, remember:
  - Keep the top of the opener frames level with the ground for consistent seeding depth.
  - Raise openers before turning. Never back up or turn sharply with openers in the ground. Doing so will plug openers and may damage equipment.
  - Check periodically for plugged openers and hoses.

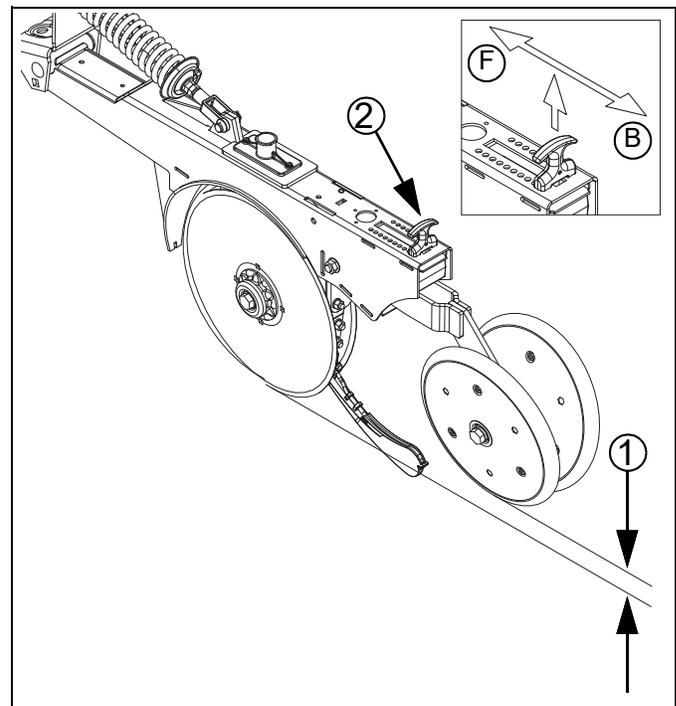


Figure 13  
Initial Opener Depth

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For information on opener adjustments, see **“Row Unit Adjustments”** on page 30. For information on troubleshooting opener problems, see **“Troubleshooting”** on page 35.

## Acremeter Operation

A battery-operated electronic acremeter is supplied with the drill. The display module for the system is normally on the front face of the main toolbar near the left gauge wheel.



Acremeter Console

80377

The acremeter calculates and displays the field acres and total acres accumulated.

The meter counts rotations of the main ground drive shaft before the clutch. The meter tallies all movements with the drill unfolded, whether planting or not.

There are three buttons on the face of the acremeter:



**Select** - Navigates to the next screen. If the current screen has any settings, pressing the Select button will also save the current screen's settings.

Pressing Select while the screen is inactive will activate display mode starting on screen A1.



**Up Arrow** - Increments current value. If the current screen only displays a reading, then arrow buttons can be used to reset current reading or for navigation.



**Down Arrow** - Decrements current value. If the current screen only displays a reading, then arrow buttons can be used to reset current reading or for navigation.

## Operating Instructions

The electronic acremeter operates in two modes: sleep and entry. In sleep mode, the display is blank, and the counter is accumulating acres. Sleep mode will be entered if a button is not pressed for 20 seconds. In entry mode, the display is on, and the operator can enter values.

To access entry mode, press and hold the SELECT button, the acre counter will cycle through the functions that it can perform. The available screens, in order, are:

- | Field Acre Count
- | Total Acre Count
- | Battery Life
- | Password
- | Pulses per 400ft
- | Swath Width
- | Calibration
- | Units of Measurement
- | Sensor Count
- | Change Password

## Acrometer Screens

### Field Acre Count



Displays the number of acres covered since the field acre counter was last reset. If there is an additional acre counting sensor on the machine, an A2 screen will immediately follow the A1 and T1 screens.

Pressing Select navigates to screen T1 or T2.

Press and hold both arrow buttons to reset the current field acre counter.

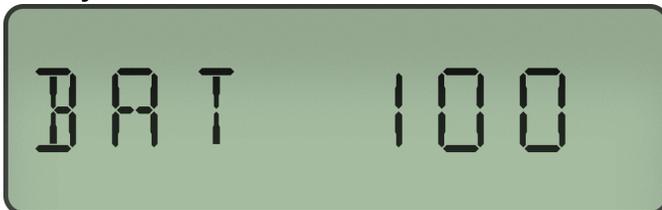
### Total Acre Count



Displays the total number of acres covered since the total acre counter was last reset. If there is an additional acre counting sensor on the machine, a T2 screen will immediately follow the T1 and A2 screens.

Pressing Select navigates to screen BAT or A2.

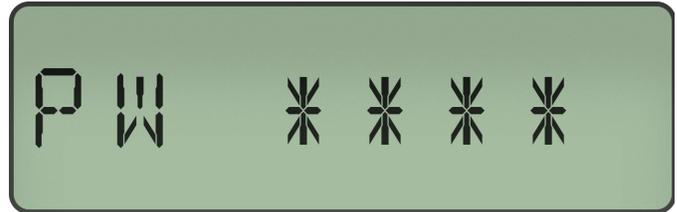
### Battery Life



Displays the percentage of remaining battery life.

Pressing Select navigates to screen PW.

## Password



Displays the password screen. Entering your system password enables access to configuration parameters.

The default password screen shows a salted - \*\*\*\* - password. Press either arrow button to bring up the password input screen. The factory set password is 0000.

Use the arrow buttons to enter your 4 digit password.

Pressing Select while password is salted - \*\*\*\* - will navigate to the A1 screen.

Pressing Select while the correct password value is entered will navigate to the P1 screen. If the password is incorrect, the PW screen is reset.

## Pulses Per Distance



Displays the pulse scaling factor. This value affects the number of pulses emitted per 400ft traveled.

Use the arrow buttons to increase or decrease the scaling factor.

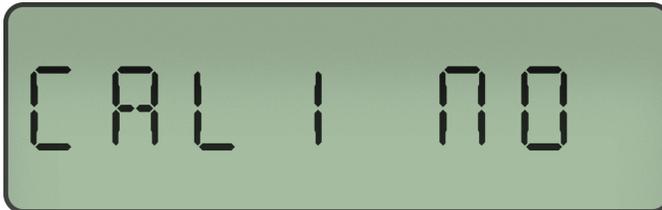
Pressing Select will save the configuration and navigate to the P2 or SW screen.

**Swath Width**

Displays the machine's swath width. To correctly calculate the number of acres planted, the acre meter needs the swath width of the drill.

Use the arrow buttons to increase or decrease the swath width.

Pressing Select will save the configuration and navigate to the CAL1 screen.

**Calibration**

Displays either the calibration request status or the current calibration value.

If displaying the request status - YES or NO - and status is YES, pressing Select begins sensor calibration.

If displaying the request status and status is NO, pressing Select does not begin sensor calibration and instead navigates to the UNITS or CAL2 screen.

When calibrating and calibration value is greater than the acremeter's minimum required value, pressing Select saves the calibration value and navigates to the UNITS or CAL2 screen.

**Units of Measurement**

Displays the units of measurement used by the acre meter.

Use the arrow buttons to change the units of measurement to either USA - Imperial - or METRIC.

Pressing Select saves the unit selection, converts the swath width value, and navigates to the SENSOR screen.

**Sensor Count**

Displays the number of active sensors in the system.

Use the arrow buttons to change the entry value.

Pressing Select saves the sensor count configuration and navigates to the CHPW screen.

**Change Password**

Displays either the password change status or the new password value.

If displaying the change status - YES or NO -, use the arrow buttons to switch the change status.

If displaying a new password value, use the arrow buttons to increase or decrease the new password value. Holding the arrow buttons will automatically increase or decrease the password value.

If displaying the change status - YES or NO - and the status is YES, pressing Select allows for a new password to be entered.

If displaying the status and status is NO, pressing Select navigates to the A1 screen.

## Field Operations

### Final Field Checklist

- q Drill hitched and chained. See page 12.
  - q Seed and fertilizer rates set per charts and calibration. in Seed Rate Manual.
  - q Lock-out hub engaged. See page 16.
  - q Record acremeter reading if acreage monitoring is desired.
  - q Down-pressure adjustment pin configured. See page 18.
  - q Materials loaded. See page 19.
1. Pull the raised drill into starting position at the first pass.
  2. Lower the drill (page 18).
  3. Pull forward at the intended planting speed.  
  
Optimum planting speed depends on conditions, and is typically between 5 to 8 mph (8 to 13 kph). If openers are bouncing, or not operating at a consistent penetration depth, reduce speed.
  4. Stop shortly into the first pass and check drill level. Both drill frame and opener frames need to be parallel to the ground for most consistent results. Also check the seed furrow in between the openers and press wheels, and make sure that seed is being delivered, and being covered.
  5. At the end of each pass, retract the tractor circuit for opener lift. Seeding stops automatically when the openers are raised.
  6. Check material consumption to ensure that it is being used at expected rates, and that you don't run out.
  7. Check opener level and planting depth, which can change as the drill empties and becomes lighter.
  8. At the conclusion of planting, raise the openers and lock them up by moving the down-force adjustment pin back to the transport lock hole (page 15).
  9. If substantial quantities of materials remain, consider performing a clean-out prior to transport (page 41), to make a safer load, and reduce wear on the tires.

 If re-using calibrated rates from a prior planting, make sure that meter scales are correctly set, and not still at zero for transport. make sure chains are in place for boxes to be used.

### NOTICE

**Crop** **Yield** **Risk:**  
*For consistent opener down pressure, fully extend the cylinder every time you lower the openers.*

### NOTICE

**Equipment** **Damage** **Risks:**  
*Do not make sharp turns with openers in the ground.*

*Never back up with openers in the ground. Seed tube plugging and equipment damage is likely.*

 Some row spacings have unequal numbers of row units served by each box compartment. The compartments with more rows run out of material first.

## Parking

Following these steps when parking for less than 36 hours. If elevating (folding) tongue, refer to the “**Tongue Elevation**” topic on page 26. For extend periods of parking, see “**Storage**”.

1. Position drill on a level, solid area.
2. Remove jack from storage location on top of tongue and pin it on post on the top of the tongue as shown on page 12. Extend jack until weight of tongue is on jack. Leave tractor hitched for the moment.
3. Lower openers and reduce hydraulic circuit pressure to zero (Float circuit).
4. Unplug drill hydraulic hoses and electrical lines from tractor.
5. Remove hitch pin first, then safety chain from tractor drawbar.

## Storage

Store the drill where children do not play. If possible, store it inside for longer life.

1. Plug or cap seed delivery and fertilizer tubes to prevent pest entry.
  2. Perform the drill Parking or Hitch Elevation checklist.
  3. Un-pin the rod end of the lift cylinder. Fully retract the cylinder to prevent rust.
-  If disconnection not desired, grease exposed rod. Be sure to remove grease before next use to avoid seal damage.
4. Disconnect seed and fertilizer hoses at openers. Plug hose ends to prevent pest entry.
  5. Lubricate the drill at all points listed under “**Lubrication and Scheduled Maintenance**” on page 43.
  6. Check all bolts, pins, fittings and hoses. Tighten, repair or replace parts as needed.
  7. Check all moving parts for wear or damage. Make notes of any parts needing repair before the next season.
  8. Use touch-up paint to cover scratches, chips and worn areas to prevent rust.

### **WARNING**

**Negative Tongue Weight Hazard:**  
Lower openers and remove hydraulic pressure before unhitching the drill in the unfolded position. Unhitching with the openers raised will result in sudden elevation of the tongue, causing injury or death. This drill has a negative tongue weight when openers are raised.



### **CAUTION**

**Possible Pinch Hazard:**  
Use caution when removing the hitch pin. Slight tongue elevation may occur, even with openers and jack lowered.

## Tongue Elevation

For compact storage, or movement on a trailer, the tongue can be swung to vertical and pinned up. A separate stob is provided for using the tongue jack to support the front of the main frame.

### NOTICE

Two or three people are needed for this operation.

#### Refer to Figure 14 and Figure 15

1. Move the drill to the parking location or trailer.
2. Place a block or jack stand under the hitch, and disconnecting from tractor at step 11. The normal jack is not available for this.
3. Raise openers slightly to free transport lock pin ①. Move lock pin to down-pressure hole "E" ②.
4. Lower openers and reduce hydraulic circuit pressure to zero (Float circuit).
5. Move the tongue jack ③ to the stob ④ on the left side of the front tool bar.
6. Crank the jack up or down until tension is removed from the pins ⑤ at either end of the turnbuckle.
7. Remove both pins, and the turnbuckle.
8. Operate jack crank until frame is level front-to-back.
9. Unplug drill hydraulic hoses and electrical lines from tractor. Secure the electrical cable receptacle in the weather cap ⑥. Route the hydraulic lines fully through the hose management plate ⑦.
10. Remove safety chain ⑧ from tractor drawbar. Have one or two people support the weight of the tongue with the safety chain

### WARNING

**Negative Tongue Weight Hazard:**  
Lower openers and remove hydraulic pressure before unhitching the drill in the unfolded position. Unhitching with the openers raised will result in sudden elevation of the tongue, causing injury or death. This drill has a negative tongue weight when openers are raised.

Lower row units -or- empty all seed and fertilizer boxes. An unhitched drill will tip backwards if rows are raised with seed loaded.

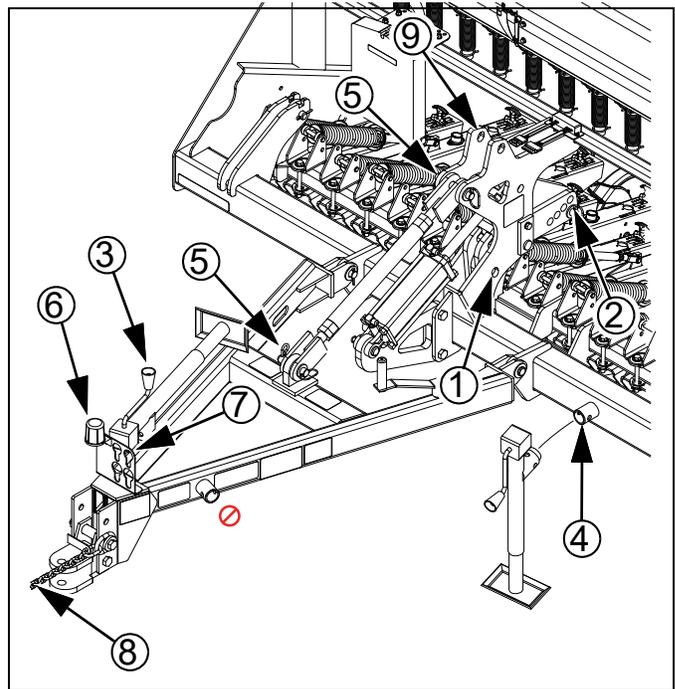


Figure 14  
Normal Tongue Position

32623

11. Unhitch tractor, and pull tractor forward.
12. Carefully swing tongue to vertical. Have one person on the chain to keep the tongue from striking the drill.
13. Using a turnbuckle pin, re-pin the tongue crossbar lug at the hole ⑨ in the down-pressure weldment.
14. Using the other turnbuckle pin, secure the turnbuckle to one side of the upper turnbuckle lug ⑤ on the down-pressure weldment.

#### Return to Use

### NOTICE

*Two or three people are needed for this operation.*

15. Move the upper end of the turnbuckle from the side of the down-pressure weldment to the normal clevis engagement.
16. Un-pin tongue crossbar lug at down-pressure weldment.
17. Carefully swing tongue forward until pin can be re-inserted at lower clevis of turnbuckle and crossbar lug.
18. Do not remove tongue jack until hitched to tractor.

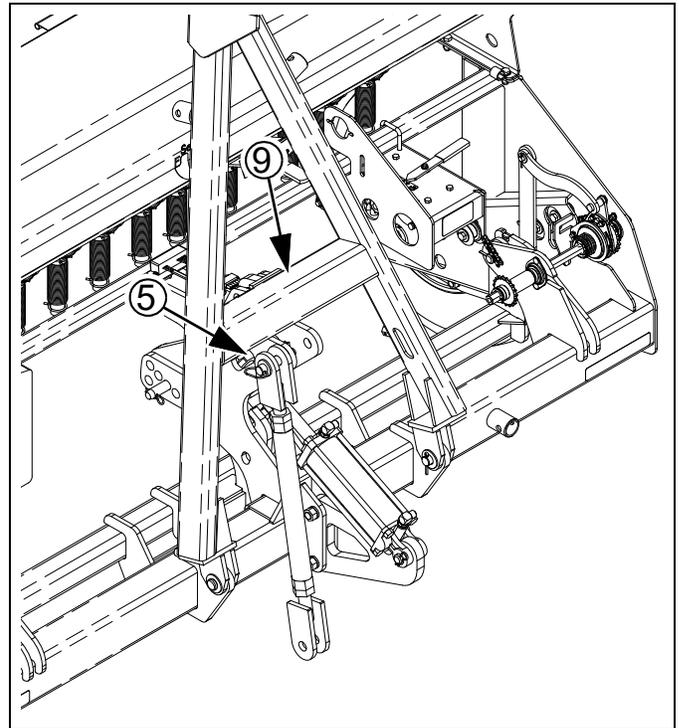


Figure 15  
Tongue Elevated to Vertical

32626



## Adjustments

To get full performance from your drill, you need an understanding of all component operations, and many provide adjustments for optimal field results.

The Model 800 has double-disc 00 Series openers with depth-controlling press wheels mounted on floating opener frames. Opener bodies are staggered for easy soil flow. All openers pivot on a common axis to maintain consistent depth as the opener frames follow contours. A spring provides the down pressure necessary for opener double discs to open a seed furrow. The spring allows openers to float down into depressions and up over obstructions. Individual openers can be adjusted to account for tire tracks.

Even if your planting conditions rarely change, some of these adjustment items need periodic attention due to normal wear.

### Seed and Fertilizer Rate

Materials are applied by fluted feed meters driven by the left end wheel. Independent mechanisms drive main seed, fertilizer and optional small seeds application.

**Main Box Seed rate** is controlled by adjustments for:

- Drive Type gearbox lever
- Seed Rate Handle at box (drill front)
- Feed Cup Door (one each seed tube)

**Fertilizer rate** is controlled by:

- Rate Adjuster at box (drill rear)

**Small Seeds rate** is controlled by:

- Rate Handle at box (drill rear)

### Planting Depth

Setting nominal planting depth, and achieving it consistently, is affected by multiple adjustable drill functions, from greatest to least effect they are:

- Opener Depth (Press Wheel Height)
- Opener Frame Down-Force,
- Row Unit Down Pressure (Spring),
- Opener Height, and;
- Disc Blade Adjustments (as blades wear).

Adjustment	Page	The Adjustment Affects
Setting Main Box Seed Rate	SRM*	
Setting Drive Type	SRM*	Coarse control of seeding rate
Main Box Seed Rate Handle	SRM*	Fine control of seeding rate
Position Seed Cup Doors	SRM*	Consistent seed delivery for certain seed sizes
Setting Fertilizer Rate	SRM*	Fine control of application rate
Small Seeds Rate	SRM*	Small seeds population
Hitch Preparation	11	
Adjusting the Drill Hitch	11	Frame Level
Leveling the Drill	13	Frame Level
Opener Frame Down-Force	29	Consistent seeding depth
Row Unit Adjustments	30	
Opener Height	31	Seeding depth in tire tracks
Row Unit Down Pressure (Spring)	31	Level row units and consistent seeding depth in tire tracks
Disc Blade Adjustments	32	Consistent seeding depth
Disc Scraper Adjustments	32	Consistent seeding depth
Seed Firmer Adjustments	33	Consistent seed placement and coverage
Fertilizer Tube Adjustment	34	Optimal fertilizer placement
Opener Depth (Press Wheel Height)	34	Seeding depth.

\*. SRM: Seed Rate Manual: This adjustment is described in manual 175-075B.

## Opener Frame Down-Force

To properly adjust seeding depth, you need an understanding of how the opener frame, opener springs, discs and press wheels work. The opener frame adjustment affects all rows at once.

### Refer to Figure 16 and Figure 17

The openers are mounted on a pivoting tube ①. A hydraulic cylinder mounted on a floating lug controls the openers. Springs on the opener bodies provide down pressure for the opener discs to cut a seed furrow. A pivot-stop pin ② is placed in one of five sets (A...E) of holes ③ to limit the rotation of the floating lug and thereby controls spring length and down pressure on all openers.

Changing the position of the pivot-stop pin changes opener down-pressure across the drill. You can also change the spring length (page 31) or mounting height of individual openers (page 31), such as in tire tracks.

Press wheels (page 34) are mounted on the opener bodies behind the opener discs, and perform two functions:

- They close the furrow and firm the seed bed. To provide consistent seed firming, the press wheels are free to move down from their normal operating position. This maintains pressing action even if the opener arm lifts at obstructions.
- The press wheels control opener depth. The higher the press wheels run, the deeper seed is placed.

## Spring Down Pressure—All Openers

The amount of down pressure needed for the opener discs to penetrate the soil varies with field conditions.

The objective in selecting a pivot-stop pin hole, and a press wheel height, is to achieve the desired planting depth while keeping the drill frame and the row unit frames level with the ground.

📖 The setting of the pivot-stop pin ② interacts with the setting of the press wheel height. When adjusting one, recheck the other.

To increase or decrease all-rows spring down pressure:

1. Raise the drill (to free the pin).
2. Move the pivot-stop pin ②. The holes ③ in the floating lug are lettered: A provides the greatest down pressure and E provides the least.

As the pin is moved to hole ④ for transport, keep records of what hole is optimal for fields and conditions worked.

📖 To maintain consistent opener down pressure, fully extend the hydraulic cylinder each time you lower the openers.

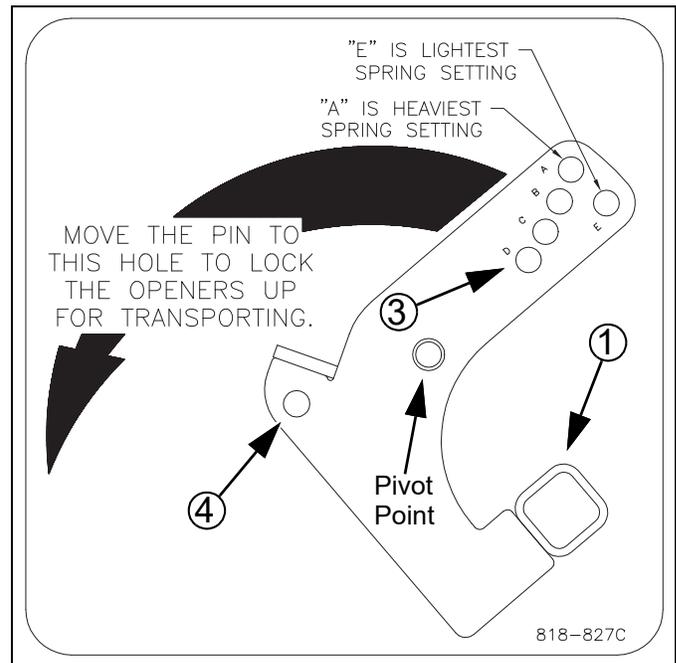


Figure 16  
Down-Pressure Decal

818-827C

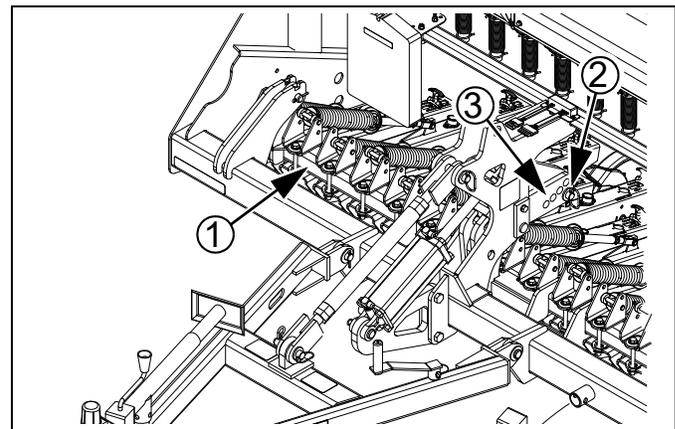


Figure 17  
Adjusting Down-Pressure

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## Row Unit Adjustments

Refer to Figure 18 (which depicts a row unit fully populated with all optional accessories [except scraper and Keeton®] supported for use with the Model 800 drills)

From front to back, a Great Plains 00 Series row unit can include the following capabilities (some optional):

1. Opener height adjustment: standard  
If a few rows need to run deeper, such as in tire tracks, the arm's pivot point may be lowered. See "Opener Height" on page 31.
2. Single Down Pressure Spring: standard  
Each row unit is mounted on the drill as a pivoting arm which allows the row unit to independently move up and down. The adjustable spring provides the force to get the row unit and attachments into the soil. See "Row Unit Down Pressure (Spring)" on page 31.
3. Disc Blades: standard, 2 per row unit  
Double disc blades open a furrow, creating the seed bed. Spacers adjust the blades for a clean furrow. See "Disc Blade Adjustments" on page 32.
4. Seed delivery tube: standard  
No adjustments are necessary.
5. Disc Scraper: standard (not shown)  
In sticky soils, a scraper helps keep the opener discs operating freely. A slotted scraper is standard. A spring-loaded carbide scraper is optional. See "Carbide Disc Scraper" on page 51.
6. Seed flap (not shown) firmer: standard:  
Seed-Lok® firming wheel (shown)  
Improves seed-soil contact. See "Seed-Lok® Seed Firmer Lock-Up" on page 33.  
  
Keeton® seed firmer (not shown)  
Improves seed-soil contact, and provides a stable arm for a low-rate liquid fertilizer delivery tube. See "Keeton® Seed Firmer Adjustment" on page 33.
7. Press wheels: standard (choice of types)  
These close the seed trench. The wheels also support the free end of the row unit, and provide the primary control over seeding depth. See "Opener Depth (Press Wheel Height)" on page 34.

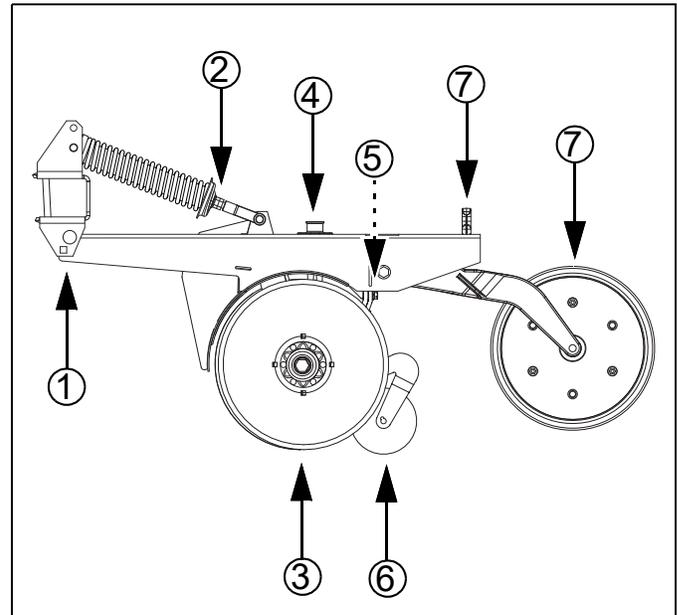


Figure 18  
00 Series Row Unit

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### NOTICE

**Equipment**                      **Damage**                      **Risk:**  
Do not back up with row units in the ground. To do so will cause severe damage and row unit plugging.

## Opener Height

The depth to which the opener disc blades penetrate the soil is controlled in front by the tool bar and pivot (opener height), and in the back by the press wheel height.

If the actual ground level is lower for some rows, such as those in tire tracks, you can lower that row unit by lowering the pivot point.

### Refer to Figure 19

1. Raise the drill just enough to relieve tension in the down-pressure spring.
2. Remove the bolt from the upper hole ①.
3. Re-position the arm at the lower hole ②, and secure with bolt.

 No spring tension or position adjustment is required. The pivot holes are designed for neutral effect on spring tension (the bolt at the top end of the spring uses a hole ③ that depends on spring length, and not opener height.)

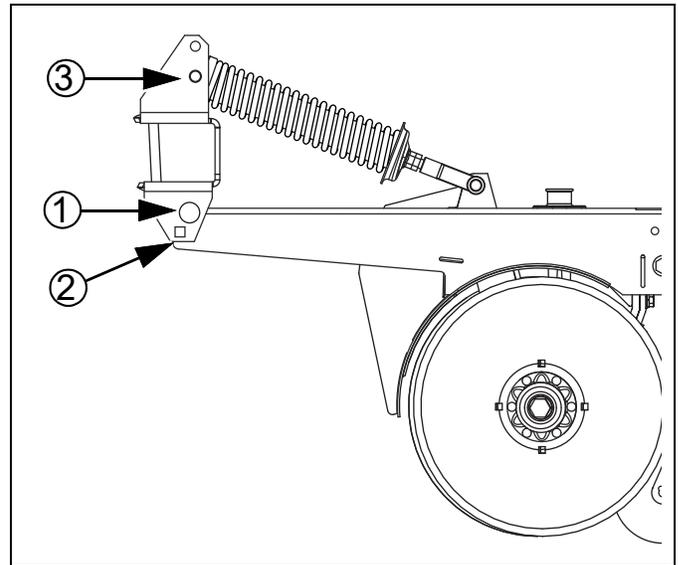


Figure 19  
Pivot Point Bolt Holes

26382

## Row Unit Down Pressure (Spring)

For planting in tire tracks, and no-till conditions, you can increase spring pressure on individual or on all openers. Adjust the spring in conjunction with the subframe down-force, and opener height, to keep the top of the row unit parallel to the ground.

Adjusting pressure at the springs for all rows is not recommended. Use the opener frame pivot pin (page 29).

### Refer to Figure 20 and Figure 21

To increase spring pressure:

1. Loosen jam nut ① at lower end of opener spring.
2. Tighten flange against spring tension.

 Each  $\frac{1}{4}$  inch adjustment adds about 13 pounds of force at opener disc (approximately 9 kg per cm). Do not tighten nut more than one inch (2.5 cm).

3. After adjusting, lock flange nut in place with jam nut.

The length ② of the spring is factory-set to:  $13\frac{5}{16}$  in. (33.8 cm).

The reference points for this length are the center of the upper/front clevis pin ③ and the base of the lower/rear spring stop cup ④.

The factory preset length is recommended for conventional till and min-till conditions. Shorten it for rows in tire tracks or more difficult min-till conditions. The minimum recommended length is:  $12\frac{5}{16}$  in. (31.3 cm).

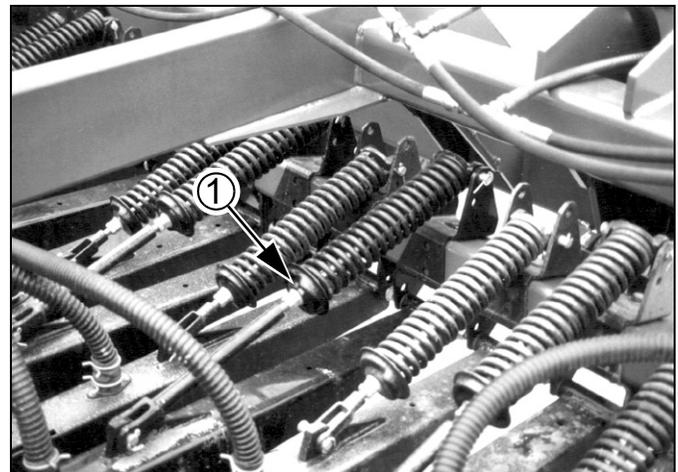


Figure 20  
Row Unit Spring Tension

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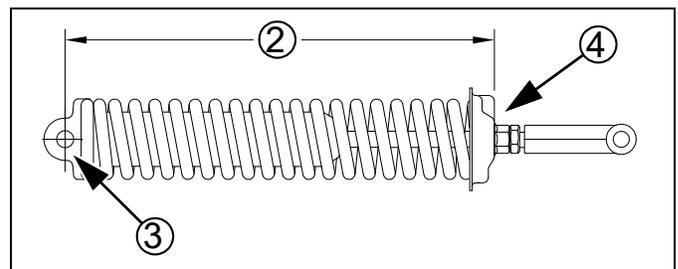


Figure 21  
00 Series Spring Length

26454

## Disc Blade Adjustments

Opener disc angle and stagger is not adjustable, but disc-to-disc spacing is, and may need attention as discs experience normal wear. Spacers must be reset when blades are replaced.

### Refer to Figure 22

The ideal spacing causes the blades to be in contact for about one inch. If you insert two pieces of paper between the blades, the gap between them should be 0 to 1.75 in. (0 to 4.4 cm).

If the contact region is significantly larger or smaller (or there is no contact at all), it needs to be adjusted by moving one or more spacer washers. If the contact region varies with blade rotation, one or both blades is likely bent and in need of replacement.



Figure 22  
Checking Disc Contact

26451

## Adjusting Disc Contact

### CAUTION

**Sharp**                      **Object**                      **Hazard:**  
Use caution when making adjustments in this area. Row unit disc blades may be sharp.

### Refer to Figure 23

1. Raise the openers and lock them with the transport pin.
2. Remove the bolt ① retaining the opener disc on one side. Carefully remove the disc, noting how many spacers ③ are outside the disc bearing ② and inside the disc. Do not lose the hub components and spacer washers.
3. To reduce the spacing between the discs (the normal case), move one spacer washer from the inside to the outside of the disc.
4. Re-assemble and check disc contact.

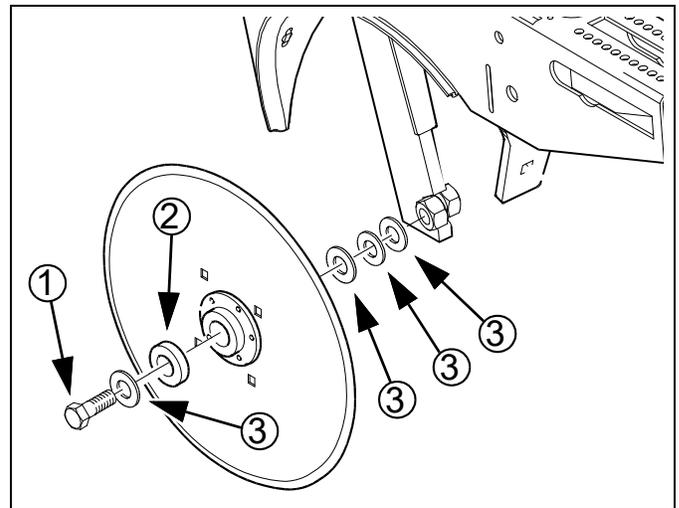


Figure 23  
Adjusting Disc Spacers

26385

## Disc Scraper Adjustments

To keep opener discs turning freely, dirt scrapers are mounted between discs to clean as discs rotate. Standard 00 Series row units include a double-disc slotted scraper. A carbide scraper is optional (page 51).

### Refer to Figure 24

As field conditions vary, scrapers may need to be adjusted. In damp conditions, lower scrapers. If openers are not turning freely, raise scrapers. To adjust, loosen bolt and move scraper as needed.

### CAUTION

**Sharp**                      **Object**                      **Hazard:**  
Use caution when making adjustments in this area. Row unit disc blades may be sharp.

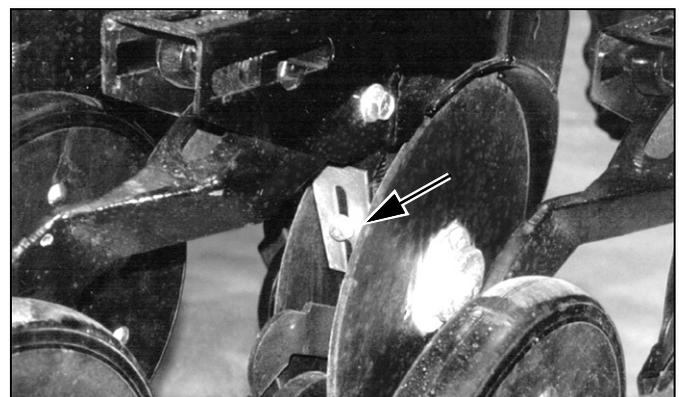


Figure 24  
Opener Disc Scraper

16163

## Seed Firmer Adjustments

Depending on row option originally specified, 00 Series row units include a seed flap or Seed-Lok<sup>®</sup>. An optional Keeton<sup>®</sup> seed firmer may be ordered separately.

The seed flap requires no adjustment, but may need to be replaced if worn, and may need to be shortened if an optional seed firmer is added after initial delivery.

### **CAUTION**

**Sharp**                      **Object**                      **Hazard:**  
Use caution when making adjustments in this area. Row unit disc blades may be sharp. To adjust the Keeton<sup>®</sup> Seed Firmer, lower the drill until the discs of the row units are resting on the ground.

#### Keeton<sup>®</sup> Seed Firmer Adjustment

The optional Keeton<sup>®</sup> Seed Firmer is an engineered polymer shape that slides down the seed trench. It traps seeds as they exit the seed tube and firms them into the bottom of the furrow “V”.

#### Refer to Figure 25

The Firmer is provided with a preset tension which is recommended for using the first year. The tension screw ① can be tightened in subsequent years according to your needs. Firmers should provide just enough tension to push seeds to the bottom of the trench.

#### Seed-Lok<sup>®</sup> Seed Firmer Lock-Up

Optional Seed-Lok<sup>®</sup> firming wheels provide additional seed-to-soil contact. The wheels are spring loaded and do not require adjusting. In some wet and sticky conditions the wheels may accumulate soil. To avoid problems associated with this, you can lock-up the firmers.

**Refer to Figure 26 (shown with an opener disc removed for clarity - this task can be performed with discs mounted)**

To lock up Seed-Lok<sup>®</sup> wheels:

1. Pull catch wire aside ①.
2. Pull firming-wheel arm ② up and release wire to catch arm.

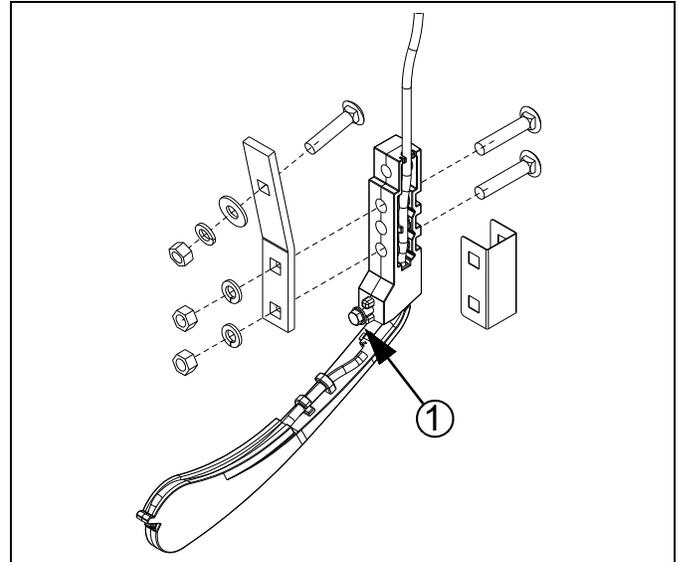


Figure 25  
Keeton<sup>®</sup> Seed Firmer

26390

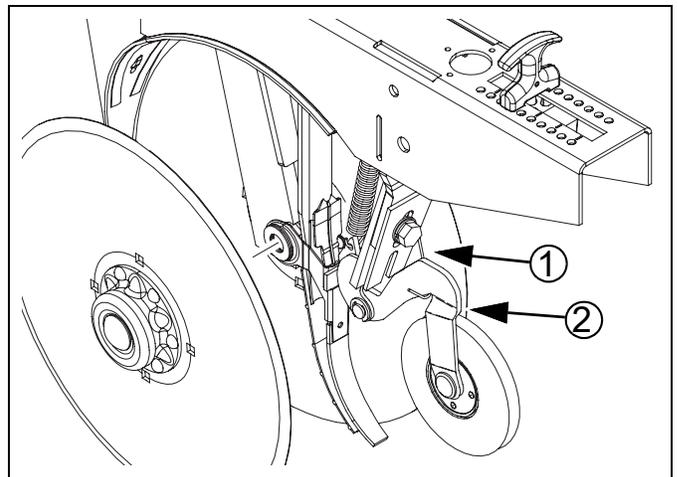


Figure 26  
Seed-Lok<sup>®</sup> Lock-Up

27122

## Fertilizer Tube Adjustment

### Refer to Figure 27

Deeper dry fertilizer placement may be achieved by rotating the fertilizer tube ① to face forward.

This orientation is suggested only if the seed firmer is a seed flap ②. If a Keeton® or Seed-Lok® is present, fertilizer falls on the firmer and may be scattered rather than placed deeper.

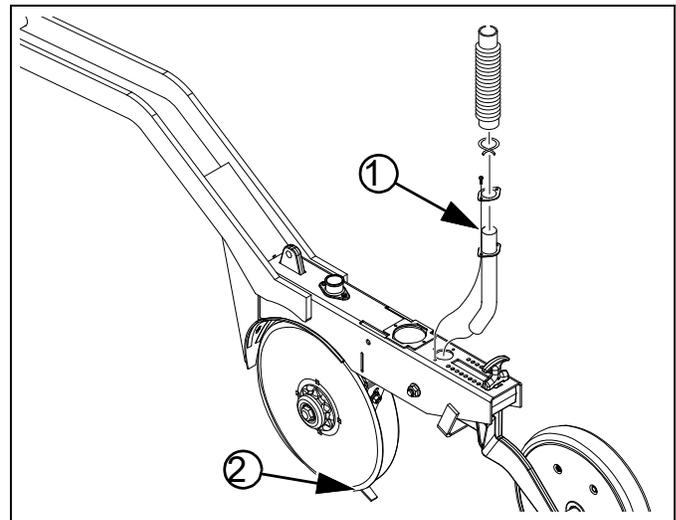


Figure 27  
Fertilizer Tube Forward

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## Opener Depth (Press Wheel Height)

### Refer to Figure 28

Set opener seeding depth ① by adjusting press-wheel height.

To adjust, first raise openers slightly, then lift and slide T handles ② on top of openers. Adjust all press wheels to the same height.

- Each increment of the handle adjusts the seeding depth by approximately  $\frac{1}{8}$  in. (6.3 mm). The range is approximately 0 to  $3\frac{1}{2}$  in. (0-89 mm) seeding depth.
- For more shallow seeding, slide T handles forward ⑤ toward implement.
- For deeper seeding, slide T handles backward ⑥ away from implement.

If moving the T handle backward doesn't cause the opener to achieve desired depth, adjust the opener frame down-force (page 29).

Adjust opener pivot height (page 31) so that opener frame runs level at desired seeding depth.

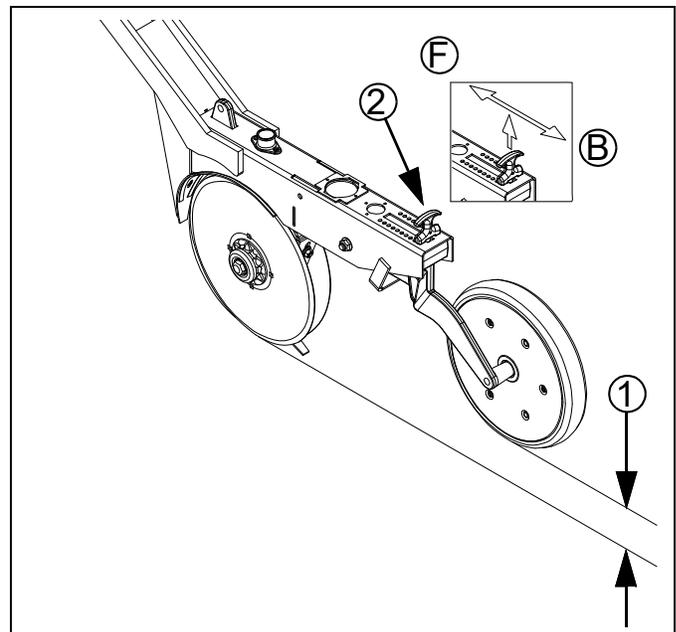


Figure 28  
Adjusting Opener Depth

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## Troubleshooting

Problem	Solution
<b>Uneven seed spacing or uneven stand</b>	Check for plugging in seed cup.
	Check if seed tubes are plugged.
	Reduce ground speed.
	Check that opener discs turn freely.
	Use a faster Drive Type and close seed-cup doors to narrower position.
	Check if opener frame has too little down pressure to penetrate soil. Increase down pressure on openers if necessary. See <b>“Opener Frame Down-Force”</b> on page 29.
	Check if opener frame has too much down pressure, and rows are not running level. Decrease down pressure if necessary. See <b>“Opener Frame Down-Force”</b> on page 29.
	Check for trash or mud build-up on Seed-Lok <sup>®</sup> wheels. Lock up if necessary. See <b>“Seed-Lok<sup>®</sup> Seed Firmer Lock-Up”</b> on page 33.
	Chain skipping - check for loose idlers and excess slack.
	End Wheel slippage - conditions may be too wet for planting.
<b>Opener discs not turning freely</b>	Check for trash or mud build-up between discs.
	Check disc scraper adjustment (standard slotted scraper.)
	Check for trash or mud build-up on disc scrapers.
	Check disc bearings.
	Check opener frame for possible damage.
	If opener discs turn freely by hand but not in field, reduce down pressure. See <b>“Opener Frame Down-Force”</b> on page 29.
	Check press-wheel adjustment for seeding depth. See <b>“Opener Depth (Press Wheel Height)”</b> on page 34.
<b>Actual seeding rate is different than desired</b>	Check tire pressure. See <b>“Tire Inflation Chart”</b> on page 53.
	Check end wheels. Proper size is 700-15 LT.
	Check for build-up of seed treatment. Regularly clean off build-up.
	Check seed-rate setting. in Seed Rate Manual or <b>“Opener Frame Down-Force”</b> on page 29.
	Consider your seed weight. Seed-rate charts are based on average seed weights.
<b>Excessive seed cracking</b>	Use slower drive type and open seed-cup doors to a wider position.
<b>Acremeter doesn't measure accurately</b>	Meter readings are not precise. Acremeters are factory-programmed for average drill swath, but not particular row spacings. Also, they include a compensation for nominal wheel slippage that may vary from your conditions.
	Check tire size and pressure. See <b>“Tire Inflation Chart”</b> on page 53.
	Check planting operation for excessive overlap or gaps between passes.
	Check that your acremeter is for your drill. Verify revolutions per acre when display is active. See <b>“Field Operations”</b> on page 24.
<b>Uneven seeding depth</b>	See <b>“Opener Depth (Press Wheel Height)”</b> on page 34.
	See <b>“Opener Frame Down-Force”</b> on page 29.
	Check that drill tongue matches tractor drawbar height. See <b>“Hitch Preparation”</b> on page 11.
<b>Chain-debris/retainer clip</b>	Be sure retainer clip is facing opposite way of chain travel.

Problem	Solution
<b>Press wheel not compacting the soil as desired</b>	Reset press-wheel depth. See “ <b>Opener Depth (Press Wheel Height)</b> ” on page 34.
	Increase down pressure. See “ <b>Opener Frame Down-Force</b> ” on page 29.
<b>Grain box not emptying evenly</b>	Certain models do not have the same number of seed cups between each bulkhead divider. The compartment with more seed cups empties faster.
<b>Press wheel or openers plugging</b>	Consider soil conditions. Drilling in damp or wet conditions can increase this problem.
	Reduce down pressure. See “ <b>Opener Frame Down-Force</b> ” on page 29.
	Do not back up or allow drill to roll backward with openers in ground.
	Check Seed-Lok <sup>®</sup> wheels for mud accumulation. Lock up wheels if necessary. See “ <b>Seed-Lok<sup>®</sup> Seed Firmer Lock-Up</b> ” on page 33.
<b>Seed-cup sprockets locked up or seed-drive shaft twisted</b>	Check for foreign material lodged in seed-cup sprockets.
	Check for build-up of dried liquid insecticide in seed cups. Remove the build up by disassembling each seed cup and scraping the foreign substance from the turning surfaces.
<b>Openers drill too deep (Bulldozing)</b>	If operating at high down-pressures, See “ <b>Opener Frame Down-Force</b> ” on page 29.
	Reduce down pressure on openers. See “ <b>Opener Frame Down-Force</b> ” on page 29.
	Check press-wheel adjustment. See “ <b>Opener Depth (Press Wheel Height)</b> ” on page 34.
<b>Openers raise when tractor hydraulic lever is held forward and lower when lever is held back</b>	Reverse hydraulic hoses at tractor quick couplers.
<b>Opener frames do not float over uneven terrain</b>	Check that hydraulic circuit is in Neutral.



## Maintenance and Lubrication

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 the tractor key before making any adjustments or performing any maintenance.

### **WARNING**

#### **Crushing**

#### **Hazard:**

Always have frame sufficiently blocked up when working on, and particularly under implement. You may be severely injured or killed by being crushed under a falling implement.

### **WARNING**

#### **High**

#### **Pressure**

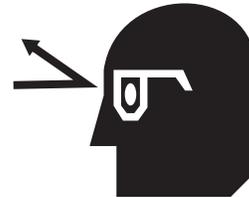
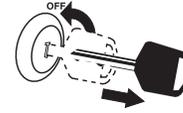
#### **Fluid**

#### **Hazard:**

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

After using drill for several hours, check all bolts to be sure they are tight.

1. Securely block drill before working on it.
2. Lubricate areas listed under “**Lubrication and Scheduled Maintenance**” on page 43.
3. Clean any fittings that do not take grease.
4. Inflate tires as specified on “**Tire Inflation Chart**” on page 53.
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. See “**Safety Decals**” on page 5.

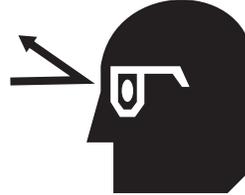


## Bleeding Hydraulics

To function properly, the hydraulics must be free of air. If hydraulics have not been bled, they will operate with jerky, uneven motions and could cause openers to drop rapidly during raising and lowering. If hydraulics were not bled during initial implement setup or if you replace a part in hydraulic system during the life of the drill, complete the following procedures.

### **WARNING**

**High Pressure Fluid Hazard:**  
Relieve 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. Escaping fluid under pressure can penetrate the skin causing serious injury. If an accident occurs, seek immediate medical attention from a physician familiar with this type of injury.



### **WARNING**

**Negative Tongue Weight Hazard:**  
Be certain that drill is hitched securely to your tractor drawbar and the safety chain is securely attached to tractor before raising openers or unfolding drill. Raising openers on unfolded, unhitched drill will cause drill tongue to rise suddenly, which could cause serious injury or death.



### **NOTICE**

<b>Equipment</b>	<b>Damage</b>	<b>Risk:</b>
Bleed		at:
JIC (Joint Industry Conference, 37· flare) or NPT (National Pipe Thread, tapered thread) fittings.		
Avoid	bleeding	at:
ORB	(O-Ring Boss)	
Never	bleed	at:
QD (Quick Disconnect) fittings.		

Check hydraulic fluid level in tractor reservoir and fill to proper level. Add fluid to system as needed.

System capacity for the Great Plains cylinder and hoses is 1/2 gallon (1.9 liters).

## Bleeding Opener Lift Hydraulics

To function properly, the hydraulics must be free of air. With air in the system, the hydraulics will move in jerky, uneven motions. If you install or replace a hydraulic component, follow these steps.

1. Check the fluid level in the tractor hydraulic reservoir. Bleeding the hydraulics with a low fluid level will draw air into the system.
2. Lower the openers to the ground. Unpin the rod end of the cylinder from the floating lug. Wire, block up, or otherwise safely support the cylinder so the rod will not contact anything when fully extended.
3. Loosen a JIC connection between the hose and rod-end cylinder fitting.
4. With the tractor idling, slowly work the tractor remote lever as if retracting the cylinder. Continue working the lever until oil seeps from the fitting. Tighten the hose connection.
5. Continue working the lever until the cylinder rod is completely retracted.
6. Loosen a JIC connection between the hose and base-end fitting.
7. With the tractor idling, slowly work the tractor remote lever in the opposite direction as if extending the cylinder. Continue working the lever until oil seeps from the fitting. Tighten the hose connection.
8. Continue working the lever until the cylinder is completely extended. Re-pin the cylinder to the floating lug.

## Chain Maintenance

Initially check the drive chains after the first 10 hours of drill use. The slack of new chains tends to increase during the first few hours of operation due to seating. Thereafter, check the chains every 100 hours.

Lubricate chains any time there is a chance of moisture, and when being stored at the end of the planting season.

### Chain Slack

**Refer to Figure 29, which, for clarity, greatly exaggerates slack, and omits the idlers.**

1. Measure the span ① for allowable slack: Locate the longest span of each chain (usually the span which does not run through the idlers).
2. Determine the ideal slack:
 

Long chains (over 36 inches / 91 :			
1/4 inch	per	foot (21 mm/m)	
Vertical	short	chains:	
1/4 inch			
Horizontal		per	foot (21 mm/m)
1/2 inch per foot (42 mm/m).		short	chains:

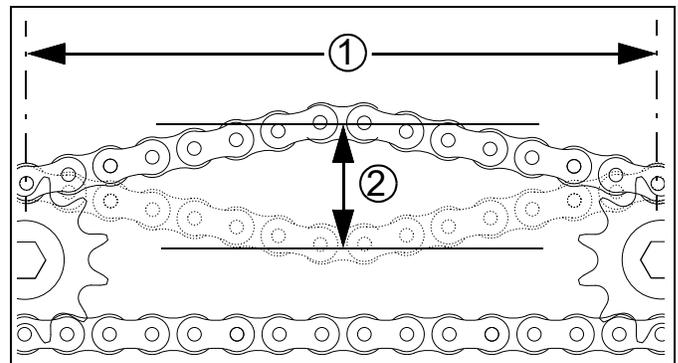


Figure 29  
Measuring Chain Slack

27264

3. Measure the current slack ②: Acting at a right angle to the chain span at the centre of the span, deflect the chain in both directions. The slack is the distance of the movement.
4. Adjust the idlers for ideal slack.

Whenever mounting a chain, make sure the clip at the removable link is oriented to minimize snags.

**Refer to Figure 30 (arrow shows chain direction)**

Install clip with open end facing away from direction of chain travel (shown by gray or striped arrows in chain routing diagrams).

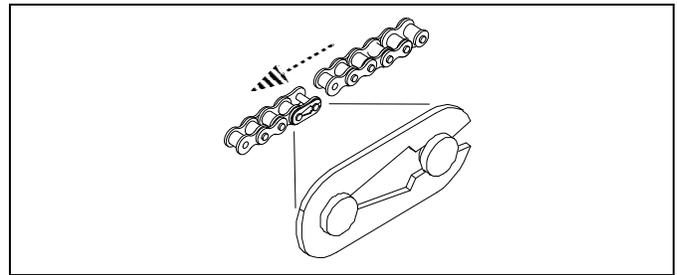


Figure 30  
Chain Clip Orientation

26482

## Materials Clean-Out

### Main Box Clean-Out

Refer to Figure 31, which depicts the seed cup door handle ① in a normal operating position.

1. Set the Seed Rate Handle to zero (0). This moves the seed cup sprockets out of the seed path.
2. Position a tarp or bucket under each row or set of rows to be cleaned out.
3. At the seed cup for that row, pull the door handle ① out of the operating detent range, and swing it down to position ②.
4. Open the main seed box and use a small brush to sweep seed toward seed cups set to clean-out. If seed does not flow freely, inspect seed cup, hose and seed tubes for obstructions.
5. If a vacuum cleaner is available, use it to remove residual material.

It is not necessary to operate the meter drive shaft for clean-out. With the Seed Rate set to zero, nothing moves inside the seed cups; however, an inspection of the flutes for excess wear and damage does require shaft rotation.

Set the Seed Rate Handle to 100 and disengage the lock-out hub. With openers lowered to engage the clutch, the seed meter jackshaft can be slowly turned with the calibration crank, while another person inspects the flutes from the open seed boxes.

### Fertilizer Box Clean-Out

After applying fertilizer, clean the box as soon as possible. Fertilizers often contain corrosive chemicals.

Refer to Figure 32

With a small scoop or can, remove as much fertilizer as possible from drill boxes.

Clean-out releases material across the entire length of a box. Have collection equipment prepared.

Release all clean-out latches on the drill, and open clean-out door. Leave door open until after washout.

Refer to Figure 33

Wash inside of fertilizer box with high pressure water.

Let drill boxes dry before closing clean-out doors.

### Small Seeds Box Clean-Out

1. Open box lid and scoop out as much seed as possible.
2. To recover remaining seed, place a collection tarp under the small seeds tubes at the openers.
3. Raise drill.
4. Set seed rate handle to 100.
5. Rotate calibration crank or end wheel until no seed flows.
6. If a vacuum cleaner is available, remove any residual seed from top of meters.

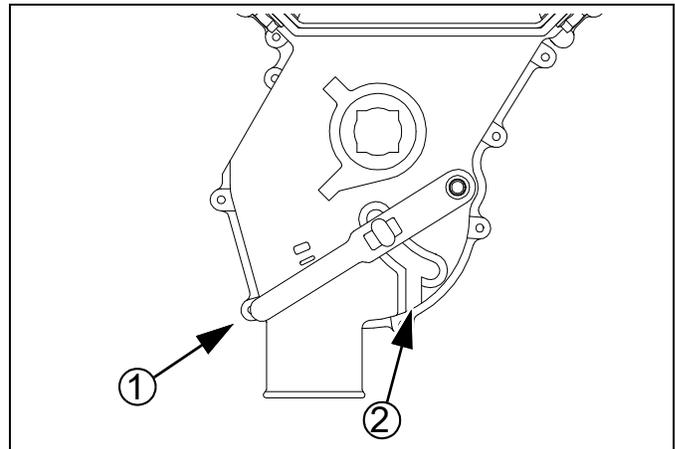


Figure 31  
Seed Cup Clean-Out

26211

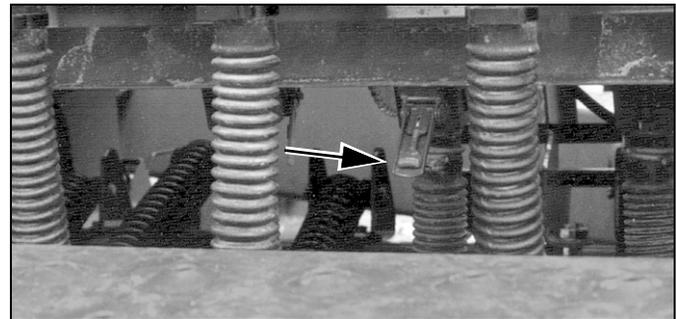


Figure 32  
A Fertilizer Clean-Out Latch

16376

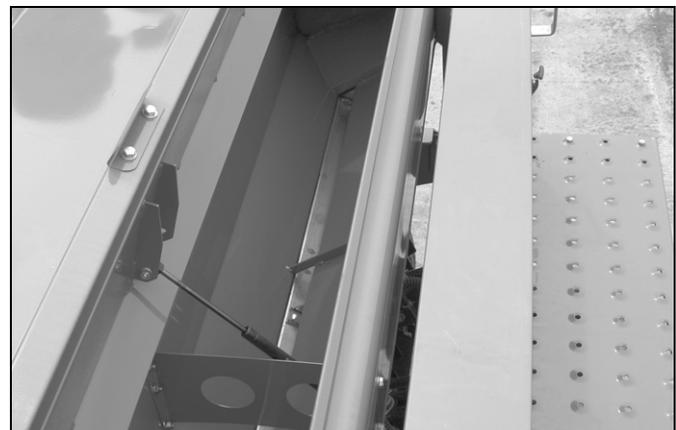


Figure 33  
Fertilizer Tray

28288

## Seed Flap Replacement

### Current Drill Model Flap

#### Refer to Figure 34

To replace a seed flap ①, use needle nose pliers or similar tool to grasp “T” top of flap. Pull upward to remove flap from metal bracket ②.

Push new seed flap ① down through metal bracket ② until flap snaps into place with “T” top resting on top of bracket.

If a seed firmer is also installed, it may be necessary to shorten the flap.

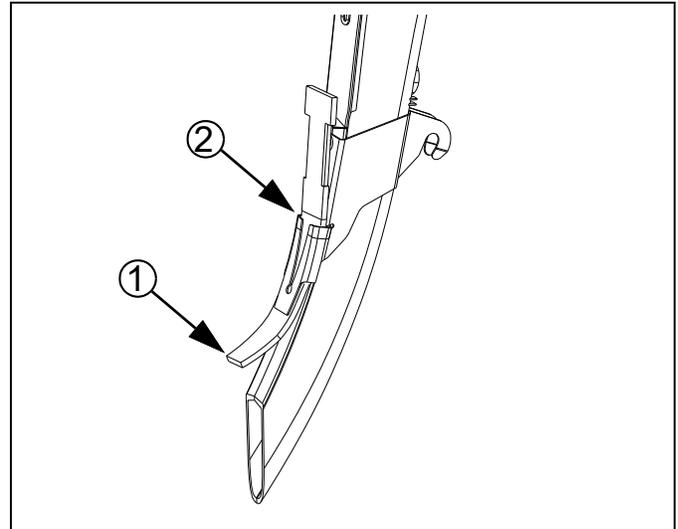


Figure 34  
Seed Tube Flap

31047

### Older Drill Model Flap

#### Refer to Figure 35

To replace a seed flap ① use a needle nose or similar tool and squeeze the tabs ② together. Pull plastic seed flap ① down out of metal bracket ③.

Push new seed flap ① up through metal bracket ③ until tabs ② on seed flap snap in place.

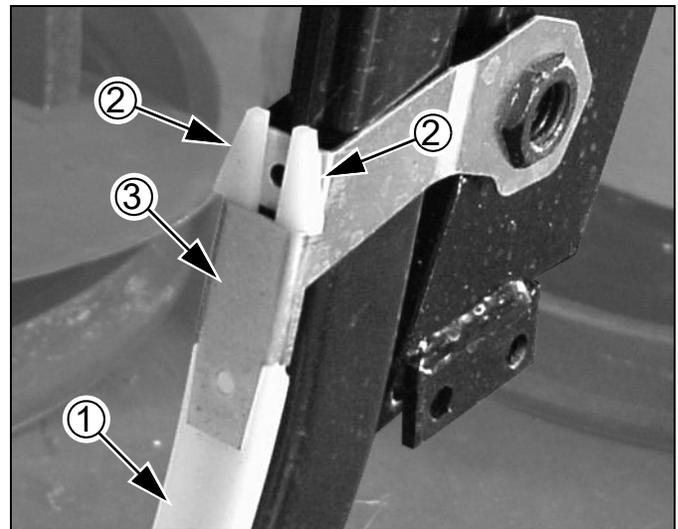


Figure 35  
Seed Tube Flap

19398

## Lubrication and Scheduled Maintenance

 Multi-purpose	 Multi-purpose	 Multi-	 Inspectio	 50 Intervals (operating hours) at
---	---	--	--	---

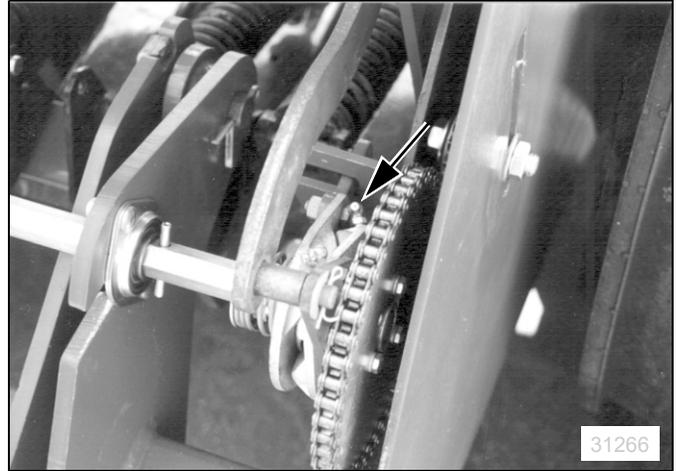
### Drive Shaft Clutch

	 8
---	---

2 zerks total

Lubrication: bearing grease  
Amount: until grease emerges

 Also smear grease on clutch engagement.



### Opener Frame Pivots

	 10
--	---

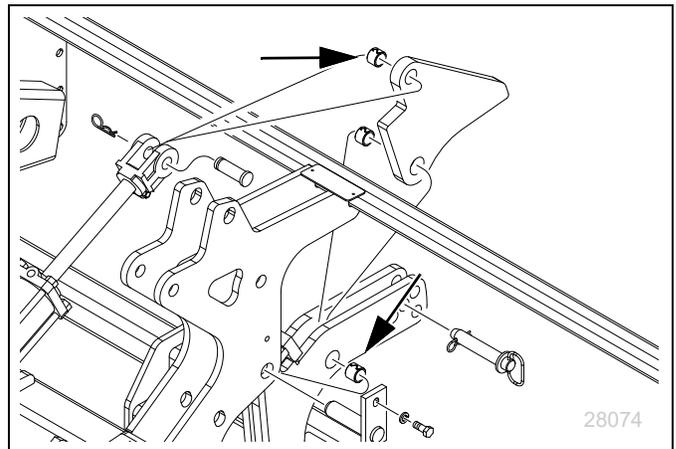
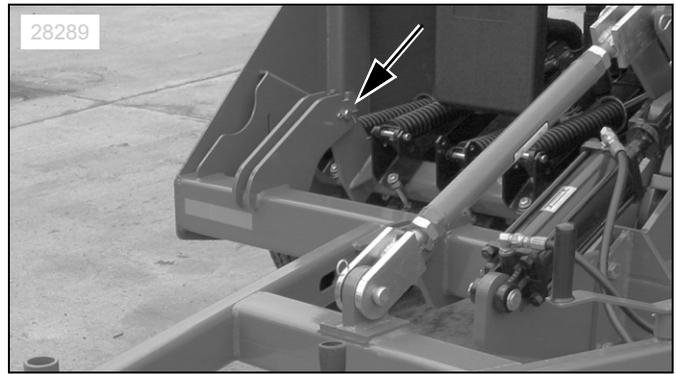
2 zerks total

1 bushing at each end,  
3 at center;

5 total

Type of Lubrication: Oil

Quantity: Coat thoroughly



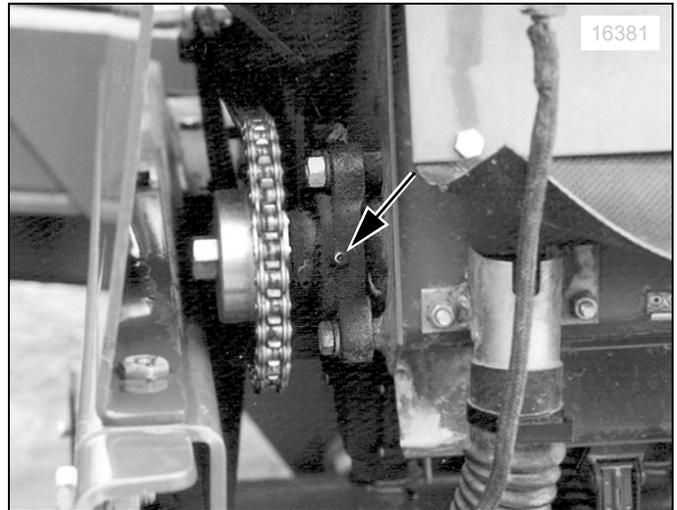
### Fertilizer Shaft Bearings (Option)



1 zerk each bearing, 2 per shaft; 2 total

Type of Lubrication: Grease  
Quantity: Until resistance is felt

If Small Seeds is also installed, access these zerks from below.

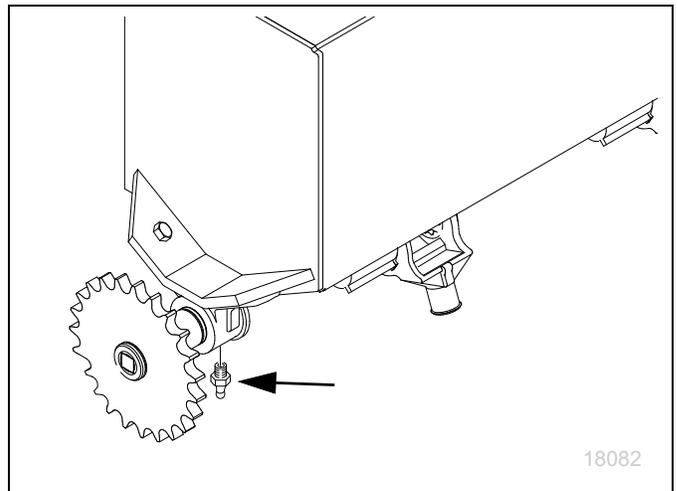


### Small Seeds Shaft Bearings (Option)



1 zerk total

Type of Lubrication: Grease  
Quantity: Until grease emerges



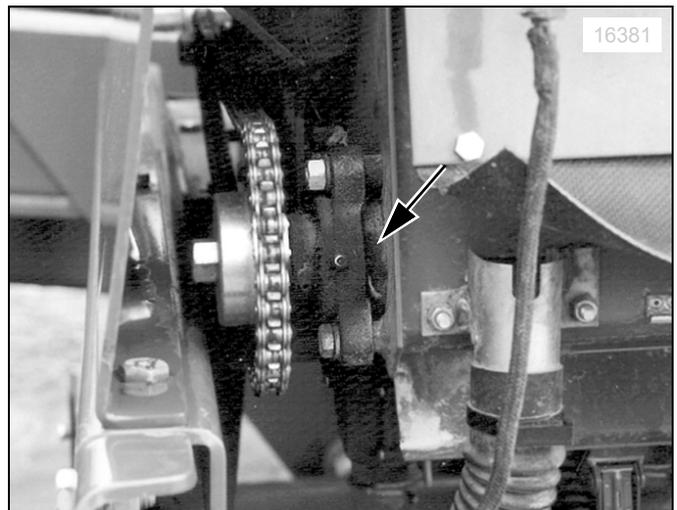
### Felt Barrier Seals



1 seal at each shaft end, 2 total

Type of Lubrication: Oil  
Quantity: Soak seal

If Small Seeds is also installed, access these seals from below or through the end wall gaps.

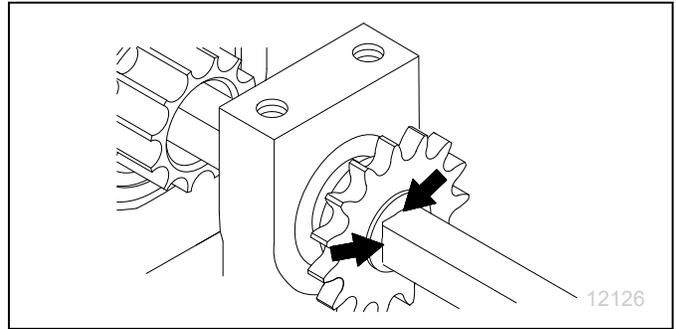


### Seed Cup Drive Shaft Sprocket



1 sliding sprocket  
 Type of Lubrication: Oil  
 Quantity: Coat thoroughly

Move the Seed Rate adjustment handle back and forth to get oil into the square bore. Perform this with seed box empty, or handle may be difficult to set to 100.



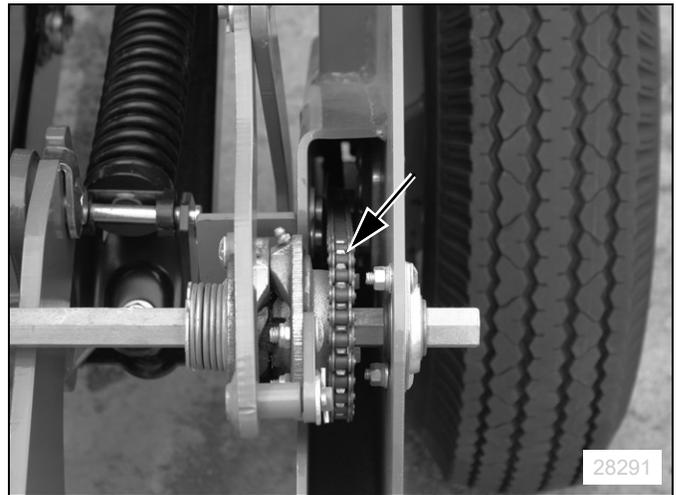
12126

### Clutch Shaft Input Chain



1 chain  
 Type of Lubrication: Chain Lube  
 Quantity: Coat thoroughly

Slack: 1/2 inch (13 mm) in top span



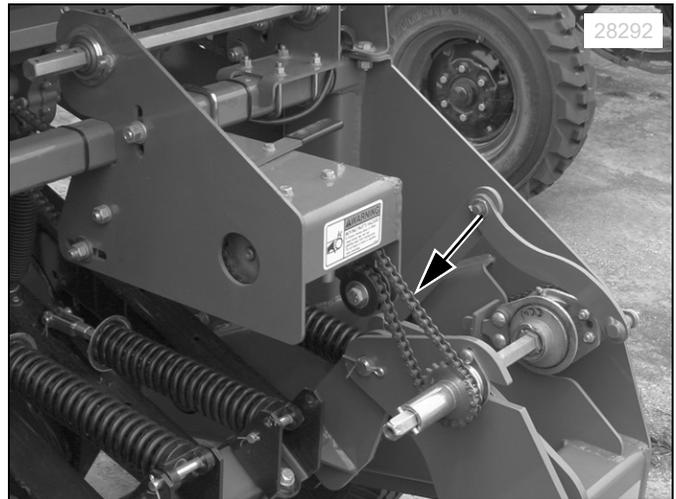
28291

### Gearbox Input Chain



1 chain  
 Type of Lubrication: Chain Lube  
 Quantity: Coat thoroughly

Slack: 1/2 inch (13 mm) in top span



28292

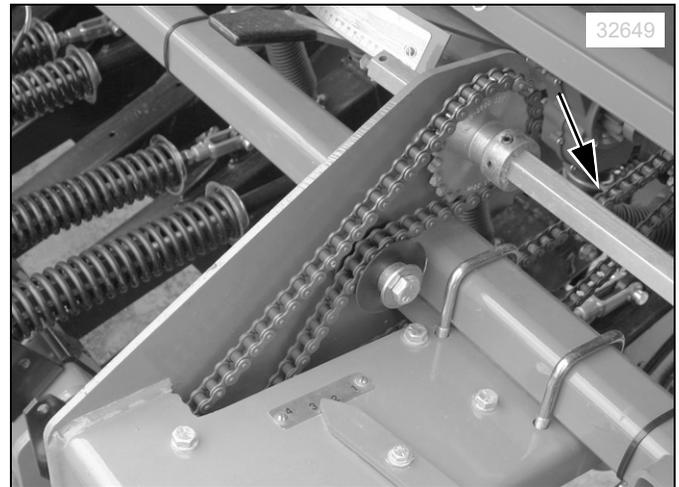
### Main Seed Meter Drive Chain

		<b>As Required</b>
---	---	--------------------

1 chain

Type of Lubrication: Chain Lube  
Quantity: Coat thoroughly

Slack: 1/2 inch (13 mm) in top span



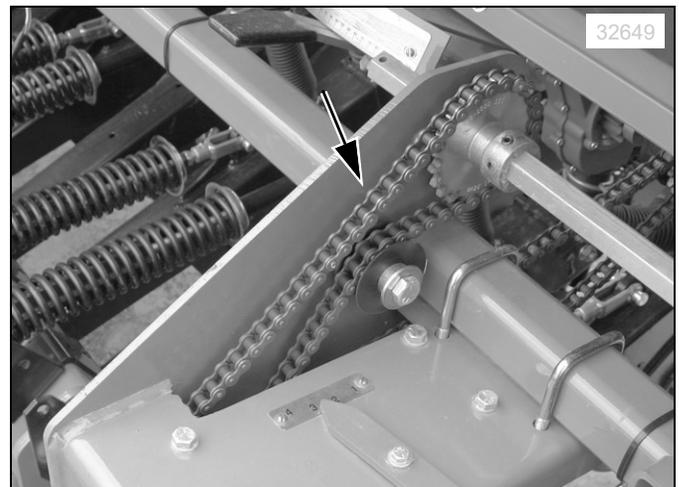
### Gearbox Bypass Chain

		<b>As Required</b>
---	---	--------------------

1 chain:  
Present only if any of the following options are present:  
agitator, fertilizer, small seeds

Type of Lubrication: Chain Lube  
Quantity: Coat thoroughly

Slack: 1/2 inch (13 mm) in top span



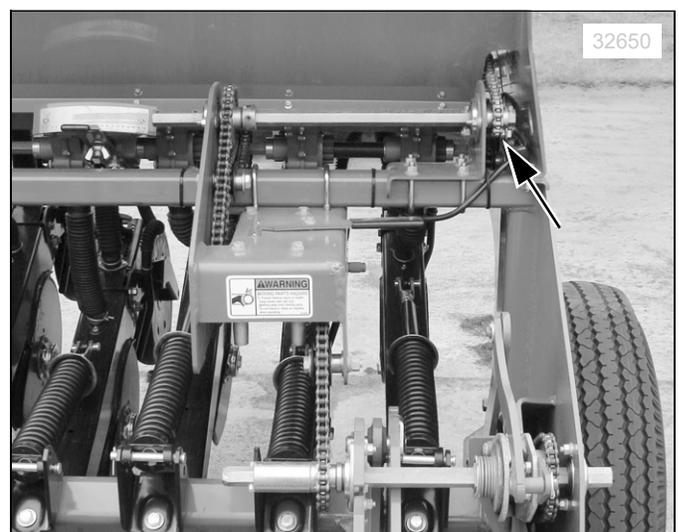
### Option Transfer or Drive Chain (Option)

		<b>As Required</b>
---	---	--------------------

1 chain:  
Agitator drive chain  
Fertilizer drive chain  
Small seed drive input chain (if no Fertilizer)

Type of Lubrication: Chain Lube  
Quantity: Coat thoroughly

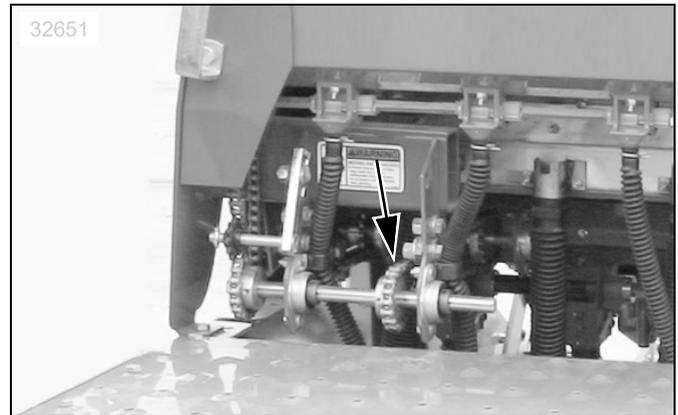
Slack: 1/4 inch (6 mm) in top span



### Fertilizer to Small Seeds Chain (Option)

		<b>As Required</b>
---	---	--------------------

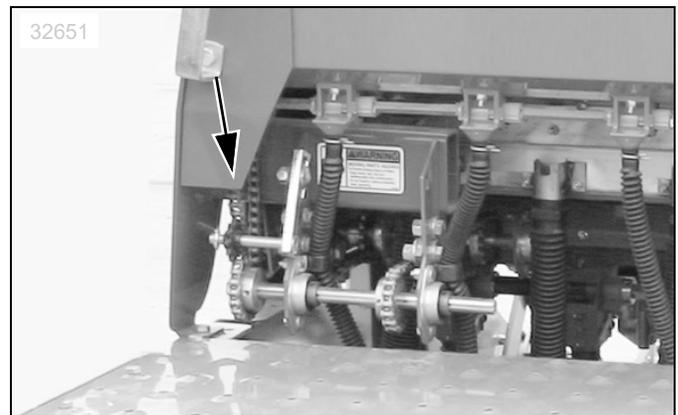
1 chain:  
 present only with both Fertilizer and Small Seeds  
 Type of Lubrication: Chain Lube  
 Quantity: Coat thoroughly  
 Slack: 1/4 inch (6 mm) in top span



### Small Seeds Meter Drive Chain (Option)

		<b>As Required</b>
---	---	--------------------

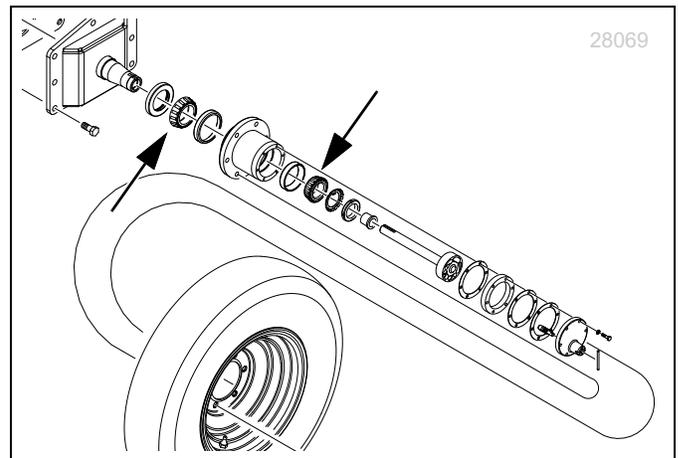
1 chain  
 Type of Lubrication: Chain Lube  
 Quantity: Coat thoroughly  
 Slack: 1/4 inch (6 mm) in front span



### Lock-Out Hub Wheel Bearings

		<b>2-3 Years</b>
---	---	------------------

2 races  
 Type of Lubrication: Grease  
 Quantity: Repack

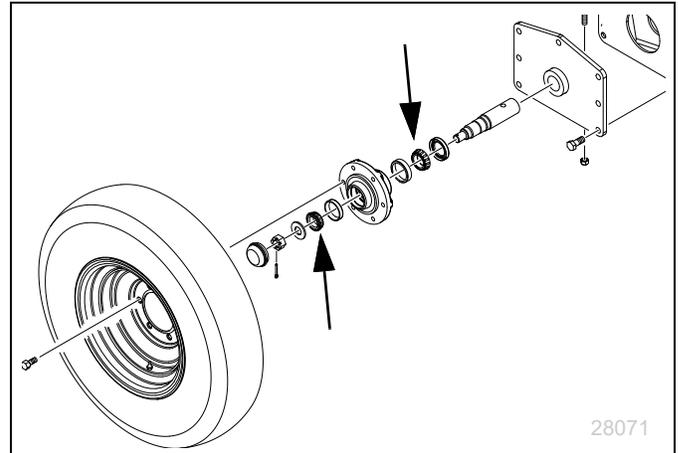


### Right End-Wheel Bearings

	 <b>2-3 Years</b>
---	--

2 races

Type of Lubrication: Grease  
Quantity: Repack



### Gearbox

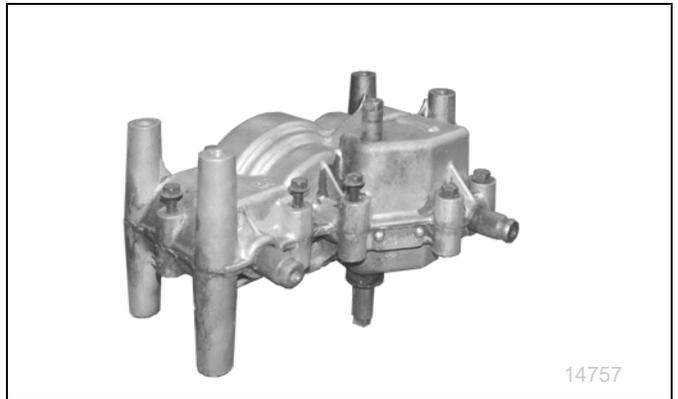
	 <b>On Repair</b>
---	--

The gearbox is lubricated and sealed at the factory. Under normal conditions, it does not require maintenance or lubrication.

If the gearbox has been opened for repair, repack all gears and around shaft bearings using at least 7 oz. of gear lube, part number 788067.

Keep moisture and dirt out of gearbox. Inspect (replace if needed) the rubber seals on gearbox drive and shifter shafts.

Spread a small skim coat of anaerobic sealant (Loctite® 525 or equivalent) to gear case mating surfaces before bolting them back together.



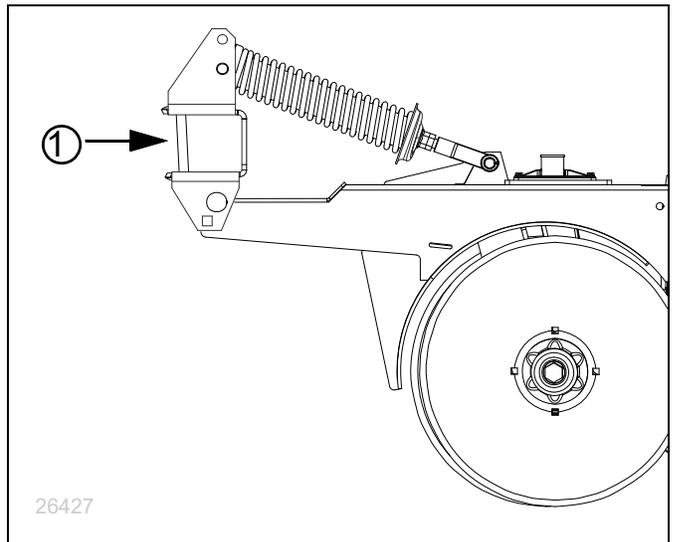
### NOTICE

*Use sparingly. Excess sealant may squeeze off the intended surface and lock bearings or gears.*

### Opener Mounting Bolt

	 <b>After 1st use and start of each season</b>
---	---

After first initial operation of the drill, inspect the opener mounting bolt and nut (1) for proper torque. This check should be repeated before each drilling season. This nut should be torqued to 85 ft./lbs +5/-0. If replacing this nut, it should be Great Plains part number 803-549c.





## Seed Box Agitator

An optional agitator can be added to the main seed box. The agitator stirs the seed directly above the metering cups. The agitator helps prevent bridging of light, fluffy seeds and separates soybeans that are sticky with inoculant.

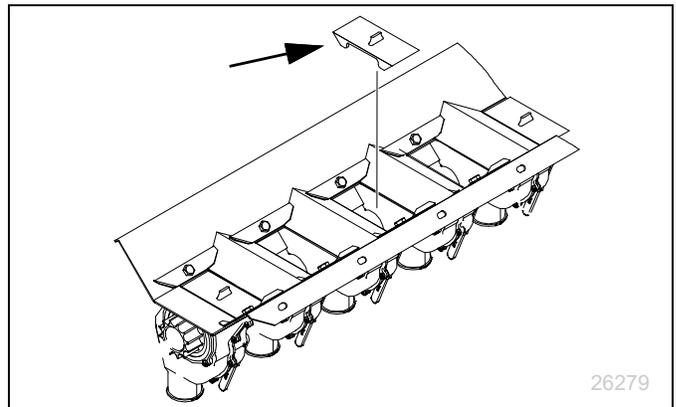
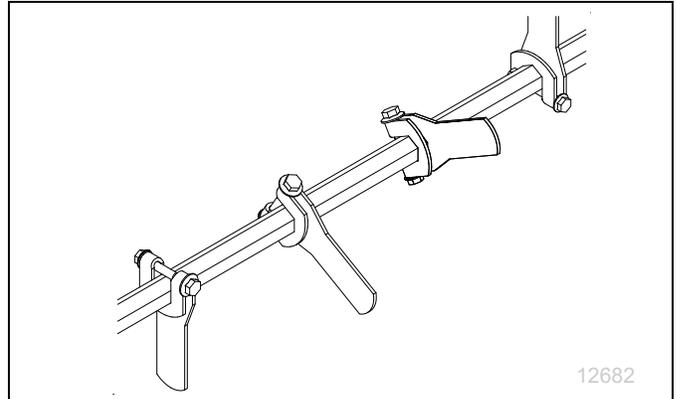
Description	Part Number
800EW AGITATOR 6IN	175-239A
800EW AGITATOR 6IN W/ DRIVE	175-240A
800EW AGITATOR 7 1/2IN	175-241A
800EW AGITATOR 7 1/2 IN W/ DRV	175-242A

The agitator adds 22 lbs (10 kg) to a 6 inch drill, and 21 lbs (9.5 kg) to a 7.5 inch drill.

## Seed Tube Plug (Main Seeds)

This plug stops seed flow from the main seed box above the meter. Order one per row to be set inactive.

Description	Part Number
Fluted Feed Meter Plug	817-087C



## Press Wheels

A variety of single and dual press wheels are available, as bundle options at the time of initial drill order. Kits are not presently available to convert these in the field. Parts may be ordered to do so.

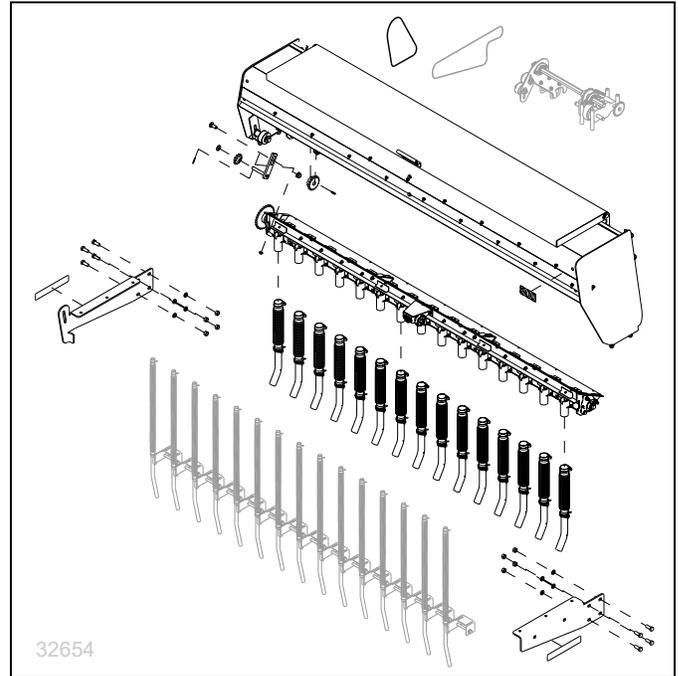
## Fertilizer

These options add an independent fertilizer box, drive system and fertilizer metering system. Order the Option number for factory-installation on a new drill. Order the part Number for field installation.

Description	Order Opt.	Part Number
800EW FERTILIZER 6IN	(46)	
800EW FERT AND SML SDS 6IN	(48)	
800EW FERTILIZER 7.5IN	(46)	
800 EW BOX AND FRAME ASY	(48)	
800 FERT 6 FLD INST ON SGS		175-248A
800 FERT 6 FLD INST WITH DRIVE		175-249A
800 FERT 7.5 FLD INST ON SGS		175-250A
800 FERT 7.5 FLD INST WITH DRV		175-251A

The fertilizer option adds: 390 lbs (177 kg) to a 6 inch drill, and 370 lbs (168 kg) to a 7.5 inch drill.

See “ ” on page 19 and Seed Rate Manual for rate setting.



## Small Seeds Attachment

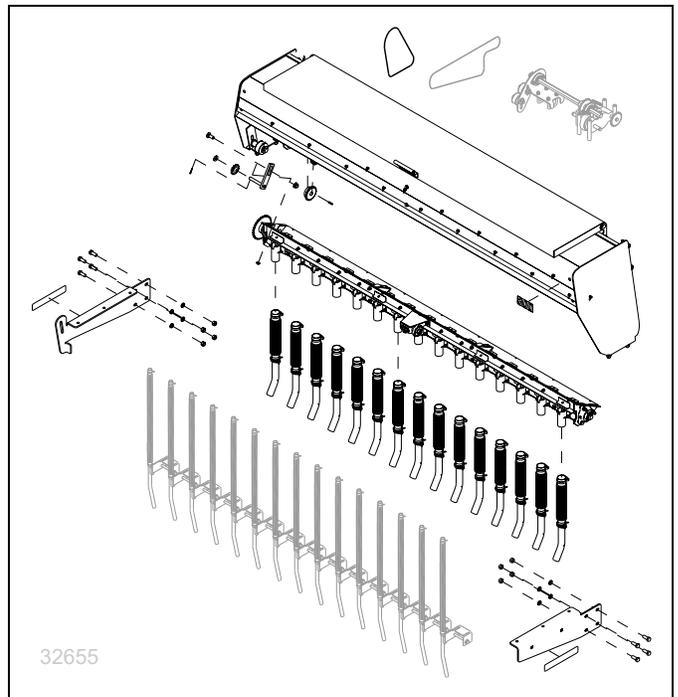
This attachment delivers the smallest seeds evenly and gently.

Order the Option number for factory-installation on a new drill. Order the part Number for field installation.

Description	Order Option	Part Number
800EW SMALL SEEDS 6IN	(41)	
800EW FERT AND SML SDS 6IN	(48)	
800EW SML SEEDS 7.5IN	(41)	
800 EW BOX AND FRAME ASY	(48)	
800 SGS 6" FLD INST ON FERT		175-244A
800 SGS 6" FLD INST WITH DRIVE		175-245A
800 SGS 7.5 FLD INST ON FERT		175-246A
800 SGS 7.5 FLD INST WITH DRV		175-247A

The small seeds option adds: 160 lbs (73 kg) to a 6 inch drill, and 150 lbs (68 kg) to a 7.5 inch drill.

See “ ” on page 19 and Seed Rate Manual for rate setting.

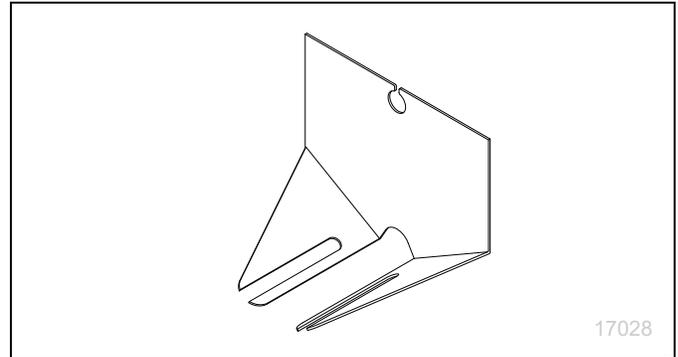


and Seed Rate

## Removable Partition

This partition reduces side-to-side seed flow in the small seeds box. This can prevent seed pile-up when drilling across slopes and in other situations where the seed is particularly fluid. Partitions are sold individually. Order quantity desired.

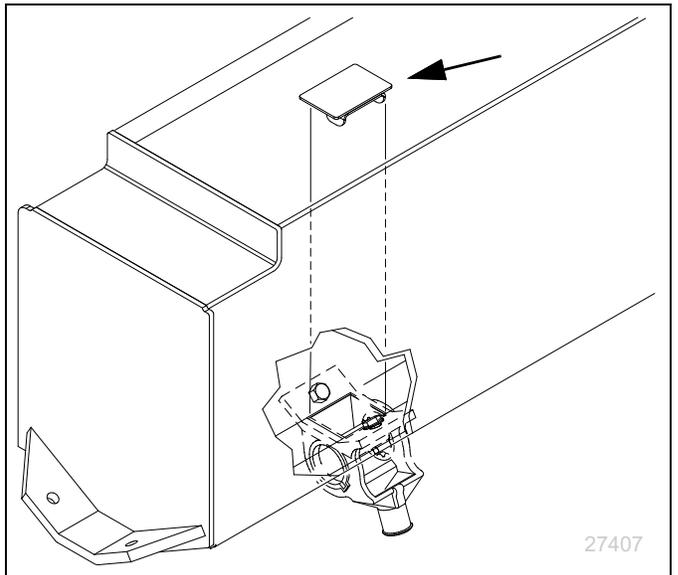
Description	Part Number
RMVBL SMALL SEED BOX PARTITION	123-409D



## Seed Tube Plug (Small Seeds)

This plug stops seed flow from the small seeds box above the meter. Order one per row to set inactive.

Description	Part Number
SML SDS CUP PLUG	133-315H



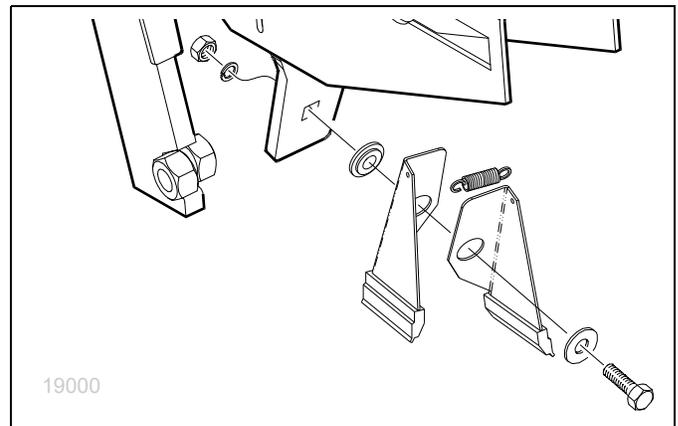
## Carbide Disc Scraper

Slotted scrapers are standard.

Optional carbide disc scrapers are spring-loaded and require no periodic adjustment. Scrapers are compatible with the standard seed flap and Seed-Lok®, but not Keeton®.

Description	Part Number
SPRING SCRAPER ASSEMBLY	121-781A

See “**Carbide Disc Scraper Installation**” on page 62.



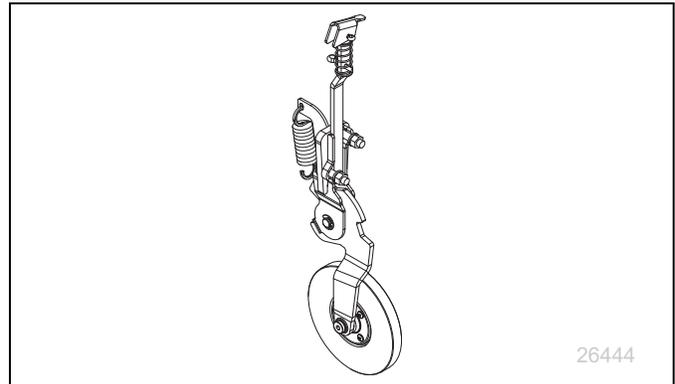
## Seed Firmers

The standard Model 800 drill includes seed flaps. A choice of firmers is an option in the product bundles, or may be field-installed as kits. Only one type of seed firmer may be installed at the same time. Order one firmer kit per opener.

### Seed-Lok® Seed Firmer

Description	Part Number
Series Seed-Lok® kit	122-193K

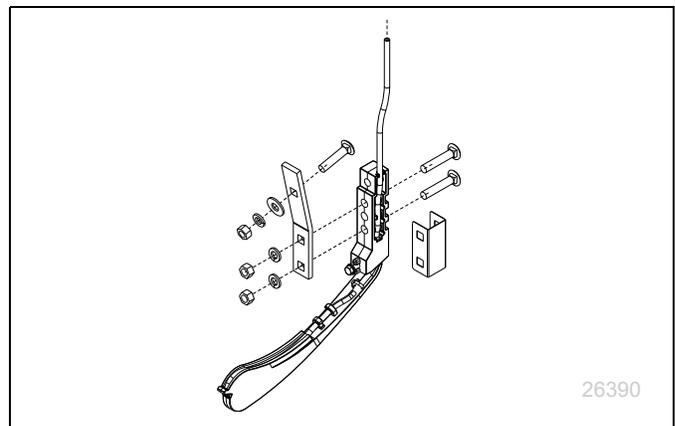
For operations, see “**Seed Firmer Adjustments**” on page 33.



### Keeton® Seed Firmer

Description	Part Number
Keeton® seed firmer (per opener)	890-810C

For operations, see “**Seed Firmer Adjustments**” on page 33.





## Appendix A - Reference Information

### Specifications and Capacities

	800-1275	800-1506
<b>Row Count</b>	12	15
<b>Row Spacing</b>	7.5 inches (19.1 cm)	6 inches (15.4 cm)
Capacities:		
<b>Main Box Capacity</b>	16 bushels (1024 liters)	
<b>Fertilizer Box Capacity</b>	8 cubic feet (227 liters)	
<b>Small Seeds Box Capacity</b>	1.9 bushels (67 liters)	
<b>Agitator</b>	Optional in Main Seed Box. Standard	
<b>Tractor Requirements</b>	45 hp (33.6 kW) minimum	
<b>Weight, standard 800*</b>	2379 lbs (1079 kg)	2579 lbs (1170 kg)
Tongue Weigh, Transport	306 lb (139 kg)	
Tongue Weight, Field	390 lb (177 kg)	
<b>Opener Down Pressure</b>	90 to 180 pounds (41 to 82 kg)	
<b>Opener Travel</b>	8 inches (20.3 cm)	
<b>Opener Planting Depth</b>	0 to 3.5 inches (0-8.9 cm)	
<b>Hydraulic Circuits</b>	1 circuit required	
<b>Transport Width</b>	9 feet 8.5 inches (2.96 m)	
<b>Opener Transport Clearance</b>	9 inches (22.9 cm)	
<b>Swath</b>	7 feet 6 inches (228.6 cm)	
<b>Transport Height</b>	5 feet 4 inches (1.63 m)	
<b>Length (with tongue folded)</b>	12 feet (3.66 m) 7 feet 5 inches (2.26 m)	
<b>Tire Sizes</b>	End Wheels: 700-15 LT 8-Ply 6-bolt rim	

\*. See page 17 for additional weight data.

### Tire Inflation Chart

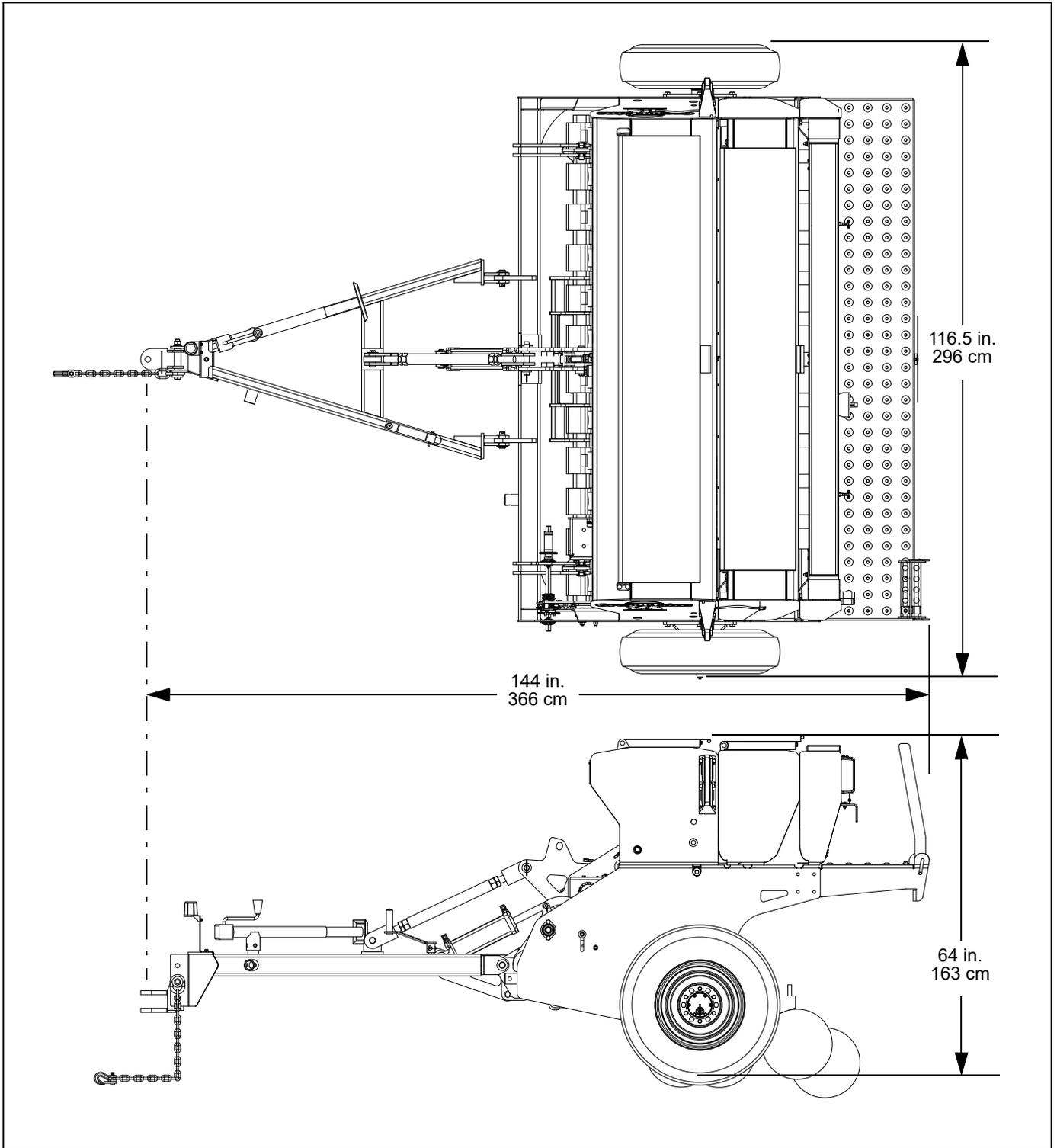
Tire Size	Inflation
700-15 LT 8-Ply	60 psi 414 kPa
Existing drills at 44 psi/303 kPa should re-inflate to the pressure shown above, and should replace any existing 838-258C pressure torque decals (see page 8).	

#### Tire Warranty Information

All tires are warranted by the original manufacturer of the tire. Tire warranty information is found online at the manufacturer's websites listed below. For assistance or information, contact your nearest Authorized Farm Tire Retailer.

ManufacturerWebsite  
 Firestone [www.firestoneag.com](http://www.firestoneag.com)  
 Gleason [www.gleasonwheel.com](http://www.gleasonwheel.com)  
 Titan [www.titan-intl.com](http://www.titan-intl.com)

### Drill Dimensions



## Torque Values Chart

Bolt Size	Bolt Head Identification						Bolt Size	Bolt Head Identification					
													
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi <sup>a</sup>	N-m <sup>b</sup>	ft-lb <sup>d</sup>	N-m	ft-lb	N-m	ft-lb	mm x pitch <sup>c</sup>	N-m	ft-lb	N-m	ft-lb	N-m	ft-lb
1/4-20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4-28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16-18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16-24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8-16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8-24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16-14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16-20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2-13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2-20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16-12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16-18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8-11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8-18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4-10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4-16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8-9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8-14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1-8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1-12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1 1/8-7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8-12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4-7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
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							

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

### Chain Routing

Striped "T" callouts arrows show sprocket and chain idler tooth pitch direction. counts. count.

Striped "P" callout shows sprocket and chain idler tooth pitch direction. counts. count.

Idler callouts (circles) reference slack for longest chain span.

#### End Wheel to Gearbox

End Wheel to Clutch Input slack ①: 1 inch (2.4 cm)  
 Clutch Output to Gearbox Input slack ②: 1/4 inch (6 mm)

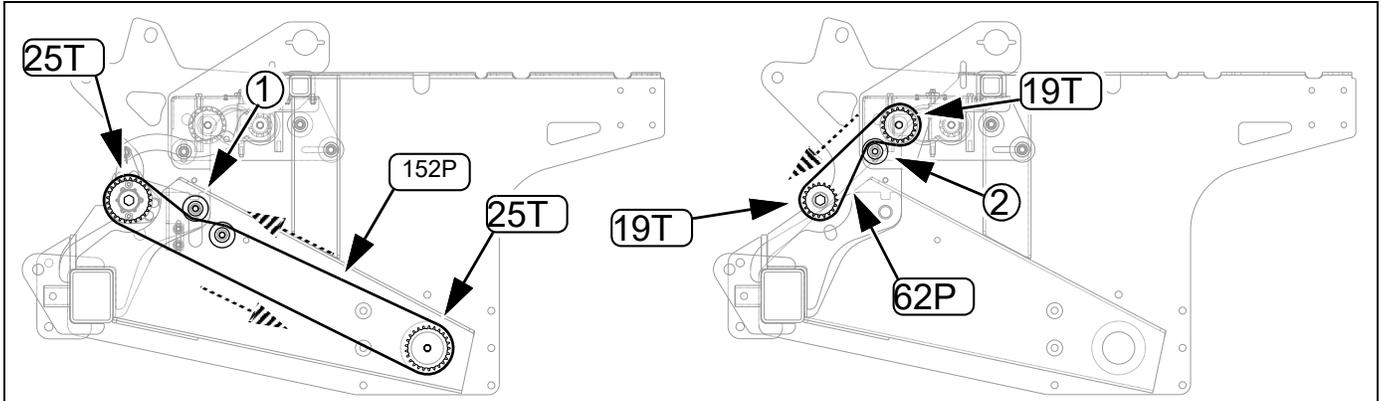


Figure 36  
 Chain Routing: End Wheel to Gearbox

28300

#### Accessory Jackshaft and Agitator

With Fertilizer, see Figure 41. With Small Seeds, see Figure 38. With both, see Figure 41.

Gearbox Bypass to Accessory Jackshaft slack ④: 3/8 inch (9 mm)  
 Accessory Jackshaft to Agitator slack ⑤: 1/4 inch (6 mm)

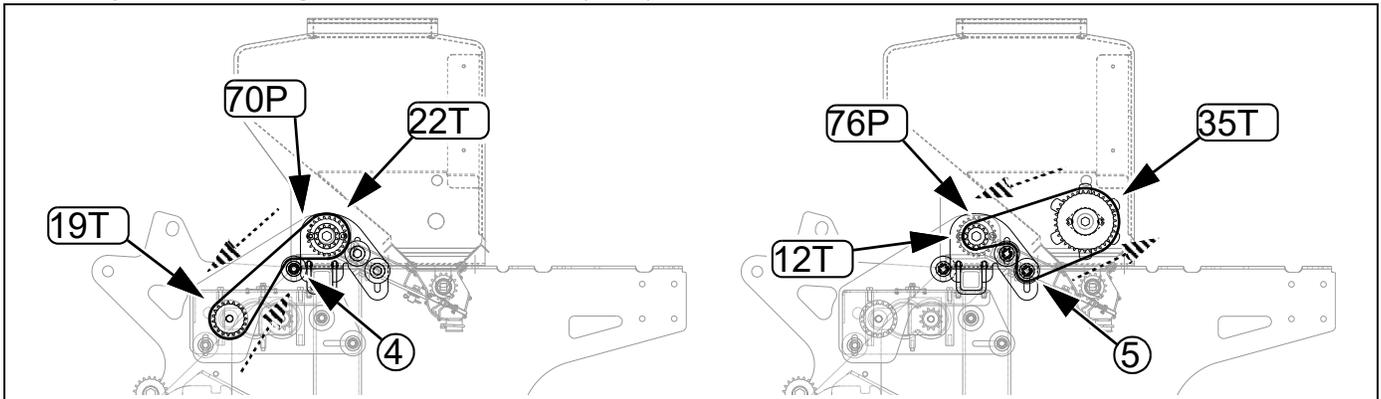


Figure 37  
 Chain Routing: Accessory Jackshaft and Agitator (w/o Option Boxes)

28304

#### Gearbox to Main Seed Meters / Agitator w/ Small Seeds

For Small Seeds Jackshaft to Small Seed Meter Shaft, see Figure 40.

Gearbox Output to Seed Meter Drive Shaft slack ③: 3/8 inch (9 mm)  
 Accessory Jackshaft to Small Seeds Jackshaft slack ④: 1/2 inch (13 mm)

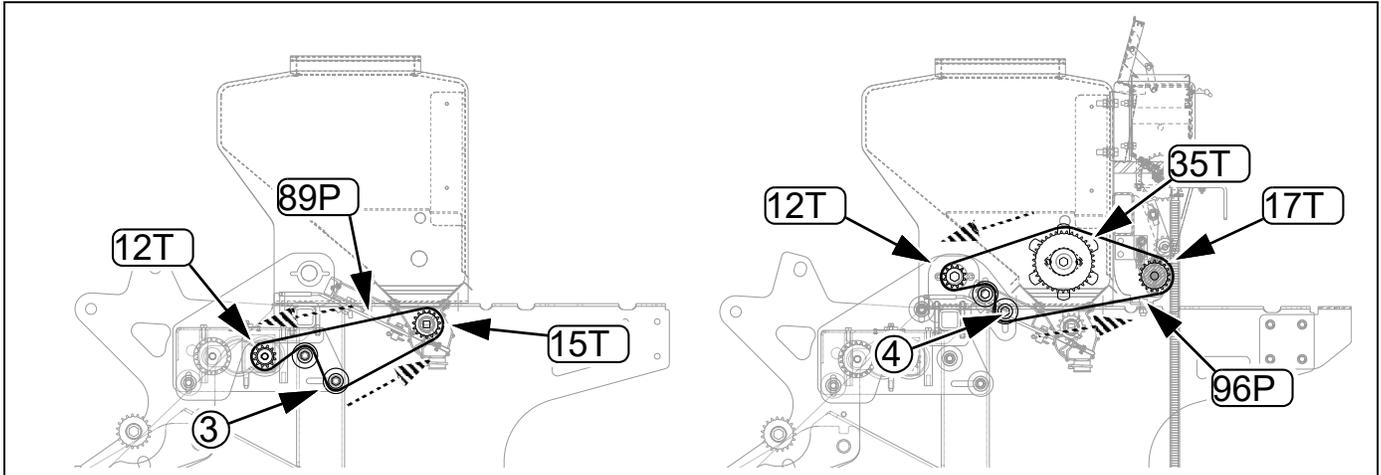


Figure 38

28303

Chain Routing: Gearbox to Main Box Meter Shaft / Agitator with Small Seeds

**Fertilizer (only) Chains**

With Agitator, Small Seeds, or both, see Figure 41.

Accessory Jackshaft to Fertilizer Jackshaft slack ⑤: 1 inch (2.5 cm)  
 Fertilizer slack ⑥: 1/4 inch (6 mm)

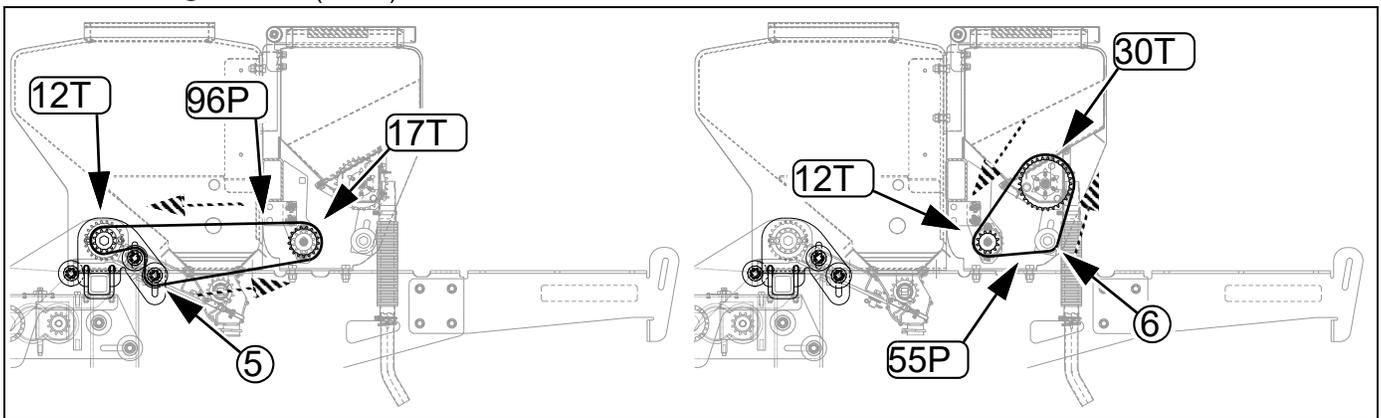


Figure 39

28305

Chain Routing: Fertilizer (w/o Small Seeds or Agitator)

**Small Seeds (only) Chains**

With Fertilizer, Small Seeds Jackshaft Input chain is from Fertilizer Jackshaft, see Figure 41.  
 With Fertilizer and Agitator, see also Figure 41.

Accessory Jackshaft to Small Seeds Jackshaft slack ⑤: 1 inch (2.5 cm)  
 Small Seeds Jackshaft to Meter Shaft slack ⑦: 1/4 inch (6 mm)

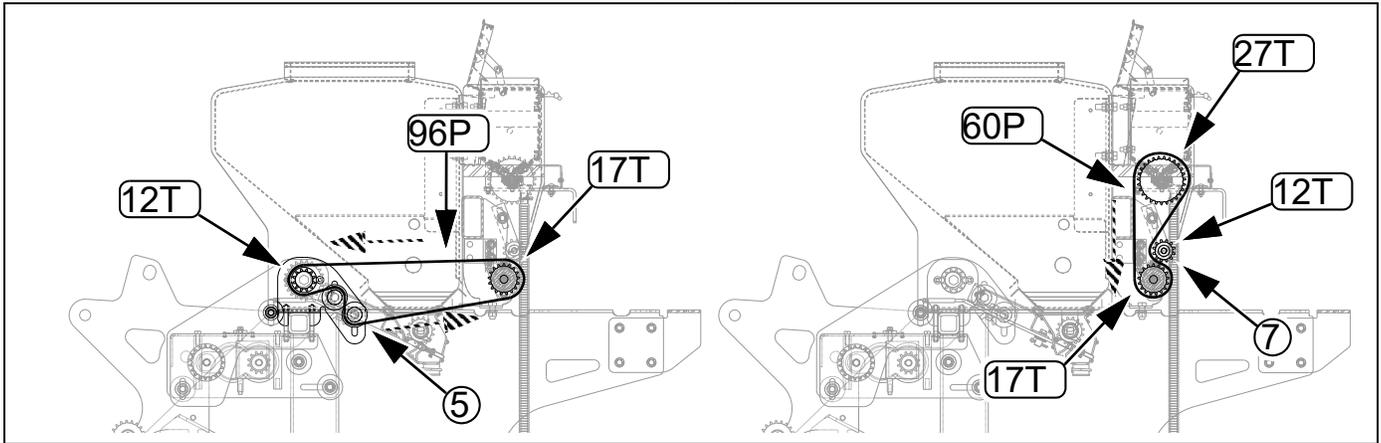


Figure 40  
 Chain Routing: Small Seeds (w/o Fertilizer or Agitator)

28306

**Fertilizer to Small Seeds / Fertilizer + Agitator Chain Routing**

For Fertilizer Jackshaft to Fertilizer Meter, see Figure 39.  
 For Small Seeds Jackshaft to Small Seeds Meter, see Figure 40.

Fertilizer Jackshaft to Small Seeds Jackshaft slack ⑧: 1/2 inch (13 mm)  
 Accessory Jackshaft to Agitator and Fertilizer ⑨: 3/8 inch (9 mm)

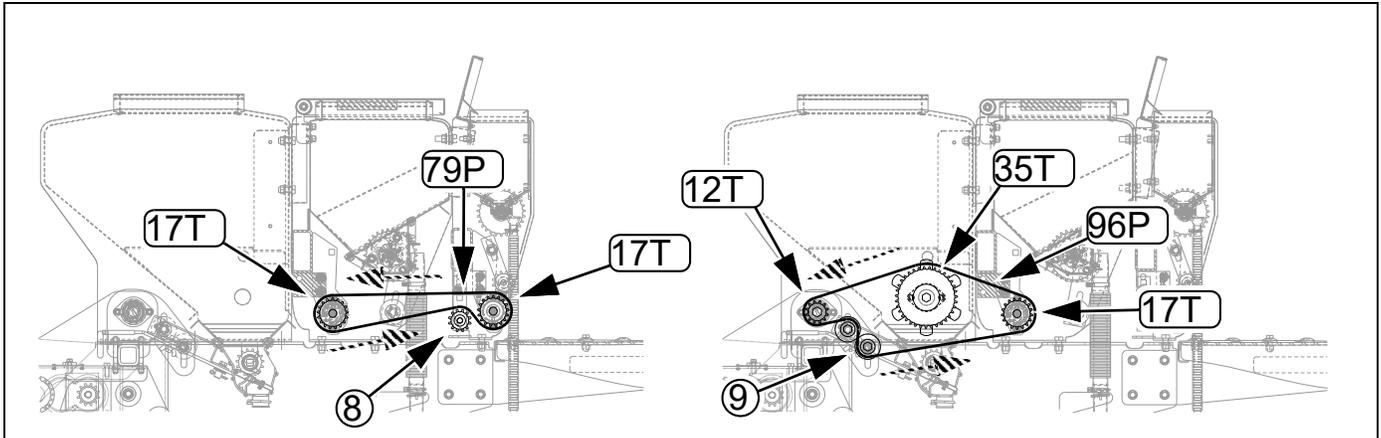
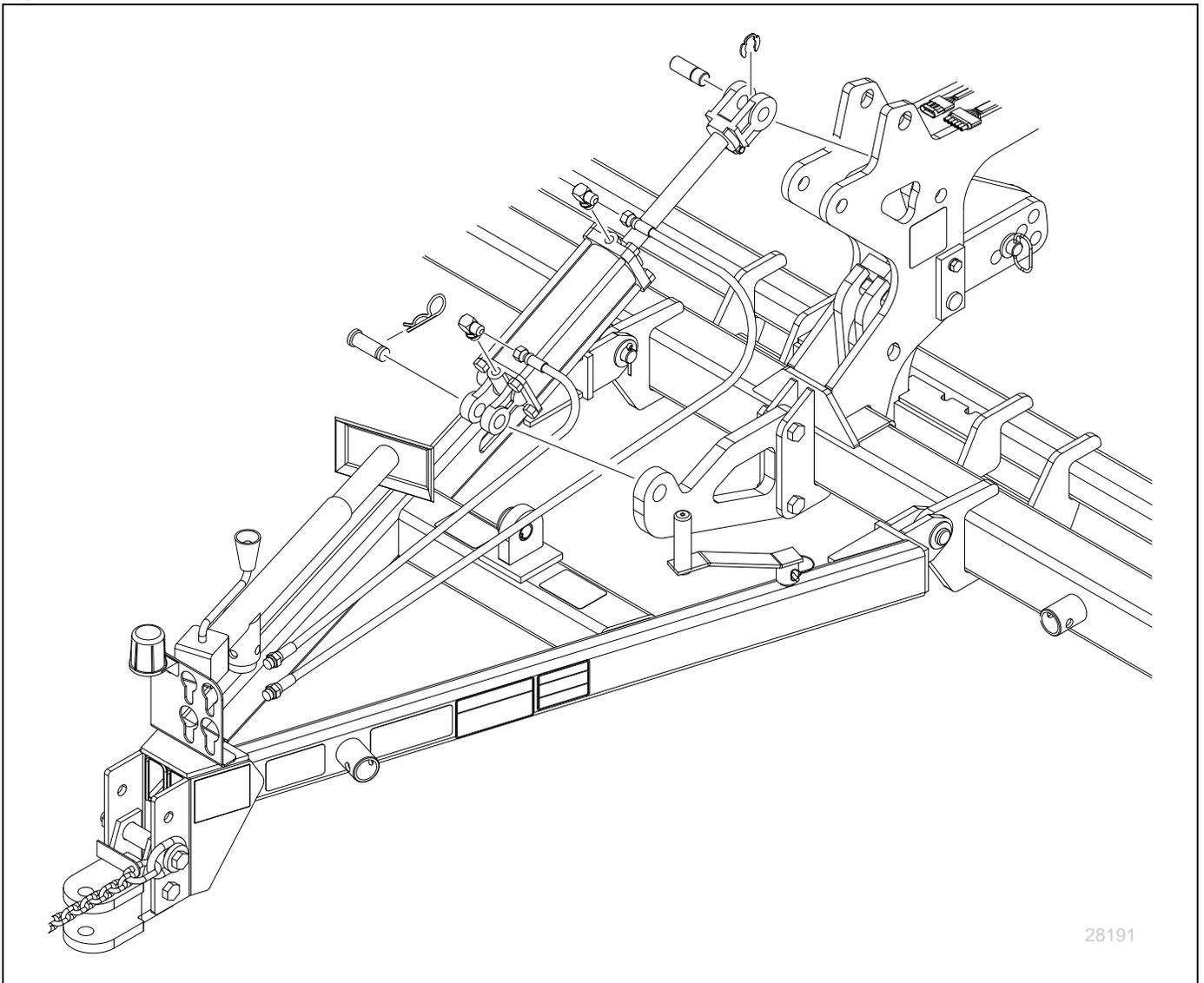


Figure 41  
 Chain Routing: Small Seeds (w/o Fertilizer or Agitator)

28307

# Hydraulic Diagram

## Opener Lift



## Appendix B - Pre-Delivery

### Deploy Tongue

The hitch tongue is elevated for shipment. Review “**Tongue Elevation**” on page 26. Set tongue to normal operating position per “**Return to Use**” on page 27.

### Attach Meter Hoses at Rows

All meter hoses are shipped disconnected at the row units. Clamps are shipped inside a seed box. The opener frame has openings for up to three material hoses:

- The forward hole (f) is always used for the seed delivery tube for the main seed box.
- The rear hole (r) is used for Fertilizer, or if no Fertilizer is installed, for Small Seeds.
- The side tube (s) is used for Small Seeds if Fertilizer is also installed.

Start with the left row unit (row 1). For each row:

**Refer to Figure 42**

#### Main Seed Hose

Select one:  
 (7) 800-268C SINGLE WIRE HOSE CLAMP #23  
 Open the clamp (7). Place it onto the outlet end of the hose (21), up against the ribs. Slide the outlet end of the hose fully onto the seed tube inlet at the forward row unit opening (f). Move the clamp to just below the raised lip of the seed tube inlet.

#### Fertilizer Hose

Select one:  
 (6) 800-008C CLAMP HOSE 1 1/2 NO. 24  
 Open the clamp (6). Place it onto the outlet end of the hose (24), up against the ribs. Slide the outlet end of the hose fully onto the fertilizer tube inlet at the rear row unit opening (r). Move clamp to halfway onto the hose neck.

#### Small Seeds Hose

Select one:  
 (8) 800-321C HOSE CLAMP NO.12 3/4 ID  
 Open the clamp (8). Place it onto the outlet end of the hose (25), up against the ribs. Slide the outlet end of the hose fully onto the small seeds tube inlet at the rear row unit opening (r) or side tube (s). Move the clamp to halfway onto the hose neck.

 These items are normally completed by the dealer prior to delivery.

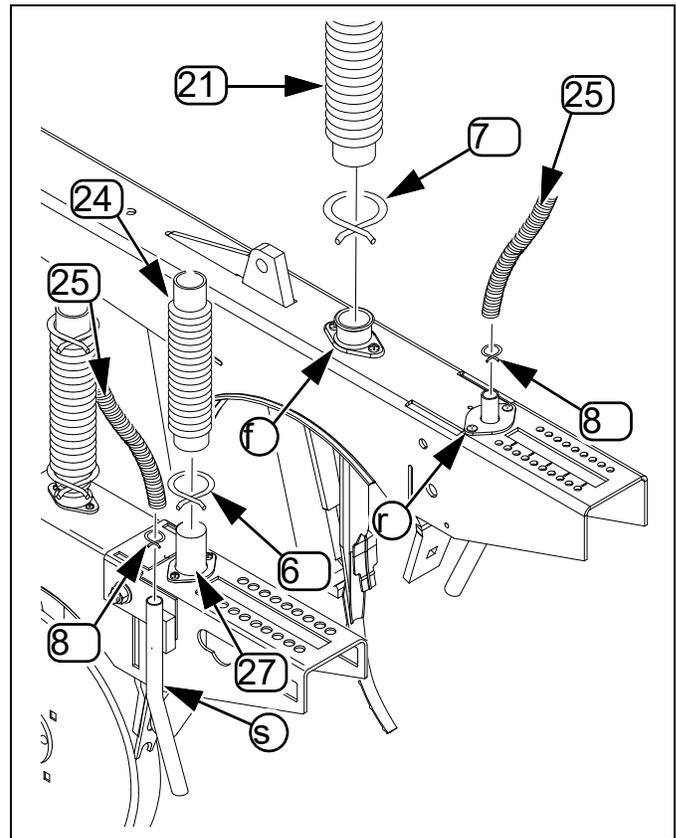


Figure 42  
Seed and Fertilizer Hoses

32340

## Install SMV Reflector

### Refer to Figure 43

The SMV reflector (29) is shipped pre-assembled to the mount (2), but mounted inverted on the walkboard. The SMV must be repositioned to upright to prevent contact with row units during operation.

Remove and save two sets:

(13) 802-092C RHSNB 5/16-18X3/4 GR5

(18) 804-009C WASHER LOCK SPRING 5/16 PLT

(15) 803-008C NUT HEX 5/16-18 PLT

Orient the reflector assembly (29) upright, and red/orange reflective side to rear. Secure mount (2) to walkboard with bolts (13), lock washers (18) and nuts (15).

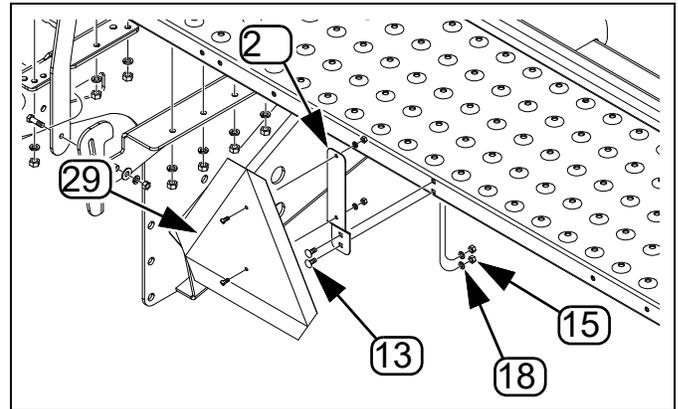


Figure 43  
SMV Reflector

28055

## Appendix C - Option Installation

### Carbide Disc Scraper Installation

These instructions apply to an installation of scraper kit part number 121-781A.

Optional carbide disc scrapers are not factory installed. Start with row 1 (left-most row unit):

1. Remove one or both disc blades to gain safe access to the mount ①. Note the position of bushings and spacers for correct re-assembly (page 32).
2. Remove the existing slotted scraper.

#### Refer to Figure 44

3. Select one:  
⑫ 802-079C HHCS 3/8-16X1 1/4 GR5

If Seed-Lok® is present, or also being mounted, also select one:  
⑳ 804-013C WASHER LOCK SPRING 3/8 PLT  
Place the lock washer ⑳ on the bolt ⑫ (because the nut is not used).

4. Select one:  
⑲ 804-012C WASHER FLAT 3/8 SAE PLT  
Place this flat washer on the bolt.

5. Select one:  
890-357C SCRAPER-SPRING LOAD-AIR DESIGN  
If the blades were not completely pre-assembled, select one each:  
⑳ K7090 AIR DESIGN SCRAPER LH SIDE  
㉑ K7091 AIR DESIGN SCRAPER RH SIDE  
㉒ K7096 SPACER AND WASHER ASSEMBLY  
㉓ K7093 AIR DESIGN SCRAPER 15LB SPRING  
Nest one side (㉒, ㉓) behind the other. Connect the spring ㉔ between the sides, using the small top holes. Insert the spacer ㉕ from the front, with the narrow raised center to the rear (in the large blade holes).

6. Insert the bolt through the scraper blades (㉒, ㉓) and spacer ㉕.

7. If no Seed-Lok® is present, select one each:  
⑳ 804-013C WASHER LOCK SPRING 3/8 PLT  
㉖ 803-014C NUT HEX 3/8-16 PLT  
Secure the scraper assembly to the scraper mount ① using the lock washer ⑳ and nut ㉖.

If a Seed-Lok® is present (not shown), secure the scraper assembly to the Seed-Lok®, using a threaded hole present in the Seed-Lok®. The hex nut is ㉖ unused.

8. Re-mount the removed disc blade.

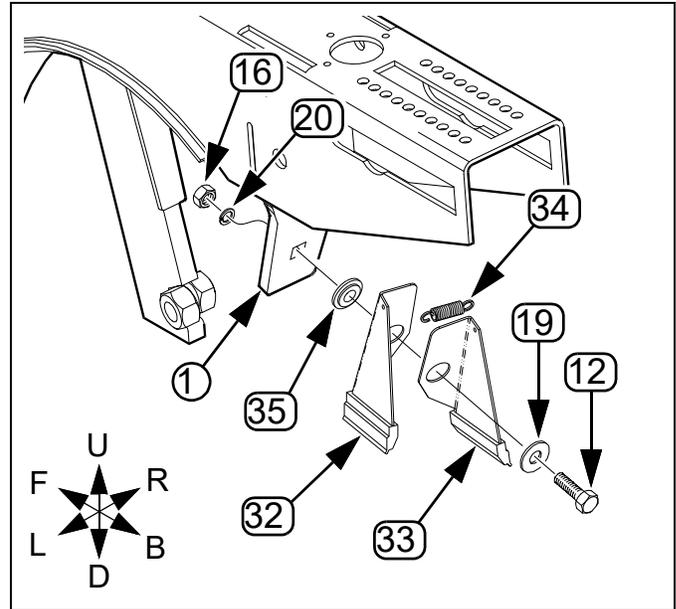


Figure 44  
Carbide Disc Scraper Installation

19000



## 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 call 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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