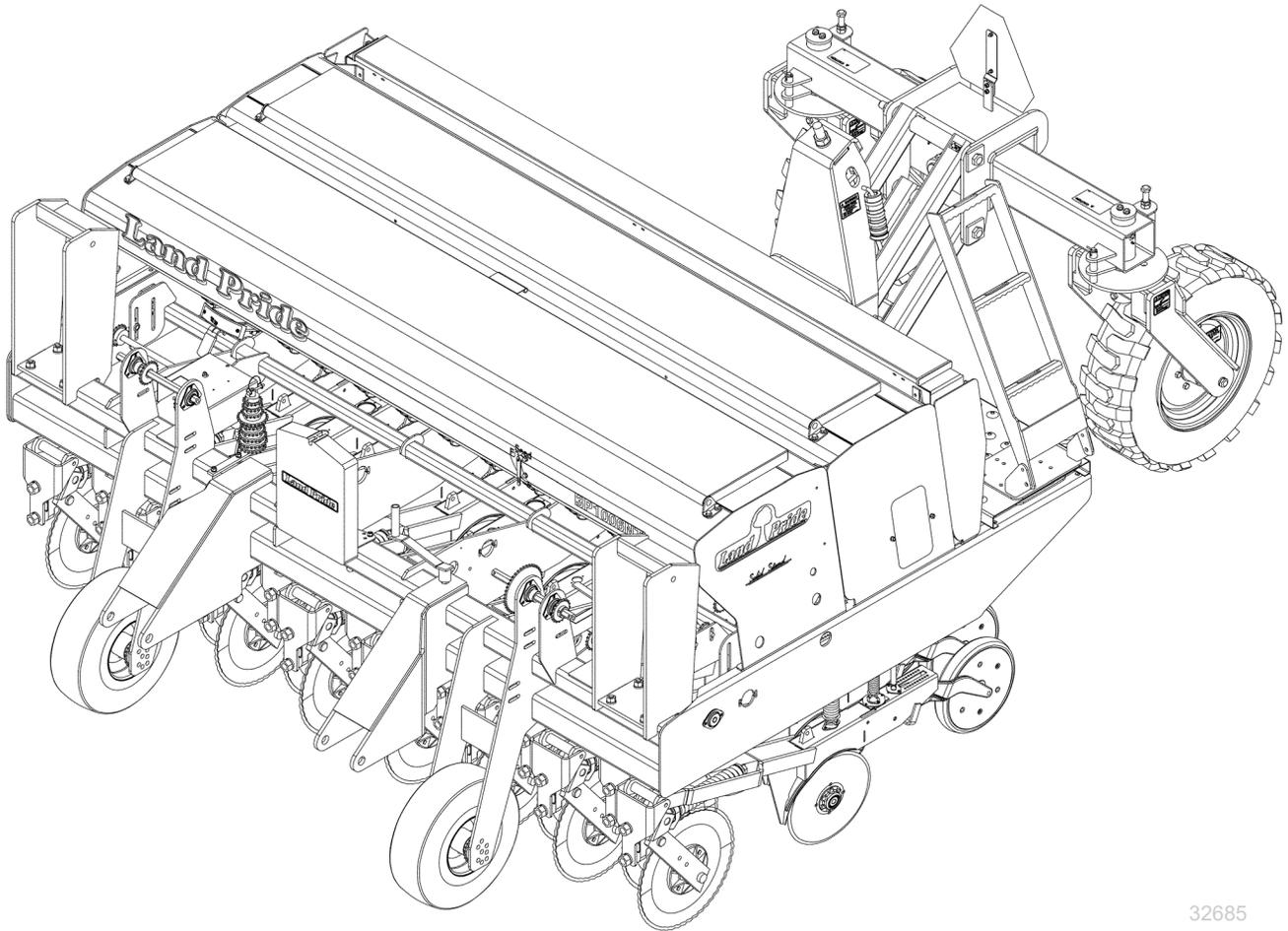


Compact Drill

3P1006NT



32685

313-521M Operator Manual



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

**Cover photo may show optional equipment not supplied with standard unit.
For an Operator's Manual and Decal Kit in another language, please see your Land Pride dealer.**

Printed 2024-07-24



Machine Identification

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

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

Model Number	
Serial Number	
Machine Height	
Machine Length	
Machine Width	
Machine Weight	
Year of Construction	
Delivery Date	
First Operation	
Accessories	_____ _____ _____

Dealer Contact Information

Name: _____

Street: _____

City/State: _____

Telephone: _____

Email: _____

Dealer's Customer No.: _____

California Proposition 65

WARNING: 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 www.P65Warnings.ca.gov/motor-vehicle-parts.



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Printed in the United States of America.



Weight Bracket Installation 90
Warranty 91



Parts Manual QR Locator
The QR (Quick Reference) code on the cover and to the left will take you to the Parts Manual for this equipment. Download the appropriate App on your smart phone, open the App, point your phone on the QR code and take a picture.



Dealer QR Locator
The QR code on the left will link you to available dealers for Land Pride products. Refer to Parts Manual QR Locator on this page for detailed instructions.

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.

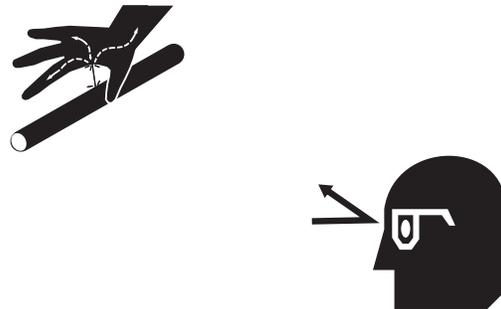
- ▲ *Do not use liquid seed treatments with the drill.*
- ▲ *Read and follow chemical manufacturer's instructions.*
- ▲ *Wear protective clothing.*
- ▲ *Handle all chemicals with care.*
- ▲ *Avoid inhaling smoke from any type of chemical fire.*
- ▲ *Never drain, rinse or wash dispensers within 100 feet (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.*



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.

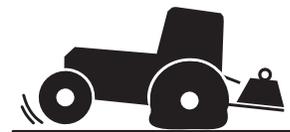
- ▲ Use flashing warning lights and turn signals whenever driving on public roads.
- ▲ Use lights and devices provided with implement



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.

- ▲ 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.
- ▲ Semi-mounted and 3-point implements reduce weight on steering tires. Verify that tractor is correctly ballasted. Watch for signs of poor steering traction.



Tires Not a Step

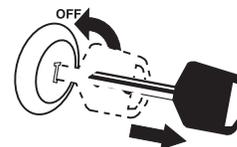
Do not use gauge wheel or lift-assist tires as steps. A tire could spin underfoot, resulting in a fall onto the implement or ground, possibly causing serious injury.

- ▲ The gauge wheel tires can be in poor ground contact at any time, even with the drill lowered in the field. They can appear to be in ground contact, and spin easily, in multiple conditions.
- ▲ The lift-assist tires can be in poor ground contact, or out of ground contact, whenever the drill is lowered.



Shutdown and Storage

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



Tire Safety

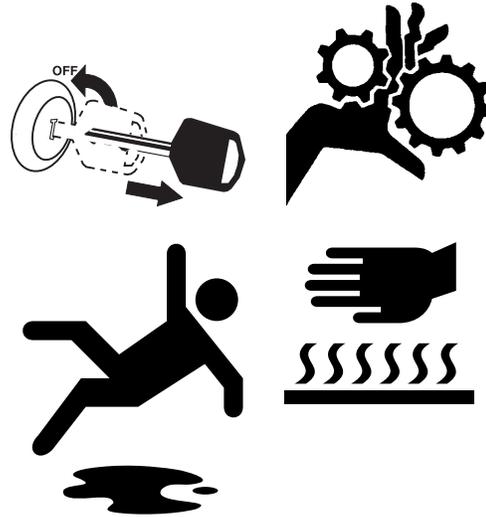
Tire changing can be dangerous and should be performed by trained personnel using correct tools and equipment.

- ▲ 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

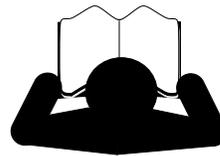
- ▲ *Understand procedure before doing work. Use proper tools and equipment. Refer to this manual.*
- ▲ *Work in a clean, dry area.*
- ▲ *Lower the drill, put tractor in park, turn off engine, and remove key before performing maintenance. If work must be performed with implement raised, use blocks or 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

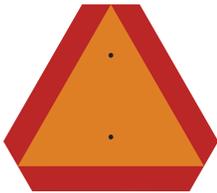
Safety Reflectors and Decals

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 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



On top of lift assist pivot weldment;
1 total

See “**Transporting**” on page 23.

Reflectors: Red

838-266C



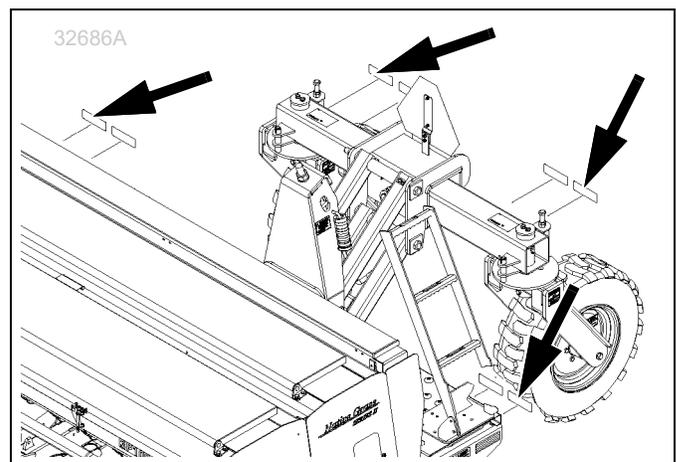
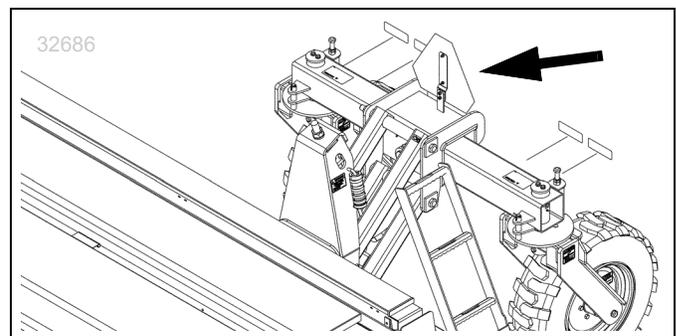
On rear face of lift assist cross tube, outside daytime reflectors;

On rear face of walkboard, outside daytime reflectors;
4 total

See “**Transporting**” on page 23.

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.



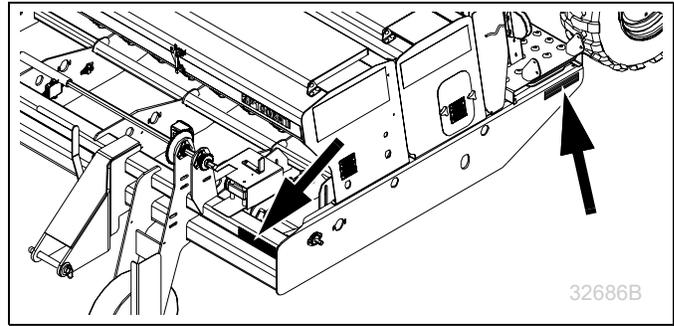
Reflectors: Amber

838-266C



On side frames at walkboard ends, on front face of upper front tool bars, outside ends; 4 total

See “Transporting” on page 23.



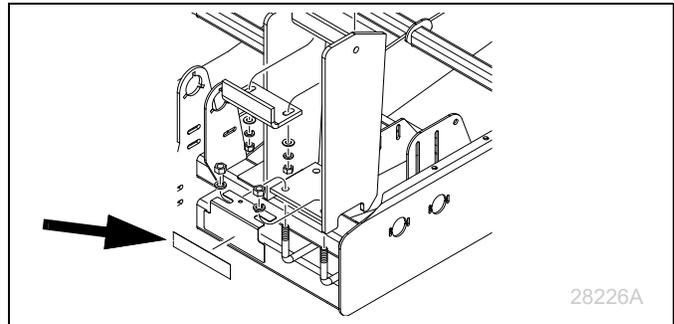
Reflectors: Amber (with Weights Option)

838-266C



On decal mounts attached to both weight brackets; 2 total

See “Transporting” on page 23.



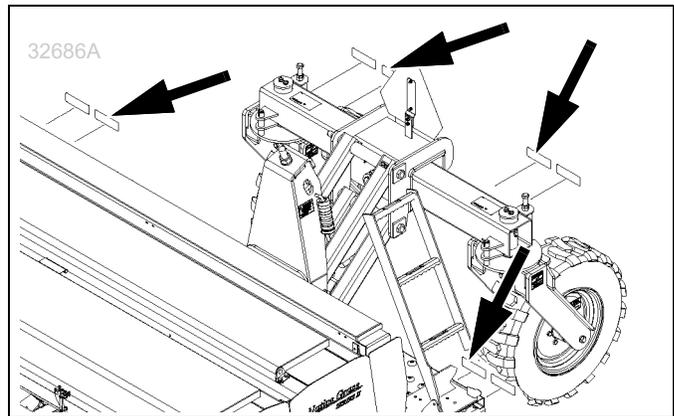
Reflectors: Daytime

838-267C



On rear face of lift assist cross tube, inside red reflectors; On rear face of walkboard, inside red reflectors; 4 total

See “Transporting” on page 23.

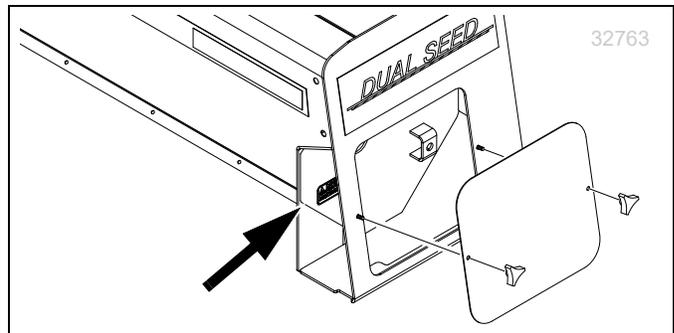


Danger: Moving Chain (Option)

818-518C



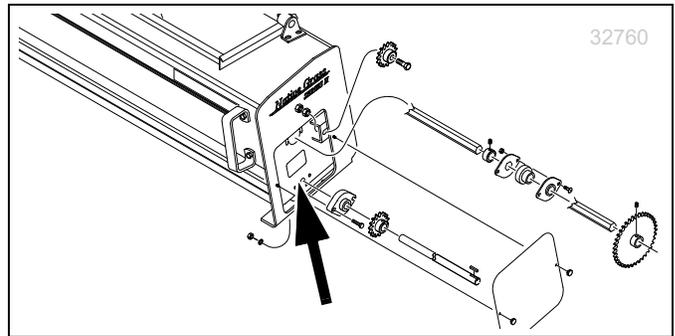
Dual Seed: On outside of box end wall, under both covers; 2 total



Danger: Moving Chain (Option)
818-518C



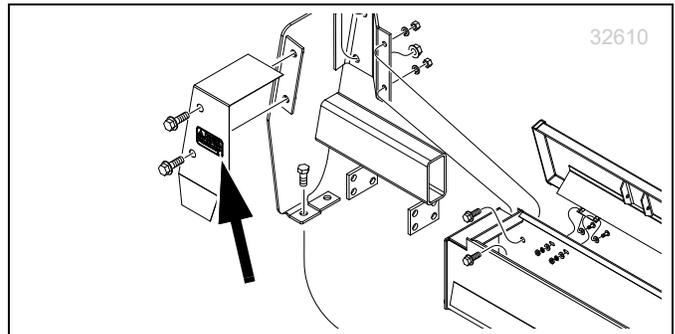
Native Grass: On outside of box end wall, under both covers;
2 total



Danger: Moving Chain (Option)
818-518C



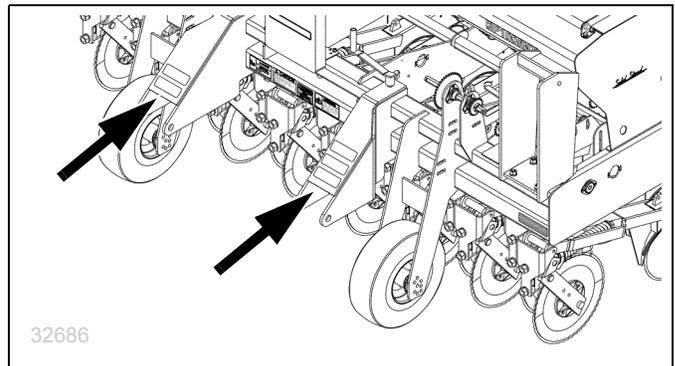
Small Seeds: On chain guard of Small Seeds option;
1 total



Danger: Hitch Crush
818-590C



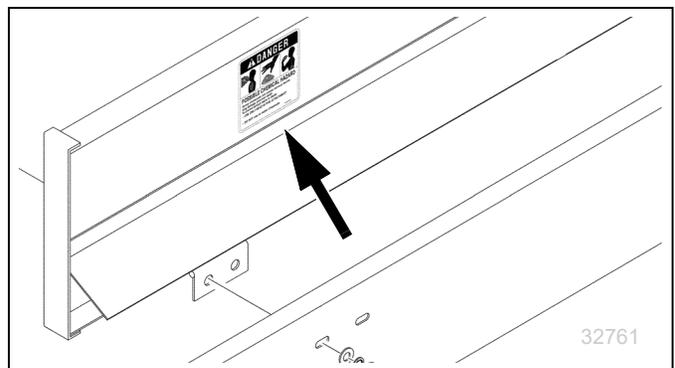
On front faces of both lower 3-point hitch arms;
2 total
See "Hitching Tractor to Drill" on page 15.



Danger: Possible Chemical Hazard
838-467C



Under lid of Small Seeds box;
1 total
See "Loading Materials" on page 25.

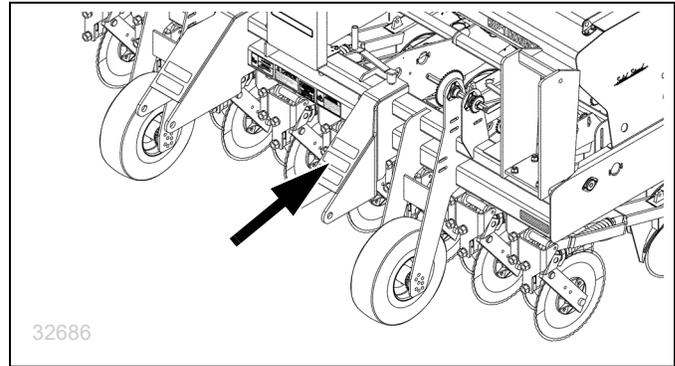


Warning: Speed
818-337C



On front face of lower front cross tube inside 3-point hitch;
1 total

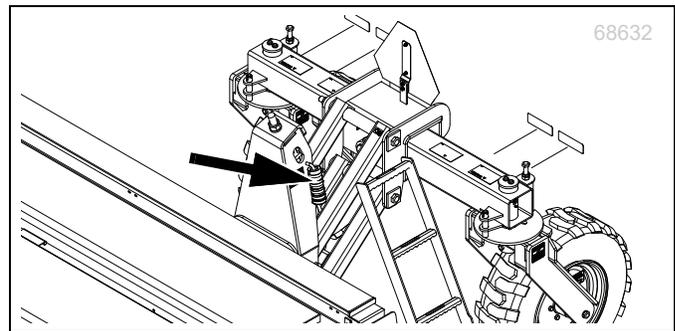
See “Transporting” on page 23.



Warning: Transport Locks
838-057C



On left face of lift assist mount weldment;
1 total

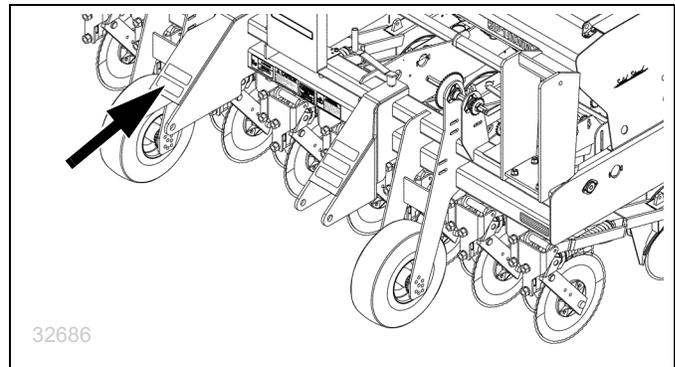


Warning: High Pressure Fluid
838-094C



On front face of right 3-point hitch arm;
1 total

See “Hitching Tractor to Drill” on page 15.

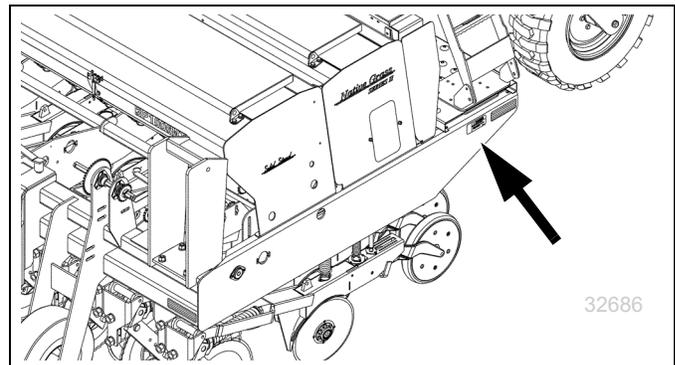


Warning: Falling Hazard
838-102C



On left side frame at ladder;
2 total

See “Loading Materials” on page 25.

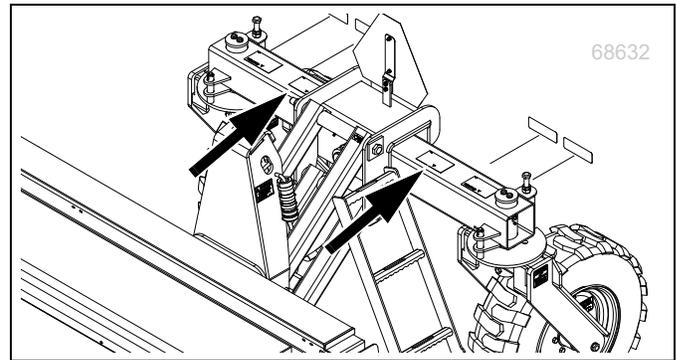


Warning: Hand Crush

838-611C



On 2 on axle tube; 2, 3, 4, or 5 total axle tube

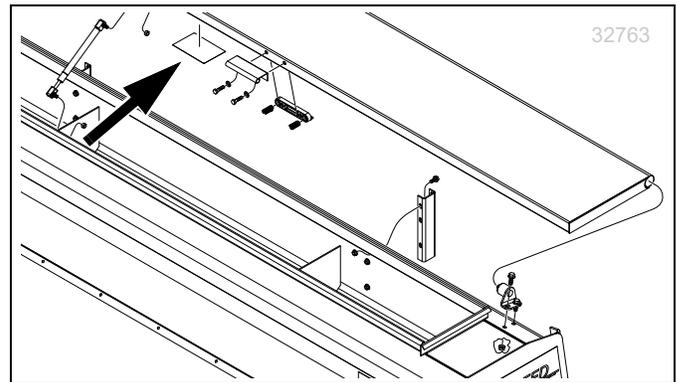


Warning: Hand Crush (Option)

838-611C



Dual 1 Seed: 2 Under lid; 2, 3, 4, or 5 total Under Lid

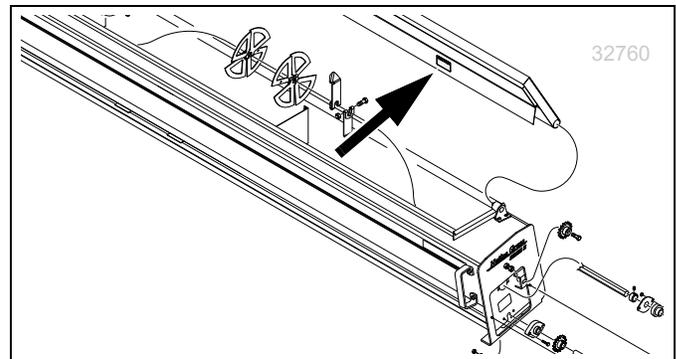


Warning: Hand Crush (Option)

838-611C



Native 2 Grass: 2 Under lid; 2, 3, 4, or 5 total under lid

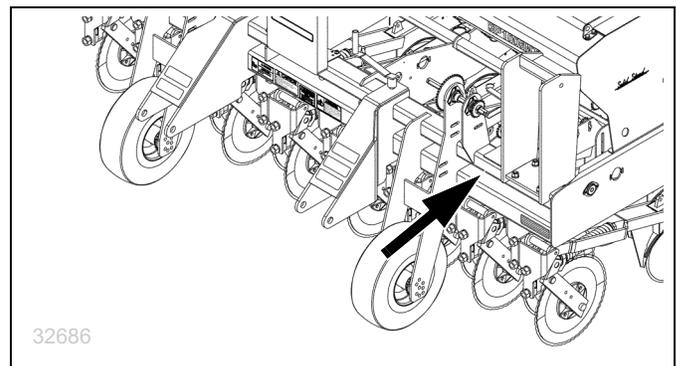


Warning: Moving Parts

818-860C



On front face of upper front cross tube at gearbox; 1 total



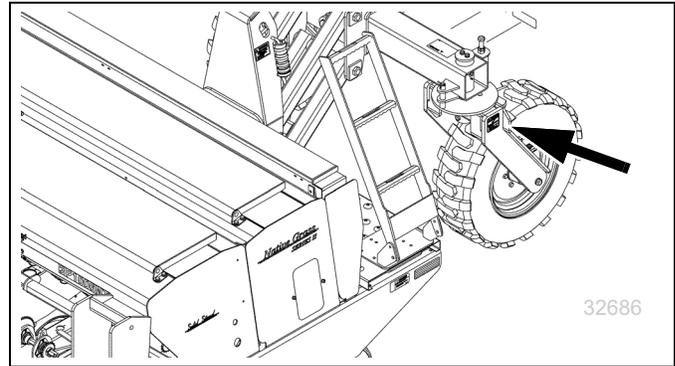
Caution: Tires Not a Step

818-398C



On outside face of caster arms above tires;
2 total

See “Tires Not a Step” on page 3.



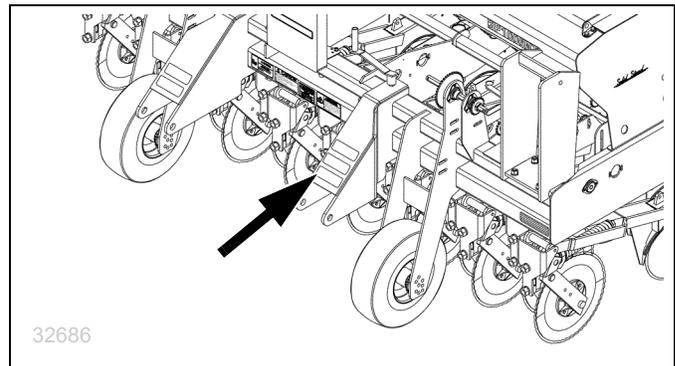
Caution: General

818-719C



On front face of left 3-point hitch arm;
1 total

See “Important Safety Information” on page 1.

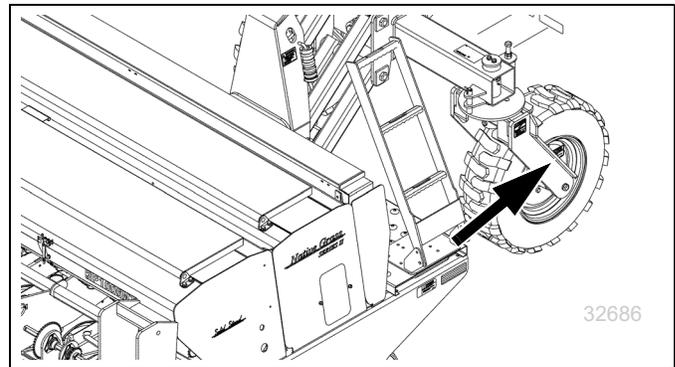


Caution: Tire Pressure and Torque

838-092C



On rim of each lift assist wheel;
2 total

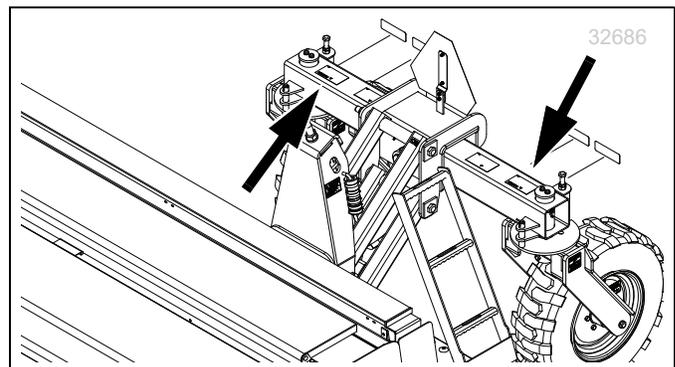


Caution: Transport Locks

848-339C

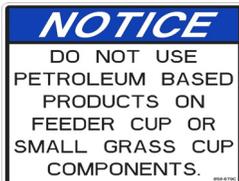


On top face of caster cross tube;
2 total

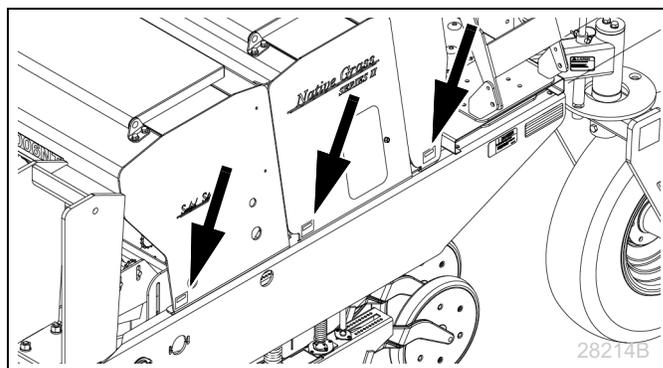


NOTICE: Petroleum Products

858-679C



On _____ ends _____ of _____ seed _____ boxes;
1 per seed box



Introduction

Land Pride welcomes you to its growing family of new product owners. Your Semi-Mounted 10-Foot No-Till 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 3P1006NT is a towed seeding implement. This drill has a working width of 10 feet (2.9 m). The drill has straight arm, double disc 06 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 one or both forward gauge wheels. Seeding rates are set by rate adjustment handles and a Drive Type gear box for a main seed box. Native Grass rates are set by sprocket selection.

Intended Usage

Use this drill to seed grasses or production-agriculture crops or to seed over existing grass stands, in ground conditions that are flat to semi-flat or gently rolling.

Models Covered

This manual applies to compact drill model:

Standard 3P1006NT Models have a main seed box. A second main seed box (Dual Seed), Fertilizer, Native Grass 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.

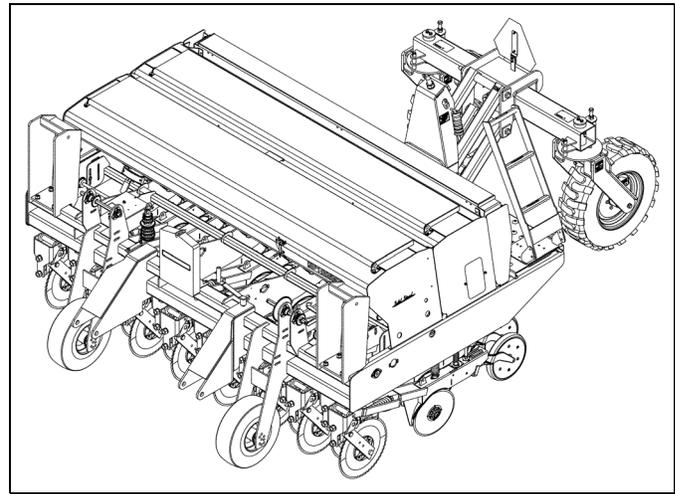


Figure 1
3P1006NT Drill

32685

Document Family

Operator Manual (this document)

3P1006NT Parts Manual

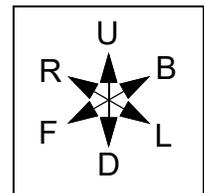
Seed Rate Manual

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.

Note: 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.





Owner Assistance

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

Refer to Figure 2

Your machine's parts were specially designed and should only be replaced with parts. Always use the serial and model number when ordering parts from your dealer. The serial-number plate is located on the top front cross-tube, left of the left gauge wheel mount.

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

Model Number: _____

Serial Number: _____



Figure 2
Serial Number Location

32802

Further Assistance

Your dealer wants you to be satisfied with your new machine. If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your dealership service manager making sure that person is aware of any problems you may have and has had the opportunity to assist you.
2. If you are still unsatisfied, seek out the owner or general manager of the dealership, explain the problem, and request assistance.

For further assistance write to:

PO Box 5060
Salina, KS 67402-5060

Preparation and Setup

This section helps you prepare your tractor and drill for use.

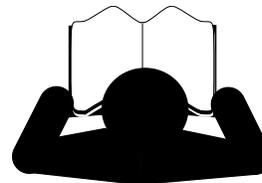
Pre-Delivery Setup

If the drill has just been delivered, or has been broken down for re-shipment, this item needs to be completed prior to first field use:

- See “**Appendix B - Pre-Delivery**” on page 76.

You may also need to install features, options and accessories that are not factory-installed, including:

- “**Carbide Disc Scraper Installation**” on page 89.
- “**Weight Bracket Installation**” on page 90
- Native Grass Seed Rate Reduction installation, found in manual 202-583M in the Reduction kit.



Pre-Planting Setup

The balance of this section covers items that need to be completed or checked prior to each field use of the drill.

Pre-Setup Checklist

1. Read and understand “**Important Safety Information**” on page 1.
2. Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
3. Check that all grease fittings are in place and lubricated. See “**Lubrication and Scheduled Maintenance**” on page 51.
4. Re-connect any seed or fertilizer hoses disconnected for storage. See “**Attach Meter Hoses at Rows**” on page 87.
5. Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See “**Safety Decals**” on page 5.
6. Inflate tires to pressure recommended and tighten wheel bolts as specified. See “**Appendix A - Reference Information**” on page 61.

Hitching Tractor to Drill

The 3P1006NT is a Semi-Mounted 3-Point Category II hitch implement.

Hitch Extension

If no hitch extension is required, skip to step 4.

On tractors with oversize tires, or unusual wheel bases, the rear tractor tires may be too close to (or touch) drill components when directly hitched. In this case, a hitch extension kit is available (page 57).

NOTICE

Equipment Damage Risk:

Great Plains CPH, PFH or SSH accessory hitches are not compatible with the 3P1006NT.

Note: The extension hitch is compatible with most standard quick hitches.

Mount the extension on the tractor before hitching to the drill.

Refer to Figure 3

1. Use a lift or hoist to bring the extension upright and lift it high enough to engage with the lower arms of the tractor 3-point.
2. Align the tractor-side (front) top link ① with the tractor top link arm, and secure with a pin provided with the extension. The lift or hoist may be removed.
3. Adjust the tractor top link as needed, and swing the extension until the tractor-side lower links ② are aligned with the tractor's lower arms. Secure with pins provided with the extension.

Semi-Mounted Hitching

If a hitch extension is required, mount it on the tractor *before* hitching the drill.

4. Raise or lower tractor 3-point arms, or hitch extension, as needed and pin lower arms to drill. Upper arm is unused.
5. Set your tractor 3-point draft control to Float position.

NOTICE

Equipment Damage Risk:

Do not raise 3-point until after hydraulic and electrical connection have been made.

WARNING

Heavy Falling Object Hazard:

Never mount an extension hitch or setback kit by itself on the drill. There is no top link on the drill to prevent the extension from tipping forward, with risk of serious injury, or tipping backward, causing equipment damage.

Extension: Hitch to the tractor **FIRST**.

Extension: Unhitch at the drill **FIRST**.

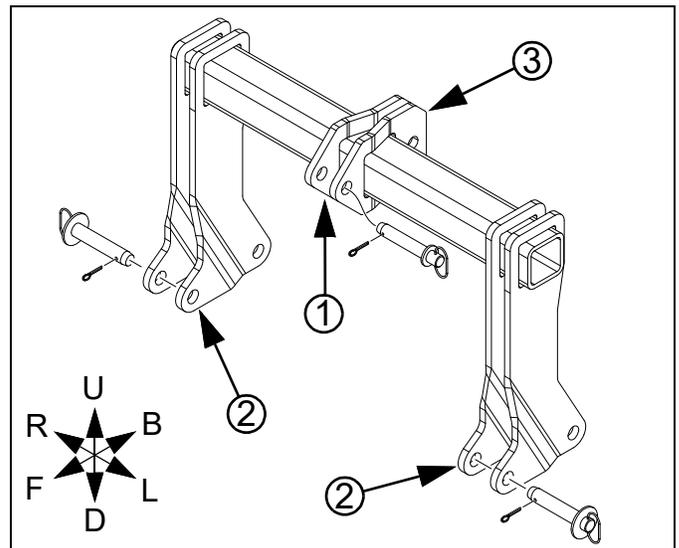


Figure 3
Hitch Setback/Extension

28366

Note: The implement-side (back) top link ③ is unused. It provides a nearly ideal lifting point. Use a lower hitch pin from the drill as needed.

DANGER

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 drill and moving tractor. Stop tractor engine and set park brake before installing hitch pins.

Hydraulic Hose Hookup

Connect hydraulic system to tractor before lifting the drill.

The hydraulic system of the 3P1006NT drill has one single-acting lift-assist cylinder. The cylinder raises the rear of the drill during lift (tractor 3-point lift arms raise the front).

Refer to Figure 4

6. Determine which tractor remote to use for lift assist, and set the lever for that circuit to Float (to relieve any pressure).
7. Connect the single lift hose to the Extend port of the tractor remote.

Note: Prior to first use, adapt the $\frac{1}{2}$ in. male NPT hose fitting ① to a connector compatible with the tractor. Use liquid pipe thread sealant (not tape) on NPT.

A poppet style QD (Quick Disconnect) to $\frac{1}{2}$ in. FNPT coupler is available as part number 811-856C.

Bleeding Hydraulics

When the hydraulic system is first charged, and if air is later allowed in the system, it is necessary to bleed it, or lift may be uneven. See “Bleeding Hydraulics” starting on page 50.

Electrical Connection

Refer to Figure 5

8. Plug the drill lighting connector into tractor outlet.
9. Coil-up and tie-up excess cable, allowing enough slack for the drill to tilt back if the tractor 3-point lift arms happen to be raised prior to the lift-assist circuit.

⚠ WARNING

High Pressure Fluid Hazard:

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

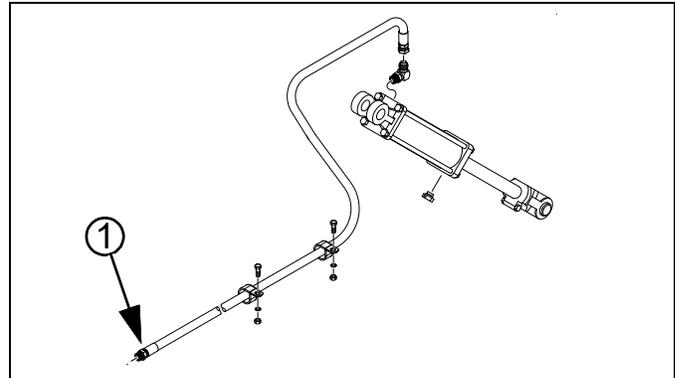


Figure 4
Drill Hydraulic System

32056

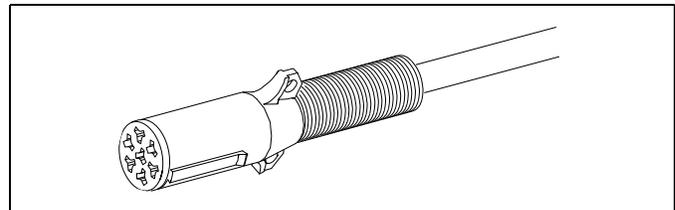


Figure 5
Lighting Connector

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Leveling the Drill

Perform leveling in representative field conditions. On hard ground or pavement, coulters and openers may prevent determination of drill level.

10. If caster swivel locks were engaged, retract the rods and pin them up. See “**Transporting**” on page 23.
11. Extend lever for lift circuit to extend lift-assist cylinders. See “**Drill Lift/Lower**” on page 20.
12. Remove transport lock channels from lift assist cylinders. See “**Drill Lift/Lower**” on page 20.

Refer to Figure 6

13. Initially adjust tractor 3-point lift arms so opener tube runs at the recommended initial height above ground when drill is lowered in the field.
14. The drive wheel should be in the fourth mounting hole ① from the top. This is the factory configuration.

Note: The drive wheel axle height may need to be adjusted due to ground conditions. See page 35.

15. Check level of frame front-to-rear. If not level, adjust the rear height with the stroke control spacers.

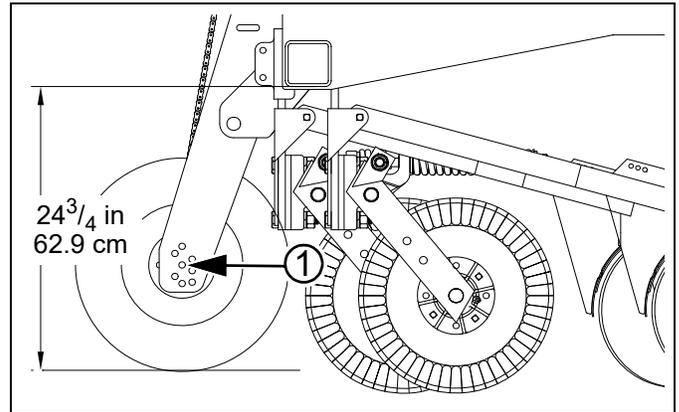


Figure 6
Initial Operating Height

18546



Stroke Control Spacers

The height of the drill at rear (when lowered) is adjusted with a set of stroke control spacers ④ (part no. 810-442C) included with the drill. Five snap-around spacers are stored on the storage rod for a combined length of 6¹/₂ inches (165 mm).

Refer to Figure 7 and the table at right

16. Remove the desired combination of stroke control spacers from the lift-assist weldment storage rod ⑤ and install on the cylinder rod ⑥. There is no factory recommendation for this, as it depends on the tractor used.

Note: If planting in rolling terrain, it may be necessary to adjust the lift assist cylinders manually with the tractor hydraulics to allow the machine to float backwards.

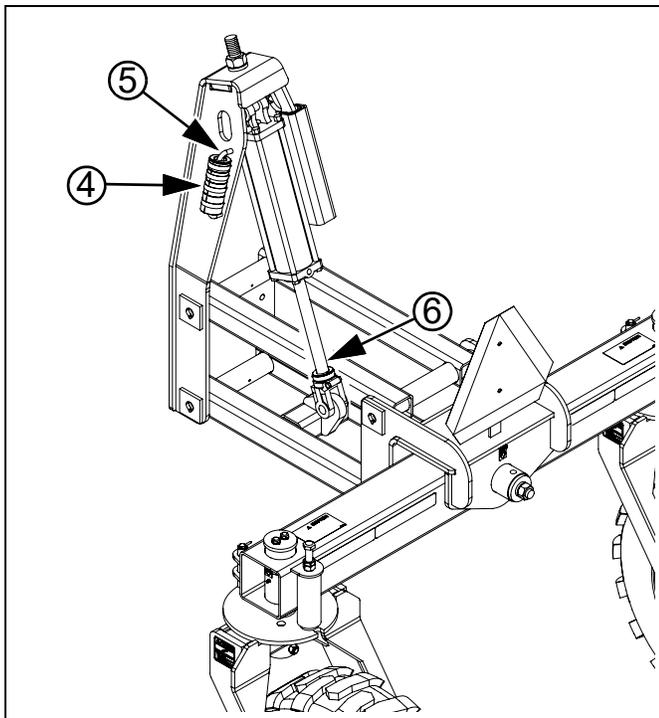


Figure 7
Stroke Control Spacers

32057

Check Level

17. Lower drill until the cylinders rest on the stroke control spacers. See “Drill Lift/Lower” on page 20.
18. Pull drill forward to put coulters and openers in ground, and assure that lift-assist casters are in trail-ing position. Set tractor brakes.
19. When correct level has been achieved, set a stop, lock or reference indicator on the tractor’s hitch control to prevent lowering below drill-level.
20. Check level of frame front-to-rear. If not level, adjust the rear height with the stroke control spacers. If changed, re-check front tool bar height, and re-adjust tractor 3-Point lift arms. Repeat until level.

Stroke Control Spacer Combinations

Stack Length inches	mm	Spacer Sizes			
		1 in. 25 mm	1¼ in. 32 mm	1½ in. 38 mm	1¾ in. 44 mm
1.00	25	1			
1.25	32		1		
1.50	38			1	
1.75	44				1
2.00	51	2			
2.25	57	1	1		
2.50	64	1		1	
2.75	70		1	1	
2.75	70	1			1
3.00	76		1		1
3.25	83	2	1		
3.25	83			1	1
3.50	89	2		1	
3.75	95	2			1
3.75	95	1	1	1	
4.00	102	1	1		1
4.25	108	1		1	1
4.50	114		1	1	1
4.75	121	2	1	1	
5.00	127	2	1		1
5.25	133	2		1	1
5.50	140	1	1	1	1
6.50	165	2	1	1	1

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Operating Instructions

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

Pre-Start Checklist

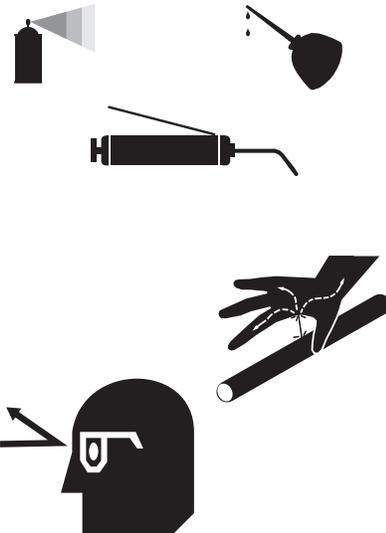
WARNING

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

1. Carefully review “**Important Safety Information**” starting on page 1.
2. Lubricate drill as indicated under “**Lubrication and Scheduled Maintenance**” on page 51.
3. Check all tires for proper inflation. See “**Tire Inflation Chart**” on page 61.
4. Check all bolts, pins and fasteners. Torque as shown in “**Torque Values Chart**” on page 62.
5. Check drill for worn or damaged parts. Repair or replace parts before going to the field.
6. Check hydraulic hoses, fittings and cylinders for leaks. Repair or replace before going to the field.
7. Rotate each ground drive wheels to see that the drives and meters are working properly and free from foreign material.
8. Check that the caster pivots are unlocked.

WARNING

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



Drill Lift/Lower

Raising and lowering the drill relies on the tractor 3-point lift arms in front, and hydraulic lift-assist cylinder at rear. When setup for field use, the hitch and lift circuits may be operated in any order, or simultaneously. Both, however, must be lowered for planting, and the lowered hitch height must be as established at step 15 on page 17.

Raising

1. Raise the tractor 3-point lift arms fully.
2. Activate the lift circuit lever to Extend the lift-assist cylinder fully. Set circuit to Neutral.

CAUTION

Crushing Hazard:

Rely on circuit Neutral to hold the drill raised only for field turns. Use parking stands and lock channel for all other raised operations, transport, parking, maintenance and storage.

Raising after Transport, Parking or Storage

Refer to Figure 8 and Figure 9

3. If raising for planting, remove lock channel ① from lift-assist cylinder. Store in the pin hole ② of the right side of lift assist weldment.

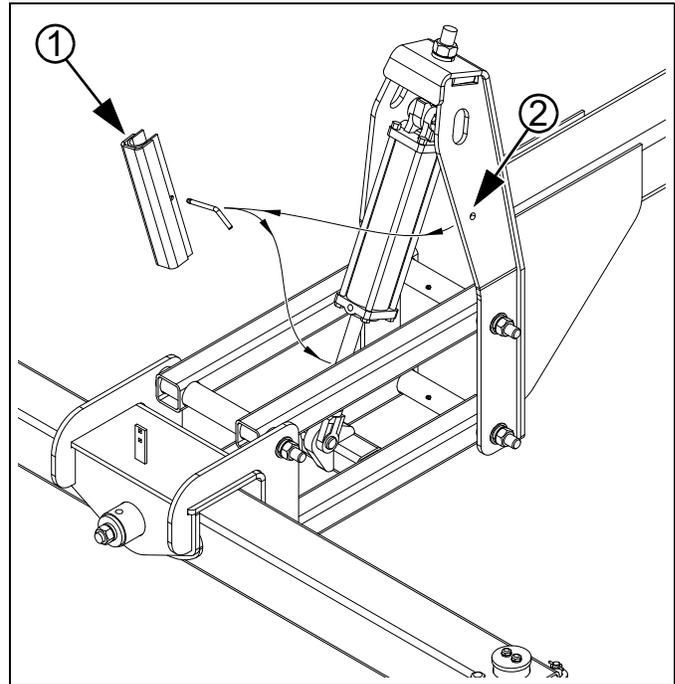


Figure 8
Lock Channels

31920

4. Install stroke control spacers ③. Remove needed set from rod ④ on lift-assist weldment and clamp around cylinder rod ⑤. Use a locally developed spacer combination (see page 18).

Raising for Transport, Parking or Storage

Refer to Figure 8 and Figure 9

5. If raising for transport or storage, set lift circuit to neutral to hold at raised. Set tractor parking brake and shut off tractor.
6. Remove stroke control spacers ⑤ from lift-assist cylinder. Store spacers on weldment rod ④.

Note: If recently developed or changed, make a note of the combination removed.

7. Install lock channel ① on cylinder rod. Secure with pin.
8. Start tractor.
9. Slowly move the lift circuit lever to Retract, allowing the cylinder to settle on the lock (and relieving pressure from the hydraulic system).

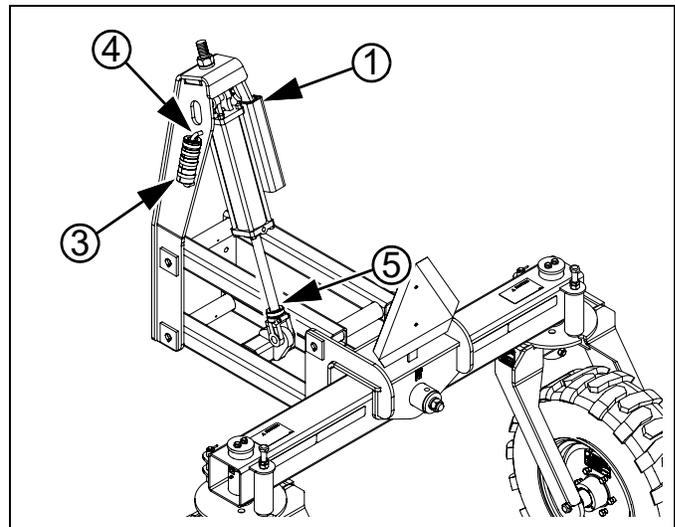


Figure 9
Stroke Control Spacers

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Lowering

The lift-assist cylinder is single-acting. Move the tractor remote circuit lever to Retract. The drill settles by gravity. The cylinder piston drives oil back to the tractor reservoir.

Note: Do not use Float to lower, or the drill will settle suddenly.

If lowering from transport, parking or storage, it is first necessary to raise the drill, remove the lock channel, and install the stroke control spacers. See “**Leveling the Drill**” on page 17.

1. Slowly move the lift circuit lever to Retract, until lift-assist cylinder fully settles.
2. Lower the tractor 3-point lift arms to the stop, block or reference indicator established at step 15 on page 17.
3. Move lift-assist circuit lever to Float.
4. If about to begin planting, set tractor 3-point hitch to Float (and not Draft or Depth Control mode).

Caster Pivot Locks

To prevent side movement of the drill when transported by trailer, the lift-assist casters may be locked in their full-reversing orientation.

Use this feature only for trailer transport. Do not use these locks for semi-mounted 3-point towing or field operations.

Locking Casters

Refer to Figure 10

1. With drill hitched, raise both tractor 3-point lift arms and lift assist (page 20). Install lift lock channel ①.
2. Pull or back drill onto trailer bed.

Note: On extremely narrow trailer beds, it may be necessary to lock the casters before moving the drill onto the trailer. Make sure drill is precisely aligned for the final move, as maneuverability is greatly reduced with lock pins in place.

3. On both casters lift and turn spring loaded lock pin plungers ② 90 degrees. Move in reverse, lock pins snap into place in the caster plate cutouts ③ when aligned under each lock tube.
4. Lower drill.

Unlocking Casters

Refer to Figure 10

1. Hitch drill before unlocking.
2. Leave the lock pins ② in place until the drill is removed from the trailer, unless the trailer bed has more than ample width to permit casters to safely make a full turn.
3. Lift lock pins ② out of lock plate holes and turn 90 degrees to hold in the unlock position.

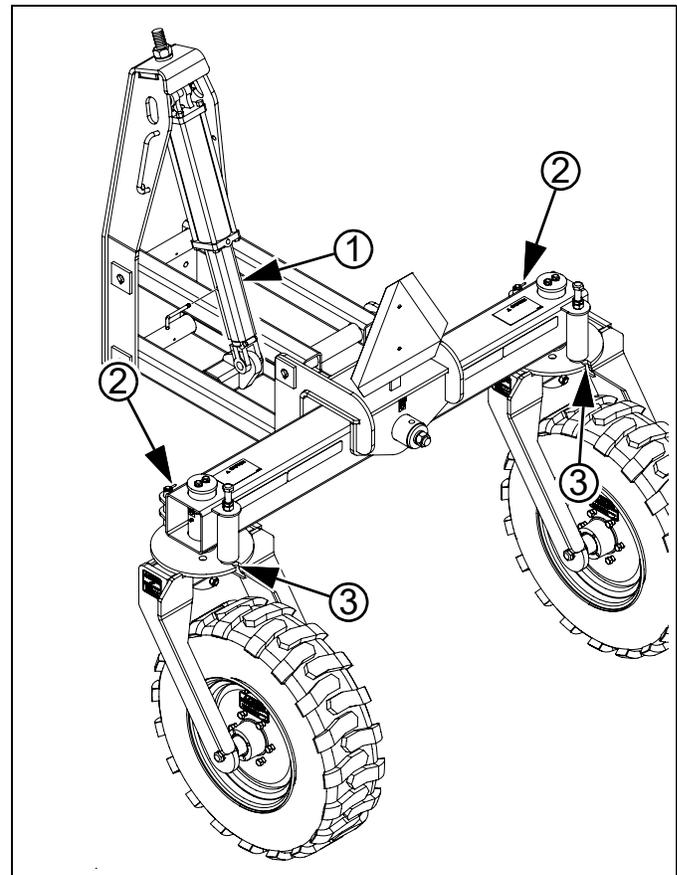


Figure 10
Caster Pivot Locked

32058



Transporting

Instructions and advisories for transport depend on the method of transport. Towing behind a tractor is covered on this page under “**Semi-Mounted 3-Point Transport**”. Transport via trailer is covered under “**Trailer Transport**” on page 24.

Semi-Mounted 3-Point Transport

⚠ DANGER

*Tow the drill on its own tires **only** with a 3-point tractor. Towing with any other hitch type is likely to result in loss of control and a serious accident, with risk of injury or death, and almost certain major equipment damage.*

Before transporting with a tractor, check these items:

1. Check that tractor is sufficient for towing the drill.

Tractor must have at least 100 horsepower (75 kW).

Use a tractor with adequate lift capacity, and that is weighted to maintain steering control. See the table on next page for weights of typical drill configurations. Tractor must have sufficient front-end weights.

2. Unload drill boxes. The drill can be transported with full boxes of material (other than native Grass), but the added weight increases stopping distance and decreases maneuverability. Unload before transporting if possible.
3. Raise drill completely (page 20).
4. Install lock channels on lift cylinders (page 20).

Note: The cylinder lock can be secured or removed only after the drill is fully raised.

5. Check that caster locks are *disengaged* (page 22).

Keep Clearance in Mind

Remember that the drill may be wider than the tractor. Allow safe clearance.

Observe Road Rules

Comply with all national, regional and local safety laws when traveling on public roads.



⚠ WARNING

Towing the drill at high speeds or with a vehicle that is too light can lead to loss of vehicle control and a serious road accident, injury and death. To reduce the hazard, do not exceed 20 mph. Check that your tractor has enough ballast to handle the weight of the drill. Refer to your tractor operator’s manual for ballast requirements.

⚠ CAUTION

Failure of hydraulic cylinders or tractor circuit during transport will cause drill to drop suddenly, which could lead to serious road accidents, injury or death. To prevent an accident, always install cylinder locks before transporting drill.

NOTICE

Do not tow on drill wheels with caster locks installed. They are unnecessary in semi-mounted towing and dramatically reduce turning ability. Tractor towing with caster locks is likely to result in equipment damage. If locks are installed, remove them (page 22).

NOTICE

Semi-mounted implements with rear lift-assist wheels maneuver differently in field and highway transport, compared to pull-type implements. Observe caution when turning and transporting.

NOTICE

Do not transport with seed loaded in Native Grass box. Heavier mix components settle to the bottom, which can prevent drive system from operating, and results in irregular seed rate and population distribution.



Typical¹ 3P1006NT Weights by Configuration

	Standard Drill Option (40)	Drill with Fertilizer	Drill with NG (Native Grass)	Drill with SGS (Small Seeds)	Drill with Fert. and SGS	Drill with NG and SGS
All Boxes Empty	4821 lbs 2187 kg	5145 lbs 2334 kg	5108 lbs 2317 kg	4880 lbs 2214 kg	5220 lbs 2368 kg	5410 lbs 2454 kg
Full Main Box and Full Fertilizer (if present)	6101 lbs 2767 kg	7115 lbs 3227 kg	6388 lbs 2898 kg	6160 lbs 2794 kg	7190 lbs 3261 kg	6690 lbs 3035 kg
All Boxes Empty with Weights	5989 lbs 2717 kg	6313 lbs 2863 kg	6277 lbs 2847 kg	6049 lbs 2744 kg	6388 lbs 2898 kg	6579 lbs 2984 kg
Full Main Box, Weights, Full Fertilizer (if present)	7269 lbs 3297 kg	8283 lbs 3757 kg	7557 lbs 3428 kg	7329 lbs 3324 kg	8358 lbs 3791 kg	7859 lbs 3565 kg

32800A

Trailer Transport



Load Maneuvering Hazard - Use care and planning when loading or unloading the drill in trailer transport. The rear casters may turn and force the drill off the trailer.

- ▲ Make sure the trailer is rated for the load.
- ▲ Make the trailer is wide enough for the load.
- ▲ Make sure the load is secured properly.

Loading Trailer

1. Hitch suitable 3-point tractor with available hydraulic remote (page 15).
2. Raise drill (page 20).

Loading with Casters Locked

3. Carefully line-up the tractor, drill and trailer, so that:
 - a. no turns are needed for the final movement, and
 - b. the casters are fully reversed.
4. Install caster swivel lock pins (page 22).
5. Carefully back the drill onto the trailer bed.
6. Lower the drill (page 21).
7. Secure the load with cargo straps or chains.



Land Pride recommends locking casters prior to loading for trailer transport, and leaving them locked for transport and unloading. This reduces the risk of loading and transport accidents which could result in significant implement damage.



Unstable Load Hazard - Do not transport on a trailer of insufficient width or length. Unless both caster tires are on the bed, too few openers are supporting the entire drill. The load may spill, with risk of serious injury or death to anyone nearby, and certainty of major equipment damage.



Machine Damage Risks - The drill must be hitched to a 3-point tractor for any movement. Coulter or opener damage is likely if unhitched movement is attempted. Observe all hitching precautions.

Unloading Trailer

1. Check that casters are still locked.
2. Release cargo straps or chains.
3. Hitch suitable 3-point tractor with available hydraulic remote (page 15).
4. On a narrow trailer, confirm that caster pivot swivel locks are still in place (page 22).
5. Raise drill (page 20).
6. Carefully tow drill from trailer.
7. Remove caster pivot swivel locks (if engaged, page 22).
8. Unless arriving at planting ground, install lift-assist cylinder transport locks (page 20).

1. Weights approximate, and can vary by hundreds of pounds based on material density, press wheel options, accessories and user modifications. Weight kit figures presume 10 each 100 pound suitcase weights.



Loading Materials

Fully loaded with dense seed and fertilizer, the drill weighs an additional 1970 lbs (894 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 Loading ①

1. Check that all meter doors are positioned for the seed size, and not set for clean-out. See “**Position Seed Cup Doors**” in 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. See “**Seed Tube Plug (Small Seeds)**” on page 59.

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.

3. The main seed box lid handle is also a latch. It needs to pivot up to release the lid.
4. Load seed evenly into compartments.

To reduce wear on unused boxes that may also be present:

- Remove final drive chain for small seed box.
- Remove Native Grass ground drive chain (right wheel).

Loading Native Grass Box ②

1. The main seed box lid handle is also a latch. It needs to pivot up to release the lid.
2. Load seed evenly into compartments.

Loading Small Seeds Box ③

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.
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 compartments.
5. To reduce wear, remove main shaft drive chains for main seed boxes.

Loading Dual Seed Box

See “Main Seed Box Loading.”

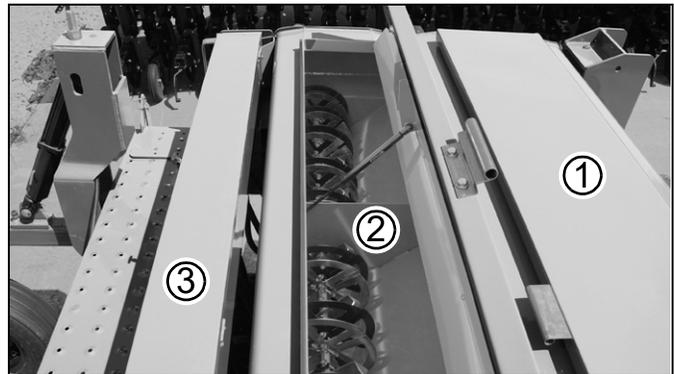


Figure 11
Native Grass Box Open

28362



WARNING
Take all prescribed material safety precautions.



Loading Fertilizer

Fully loaded with dense fertilizer, the drill can weigh an additional 700 lbs (318 kg) or more. 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, unless the meters are set to zero.

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 chains for seed boxes not used.

Material Rates Overview

Details of seed and fertilizer rate setting are found in the **Adjustments** section, and rely on data from the Seed Rate Manual.

Rate setting controls are different for each box, but independent for each box. Some boxes have more than one control.

Basic rate settings are found in the Seed Rate Manual (part number , normally located in the Manual-Pak™ enclosure at front center of drill).

All chart rates, for all boxes, are approximate. strongly recommends calibration of each box to the material to be applied.

	Main Box Dual Seed	Native Grass	Small Seeds	Fertilizer
Rate Range		Seed Rate Reduction	Rate Handle	Rate Knob
Coarse Rate	Drive Type	Drive Type		
Fine Rate	Rate Handle	Driver/Driven		
Cup Adjustment	Door Handle			

applied.

Seeding Depth Overview

Setting nominal planting depth, and achieving it consistently, is affected by multiple adjustable drill functions, which can interact. From greatest to least effect they are:

Refer to *Figure 12*

- ① **Coulter Height** (page 17)
The coulters prepare soil ahead of the openers, and are typically set slightly deeper than the openers. The openers thus only need to open the tilled shaft into a V-shaped furrow. The openers cannot generally run deeper than the coulters, and running them too close to coulter depth may result in uneven seed depth.
- ② **Opener Depth** (Press Wheel Height) (page 40)
Using the T-handle, in no-till conditions, opener depth can be set near, and at any level above coulter depth. In soft or conventionally tilled soil, the opener disc depth is more independent of the coulters.
- ③ **Row Unit Down Pressure** (Spring) (page 38)
In most conditions, the factory spring setting is sufficient to make a consistent furrow in the coulter-prepared soil. In extremely heavy conditions, with the coulters running at the desired depth, the openers may be making a furrow of inconsistent depth. Rather than increase the coulter depth, you can increase opener down force at the row unit springs.

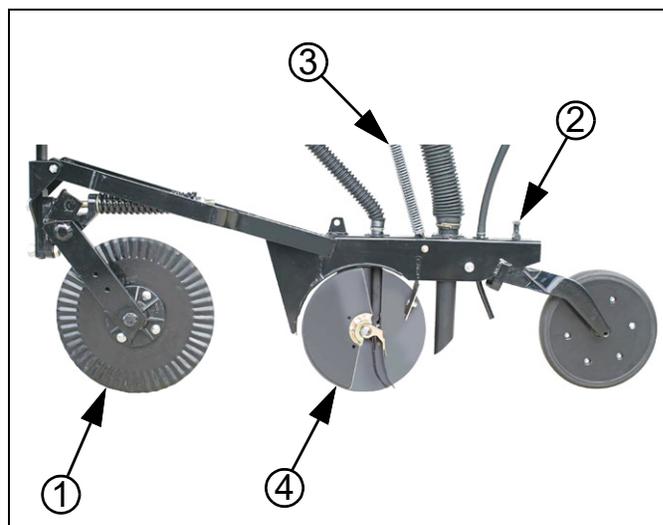


Figure 12
06 Series Coulter & Row Unit

28368

NOTICE

Never back up with openers in the ground. To do so may cause damage or opener plugging.



④ **Disc Blade Adjustments** (as blades wear)

(page 37)

As blades wear, the diameter of the discs, and their contact gap, changes. Seeding depth will also change (or become irregular), unless adjustments are made to blade spacing and the T-handle setting. Generally, the blades need to be replaced completely before coulter height adjustments would be needed.

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.

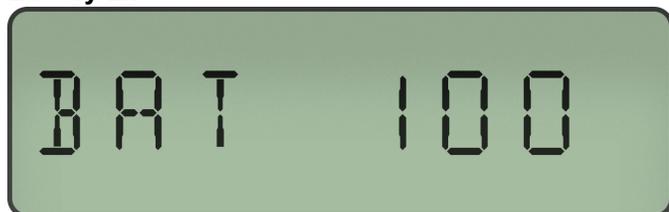
Total Acre Count



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.

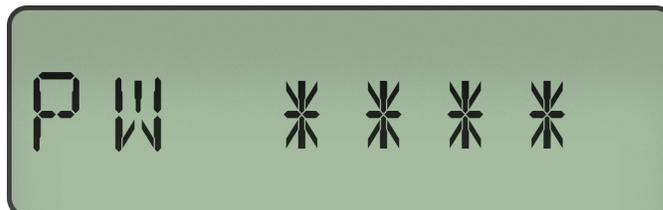
Battery Life



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.

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

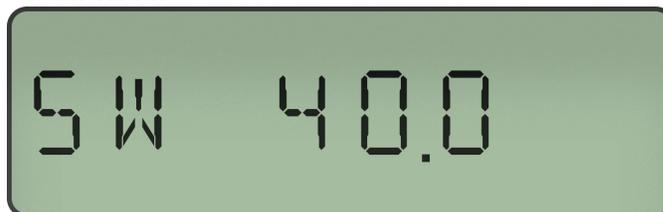


Displays the pulse scaling factor. This value affects the number of pulses emitted per 400ft traveled.

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



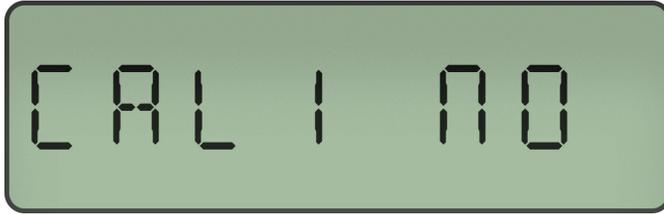
Displays the machine's swath width. To correctly calculate the number of acres planted, the acre meter needs the swath width of the drill.

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

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



Calibration



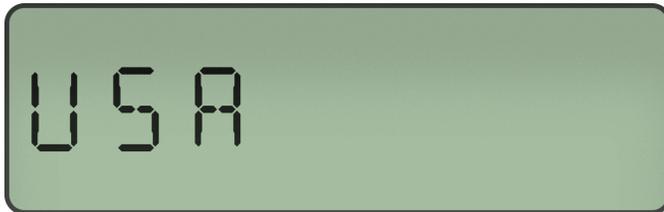
Displays either the calibration request status or the current calibration value.

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 Operation

1. Hitch drill to a suitable tractor (page 15).

⚠ DANGER

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 drill and moving tractor. Stop tractor engine and set park brake before installing pins.

2. Remove caster pivot swivel locks if installed (page 22).
3. Fully raise drill (page 20).
4. Rotate gauge wheels. Check that feed cups, seed tubes and drives are working properly and free from foreign material.
5. Remove lift-assist cylinder transport locks and store on weldments (page 21).
6. Install Stroke Control Spacers (page 18).
7. Load materials (page 25).
8. Set initial seed population from Seed Rate manual.
9. Rotate gauge wheels to fill cups. Check for flow at opener tubes.
10. Calibrate material rates (see Seed Rate Manual).
11. Record initial acremeter reading (page 26).
12. Pull forward, lower drill, set both hitch and lift-assist circuit to Float, and begin seeding.
13. When turning at row ends and for other short-radius turns, always raise drill (tractor 3-point lift arms and drill lift-assist). Seeding automatically stops when ground drive wheels lose contact.

Parking

Perform the following steps when parking the drill for 36 hours or less. Refer to “**Storage**” to prepare for longer-term storage.

1. Position drill on a level, solid area.
2. Lower tractor 3-point lift arms and Retract lift-assist cylinder (page 21) until drill is on the ground.
3. Set lift-assist circuit to Float, to relieve all pressure.
4. Remove pins from lower 3-point links on drill (not on any hitch extension in use).
5. Disconnect lighting harness and any other electrical connections.
6. Disconnect lift-assist hydraulic line.

NOTICE

Semi-mounted implements with rear lift-assist wheels maneuver differently in field and highway transport, compared to pull-type implements. Observe caution when turning and transporting.

Storage

Store drill where children do not play. Prevent coulter/ opener ground contact.

1. Hitch tractor (page 15).
2. Unload seed and fertilizer boxes (page 46).
3. Thoroughly clean seed, seed treatment residue and fertilizer residue from boxes and feeder cups.
4. Position drill on a level, solid area. If possible, store the drill inside or under a tarp for longer life.
5. Place a tarp, pallets or sheets of wood under coulters and opener discs.
6. Lower tractor 3-point lift arms and Retract lift-assist cylinder (page 21) until drill is on the ground.
7. Set lift-assist circuit to Float, to relieve all pressure.
8. Remove pins from lower 3-point links at drill (not at any hitch extension in use)
9. Disconnect lighting harness and any other electrical connections.
10. Disconnect lift-assist hydraulic line.
11. Remove any dirt and debris that can hold moisture and cause corrosion.
12. Disconnect seed and fertilizer hoses at openers. Allow to hang freely.
13. Cap or plug seed tubes to prevent pest entry.
14. Lubricate and adjust all roller chains.
15. Take special care to oil feed cup drive sprocket in its square bore.
16. Lubricate areas noted under “**Lubrication and Scheduled Maintenance**”.
17. Inspect drill for worn or damaged parts. Make repairs and service during the off season.
18. Use spray paint to cover scratches, chips and worn areas on the drill to protect the metal.
19. Cover with a tarp if stored outside.



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 3P1006NT has double-disc 06 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 frame follows contours. A spring provides the down pressure necessary for double discs to open a seed furrow. The spring allows openers to float into depressions and 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

Seed are applied by fluted feed meters driven by the ground wheels. Independent mechanisms drive main seed, fertilizer, native grass and small seeds application.

Main Box Seed rate is controlled by adjustments for:

- Left Drive Type gearbox lever
- Seed Rate Handle at box (drill front)

- Feed Cup Door (one each seed tube)

Dual Box Seed rate is controlled by adjustments for:

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

Native Grass rate is controlled by:

- Rate Reduction Sprockets (see manual 202-583M)
- Right Drive Type gearbox lever (drill front)
- Driven Sprocket at Native Grass Seed box

Small Seeds rate is controlled by a Rate Handle at box (drill rear)

Fertilizer rate is controlled by a Rate Adjuster 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:

- Coulter Height
- Opener Depth (Press Wheel Height)
- Opener Down Pressure, and;
- Disc Blade Adjustments (as blades wear).

Adjustment	Page	The Adjustment Affects
Leveling the Drill		
Frame Height (Front)	17	Coulter depth
Lift-Assist Spacers (Rear)	18	Front-to-back frame level and consistent seeding depth
Eye bolt Adjustment	49	Side-to-side frame level
Drill Weight Adjustment	35	Achieving coulter depth in heavy No-Till conditions
Setting Main Box Seed Rate	SRM	Main seed population
Setting Native Grass Rate	SRM	Native Grass population
Small Seeds Rate	SRM	Small seeds population
Setting Fertilizer Rate	SRM	Fine control of application rate
Row Unit Adjustments	36	
Disc Blade Adjustments	37	Consistent seeding depth
Opener Down Pressure	38	Level row units and consistent seeding depth in tire tracks
Disc Scraper Adjustment	38	Consistent seeding depth
Seed Firmer Adjustments	39	Consistent seed placement and coverage
Opener Depth (Press Wheel Height)	40	Seeding depth.

SRM Rate setting details are in the Seed Rate Manual, part number , normally located in the Manual-Pak™ enclosure at the front of the drill.

Coulters Adjustments

Refer to Figure 13

A no-till coulters ①, is mounted directly ahead of each opener on the drill. The coulters cut through heavy trash and make a groove in the soil for the openers. The coulters are mounted on the drill frame so coulters cutting depth changes as the drill is raised and lowered.

To set drill seeding depth, you must:

1. Set coulters depth by raising or lowering the front drive wheel (see below).
2. Check front-to-back drill level and re-adjust lift-assist stroke control spacers (page 18).
3. Set opener depth with T-handles ② on press wheels (page 40).
4. If soil conditions make it necessary, increase coulters down pressure by adding weights (page 35).

Coulters normally operate fully down against their stops, with the coulters springs compressing only occasionally as the blades encounter obstructions.

If necessary, adjust individual coulters or openers to run deeper for tire tracks, refer to “**Coulters Depth (Individual Rows)**” on page 35.

The amount of coulters down force needed to cut a soil groove varies with soil conditions. Adding weight or shortening the coulters spring increases coulters down pressure and cutting force.

Coulters Depth (All Rows)

Refer to Figure 14

Raise or lower drive wheels, by relocating axles, to achieve proper coulters depth.

- Raising wheels sets coulters deeper.
- Lowering wheels sets coulters shallower.

Note: Factory default setting is hole ④.

Note: Do not lower coulters to aid in penetrating hard soil. Instead, increase coulters down pressure by adding weight to drill. See “**Coulters Down Pressure**” on page 34.

NOTICE

Set both left and right ground drive axles identically.

NOTICE

Normal practice is to set coulters depth approximately 1 inch deeper than desired seed depth.

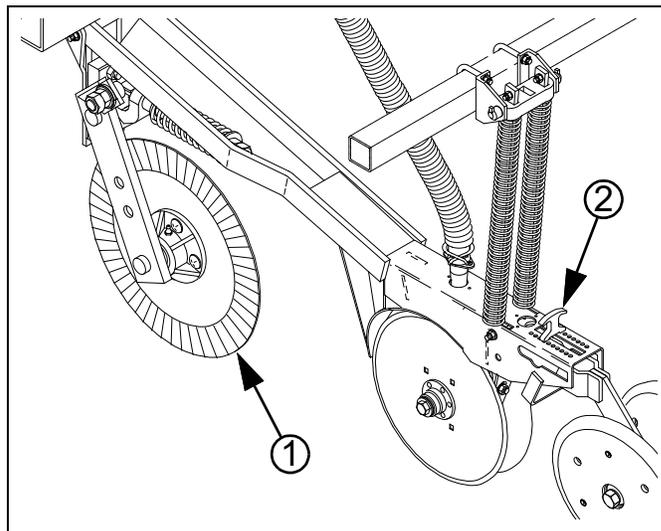


Figure 13
Coulters

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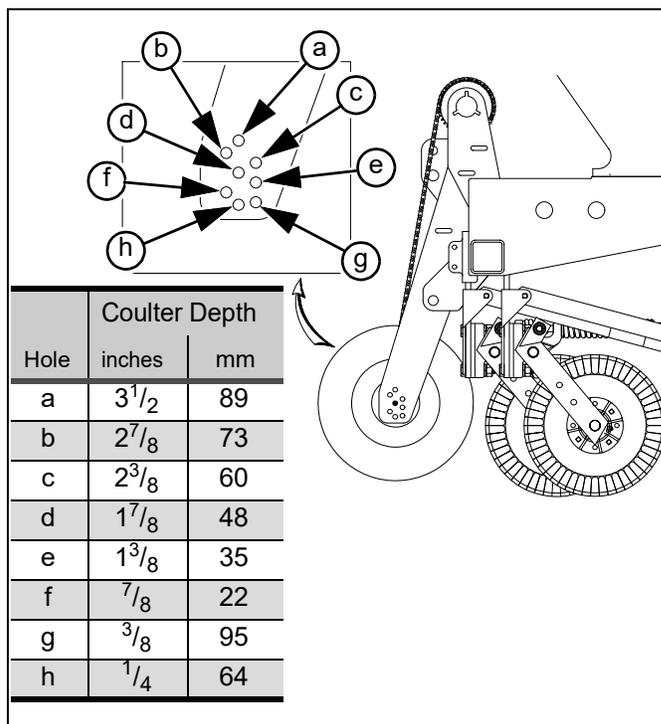


Figure 14
Coulters Depth Adjustment

18509

Coulter Down Pressure

The maximum down force at the coulters depends on:

- empty drill weight (page 24),
- extra weights added (page 35),
- down-force consumed by the opener discs (this can range from 50-150 pounds), and;
- the current material loading (which declines to zero during planting).

3P1006NT configurations typically are too light to reach the factory down-force of 400 lbs at all rows. The table at right shows typical forces available. Do not increase coulters spring forces drill-wide unless weight is available.

Coulter Spring Length

Coulter springs are preset at 10 in. (25.4 cm), giving coulters an initial operating force of 400 pounds before the spring compresses. This setting is adequate for many difficult no-till conditions.

In normal operation at target running depth, springs are at full extension or only slightly compressed. They compress briefly at obstructions and in denser soil.

- In heavy no-till conditions, you may observe the springs in compression most of the time. This means that the blades are not reaching the desired coulters depth. If adequate drill weight is available, you can increase the spring down-force to compensate.
- In light but rocky conditions, the factory setting may be higher than needed. Extend blade life by reducing the force at which the blades ride up over obstructions.

To adjust the coulters spring:

Refer to Figure 15

1. Raise the drill and install transport locks. See “Drill Lift/Lower” on page 20.
2. Determine the new spring length ① desired. See the table at right.
3. Measure the current length of the spring(s) to be changed. If already shorter than 9³/₄ in., or longer than 10¹/₄ in., do not further adjust them.
4. Loosen the jam nut ②.
5. Rotate the adjuster nut ③ until the spring is at the new length. Tighten the jam nut.

Note: If all springs are continuously in compression, the coulters can lift the drill off the ground (at the ground drive wheels), resulting in low seeding rates and uneven seed depth. If high forces are required, frame weights are probably required.

Available Coulter Force Per Row

Drill Configuration	Empty Drill	Drill with Full Weight Kit
Standard Drill	174 lbs (79 kg)	252 lbs (114 kg)
Drill w/Fertilizer	195 lbs (89 kg)	273 lbs (124 kg)
Drill w/Native Grass	193 lbs (87 kg)	271 lbs (123 kg)
Drill w/Small Seed	178 lbs (81 kg)	256 lbs (116 kg)
Fert. & Small Seed	200 lbs (91 kg)	278 lbs (126 kg)
NG & Small Seed	213 lbs (97 kg)	291 lbs (132 kg)

32800B

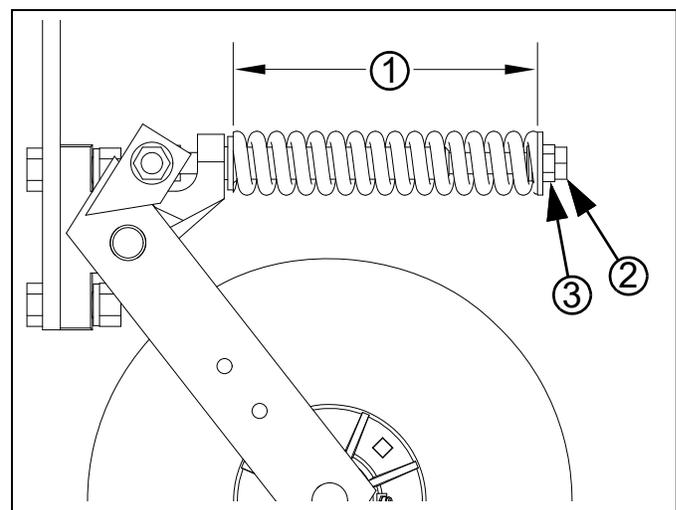


Figure 15
Coulter Spring

27139

Spring Length ①	Force at Blade
10 ¹ / ₂ in. (26.7 cm)	175 lbs. (79 kg)
10 ¹ / ₄ in. (26.0 cm)	300 lbs. (136 kg)
10 in. (25.4 cm)	400 lbs. (181 kg)
9 ³ / ₄ in. (24.8 cm)	525 lbs. (238 kg)

NOTICE

Machine Damage Risk:

Resetting coulters-spring length shorter than 9³/₄ in. may cause premature failure of parts, and voids the warranty. No 3P1006NT configurations have enough weight to compress all springs shorter than 9³/₄ in.

Coulter Depth (Individual Rows)

The running depth of all coulters is adjusted simultaneously by changing the tool bar height. Adjusting the height of a small number of coulters may be useful for rows in tire tracks.

Adjust individual coulters as follows.

1. On level ground, lower the drill until coulters just touch the ground.
2. Raise the drill by the extra amount you need to lower the rows in tracks.

Refer to Figure 16

3. At each coulters to be adjusted, slightly loosen all six bolts (①, ②) at the mount.
4. Using a rubber mallet, tap the spring bar ③ up or down until the bottom edge of the coulters disc is at ground level.
5. Tighten the two clamp bolts ① until both U-bolts are firmly against the edge of the spring bar ③. It is normal for there to be a small gap between the clamps.
6. Tighten the four U-bolts ②.
7. Lower the drill and pull forward 30 feet (10m).
8. Check coulters blade to opener blade (furrow centerline) alignment.

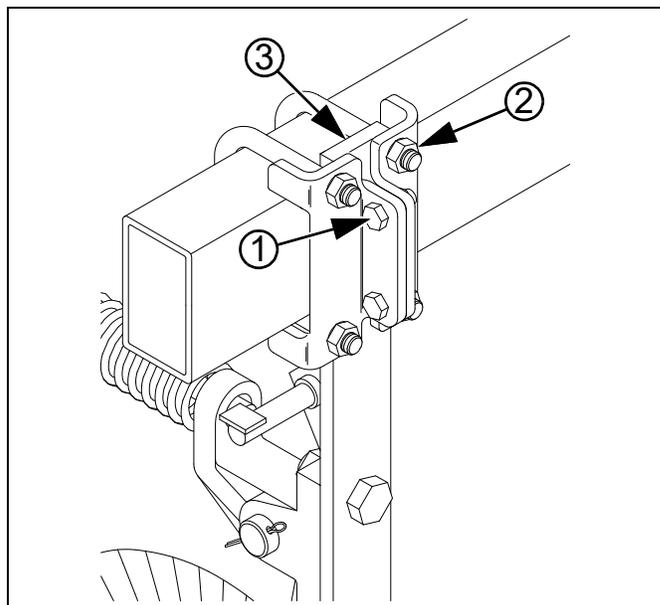


Figure 16
Frame-Mounted Coulter Height

10300

Note: Do not adjust the bar height of all coulters. Use the tractor 3-point lift arms and front gauge wheels to set group coulters height (page 17).

Drill Weight Adjustment

In heavy no-till conditions, or if it is otherwise necessary to increase coulters spring force, extra frame weight is probably required (or the higher forces will just lift the drill off the ground, resulting in unreliable ground drive operation).

Adding weight requires the optional weight kit and user-provisioned standard "suitcase" tractor weights (kit does not include weights). See page 60 for ordering and page 90 for installation.

The kit includes two brackets. Each bracket accepts up to five 100 pound (45 kg) weights. The following table shows the additional force per row that the kit can provide.

Weights Added	Additional Force per Row	
	Pounds	Kilograms
2	13	6
4	27	12
6	40	18
8	53	24
10	67	30

32800C

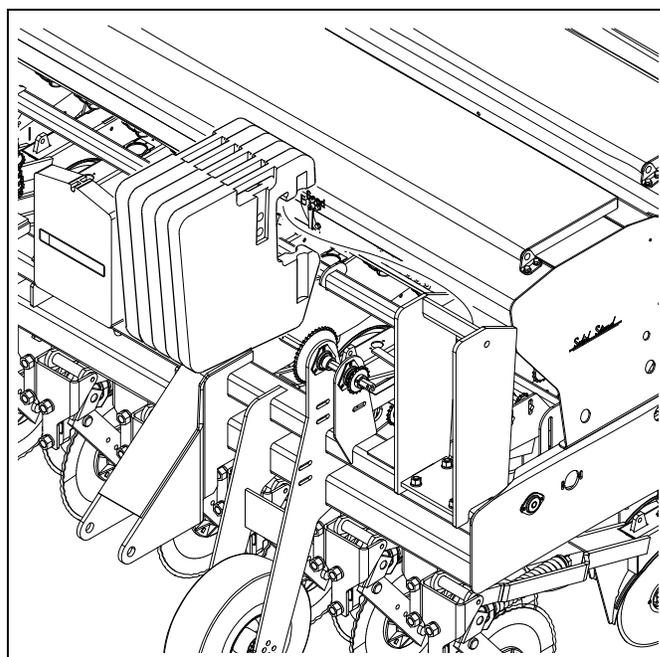


Figure 17
Adding Weights

28364

Row Unit Adjustments

Refer to Figure 18 (which depicts an 06 series row unit fully populated with all optional accessories [except Fertilizer and Seed-Lok®] supported for use with the 3P1006NT drill; coulters is not part of opener assembly and is not shown)

From front to back, a 06 Series row unit can include the following capabilities (some optional):

1. 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 37.
2. Dual Down Pressure Springs: standard
The adjustable springs provides the force to get the row unit and attachments into the soil prepared by the coulters. See “**Opener Down Pressure**” on page 38.
3. Main Box Seed Delivery tube: standard
No adjustments are necessary.
4. Seed firmer: seed flap (shown) standard
No adjustments required. The flap may need to be shortened if Seed-Lok® is field-installed. See “**Seed Flap Replacement**” on page 48 for maintenance.

Seed-Lok® firming wheel (optional)
Improves seed-soil contact. See “**Seed-Lok® Lock-Up**” on page 39.

5. Disc Scraper: standard
In sticky soils, a scraper helps keep the opener discs operating freely. A slotted scraper is standard. See “**Disc Scraper Adjustment**” on page 38

A spring-loaded carbide scraper is optional. See page 56 for ordering and page 89 for installation.

6. Native Grass Box Seed Delivery tube: optional
No adjustments are necessary.
7. Fertilizer Delivery tube: optional (not shown)
No adjustments are necessary.
8. Small Seeds Box Seed Delivery tube: optional
No adjustments are necessary. If Fertilizer is also installed, small seeds are delivered by a side tube (not shown).
9. Press wheels: standard (choice of types)
The T-Handle controls press wheel height and opener depth. The wheels close the seed trench. See “**Opener Depth (Press Wheel Height)**” on page 40.

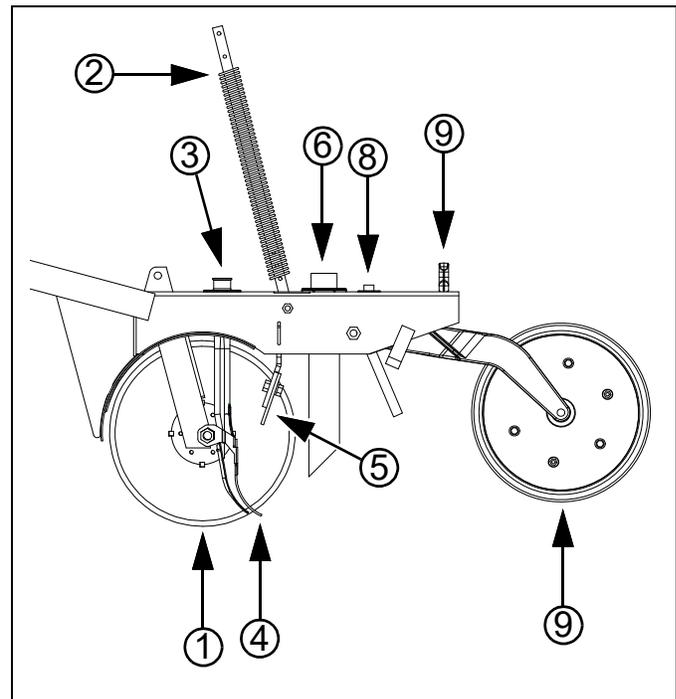


Figure 18
06 Series Row Unit

28380

NOTICE

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

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 19

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 $1\frac{1}{2}$ to $1\frac{3}{4}$ in. (1.3 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.

Adjusting Disc Contact

CAUTION

Sharp Object Hazard:

Row unit disc blades may be sharp. Use caution when making adjustments in this area.

Refer to Figure 20

1. Raise the drill and lock the lift-assist cylinders.
2. Remove the bolt ① retaining the opener disc on one side. Carefully remove the disc, noting how many spacers ② are outside the disc and inside the disc. Do not lose the hub components and dust cover ③.
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.

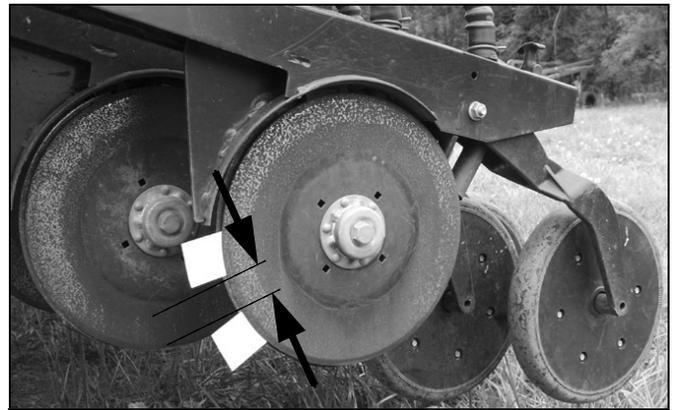


Figure 19
Checking Disc Contact

26451

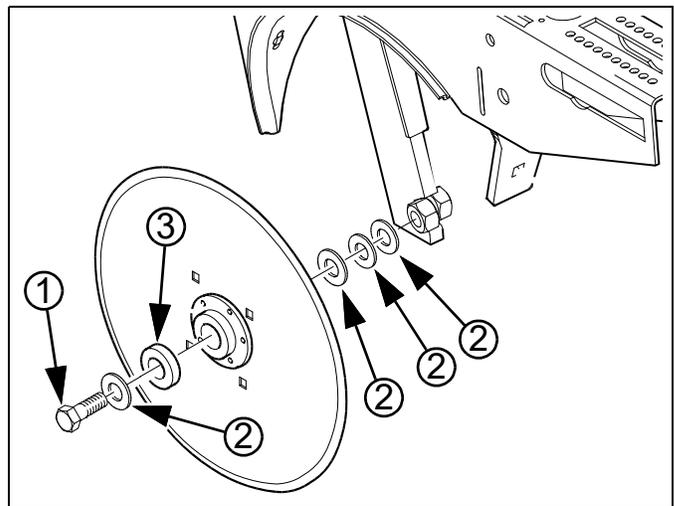


Figure 20
Adjusting Disc Spacers

26385

Opener Adjustments

Opener Down Pressure

Opener springs provide the down pressure necessary for opener discs to open a seed trench. The springs allow the openers to float down into depressions and up over obstructions.

Each opener spring can be adjusted for down pressure. This is useful when planting in tractor tire tracks.

Refer to *Figure 21*

To adjust the pressure, remove “W” clip at bottom of spring. Place “W” clip in a higher hole in spring rod for more pressure or in a lower hole for less pressure.

“W” Clip Hole	Row Down Force Added	
	Pounds	kg
Highest	+60	+27
Middle	+30	+14
Lowest	Factory Setting	

NOTICE

Use this adjustment only for a few rows, typically in tire tracks. Do not set row force higher on all rows. Instead use coulter adjustments (page 33) and frame weight adjustments (page 35).

Re-check drill level (page 17) after adjusting row force.

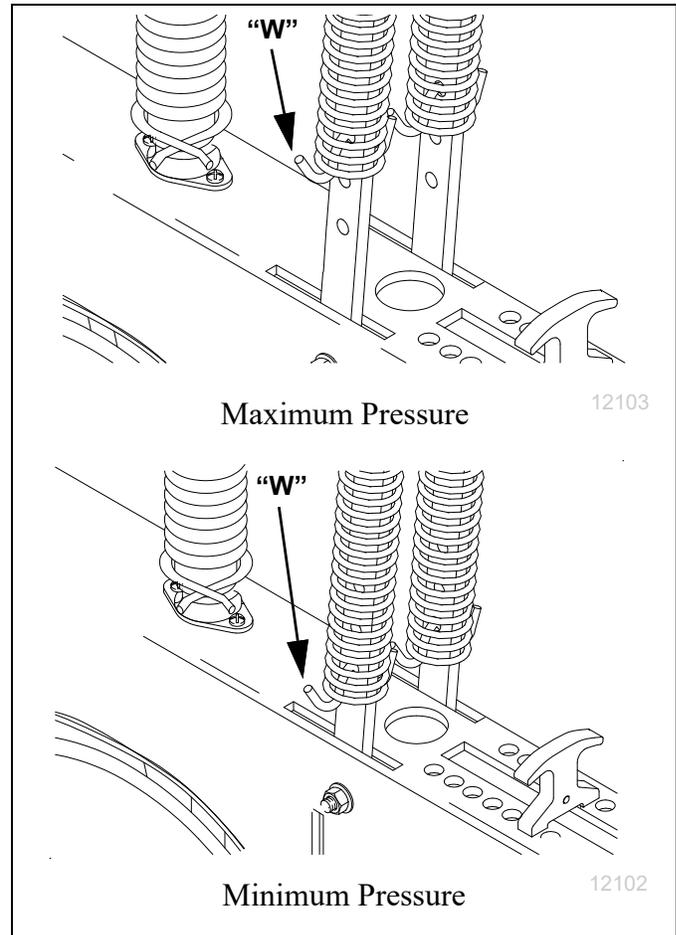


Figure 21
Opener Down Pressure Adjustment

Disc Scraper Adjustment

To keep opener discs turning freely, dirt scrapers are mounted between discs to clean as the discs rotate. As field conditions vary, scrapers may need to be adjusted. In damp conditions, scrapers may need to be lowered. If openers are not turning freely, scrapers may need to be raised.

Refer to *Figure 22*

To adjust scrapers, loosen $\frac{1}{8}$ inch bolt ① and move scraper as needed.

The standard scraper is shown. Optional spring-loaded carbide scrapers are available (see page 56). They require no adjustment.

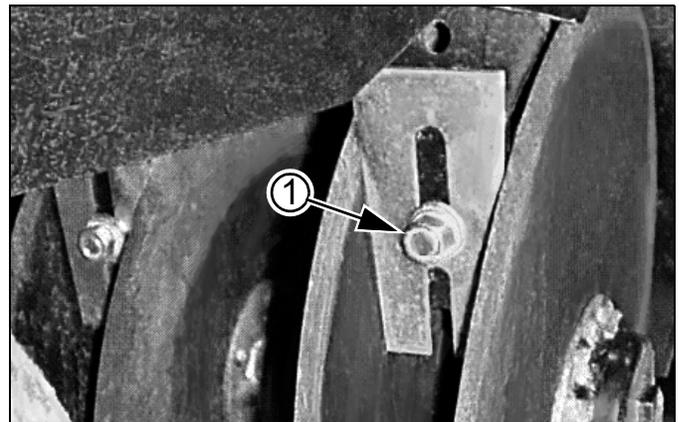


Figure 22
Disc Scraper Adjustment

Small Seeds Tube Adjustment (Option)

Refer to Figure 23

On a drill with the Small Seeds option, deeper seed placement may be achieved by rotating the seed tube ① to face forward.

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

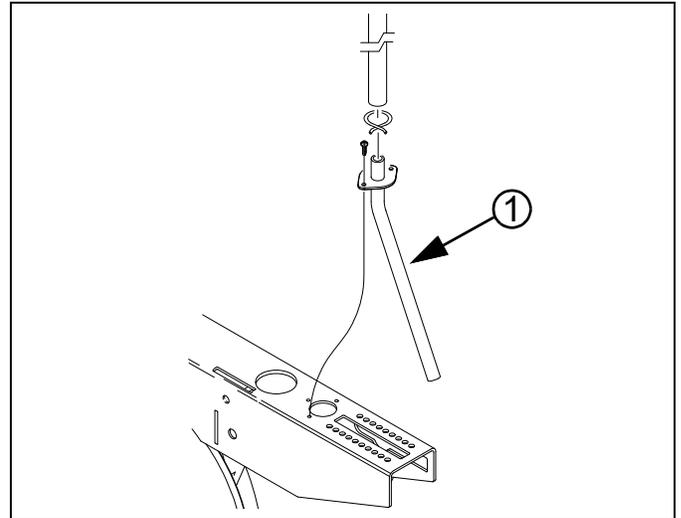


Figure 23
Small Seeds Tube

32810

Seed-Lok® Lock-Up

Optional Seed-Lok® 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 24 (shown with an opener disc removed for clarity - this task can be performed with discs mounted)

To lock up Seed-Lok® wheels:

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

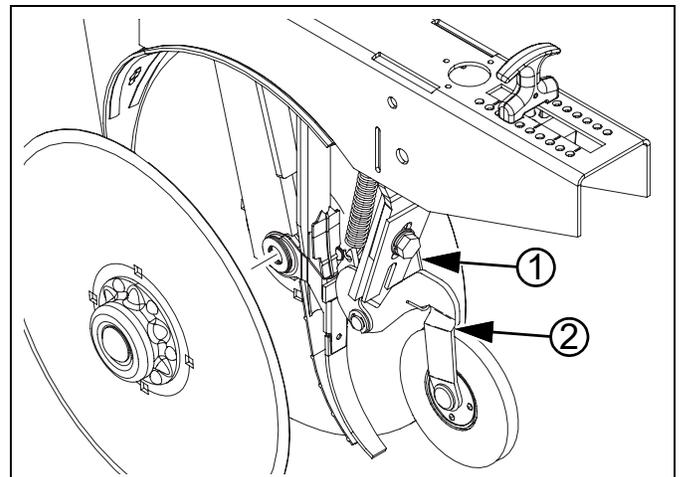


Figure 24
Seed-Lok® Lock-Up

27122

Opener Depth (Press Wheel Height)

A press wheel attached to each opener body controls seeding depth. To maintain consistent depth, the relationship between the bottom of the opener discs and press wheel is fixed upwardly by an adjustable stop on each opener.

The press wheels also close the seed trench and gently press soil over seed. To provide consistent soil firming, press wheels are free to move down from normal operating position. This maintains pressing action even if opener discs encounter obstructions or hard soil.

Refer to Figure 25

Set opener seeding depth by adjusting press-wheel height. To adjust, first raise drill slightly, then lift and slide T-handles on top of openers.

- For shallower seeding, slide T-handles toward drill.
- For deeper seeding, slide T-handles away from drill.

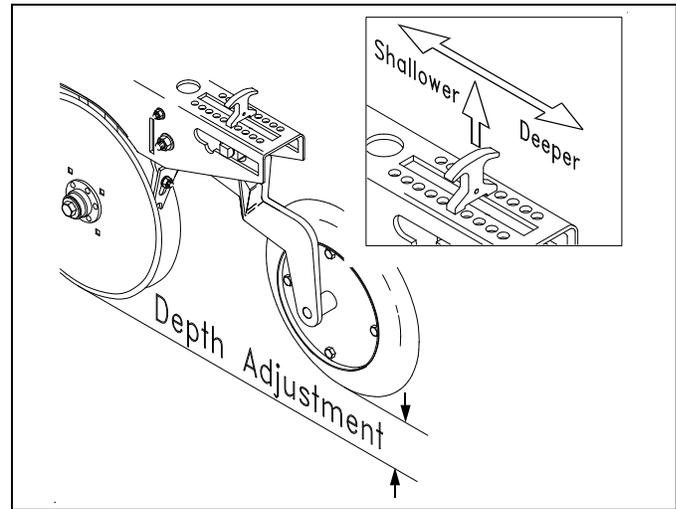


Figure 25
Press Wheel Adjustment

15659



Troubleshooting

Problem	Cause	Solution
Uneven seed spacing or uneven stand	Excessive field speed.	Reduce field speed.
	Feed cups plugging.	Clean out feed cups.
	Seed tubes plugging.	Clean out seed tubes.
	Opener discs not turning freely.	See “Opener discs not turning freely” in this Troubleshooting section.
	Ground drive wheel slippage	Check tire pressure and frame height. Solution may require drier conditions.
	Seed cups too wide	Use faster Drive Type speed and close feed cup flutes to a more narrow position.
	Chain skipping.	Check chain slack and wear.
	Mud build-up on Seed-Lok [®] wheel	Lock-up Seed-Lok [®] (page 39) or wait for drier conditions.
Uneven seed depth	Excessive field speed.	Reduce field speed.
	Planting conditions too wet.	Wait until drier weather.
	Drill not level	Readjust (page 17).
	Casters lifting drill	Set lift-assist circuit to Float.
Opener discs not turning freely	Trash or mud build up on disc scraper.	Adjust scraper (page 38).
	Scraper adjusted too tight, restricting movement.	Adjust scraper (page 38).
	Failed disc bearings.	Replace disc bearings.
	Bent or twisted opener frame.	Replace opener frame.
	Planting conditions too wet.	Wait until drier weather.
	Too much opener down pressure.	If opener discs turn freely by hand but not in field, reduce down pressure (page 38).
	Incorrect press wheel adjustment.	Readjust press wheel (page 40).
Actual material rate different than desired	Incorrect frame height, axle setting, tire size or tire inflation.	Check ground drive tires (page 61), frame height (page 17) and axle setting (page 33).
	Improper tire size or air pressure.	Check tire size and air pressure (page 61).
	Build up of seed treatment in feed cup.	Clean out seed treatment from feed cups.
	Incorrect rate adjustment.	Check gearbox, sprocket, seed rate handle and seed door settings. Perform calibration if not already done.



Problem	Cause	Solution
Excessive seed cracking	Excessive field speed.	Reduce field speed.
	Feed cup flutes not open enough.	Open feed cups to a wider position.
	Feed cup door handle not open enough.	Open feed cup door handle to a lower position.
Press wheels not compacting soil as desired	Too wet or cloddy.	Wait until drier weather or rework ground.
	Press wheel depth does not match coulter depth.	Readjust press wheel depth (page 40).
	Not enough down pressure on disc openers.	Increase down pressure on openers (page 38).
Boxes not emptying evenly	Some boxes do not have same number of feed cups between each divider of bulkhead.	Load more material than required. Re-distribute when re-loading.
	Main box seed cup door setting	Set all doors the same, per seed size.
	Seed plug(s) installed	Remove seed plug(s).
	Meter or tube blocked.	Clear blockage.
Press wheel or openers plugging	Planting conditions too wet.	Wait until drier weather.
	Too much down pressure on openers.	Reduce down pressure on openers (page 38).
	Backed up with drill in the ground.	Clean out and check for damage.
	Failed disc bearings.	Replace disc bearings.
	Scraper worn or damaged.	Replace scraper.
Feed cup sprockets locked up or twisted feed cup drive shaft	Foreign matter lodged in one or more feed cup sprockets.	Clean out feed cup sprockets. Use clean seed.
	Dried liquid insecticide inside feed cups.	Remove build up by disassembling each feed cup and scraping foreign substance from turn surfaces.
Coulters not going deep enough	Not enough down pressure.	Adjust coulters when a few rows are involved (page 35). Add weight when all rows are affected (page 35).
	Row down pressure set too high (reducing weight available to coulters)	Reduce row down pressure to standard (page 38). Set coulters to prepare furrow more aggressively (page 33).
Coulters and drill going too deep	Coulters set too deep or spring force too high	Correct adjustment (page 33).
	Incorrect press wheel adjustment.	Set press wheels to a shallower depth.
Coulters and openers plugging in no-till conditions		Drill at a slight angle to rows.



Problem	Cause	Solution
Small seeds box not emptying evenly	Adjustable divider not set evenly.	Move adjustable divider to create more volume in areas that run out first.
Chain	Debris, retainer clip	Be sure retainer clip is facing opposite way of chain travel (page 48).
Acremeter inaccurate	Excess wheel slippage	Check frame height, wheel axle position, tire size and pressure. If correct, solution may be to wait for drier conditions.
	Passes misaligned.	Check that planting passes are not leaving gaps (under-reporting area) or causing overlap (over-reporting area).
	Wheel slippage is varying from nominal.	If variance is consistent, develop a correction factor for your conditions.
	Check that acremeter is for your drill.	Activate display. Lower left corner must be "568.7 revs/ac" or "1405.3 revs/ha". Contact dealer if otherwise.
	Acremeter battery failing	Replace acremeter (page 26). Unit is sealed and battery is not replaceable.

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.

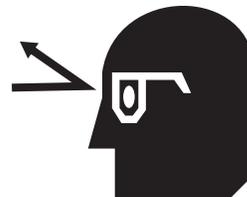
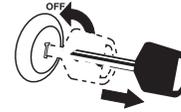
WARNING

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 51.
3. Clean any fittings that do not take grease.
4. Inflate tires as specified on “**Tire Inflation Chart**” on page 61.
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 dealer. See “**Safety Decals**” on page 5.



Caster Brake Adjustment

Refer to Figure 26

The rear lift-assist wheels each have independent adjusters for the caster pivot. The adjustments will vary depending on different field-to-field conditions as well as road transport conditions.

Caster Pressure Plate and Tube:

The tube acts as a pivot brake ①, and helps prevent caster oscillation during transport.

If the caster is oscillating during transport turns or in field use, adjust the pressure plate bolt ②.

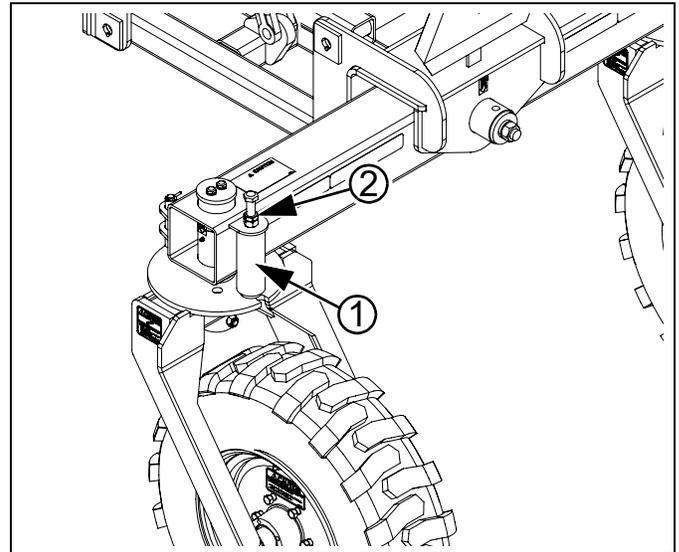


Figure 26
Rear Caster Adjustments

32058

Refer to Figure 27

The factory setting for both adjustments is $1\frac{3}{4}$ in. (4.4 cm) from the face of the bolt head to the top of the weldment, this measurement is a starting point and will need to be fine tuned from field-to-field as conditions vary. Depending on conditions, adjustment may be needed to go from field to road transport. If caster brake components are ever replaced, return the bolts to the factory setting.

Pressure Plate Adjustment

1. Loosen the jam nut ③.
2. Turn the bolt ② clockwise until the spring is fully compressed.
3. Back the bolt out $\frac{1}{4}$ in. (6 mm).
4. Tighten the jam nut.

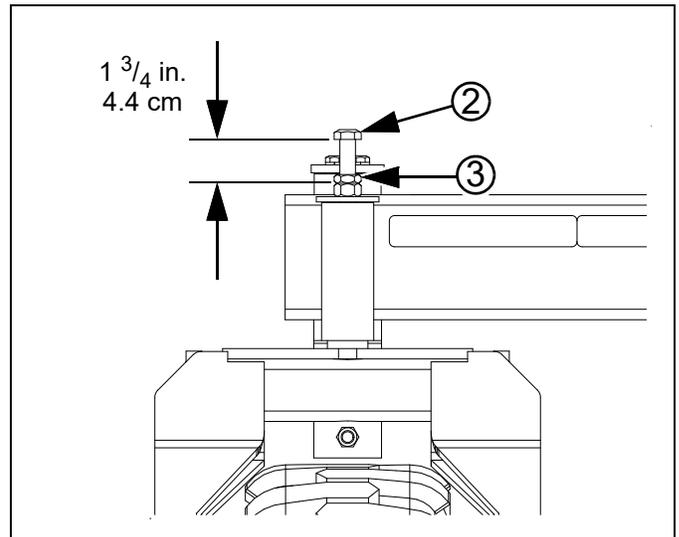


Figure 27
Rear Caster Adjustment Bolts
(left side shown)

32059

Materials Clean-Out

Main Box and Dual Box Clean-Out

Refer to Figure 28, 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.

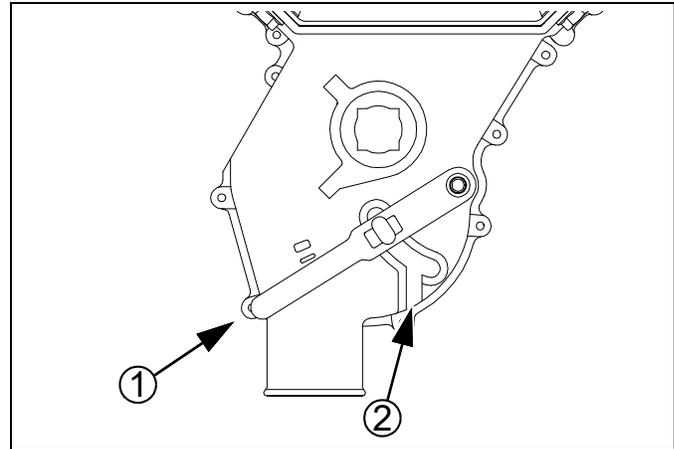


Figure 28
Seed Cup Clean-Out

26211

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.

Native Grass Box Clean-Out

If a suitable vacuum is available, open the Native Grass box lid, and vacuum out remaining seed.

If too much seed remains for the vacuum, or no vacuum is available:

1. Raise and lock up the drill. Place a tarp under the Native Grass seed tubes.
2. Set the Native Grass (right gearbox) Drive Type to 4. Optionally install the smallest final Driven sprocket.
3. Install the calibration crank, and turn the drive system until no seed flows from Native Grass tubes.
4. Vacuum out any residual material from above.

NOTICE

Equipment Damage Risk:

Water wash-out is not recommended for the Native Grass box, particularly if seed lubricants have been used. Water may cause build-up of solidified residue. Filler material used in native grass mixes can also present problems.



Figure 29
Native Grass Box Open

28362

Fertilizer Box Clean-Out

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

Refer to Figure 30

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 31

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.

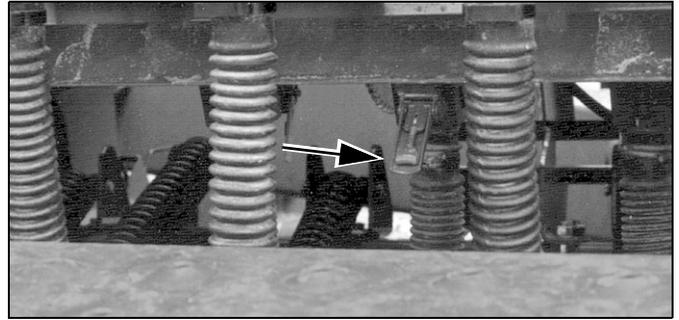


Figure 30
A Fertilizer Clean-Out Latch

16376

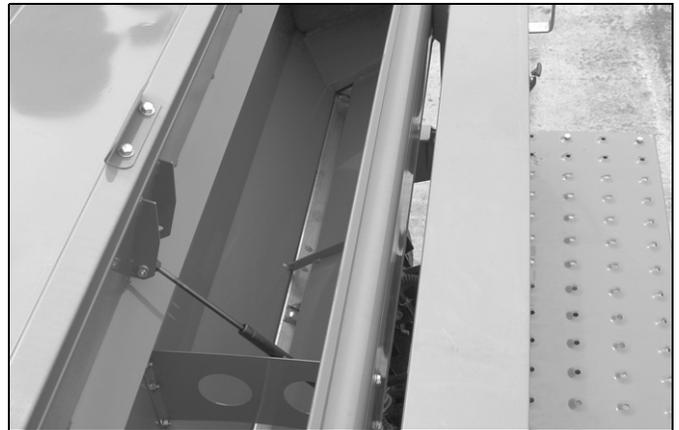


Figure 31
Fertilizer Tray

28288

Disc Maintenance

Coulter and opener disc blades wear in normal service, becoming smaller in diameter. Periodically check blade diameter, and replace when below the recommended limits. Discs can also be dented by unusual field hazards, or bent. Replace damaged blades immediately.

Opener Disc Replacement

Replace 15 in. (38.1 cm) opener discs when re-positioning spacers no longer brings both blades into the contact as recommended at “**Disc Blade Adjustments**” on page 37.

Consult updated Parts Manual for latest disc, or disc assembly part number.

Coulter Disc Replacement

Replace 17 in. (43.2 cm) coulter blades when adjusting drill level becomes difficult. Two signs that blade replacement is indicated are:

- Coulter height adjustments drill-wide are using the lowest axle hole (page 33).

- Coulter blade diameter is close to, or below, 15 in. (38.1 cm).
See page 55 for replacement and alternate coulter blades.

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 32, 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 in. / 91cm):
1/4 in. per ft. (21 mm/m)
Vertical short chains:
1/4 in. per ft. (21 mm/m)
Horizontal short chains:
1/2 in. per ft. (42 mm/m)
3. Measure the current slack ②:
Acting at a right angle to the chain span at the center 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 33 (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).

Seed Flap Replacement

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.

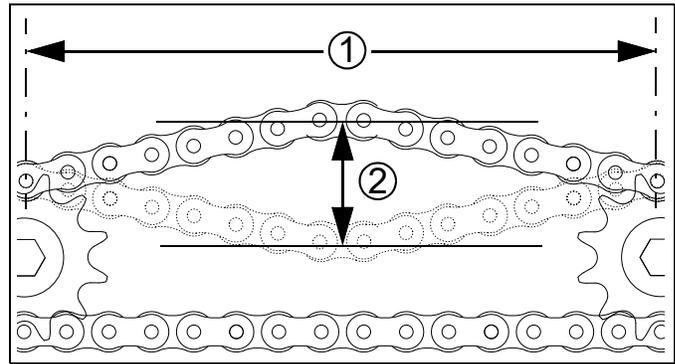


Figure 32
Measuring Chain Slack

27264

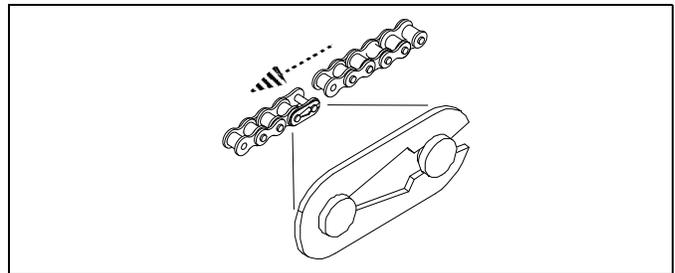


Figure 33
Chain Clip Orientation

26482

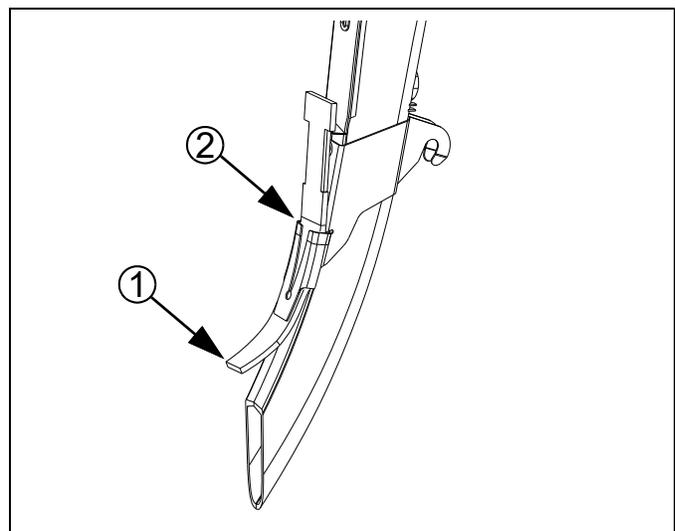


Figure 34
Seed Tube Flap

31047

Eye bolt Adjustment

Refer to Figure 35

It may occasionally be necessary to make adjustments to the eye bolts at the top of the lift-assist weldments, for example:

- lowered position is too high even with no spacers on the cylinder rod.

To make adjustments:

1. Determine what change in drill height is required.
2. Hitch the drill to the tractor's 3-point lift arms. Raise the drill, and support the rear tool bar on jack stands.
3. Loosen the jam nut ①.
4. Rotate the adjuster nut ② (under weldment top, not visible in figure) by the amount of height change required. Moving the eye bolt ③ lower increases height. Moving the eye bolt higher decreases height.
5. Tighten the jam nut.
6. Lower the drill and check the setting.

The factory setting for eye bolt reveal is:

- ④ 3¹/₂ in. (88.9 mm)

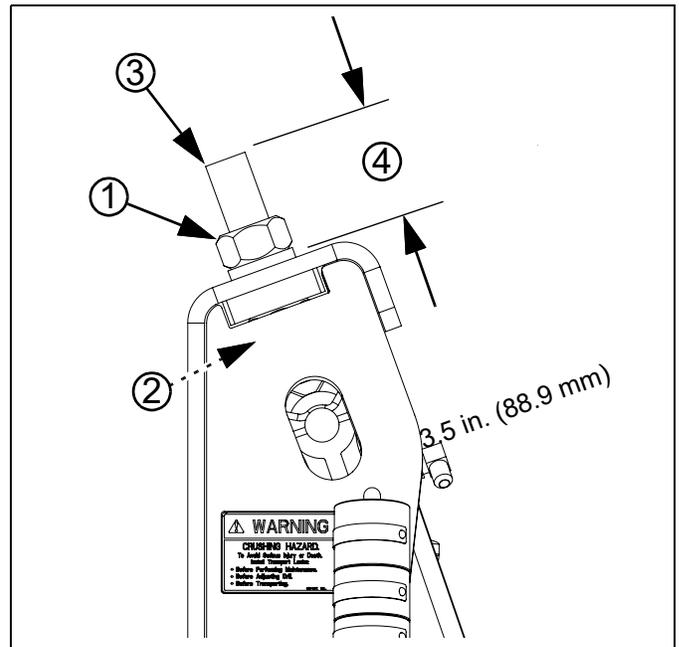


Figure 35
Lift-Assist Eye Bolt

32060

Bleeding Hydraulics

⚠ WARNING

High Pressure Fluid Hazard:

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

Check that tractor hydraulic reservoir is full.

NOTICE

Bleed pressurized lines only at:

JIC (Joint Industry Conference, 37-flare) or
NPT (National Pipe Thread, tapered thread) fittings.

Avoid bleeding at:

ORB (O-Ring Boss)

Never bleed pressurized lines at:

QD (Quick Disconnect) fittings.

1. Check hydraulic fluid in tractor reservoir and fill reservoir to proper level. Add fluid to system as needed. A low reservoir level may introduce air into the system, causing jerky or uneven cylinder movements.
2. Hitch drill to tractor (page 15).
3. If lift-assist lock channel or stroke control spacers are installed, raise drill and remove them.
4. Fully lower drill (page 20).
5. Set tractor lift circuit to Float and shut off tractor.
6. Crack (slightly loosen) JIC connection ① at elbow fitting. Refer to Figure 36
7. Start tractor. Slowly Extend lift-assist circuit until oil seeps at cracked fitting.
8. Set circuit to Neutral and shut off tractor.
9. Tighten JIC fitting to 18-20 ft-lbs (24-27 N-m).
10. With cylinder bled and tightened, raise drill and re-install removed lock channel or spacers.

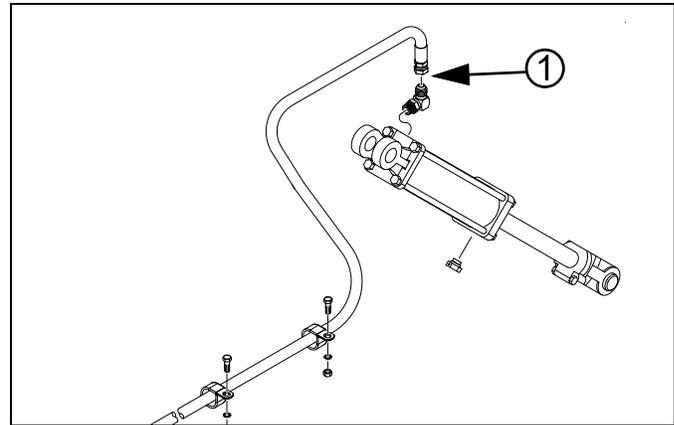


Figure 36
Lift Assist System Bleed

32056

Lubrication and Scheduled Maintenance

Multi-purpose spray lubricant	Multi-purpose grease lubricant	Multi-purpose oil lubricant	Inspection	50 Intervals (operating hours) at which service is required
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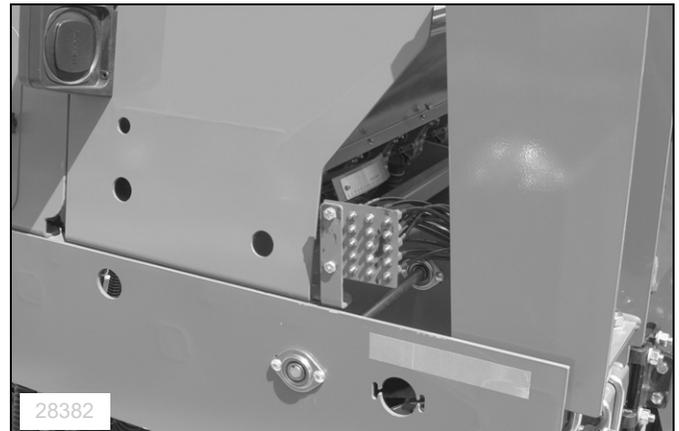
Coulter Arm Pivots

	8
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One pivot per row; 15 total (via grease bank)

Type of Lubrication: Grease

Quantity = Until grease emerges



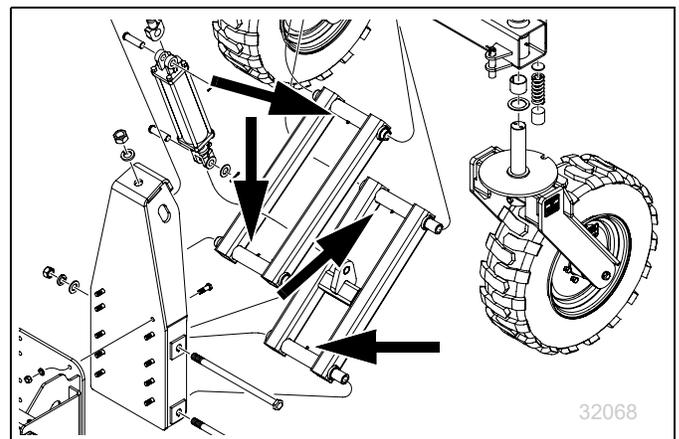
Lift-Assist Arm Pivot

	8
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One zerk each pivot; 4 total

Type of Lubrication: Grease

Quantity = Until grease emerges



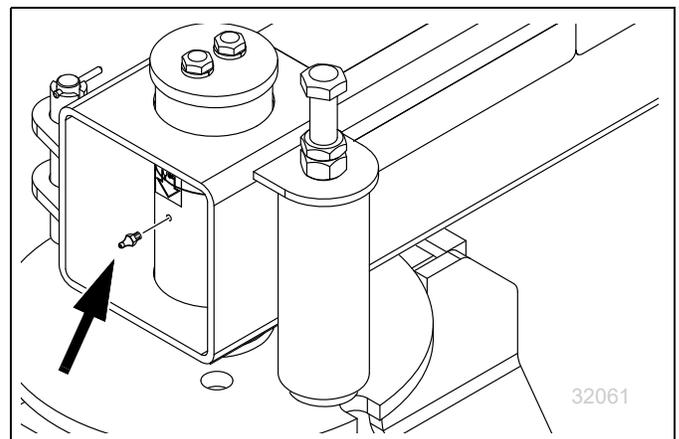
Caster Pivots

	10
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One zerk each pivot; 2 total

Type of Lubrication: Grease

Quantity = Until grease emerges



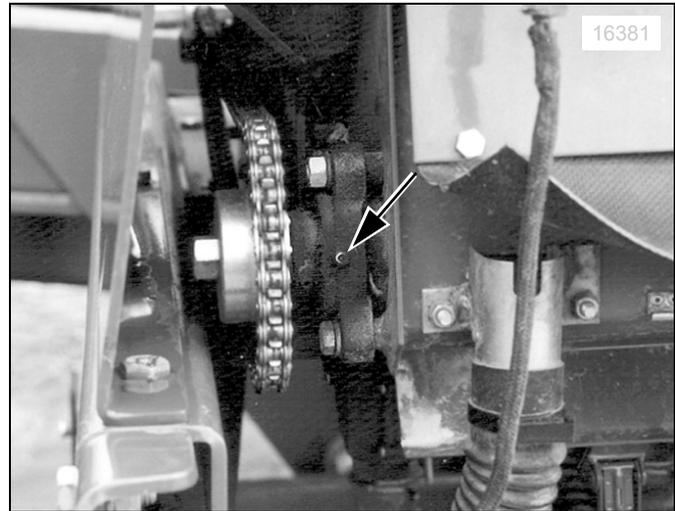
Fertilizer Shaft Bearings (Option)

		15
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1 zerk each bearing, 2 per shaft;
2 total

Type of Lubrication: Grease
Quantity: Until resistance is felt

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

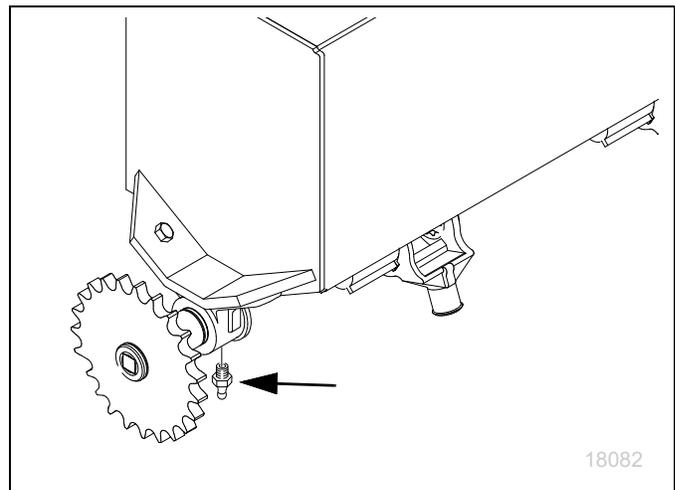


Small Seeds Shaft Bearings (Option)

		15
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1 zerk total

Type of Lubrication: Grease
Quantity: Until grease emerges



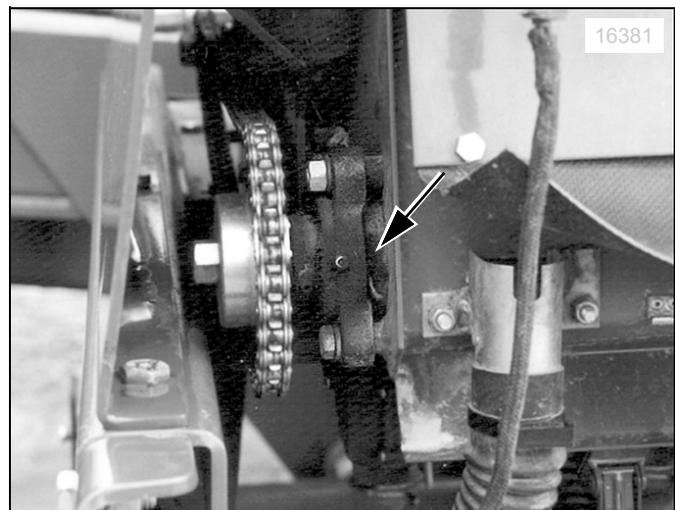
Felt Barrier Seals

		30
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1 seal at each shaft end, 2 total

Type of Lubrication: Oil
Quantity: Soak seal

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

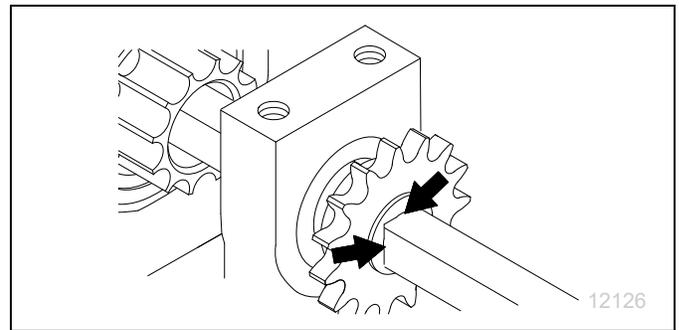


Seed Cup Drive Shaft Sprocket



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.

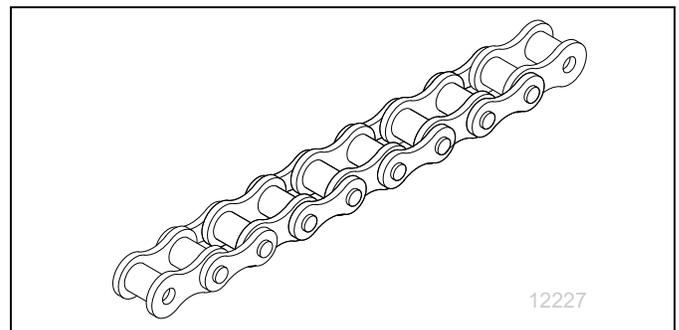


Drive Chains

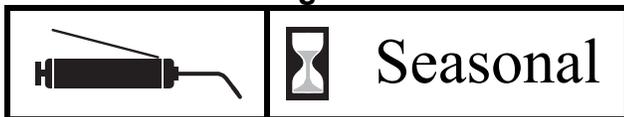


See “**Chain Routing**” starting on page 63 for locations all chains by drill configuration.

Type of Lubrication: Chain Lube
 Quantity = Coat thoroughly.

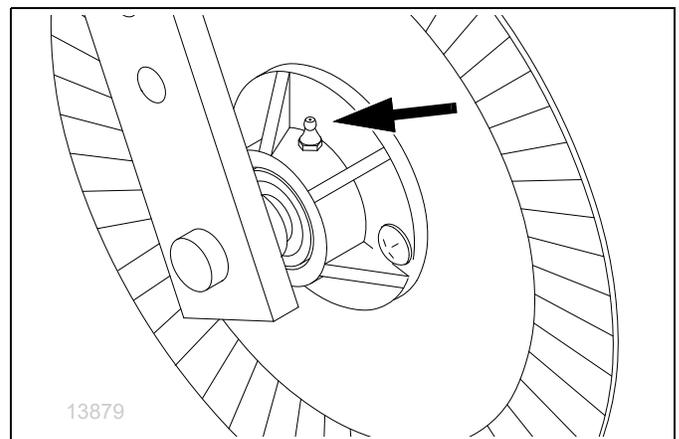


Coulter Hub Bearings



One zerk per coulter; 15 total

Type of Lubrication: Grease
 Quantity = Until resistance is felt



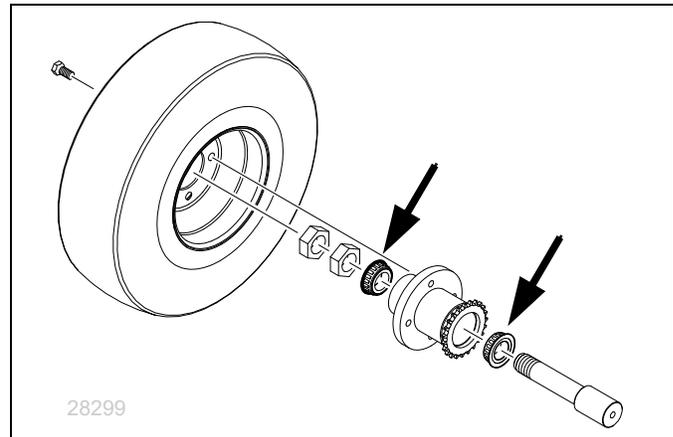
Ground Drive Wheel Bearings

	 Seasonal
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2 races per wheel; 4 total

Type of Lubrication: Grease

Quantity = repack



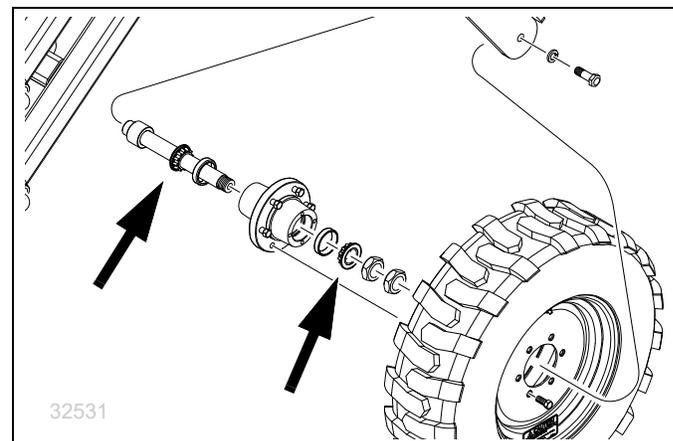
Caster Wheel Bearings

	 Seasonal
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2 races total

Type of Lubrication: Grease

Quantity = repack



Gearbox

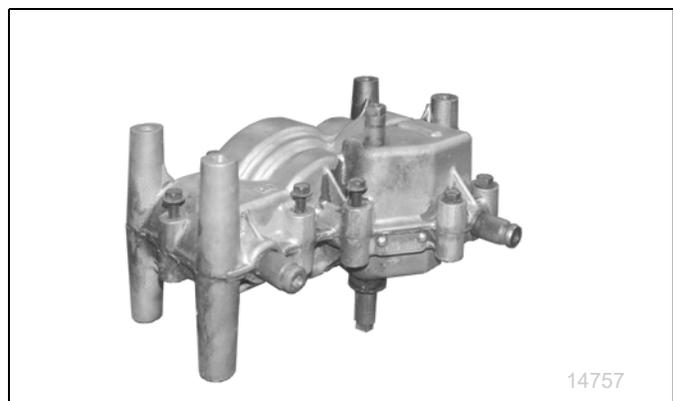
	 On Repair
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The gearbox is lubricated and sealed at the factory. Under normal conditions, it does not require maintenance or lubrication.

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.

Options

Acre/Hectare Meter

A digital acremeter is standard on 3P1006NT drills, programmed for the revs/area of the 3P1006NT, and in the units of measure typical for the destination. Order one of the following if you prefer alternate units of measure.

Description	Part Number
U.S. Customary	823-495C
Metric	823-495C



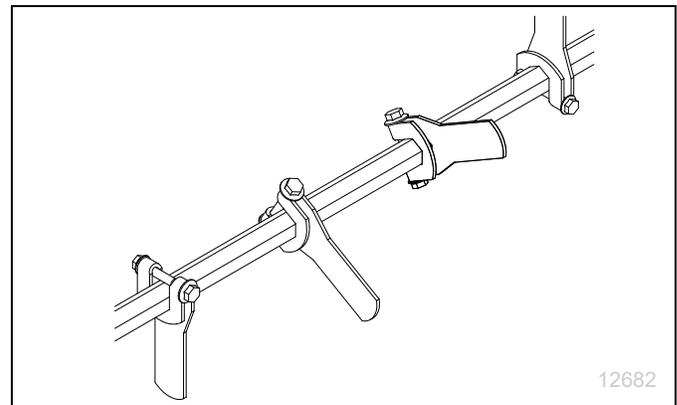
Agitator, Main Seed Box

An optional agitator can be added to the main seed box. It stirs the seed directly above the metering cups, separating soybeans that are sticky with inoculant, and helping prevent bridging of light, fluffy seeds (this is not a substitute for the optional Native Grass seed box).

If the drill has only a main seed box only, or has Dual Seed¹ or Native Grass as the only optional box, order the “W/DRIVE” kit to obtain the necessary accessory drive components.

If the drill has Fertilizer or Small Seeds, or any combination thereof, order the “W/O DRIVE” kit.

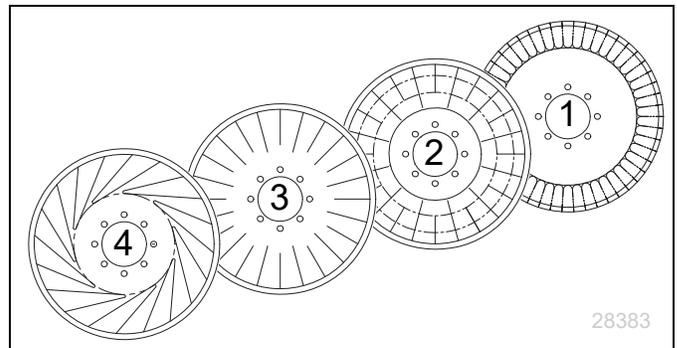
Description	Part Number
3P1006NT AGITATOR KIT W/DRIVE	118-970A
3P1006NT AGITATOR KIT W/O DRIVE	118-971A



Coulter Blades

The standard coulter blades on the 3P1006NT drill are 17 in. (43.2 cm) 820-156C Turbo or 820-018C Fluted. Available replacement and alternate blades include:

Description	Part Number
① 50 Convolution 5/16 Fluted	820-018C
② 12 Convolution 3/4 Wavy	820-082C
③ 24 Convolution 5/8 Wavy	820-116C
④ 20 Convolution 5/8 Turbo	820-156C



1. An agitator is standard in the Dual Seed box.

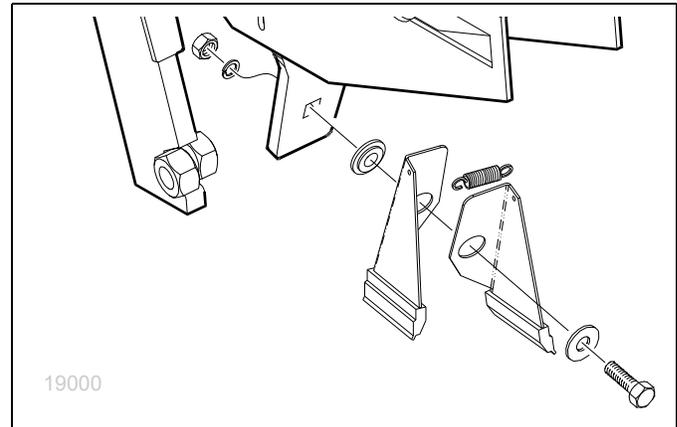
Carbide Disc Scraper

Slotted disc scrapers are standard.

Optional carbide disc scrapers are spring-loaded and require no periodic adjustment. Disc scrapers are compatible with the standard seed flap and Seed-Lok[®], but not Keeton[®]. Order one per row.

Description	Part Number
SPRING SCRAPER ASSEMBLY	121-781A

See “**Carbide Disc Scraper Installation**” on page 89.



Dual Seed Box

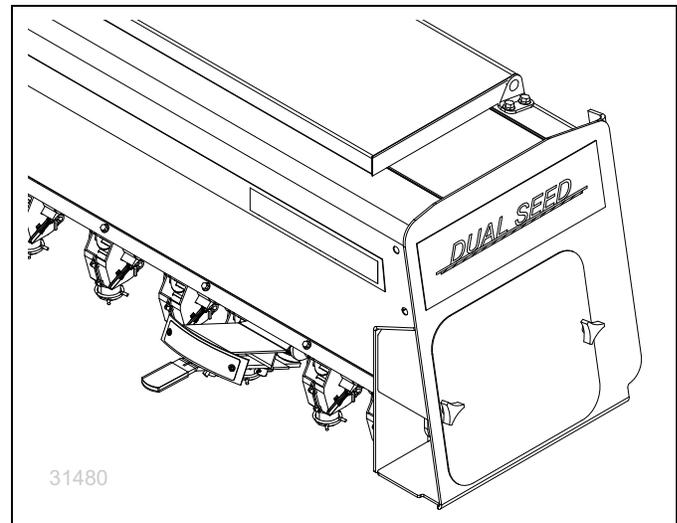
This seed box is an optional second seed box installed behind the main seed box used for planting a wide variety of seeds. It is used for planting the same or additional crops as the main seed box. Dual Seed can plant at the same or different rate than the Main Seed Box. Box capacity is 10 bushels (352 liters). An agitator is standard.

Dual Seed may be factory or field installed.

Consult your dealer for ordering information.

Note: Dual Seed is not compatible with Native Grass or Fertilizer Option (or kits).

For operation, see: “**Loading Materials**” on page 25, “**Setting Main Box Seed Rate**” in Seed Rate Manual, and; “**Main Box and Dual Box Clean-Out**” on page 46.



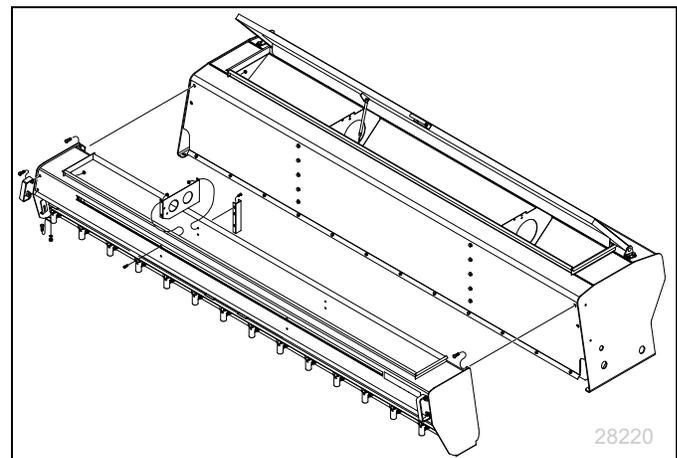
Fertilizer

The Fertilizer attachment is designed to meter dry fertilizer and apply it in row. It is driven independently of other boxes on the drill. The standard Fertilizer attachment includes a drive system, 9.2 cubic foot box, stainless steel meters, and delivery tubes.

Consult your dealer for ordering information.

Note: The Fertilizer attachment is compatible with an existing, concurrently installed, or subsequent installation of Small Seeds. The Fertilizer attachment is not compatible with the Native Grass.

For operation, see: “**Loading Materials**” on page 25, “**Setting Fertilizer Rate**” in Seed Rate Manual, and “**Fertilizer Box Clean-Out**” on page 47.



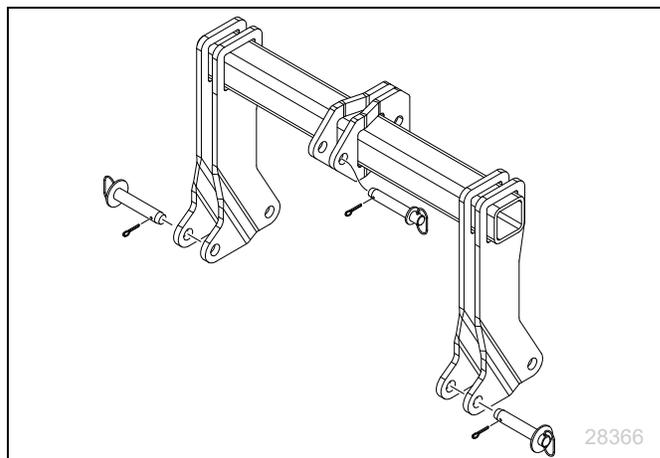
Hitch Extension Kit

This accessory extends the tractor's 3-point hitch to eliminate interference on tractors with unusual wheel bases or oversize tires. The extension is available as an Option with the original drill order, or as a separate kit.

The kit includes pins for the forward holes.

Note: This extension hitch is compatible with most standard quick hitches.

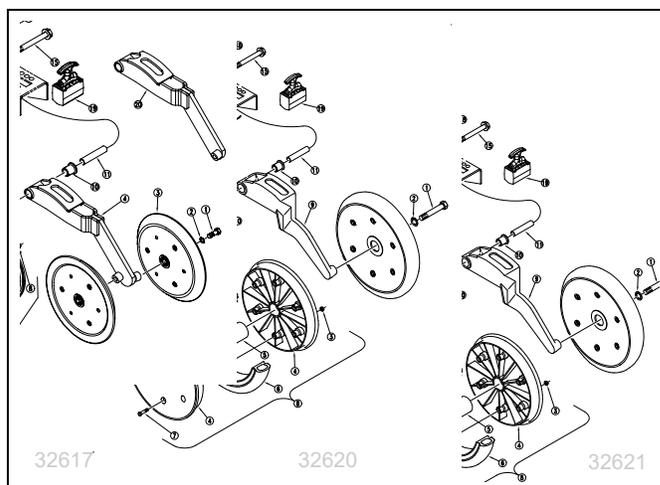
See "**Hitch Extension**" on page 15.



Press Wheel Selection

The base drill includes a choice of press wheels. Additional wheels are available, and all may be field-installed.

This manual does not list kit part numbers as the available wheels are often region-specific. Consult your dealer.



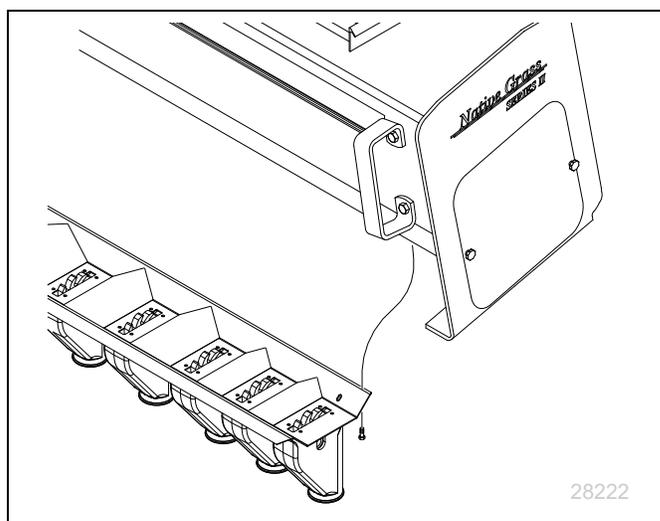
Series II Native Grass Attachment

This attachment is designed to seed fluffy, hard-to-plant grasses. Standard equipment includes dedicated ground drive and gearbox system, acremeter, 10 bushel box with Series II meters, Series II agitator, and seed tubes.

Consult your dealer for ordering information.

Note: Native Grass is not compatible with the Fertilizer Option (or kits). Native Grass is compatible with an existing, concurrent, or subsequent installation of the Small Seeds attachment.

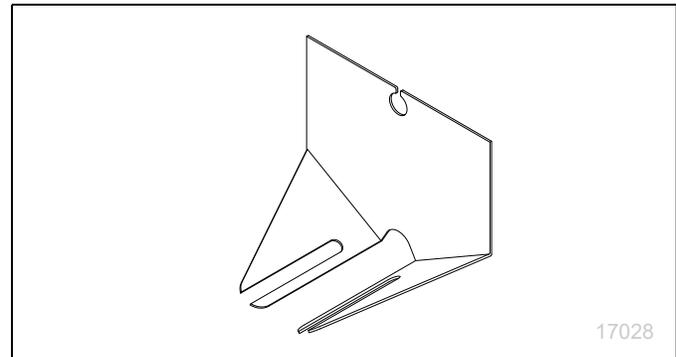
For operation, see: "**Loading Materials**" on page 25, "**Setting Native Grass Seed Rate**" in Seed Rate Manual, and; "**Native Grass Box Clean-Out**" on page 46.



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 sold individually. Order quantity desired.

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



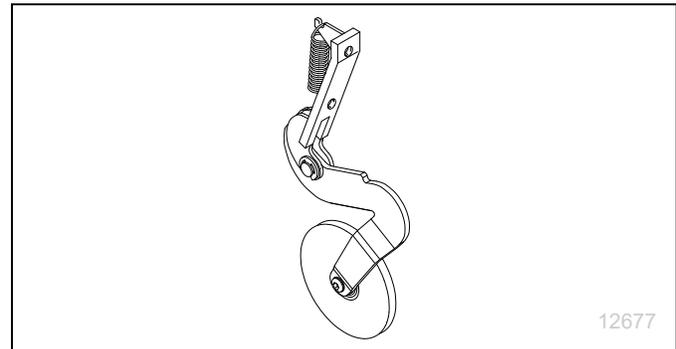
Seed Firmers

The standard 3P1006NT drill includes seed flaps. Only one type of optional 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-Lok® Lock-Up” on page 39.



Seed Lubricants

Use seed lubricants only in Native Grass planting.

Description	Part Number
Graphite (1 lb / 0.45 kg bottle)	821-042C
Graphite (5 pound / 2.3 kg jug)	821-060C

See “Loading Materials” on page 25.

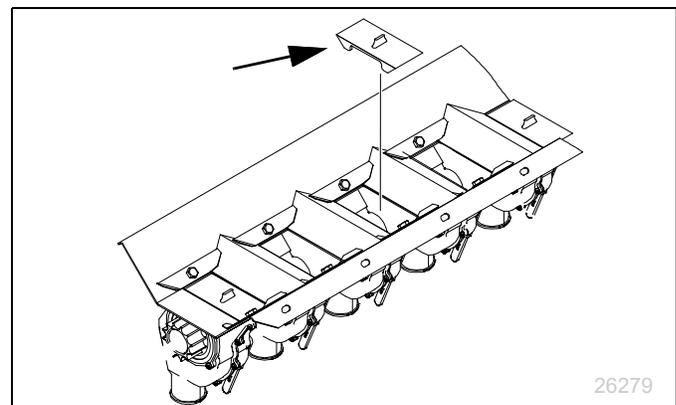


Seed Tube Plug (Main Seeds)

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

Description	Part Number
Fluted Feed Meter Plug	817-087C

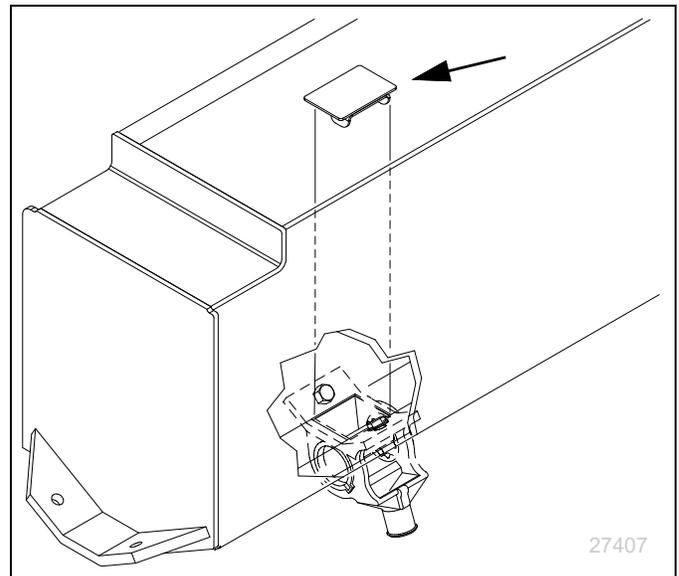
See “Main Seed Row Shutoff” in the Seed Rate Manual.



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



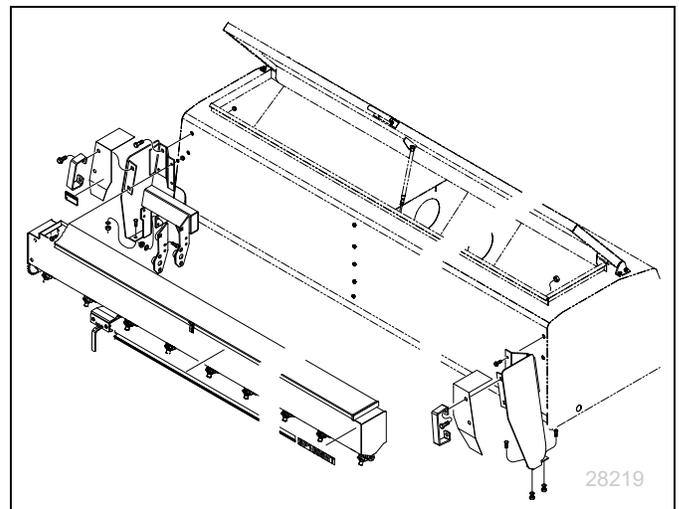
Small Seeds Attachment

The Small Seeds (SGS) attachment is designed to meter various small seeds in row. It is driven independently of other boxes on the drill. The standard attachment includes a drive system, 2.4 bushel box (85 liter), meters and seed tubes.

Consult your dealer for ordering information.

Note: The Small Seeds attachment is compatible with an existing, concurrently installed, or subsequent installation of Dual Seed, Fertilizer or Native Grass.

For operation, see: “**Loading Materials**” on page 25, “**Small Seeds Rate**” in Seed Rate Manual, and; “**Small Seeds Box Clean-Out**” on page 47.

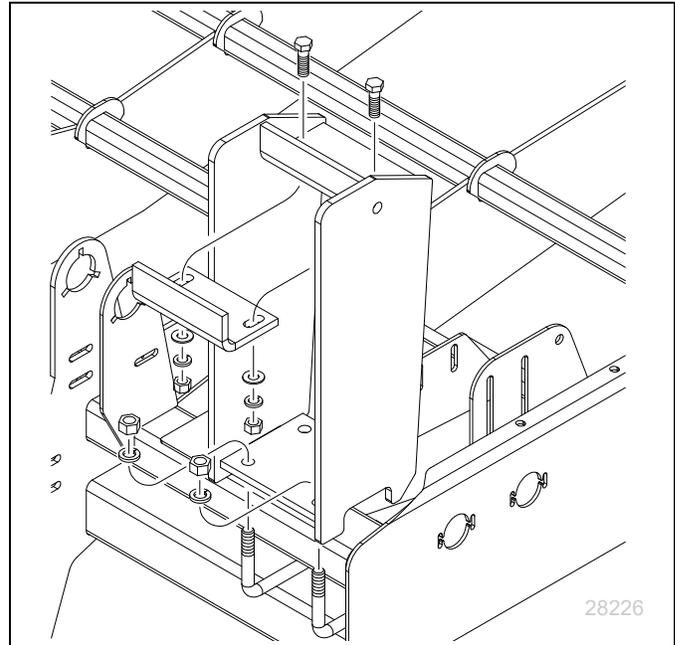


Weight Brackets

The weight brackets are available to add weight for additional penetration in no-till conditions. The kit includes two brackets. Each bracket accepts up to five standard 100 pound (45 kg) "suitcase" style tractor weights. The weight brackets are available as an Option with the original drill order, or as a separate kit.

The kits do not include weights.

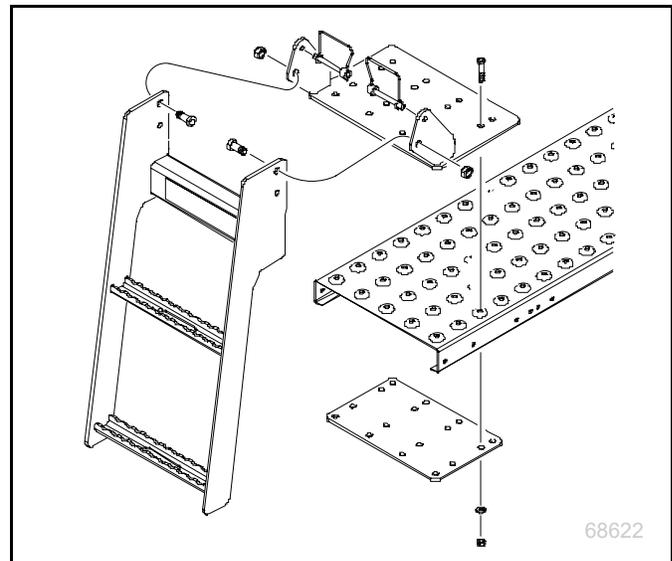
See **"Weight Bracket Installation"** on page 90, and **"Drill Weight Adjustment"** on page 35. also:



Second Ladder

The second ladder can be installed on the opposite end of the walkboard from the standard ladder.

Description	Part Number
L ADDER ASSEMBLY	119-020A





Appendix A - Reference Information

Specifications and Capacities

	3P1006NT
Row Spacing	7.5 in. (19.1 cm)
Rows per drill	15
Swath	112.5 in. (285.8 cm)
Weight, pounds	4820-6388 lbs. (2187-2898 kg) ^a
Transport Width	approx. 118.25 in. (3.00 m)
Height	approx. 95 in. (2.41 m)
Length	approx. 141 in. (3.56 m)
Transport Clearance	approx. 16 in. (40.6 cm) ^b , and depends on tractor hitch
Capacities:	
Main Seed Box	16.8 bu. (595 liters)
Dual Seed Box	10 bu. (352 liters)
Native Grass Box	10 bu. (352 liters)
Small Seeds Box	2.4 bu. (85 liters)
Fertilizer Box	9.2 cubic feet (261 liters)
Agitators	Optional in Main Seed box. Standard in Dual Seed or Native Grass box.
Transport/Lift-Assist Wheel	265/70B 16.5 NHS Skid Steer, 6-bolt rim
Ground Drive Wheel	5.70-8 8-Ply, 4-bolt rim
Tractor Requirements	Semi-Mounted 3-point Category II hitch, 100 hp (75 kW), 1 hydraulic circuit

a. Empty weight range: see page 24 for weights of representative configurations.

b. With rear lift lock channels installed, and semi-mounted hitch elevated to drill-level.

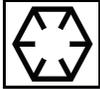
Tire Inflation Chart

Tire Size	Inflation
265/70B 16.5 NHS Skid Steer	60 psi 414 kPa
5.70-8 8-Ply	50 psi 345 kPa

Tire Warranty Information
<p>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.</p> <p>ManufacturerWebsite Firestone www.firestoneag.com Goodyear www.goodyearag.com BKT www.bkt-tirestires.com/en Gleason www.gleasonwheel.com Titan www.titan-intl.com</p>



Torque Values Chart

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

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

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

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

25199



Chain Routing

Striped arrows show chain direction.

“T” callouts show tooth counts for sprockets other than idler sprockets.

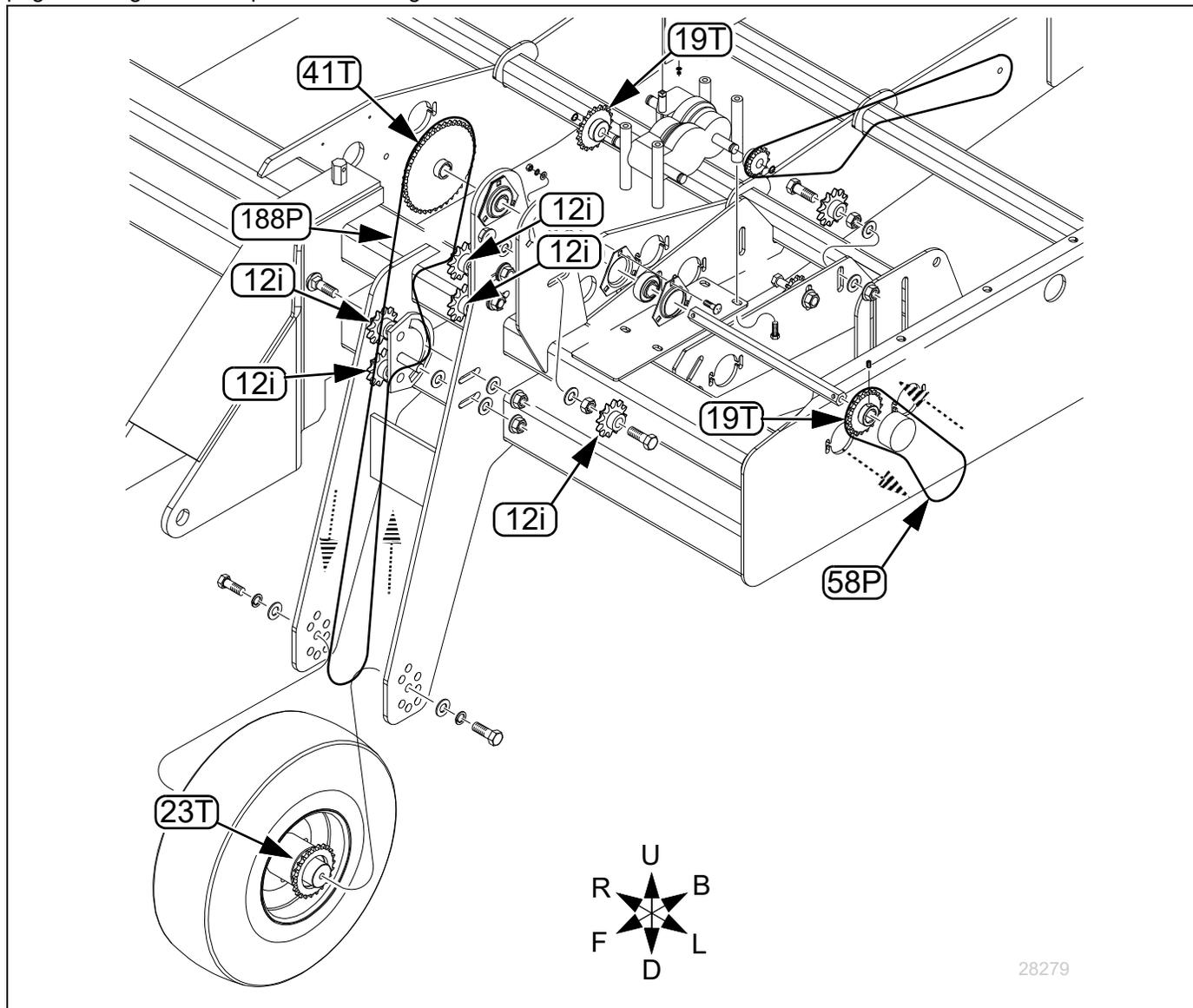
“i” callouts show tooth counts for idler sprockets.

“P” callout show chain pitch count.

Standard (Left) Ground Drive to Gearbox

This assembly drives the Main Seed Box (via the gearbox), and if installed, the optional Main Box Agitator, Fertilizer attachment, and/or Small Seeds attachment.

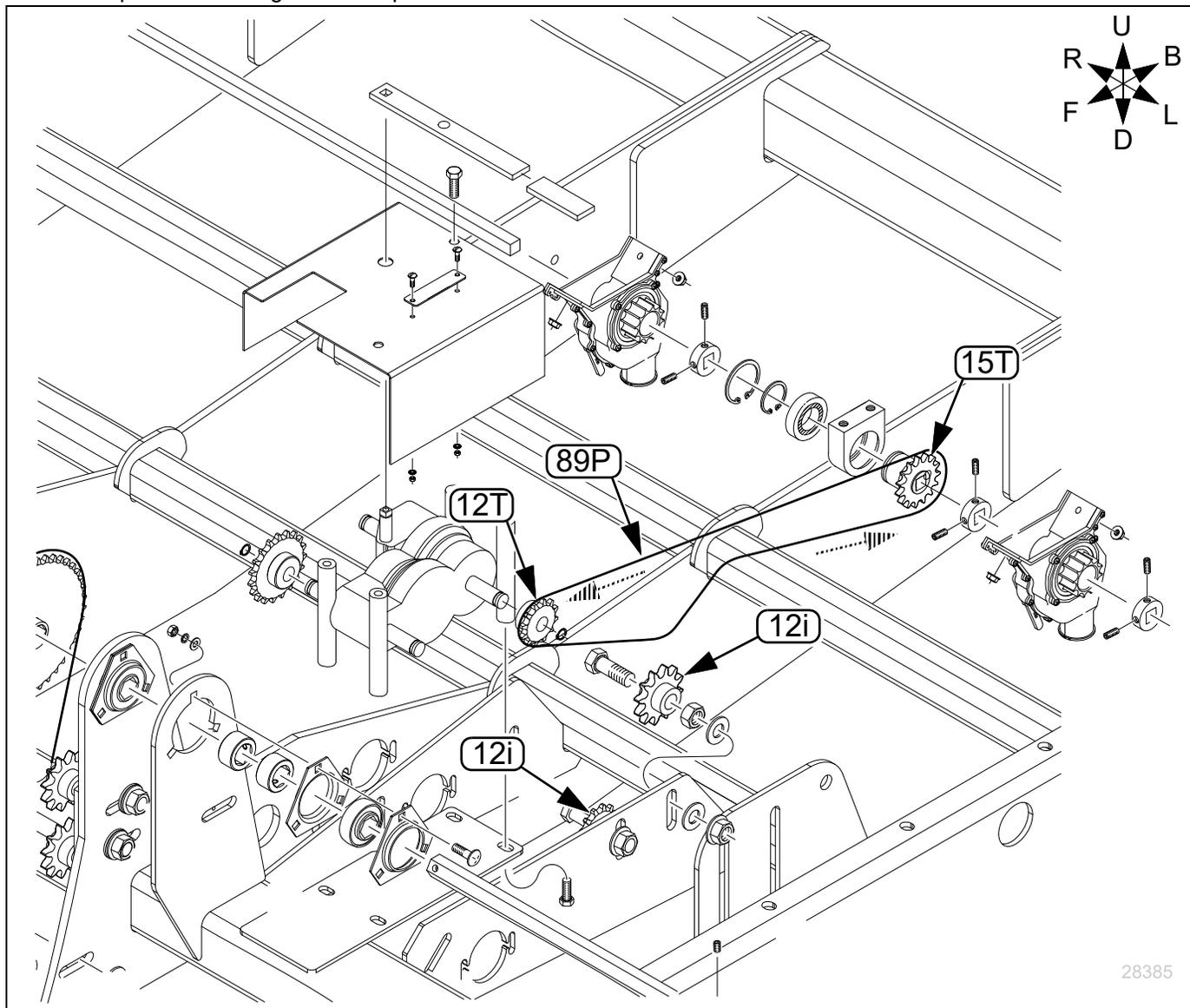
See “**Left Gearbox to Main Seed Box Meters**” on page 64 for gearbox output chain routing.





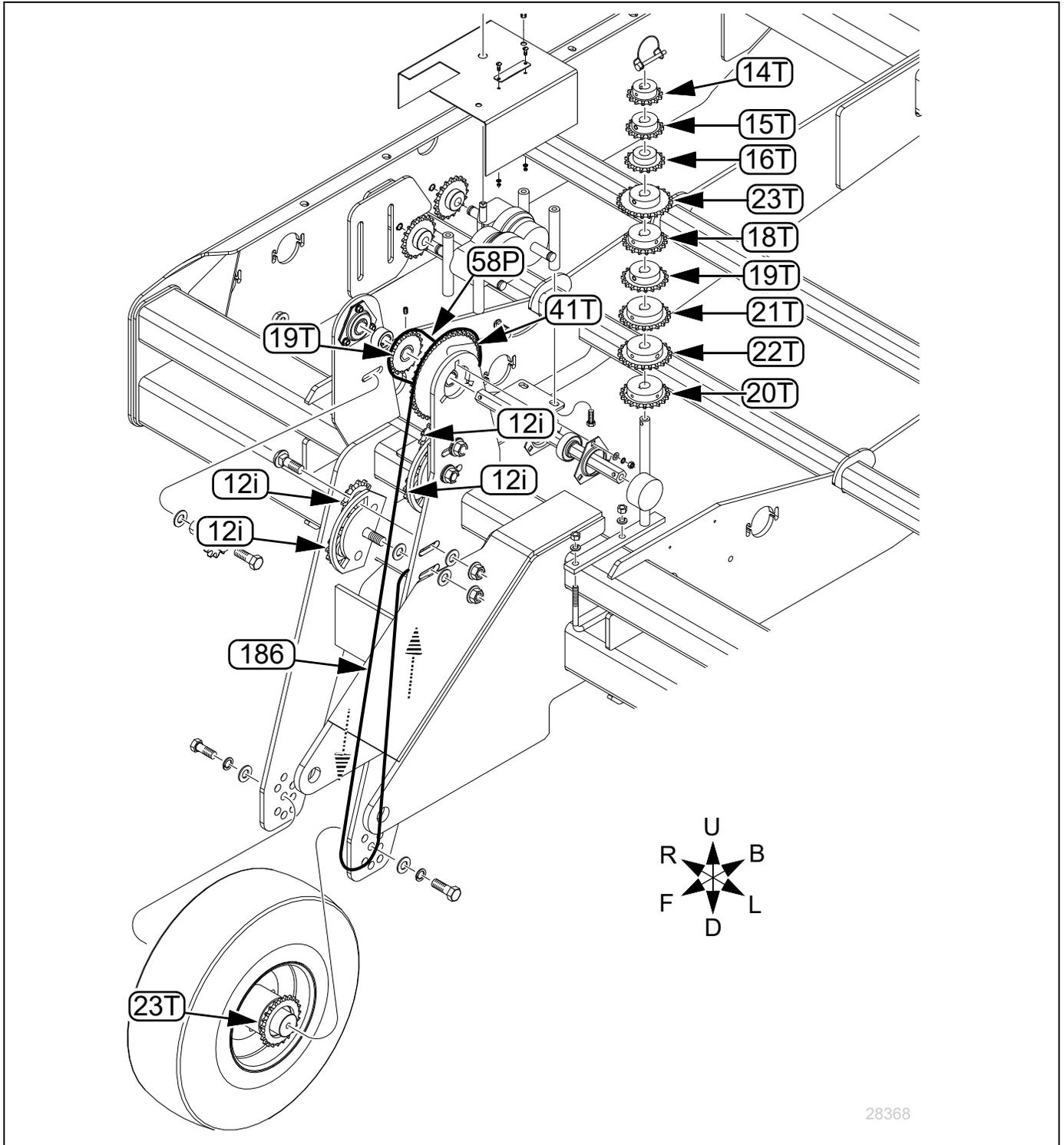
Left Gearbox to Main Seed Box Meters

See “Standard (Left) Ground Drive to Gearbox” on page 63 for gearbox input. Main box meters are the only meters coupled to the left gearbox output.



Native Grass (Right) Ground Drive (Option)

See “Right Gearbox to Native Grass Meters (Option)” on page 66 for Native Grass gearbox output. One sprocket from storage tower is mounted at Native Grass meter shaft (the 17T as shipped).

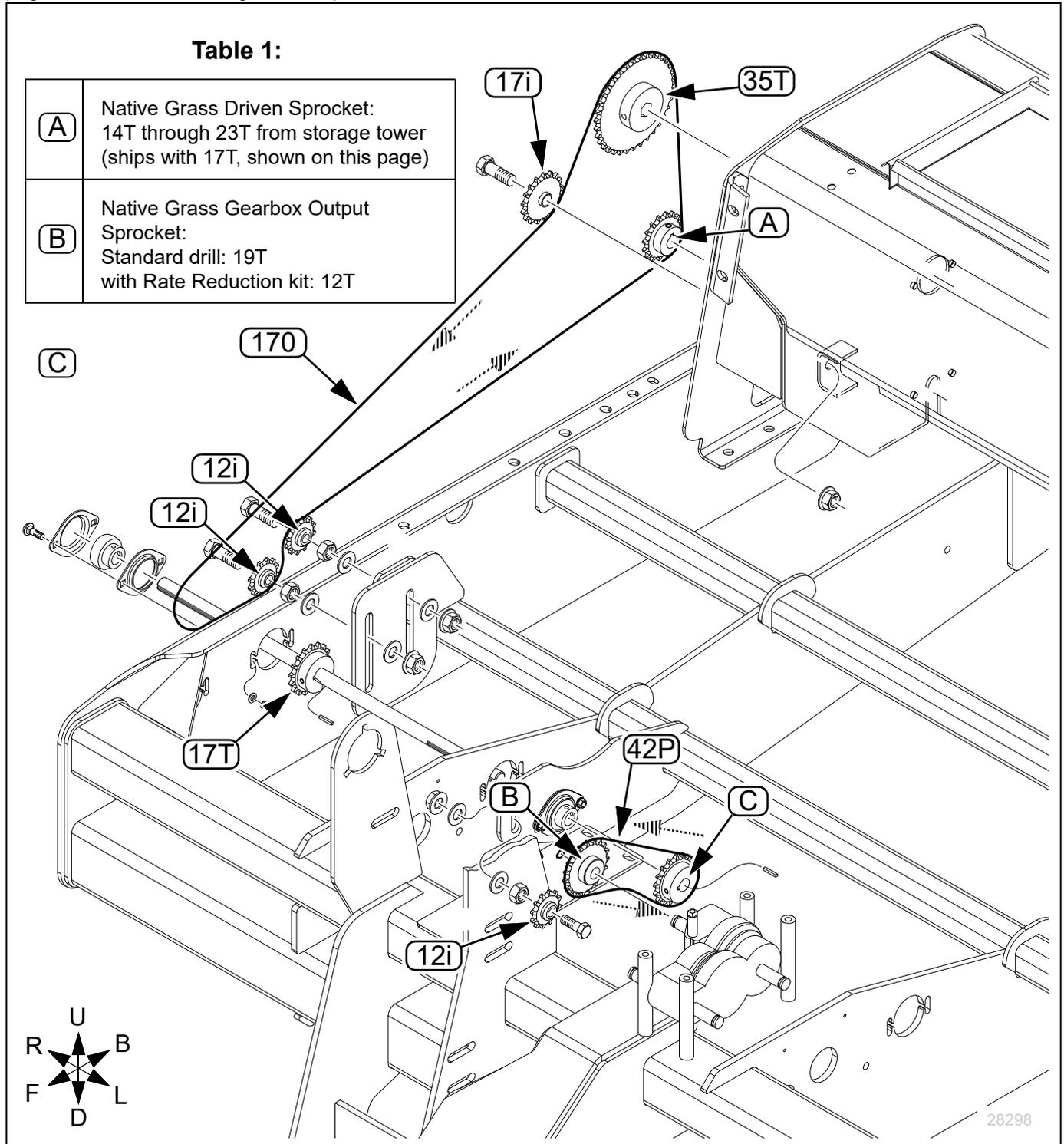


Right Gearbox to Native Grass Meters (Option)

See “Native Grass (Right) Ground Drive (Option)” on page 65 for Native Grass gearbox input.

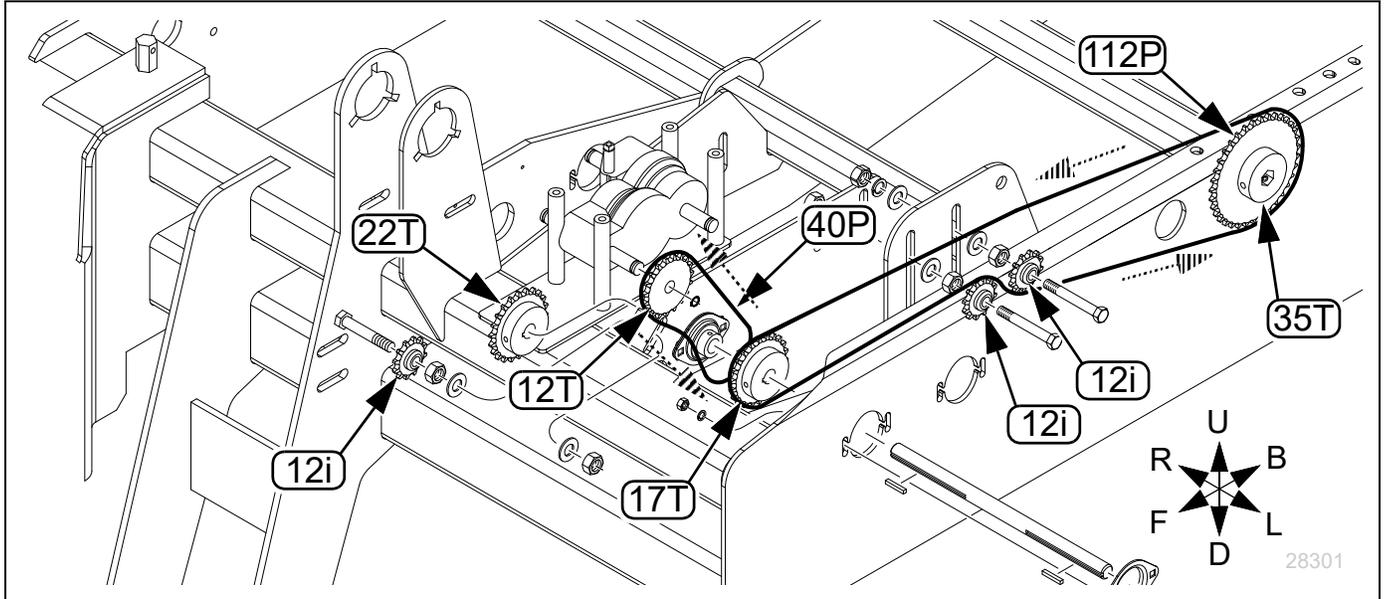
Table 1:

A	Native Grass Driven Sprocket: 14T through 23T from storage tower (ships with 17T, shown on this page)
B	Native Grass Gearbox Output Sprocket: Standard drill: 19T with Rate Reduction kit: 12T



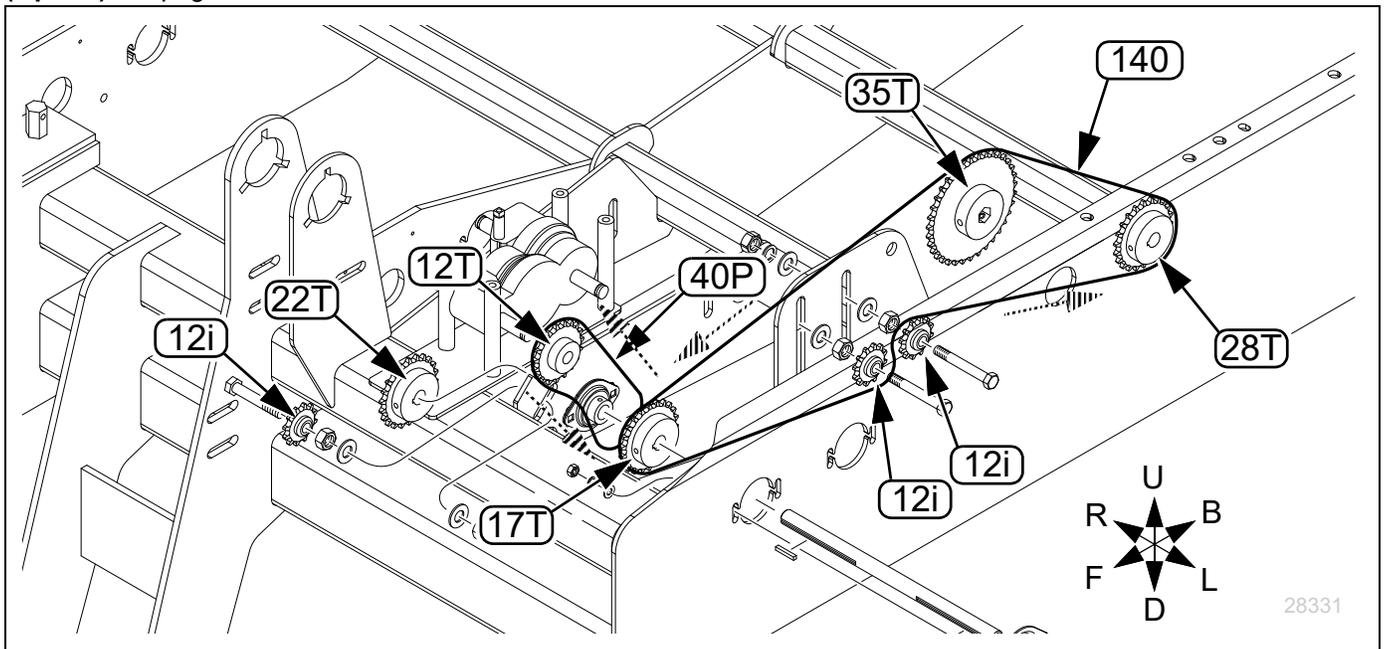
Main Seed Box Agitator (Option)

No Fertilizer or Small Seeds installed.



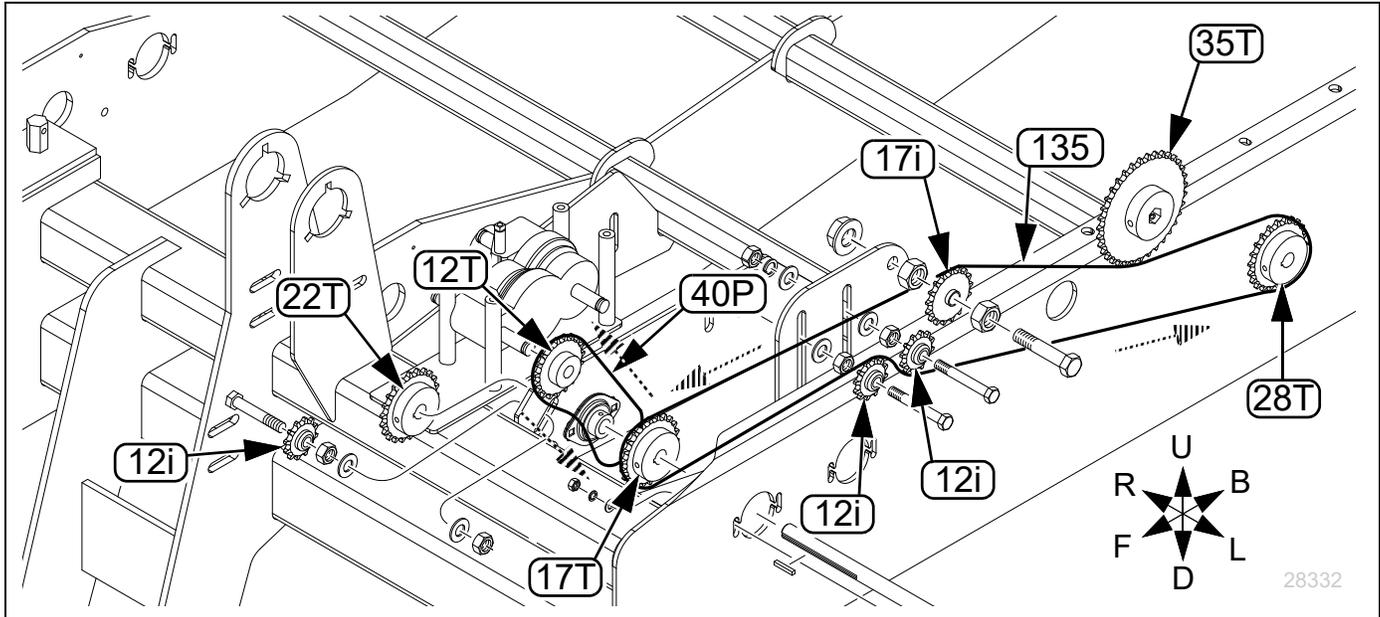
Agitator and Fertilizer Drive (Options)

No Small Seeds installed. See "Fertilizer Box Drive (Option)" on page 69 for Fertilizer Box drive.



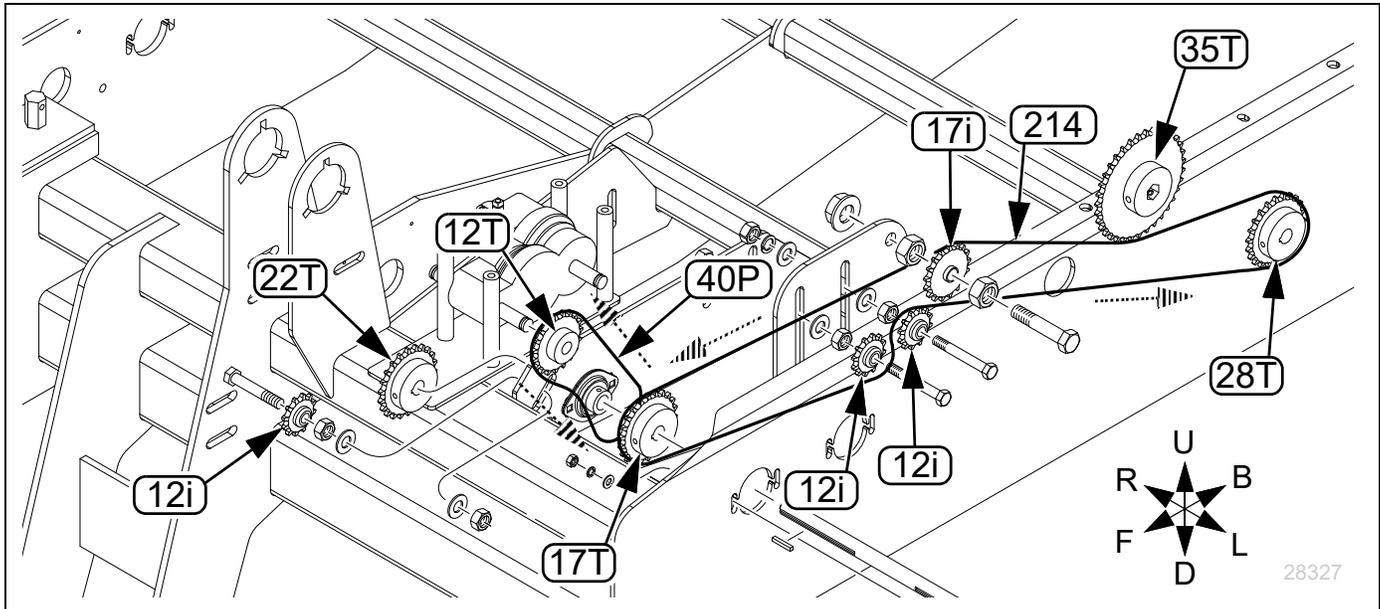
Agitator and Small Seeds Drive (Options)

No Fertilizer or Native Grass installed. See “**Agitator and Small Seeds Drive w/Native Grass (Options)**” on page 68 for Native Grass configuration. See “**Small Seeds Box Drive (Option)**” on page 71 for Small Seeds Box drive.



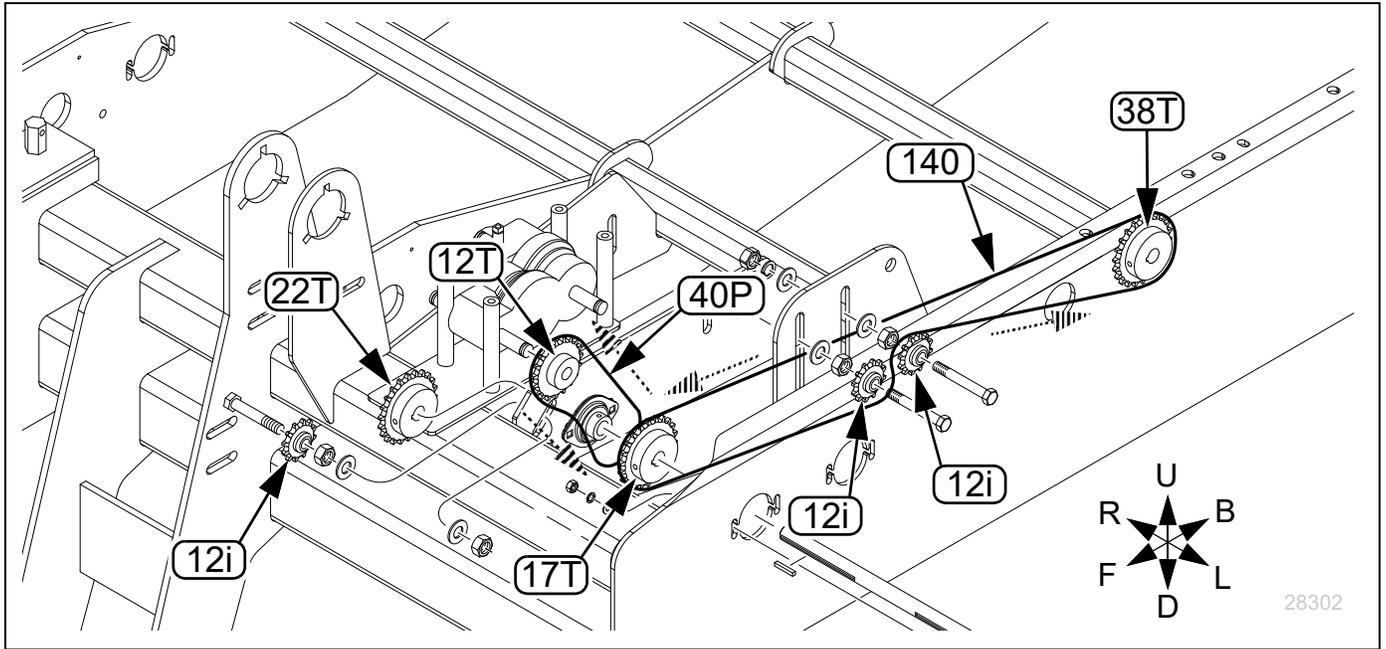
Agitator and Small Seeds Drive w/Native Grass (Options)

No Fertilizer installed. See “**Agitator and Small Seeds Drive (Options)**” on page 68 if Native Grass not installed. See “**Small Seeds Box Drive (Option)**” on page 71 for Small Seeds Box drive.



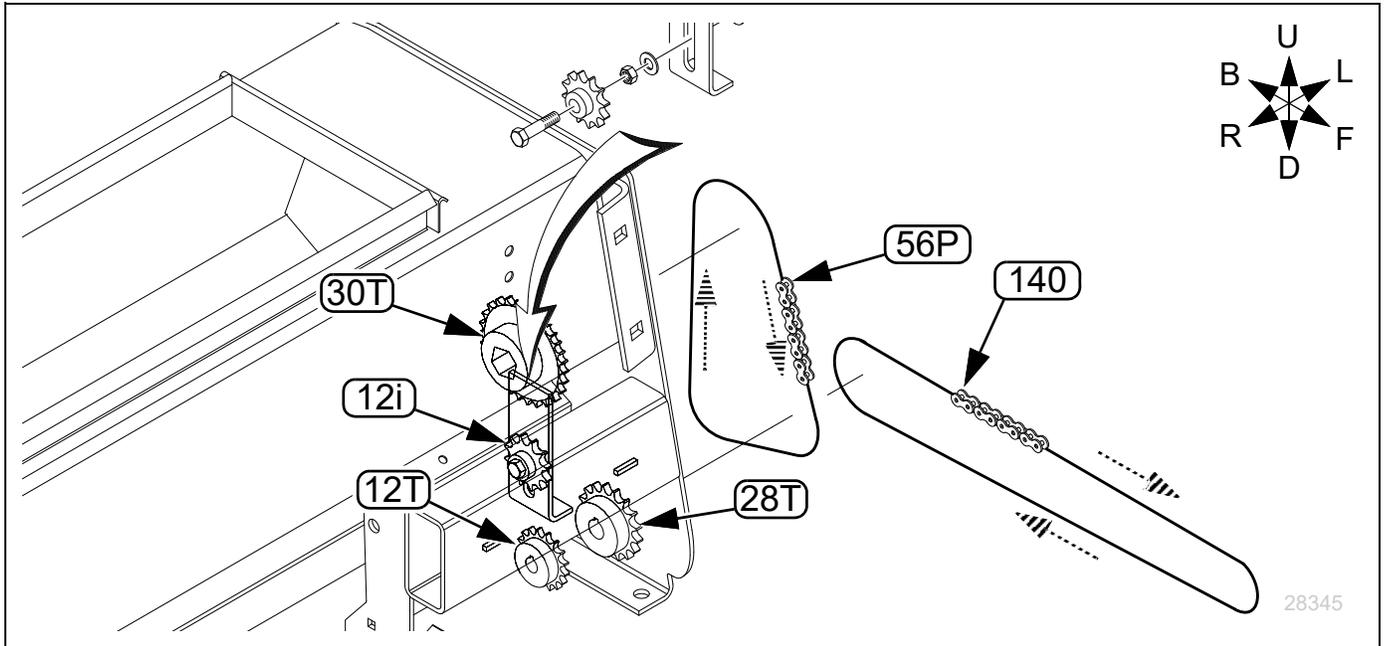
Fertilizer Drive (Option)

No Main Seed Box Agitator installed. See “Fertilizer Box Drive (Option)” on page 69 for Fertilizer Box drive.



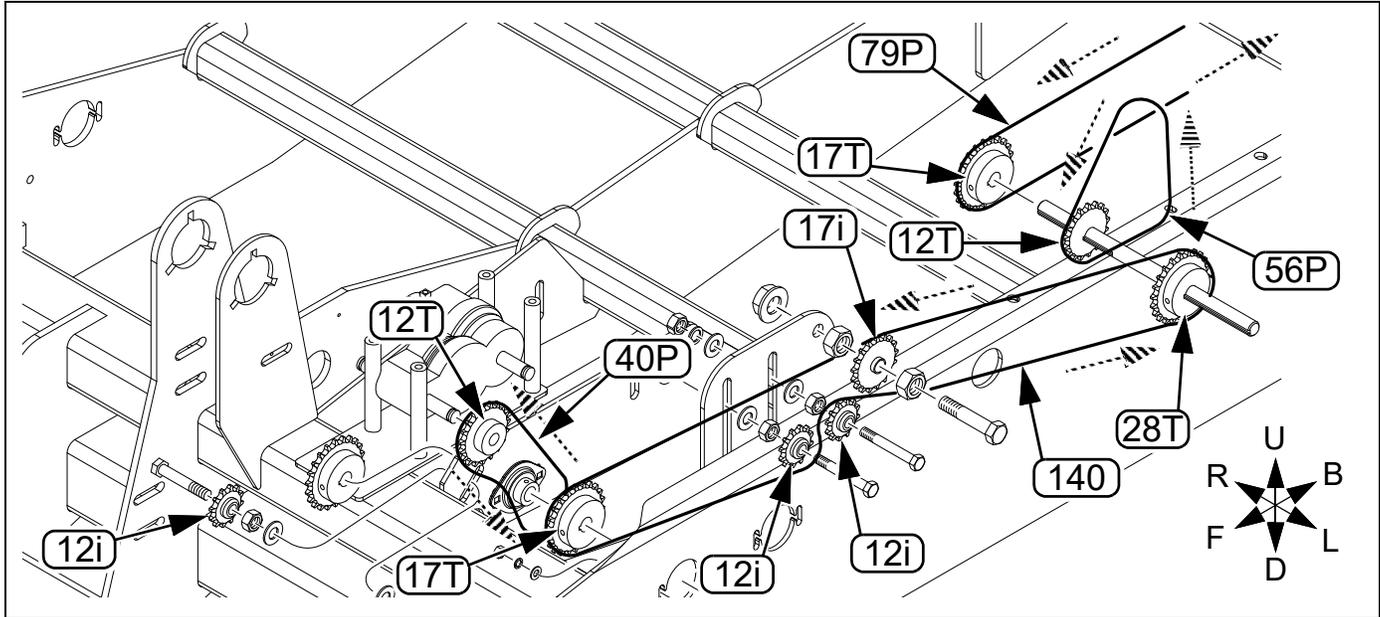
Fertilizer Box Drive (Option)

See “Small Seeds Box Drive with Fertilizer (Option)” on page 72 if Small Seeds also installed.



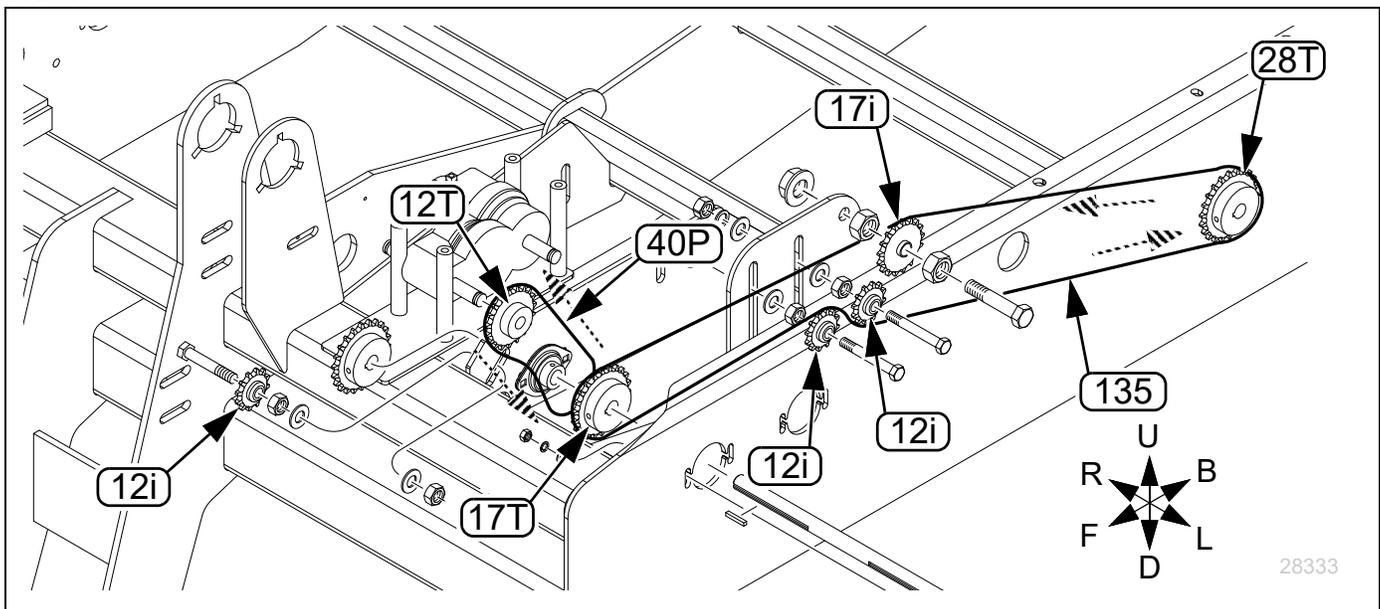
Fertilizer Box Drive with Small Seeds (Options)

See “Fertilizer Box Drive (Option)” on page 69 for Fertilizer Box drive details. See “Small Seeds Box Drive (Option)” on page 71 for Small Seeds Box drive details.



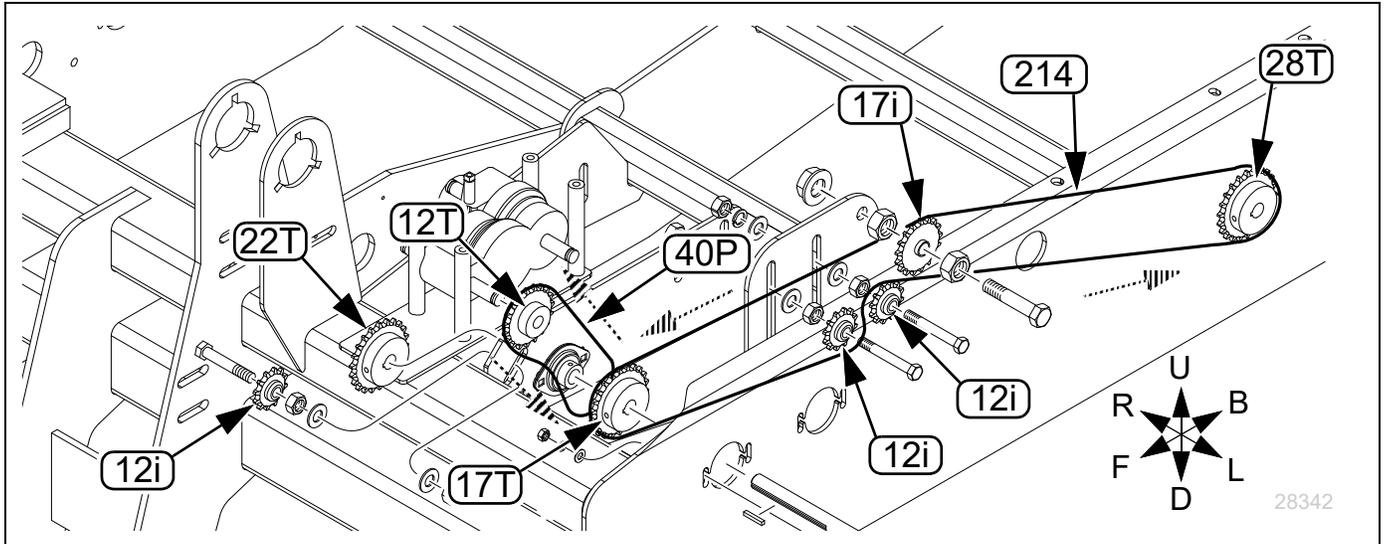
Small Seeds Drive (Option)

See “Small Seeds Box Drive with Fertilizer (Option)” on page 72 if Fertilizer is also installed. See “Agitator and Small Seeds Drive w/Native Grass (Options)” on page 68 if Main Box Agitator is also installed, with or without Native Grass installed. See “Small Seeds Box Drive (Option)” on page 71 for Small Seeds Box drive details.



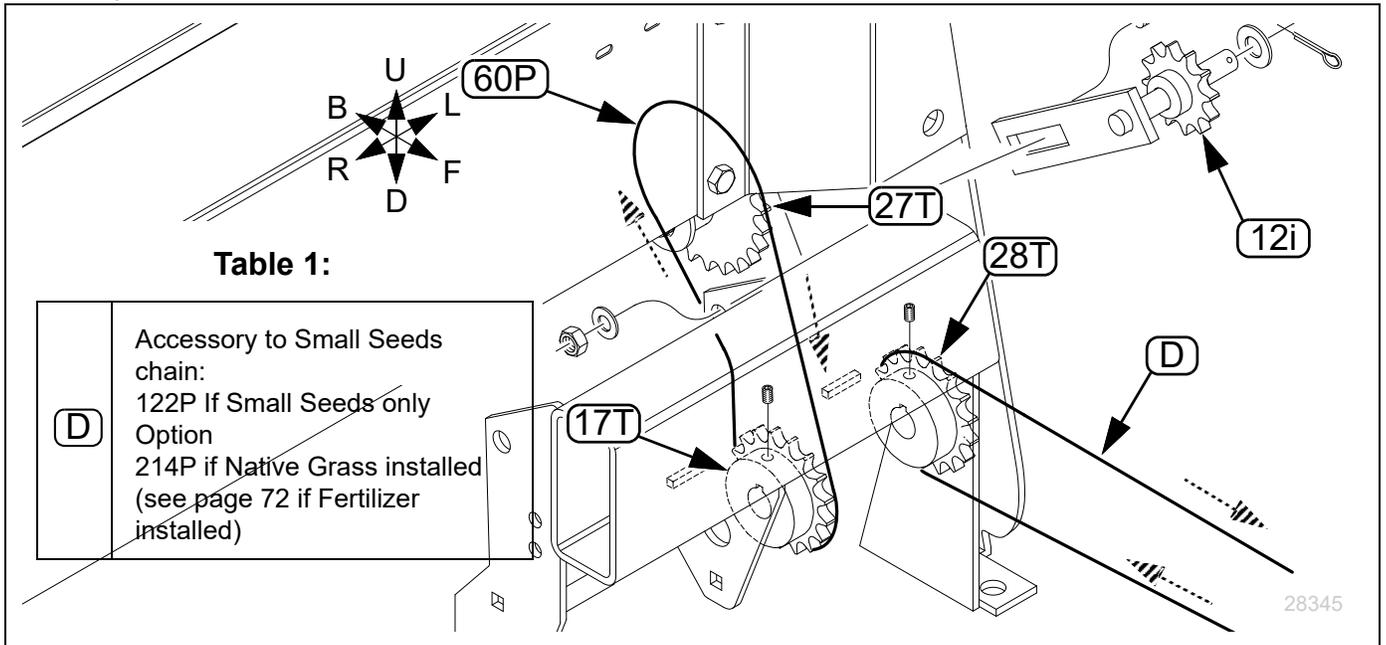
Small Seeds Drive w/Native Grass (Options)

No Fertilizer installed. See “**Small Seeds Drive (Option)**” on page 70 if Native Grass not installed. See “**Small Seeds Box Drive (Option)**” on page 71 for Small Seeds Box drive.



Small Seeds Box Drive (Option)

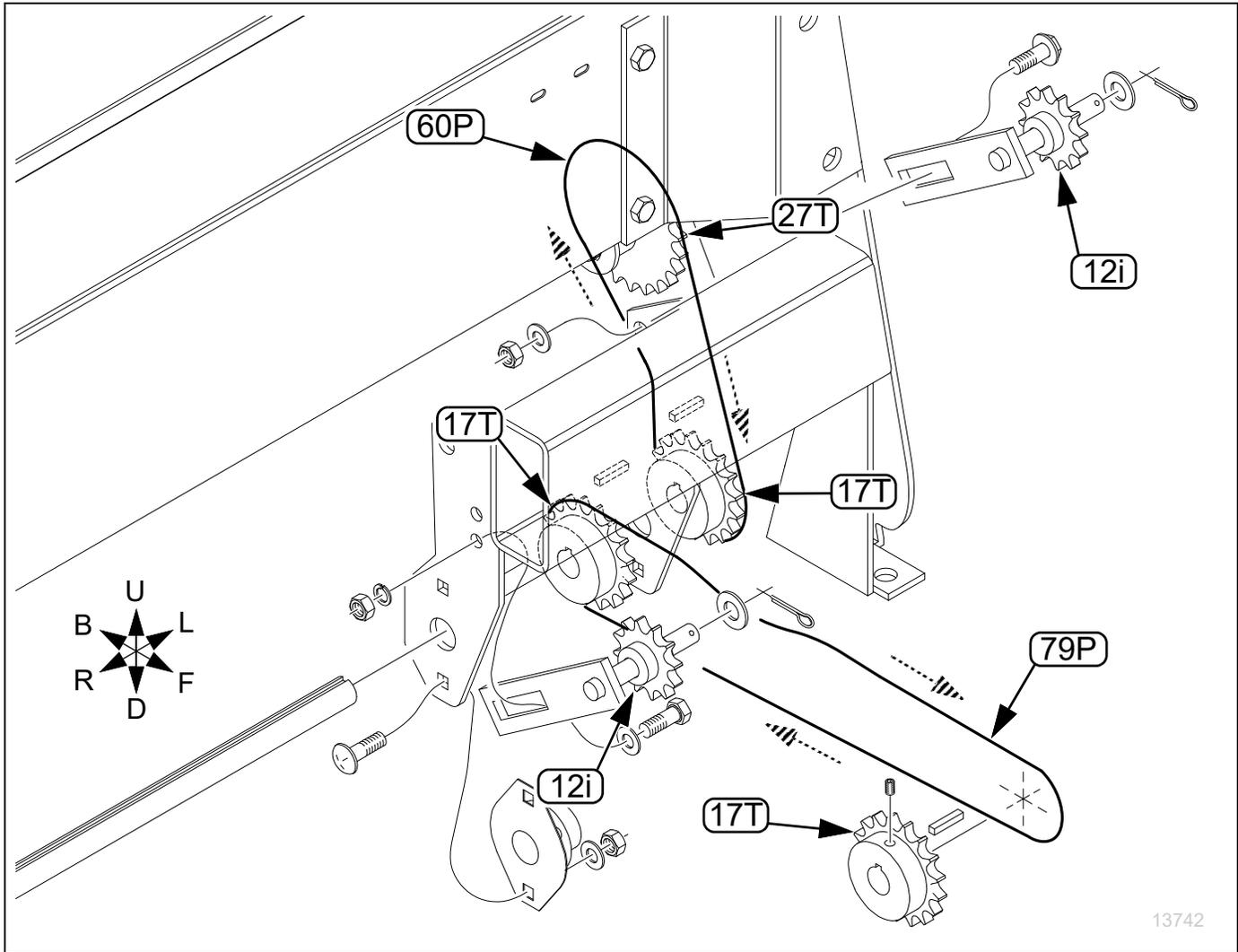
See “**Small Seeds Box Drive with Fertilizer (Option)**” on page 72 if Fertilizer is also installed. See “**Agitator and Small Seeds Drive (Options)**” on page 68, “**Small Seeds Drive (Option)**” on page 70 or “**Small Seeds Drive w/Native Grass (Options)**” on page 71 for Accessory Jackshaft to Small Seeds chain detail.





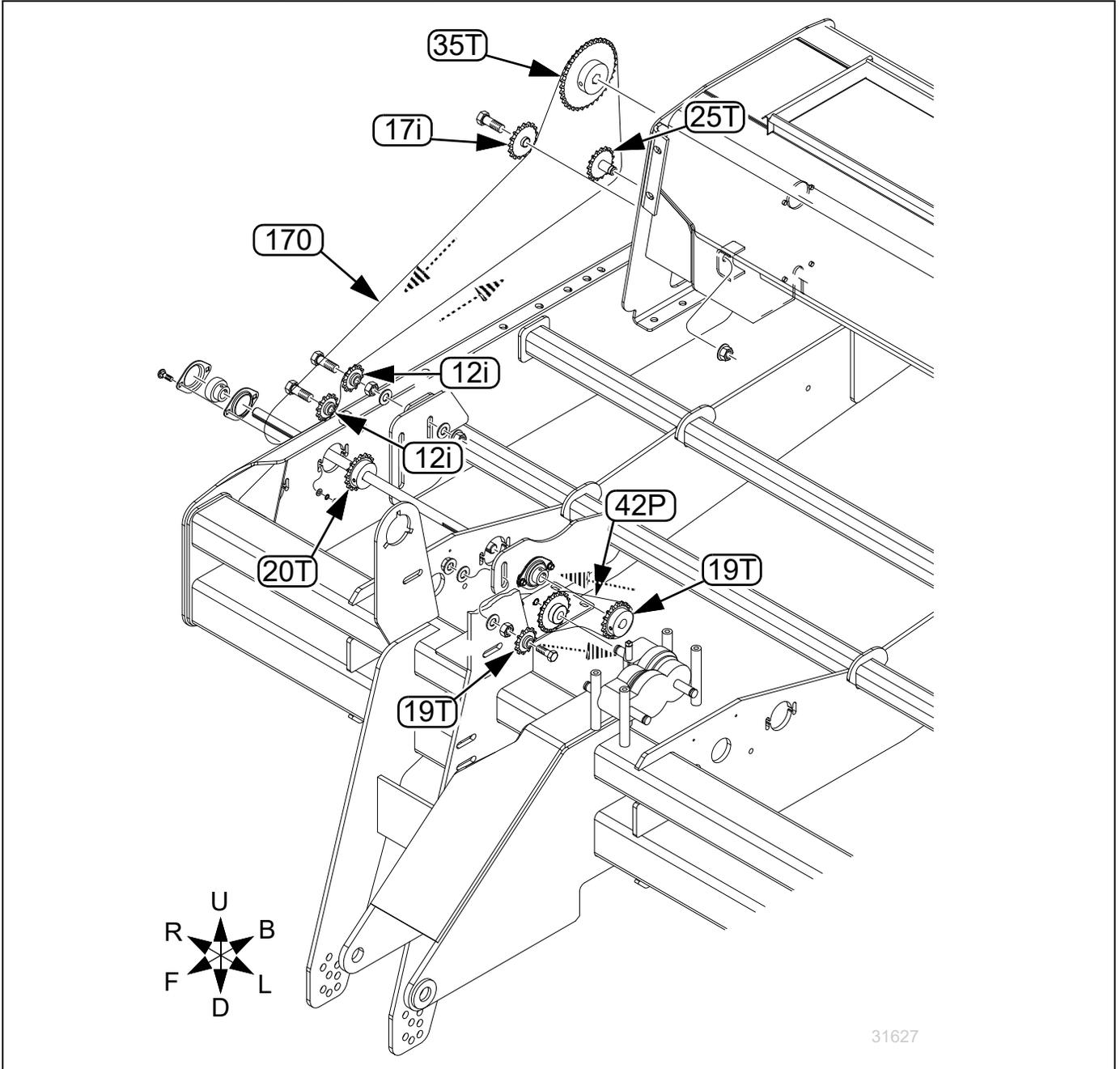
Small Seeds Box Drive with Fertilizer (Option)

When Fertilizer is also installed, Small Seeds Jackshaft is driven from Fertilizer jackshaft. If Fertilizer is not also installed, see “**Small Seeds Box Drive (Option)**” on page 71.



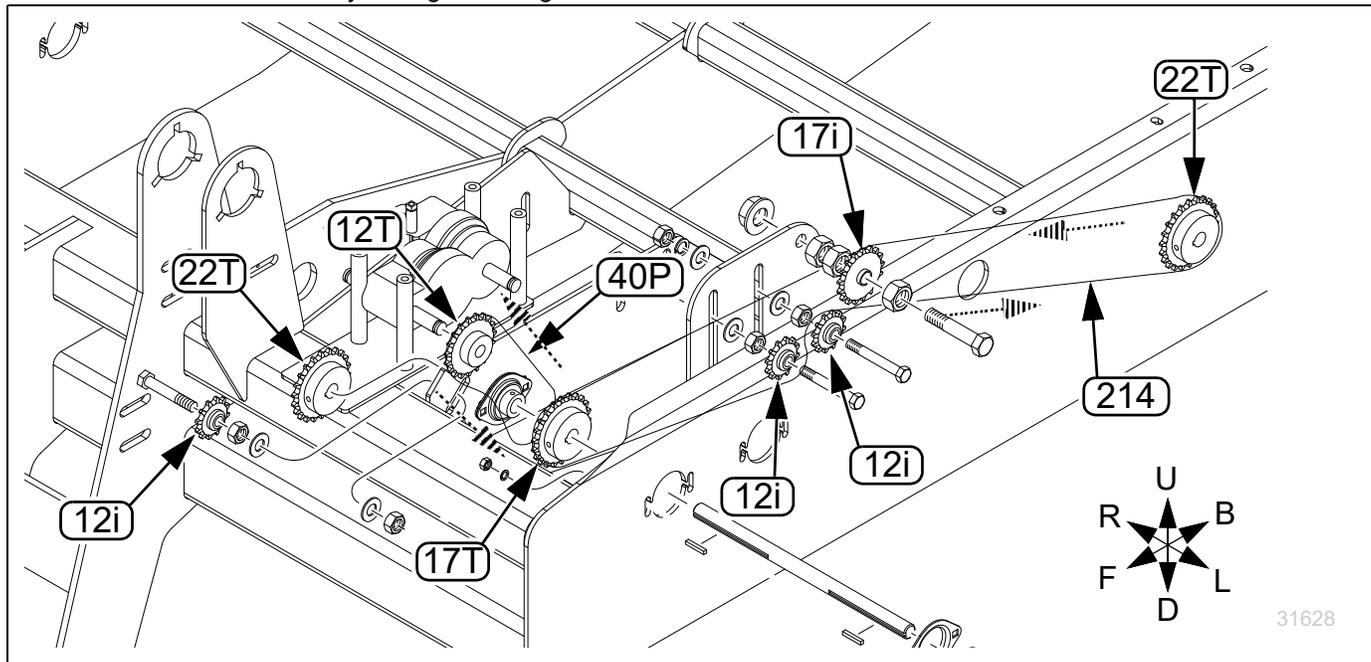
Dual Seed Drive (Option)

Dual box meters are driven by the right-hand gearbox.



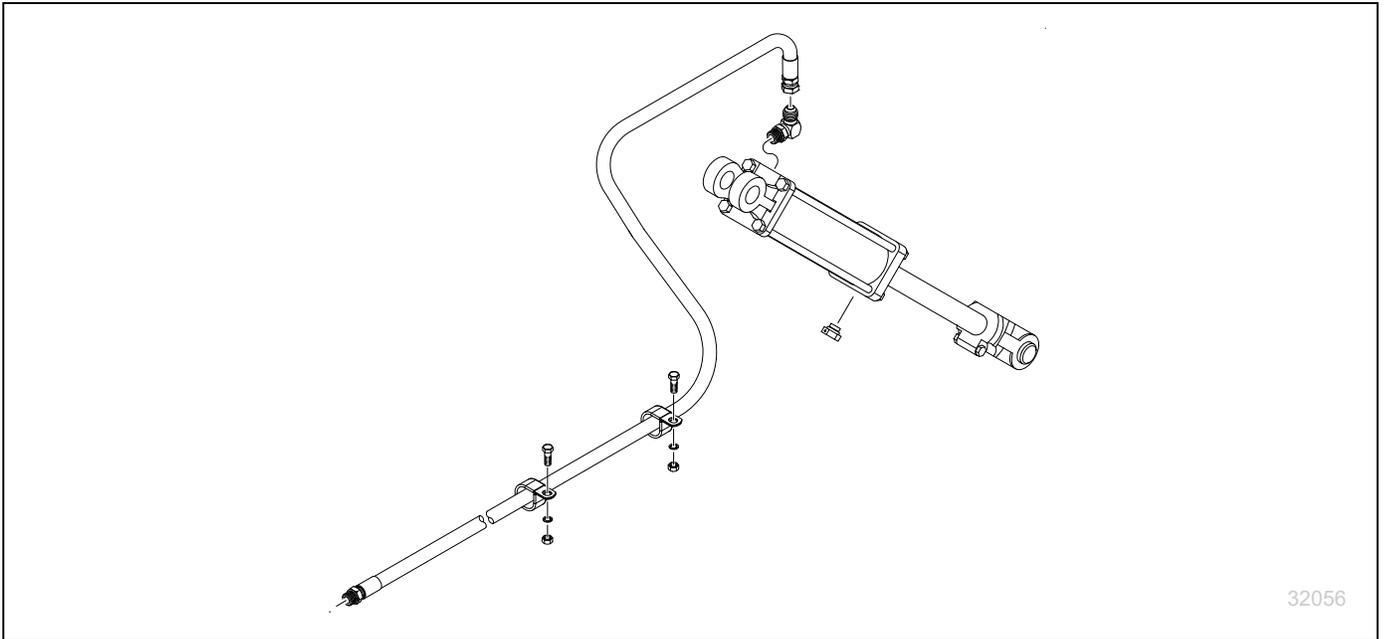
Dual Seed and Small Seeds Drive (Options)

Dual box meters are driven by the right-hand gearbox.



Hydraulic Diagram

Lift-Assist



Appendix B - Pre-Delivery

This section covers dealer requirements for assembly. As the dealer, it is your responsibility to unload, assemble and prepare the drill for use.

The drill is shipped via flat bed truck. Unload all equipment before beginning assembly. Do not attempt any assembly work while the drill is on the truck.

The following sections are step-by-step instructions for assembling the drill. Begin with *Tools Required* and *Pre-Assembly Checklist* to ensure you have all necessary parts and equipment at hand. Then proceed with *Install Gauge Wheels*. Follow each step to make the job as quick and safe as possible and produce a properly working machine.

Tools Required

- Properly rated forklift with 3-pt adapter to lift the drill, or two forklifts with the properly rated combined capacity for the drill, or overhead hoist, or loader with 6,500-pound capacity
- Hand jack
- General hand tools
- Jack stands, blocks and safety chain

Pre-Assembly Checklist

1. Read and understand “Important Safety Information” on page 2 before assembling.
2. Have at least two people on hand while assembling.
3. Make sure the assembly area is level and free of obstructions (preferably an open concrete area).
4. Have all major components.
5. Have all fasteners and pins shipped with the drill.
Note: If a pre-assembled part or fastener is temporarily removed, remember where it goes. Keep the parts separated.
6. Have a copy of the parts manual on hand. If unsure of proper placement or use of any part or fastener, refer to the parts manual.
7. Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
8. Check for proper tension and alignment on all drive chains.
9. Check that all safety labels and reflectors are correctly located and legible. Replace if

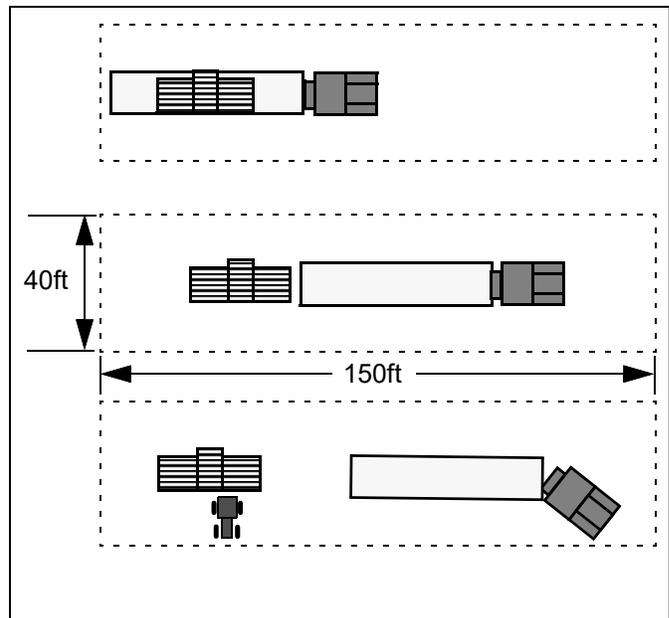
improperly located or damaged. Refer to *Safety Labels*, “Important Safety Information” in the operator’s manual.

10. Inflate tires to recommended pressure as listed on the *Tire Inflation Chart* in “Appendix A” on page 61. Tighten wheel bolts as specified on *Torque Values Chart* in “Appendix A” on page 62.

Unloading Location Requirements

Until unloaded, the drill cannot be moved using a tractor. The drill needs to be unloaded directly above the spot where final assembly takes place:

- On a flat, level, and dry surface,
- With adequate space to pull the trailer out from under the lifted drill without turns,
- With adequate space at the front and rear of the drill to easily maneuver forklifts
- With at least 10 ft. (3 m) clearance behind the press wheels,
- With tractor access in front.



Suggested Unload Clearances

Unloading

Crushing Hazard:

Keep all bystanders away from unloading area. Use properly rated forklifts for unloading drill from trailer.

1. Unload all miscellaneous crates first. Place them well out of the area needed for unloading the drill.
2. If using two forklifts, position one forklift at the front and one at the rear of the drill.



- I On the front forklift, position the forks between two openers, under the front frame tube.
- I On the rear forklift, position the forks under the rear frame tube.

Machine Damage Risk:

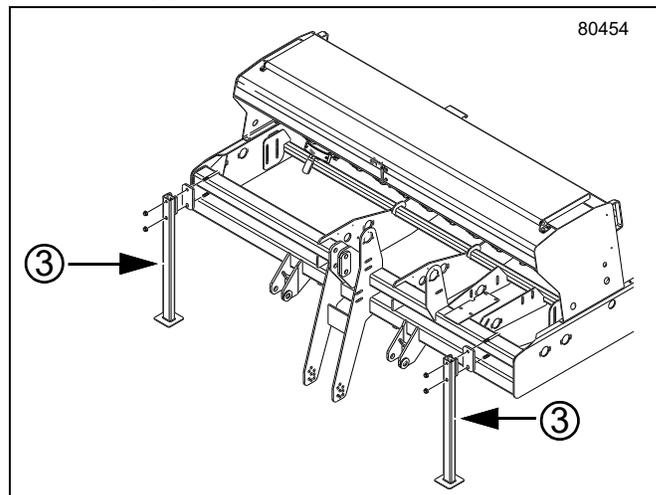


Do not use straps to unload the drill. Lift the drill by the frame tubes only. Do not lift the drill by the seed cups or seed cup channels.

Make sure the forklift forks are located between openers on the front frame tube.

3. Slowly lift the drill off the trailer bed.
4. Stop lifting about 12 inches off the trailer bed.
5. Slowly pull the trailer straight out from under the drill.
6. Making sure to keep the drill level front-to-back and side-to-side, slowly lower the drill to the ground 12 inches off the ground.

7. Remove nuts and u-bolts from the two shipping stands (3).



8. Remove shipping stands and rubber pads from the drill.
9. Slowly lower the drill to the ground.
10. Lower the forks and withdraw forklifts.

Figure Callouts

- ① to ⑨, callouts identify components in the currently referenced Figure or Figures. These numbers may be re-used from page to page.
- Ⓐ to Ⓔ callouts reference existing parts exchanged or temporarily removed parts. The descriptions match those on the cartons, bags or item tags, as well the current Parts Manual. (Ref.Page)
- ⑩① to callouts reference new parts The descriptions match those in the current drill Parts Manual.

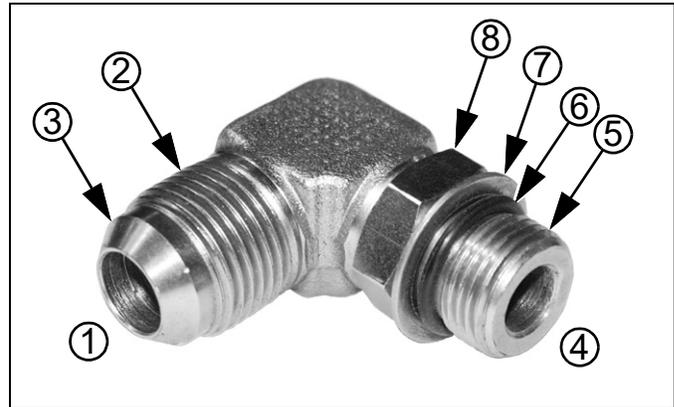


Figure 37
Hydraulic Connector ID 25188

Connector Identification

Refer to Figure 37

- ① JIC - Joint Industry Conference (SAE J514)
Note straight threads ② and the 37° cone ③ on “M” fittings (or 37° flare on “F”).
- ④ ORB - O-Ring Boss (SAE J514)
Note the straight threads ⑤ and, elastomer O-Ring ⑥.
Fittings needing orientation, such as the ell above, also have a washer ⑦ and jam nut ⑧ (“adjustable thread port stud”)

Fittings Torque Values		
Fitting	Ft-Lbs	N-m
9/16 JIC	18-20	24-27
9/16 ORB w/jam nut	12-16	16-22
9/16 ORB straight	18-24	24-32
3/4 JIC	27-39	37-53

Unload Truck

The 3P1006NT drill is delivered by flatbed truck. When coordinating the unload with the Great Plains driver, plan to position the partially assembled drill at a spot with:

- at least 10 ft. (3 m) clearance behind the press wheels,
- tractor access in front,
- ample light,
- flat, level and dry surface.

Tools required for installation:

- hoist with 500 lb (277 kg) capacity,
- basic hand tools



Install Lift-Assist

Install Wheels

Refer to Figure 38

Note: Use the caster pivot locks ⑦ as needed to prevent caster swiveling.

Note: The pivot arm ②② is shown hoisted. The work can be performed with the arm resting on the ground.

Caster Frame

11. For each caster frame ②①, the following hub assembly and spindle are pre-assembled:

- ⑤⑨ 802-065C HHCS 3/4-10X2 1/4 GR5
- ⑧⑤ 804-023C WASHER LOCK SPRING 3/4 PLT
- ⑨⑧ 815-200C HUB ASSY 6BOLT 6"BC 4.62PILOT
- ②① 151-156H 1007 SPINDLE GW WELDMENT
- ⑥⑧ 803-210C NUT HEX JAM 1 1/2-12 PLT

Assemble Wheels

Refer to Figure 39 and Figure 40

12. Select one:

- ③⑨ 196-274K RH TIRE/RIM 265/70B16.5 SKID ST and six:
- ⑥⑤ 802-845C BOLT WHL 9/16-18X1 1/8 GR5

Note: The "outside" of the wheel rim ⑨⑥ has the valve stem ⑨⑦. The bolt holes are raised to the outside, and counter-sunk for the self-centering bolts ⑥⑤. The "outside" of the spindle is the threaded end with two jam nuts ⑦④.

13. Insert the spindle ②① into the wheel. Insert bolts ⑥⑤ to finger-tight.

Note: Following the order in the bolt torquing pattern, gradually tighten the bolts to Grade 5 specification.

Refer to Figure 41 (which depicts the caster frame to the front of the caster arm)

14. Align the wheel/spindle assemblies in the caster frames. Orient the wheels with the valve stems to the outside (which is toward the inside if the caster frames are reversed, as in the figure). Secure with bolts ⑤⑨ and lock washers ⑧⑤.

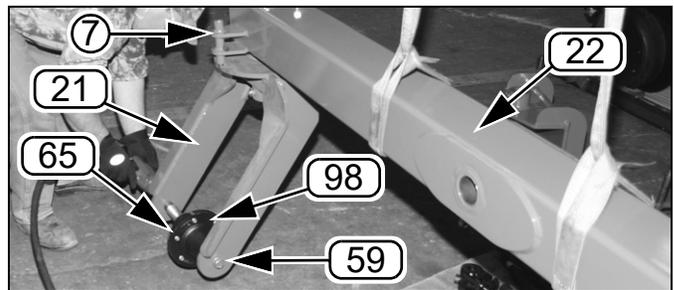


Figure 38
Dismount Spindle 32801

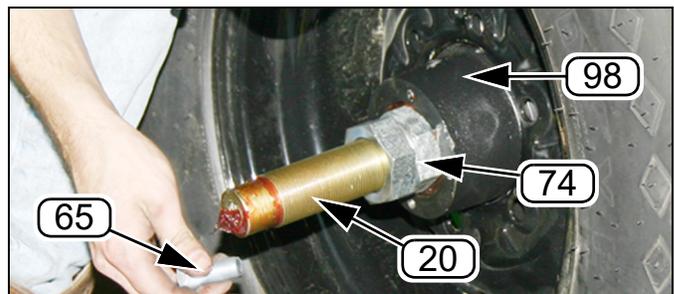


Figure 39
Assemble Wheel 32120

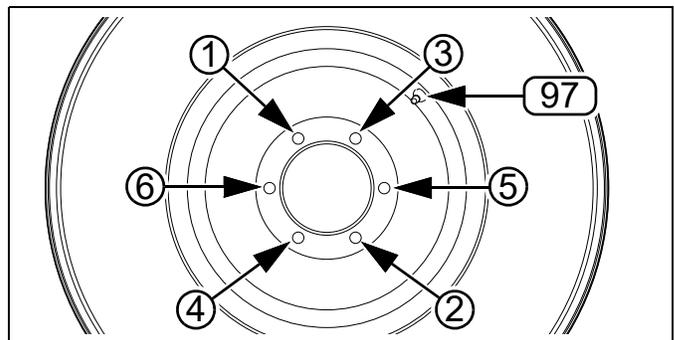


Figure 40
Bolt Torquing Pattern 32065

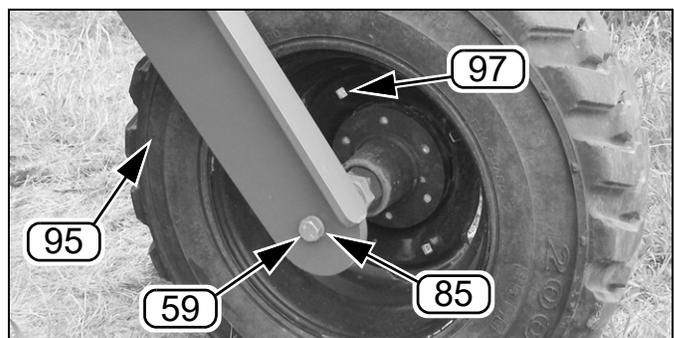


Figure 41
Mount Wheel 32117

Install Pivot

Refer to Figure 42

15. Select the pivot mount:
 - (23) and one:
 - (30) 151-381D LIFT ASSIST AXLE PIVOT PIN
 - and two:
 - (36) 161-056D CASTER SPACER
16. Orient the pivot mount (23) with the (front) parallel arm plates (8) on the pivot lock (29) (front) side of the pivot arm weldment (42). The caster stabilizers (41) are on the rear side of the pivot arm. Align the pivot holes.

NOTICE

Part Damage Risks:

During pivot pin (30) insertion, take care to avoid damaging the spacers (36) or dislodging the bushings (112).

17. Insert one spacer (36) between the front holes of the pivot mount (23) and pivot arm (42). From the front, insert the threaded end of the pin (30) into the pivot mount. Carefully adjust the spacer position until the pin passes through it.
18. Insert one spacer (36) between the rear holes of the pivot mount (23) and pivot arm (42). Carefully adjust the spacer position until the pin passes through it.
19. Select one each:
 - (58) 802-060C HHCS 5/8-11X4 GR5
 - (69) 803-024C NUT LOCK 5/8-11 PLT
 Align the pin bolt hole (30) with the bolt hole in the front tube of the pivot mount (23). From the top, insert the bolt (58). Secure with lock nut (69). Use Grade 2 torque.
20. Select one each:
 - (44) 500-064D WASHER - SAFETY CHAIN SA
 - (71) 803-031C NUT HEX 1-8 PLT
 - (86) 804-027C WASHER LOCK SPRING 1 PLT
 At the threaded end of the pivot pin (30), add a flat washer (44), lock washer (86) and nut (71). Tighten nut to Grade 2 torque.

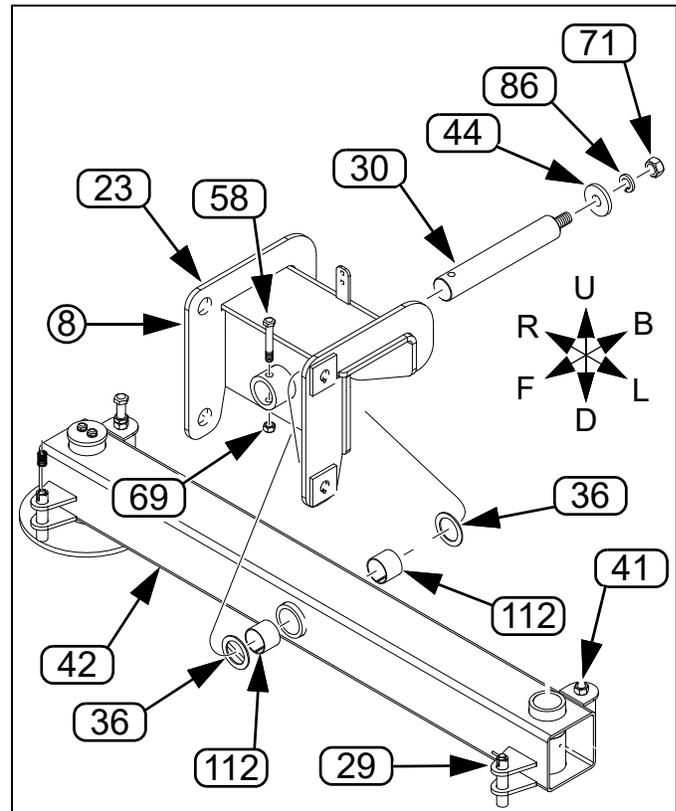


Figure 42
Rear Pivot Installation

32803

Caster Shaft Installation

Refer to Figure 43 and Figure 44

Begin Install Shaft

21. Select one each:

- (38) 161-116D LIFT ASSIST CASTER SHAFT
- (58) 802-060C HHCS 5/8-11X4 GR5
- (69) 803-024C NUT LOCK 5/8-11 PLT

Insert caster shaft (38) through caster frame plate (1) and secure with bolt (58) and nut (69).

Install Lock Out Plunger

22. Select one each:

- (92) 807-175C SPRING COMP .796ODX.065WX1.
- (29) 151-355D 1007 LOCK OUT PLUNGER
- (89) 805-076C PIN ROLL 3/16 X 1 3/4 PLT.

Place lock out plunger spring (92) over lock out plunger (29). Inserting from the bottom up of plunger tube (2), force both into the plunger tube and secure with roll pin (89).

Note: The lock out plunger tube (2) MUST be facing to the front of the drill. If it is facing to the rear, the pivot arm tube is on backwards and must be switched.

Finish Install Shaft

23. Select one each:

- (36) 161-056D CASTER SPACER
 - (37) 161-114D CASTER RETAINER CAP
- and two each:
- (112) 890-072C BUSHING 2 1/2 X 2 1/4 X 2 LG.
 - (54) 802-034C HHCS 1/2-13X1 1/4 GR5
 - (82) 804-015C WASHER LOCK SPRING 1/2 PLT

Place spacer (36) over the top of the caster shaft (38). With mallet, drive one bushing (112) into shaft hole on bottom of pivot arm tube and one in top of hole on pivot arm tube. Place shaft up through these bushings in pivot arm. Complete assembling shaft by placing caster retaining cap (37) on top and securing with two washer lock springs (82) and two bolts (54).

Install Lock Tube

24. Select one each:

- (41) 266-020D UHMW RND 2.0 DIA X 2.0 LONG
- (91) 807-143C SPRING COMP 1.88OD X .36 +
- (40) 266-012D PLATE RND 3/16" THK 1 7/8"
- (60) 802-067C HHCS 3/4-10X4 GR5 FTHD
- (72) 803-048C NUT HEX JAM 3/4-10 PLT

Assemble bushing (41), spring (91) and small round plate (40). Push up inside lock tube. Complete with nut (72) and bolt (60).

Install Caster Zerk

25. Select one:

- (45) 800-001C GREASE ZERK STRAIGHT 1/4-28

Install zerk (45) in shaft at end of pivot arm tube.

26. Repeat all steps for other caster.

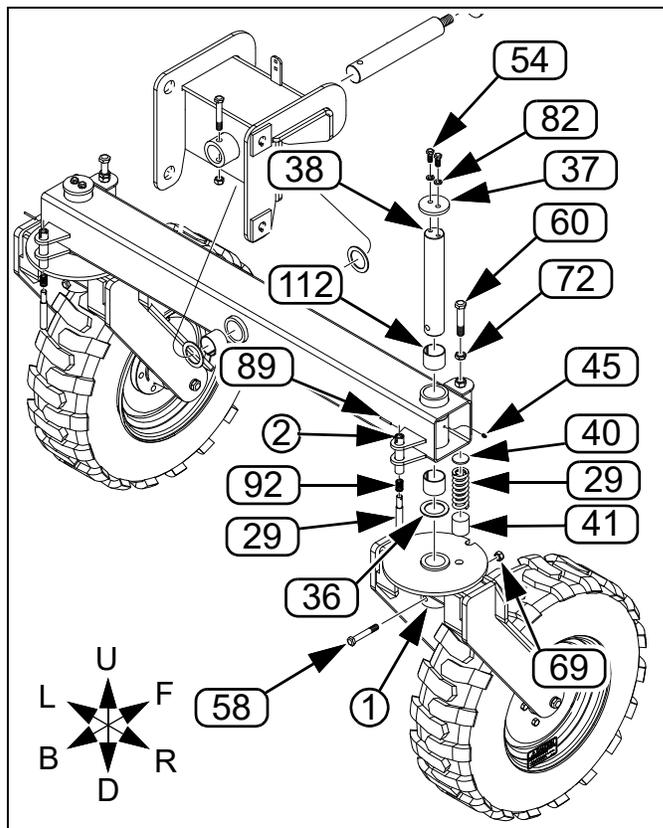


Figure 43
Caster Shaft Installation

32115

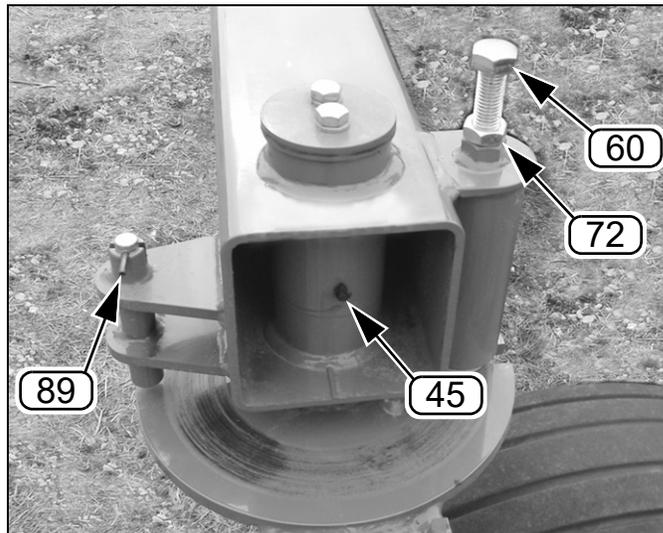


Figure 44
Caster Assembled

32119

Attach Lift-Assist Frame Mount

Refer to Figure 45

Frame Mount Weldment (26)

27. Select one each:

(26)

Select eight each bolts, washers, nuts:

(55) 802-053C HHCS 5/8-11X1 3/4 GR5

(68) 803-021C NUT HEX 5/8-11 PLT

(84) 804-022C WASHER LOCK SPRING 5/8 PLT

(88) 804-195C WASHER FLAT 1.31ODX.65IDX.188T

Attach mount weldment (26) to holes provided in drill frame.

Mount Clamp (27) and Long Spacers (31)

28. Select two each:

(31)

Select one each:

(27)

Select eight each:

(57) 802-057C HHCS 5/8-11X2 1/4 GR5

(68) 803-021C NUT HEX 5/8-11 PLT

(84) 804-022C WASHER LOCK SPRING 5/8 PLT

Position both clamp spacers (31). Place lift assist mount clamp weldment (27) on top of spacers. Secure with bolts, washers and nuts.

Attach Lift-Assist Bolt On Mount (24)

29. Select one:

(24)

30. Select ten each:

(56) 802-055C HHCS 5/8-11X2 GR5

(84) 804-022C WASHER LOCK SPRING 5/8 PLT

(68) 803-021C NUT HEX 5/8-11 PLT

Attach lift assist bolt on mount (24) to frame mount weldment using bolts, washers and nuts.

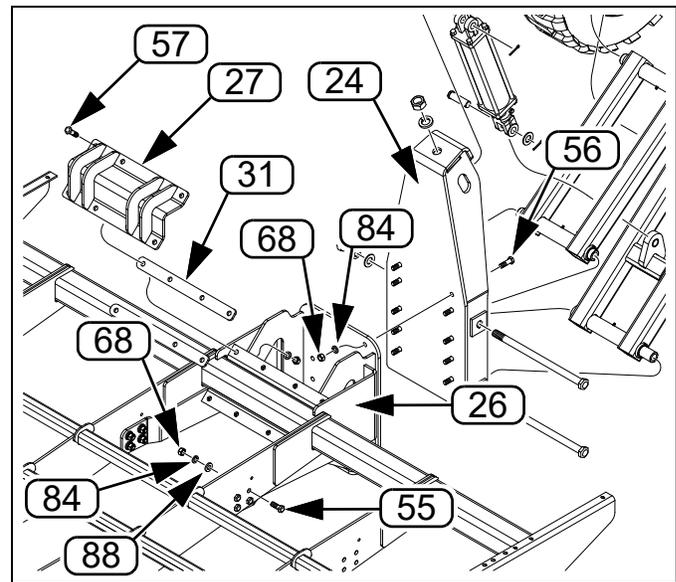


Figure 45
Install Frame Mount Weldment
and Bolt On Mount

32068

Connect Parallel Arms

Refer to Figure 46 and Figure 47

Lower Parallel Arm

31. Select one:

(25)

Note: The lower parallel arms (25) have a cross-tube with a cylinder lug (1). The arms are installed with the cross-tube closer to the front, lug up, and lug pointing to the rear.

32. Select one set:

(64) 802-728C HHCS 1-8X18 GR5

(87) 804-029C WASHER FLAT 1 SAE

(86) 804-027C WASHER LOCK SPRING 1 PLT

(71) 803-031C NUT HEX 1-8 PLT

33. Bring the forward tube of the lower arms (25) into alignment with the lower holes (2) of the lift-assist mount (24). Insert a bolt (64). Add a flat washer (87) and lock washer (86). Secure with nut (71), tightened to Grade 2 torque.

34. Select one set:

(64) 802-728C HHCS 1-8X18 GR5

(87) 804-029C WASHER FLAT 1 SAE

(86) 804-027C WASHER LOCK SPRING 1 PLT

(71) 803-031C NUT HEX 1-8 PLT

Bring the lower holes (3) of the lift-assist pivot (23) into alignment with the rear tube of the lower arms (25). Insert a bolt (64). Add a flat washer (87) and lock washer (86). Secure with nut (71), tightened to Grade 2 torque.

Upper Parallel Arm

35. Select one:

(43)

Note: The upper parallel arms are symmetrical. There is no top, bottom, front or back.

36. Repeat step 32 through step 34 for the upper arms and upper holes.

Install Arm Zerks

37. Select four:

(45) 800-001C GREASE ZERK STRAIGHT 1/4-28

Install one zerk (45) in middle of top and bottom cross bar of each parallel arm.

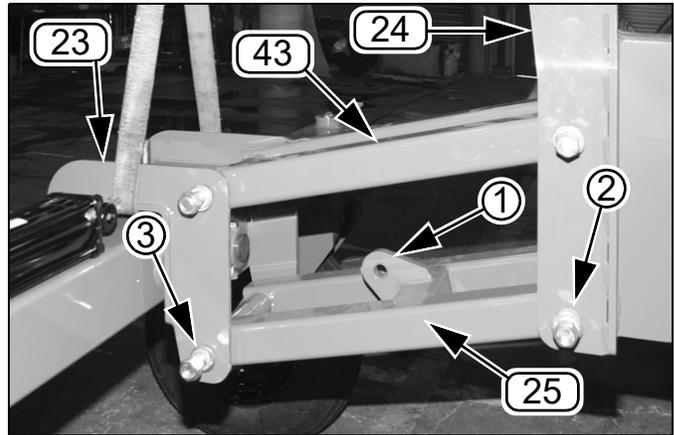


Figure 46
Parallel Arms Installed

32123

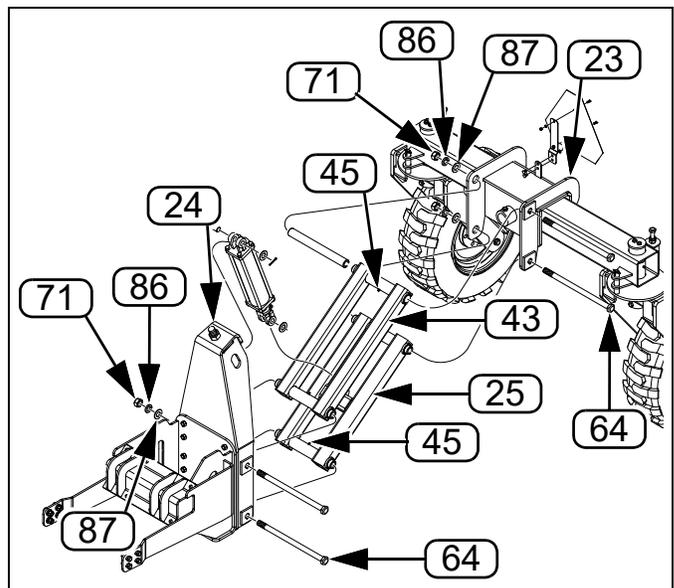


Figure 47
Parallel Arm Parts

32116

Hydraulic Setup

Refer to Figure 48

38. Select one each:

- (94) 811-065C EL 9/16MJIC 9/16MORB
- (111) 841-286C HH1/4R2 134 9/16FJIC 1/2MNPT

39. Secure the FJIC end of hose (111) to the end port of the elbow (94). Tighten to specification.

40. At the MORB fitting, fully back off the jam nut. Loosely connect the MORB end of hose to the top (base end) port of the cylinder. Orient the elbow so that the hose route is down. Do *not* tighten ORB fitting or its jam nut.

41. Select two sets:

- (43) 800-064C HOSE CLIP 13/16 ID
- (118) 800-239C 1.125 WIRING AND TUBE CLIP

NOTE: The hose is secured with four clips.

42. Select four sets:

- (53) 802-017C HHCS 3/8-16X1 GR5
- (81) 804-013C WASHER LOCK SPRING 3/8 PLT
- (67) 803-014C NUT HEX 3/8-16 PLT

43. Place the hose clips (43) around the feed-line hose (111). Insert the bolt (53). Loosely secure with lock washer (81) and nut (67). Tighten the nut.

44. Place the wiring and tube clips (118) around the feed-line hose (111). Insert the bolt (53). Loosely secure with lock washer (81) and nut (67). Tighten the nut.

45. Feed-line hose (111) terminates in a 1/2 in. male NPT fitting. Adapt this to the style and size of coupler required to connect the drill to a hydraulic source for the next step. The drill does not include a coupler for this purpose. If fitting the coupler for the tractor to be used with this drill in the field, apply liquid sealant to the threads before making the connection. Do not use plastic tape sealant.

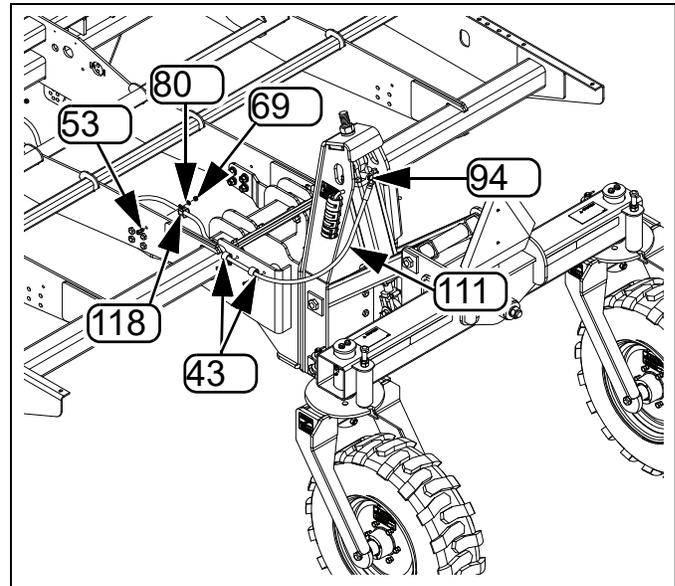


Figure 48
Install Hydraulic Lines

32069

Hydraulic Charge and Bleed

Refer to Figure 49

NOTICE

Bleed pressurized lines only at:

JIC (Joint Industry Conference, 37-flare) or
NPT (National Pipe Thread, tapered thread) fittings.

Avoid bleeding at:

ORB (O-Ring Boss)

Never bleed pressurized lines at:

QD (Quick Disconnect) fittings.

See "Bleeding Hydraulics" on page 50.

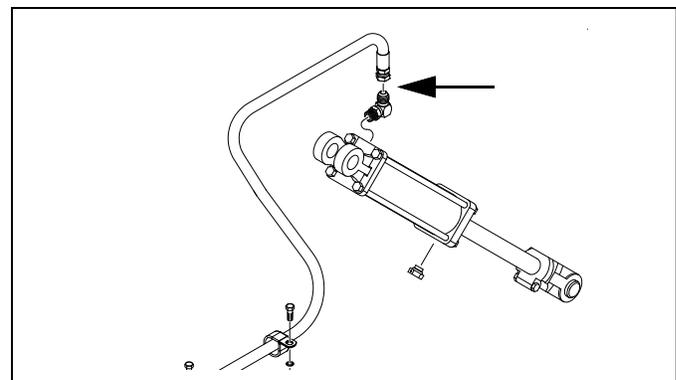


Figure 49
Lift-Assist Cylinder Bleed

32056

Lift-Assist Closeout

Refer to Figure 50

46. Locate one sets of stroke control spacers:
 (93) 810-242C STROKE CONTROL SPACERS 1 1/8
 If they are in the main seed box, relocate the set to the rod on the weldment.
47. With the drill lowered on the lock channel. Make sure cylinder is fully seated on the channel, and that no part of the channel is at a cylinder bolt face.
48. Perform a side to side level check, and make any adjustment required, per “Eye bolt Adjustment” on page 49.

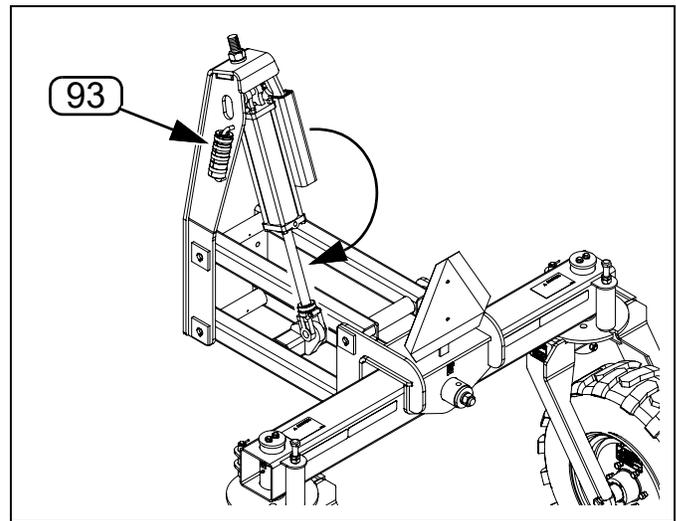


Figure 50
Stroke Control Spacers

32058

Lighting

49. Drills are shipped with rear lighting not installed to prevent damage during shipment. The dealer must install the lights prior to selling the drill.

Amber Lights

Refer to Figure 51

50. Select one:
 - (35) 151-454D SPACER
 - (14) 119-190D HANDLE
 - (33) 151-443D 10 GA BOX DRILL LEFT LIGHT MNT
 NOT SHOWN 151-452D 10 GA BOX DRILL RIGHT LIGHT MNT
 - (108) 833-697C LIGHT, AMBER LAMP LED
 Select two:
 - (63) 802-203C HFSS 1/2-13X1 1/2 GR5
 - (73) 803-169C NUT HEX FLG LOCK 1/2-13 PLT
 - (52) 801-081C SCREW HEX SELF TAP 1/4-20X3/4
51. Install a spacer (35), light mount (33), and handle (14) using two the bolts (63) and two nuts (73).
52. Install the amber lamp (108) to the light mount with two 1/2-20x3/4 inch self tapping screws (52).
53. Repeat the procedure for the other amber lamp.

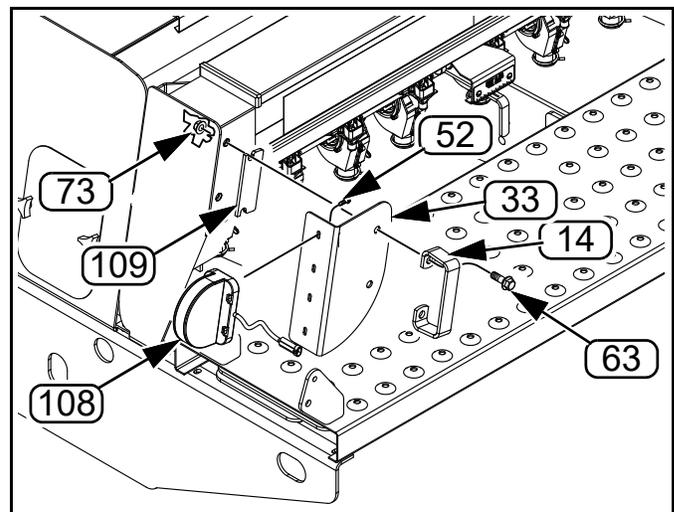


Figure 51
Brackets for Amber Lights

68366

Red Lights

Refer to Figure 52

54. Select two:

(106) 833-696C LIGHT, RED LAMP - LED

(116) 119-047D WALKBOARD LIGHT MOUNT 10 GA
select four:

(52) 801-081C SCREW HEX SELF TAP 1/4-20X3/4

(67) 803-014C NUT HEX 3/8-16 PLT

(79) 804-011C WASHER FLAT 3/8 USS PLT

(81) 804-013C WASHER LOCK SPRING 3/8 PLT

(115) 802-022C HHCS 3/8-16X1 1/2 GR5

55. Install the 2 light mount brackets (106) to the mount (1) with four 3/8-16X1 1/2 inch hex head cap screws (115), four 3/8 flat washers (79), four 3/8 lock washers (81), and four 3/8-16 hex nuts (67).

56. Install the two red lights (106) to light mount bracket (116) with four 1/2-20x3/4 inch self tapping screws (52).

57. Find one:

LIGHT WISHBONE LED HARNESS (Not shown)

The wishbone harness is fastened to the rear of the machine mainframe with a wire tie. Remove the wire tie.

Refer to Figure 53

58. Select two:

(50) 800-449C P-CLAMP

(61) 802-079C HHCS 3/8-16X1 1/4 GR5

(79) 804-011C WASHER FLAT 3/8 USS PLT

(81) 804-013C WASHER LOCK SPRING 3/8 PLT

(67) 803-014C NUT HEX 3/8-16 PLT

59. Install the two P-clamps (50) on the wishbone harness.

60. Install a P-clamp and a 3/8-16x1 1/4 cap screw (61) in the two locations shown.

61. Install a flat washer (79), lock washer (81), and nut (67) on both cap screws.

62. Route the rear of the wishbone harness over the center (1) of the lift assist frame.

63. Use a wire tie to connect the wiring harness to the mounting post (2) for the SMV

64. Connect the wiring harness to the two red lights.

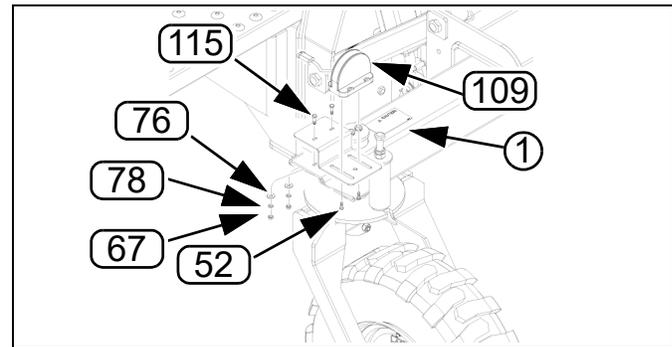


Figure 52
Red Light Installation

TP-71441

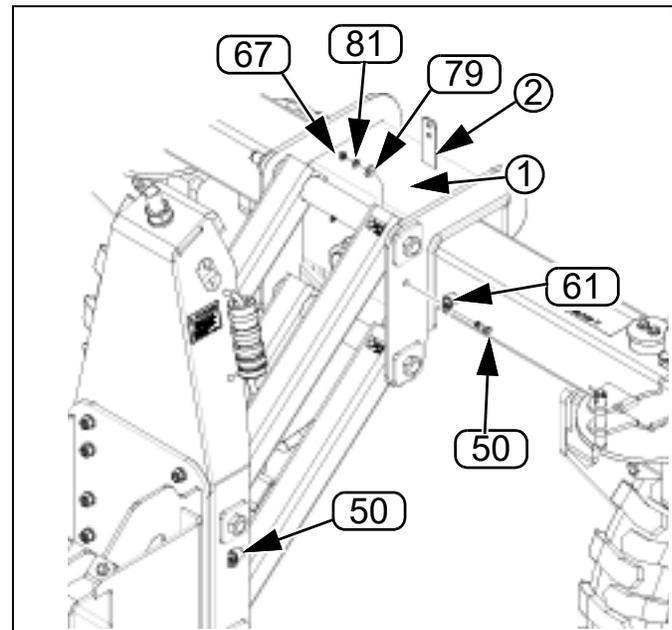


Figure 53
Wishbone Harness Routing

68384

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 center hole (c) is used for Dual Seed, Fertilizer or Native Grass, if installed.
- The rear hole (r) is used for Small Seeds, if installed.

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

Refer to Figure 54

Main Seed Hose

Select one:

(46) 800-008C CLAMP HOSE 1 1/2 NO. 24

Open the clamp (46). Place it onto the outlet end of the hose (99), up against the ribs. Slide the outlet end of the hose fully onto the seed tube inlet (103) at the forward row unit opening (f). Move the clamp to just below the raised lip of the seed tube inlet.

Dual Seed or Fertilizer Hose

Select one:

(49) 800-346C CLAMP HOSE 2 5/8 #42

Open the clamp (49). Place it onto the outlet end of the hose (101), up against the ribs. Slide the outlet end of the hose fully onto the delivery tube inlet (104) at the center row unit opening (c). Move the clamp to halfway onto the hose neck.

Native Grass Hose

Select one:

(49) 800-346C CLAMP HOSE 2 5/8 #42

Open the clamp (49). Place it onto the outlet end of the hose (100), up against the ribs. Slide the outlet end of the hose fully onto the native grass tube inlet (106) at the center row unit opening (c). Move the clamp to halfway onto the hose neck.

Small Seeds Hose

Select one:

(48) 800-321C HOSE CLAMP NO.12 3/4 ID

Open the clamp (48). Place it onto the outlet end of the hose (102), up against the ribs. Slide the outlet end of the hose fully onto the small seeds tube inlet (16) at the rear row unit opening (r). Move the clamp to halfway onto the hose neck.

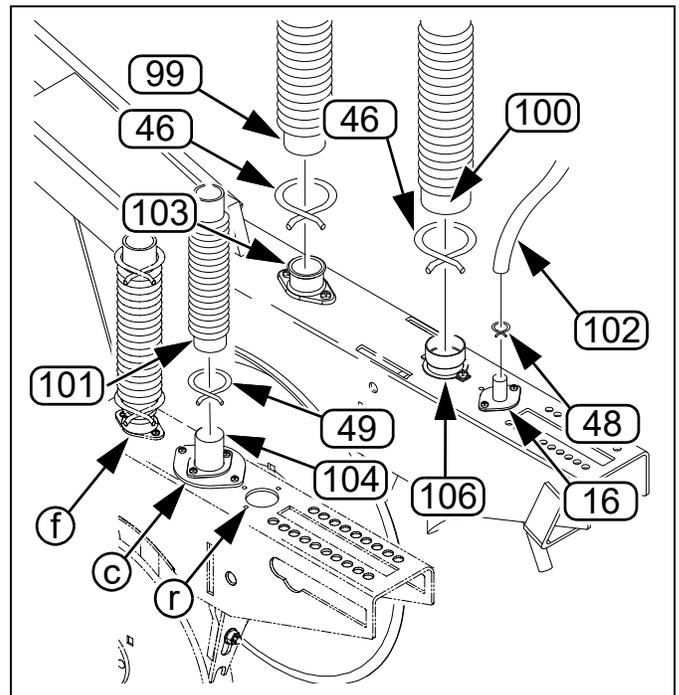


Figure 54
Seed and Fertilizer Hoses

32683

Install SMV Reflector

Refer to Figure 55

The SMV reflector (107) is shipped pre-assembled to the mount (101), but dismounted from the pivot (23). Locate it in a seed box or crate.

Select two sets:

(62) 802-092C RHSNB 5/16-18X3/4 GR5

(75) 804-009C WASHER LOCK SPRING 5/16 PLT

(66) 803-008C NUT HEX 5/16-18 PLT

Orient the reflector (107) upright, and red/orange reflective side to rear. Secure mount (101) to lift-assist pivot (23) with bolts (62), lock washers (75) and nuts (66).

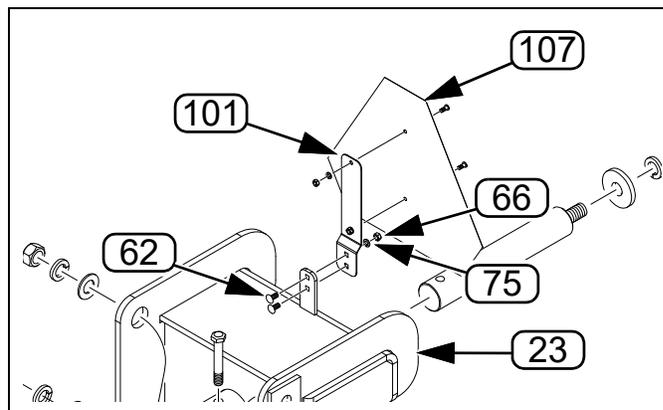


Figure 55
SMV Reflector

32531

Appendix C - Accessory Installation

Carbide Disc Scraper Installation

Optional carbide disc scrapers are not factory installed. See page 56 for ordering. This page covers installation of:

121-781A SPRING SCRAPER ASSEMBLY

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 37).
2. Remove the existing slotted scraper.

Refer to Figure 56

3. Select one:

⑥1 802-079C HHCS 3/8-16X1 1/4 GR5

If Seed-Lok® is present, or also being mounted, also select one:

⑧1 804-013C WASHER LOCK SPRING 3/8 PLT

Place the lock washer ⑧1 on the bolt ⑥1 (because the nut is not used).

4. Select one:

⑧0 804-012C 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:

①14 K7090 AIR DESIGN SCRAPER LH SIDE

①15 K7091 AIR DESIGN SCRAPER RH SIDE

①17 K7096 SPACER AND WASHER ASSEMBLY

①16 K7093 AIR DESIGN SCRAPER 15LB SPRING

Nest one side (①14, ①15) behind the other. Connect the spring (①16) between the sides, using the small top holes. Insert the spacer (①17) from the front, with the narrow raised center to the rear (in the large blade holes).

6. Insert the bolt through the scraper blades (①14, ①15) and spacer (①17).

7. If no Seed-Lok® is present, select one each:

⑧1 804-013C WASHER LOCK SPRING 3/8 PLT

⑥7 803-014C NUT HEX 3/8-16 PLT

Secure the scraper assembly to the scraper mount ① using the lock washer ⑧1 and nut ⑥7.

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 ⑥7 unused.

8. Re-mount the removed disc blade.

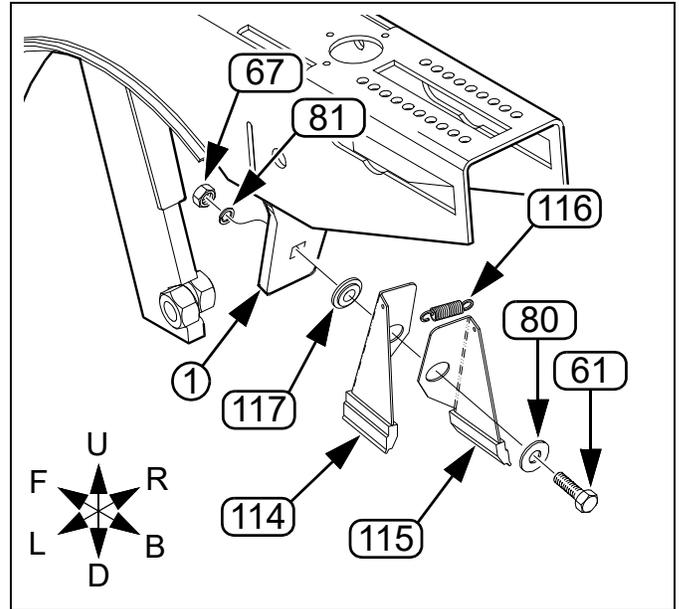


Figure 56
Carbide Disc Scraper Installation

19000

Weight Bracket Installation

These instructions apply to an installation of an optional weight bracket kit.

Refer to Figure 57

Start at the left side of the drill.

1. Select one:
 - (17) 151-135A WEIGHT BRACKET ASSEMBLY
 - (34) 151-445D DECAL MOUNT
 Select two:
 - (90) 806-160C U-BOLT 3/4-10 X 4 1/32 X 4
 Select four sets:
 - (85) 804-023C WASHER LOCK SPRING 3/4 PLT
 - (70) 803-027C NUT HEX 3/4-10 PLT
2. Position the weldment (17) at the left end of the top front frame tool bar. Orient the beveled edges and upper bracket to the back.
3. Install the U-bolts (90).
4. Install the decal mount (34) on the U-bolts.
5. Secure the weldment (17) to the tool bar with the lock washers (85) and nuts (70).
6. Select one:
 - (109) 838-266C AMBER REFLECTOR DECAL
7. Install the amber reflector decal on the decal mount.
8. Examine the weights to be used, and determine how to install the weight bracket adjustment legs. The orientation depicted is not optimal for all weights.
9. Select one:
 - (28)
 and two sets:
 - (56) 802-055C HHCS 5/8-11X2 GR5
 - (83) 804-021C WASHER FLAT 5/8 SAE PLT
 - (84) 804-022C WASHER LOCK SPRING 5/8 PLT
 - (68) 803-021C NUT HEX 5/8-11 PLT
10. Secure the weight bracket adjustment leg (0) to the upper bracket with the bolts (56), washers (83), lock washers (84) and nuts (68). Depending on how your weights lock, it may be necessary to leave the bolts loose until after the weights are mounted.
11. Repeat step 1 through step 10 for the right side of the drill.

See “**Drill Weight Adjustment**” on page 35 for weight selection.

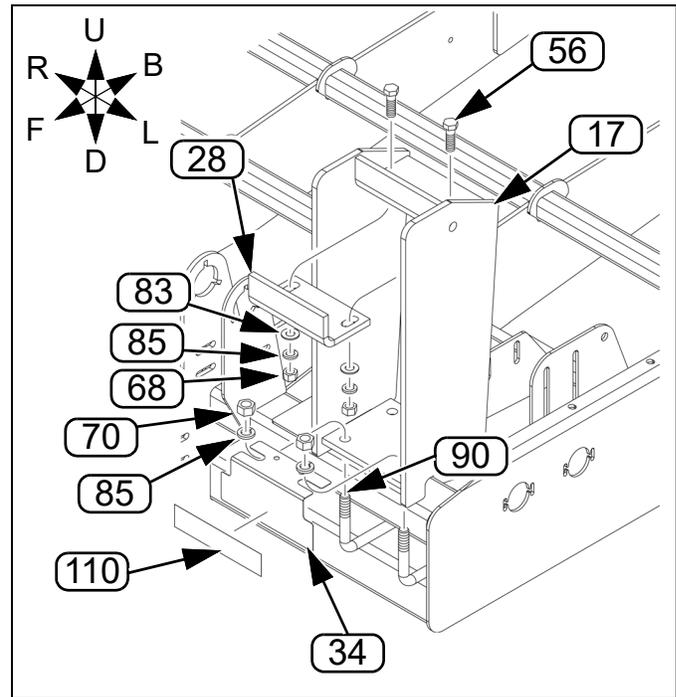
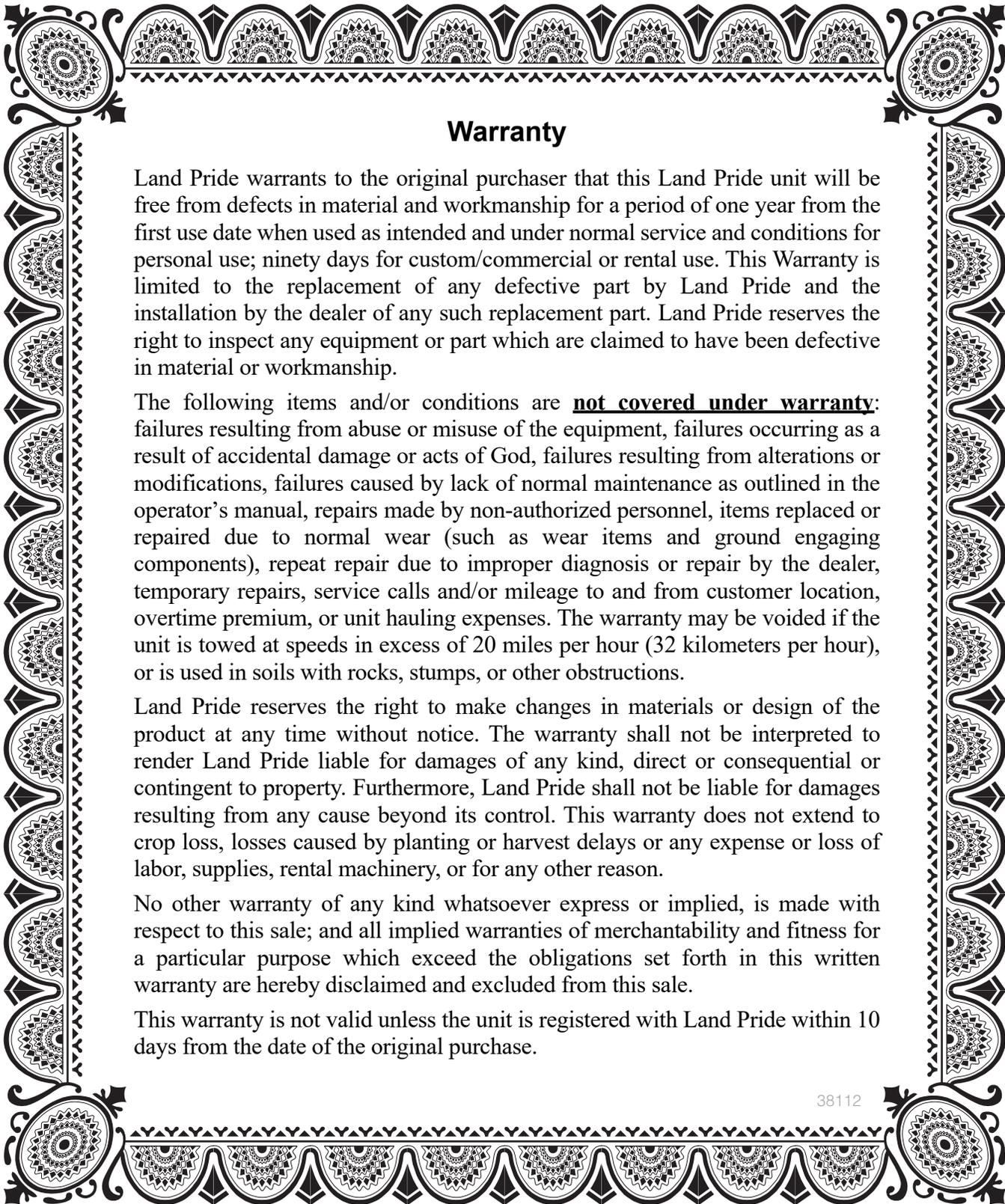


Figure 57
Install Weight Bracket

28226A



Warranty

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

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

Land Pride 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 Land Pride liable for damages of any kind, direct or consequential or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its control. This warranty does not extend to crop loss, losses caused by planting or harvest delays or any expense or loss of labor, supplies, rental machinery, or for any other reason.

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

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

38112

Model Number: _____

Serial Number: _____

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