Operator Manual
YP1225 and YP1625 s/n+ A1111K+, A1190B+
2009+ Yield-Pro© Planters

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

Illustrations may show optional equipment not supplied with standard unit or may depict similar models where a topic is identical.
**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.

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**Dealer Contact Information**

Name:  
Street:  
City/State:  
Telephone:  
Email:  
Dealer’s Customer No.:  

⚠️ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov
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Important Safety Information

Look for Safety Symbol

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

Be Aware of Signal Words

Signal words designate a degree or level of hazard seriousness.

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

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

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

Prepare for Emergencies

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

Be Familiar with Safety Decals

▲ Read and understand “Safety Decals” on page 5, thoroughly.
▲ Read all instructions noted on the decals.
▲ Keep decals clean. Replace damaged, faded and illegible decals.
Wear Protective Equipment

Great Plains advises all users of chemical pesticides or herbicides to use the following personal safety equipment.

- Waterproof, wide-brimmed hat
- Waterproof apron.
- Face shield, goggles or full face respirator.
- Goggles with side shields or a full face respirator is required if handling or applying dusts, wettable powders, or granules or if being exposed to spray mist.
- Cartridge-type respirator approved for pesticide vapors unless label specifies another type of respirator.
- Waterproof, unlined gloves. Neoprene gloves are recommended.
- Cloth coveralls/outer clothing changed daily; waterproof items if there is a chance of becoming wet with spray.
- Waterproof boots or foot coverings.
- Do not wear contaminated clothing. Wash protective clothing an equipment with soap and water after each use. Personal clothing must be laundered separately from household articles.
- Clothing contaminated with certain pesticides must be destroyed according to state and local regulations. Read chemical label for specific instructions.
- Wear clothing and equipment appropriate for the job. Avoid loose-fitting clothing.
- Prolonged exposure to loud noise can cause hearing impairment or loss. Wear suitable hearing protection such as earmuffs or earplugs.
- Avoid wearing entertainment headphones while operating machinery. Operating equipment safely requires the full attention of the operator.

Use A Safety Chain (Hydraulic Hitch)

- Use a safety chain to help control drawn machinery should it separate from tractor draw bar.
- Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
- Attach chain to tractor draw bar support or other specified anchor location. Allow only enough slack to permit turning.
- Replace chain if any links or end fittings are broken, stretched or damaged.
- Do not use safety chain for towing.
Avoid High Pressure Fluids
Escaping fluid under pressure can penetrate the skin, causing serious injury.

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

Handle Chemicals Properly
▲ Read and follow chemical manufacturer’s instructions.
▲ Wear protective clothing.
▲ Handle all chemicals with care.
▲ Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.
▲ Inhaling smoke from any type of chemical fire is a serious health hazard.
▲ Store or dispose of unused chemicals as specified by the chemical manufacturer.
▲ Before adding chemical to the tank, make sure tank is at least half full. Do not pour concentrate into an empty tank.
▲ Never leave fill hose attached to the sprayer after filling tank. Chemicals in tank can siphon out of tank and contaminate freshwater source.
▲ Immediately and thoroughly flush any area of the body that is contaminated by chemicals.
▲ Do not touch plumbing components with mouth or lips.
▲ If chemical is swallowed, carefully follow the chemical manufacturer’s recommendations and consult with a doctor.
▲ If persons are exposed to a chemical in a way that could affect their health, consult a doctor immediately with the chemical label or container in hand. Any delay could cause serious illness or death.
▲ Dispose of empty chemical containers properly. By law rinsing of the used chemical container must be repeated three times. Puncture the container to prevent future use. An alternative is to jet-rinse or pressure rinse the container.
▲ After working with chemicals, wash hands and face before eating. Shower when application is completed for the day.
▲ Never wash out the tanks within 100 feet (30 m) of any freshwater source or in a car wash.
▲ Rinse out the tank. Apply rinse water on last field treated.

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 (32 kph). Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

▲ Do not exceed 20 mph (32 kph). Never travel speeds which do not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.

▲ Comply with state and local laws.

▲ Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.

▲ Carry reflectors or flags to mark planter in case of breakdown on the road.

▲ Keep clear of overhead power lines and other obstructions when transporting. Refer to transport dimensions under “Specifications and Capacities” on page 115.

▲ Do not fold or unfold the planter while the tractor is moving.

Shutdown and Storage

▲ Lower planter, put tractor in park, turn off engine, and remove the key.

▲ Secure planter using blocks and supports provided.

▲ Detach and store planter in an area where children normally do not play.

Tire Safety

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

▲ When inflating tires, use a clip-on chuck and extension hose long enough for you to stand to one side—not in front of or over tire assembly. Use a safety cage if available.

▲ When removing and installing wheels, use wheel-handling equipment adequate for weight involved.
Practice Safe Maintenance

▲ Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.
▲ Work in a clean, dry area.
▲ Lower the planter, put tractor in park, turn off engine, and remove key before performing maintenance.
▲ Make sure all moving parts have stopped and all system pressure is relieved.
▲ Allow planter to cool completely.
▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on planter.
▲ 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 planter 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 planter functions.
▲ Operate machinery from the driver’s seat only.
▲ Do not leave planter unattended with tractor engine running.
▲ Do not dismount a moving tractor. Dismounting a moving tractor could cause serious injury or death.
▲ Do not stand between the tractor and planter during hitching.
▲ Keep hands, feet and clothing away from power-driven parts.
▲ Wear snug-fitting clothing to avoid entanglement with moving parts.
▲ Watch out for wires, trees, etc., when folding and raising planter. Make sure all persons are clear of working area.

Safety Decals

Safety Reflectors and Decals

Your implement comes equipped with all lights, safety reflectors and decals in place. They were designed to help you safely operate your implement.
▲ Read and follow decal directions.
Keep lights in operating condition.

Keep all safety decals clean and legible.

Replace all damaged or missing decals. Order new decals from your Great Plains dealer. Refer to this section for proper decal placement.

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

To install new decals:

1. Clean the area on which the decal is to be placed.

**818-055C**

**Slow Moving Vehicle Reflector**

On the back of the planter, walkboard center; one total

See “Transporting” on page 27

**838-266C**

**Red Reflectors**

On the back of walkboard each end and on the backside of each light mounting bar; four total

**838-265C**

**Amber Reflectors**

On the left-hand wing by drive, two on each side of frame when folded and two on the front of the light brackets, seven total.

2. Peel backing from decal. Press firmly on surface, being careful not to cause air bubbles under decal.
838-267C
Daytime Reflectors

On the back of walkboard each end and on the backside of each light mounting bar, four total

818-590C
Danger: Crushing Hazard

On the hitch, one total.
See “Hitching Tractor to Planter” on page 13

838-599C (Option)
Warning: Electrocution Hazard

On marker section each end, two total.
See “Marker Operation” on page 41

818-045C
Warning: Pinch-Crush

Above both tires, two total
818-339C
Warning: High Pressure Fluid Hazard

On the tongue, one total
See “Hydraulic Hose Hookup” on page 13

818-580C (Option)
Warning: Overhead Hazard

On marker section each end, two total
See “Marker Operation” on page 41

818-579C (Option)
Warning: Pinch/Shear Hazard

On marker section each end, two total
See “Marker Operation” on page 41

818-188C
Warning: Excessive Speed

On the tongue, one total
See “Transporting” on page 27
818-587C
Caution: Read Operator Manual

On the tongue, one total

818-398C
Caution: Tires Not A Step

Above both tires, two total

858-792C
Caution: Tire Pressure and Torque

One on outside of each wheel, two total
Introduction

Great Plains welcomes you to its growing family of new product owners. This planter was 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 30- and 40-foot Yield-Pro® Product are pull-type planting implements for use in conventional till, minimum-till, or light no-till conditions.

Yield-Pro® Planters® are outfitted with 25 Series, side-depth-control row-units, and equipped with either Singulator Plus or finger pickup seed meters. Optional unit-mounted coulters make it suitable for light to moderate no-till conditions only. These Planters fold for transport.

Document Family

401-226M-A Owner’s Manual (this document)
ManualB # Seed Rate manual
ManualP # Parts manual
110011375 DICKEY-john® IntelliAg® Operator
110011387A YP1225 Quick Start Guide
110011388A YP1625 Quick Start Guide

Intended Usage

Use the product to seed production-agriculture crops only. Do not modify the product for use with attachments other than Great Plains options and accessories specified for use with the product.

Covered Models

YP1225-1230 30-Foot, 12-Row, 30-Inch
YP1225-16TR36 30-Foot, 16-Row (8 Twin), 36-Inch
YP1225-1820 30-Foot, 18-Row, 20-Inch
YP1225-2315 30-Foot, 23-Row, 15-Inch
YP1225-24TR 30-Foot, 24-Row, (12 Twin) 30-Inch
YP1625-1236 40-Foot, 12-Row, 36-Inch
YP1625-1630 40-Foot, 16-Row, 30-Inch
YP1625-1670 12-Meter, 16-Row, 70cm
YP1625-2420 40-Foot, 24-Row, 20-Inch
YP1625-24TR36 40-Foot, 24-Row (12 Twin), 36-Inch
YP1625-3115 40-Foot, 31-Row, 15-Inch
YP1625-32TR 40-Foot, 32-Row (16 Twin), 30-Inch

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.

Definitions

The following terms are used throughout this manual.

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.

NOTICE

A crucial point of information related to the preceding topic. Read and follow the directions provided before continuing, to ensure safety, avoidance of machine damage, and to achieve desired field results.

Useful information related to the preceding topic.

---
a. Yield-Pro® “A” model planters with Air-Pro® seed meters are covered in Operator Manual 401-625M.
Owner Assistance

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

Refer to Figure 2

Your machine’s parts were specially designed and should only be replaced with Great Plains parts. Always use the serial and model number when ordering parts from your Great Plains dealer. The serial-number plate is located on the front face of the left wing rest, as shown.

Record your Implement Name model and serial number here for quick reference:
Model Number: ___________________________
Serial Number: __________________________

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

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

Further Assistance

Great Plains Manufacturing, Inc. and your Great Plains dealer want you to be satisfied with your new product. If for any reason you do not understand any part of this manual or are otherwise dissatisfied, please take the following actions first:

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

If your dealer is unable to resolve the problem or the issue is parts related, please contact:

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

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

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

Initial Setup

If the product has just been delivered, or broken down for re-shipment, these items need to be completed prior to first field use:

- **“Hydraulic Charge and Bleed”** on page 131, which includes:
- **“Console Installation”** on page 131
- **“Level Planter”** on page 132, and
- **“Marker Setup”** on page 135.

You may also need to install features, options and accessories that were not factory- or dealer-installed.

Pre-Planting Setup

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

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**” on page 96.
4. Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See “**Safety Decals**” on page 5.
5. Inflate tires to pressure recommended and tighten wheel bolts as specified. See “**Tire Inflation Chart**” on page 117.
6. If returning the planter to service from storage, remove any grease used to protect cylinder rods.
Hitching Tractor to Planter
Protecting Hydraulic Motor Seals

Low Pressure (Case) Drain Connection

**NOTICE**

**Machine Damage Risk:**
Case Drain Hose must be attached prior to inlet and return hoses being connected. Also, it must be unhooked last to prevent damage to the fan motor.

7. Attach case drain hose to low pressure drain connection.
8. Connect low pressure return hose to low pressure return connector.

**NOTICE**

**Machine Damage Risk:**
DO NOT hook case drain line to a “power-beyond port”.

9. If the tractor has a limited number of remotes capable of continuous flow, use them for the hydraulic fan and optional hydraulic drive. (See “Specifications and Capacities” on page 115 for tractor requirements.)

Hydraulic Hose Hookup

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

**Current Style Color Coded Hose Handles**

<table>
<thead>
<tr>
<th>Color</th>
<th>Hydraulic Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Fold/Marker</td>
</tr>
<tr>
<td>Blue</td>
<td>Lift/Tongue</td>
</tr>
<tr>
<td>Black</td>
<td>Fan</td>
</tr>
<tr>
<td>Yellow</td>
<td>Hydraulic Drive (Option)</td>
</tr>
</tbody>
</table>

To distinguish hoses on the same hydraulic circuit, refer to the symbol molded into the handle grip. Hoses with an extended-cylinder symbol feed cylinder base ends. Hoses with a retracted-cylinder symbol feed cylinder rod ends.

For hydraulic fan and drive motors, connect the hose under the retracted cylinder symbol to the pressure side of the motor. Connect the hose under the extended cylinder symbol to the return side of the motor.

The fan motor further requires hookup of a (third) case drain line, which returns lubricating/cooling fluid.

**DANGER**

**Crushing Hazard:**
You may be severely injured or killed by being crushed between the tractor and planter. Do not stand or place any part of your body between planter and moving tractor. Stop tractor engine and set park brake before attaching cables and hoses.

**WARNING**

**High Pressure Fluid Hazard:**
Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic lines. Use a piece of paper or cardboard, NOT BODY PARTS, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. If an accident occurs, seek immediate medical attention from a physician familiar with this type of injury.
Older Style Hoses with Color Ties

Refer to Figure 4

Great Plains hydraulic hoses are color coded. Hoses that go to the same remote valve are marked with the same color tie.

<table>
<thead>
<tr>
<th>Color</th>
<th>Hydraulic Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Fold/Marker</td>
</tr>
<tr>
<td>Blue</td>
<td>Lift/Tongue</td>
</tr>
<tr>
<td>Orange</td>
<td>Fan</td>
</tr>
<tr>
<td>Yellow</td>
<td>Hydraulic Drive (Option)</td>
</tr>
</tbody>
</table>

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

3-Point Hitch

Refer to Figure 5

10. Connect your tractor 3-point to the product 3-point hitch. If using quick hitch be sure planter locks into hitch securely.

11. Raise tractor 3-point just enough to relieve pressure off of the parking stand.

**NOTICE**

**Load Sway Risk:**
Adjust 3-point hitch arms and sway blocks to minimize any side-to-side sway to assure proper tracking in the field and safe road travel.

12. Connect hydraulic hoses to tractor remotes. See “Hydraulic Hose Hookup” on page 13
Hitching with Hydraulic Tongue (Option)

Refer to Figure 6
1. Move the tractor to near hitching position.
2. Connect the hydraulic hoses for the tongue circuit. This needs to be done before hitching in order to raise and lower the tongue. See “Hydraulic Hose Hookup” on page 13. Allow slack for hitch movements. Close the tongue cylinder bypass valve.
3. Make electrical connections for at least the planter control circuit (necessary to control planter hydraulic systems). See page 16.
4. Check that hitch local bypass valve ① is closed.

Refer to Figure 7
5. Set the cab CFM Lift/Hitch switch ② to Hitch.
6. Retract the Hitch/Lift circuit to set the tongue height to clear the draw-bar. Back the tractor into alignment and pin the draw-bar.

Local Float on Hydraulic Tongue

Refer to Figure 6

The hydraulic tongue must be in Float during planter moves.

If it is necessary to move the product without first connecting it to a tractor that has a float-capable circuit for the hydraulic tongue, open the bypass valve ① on the tongue cylinder. This provides local floating capability at the tongue.

Raising/Lowering Tongue

In addition to hitching, tongue raising and lowering is required during fold and unfold to engage and disengage the wing locks.

With the standard 3-point hitch, the product tongue is raised and lowered by raising and lowering the 3-point.

With the optional hydraulic tongue, the product tongue is raised by extending the hitch cylinder, and lowered by retracting the hitch cylinder.

Setting Tongue Height to Planting Position

1. Once unfolded, set the initial tongue height, using 3 point or cylinder of hydraulic tongue. Distance ⑥, measured at top of tongue tube is:
   46in (117cm) above ground level for YP12, or
   42in (107cm) above ground level for YP16.
   Additional product leveling information is found on page 132.
2. Connect other hydraulic hoses to tractor remotes. See “Hydraulic Hose Hookup” on page 13
Electrical Hookup

Refer to Figure 9

Your product is equipped with standard and optional devices that require separate electrical connections. Make sure tractor is shut down with accessory power off before making connections. These connections may be made in any order. The key requirement is that all connections be made prior to product movement.

1. Plug the product light cable to the tractor.
2. Connect monitor lead to monitor harness. (See page 131 for console installation.)

Store Parking Stand

Refer to Figure 10

1. Remove the lower pin 5 holding the parking stand 7. Swing the parking stand back and up until it is above the rear hole 6. Place the holding pin in the rear hole and allow the parking stand to rest on it. This will be the transport position for the parking stand.
2. Adjust the top link of a 3-point long enough so the ball swivel does not bottom out when fully raised.
3. Secure hoses so they do not get caught in ball swivel. Failure to do so could cause hose to be crushed requiring hose replacement.
4. If equipped with hydraulic hitch option, connect safety chain to a suitable anchor point on the tractor.
Lock Up Fertilizer Drive

YP1225 serial number A1175K+
YP1625 serial number A1308B+

**WARNING**

*Loss of Control and Sharp Object/Crushing Hazards:*
Do not lift or lower wheel by spoke or rim; use handle only. Keep feet out from under wheel. 90 pounds (41 kg.) force is required to lift wheel. If you lose your grip before pinning, or after unpinning, the arm snaps down rapidly. The traction teeth and the force of the wheel impact can inflict serious injury.

The liquid fertilizer option uses a piston pump driven by a ground contact wheel. When not using the fertilizer drive, preserve the pump by locking up the ground wheel. On older models remove the chain.

*Do not operate planter pump when not applying material.*

**Refer to Figure 11**

For YP1225 and YP1625 planters:
1. Remove clevis pin from storage hole ④.
2. Release the lock arm ⑤, lift handle ⑦ to lift ground wheel up to position it in-between lock arm.
3. Secure with pin clevis ⑥ and cotter pin.
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 an accident occurs, seek immediate medical attention from a physician familiar with this type of injury.

1. Carefully read “Important Safety Information” on page 1.
2. Lubricate planter as indicated under “Lubrication” on page 96.
3. Check all tires for proper inflation. See “Tire Inflation Chart” on page 117.
4. Check all bolts, pins and fasteners. Torque as shown in “Torque Values Chart” on page 130.
5. Check planter 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. Be sure hydraulic hoses are securely held out of the ball swivel area at hitch. Failure to do so could cause hoses to pinch requiring hose replacement.
Unfolding The Product

The distance between the tractor and the seed structure decreases by about 10 feet (3 m) during unfolding. Product, tractor, or both will move during this operation.

**WARNING**

*Crushing, Pinch-Point and Overhead Hazards:*
To prevent serious injury or death:

▲ Unfold only on hard level ground. Allow ample room.
▲ Do not allow anyone to be on or near the planter during unfolding.
▲ Stay clear of the wing sweep arcs. The sweep arcs of the wings have numerous pinch and crush points in the mechanism. Coulters and row openers are sharp.
▲ Allow no one near planter. The seed structure usually moves forward during unfolding.
▲ Do not unfold with planter lowered, or machine damage will result.
▲ Unfold only with markers resting in transport cradles.
▲ Unfold only if hydraulics are bled free of air and fully charged with hydraulic oil.

**Prepare Hitched Tractor and Product**

1. Move product to level ground.
2. If tractor movement is not desired, put tractor in Park and/or set parking brakes, or telescoping movement of product may cause tractor to move backward.
3. On the CFM (Clutch Folding Module), set the following switches to OFF (down):
   - MASTER switch ① and Fertilizer Pump ②.

**Prepare Transport Hooks**

The transport hooks, which prevent unfolding during transport, open automatically only when the product is fully raised.

*Refer to Figure 12*

1. Set CFM Lift/Hitch switch ③ to “Lift” to enable lift cylinder hydraulics.
2. Set CFM Marker/Fold switch ④ to “Fold” to enable fold cylinder hydraulics.
3. Activate lift hydraulics. Raise planter until lift hydraulics are fully raised. This prepares the transport hooks ⑤ to disengage during unfolding.

**NOTICE**

*Certain Machine Damage:*
Be sure planter’s lift hydraulics are fully raised before unfolding or machine damage WILL occur.
Release Wing Locks

*Refer to Figure 15*

A pair of inverted hooks ⌈ on the tongue tube engage locks ⌈ on each wing when the product is folded. This lock system must be released prior to unfolding.

1. This step is slightly different depending on hitch type.

**Release Wing Lock with 3-Point Hitch**

a. Raise the 3-point hitch to disengage the wing lock. Continue at step 2.

**Release Wing Lock with Hydraulic Hitch**

*Refer to Figure 14*

a. Set CFM Lift/Hitch switch ⌈ to Hitch.

b. Raise hydraulic tongue to disengage wing lock.

**Re-Phase Fold Cylinders**

2. The fold system uses re-phasing cylinders. It is necessary to re-phase cylinders so wing gauge wheels run in their fully rotated positions in front of product. To re-phase fold cylinders:

Move and hold lever for Marker/Fold in Fold direction (typically Extend) for 30 seconds. This causes wings to push against the tongue transport hooks ⌈.

**Partially Unfold**

*Refer to Figure 15*

3. Reverse fold circuit lever until wings clear transport hooks ⌈ by a few feet.

**Lower Tongue**

4. Lower 3-point hitch or hydraulic tongue to planting position. See page 15 and page 132 for correct hitch height and depth control settings. If hydraulic tongue, set CFM Lift/Hitch switch ⌈ to Lift.

**NOTICE**

*Certain Machine Damage:*
Failure to lower the tongue before unfolding WILL result in opener or seed delivery system damage.

**Fully Unfold**

*Refer to Figure 16*

5. Unfold product fully to planting position. Unfolding is complete when the large roller bushing on top of the tongue is engaged by the tongue safety latch ⌈.

**NOTICE**

Do not plant if this latch is not fully down over the roller. Frame and opener damage is likely if the product is operated with the latch open.
Remove Transport Locks

Refer to Figure 17 and Figure 18

6. Remove transport lock channels from lift cylinders located on gauge wheels and on center frame.

Refer to Figure 19 and Figure 20

7. Transfer lift cylinder transport lock channels to their storage positions.

Unfold Closeout

8. As appropriate for the next planned activity, activate lift hydraulics and lower planter.

9. To disable fold hydraulics, whether Markers are installed or not, set CFM Marker/Fold switch ④ to “Marker”.
Raising/Lowering Product

The product mainframe raises and lowers independently of the tongue.

- The product may be fully raised at any time (and must be raised for folding).
- The product may be lowered onto its transport lock channels at any time.
- The product may be fully lowered, with lock channels removed, only when unfolded.

Refer to Figure 22

The CFM “CLUTCH” switch positions are not shown because they normally require no attention during lift or lower. Lifting the product automatically disengages the entire drive system.

For Product # products the “Fert.Pump” switch 2 has no function because the optional fertilizer system for these products as shipped by Great Plains uses a ground-drive pump that has no electrical control.

Leave or set the CFM Marker/Fold switch 3 in “Marker” position to prevent unintended folding.

Raising Planter

The product may be raised at any time.

1. Set the CFM “Lift/Hitch” switch 3 to Lift to enable the lift cylinder circuit.
2. Move the Lift/Hitch circuit lever to extend the lift cylinders.
3. Set the circuit to Neutral to hold the product at lift. The switch 3 may be left in the “Lift” position.

⚠️ CAUTION

Crushing and Entrapment Hazard:

Rely on circuit neutral to hold the product raised only for brief periods, such as field turns and lock channel installation. Use lock channels at all other times.

4. Install lock channels if raising for transport, parking, storage, adjustments or maintenance.

⚠️ After every few hours of operation (or earlier, if uneven lift is observed), re-phase the lift circuit. At a lift operation, hold the circuit in Extend for 30 seconds.

If your product has an aftermarket pumping system compatible with the IntelliAg® system, the “Fert.Pump” switch may require operator attention during lift/lower.
Lowering Planter

If lock channels are installed, the product may be lowered at any time. If lock channels are not installed, lower only when unfolded, such as for field turns.

Install lock channels (page 21) as appropriate for next activity.

1. Set the CFM “Lift/Hitch” switch to Lift to enable the lift cylinder circuit.
2. Move the Lift/Hitch circuit lever to retract the lift cylinders until settled on lock channels or fully lowered to ground.
3. Set the lift circuit to Neutral for field operation. The switch may be left in the “Lift” position.

**DANGER**

*Crushing and Sharp Object Hazards:*

Keep all persons away from frame sections during lift and lower. Area under row units is particularly dangerous. Sharp coulter and opener blades descend with hundreds of pounds of down-force.

Unless lock channels are installed, lower the product only when fully unfolded. Lowering when folded is prevented by the transport locks.

Re-phasing Lift System

Over a period of normal use the cylinders may get out of phase. This will cause some planter sections to run higher than others. If this is the case, it will be necessary to re-phase lift cylinders.

Lift cylinders can only be re-phased when product is unfolded.

To re-phase cylinders:

1. Raise the implement completely and hold the hydraulic remote lever on for several seconds until all cylinders are fully extended. Do this every 8 to 10 times you raise product out of ground.
2. When all cylinders are fully extended, momentarily reverse hydraulic remote lever to retract system 1/2 inch to maintain levelness.
Folding the Planter

The product must be raised for folding. The tongue is raised and lowered during the sequence.

The distance between the tractor and the seed structure increases by about 10 feet (3 m) during folding. Product, tractor, or both will move during this operation.

**WARNING**

*Pinch Point and Crushing Hazard:*

To prevent serious injury or death:

- Fold only with product raised and lock channels installed.
- Fold only if hydraulics are bled free of air and fully charged with hydraulic oil.
- Stay away from frame sections when they are being raised or lowered.
- Keep away and keep others away when folding or unfolding planter.
- Fold markers onto cradles before folding product.

**Shut off Fan and Hydraulic Drive**

1. Set circuit levers for seed box fan and optional hydraulic meter drive to Neutral.

**Set Tractor and Tongue**

2. Raise and move product to a level area.
3. If tractor movement during folding is not desired, put tractor in Park and/or set parking brake.
4. This step is slightly different depending on hitch type:

   **Prepare 3-Point Hitch for Fold**
   
a. Fully lower 3-point hitch. Continue at step 5.

   **Prepare Hydraulic Hitch for Fold**
   
   Refer to Figure 23
   
a. Set CFM Lift/Hitch switch 1 to “Hitch”.
   b. Retract hitch cylinder to fully lower tongue.

**Raise Planter**

Refer to Figure 24

5. Set CFM Lift/Hitch switch 2 to “Lift”.
6. Activate circuit lever to extend lift cylinders until product is fully raised.
7. Set circuit to Neutral to hold at lift.
8. On hydraulic hitch, return switch 2 to “Hitch”.
9. Put tractor in Park and/or set parking brake, and shut off tractor.
Install Lock Channels

Refer to Figure 26 and Figure 25

10. Remove lift cylinder transport lock channels from their storage positions.

Refer to Figure 28 and Figure 27

11. Place transport lock channels on lift cylinders located on gauge wheels and on center frame.

Center lock channels are provided for use during service procedures. They are not necessary for normal transport operation.
Begin Folding
12. Extend the fold cylinders and fold the product until the wing tubes are within a few feet (a meter or so) of the tongue.

Raise Tongue
13. Raise 3-point hitch or hydraulic hitch until wing hooks ③ on tongue clear locks ④ on wings.

Complete Fold
14. Continue or resume folding until the wing locks contact lock plate (under hooks).

Lower Tongue
15. Lower 3-point hitch or hydraulic tongue until wing hooks rest on wing locks.

Re-phasing Fold System
Over a period of normal use, the cylinders may get out of phase. This is evident by wing gauge wheels not running in their fully rotated positions in front of the planter.

⚠️ Product must be folded to re-phase fold system. Refer to “Important Safety Information” on page 1, for instructions on re-phasing fold system.
Transporting

The tractor must weigh at least 2/3 (67%) of the product plus any materials loaded. See table below for representative planter weights. Have your product weighed if the tractor capability is not clearly above requirements.

Before transporting, follow and check these items:

- Set the tractor 3-point hitch control for depth control operation. If the 3-point hitch control is set for load control, the auto load control response may automatically adjust too high in given circumstances - this could cause the wing locks to disengage on the road.
- Empty seed box. Empty seed box before transporting if at all possible.
- The product can be transported with a full box of grain, but the added weight increases stopping distance and decreases maneuverability.
- Transport planter only while in folded position. Refer to “Folding the Planter” on page 24 and make sure cylinder lock channels are in place.
- Warning lights. Always use warning lights when transporting the product.
- Road rules. Comply with all national, regional, and local safety laws when traveling on public roads.
- Clearance. Remember that the product is wider than the tractor. Allow safe clearance.
- Transporting with Markers. Always transport markers in the folded position. Make sure second marker section rests securely on transport carrier.

**WARNING**

* Loss of Control Hazard: Towing the planter at high speeds or with a vehicle that is not heavy enough could lead to loss of vehicle control. Loss of vehicle control could lead to serious road accidents, injury and death. To reduce the hazard, do not exceed 20 mph.

---

### Weights of Representative Planter Configurations

<table>
<thead>
<tr>
<th>Configuration</th>
<th>YP1225-1230</th>
<th>YP1225-16TR36</th>
<th>YP1225-1820</th>
<th>YP1225-2315</th>
<th>YP1225-24TR</th>
<th>YP1625-1670</th>
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</thead>
<tbody>
<tr>
<td>Base Planter Weight</td>
<td>15540 lb</td>
<td>16410 lb</td>
<td>16850 lb</td>
<td>17940 lb</td>
<td>18160 lb</td>
<td>7570 kg</td>
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<tr>
<td>Typical Empty Standard* Planter</td>
<td>16400 lb</td>
<td>17280 lb</td>
<td>17710 lb</td>
<td>18800 lb</td>
<td>19020 lb</td>
<td>7960 kg</td>
</tr>
<tr>
<td>Typical Full Standard* Planter</td>
<td>21650 lb</td>
<td>22530 lb</td>
<td>22960 lb</td>
<td>24050 lb</td>
<td>24270 lb</td>
<td>10340 kg</td>
</tr>
<tr>
<td>Typical Empty Maximum* Planter</td>
<td>18460 lb</td>
<td>19560 lb</td>
<td>20120 lb</td>
<td>21500 lb</td>
<td>21780 lb</td>
<td>9000 kg</td>
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<tr>
<td>Typical Full Maximum* Planter</td>
<td>28500 lb</td>
<td>29610 lb</td>
<td>30170 lb</td>
<td>31550 lb</td>
<td>31830 lb</td>
<td>13560 kg</td>
</tr>
</tbody>
</table>

Note: the weight of a specific planter can vary significantly.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>YP1625-1236</th>
<th>YP1625-1630</th>
<th>YP1625-2420</th>
<th>YP1625-24TR36</th>
<th>YP1625-3115</th>
<th>YP1625-32TR</th>
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<tr>
<td>Base Planter Weight</td>
<td>15800 lb</td>
<td>16670 lb</td>
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<td>16660 lb</td>
<td>17530 lb</td>
<td>19280 lb</td>
<td>20810 lb</td>
<td>21030 lb</td>
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<tr>
<td>Typical Full Standard* Planter</td>
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<td>Typical Full Maximum* Planter</td>
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<td>32100 lb</td>
<td>34040 lb</td>
<td>34320 lb</td>
<td></td>
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</tbody>
</table>

* Typical Standard configuration is: markers, 82 bu. hopper, no fertilizer, no coulters
    Typical Maximum configuration is: markers, 82 bu. hopper, starter fertilizer system, UM coulters
Loading Materials

The YP1225 and YP1625 planters accept the Great Plains 82 bu. hopper, 150 bu. hopper, or bulk seed boxes that meet the Pioneer PROBOX® specification.

Material Loading Overview

- With hoppers, seed is loaded from above, with the hopper already mounted on the planter.
- With PROBOX®, seed is pre-loaded by the seed supplier, and the box is mounted on the planter already loaded.
- If the optional fertilizer system is installed, liquid fertilizer is normally pumped in from below via the quick-fill system, but may also be gravity-loaded from above with the tank caps removed.

**CAUTION**

Tipping Hazard:
Place or remove a hopper only when empty. A full hopper can weigh between 5000 and 10000 lbs (2700-4500 kg), which is above the lifting and balance capability of most tractors and farm forklifts.

Mounting a Hopper or Bulk Seed Box

These steps cover mounting a hopper or seed box on a planter that has no seed container. If a seed container needs to be removed first, see page 33.

1. Move the product to an area of level ground and sufficient room to maneuver a tractor or fork-lifter.

2. If changing between hopper and bulk seed box, use the Accessory Sensor Setup menu on the seed monitor console to disable the hopper sensor and avoid nuisance alarms. See DICKEY-john® Quick Start Guide.

3. Place tractor in park, shut off engine, and remove the key. If using the same tractor for container mounting, block the planter transport tires.

**Refer to Figure 31**

4. Remove the walkboard lock pin ①.

**Refer to Figure 32**

5. Swing walkboard ② all the way to the right.

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a. The 150 bu. hopper is incompatible with on-board fertilizer tanks.
b. PROBOX® is a registered trademark of Pioneer Hi-Bred International, Inc.
Refer to Figure 33


If planter is lowered, walkboard will stay open by itself once fully opened. There is a keeper near the walkboard pivot that can hold the walkboard open in all conditions.

Refer to Figure 34

7. Remove pins 1 at the corners of the airbox frame.

8. When using a bulk seed box, new meters for the first time, or at the start of each season, measure out approximately 4 gallons (15 liters) of seed into a pail. Add 1/2 cup (120 ml) of lubricant to the pail. Mix and pour into air box before mounting hopper.

9. At the airbox seed inlet, inspect the seals for wear and damage.

10. If mounting a seed box, add lubricant to the seed box at this time. It may be easier to add it while the box is still at ground level.

**NOTICE**

Inconsistent Population Risk:
Talc+graphite lubricant mix is mandatory for all seed, especially treated or inoculated seed when using precision meters. However, DO NOT use talc with finger pickup meters. Use graphite lubricant with finger pickup meters. See “Seed Lubricants” on page 102

Refer to Figure 35

11. Approach the hopper or seed box from the back (the side with the slide gate). Align the forks with the slots in the rear of the seed box or hopper and slowly drive forward until forks are completely under the seed box or hopper.

**CAUTION**

Tipping Hazard:
A full seed box can weigh over 2500 lbs. Make sure your tractor or fork lift is rated for and configured to lift this weight. Do not let anyone stand under or in front of the elevated seed box.

- Bulk hopper frame has two sets of lifting points. One set is for normal loading and is tubes. The other set is to allow picking it up from the side for placing in storage near a wall.
- It may be necessary to adjust the seal on top of air box to get full contact with the bottom of seed box or hoppers. This is a one-time adjustment.
Refer to Figure 36
12. Slowly lift the full seed box or empty hopper, and place it in the planter airbox frame.
13. Install the box retaining pins in frame corners.

Refer to Figure 37
14. Unless you are at the field to plant, close the slide gate at the base of the hopper.
15. Return the walkboard to the closed position and install the latching pin.
16. If installing an empty hopper for planting, load seed (and lubricant). Otherwise, skip to step 24 on page 32.

Loading Hopper with Seed
Refer to Figure 38
17. At the top of the hopper, release the lid latch(es) and open the lid(s):
18. Check that the strainer basket is clean and in place.

CAUTION
Do not operate without a strainer:
It is an important safety feature that prevents accidental entry into the hopper. It also prevents larger foreign matter from clogging the air system.
19. Inspect the hopper itself to ensure that it contains only expected material.
Refer to Figure 39
If using an auger to load seed, access to the top of the hopper is eased by swinging down the top section of the center walkboard railing.

20. At each end of the swing-down section, pull the cross pins inward until the pins clear the holes. Swing the railing section in or out (it is easier to close if swung in).

Using Auxiliary Hydraulic Circuit
The optional auxiliary hydraulic kit includes a manual valve that diverts the marker hydraulic circuit to a pair of quick-connect ports at the back of the seed cart.

Refer to Figure 40
a. Extend or fold any marker that is raised. Return the cab control for that circuit to “off”.

b. Close any shut-off valve on your auger, and connect the auger to the auxiliary quick-connect ports at the back of the seed cart.

c. At the auxiliary selector valve (near marker sequence valve on left wing), move the handle from “Marker” to “Auxiliary”.

d. With no seed present, open the auger shutoff valve, and operate the cab control to determine which setting (“extend” or “retract”) turns the auger in the correct direction for seed lift.
e. Load seed. Shut off cab circuit, then auger. Return Aux valve control handle to “Marker” position.

f. Disconnect auger hydraulic hoses at Aux ports.

Refer to Figure 42 and Figure 43

21. Load seed. Cross-check the expected amount against the indicator marks molded into the side of the hopper. The figures at right show the approximate capacity by fill depth.

22. Connect optional hopper level sensor to monitor harness.

For planters equipped with optional 82 bu. or 150 bu. hoppers, an extra level sensor is included. Use Figure 42 or Figure 43, showing capacity, to place it at the level that suits your operation. The hopper sensor is in addition to the manifold sensor.

23. Close and latch lid(s).

Seed Loading Close-Out

24. If at the planting field, open the slide gate.
Dismounting a Hopper or Seed Box

1. Move the product to an area of level ground and sufficient room to maneuver a tractor or fork-loader.
2. Place tractor in park, shut off engine, and remove the key. If using the same tractor for container dismounting, block the planter transport tires.
3. Remove the walkboard lock pin (page 28).
4. Swing the walkboard completely open and secure with keeper (page 29).
5. For hoppers with optional level sensors, disconnect the sensor lead at the harness.

Refer to Figure 44

6. Remove pins at the corners of the airbox frame.
7. Close the slide gate at the base of the hopper or seed box.
8. Approach the hopper or seed box from the back.

**CAUTION**

**Tipping Hazard:**

A full seed box can weigh over 2500 lbs. Unless the container is known to be empty, make sure your tractor or fork lift is rated for and configured to lift this weight. Do not let anyone stand under or in front of the elevated seed box.

9. Slowly lift the full seed box or empty hopper, and back it away from the planter airbox frame.
10. Return the walkboard to the closed position and install the latching pin.
11. If changing between hopper and bulk seed box, use the Accessory Sensor Setup menu on the seed monitor console to disable the hopper sensor and avoid nuisance alarms. See DICKEY-john® Quick Start Guide.
12. If not installing another seed container, cover the airbox inlet with plastic sheeting and secure with tape or bungees.
Fertilizer Tanks (Option)

⚠️ **DANGER**

**Agricultural Chemical Hazard:**
Some chemicals will cause serious burns, lung damage and death. Avoid contact with skin or eyes. Wear proper protective equipment as required by chemical manufacturer. Avoid prolonged breathing of chemical fumes. Wear respirator and other protective equipment as required by chemical manufacturer. Seek medical assistance immediately if accident occurs. Know what to do in case of an accident.

### Filling Tanks

*Refer to Figure 45*

1. Connect nurse-tank hose to quick-fill coupler located behind the right-hand tank. Lock hose in place with cam-lock levers.
2. Close valve going to the in-line filter located just before the pump.
3. Open valves at each tank and at quick-fill coupler.
4. Fill tanks, then close valve at quick-fill coupler, and disconnect the nurse tank hose.

- Always close valve at filter when filling or storing any liquid in tanks. Failure to do so may allow material to run out of manifold outlets causing contamination from spillage.
- Always fill fertilizer tanks to equal levels. If one tank fills more quickly, shut that tank valve off to raise the level in the other tank.

### Ground Drive Pump

The liquid fertilizer option uses a ground drive positive displacement pump. For pump operation and pump maintenance, refer to the pump manual, supplied in the liquid fertilizer option package. For fertilizer settings, see the Seed Rate manual.

⚠️ **NOTICE**

**Plugging Risks:**
Do not allow fertilizer to remain in the tanks for extended periods or settling of material and system plugging will occur.

### Field Setup Checklist

Use the following checklist as a guide to ensure the planter is properly set up before using. You may need to
refer to the assembly instructions, operator’s manual or the Dickey-john manual to complete checklist.

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<th>MECHANICAL</th>
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<tr>
<td>? Tongue height preset on 3-point.</td>
<td>? Preset depth handles to 7 holes showing above “T”</td>
</tr>
<tr>
<td>? Set tractor 3-point hitch to “depth control” operation (and not load control)</td>
<td>? Preset down force springs to 1st notch (lightest) setting for most conditions, 2nd notch otherwise.</td>
</tr>
<tr>
<td>? Front to rear levelness.</td>
<td>? Set all unit mounted coulters to 1/4 inch (6 mm) above opener blade depth.</td>
</tr>
<tr>
<td>? Side to side levelness at gauge wheels.</td>
<td>? Check coulter alignment to row.</td>
</tr>
<tr>
<td>? Toe-in of wing frames at pull-bars.</td>
<td>? Check closing wheel alignment.</td>
</tr>
<tr>
<td>? Tongue hook latch operation.</td>
<td>? Set closing wheels to first notch (light setting).</td>
</tr>
<tr>
<td>? Marker extension and disk angle set.</td>
<td>? Correct seed meters and wheels installed.</td>
</tr>
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<th>HYDRAULIC</th>
<th>ROW CLEANERS</th>
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</thead>
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<tr>
<td>? All circuits connected with correct polarity.</td>
<td>? Check for correct installation of row cleaners on all rows if equipped.</td>
</tr>
<tr>
<td>? Tractor reservoir full.</td>
<td>? Check that row cleaners do not catch on hydraulic hoses.</td>
</tr>
<tr>
<td>? Field raise and lower.</td>
<td>? Carefully watch when folding planter the first time to ensure clearance of row cleaner.</td>
</tr>
<tr>
<td>? Inspect for leaks.</td>
<td></td>
</tr>
<tr>
<td>? Fold/unfold and tongue lock.</td>
<td></td>
</tr>
<tr>
<td>? Markers.</td>
<td></td>
</tr>
<tr>
<td>? Solenoid valve.</td>
<td></td>
</tr>
<tr>
<td>? Fan direction and speed.</td>
<td></td>
</tr>
<tr>
<td>? Hydraulic drive (if equipped).</td>
<td></td>
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<table>
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<th>ELECTRICAL</th>
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<td>? Power up monitor and check settings.</td>
<td>? Set rate drive sprockets for correct rate. (Note fertilizer rate is population dependent.)</td>
</tr>
<tr>
<td>? Power up and check hydraulic settings if not already done.</td>
<td>? Check for correct orifice plates.</td>
</tr>
<tr>
<td>? Check operation of selector valve for fold/makers.</td>
<td>? Check unused rows are correctly closed off.</td>
</tr>
<tr>
<td>? Check operation of lighting equipment.</td>
<td>? Fill system 1/2 full with water and check for leaks (run pump if possible).</td>
</tr>
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<th>AIR SYSTEM</th>
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<tr>
<td>? Manifold to PROBOX or poly hopper seal.</td>
<td>? Check all chains are lubricated, proper tension and move freely without kinks or tight spots. (This is very important for even metering.)</td>
</tr>
<tr>
<td>? Y-tubes turned on to correct rows.</td>
<td>? Set range &amp; transmission sprockets for desired rate.</td>
</tr>
<tr>
<td>? Air leaks (small leaks from PROBOX are normal.</td>
<td>? Check contact wheel pressure.</td>
</tr>
<tr>
<td>? Hose routings, no sags and no pinched hoses. (Check both folded and field positions.)</td>
<td>? Check action of contact wheel when raising and lowering it makes contact at ground height.</td>
</tr>
<tr>
<td>? Cleanout doors closed at meters.</td>
<td>? For hydraulic drive set cal number for correct crop and row spacing.</td>
</tr>
<tr>
<td>? Hoses fully connected to meters and locked.</td>
<td>? For hydraulic drive pre-run system using cal mode to verify proper hydraulic action.</td>
</tr>
<tr>
<td></td>
<td>? Lubricate slider joints on drive shafts if not already done.</td>
</tr>
<tr>
<td></td>
<td>? Check operation of electric clutches for point rows.</td>
</tr>
<tr>
<td>METERS</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>? Correct meters for desired crop. (Precision Finger Pickup or Singulator Plus.)</td>
<td></td>
</tr>
<tr>
<td>? Correct seed wheels for desired crop. (Wheels for planters are green in color, not black.)</td>
<td></td>
</tr>
<tr>
<td>? Seed wheels need to be fully seated in meter.</td>
<td></td>
</tr>
<tr>
<td>? Correct 12 finger or 6 finger units on all rows for your row spacing. (Can be checked by looking into cleanout door opening.)</td>
<td></td>
</tr>
<tr>
<td>? Check timing of meters in Twin Row corn.</td>
<td></td>
</tr>
<tr>
<td>? Cleanout doors closed.</td>
<td></td>
</tr>
<tr>
<td>? Meter assemblies properly secured in place.</td>
<td></td>
</tr>
<tr>
<td>? Graphite for Precision Finger Pickup meters or Graphite plus Talc for Singulator Plus meters (per Seed Rate manual).</td>
<td></td>
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</table>
Field Operation

Perform all steps in “Pre-Start Checklist” on page 18 and “Field Setup Checklist” on page 35.

Use Depth Control mode. If tractor 3-point hitch control is set for Load Control, hitch movement may cause changes in row unit depth resulting in uneven depth control.

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<td>2. Unfold marker on next-row side.</td>
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<tr>
<td>3. Set fan hydraulic circuit to low flow, engage circuit. Gradually adjust fan hydraulic flow to obtain (normally) 3800 rpm.</td>
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<tr>
<td>4. Engage optional hydraulic seed drive via seed monitor.</td>
<td>-</td>
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<tr>
<td>5. In the CLUTCH cluster of the CFM, set all switches, including Master, to ON.</td>
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<td>7. Stop. Assess planting depth, seed spacing, press wheel operation and fertilizer application (if in use)</td>
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<td>8. Make necessary adjustments</td>
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<td>3. Make turn</td>
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<td>4. Lower product</td>
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<td>5. Unfold marker on next-row side.</td>
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<td>6. Resume planting.</td>
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<td>3. Fold Marker</td>
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<td>4. Raise product</td>
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<td>1. Suspend operations as above, then</td>
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<td>2. Fold product</td>
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<td>3. Install transport locks</td>
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<td>4. Lights ON</td>
<td></td>
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<tr>
<td>5. Transport</td>
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</tbody>
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Monitor Operation

For monitor operation in the field, refer to the DICKEY-John® manual supplied with this unit, and the Seed Rate manual.
Airbox Operation

The function of the airbox is to mix seed with turbulent air from the hydraulic fan, which then exits through a manifold to the seed tubes which serve the row unit meters.

Fan Operation

Three (3) hydraulic hoses serve the fan, and must be properly connected. See “Hydraulic Hose Hookup” on page 13.

The fan must hook up to the case drain line first, and it must be operated with the return oil line connected to a low back pressure sump return on the tractor. Check with tractor manufacturer for proper connection of oil sump return line. A low back pressure quick disconnect is supplied with the planter for ease of connection to the tractor sump return line.

NOTICE

Motor Seal Damage Risk:
Do not apply pressure to the return line or operate with restricted return line or motor seals will be damaged.

Use tractor remote hydraulic valve flow control to set fan speed. Start with flow on low setting. 8 - 12 gpm (30-45 liters/min) is average flow.
Recommended butterfly valve setting is 0°. Recommended fan speed depends on planter configuration:

- **3800 rpm**: Planters using 2007+ 82 bu. or 150 bu. hoppers (or older hoppers with the vent line update)
- **3500 rpm**: 2006- planters, or any planter using bulk seed boxes or unvented hoppers

Do not run the fan at speeds over 4500 rpm or speeds under 3000 rpm. Fans operating at too high a speed create too much air flow causing seed to plug up the meter box. Fans operating at too low a speed do not create enough air flow to push the seed to the meter causing the seed tube to plug or meters to run empty.

If air system does not operate suitably with fan speeds between 3000-4500 rpm, see “Airbox Troubleshooting” on page 77, and then “Fan Adjustments” on page 50.

When starting empty you must blow seed out to the meters for two to four minutes to fill meters.

Before corn planting for the first time at the start of each season, add 1/3 cup (80 ml) graphite to bottom of airbox.

Watch monitor and adjust fan speed by increasing or decreasing hydraulic flow from tractor.

The monitor system includes a level sensor located below hopper to warn when box is empty. This typically provides three to four acres (1.2 to 1.6 ha) of run time before rows start going empty.

**Electric Clutch Operation**

Refer to Figure 49, which depicts the left product side on and the right side shut off.

Electric clutches allow for turning planting off while the planter is lowered. A clutch for each drive shaft allows for independent control of each side of the planter. The clutches are controlled via the CFM “CLUTCH” switches.

For regular field operation, turn “MASTER” 1, “Left” 2 and “Right” 3 clutch switches to the “ON” position. This activates the magnet on each clutch and allow clutch shafts to rotate.
To shut off planting on one or both sides to accommodate point row while product is lowered, switch either to “OFF” position. Turning the MASTER switch off disengages both sides. If the product has hydraulic meter drive, MASTER off also shuts down the drive motor.

**Electric Clutch Lockup**

Refer to Figure 50

In case of electric clutch failure, electric clutches can be bolted together.

1. Remove rubber plugs ① from oil shield ② to gain access to bolts ③.
2. Align cutouts at bolt holes ④.
3. Insert M8-1.25x14 mm long metric bolts ③.

Use only 14 mm length bolts as provided or machine damage will occur. Longer bolts will damage the clutch. Shorter bolts may not effect a lock-up.

If you observe half the hole obstructed by a metal disc ⑤, you are not at a cutout.

If the entire hole is obstructed by a metal disc ⑤, you are not at a cutout.

When at a cutout, the bolt will screw in with minimal resistance until the bolt head reaches the clutch face.

**NOTICE**

*Clutch Slippage Risk:*

*When lubricating the planter, do not allow lubricant to enter the clutch, or clutch slippage will result.*
Marker Operation

**DANGER**

Electrocution Hazard:
Check for overhead lines before operating markers. If a marker contacts an electrical line, all metal parts of the planter and tractor can have lethal voltages present. There may be no indication of this condition until a person completes the circuit to ground. At higher voltages, electrocution can occur without direct contact.

Before operating markers, make sure they are properly bled as described in “Bleeding Hydraulics” on page 83.

For markers to operate, the marker hydraulic circuit must be enabled:

Refer to Figure 52

1. On the CFM switch panel, set the “Marker/Fold” switch ① to Marker.

Refer to Figure 53

2. If the product is equipped with an auxiliary hydraulic system, set the selector valve ② (found near the sequence valve ③ at the marker base on the left wing) to “Marker”.

Dual markers are equipped with a sequence valve ③ to control lift sequence. Starting with both markers up, the sequence is:

1. Activate tractor hydraulic lever; right marker lowers while left marker stays up.
2. Reverse hydraulic lever; right marker raises while left marker stays up.
3. Activate hydraulic lever; left marker lowers while right marker stays up.
4. Reverse hydraulic lever; left marker raises while right marker stays up.
5. Pattern repeats.

Folding speed of dual markers is adjusted with adjustment screws on sequence valve body. Because excessive folding speed may damage markers, adjust markers to a safe folding speed according to “Marker Adjustments” on page 48.

To get both markers in the lowered position at the same time, activate hydraulic lever to lower one marker. After marker is lowered, move lever to opposite position then quickly reverse lever and hold until other marker is lowered.
Parking
For information on long-term storage, see “Storage” on page 43.
1. Fold planter. see “Folding the Planter” on page 24.
   Be sure to install cylinder lockup channels. Failure to do so may result in injury and/or damage to the planter.
2. Park planter on a level, solid area.
3. To prevent rolling, block tires securely.

**DANGER**

Roll-Away Hazard:
There is not enough weight on parking stand(s) to anchor planter. Planter wheels must be blocked when whitching from tractor. DO NOT unwhitch planter while on a steep slope.

4. If equipped, flush, drain, and close all valves on fertilzer system kit.

Refer to Figure 54

3 Point Hitch
1. Remove pin holding parking stand in “UP” position. Swing stand down. Pin stand in parking position. If the ground is soft, place a board or plate under the stand.
2. Remove wire snap lock pin from innermost hole on park stand mount. Swing support stand from underneath crossbar weldment.
3. Secure 3-point prop stands by inserting previously removed wire snap lock pin in lower outermost hole on park stand mount.
4. Lower tractor 3-point until planter is resting on parking stand.

Hydraulic Tongue Hitch
1. Remove hitch pin, pin holding parking stand in “UP” position.
2. Use tongue cylinder to lift planter high enough to fully swing down parking stand. Insert locking pin in parking stand.
3. Use tongue cylinder to lower planter onto parking stand. Pin parking stand.
4. Use tongue cylinder to lift tongue off tractor drawbar.

Either Hitch
1. Set all implement hydraulic circuits to Float to relieve pressure in lines.
2. Shut down hydraulics. Unplug hydraulic lines from tractor. Do not allow hose ends to rest on the ground.
3. Unplug planter light cable from tractor.
4. Unplug monitor harness from console.
5. 3-point: Unhook tractor from planter hitch.
6. Pull tractor away.
Storage

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

1. Empty hopper (page 79).
2. Close the seed box or hopper door (page 80).
   Clean out the air system (page 80).
3. Remove hopper or seed box (page 33).
4. Cover and seal off the opening at the top of the air box. Leave clean-out door slightly ajar to allow any condensed moisture to drain off.
5. Thoroughly clean seed and seed treatment residue from seed meters. See “Meter Clean-Out” on page 81, for more information.
6. Cap seed tubes to prevent pest entry.
7. If your planter is equipped with an optional fertilizer tank, clean tank and application hoses. Be sure to follow chemical manufacturer’s instructions when handling chemicals.
8. Thoroughly clean pump following instructions in the pump manual.
9. Unscrew caps on end of fertilizer booms and flush them out. Drain completely and replace caps.
10. Remove any dirt and debris that can hold moisture and cause corrosion.
11. Lubricate and adjust all roller chains.
12. Smear grease on exposed cylinder rods to prevent rust. Add a brightly-colored tag at the hitch as a reminder to de-grease the rods prior to next use (to avoid any risk that congealed grease might damage seals).
13. See “Lubrication” on page 96, for lubrication information.
14. Inspect product for worn or damaged parts. Make repairs and service during off season.
15. Use spray paint to cover scratches, chips, and worn areas on the planter to protect the metal.
16. Cover product with a tarp if stored outside.

Removing the seed box/hopper increases the life of the air box seals, which are otherwise apt to be permanently compressed if stored under load off-season.

Do not store optional bulk hopper outside on the ground. Raise it on blocks, securing it in place to prevent from falling over or blowing around by wind. Store inside if possible.
Adjustments

To get full performance from your Product, you need an understanding of all component operations, and many provide adjustments for optimal field results. Some of these are covered earlier in this manual. Even if your planting conditions rarely change, some of these items need periodic adjustment due to normal wear.

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<td>Seed Meter Setup and Adjustment</td>
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</tr>
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<td>-</td>
<td>Refer to Seed Monitor manual</td>
</tr>
</tbody>
</table>
Setting Material Rates

Planting Rate

Adjusting the planting rate requires the following:

1. setting seed rate:
   For ground-drive planters:
   adjusting drive speed range sprockets, and
   adjusting transmission sprockets,
   For hydraulic drive planters, setting monitor and drive controller,
2. preparing seed meters,
3. checking tire pressure.
4. checking planting rate.

Refer to Figure 55

Before setting the planting rate, run the “fill disk” function (hydraulic drive) or rotate the contact wheel ① (ground drive). Check that seed meters, seed tubes, and drives are working properly and free from foreign material. Check tire pressure.

Ground Drive Planting Rate

Contact wheel ① turns in opposite direction than main ground tire.

Drive Speed Range Sprockets

Select the correct drive speed range sprockets for your seed by referring to the “Seed Rate Charts” in the seed rate manual.

Loosen idler ② and remove chain ③. Remove retaining pins ④ from shafts and install speed range sprockets as necessary.

Make sure the correct sprockets have been installed in the DRIVING and DRIVEN locations as shown.
Reroute chain over sprockets and idlers as shown. Move idler into chain so chain has 1/4 inch (6 mm) slack in its longest span. Tighten idler and install lynch pins.

Transmission Sprockets

To change the planting rate, change the transmission sprocket combination. Refer to “Seed Rate Charts” in the seed rate manual.

Refer to Figure 56

Loosen idler ② and remove drive chain ③. Remove lynch pins ④ from shafts and rearrange driving and driven sprockets as necessary.
Reroute drive chain over sprockets and idlers as shown. Move idlers into chain so chain has 1/4 inch (6 mm) slack in its longest span. Tighten idlers and install lynch pins.

Tire pressure matters for both ground and hydraulic drive. Incorrect tire pressure causes incorrect ground speed readout. On ground drive, incorrect pressure causes incorrect or inconsistent seed metering.
Contact Wheel Drive  
Refer to Figure 57

You can adjust the down pressure the contact wheel exerts by adjusting the pressure on the springs.

- Dual contact drive has dual springs to set.
- Do not adjust springs so tight that it will bottom out when raised.

Refer to Figure 58

Before adjusting springs, raise planter and adjust wheel travel to obtain 1\(\frac{1}{2}\) inch (3.8 cm) clearance above the main tire.

Refer to Figure 59

You can adjust the amount of travel for the contact wheel by loosening the jam nuts and lengthening or shortening the threaded rod.

- This adjustment controls the timing of the seed meter drive when raising and lowering the planter. Increasing the gap between the tires causes seed flow to start and stop with the planter at a lower height. Decreasing the gap will cause seed flow to start and stop at a higher position.
- Be sure to check for springs bottoming after making this adjustment.
Checking Planting Rate

Cautious practice includes checking seed delivery rate prior to planting.

Although the seed monitor can reliably count singulated seeds, it does not count individual volumetric seeds, and several factors can cause even singulated reports to be inaccurate (such as incorrect speed calibration, Sensor Constant or Gear Ratio setup).

Methods of rate checking are described in detail in the Seed Rate Manual. The information on this page is an overview of the general process, which varies with the seed type and the product meter drive type.

Before checking rate, make sure that the seed monitor is configured with an accurate Ground Speed Constant. As delivered, the monitor may have an inappropriate value pre-loaded.

The DICKEY-john® Quick Start Guide for your product includes an initial value for this constant, but this value may not be optimal for your product, and does not include any adjustment for tire wear over time.

For reliable monitor reports, at the start of each season, perform a “GROUND SPEED CALIBRATION” over a 400ft/100m course, as described in the DICKEY-john® IntelliAg® Planter/Drill Control Operator's Manual. When completed and entered in the monitor, cross-check the reported implement speed against the tractor speedometer or other reference.

Checking Singulated Rate

A furrow check is the most accurate way to verify that you are seeding at your desired population value. This is done by planting for a short distance with one or two rows set to shallow depth and with press wheels tied up for no furrow closure. Seeds are counted in the furrow over a specific distance and the area rate is computed. Refer to the Seed Rate Manual for details.

The seed monitor will also be counting during the test, and comparing results provides confidence in the seed monitor display.

If the checked rate varies materially from the chart rate, or for hydraulic drive, from the programmed rate, it is likely that there is a product malfunction (such as contact drive tire slippage) or a configuration error that requires correction. Do not “calibrate” to correct unexpected variations in singulated rates.
Setting Fertilizer Rate

This page is an overview. For details on fertilizer rate setting, refer to the Seed Rate Manual, ManualB #.

⚠️ DANGER ⚠️

**Agricultural Chemical Hazard:**
Some chemicals cause serious burns, lung damage, and death. Avoid contact with skin or eyes. Wear proper protective equipment as required by chemical manufacturer. Avoid breathing of chemical fumes. Wear respirator as required by chemical manufacturer. Seek medical assistance immediately if accident occurs. Know what to do in case of an accident.

Fertilizer rate is controlled by pump rate (for the Great Plains ground drive pump). Consistent delivery across the product is controlled by orifice size at row unit drop-line points.

Consistent system operation also requires a correctly adjust relief valve and a well-maintained strainer ahead of the pump. See “Important Safety Information” on page 1 and “Important Safety Information” on page 1.

**Piston Pump**

The liquid fertilizer option uses a piston pump. For pump operation and pump maintenance refer to the pump manual, supplied in the liquid fertilizer option package.

The pump is driven by a ground contact wheel ①, and fertilizer rate is independent of seed rate. Coarse fertilizer rate is set by a sprocket ② on the ground drive assembly. Fine rate is set by a dial ③ on the pump. For settings, see the Seed Rate manual.

Great Plains recommends checking with your local Agronomist as soil conditions vary. Soil conditions in your area may need lesser or more amounts of fertilizer than represented in these charts. Do not exceed 12 gallons per acre (112 liters/ha) in any case.

Always remove pump drive chain when not in use. Do not operate planter pump when not applying material.

**Marker Adjustments**

See also:
“Marker Setup” on page 135 and,  
“Marker Maintenance” on page 84.

⚠️ CAUTION ⚠️

**Crushing and Sharp Object Hazards:**
You may be injured if hit by a folding or unfolding marker. Markers may fall quickly and unexpectedly if the hydraulics fail. Never allow anyone near the planter when folding or unfolding the markers.
Dual Marker Speed Adjustment

Refer to Figure 61

Adjust folding speed for dual markers with hex adjustment screws on sequence valve body. There is an adjustment screw for raising speed ① and one for lowering speed ②. You can identify adjustment screws by markings stamped in the valve body.

Turn adjustment screws clockwise to decrease folding speed and counterclockwise to increase folding speed. With tractor idling at normal operating speed, adjust marker folding to a safe speed. Excessive folding speed could damage markers and void the warranty.

After adjusting folding speed, tighten jam nuts on hex adjustment screws to hold settings.

Marker Disk Adjustment

⚠️ CAUTION ⚠️

Sharp Object Hazard:
Marker disks may be sharp. Use caution when making adjustments in this area.

Refer to Figure 62

To change angle of cut, and the width of the mark, loosen 1/2 inch bolts ⑥ holding disk assembly.

For a wider mark (W), increase the angle of the marker with respect to the tube ⑤. For a narrower mark (N), reduce the angle.

You can also invert the disc blade on the hub to change the direction of throw.

Tighten bolts ⑥.

The direction of travel (T) tends to drive the disk angle to Wide. If bolts are not tight enough, or loosen over time, the disk will slip into the Wide mark configuration.
Height Switch

The planter is supplied with a height switch ① that is used to activate the Drive when the planter is lowered for field operation.

Refer to Figure 63

1. Loosen the bolts holding the height switch bracket ② and rotate the switch ① and bracket away from the frame pivot ③.
2. Lower the planter to the height at which seed delivery should begin.
3. Rotate the switch towards the frame pivot until the spring actuator ④ just touches the frame.
4. Rotate the switch in until it clicks. Tighten the bolts to secure it in place. Be sure frame tube will not crush switch when unit is fully loaded.

It may be necessary to loosen the screws holding the switch and rotate the switch slightly on the bracket.

Fan Adjustments

Recommended fan butterfly valve setting is 0°. Recommended fan speed depends on planter configuration:

- 3800 rpm: 82 bu. (2890 l.) or 150 bu. (5290 l.) hoppers (or pre-2007 hoppers with the vent line update)
- 3500 rpm: bulk seed boxes or older unvented hoppers

Adjust the basic fan rate with the tractor hydraulic system and fan rpm display on seed monitor. Do not run the fan over 4500 rpm or under 3000 rpm.

Fans operating at too high a speed create too much air flow causing seed to plug up the meter box. Fans operating too slowly do not create enough air flow to push the seed to the meters, causing the seed tube to plug. If air system does not operate suitably with fan speeds between 3000-4500 rpm, refer to the troubleshooting chart, and then adjust the fan butterfly valve.

The butterfly valve may be helpful if your tractor can maintain a high, but irregular fan rpm. Set the rpm to above 3500 rpm with the valve completely open (0°). Adjust the valve angle in the 20-30° range until you achieve the desired seed flow consistency.
Row Implement Adjustments

To get full performance from your planter, you need a good understanding of row cleaner, coulter, fertilizer, opener, meter, seed firmer, and press wheel operation.

Frame-Mounted Row Accessories

Terra-Tine™ Adjustment

Refer to Figure 65

- All adjustments must be made with the unit in the fully raised position.

**NOTICE**

*Excess Wear Risk:*
Check that the Terra-Tine Row Cleaner tines DO NOT touch the coulter blade or any other attachments. Such contacts cause excess wear to all parts involved. At least 1/2 inch (13 mm) clearance is recommended.

1. When the blade is out of the soil, adjust the lock collar height to set the height of tine fingers flush with the bottom of coulter blade.

2. Side-to-side alignment can be done by rotating the shank mount around the vertical shaft and retightening the square head set screw.

Refer to Figure 66

3. Fore-to-aft adjustment is accomplished by adding or removing the extension arm ① to place the Terra-Tine Row Cleaner to either side of the coulter hub depending on the desired position or clearance between other attachments. Testing has shown better performance behind the hub, but available space may dictate the mounting position.
Frame-Mounted Coulters
Refer to Figure 67
At the shaft ①, adjust the coulter depth for a running depth ② of 4 to 4 ¹/₂ inches (10.2 to 11.4 cm) below ground level if off row, if on row as a no-till coulter operate at planting depth only ③. Refer to the Vantage I manual (204-376M) for further adjustments.
Do not adjust the spring ④ tension. It is factory pre-set.

Vantage I Applicator
Refer to Figure 68
At the back plate ⑤, adjust the tine height for a running depth ⑥ of 1 in. (2.5 cm) below ground level ③. Refer to the Vantage I manual (204-376M) for further adjustments.
25 Series Row-Unit Adjustments

Refer to Figure 69, which depicts a 25 Series row unit fully populated with all options supported on Product # (excepting Seed-Lok)

1. See “Row-Unit Down Pressure” on page 54. Each row-unit is mounted on the planter with parallel arms. This parallel-action mounting allows the row-unit to move up and down while staying horizontal. A cam varies the down-force.

2. See “Row Unit Shut-Off” on page 56. A row unit may be completely disengaged by locking it in the full up position.

3. See “Unit-Mount Cleaner Adjustments” on page 58. Optional row cleaners clear trash from the row, to a depth set by an adjustment.

4. See “Unit-Mounted Coulter Adjustments” on page 59. An optional disk coulter cuts remaining trash and begins opening the seed groove. Its working depth is set by the side gauge wheels and a mounting hole selection.

5. See “Row-Unit Planting Depth” on page 60. Row-unit double disk openers widen the coulter groove, making a seed bed. They have adjustments for angle and scraper clearance.

6. See “Side Gauge Wheel Adjustments” on page 61. Side gauge wheels are the primary control over seed depth. They have adjustments for depth and angle. An optional scraper also needs periodic adjustment.

7. See “Meter Exchange and Adjustments” on page 63. A seed tube mounted between the disks (not shown) delivers seed to the trench. It is fed by a seed meter which may have adjustments or interchangeable wheels.

8. See “Seed Firmer Adjustments” on page 70. An optional seed firmer (Keeton shown) minimizes seed bounce and improves soil contact. It may also deliver fertilizer.

9. See “Press Wheel Adjustments” on page 71. The press wheels close the furrow, gently pressing the soil over the seed to ensure good seed to soil contact for even emergence. They have adjustments for down-pressure, stagger and angles.

NOTICE

Plugging and Machine Damage Risk:
Do not back up with row-units in the ground. This will cause severe damage and row-unit plugging.
Row-Unit Down Pressure

Row-unit springs provide the down pressure necessary for row-unit disks to open a seed trench. The springs allow the row-units to float down into depressions and up over obstructions. Springs also provide down force on coulters when using optional row mounted coulters.

You can adjust down pressure individually for each row-unit. This is useful for penetrating hard soil and planting in tire tracks. For best results always adjust tractor tires so they are not ahead of 30 inch or 70 cm rows.

Use only enough down pressure to cut the seed trench and maintain proper soil firming over seed. Excessive row-unit down force will lead to premature wear on row-unit components. Excessive down force will also cause uneven seed depth.

Refer to Figure 70 through Figure 72

To adjust down pressure, use 1\(\frac{1}{8}\) inch (29 mm) open end wrench or tool stored under the walkboard. Position wrench on nut and pull down. Move adjustment cam to new setting. If using cast tool stored under the walkboard, be sure row unit is off the ground to fully relax springs.

Minimum and maximum settings are indicated by position of adjustment cam. Each notch on adjustment cam will increase the down pressure on the row-unit springs. Use the table below as a setting reference.

<table>
<thead>
<tr>
<th>Cam Notch</th>
<th>Pounds</th>
<th>Kilograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>zero (out of notch)</td>
<td>Maintenance Only</td>
<td></td>
</tr>
<tr>
<td>one</td>
<td>345</td>
<td>155</td>
</tr>
<tr>
<td>two</td>
<td>370</td>
<td>170</td>
</tr>
<tr>
<td>three</td>
<td>400</td>
<td>180</td>
</tr>
<tr>
<td>four</td>
<td>450</td>
<td>205</td>
</tr>
<tr>
<td>five</td>
<td>500</td>
<td>225</td>
</tr>
<tr>
<td>six</td>
<td>550</td>
<td>250</td>
</tr>
<tr>
<td>tip</td>
<td>Do Not Use</td>
<td></td>
</tr>
</tbody>
</table>

Do not set all rows any higher than notch 4. Using settings above this on all rows will create uneven depth control and improper function.

Individual rows may be set higher if running in heavy tire tracks.
Refer to Figure 73
The ideal amount of down-force causes the side gauge wheels to compress any loose surface soil, but not press a trench into subsoil.
To assess down-force, operate the product for a short distance on typical ground (with or without seeding), and stop. Leave the product lowered (row units in ground).
At several row units, inspect the furrow created by the opener discs, but prior to furrow closing by the press wheels.
Be sure to inspect rows both in and out of tire tracks.

Refer to Figure 74
1. If the side gauge wheels are leaving no tracks, or light tracks, increase down-force.
2. If the wheels are compressing trash and loose soil, and leaving clear tracks right at the top of the subsoil, down-force is probably correct and needs no adjustment.
3. If the wheels are creating a trench into the subsoil, down-force is too high and needs to be reduced.
Row Unit Shut-Off

**NOTICE**

**Machine Damage Risk:**
Do not lock up rear row units. They will strike other machine components in folding, and be damaged.

Alternate twin-row units (the front units) can be pinned in the up position to accommodate single-row spacing.

**Refer to Figure 75**

The lock-up pins ① for each front row unit are located in a storage hole ② in the row unit mount. To lock up a unit, the unit must be raised, and the pin moved to the lock-up hole ③ in the row unit shank.

If you lose a pin, the replacement part number is 805-033C

1. Raise the planter. Although this adjustment can be made with the planter lowered, the springs will be in tension, and will require more effort. The extra force may also damage tools.

2. Install lift assist cylinder locks. Lower parking stands.

3. Set the down pressure springs to the minimum force, per the instructions on page 54.

4. Raise the row unit high enough that the hole for the pin is above the lower parallel arm. This can be done in several ways, including:
   a. use a hoist at the rear of the shank ④
   b. use a jack under the shank extension ⑤

**WARNING**

**Machine Damage Risk:**
Raising a row unit on a block by lowering the planter is risky. Full lowering can easily damage components, and hydraulic failure is a safety hazard.

**Refer to Figure 76**

5. Remove the pin from the storage hole ② and insert and secure it in the lock-up hole ③.

6. Lower row unit until lock-up pin rests on lower parallel arm.

**NOTICE**

**Machine Damage Risk:**
Do not pin the row unit while it is in the lowered position. If the pin is inserted below the parallel arm, unit damage will occur when planting begins.
Refer to Figure 77

7. Shut off Y-tube port for the current row unit.

Disengage Meter

Refer to Figure 78

8. Uncouple meter drives for the locked-up rows. Pull shaft out and park pin in shallow detents.

**NOTICE**

*Machine Damage Risk:*
*Do not disable meters by removing them or chain drive damage will occur.*

9. Repeat for all rows needing lock-up.
10. Reset marker extension (page 135).
11. Reset monitor active row pattern and row spacing to avoid nuisance alarms.
Unit-Mount Cleaner Adjustments

Refer to Figure 79 and Figure 80

Optional Martin row cleaners are unit-mounted, using:
UMRC: Unit-Mount Row Cleaner (stand-alone), or
UMC-RC: Unit-Mount Coulter RC (on coulter bracket, with or without a coulter disk present).

There are two adjustments:
1. Wheel placement (forward or aft mounting hole, for more or less aggressive cleaning), and
2. Wheel height, adjusted by a stop. Cleaner arms float.
   The stop only sets the lowest position.

In UMRC mount, a pinned cross-tube ③ on the mount adjusts the depth. In UMC-RC (coulter) mount, a sliding down-stop block ⑤ adjusts how close to the ground the row cleaners operate.

The row cleaner needs to be adjusted for your conditions, crop changes, and as coulters and openers wear. Ideally, cleaners contact only the trash, and do not disturb the soil. If allowed to “dig”, row cleaners can reduce seed coverage.

Suggested initial depth is tine tips at ground level.

Make the adjustment with the planter raised. Install lift-assist cylinder locks. Also check bolt ⑥ tightness prior to each planting session, to avoid down-stop slippage.

To adjust the row cleaner:
1. Determine the height adjustment required. Measure from the lowest tine to the ground. Determine the desired new measurement.
2. Support most or all of the weight of the arm to prevent injury and ease the adjustment. Loosen bolts ⑥ on UMC-RC. Remove bent pin ② on UMRC.
3. Support arm at desired height.
4. UMRC: Slide adjustment tube ① until cross-tube ③ contacts arm at target height. Insert bent pin ② in whichever hole pair is most in alignment.
5. UMC-RC: Slide the down-stop ⑥ on the arm ④:
   - back toward the pivot for shallower cleaning, or
   - forward toward the tines for deeper cleaning.
   Tighten the bolts ⑤. Each possible hole pairing adjusts the tine height by about 3/4 inch (19 mm).
6. Check the new height measurement.

Refer to Row Cleaner manual 204-085M-A for further information on use, adjustment and maintenance of row cleaners.
Unit-Mounted Coulter Adjustments

The ideal operating depth for coulters is $\frac{1}{4}$ inch (6 mm) above opener depth. Although they may have originally been set to this depth, coulter (and opener) blades wear with time, and may need adjusting.

Adjusting the coulter depth is accomplished by re-mounting the coulter blade in one of the six mounting holes arranged in a staggered pattern in the coulter bracket.

Refer to Figure 81 and Figure 82

Raise planter and install cylinder locks before working on coulters. Row unit may be fully lowered or locked up. Do not attempt to move blade when the current or new position causes it to contact the ground during the adjustment. Be careful around the front end of row units. Row clear tines and coulter blades may be sharp.

To adjust coulter depth:

1. Dismount row cleaner (if present) to reduce risk of injury.
2. Determine the present opener and coulter depths.
3. Note which bracket hole the coulter is presently using.
4. Determine which new hole will position the coulter closer to the $\frac{1}{4}$ inch-above depth. See the table below. If none, don’t move it.
5. Remove the $\frac{5}{8}$-11 x 4 inch bolt, lock washer and nut (7 in Figure 81).
6. Move the blade to the new position. Insert the bolt, and tighten on the lock washer and nut.

<table>
<thead>
<tr>
<th>Hole Number</th>
<th>Depth of (new) coulter blade relative to (new) opener blades</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1 inch (25 mm) above</td>
</tr>
<tr>
<td>3</td>
<td>$\frac{5}{8}$ inch (16 mm) above</td>
</tr>
<tr>
<td>5</td>
<td>$\frac{1}{4}$ inch (6 mm) above</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>$\frac{3}{8}$ inch (9.5 mm) below</td>
</tr>
<tr>
<td>6</td>
<td>$\frac{3}{4}$ inch (19 mm) below</td>
</tr>
</tbody>
</table>

7. Re-adjust openers, if installed.

If a worn coulter cannot be adjusted to satisfactory operating depth, replace coulter blade.
Row-Unit Opener Disk Adjustments

Opener Disc Contact Region

Refer to Figure 83

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

The ideal spacing causes the blades to be in contact for about one inch. If you insert two pieces of paper between the blades, they should slide to within zero (touching) to 1.5 inches (3.8 cm) of each other. If zero, the gap between the blades should not be significantly greater than the thickness of two sheets of paper.

If the contact region is significantly larger or there is a large gap, it needs to be adjusted by moving one or more spacer washers.

Adjusting Disc Contact

Refer to Figure 83 and Figure 84

1. Raise the product and install lift cylinder locks.
2. Remove the side gauge wheels on the row unit in need of adjustment.
3. Remove the bolt retaining the opener disc on one side. Carefully remove the disc. Do not lose the hub components and spacer washers. Make note of how many spacer washers are between the disk and the nut bar.

When the bolt is fully removed from the disk, a dust cap or hold-down bracket will be loose.

4. To reduce the spacing between the discs (the normal case), move one spacer washer from the inside to the outside of the disc. Do not discard any spacers. They will be moved to the inside upon eventual replacement of a completely worn out blade.

5. Re-assemble and check disk contact.

Row-Unit Planting Depth

Refer to Figure 85

Side depth wheels control row-unit planting depth. The position of an adjustable T-handle stop determines planting depth.

Set planting depth by adjusting handle. To adjust, first raise row-units slightly, then lift and slide handle on top of row-units. Adjust all handles to the same setting.

For shallower planting, slide handle forward toward meter.

For deeper planting, slide handle back from meter.
Side Gauge Wheel Adjustments

Refer to Figure 86

The side gauge wheels have two, interrelated adjustments:

- angle of side gauge wheel, and
- distance between side gauge wheels and disks.

Refer to Figure 87

Adjust side-gauge-wheel angle so wheels contact row-unit disks at the bottom of wheel at 2 inch planting depth and gaps open $\frac{3}{8}$ to $\frac{5}{8}$ inches (9.5 to 16 mm) at top. Check with row-units in soil so wheels are held up.

At the same time, keep side gauge wheels close to opener disks so openers do not plug with soil or trash. However, wheels should be out far enough so disks and wheels turn freely.

Refer to Figure 88

To adjust side gauge wheels:

1. Raise planter slightly removing weight from side gauge wheels.
2. Loosen hex-head bolt ①. Move wheel and arm out on o-ring bushing.
3. Loosen pivot bolt ②. Turn hex adjuster ③ so indicator notch ④ is at 5 o’clock to 7 o’clock.
   - Use this as the starting point for adjustment.
4. Move wheel arm in so side gauge wheel contacts row unit disk. Tighten hex-head bolt ① to clamp arm around bushing and shank.
5. Check wheel-to-disk contact at 2 inches (5 cm) planting depth. Lift wheel 2 inches (5 cm) and release. When let go, wheel should fall freely.
   - If wheel does not contact disk at bottom to area where blade leaves contact with soil, move hex adjuster until wheel is angled for proper contact with disk.
   - If wheel does not fall freely, loosen hex-head bolt ① and slide wheel arm out just until wheel and arm move freely. Tighten hex-head bolt ① per grade:
     - $\frac{1}{2}$ inch Grade 5 bolt, 76 ft-lbs (105 N-m).
     - $\frac{1}{2}$ inch Grade 8 bolt, 110 ft-lbs (150 N-m).
6. Keep turning hex adjuster and moving wheel arm until the wheel is adjusted properly. When satisfied, tighten pivot bolt ② to 110 ft-lbs.
   - Use “Torque Values Chart” on page 130 for reference.
Adjusting Gauge Wheel Scrapers

Refer to Figure 89

Scrapers are optional, and may be useful in moist or sticky soils that tend to accumulate on gauge wheels and reduce intended planting depth.

To adjust scrapers:

1. Loosen nut ⑤.
2. Slide scraper ⑥ toward gauge wheel ⑦ until scraper touches tire.
3. Slide scraper ⑥ away from wheel ⑦ leaving a 1/8 inch gap at ⑧.
4. Rotate scraper left and right around bolt, making sure it cannot touch tire if bumped in field. If it can touch tire, back scraper away from wheel until it cannot.
5. Center scraper angle on bolt ⑤ until gap ⑧ is constant.
6. Tighten nut ⑤.
Meter Exchange and Adjustments

Meter Removal
1. Clean out meter. See “Meter Clean-Out” on page 81.

Refer to Figure 90
2. Slide the retaining ring up on the seed hose, and remove the seed hose.

Refer to Figure 91
3. Release the lower latch.

Refer to Figure 92
4. Release the upper latch and swing the meter mount away from the meter.
Refer to Figure 93
5. Lift up, then back, and remove the meter.

Refer to Figure 94
6. While the meter is removed, take time to inspect the meter drive chain 1, idlers 2 and drive sprocket 3, and perhaps perform the periodic chain lubrication.
Singulator Plus™ Meter Wheel Replacement

Choose the correct seed meter wheel for the type of seed you will be using. Be sure to use the same wheel type on all meters.

**NOTICE**

*Meter Wheels Not Interchangeable:* Seed meter wheels for the 25 Series row units are made of a green color material and are not interchangeable with the other Great Plains seed meter wheels for other machines. Use only green wheels in 25 Series row units.

1. Clean out meter. For more information, see “Meter Removal” on page 63

Refer to Figure 95

2. Push in spring-loaded wheel retainer and make 1/4 turn. Pull off wheel retainer and spring.

Refer to Figure 96

3. Pry the seed meter wheel out about 1/4 inch (6 mm) using the tool stored under the walkboard, and spin backward to clean out seeds from top pockets.

Refer to Figure 97

4. Remove seed meter wheel.
Refer to Figure 98

With the seed meter wheel removed, you may want to check the meter for internal damage or trash.

Some wear on top edge of slide is normal. Excess wear is cause for replacement.

5. When changing crops be sure to clean out air system before installing new meters or wheels. See “Air System Clean-Out” on page 80.

6. Place new wheel on meter wheel shaft. Seat wheel fully on cross-pin.

7. Replace spring-loaded wheel retainer. Make $\frac{1}{4}$ turn to seat cross-pin in shallow groove of retainer.
Meter Installation
Installation is the reverse of the removal process, with two steps omitted.

Refer to Figure 99
1. Insert the meter.
   ① Insert the top meter tab (with the hook).
   ② Align the meter base with the latch plate ears.
   ③ Insert the bottom meter tab.
   Mind the lower latch, as it tends to swing under the meter base and block mating with the latch plate.

Refer to Figure 92 on page 63
2. Engage the upper latch.

Refer to Figure 91 on page 63
3. Engage the lower latch, and swing the mounting plate into engagement with the meter. It may be necessary to spin the drive coupler to ease this.

Refer to Figure 90 on page 63
4. Slide the seed hose over the meter inlet tube, and then slide the retaining ring down the seed hose.

Refer to Figure 100
5. Release the upper latch.

Engage Meter
Couple meter drive to active meter.

Refer to Figure 101
6. Pull cross-pin away from meter and out of shallow detent.
7. Rotate pin 1/4 turn and release into deeper detent.
8. Pin may not fully seat on release, but will automatically seat during next operation of drive system.
25P Finger Meter Adjustments

Applies only to 10HD and 25P Series openers.

The finger pick-up meter has an adjustable brush, and alternate inserts are available for the backing plate. The brush has been pre-set to the optimum setting for most seed sizes. The factory-installed insert is the “A” insert.

Optimum planting speed is $4\frac{1}{2}$ to 5 miles per hour (7.2-8 kph). Excess speed causes poor spacing performance due to seed tube bounce, and may also cause improper depth control due to row unit bounce.

Always pay attention to your implement name monitor. Compare actual seed usage to your estimates.

Fine-tune your implement name by thoroughly checking all key components including: seed tubes, chains, sprockets, tire pressure, seed monitor, double disk openers, gauge wheels, seed firmer, closing wheels, parallel arms, and the row unit itself.

**Finger Meter Brush Adjustment**

The brush reduces or eliminates “doubles” (delivering two seeds per finger), but if set too aggressively can cause “skips” (delivering no seed on some fingers). As needed, adjust for minimal doubles and skips.

These instructions describe the current finger pickup meter shipped with new Great Plains implement names, which has an integrated adjustment lever for the brush. If you have added pre-existing finger meters after purchase, there is some chance that you may have the previous model meter, adjusted by screwdriver rather than lever. If so, rely on counting detents to determine the setting. Not all have 9 detents.

Refer to Figure 102

<table>
<thead>
<tr>
<th>Bag Weight (80,000 seeds)</th>
<th>Seeds Per Pound</th>
<th>Brush Setting</th>
<th>Seeds Per Kilogram</th>
<th>Bag Weight (80,000 seeds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rounds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65 lbs</td>
<td>1230 or less</td>
<td>1</td>
<td>2710 or less</td>
<td>29.5 kg</td>
</tr>
<tr>
<td>65 to 55 lbs</td>
<td>1230 to 1450</td>
<td>2</td>
<td>2710 to 3195</td>
<td>29.5 to 24.9 kg</td>
</tr>
<tr>
<td>55 to 45 lbs</td>
<td>1450 to 1780</td>
<td>3</td>
<td>3195 to 3925</td>
<td>24.9 to 20.4 kg</td>
</tr>
<tr>
<td>45 to 35 lbs</td>
<td>1780 to 2300</td>
<td>4</td>
<td>3925 to 5070</td>
<td>20.4 to 15.9 kg</td>
</tr>
<tr>
<td>35 lbs</td>
<td>2300 or more</td>
<td>5</td>
<td>5070 or more</td>
<td>15.9 kg</td>
</tr>
<tr>
<td>Flats</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 lbs</td>
<td>1780 or less</td>
<td>1</td>
<td>3925 or less</td>
<td>20.4 kg</td>
</tr>
<tr>
<td>45 to 35 lbs</td>
<td>1780 to 2300</td>
<td>2</td>
<td>3925 to 5070</td>
<td>20.4 to 15.9 kg</td>
</tr>
<tr>
<td>35 lbs</td>
<td>2300 or more</td>
<td>3</td>
<td>5070 or more</td>
<td>15.9 kg</td>
</tr>
</tbody>
</table>

The adjustable brush provides additional flexibility to accommodate a wide range of seed sizes. Use lever to gently rotate the brush into position.

The settings range from 1 to 5 with detents at each half step, for a total of 9 detents. The factory default setting is 2 1/2. Although the numbers are molded into the meter housing, only “1” and “5” may be visible. To ensure consistency, rotate the lever fully counter-clockwise (1), and count detents as you advance it to the desired setting.

Use the general guidelines in the table below to adjust the brush position to your seed size and shape. The numbers listed correspond to the numbers printed on the outer housing of your meter. If there is a decal on your meter, its units are seed size in pounds per 80,000 seed bag.
Finger Meter Inserts

Refer to Figure 103

The backing plate ① is equipped with an “A” insert ② for Corn, and a “C” insert for Sunflower. In tests, these inserts provide the best performance in most seed sizes. However, there are alternate inserts that can be used. Before changing to a different insert, please consult with a Great Plains service representative for a recommendation.

The insert type is molded into the back. Changing inserts requires meter disassembly.

NOTICE

Meter Reliability Risk:

Be cautious in using seed treatments, additives, and other chemicals when possible. They can cause meter performance problems and premature wear. If graphite is used, use Precision Planting® planting graphite or Great Plains graphite, which is less abrasive. Generally, seeds treated with Maxi, Capitan, and similar coatings benefit from graphite. Always store meters in a dry, secure place. Moisture, temperature, nest-building insects and rodents can create problems. Always pay attention to your seed monitor and operating manual. Monitor the amount of seed you are planting compared to expectations. Investigate abnormalities!

Sunflower Meter Configurations

Review the finger pickup meter configuration, based on the seed size. See chart below. See “Exchanging Finger Sets” on page 89 for component removal and installation instructions.

The standard Sunflower configuration is suitable for #4 and #3 seed sizes. Larger seeds may require the Corn meter configuration. Using a finger pickup meter for Confection seeds is not recommended.

Finger Pickup Configurations for Sunflower

<table>
<thead>
<tr>
<th>Meter Component</th>
<th>#4</th>
<th>Oil Seed Size</th>
<th>#3</th>
<th>Oil Seed Size</th>
<th>#2</th>
<th>Confection Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>~16500 seeds/kg</td>
<td>(~7500 seeds/pound)</td>
<td>~14300 seeds/kg</td>
<td>(~6500 seeds/pound)</td>
<td>~12100 seeds/kg</td>
<td>(~5500 seeds/pound)</td>
</tr>
<tr>
<td>① Finger Set</td>
<td>343067°</td>
<td>(12-finger sunflower)</td>
<td>343067°</td>
<td>(12-finger sunflower)</td>
<td>343029°</td>
<td>(12-finger corn)</td>
</tr>
<tr>
<td>② Backing Plate</td>
<td>342108°</td>
<td>(Insert C)</td>
<td>342108°</td>
<td>(Insert C)</td>
<td>342110°</td>
<td>(Insert A)</td>
</tr>
<tr>
<td>③ Brush Block</td>
<td>343091°</td>
<td>(brushless block)</td>
<td>343091°</td>
<td>(brushless block)</td>
<td>343052°</td>
<td>(adjustable brush block)</td>
</tr>
</tbody>
</table>

c. These components are included in the standard 890-856C Corn meter.

s. These components are included in the standard 890-912C Sunflower meter, and the 403-659A Conversion Kit.
Seed Firmer Adjustments
25 Series row units accept one of two optional firmers.

⚠️ CAUTION

Sharp Object Hazard:
Row unit disk blades may be sharp. Use caution when making adjustments. To adjust the Keeton Firmer, lower the planter until the disks of the row units are resting on the ground.

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

Refer to Figure 104
The Firmer is provided with a preset tension which is recommended for using the first year. The tension screw 1 can be tightened in subsequent years according to your needs. Firmers should provide just enough tension to push seeds to the bottom of the trench.

Measure the distance from the ground to the head of the tension screw. This distance should be 4 to 4 1/2 inches (10.2 to 11.4 cm). If not, loosen the bolts in the mounting bracket and select different holes until the proper measurement is attained.

Seed-Lok® Seed Firmer 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 105 (which depicts a row unit with discs, side depth wheels/arms and press wheels removed for illustrative purposes - removal is not necessary for lock/unlock)

To lock up Seed-Lok® wheels:
1. Raise planter. Insert lift assist cylinder locks.
2. Lift Seed-Lok® lock-up handle 1 until lever stop 2 is free to rotate.
4. Push up on Seed-Lok® wheel 5 until wheel arm latches up 6.

To release a locked-up Seed-Lok®:
1. Insert a 1/4 inch tool drive tip in the tool hole 5 of the handle 1. Alternatively, lift up on the wheel 4.
2. Rotate the handle clockwise (handle arm up) until the Seed-Lok® wheel releases at the latch point 6 and falls free.

Engage the lever stop under the handle 2 when Seed-Lok® is in use. If left disengaged 3, a furrow obstruction could cause unintended lock-up.
3. While holding the handle up, rotate the raised portion of the lever stop ② under both sides ② of the handle at the arm end. Remove the tool.

**Seed-Lok® Seed Firmer Lock-Up (older style)**

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 106*

To lock up Seed-Lok® wheels:
1. Raise planter. Insert lift assist cylinder locks.
2. Rotate Seed-Lok® lock-up handle ① 90 degrees down on top of row unit body.
3. Push up on Seed-Lok® wheel ② until wheel arm latches up.

**Press Wheel Adjustments**

Attached to the rear of each row-unit is one of several press wheel options.

To provide consistent seed firming, the press wheels are free to move downward from their normal operating position. This system maintains pressing action even if the row-unit arm is lifted when the disks encounter obstructions.

*Refer to Figure 107*

Press wheels are attached to each row-unit body. The press wheels close the seed trench and gently press soil over seed.

An adjustable spring in the press wheel mechanism creates the down pressure needed to close the seed trench. The amount of force needed will vary with field conditions.
To adjust, move adjustment handle.

- For less down pressure, move handle forward toward planter.
- For more down pressure, move handle back away from planter.

Increased press wheel spring force may require increased row-unit down force to maintain depth.

The factory setting on the press wheel is staggered to achieve optimum residue flow.

Refer to Figure 108

To adjust press wheels from staggered to even, remove $5/8$ inch bolt 1, and lock washer 3. Reinstall the spacer 4, press wheel 5 and hardware to the other hole location.

Press Wheel Centering

If one press wheel is running in the seed trench, or the wheels are not centered over the trench, the angle 7 of the press wheel assembly can be adjusted as follows:

Refer to Figure 109

1. Determine how far, and in which direction, the press wheel assembly needs to move to center the wheels.
3. Loosen the 1/2 inch hex-head bolts 9 and 10.
4. Turn the hex head cam 11 under the forward hex head jam bolt 8, and move the required amount.
5. Tighten both hex-head bolts 9 and 10.

If press wheel adjustments do not provide satisfactory furrow closing, your conditions may require alternate press wheels. A variety of wheel assemblies are available. Consult your Great Plains dealer.

Do not loosen the square-head bolts forward of the hex-head bolts.
**Troubleshooting**

For seed monitor issues, see also the DICKEY-john® Planter/Drill Control Operator’s Manual, “TROUBLESHOOTING & ALARMS” section.

### General Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population Alarms</strong></td>
<td>False alarms or actual seed rate errors due to monitor setup with incorrect row count, spacing or active rows</td>
<td>Review planter configuration and monitor setup.</td>
</tr>
<tr>
<td><strong>Planting too little (Incorrect seed rate)</strong></td>
<td></td>
<td>Check seed rate information and planter rate setup.</td>
</tr>
<tr>
<td></td>
<td>Incorrect seed wheel cell count or finger count.</td>
<td>Use chart rates for installed components, or replace wheels or finger meters. Charts are based on either 6 finger or 12 finger meters or various wheel counts.</td>
</tr>
<tr>
<td></td>
<td>Incorrect seed wheel cell size can cause skips</td>
<td>Install meter wheels with cell sizes recommended for seed size.</td>
</tr>
<tr>
<td></td>
<td>Brush too tight on finger meter</td>
<td>Adjust brush (page 68).</td>
</tr>
<tr>
<td></td>
<td>Low contact drive tire pressure</td>
<td>Inflate all tires to recommended levels (page 117).</td>
</tr>
<tr>
<td></td>
<td>Meter drive not engaged</td>
<td>Engage drive coupler (page 67).</td>
</tr>
<tr>
<td></td>
<td>Excessive field speed.</td>
<td>Reduce field speed.</td>
</tr>
<tr>
<td></td>
<td>Incorrect tire size or air pressure.</td>
<td>Use correct chart for tire brand and model (see Seed Rate manual). Use correct air pressure, page 117.</td>
</tr>
<tr>
<td></td>
<td>Actual field size is different.</td>
<td>Verify field size.</td>
</tr>
<tr>
<td></td>
<td>Plugged row-unit seed tube.</td>
<td>Lift planter, expose bottom of seed tube and clean out.</td>
</tr>
<tr>
<td></td>
<td>Thrown or worn drive chains</td>
<td>Check drive chains.</td>
</tr>
<tr>
<td></td>
<td>Worn sprockets, chain idlers or meter components.</td>
<td>Replace worn items.</td>
</tr>
<tr>
<td></td>
<td>Loose assemblies in finger meters</td>
<td>Have dealer service meters.</td>
</tr>
<tr>
<td></td>
<td>Improper gap on speed sensor.</td>
<td>Check speed sensor on planter for 1/16 inch to 1/8 inch (1.6-3.2 mm) gap from wheel. Improper gap can cause erratic speed signal causing monitor to falsely report improper planting rate.</td>
</tr>
<tr>
<td></td>
<td>Incorrect speed sensor constant</td>
<td>Perform speed calibration per DICKEY-john® monitor manual.</td>
</tr>
<tr>
<td></td>
<td>Rate may not actually be low</td>
<td>When planting volumetric seeds, the monitor functions as a blockage detector, and does not count all seeds.</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Planting too much</td>
<td>Incorrect seed rate.</td>
<td>Check seed rate setup per Seed Rate Manual.</td>
</tr>
<tr>
<td></td>
<td>Incorrect seed wheel can cause doubles.</td>
<td>Install meter wheels with cell sizes recommended for seed size.</td>
</tr>
<tr>
<td></td>
<td>Incorrect seed wheel cell count or finger count.</td>
<td>Use chart rates for installed components, or replace wheels or finger meters. Charts are based on either 6 finger or 12 finger meters or various wheel counts.</td>
</tr>
<tr>
<td></td>
<td>Brush too loose on finger meter.</td>
<td>Adjust brush (page 68).</td>
</tr>
<tr>
<td></td>
<td>Actual field size is different.</td>
<td>Verify field size.</td>
</tr>
<tr>
<td></td>
<td>Incorrect tire size or air pressure.</td>
<td>Use correct air pressure, page 117.</td>
</tr>
<tr>
<td></td>
<td>Improper main shaft sprocket.</td>
<td>Check sprockets. Hydraulic drive and ground drive use 23-tooth.</td>
</tr>
<tr>
<td></td>
<td>Improper gap on speed sensor.</td>
<td>Check speed sensor on planter for $\frac{1}{16}$ inch to $\frac{1}{8}$ inch gap from wheel. Improper gap can cause erratic speed signal causing monitor to falsely report improper planting rate. Monitor may also falsely report a low rate on soybeans by as much as 5 percent due to difficulty in counting all of the seeds.</td>
</tr>
<tr>
<td>Uneven seed spacing</td>
<td>Hydraulic meter drive motor rpm too low for reliable control by proportional valve.</td>
<td>1. Increase field speed. 2. Use a seed wheel with lower cell count. Switch from 12 finger meters to 6 finger meters.</td>
</tr>
<tr>
<td></td>
<td>Excessive field speed.</td>
<td>Reduce field speed.</td>
</tr>
<tr>
<td></td>
<td>Unclean seed.</td>
<td>Use clean seed.</td>
</tr>
<tr>
<td></td>
<td>Seed-Lok® plugging.</td>
<td>Lock up Seed-Lok®, page 70.</td>
</tr>
<tr>
<td></td>
<td>Row-unit disks not turning.</td>
<td>See Row-unit disks not turning freely. in this Troubleshooting chart.</td>
</tr>
<tr>
<td></td>
<td>Plugged row-unit seed tube.</td>
<td>Lift up planter, expose bottom of seed tube and clean out.</td>
</tr>
<tr>
<td></td>
<td>Worn/rusted sprockets and/or chain idler or bearings.</td>
<td>Check and replace any worn/rusted sprockets or chain idlers. Inspect chain for slack.</td>
</tr>
<tr>
<td></td>
<td>Partially plugged row-unit seed tube.</td>
<td>Lift up planter, expose bottom of seed tube and clean out.</td>
</tr>
<tr>
<td></td>
<td>Lack of proper seed lubrication on seed.</td>
<td>See “Seed Lubricants” on page 102.</td>
</tr>
<tr>
<td></td>
<td>Use of excessively sticky or wet seed treatment.</td>
<td>Check your treatment.</td>
</tr>
<tr>
<td></td>
<td>Inadequate contact wheel spring pressure.</td>
<td>Check for correct tire air pressure, page 117.</td>
</tr>
<tr>
<td></td>
<td>Air pressure in contact wheel incorrect.</td>
<td>Check for correct tire air pressure, page 117.</td>
</tr>
<tr>
<td>Planter does not fold or unfold fully</td>
<td>Fold cylinders out of phase.</td>
<td>Re-phase cylinders, refer to page 26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bleed fold circuit, refer to page 83</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Uneven seed depth</td>
<td>Excessive field speed.</td>
<td>Reduce field speed.</td>
</tr>
<tr>
<td></td>
<td>Planting conditions too wet.</td>
<td>Wait until drier weather.</td>
</tr>
<tr>
<td></td>
<td>Incorrect coulter depth setting.</td>
<td>Set coulters to run $\frac{1}{4}$ inch above seed depth (bottom of opener blades).</td>
</tr>
<tr>
<td></td>
<td>Excessive or improper row unit down pressure spring setting.</td>
<td>See 25 series row-units, page 53.</td>
</tr>
<tr>
<td></td>
<td>Damaged seed tubes.</td>
<td>Check seed tubes for damage.</td>
</tr>
<tr>
<td></td>
<td>Seed-Lok® building up with dirt.</td>
<td>Lock up Seed-Lok®, page 70.</td>
</tr>
<tr>
<td></td>
<td>Row-unit not penetrating low spots.</td>
<td>Adjust row-unit, see instructions beginning on page 53.</td>
</tr>
<tr>
<td></td>
<td>Rough planting conditions.</td>
<td>Rework the field.</td>
</tr>
<tr>
<td></td>
<td>Seed firmer not in place and set to correct tension.</td>
<td>See “Seed Firmer Adjustments” on page 70.</td>
</tr>
<tr>
<td>Excessive seed cracking.</td>
<td>Incorrect seed wheel cell size.</td>
<td>Use correct size wheel for seeds you are planting.</td>
</tr>
<tr>
<td></td>
<td>Unclean seed.</td>
<td>Use clean seed.</td>
</tr>
<tr>
<td></td>
<td>Damaged, old or dry seed.</td>
<td>Use clean, new seed.</td>
</tr>
<tr>
<td>Press wheel or row-units plugging</td>
<td>Planting conditions too wet.</td>
<td>Wait until drier weather.</td>
</tr>
<tr>
<td></td>
<td>Too much pressure on row-units.</td>
<td>Reduce down pressure on row-units.</td>
</tr>
<tr>
<td></td>
<td>Coulters set too deep, bring up excess dirt and moisture.</td>
<td>Check coulter adjustment.</td>
</tr>
<tr>
<td></td>
<td>Planter not set to run level from front to rear.</td>
<td>Check tongue height page 15.</td>
</tr>
<tr>
<td></td>
<td>Backed up with planter in the ground.</td>
<td>Clean out and check for damage.</td>
</tr>
<tr>
<td></td>
<td>Failed disk bearings.</td>
<td>Replace disk bearings.</td>
</tr>
<tr>
<td></td>
<td>Disk blades worn.</td>
<td>Replace disk blades.</td>
</tr>
<tr>
<td></td>
<td>Scraper worn or damaged.</td>
<td>Adjust or replace scraper.</td>
</tr>
<tr>
<td></td>
<td>Side depth wheels not set correctly.</td>
<td>See “Side Gauge Wheel Adjustments” on page 61</td>
</tr>
<tr>
<td>Row-unit disks not turning freely.</td>
<td>Row-unit plugged with dirt.</td>
<td>Clean row-unit.</td>
</tr>
<tr>
<td></td>
<td>Planting conditions too wet.</td>
<td>Wait until drier weather.</td>
</tr>
<tr>
<td></td>
<td>Incorrect side depth wheel adjustment.</td>
<td>See “Side Gauge Wheel Adjustments” on page 61</td>
</tr>
<tr>
<td></td>
<td>Seed-Lok® is plugging row-unit.</td>
<td>Lock up Seed-Lok®, page 70.</td>
</tr>
<tr>
<td></td>
<td>Failed disk bearings.</td>
<td>Replace disk bearings.</td>
</tr>
<tr>
<td></td>
<td>Bent or twisted row-unit frame.</td>
<td>Replace row-unit frame.</td>
</tr>
<tr>
<td></td>
<td>Partially plugged row-unit seed tube.</td>
<td>Lift up planter, expose bottom of seed tube and clean out.</td>
</tr>
<tr>
<td>Press wheels not compacting the soil as desired.</td>
<td>Incorrect spring handle setting.</td>
<td>See “Press Wheel Adjustments” on page 71</td>
</tr>
<tr>
<td></td>
<td>Insufficient row unit down-force.</td>
<td>See “Row-Unit Down Pressure” on page 54</td>
</tr>
<tr>
<td></td>
<td>Use of incorrectly shaped tire for your conditions.</td>
<td>Wedge shaped wheels work best on narrow spacings and in wet conditions. Round edge wheels work best in wider row spacings and drier conditions.</td>
</tr>
<tr>
<td></td>
<td>Not level front to rear.</td>
<td>See “Raising/Lowering Tongue” on page 15</td>
</tr>
<tr>
<td>Seed blowing out of pro-box door area</td>
<td>Fan too fast.</td>
<td>Slow down fan. If already at 3000 rpm, reset fan to 3800 rpm and use fan butterfly valve to reduce airflow.</td>
</tr>
<tr>
<td></td>
<td>Seal from airbox to hopper damaged or not adjusted.</td>
<td>Inspect and adjust seal. Seal should be intact, and compress to about $\frac{1}{2}$ inch (13 mm) under seed container.</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Air lines plugging between air box and Y tubes</td>
<td>Fan too slow.</td>
<td>Speed up fan.</td>
</tr>
<tr>
<td></td>
<td>Air leaks between manifold and tubes</td>
<td>Check for leaks and correct as needed.</td>
</tr>
<tr>
<td></td>
<td>Improper hose routing, sags or kinks</td>
<td>With planter unfolded, hoses should for a gentle “S” shape through the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>holders, with no deep sags.</td>
</tr>
<tr>
<td>Air lines plugging between Y-tube and meter</td>
<td>Sag or kink in air hose.</td>
<td>Check air tube placement in tube mount weldment. If correct, shorten</td>
</tr>
<tr>
<td></td>
<td>Meter is shut off but Y-tube is open</td>
<td>any hose that has stretched due to age.</td>
</tr>
<tr>
<td></td>
<td>Air tube assembly not positioned on correct tab.</td>
<td>Move assembly to properly position Y-tubes over row meters.</td>
</tr>
<tr>
<td>Hydraulic marker functioning improperly, or not at all</td>
<td>Marker/Fold switch set to Fold.</td>
<td>CFM Switch must be set to “Marker”. Set tractor remote circuit to</td>
</tr>
<tr>
<td></td>
<td>Marker/Aux valve set to Aux</td>
<td>Neutral or Float before operating switch.</td>
</tr>
<tr>
<td></td>
<td>Air or oil leaks in hose fittings or connections.</td>
<td>Check all hose fittings and connections for air or oil leaks.</td>
</tr>
<tr>
<td></td>
<td>Low tractor hydraulic oil level.</td>
<td>Check tractor hydraulic oil level.</td>
</tr>
<tr>
<td></td>
<td>Loose or missing bolts or fasteners.</td>
<td>Check all bolts and fasteners.</td>
</tr>
<tr>
<td></td>
<td>Needle valve plugged.</td>
<td>Open needle valve, cycle markers slowly and reset needle valve, refer</td>
</tr>
<tr>
<td></td>
<td>Needle valve(s) in sequence valve plugged.</td>
<td>page 48.</td>
</tr>
<tr>
<td>Marker disk does not mark</td>
<td>Marker folding linkage does not have enough slack to allow marker</td>
<td>Maximum down float should be limited by the slot at the rod end of the</td>
</tr>
<tr>
<td></td>
<td>disk to drop into field depressions.</td>
<td>marker cylinder, refer to page 48.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reverse marker disk to pull or throw dirt.</td>
</tr>
<tr>
<td>Auxiliary Hydraulics Inoperative</td>
<td>Marker/Fold switch set to Fold</td>
<td>CFM Switch must be set to “Marker” for Aux to function. Set tractor</td>
</tr>
<tr>
<td></td>
<td>Marker/Aux valve set to Marker</td>
<td>remote circuit to Neutral or Float before switching.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Selector valve must be set to Aux. Set tractor remote circuit to Neutral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or Float before changing valve.</td>
</tr>
</tbody>
</table>
### Airbox Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single row doesn’t fill or keep up with other rows.</td>
<td>Y tube is bent/angled off feed pipe.</td>
<td>Loosen pipe and spin so the bend is straight down and Y-tube is not pointing to front or rear of air pipe.</td>
</tr>
<tr>
<td></td>
<td>Drop tube to meter is too long, causing seed to pool and plug hose or Y-tube.</td>
<td>Shorten hose (with planter raised, but row units lowered, to ensure hose is not too short).</td>
</tr>
<tr>
<td>Both rows on one meter outlet low or not keeping up with other rows.</td>
<td>Blockage in air slot in top of airbox.</td>
<td>Clear by using a long skinny tool and taking hose off through hose outlet.</td>
</tr>
<tr>
<td></td>
<td>Bad hose routing between delivery hose and airbox on wing.</td>
<td>Correct hose routing.</td>
</tr>
<tr>
<td>Multiple rows fail for lack of seed.</td>
<td>Fan speed too high/too low.</td>
<td>Check/adjust fan speed.</td>
</tr>
<tr>
<td></td>
<td>Out of seed.</td>
<td>Add seed.</td>
</tr>
<tr>
<td>Single or multiple hoses plugging just ahead of airbox.</td>
<td>Fan speed too high/too low.</td>
<td>Check/adjust fan speed.</td>
</tr>
<tr>
<td></td>
<td>Possible air leak.</td>
<td>Check for air leak downstream between box and top of meter.</td>
</tr>
<tr>
<td>All rows fail.</td>
<td>Lack of seed.</td>
<td>Fan speed too high. Adjust fan speed.</td>
</tr>
<tr>
<td>1, 2, 3, or more outlets fail. Outlets can be side-by-side or random. Plugging may also move from one outlet to another.</td>
<td>Foreign matter in seed chamber in bottom of airbox.</td>
<td>Clean out seed chamber.</td>
</tr>
<tr>
<td>Little or no seed to a lot of rows with heavily treated seed.</td>
<td>Seed treatment sticky.</td>
<td>Add talc+graphite mix to seed to dry out seed treatment.</td>
</tr>
<tr>
<td></td>
<td>Treatment mixed unevenly and plugging outlets.</td>
<td>Clean out seed. Re-mix.</td>
</tr>
</tbody>
</table>
Maintenance and Lubrication

Maintenance

Proper servicing and maintenance is the key to long implement life. With careful and systematic inspection, you can avoid costly maintenance, downtime, and repair. Always turn off and remove the tractor key before making any adjustments or performing any maintenance.

**WARNING**

Crushing Hazard:
You may be severely injured or killed by being crushed under the falling implement. Always have transport locks in place and frame sufficiently blocked up when working on implement.

**WARNING**

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

1. After using your planter for several hours, check all bolts to be sure they are tight.
2. Remove excess slack from chains. Clean and use chain lube on all roller chains as needed.
3. Maintain proper air pressure in planter tires.
4. Keep disk scrapers properly adjusted.
5. Clean planter on a regular basis. Regular and thorough cleaning will lengthen equipment life and reduce maintenance and repair.
6. Lubricate areas listed under “Lubrication” on page 96.
7. Replace any worn, damaged, or illegible safety labels by obtaining new labels from your Great Plains dealer.
Material Clean-Out

When planting is completed, it is commonly the case that some seed remains. There may be seed in the hopper or bulk box, seed in the airbox, a small amount of seed in the hose lines, and seed in the meters. Some meters may be filled up to the top cut-off vent (which prevents additional seed from reaching that meter).

A complete system cleanout is a 3-step process.
1. Empty airbox (and hopper, if desired).
2. Blow residual seed to meters.
3. Clean out meters with fan running.

**WARNING**

**Entrapment and Rapid Suffocation Hazard:**
Never enter a hopper for any reason. Keep strainer in place at all times.

▲ A hopper that is full or merely appears full can be an entrapment hazard. You can sink entirely into the grain, or into an oxygen-deficient void, and suffocate in a matter of seconds. Grain bridges and crusts are especially dangerous.

▲ When hazardous fumes are present, you can be quickly overcome even with the hopper lid open.

▲ Do not enter a hopper for material loading, material unloading, hopper cleaning or meter maintenance.

▲ Clean hopper by power washing from outside hopper top.

**CAUTION**

Possible Dust and Chemical Fume Hazard:
Wear a respirator, and any other protective equipment specified by the seed and/or seed treatment supplier. Expect dust and fumes during hopper clean-out.

Hopper Clean-Out

Perform hopper clean-out with the fan off.

**Refer to Figure 110**

1. Close the slide gate ① at the base of the hopper.
2. Place a tarp under the seed cart.

**Refer to Figure 111**

3. Open the clean-out door on the bottom of the airbox. Seed in the airbox immediately falls onto the tarp.
   ✅ If needed, additional access doors are provided.
4. Open the slide gate slowly. The remaining seed in the hopper falls onto the tarp. Use the slide gate to regulate the flow and, as needed, stop it while recovering seed from the tarp.
5. Tap on the sides of the hopper to dislodge residual seed.
6. Close slide gate.
   Close clean-out door.
7. Perform an air system clean-out to remove final amounts of residual seed from airbox, and all seed in meters.
Air System Clean-Out

Refer to Figure 112

1. Shut off slide gate door at bottom of seed box or bulk hopper.
2. Place a pan or tarp under the airbox manifold to catch seed.

Refer to Figure 113

3. Open airbox clean-out door to empty seed from the manifold.
   - If needed, additional access doors are provided.
4. Shut the clean-out door under manifold.
5. Turn on the air fan and let it run.

Refer to Figure 114

6. If the planter has Y-tubes, shut off the gates at all of the Y-tubes.
7. Start at one end of planter and open the meter clean out door for the end row-unit. Place a bucket under the meter to catch the seed.
8. Open the Y-tube gate feeding that meter. Let the air blow seed out of the meter. Keep the meter open for a couple of minutes after the seed stops blowing out.
9. Close the Y-tube gate feeding that meter. Close the meter clean out door.
10. Repeat procedure on the next meter in line. Continue with this procedure until you have reached the opposite end of the planter.
Meter Clean-Out

Finger Meter Clean-Out
1. Place a bucket or pan under meter to catch any seed during cleanout.

Refer to Figure 115
2. Slide the retaining ring up and remove the seed hose.

Refer to Figure 116
3. Pull cleanout door away from the opening and allow seed to fall.
4. Re-connect seed hose.

Singulator Plus™ Meter Clean-Out

Refer to Figure 115 (finger meter shown, but step is identical)
1. Place a bucket or pan under meter to catch any seed during cleanout.
2. Slide the retaining ring up and remove the seed hose.

Refer to Figure 117
3. Pull cleanout door away from the opening and allow seed to fall.
4. Remove the seed meter wheel for thorough cleaning. See “Meter Removal” on page 63 for more information.
5. Re-connect seed hose.
Air Box Residue Clean-Out

Planting in extremely dusty conditions, particularly dusty and humid conditions, or otherwise sticky soils, can lead to air residue build-up inside the airbox. This residue can cause seed delivery blockages.

Refer to Figure 118 and Figure 119 (Figure 118 depicts a partially and a completely plugged agitation port, and build-up in the RH plenum chamber)

Whenever opening the airbox clean-out door ①, inspect the agitation ports ②. If any are partially or completely blocked, follow the clean-out instructions on this page.

Seasonally, remove the inspection ports on each of the airbox, and inspect plenum chambers 1 (LH) and 16 (RH). If any build-up is observed, follow the more comprehensive inspection steps and clean-out instructions on this page.

1. Spot the implement name at a suitable location for clean-out and follow the parking instructions (page 42).
2. If seed is loaded, close the slide gate for the hopper or bulk seed box (page 30).
3. Set out a tarp for recovery of any expected seed still in the airbox. Open the airbox clean-out door ①.
4. Remove the inspection port covers from each end of the airbox (not shown in figures).
5. Use an indelible marker to identify the hoses on seed hose ports ③ through ⑩. Disconnect the clamps and hoses.

Further disassembly of the airbox is not recommended, as joints are sealed with silicone adhesive, and would need to be cleaned and resealed.

6. Inspect the agitation ports ②. Break up any build-up. Use a hooked tool or wire to pull smaller fragments down through the ports. For larger fragments, reach in through the inspection ports or vacuum them out via those ports.
7. Inspect the entire plenum area ④ for build-up. Break up any deposits. Vacuum them out through the inspection ports.
8. From the seed hose ports ⑤, inspect the seed air ports ⑥. Break up any deposits. Vacuum out from clean-out door.
9. With all ports and doors still open, operate the implement name fan to blow up any remaining loose residues.
10. Reconnect the seed hoses. Reinstall the inspection port doors. Close the clean-out door.

Flushing the airbox with water is not recommended. If done, operate the fan for an extended period to completely remove any moisture prior to storage or field operations.
Bleeding Hydraulics

**WARNING**

**High Pressure Fluid Hazard:**
Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic lines. Use a piece of paper or cardboard, NOT BODY PARTS, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. If an accident occurs, seek immediate medical attention from a physician familiar with this type of injury.

*Only trained personnel should work on system hydraulics!*

**Bleeding Lift Hydraulics**

Normally the lift hydraulics are bled at the factory before shipping and bleeding should not be required other than to raise fully and hold lever on for one minute or until all cylinders extend fully.

**Bleeding Fold Cylinder Hydraulics**

Normally the fold hydraulics are bled at the factory before shipping and bleeding should not be required other than to fully and hold lever on for one minute or until all cylinders reach the end of their stroke.

**NOTICE**

Do not fold or unfold without first raising planter completely.

If the fold and hold procedure does not clear the problem, perform the following steps:

1. Raise and unfold the planter.
2. Un-pin all fold cylinders (two at center, one each gauge wheel).

**Refer to Figure 120**

1. Locate the re-phase port on each cylinder. This is a raised blind weldment on one end of the cylinder tube. This is the rod end on gauge wheel fold cylinders, and the base end on center fold cylinders.
2. Support the cylinder with the re-phase port facing up, and that end of the cylinder elevated.
3. Fully extend all cylinders at low flow. Hold circuit for one minute.
4. Fully retract all cylinders at low flow. Hold circuit for one minute.
5. Set circuit to neutral and re-pin all cylinders.

**NOTICE**

JIC fittings do not require high torque. JIC and O-ring fittings do not require sealant. Always use liquid pipe sealant when adding or replacing (NPT) pipe-thread fittings. To avoid cracking hydraulic fittings from over tightening, and to keep tape fragments from clogging filters, do not use plastic sealant tape.
Bleeding Marker Hydraulics

To fold properly, the marker hydraulics must be free of air. If the markers fold in jerky, uneven motions, follow these steps.

Check that tractor hydraulic reservoir is full.

1. Set the solenoid to marker operation.
2. With both markers lowered into field position, loosen hydraulic-hose JIC fittings at rod and base ends of marker cylinders. If applicable, loosen fittings on back side of sequence valve.
3. With tractor idling, activate tractor hydraulic valve until oil seeps out around a loosened fitting. Tighten that fitting.
4. Reactivate tractor hydraulic valve until oil seeps out around another loosened fitting. Tighten that fitting. Repeat process until all loosened fittings have been bled and tightened.

Marker Maintenance

Refer to Figure 121

The marker arm is attached to the marker body with a 1/2-13 x 2 1/2 inch Grade 5 shear bolt. If shear bolt breaks, replace it with a Great Plains part 802-130C or equivalent.

Replacing shear bolt with a lower grade can result in nuisance shears.

Marker Damage Risk:
Replacing shear bolt with a higher grade bolt can result in marker damage.

If grease seal cap for marker-disk-hub bearings is damaged or missing, disassemble and clean hub. Repack with grease and install new seal or grease cap.

Crushing and Sharp Object Hazards:
You may be injured if hit by a folding or unfolding marker. Markers may fall quickly and unexpectedly if the hydraulics fail. Never allow anyone near the planter when folding or unfolding the markers.
Hydraulic Drive Maintenance

As with any hydraulic system, contamination is the most common cause of performance problems and pre-mature wear. Make a special effort to properly clean quick couplers prior to attaching the hoses to tractor.

Filter: All fluid is filtered through the high pressure filter (p/n 18574) and it provides protection to the hydraulic components of your drive if properly maintained. It is equipped with a pop-out indicator to alert that the replaceable element is clogged, and should be changed immediately if this situation occurs. Normal service life of the element will vary based on the precautions that you take to minimize contamination at the couplers and routine service of the tractor filtration.

To change the element:

Refer to Figure 122

1. Un-screw lower canister from filter, catching and disposing of used fluid.
2. Remove and discard element.
3. Install new element (p/n 19856)
4. Clean canister threads and lube o-ring with hydraulic fluid, then re-install.

Refer to Figure 123

5. Re-set pop-out indicator if necessary.

It is a good idea to keep a filter element on hand, and we recommend changing at a minimum on an annual basis.
7. Avoid direct spray from high pressure washers on the motor encoder and the external controller box. These units are sealed from normal moisture, but high pressure could inject water into the housing.
8. Keep electrical connects free from dirt and grease. It’s a good idea to occasionally spray the terminals with contact cleaner to ensure proper connection.
**Meter Maintenance**

**Finger Pickup Meter Maintenance**

**Finger Set Inspection**
Finger sets should be inspected on an annual basis. After cleaning, carefully inspect the fingers and springs for wear or other abnormalities that may develop. Excessive wear may disrupt singulation performance.

Great Plains recommends having the meter service performed by a recognized professional repair facility, such as a certified MeterMax® representative. If you choose to service them yourself, follow these procedures when installing the finger sets.

See page 63 for meter removal.

![Figure 124](image)

**Finger Meter Assembly**

4. Firmly press the finger set \( \text{2} \) against the backing plate \( \text{4} \) while tightening the nut \( \text{5} \).

5. Tighten the nut \( \text{5} \) until contact is made between the nut and the finger set \( \text{2} \). Turn \( \frac{1}{4} \) to \( \frac{1}{2} \) flat (\( \frac{1}{24} \) to \( \frac{1}{12} \) of a turn) (a flat is one of the six sides of the nut) after contact is made. See page 91 for details. This equals about 4 inch-pounds (0.45 N-m) of torque on the nut.

6. Place the slotted nut cover \( \text{6} \) on and carefully align the slotted nut cover with the shaft hole. Insert the cotter pin \( \text{7} \).

7. Rotate the finger set clockwise and make sure the fingers open and close properly. Rotate the meter and make sure the meter turns freely and that there is no air gap between the outer rim of the ashtray and the backing plate. Fingers should be closed at the 8:00 to 2:00 o’clock position (exit hole) and open at the 2:00 to 8:00 position.

**Precautions**
Visually check that there is no visible air gap between the holder and backing plate.

Make sure the finger set is properly torqued against the backing plate. Improperly torqued finger sets may disrupt seed singulation.

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**Agricultural Chemical Hazard:**
Follow material supplier recommendations carefully. Handle the meter as if it were treated seed. Use supplier-recommended cleaning agents. Any seed treatment build-up inside a meter is likely to be at a higher concentration than on the actual seed.

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**Finger Meter Re-Assembly Steps**

**Refer to Figure 124**

1. Be sure the belt \( \text{1} \) is oriented as shown in Figure 124.

2. Slide the finger set \( \text{2} \) over the shaft \( \text{3} \) and rotate clockwise until it sits against the backing plate \( \text{4} \).

3. One click will sound when the holder engages the roll pin and a second click will sound when the cam engages the bearing housing.

---

a. MeterMax® is a registered trademark of Precision Planting®, Inc.
Population Max™ Annual Maintenance.

Population Max™ insert should be inspected annually. Inspect plate for wear or other abnormalities that may develop. The action site area might also eventually show some wear. When signs of wear appear, simply replace insert.

Make sure transition between the Population Max™ backing plate and the insert is smooth. A slight incline from backing plate to insert (clockwise motion) may cause seeds to catch. Readjust insert if necessary.

Be cautious in using seed treatments, additives, and other chemicals. They can cause meter performance problems, premature wear to meter parts, and may cause undesired chemical reaction or deterioration to the Population Max™ material. When using seed treatments always use graphite.

If Population Max™ plates are not installed in meter, store in a vertical position on a cylindrical rod or face to face.

Population Max™ Installation

Refer to Figure 125

1. Remove brush screws and brush. Gently pull insert out.
2. Select appropriate insert and carefully slide into the window. Insert may catch on a finger or two. It may be necessary to lift the fingers up with a small screwdriver or rotate the fingers backward while sliding insert in. Insert will slide in without any unnecessary force.
3. Make sure insert slides in all the way and firmly locks in place.
4. Secure insert to backing plate by fastening the two screws through the insert.
5. Reinstall brush and screws. Be careful! Do not tighten brush too tightly or plastic lip may crack.

---
a. Population Max™ is a trademark of Precision Planting, Inc.
Skip Stop™ Annual Maintenance

Skip Stop™ should be inspected on an annual basis. Inspect cushion for wear, pockets, or other abnormalities that may develop. Excessive wear or pocket formation may cause seeds to become trapped and disrupt singulation performance. As a general rule, if there is a pocket that is large enough to hold one or more seeds after the belt has passed by, Skip Stop™ Cushion should be replaced.

Skip Stop™ Installation

Refer to Figure 126

1. Remove back metal cover ⑤ by removing five bolts. Four bolts attach cover to metal housing ① and one bolt ② holds idler wheel ④ and bushing ③.
2. Align new Skip Stop™ metal cover ⑥ over housing ①.
   - Skip Stop™ metal cover has a hole cut out for Skip Stop™ Cushion ⑦. Make sure idler wheel ④ and bushing ③ remain properly aligned and insert 1/4x2 inch bolt ②. Secure bolt loosely.
3. Insert remaining three 1/4x1/2 inch bolts to fasten metal cover to housing. Tighten all bolts securely.
4. Tighten bolt ② that secures idler wheel and turn belt via the bearing shaft by hand to verify that belt is centered between housing. If necessary, loosen bolt and slide cover to adjust and re-center belt.
5. Place Skip Stop™ Cushion ⑦ over the opening. Insert two 1/4x3/4 inch bolts to secure Skip Stop™ Cushion ⑦ to housing.

**NOTICE**

**Meter Performance Risk:**

Make sure Skip Stop™ Cushion ⑦ is secured tightly to back metal cover and cannot turn or rotate. Make sure Skip Stop™ Cushion ⑦ does not interfere with belt ⑤ rotation in any manner. A loose Skip Stop™ Cushion ⑦ may result in seed leakage, poor meter performance, and planting errors.

---

a. Skip Stop™ is a trademark of Precision Planting, Inc.
Exchanging Finger Sets

Although time-consuming, corn meters may be, with care, converted to sunflower meters, and vice-versa. Starting with factory-supplied corn meters, order one kit for each row to be used for sunflower planting:

403-659A SUNFLOWER 12 FINGER CONV KIT

Refer to Figure 127

This kit contains a sunflower finger set, Insert C and brushless block.

- Meter conversion is available only for finger pickup meters that were originally corn meters. Factory-supplied sunflower meters cannot be converted to corn meters, as they lack a brush adjustment decal, which requires a factory alignment fixture.

Remove Meter Cover

1. Remove the finger pickup meters from the rows (page 63).
2. Remove three sets of bolts and nuts securing the cover to the meter.

Remove Adjustment Lever

Refer to Figure 128

3. Remove the E-clip closer to the brush block.
4. Withdraw the adjustment lever. Store the removed e-clip on it.

- Sunflower meters use a brushless block (installed at step 13). The brushless block cannot be installed with the adjustment lever present.

Remove Brush Block

5. Remove the two screws that secure the brush block, then remove the brush block.

a. Larger sunflower sizes plant with the standard Corn configuration. See “Sunflower Meter Configurations” on page 69.
Remove Corn Finger Set

Refer to Figure 129

6. Straighten and remove the cotter pin ①.
7. Remove the nut cover ②.
8. Remove the nut ③.
9. Remove the corn finger set ④.

Remove Insert “A”

Refer to Figure 130

10. Remove the two screws ⑤ that secure the Insert ⑥ to the backing plate.
11. Lift the insert out of the backing plate.

Install Insert “C”

12. Select a meter insert from the conversion kit. Inspect the back for a legend identifying it as “C”. Install it in the backing plate. Secure with screws ⑤.

Install Brushless Block

13. Select a brushless block ⑦ from the conversion kit. This block, in addition to having no brushes, also has a single mounting screw hole (the removed brush block has two holes).

   Install the block as shown, using one screw through the center outer hole ⑧ in the backing plate.

   Do not reinstall the adjustment lever. It is not used with sunflower meters.
Install Sunflower Finger Set

Refer to Figure 132

14. Select the finger set ① from the conversion kit. Sunflower fingers have short square “flags” at the ends of the fingers, compared to corn finger sets, which have longer rounded flags.

Place the finger set on the meter shaft. Rotating the finger set and shaft as needed, seat the finger set fully against the back plate. There should be no air gap between the hub rim and the backing plate.

The shaft cross-pin ② seats in deep detents ③ in the finger set hub. The bearing housing has a rectangular notch ④ that engages a rectangular tab projection ⑤ in the finger set.

If the finger set does not seat fully, this is usually because the notch and projection are not mated. Rotate the finger set clockwise until you feel two clicks. The fingers should dip into the seed drop exit port, then lift, without catching on the backing plate.

15. Select the nut from step 8. Spin it onto the shaft. Do not tighten at this step.

Set Finger Set Torque

Refer to Figure 133

16. Loosen the nut ⑥.

Press the finger set hub firmly against the back plate, checking that it is fully seated and has no wobble.

Turn the nut until it contacts the finger set hub (this is the nut position shown as a dashed hexagon in the upper right illustration).

Tighten the nut by $\frac{1}{2}$ to $\frac{3}{4}$ of a nut “flat” (this is the nut position shown as a solid hexagon). This equals about 4 inch-pounds (0.45 N·m) of torque on the nut.

Refer to Figure 132

17. Place the nut cover ⑦ on the shaft, making sure to align it so that the shaft pin hole is not obscured by a castellation.

18. Insert the cotter pin ⑧, but do not secure it.

19. Verify that the finger set turns with a slight amount of resistance, and that the fingers operate correctly. Every finger flag must be closed between 8:00 and 2:00 o’clock, and open between 2:00 and 8:00.

20. Secure the cotter pin.

21. Reinstall the meter cover. Reinstall the meter (page 67).
Chain Maintenance

Inspect and lubricate chains regularly. The slack of new chains tends to increase during the first few hours of operation due to seating.

Chain Slack

Check slack at fixed idlers within the first 8 hours of operation and tighten idlers as necessary. Check slack at spring-operated seasonally (normally a spring length check).

Refer to Figure 134, 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 inch/91 cm): \[ \frac{1}{4} \text{ inch per foot} \]
   Vertical short chains: \[ \frac{1}{4} \text{ inch per foot (2.1 cm/m)} \]
   Horizontal short chains: \[ \frac{1}{2} \text{ inch per foot (4.2 cm/m)} \]

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.

Chain Clips

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

Refer to Figure 135 (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).

Meter Drive Chain

Refer to Figure 136

Remove the seed meter and check the chain and sprocket for wear. See “Meter Removal” on page 63, for more information.
Disk Spreaders and Scrapers

It is normal for the blade spreader to have some looseness in the holder and between the blades. Some looseness is required for proper operation.

Refer to Figure 137

1. Remove side gauge wheels from arms to access row-unit disks and scrapers.
2. With the unit raised, check blade spreader for wear. Replace spreader if it is 1/2 inch (13 mm) wide or narrower. To replace, remove disk blade, drive out roll pins, and install new spreader.
3. When reinstalling disk blades, put two shim washers between bearing and shank on each blade. Tighten bolts.
4. Check that outside disk scrapers are formed to disk blades to help remove any mud. Bend and twist scrapers to fit blades as necessary. After every 200 acres (80 hectares) of operation, check outside scrapers for proper adjustment and wear. Replace outside scrapers as necessary.

25 Series Row-Unit Side Wheels

Figure 138

1. Lift opener side wheel off the ground. Move tire in and out to check for end play. Check for roughness in bearing by rotating wheel. If bearings are rough, inspect and replace if necessary.
2. The side wheels are preset at the factory. However, because of normal wear it may become necessary to make adjustments so the wheel remains close to the disk. To prevent plugging, loosen clamp bolt and slide arm inward to take up gap between side wheel and disk blade. If more adjustment is needed, continue at step 3.
3. Remove bolt and wheel. Remove shims from the inside of wheel and place them on the outside of wheel. Always place removed shims from the inside to the outside. When installed, wheel should turn freely and not hit the arm at the curve. Do not add any more shims than necessary.
4. Disassemble side gauge wheel arm from unit. Remove bushing from sleeve and check for wear. If necessary, replace bushing.
5. When reinstalling side gauge wheels, align tab on hex adjustment with notch in bushing. Replace bolt and tighten.
Fertilizer System Maintenance

1. Flush entire system with clean water.
2. Remove end caps from booms and flush booms out with water. Drain and replace end caps.
3. Remove strainer and drain it out. Drain all lines and tanks completely to prevent freezing.
4. Drain pump, then turn by hand to clear. Fill pump with winter grade windshield washer fluid and cap off.

Liquid Fertilizer Strainer

**WARNING**

*Chemical Hazard:* Some chemicals will cause serious burns, lung damage, and death. Avoid contact with skin or eyes. Wear proper protective equipment as required by chemical manufacturer. Avoid prolonged breathing of chemical fumes. Wear respirator as required by chemical manufacturer. Seek medical assistance immediately if accident occurs. Know what to do in case of an accident.

*Refer to Figure 139*

1. Shut off valve at in-line filter.
2. Unscrew filter canister. Flush filter cartridge with water or replace with new cartridge if necessary.
3. Reinstall canister and turn on valve.

![In-line Filter](21965)
Seed Flap Replacement (s/n A1288B-)

Refer to Figure 140

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

If replacing with 817-349C:
Push new seed flap ① up through metal bracket ③ until tabs ② on seed flap snap in place.

If replacing with 816-302C:
See seed flap replacement instructions below.

---

Seed Flap Replacement (s/n A1289B+)

Refer to Figure 141

To replace an 816-302C seed flap ④ use a needle nose pliers or similar tool to grasp “T” top of flap. Pull upward to pull flap up out of metal bracket ⑤.

Push new seed flap ④ down through metal bracket ⑤ until flap snaps into place with “T” top resting on top of bracket.
Lubrication

**Marker**

2 grease fittings per marker; 4 total
Type of Lubrication: Grease
Quantity: Until grease emerges

**Parallel pivot arms**

4 grease fittings each arm set; 8 total
Type of Lubrication: Grease
Quantity: Until grease emerges

**Tool bar pivot**

Vertical and horizontal tool bar pivots.
Type of Lubrication: Grease
Quantity: Until grease emerges
Tool bar pivot

Vertical and horizontal tool bar pivots.
Type of Lubrication: Grease
Quantity: Until grease emerges

Tongue lift cylinder anchor pin

At rear of tongue
Type of Lubrication: Grease
Quantity: Until grease emerges

Tongue slide roller

1 grease fitting
Type of Lubrication: Grease
Quantity: Until grease emerges

25 Series side wheel bushing

2 grease fittings per row unit;
one each side of each row-unit
Type of Lubrication: Grease
Quantity: Until grease emerges
Maintenance and Lubrication

Meter Drive Chains

<table>
<thead>
<tr>
<th>Image</th>
<th>As Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image](YP1225 and YP1625.png)</td>
<td></td>
</tr>
</tbody>
</table>

1 chain each meter
Type of Lubrication: Chain Lube
Quantity = Coat thoroughly

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

Drive Chains

<table>
<thead>
<tr>
<th>Image</th>
<th>As Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image](YP1225 and YP1625.png)</td>
<td></td>
</tr>
</tbody>
</table>

Ground Drive on Seed Cart (not shown)
Wing drive (not shown)
Shaft Driven Fertilizer Pump
Contact Driven Fertilizer Pump (not shown)
Veris drive (not shown)
Type of Lubrication: Chain Lube
Quantity: Coat thoroughly

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

Frame-Mounted Coulter Hub (Option)

<table>
<thead>
<tr>
<th>Image</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image](YP1225 and YP1625.png)</td>
<td></td>
</tr>
</tbody>
</table>

Type of Lubrication: Grease
Quantity = Until grease emerges

Unit-mount coulter bearings are sealed, and require no lubrication or re-pack.

Frame-Mounted Coulter Pivot (Option)

<table>
<thead>
<tr>
<th>Image</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image](YP1225 and YP1625.png)</td>
<td></td>
</tr>
</tbody>
</table>

1 grease fitting each swivel mount casting
Type of Lubrication: Grease
Quantity: Until grease emerges
Caster wheel pivot

1 grease fitting each wheel; 2 total
One at pivot on wing and one in end of wing tube
Type of Lubrication: Grease
Quantity: Until grease emerges

Wing Transfer Drive Shafts

4 grease fittings each side; 8 total
① two each outer shaft sleeve
② one each of 2 universal joints
(newer and upgraded models)
Type of lubrication: Grease
Quantity: Until grease emerges (joints)
Quantity: 6 pumps (shafts)

Rockshaft pivot pins

Two grease fittings on top, two on bottom; four total
Type of Lubrication: Grease
Quantity: Until grease emerges
Main Transport Wheel Bearings

Seasonally

2 bearings each side;
4 total
Type of Lubrication: Grease
Quantity: Re-pack

Gauge Wheel Bearings

Seasonally

2 bearings each side;
4 total
Type of Lubrication: Grease
Quantity: Re-pack

Marker Disk Hubs

Seasonally

4 bearings; 2 each marker
Type of lubrication: Grease
Quantity = Repack
Walkboard Pivot

<table>
<thead>
<tr>
<th>1 grease fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of lubrication: Grease</td>
</tr>
<tr>
<td>Quantity: Until grease emerges</td>
</tr>
</tbody>
</table>

Row Cleaner Bearings (Option)

| 4 grease fittings each side; |
| 8 total |
| Type of lubrication: Grease |
| Quantity: Until grease emerges |
| To avoid damaging the seal, do not add grease at high pressure. |
Seed Lubricants

Singulator Plus Meters (all seeds)
Ezee Glide Plus Talc-Graphite Mix
821-069C bucket, 5 gallon (19 liter)

Ezee Glide Plus Lubricant
To maximize performance of Great Plains metering systems, it is imperative to use only “Ezee Glide Plus” lubricant. “Ezee Glide Plus” Talc-Graphite lubricant is mandatory for all seeds, especially treated or inoculated seed. Thorough mixing of seed and added lubricant is required.

Recommended usage:
For clean seeds other than milo and cotton sprinkle one cup of Ezee Glide Plus Talc per 4 bushels or units (170 ml per 100 liters) of seed.
For milo and cotton double the application to one cup (or more) per 2 bu. or units (335 ml per 100 liters) of seed.
Adjust this rate as necessary so all seeds become coated while avoiding an accumulation of lubricant in the bottom of the hopper.
For seed with excessive treatment, or for humid planting environments, increase the rate as needed for smooth meter operation.

CAUTION
Irritation and Chronic Exposure Hazard:
Wear gloves. DO NOT use hands or any part of your body to mix seed lubricant. Wear a respirator when transferring and mixing. Avoid breathing lubricant dust. Not an acute hazard. May cause mechanical eye or skin irritation in high concentrations. As with all mineral spills, minimize dusting during clean-up. Prolonged inhalation may cause lung injury. Product can become slippery when wet.

For Finger Pick Up Meters Only
Use only approved Graphite Powder available from Great Plains Mfg. Inc. or Precision Planting to ensure proper lubrication of finger pickup corn seed meters.

Recommended usage:
For finger pickup meters, add one tablespoon (15 ml) of graphite for each unit of seed corn (80000 kernels).
In high humidity conditions, or seeds with heavy seed treatments, increase the application to two tbsp (30ml).
If delivery of seed from the hopper to the finger meter is an issue, add “Ezee Glide Plus” talc and graphite blend at a rate of one cup (237 ml) per 4 units of seed. Adjust until issue is resolved.

CAUTION
Irritation and Chronic Exposure Hazard:
Wear gloves. DO NOT use hands or any part of your body to mix seed lubricant. Wear a respirator when transferring and mixing. Avoid breathing lubricant dust. Not an acute hazard. May cause mechanical eye or skin irritation in high concentrations. As with all mineral spills, minimize dusting during clean-up. Prolonged inhalation may cause lung injury.
Options and Accessories

Hydraulic Tongue
A 3-point hitch is standard on the YP1225 and YP1625, but a hydraulic tongue may be substituted.

<table>
<thead>
<tr>
<th>Option Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225/1625 Hydraulic Tongue; Factory-Installed</td>
<td>401-429A</td>
</tr>
<tr>
<td>YP1225/1625 Hydraulic Tongue; Field-Installed</td>
<td>401-430A</td>
</tr>
</tbody>
</table>

PTO Pump Kits
For tractors lacking a sufficient number of remotes with adequate continuous oil flow capability, kits are available to operate the fan(s) optionally the hydraulic seed drive motor, via mechanical Power Take-Off (PTO).

A 1000 rpm PTO is required with either:

1. $\frac{3}{4}$ inch (44.5 mm) 20-spline shaft, or
2. $1\frac{3}{8}$ inch (35 mm) 21-spline shaft.

Order one kit and one coupler.

<table>
<thead>
<tr>
<th>Kits and Couplers</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP16 PTO KIT For model 2009+ Yield-Pro© Planters</td>
<td>401-936A</td>
</tr>
<tr>
<td>YP16 PTO HYDRAULIC PUMP KIT For model 2009+ Yield-Pro©</td>
<td>401-934A</td>
</tr>
<tr>
<td>PlantersF</td>
<td></td>
</tr>
<tr>
<td>1 3/4-20 PTO COUPLER</td>
<td>826-777C</td>
</tr>
<tr>
<td>1 3/8-21 PTO COUPLER</td>
<td>826-778C</td>
</tr>
</tbody>
</table>

Operation and installation of the PTO kits is described in manual 411-015M, included with each kit.
Markers
Markers are a standard factory-installed feature on the Product, but may be optionally deleted, for example, if all planting is done via GPS navigation.
Markers are not trivial to install as a field upgrade. If any possible future planting might require markers, do not delete them from the initial Product order.
For operations, see:
“Marker Operation” on page 41, and
“Marker Adjustments” on page 48.

Fertilizer System
The Product supports an optional fertilizer system. This system is required if the optional Keeton seed firmers or Vantage I applicators are to be used for fertilizing.
To meet the needs of users who already have tractor or cart-mounted systems, the YP1225/1625 system is sold as four independent subsystems:
• Manifold (low or high rate)
• Tank system for seed cart
• Ground drive and pump
Great Plains recommends ordering the manifold and tank subsystems at time of initial planter purchase, as they are not trivial to field-install.
For operations, see: “Fertilizer Tanks (Option)” on page 34, and the Seed Rate manual.

Fertilizer Manifolds
Manifold kits include the relief valve, shut-off valve, strainer, manifold, orifice/check valves and unterminated row-unit drop-lines. They do not include a pump or tanks.

<table>
<thead>
<tr>
<th>Option Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225 Starter Fertilizer Manifold Kit; Factory-Installed</td>
<td>407-132A</td>
</tr>
<tr>
<td>YP1225 Hi-Rate Fertilizer Manifold Kit; Factory-Installed</td>
<td>407-136A</td>
</tr>
<tr>
<td>YP1625 Starter Fertilizer Manifold Kit; Factory-Installed</td>
<td>407-133A</td>
</tr>
<tr>
<td>YP1625 Hi-Rate Fertilizer Manifold Kit; Factory-Installed</td>
<td>407-137A</td>
</tr>
</tbody>
</table>
Fertilizer Orifice Plates
The manifold system includes size 28, 34 and 48 plates. To order alternate plates, use the part numbers at right. Order one per row unit.

<table>
<thead>
<tr>
<th>Orifice Size</th>
<th>Great Plains Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>832-052C</td>
</tr>
<tr>
<td>28</td>
<td>832-056C</td>
</tr>
<tr>
<td>34</td>
<td>832-053C</td>
</tr>
<tr>
<td>48</td>
<td>832-054C</td>
</tr>
<tr>
<td>59</td>
<td>832-057C</td>
</tr>
<tr>
<td>80</td>
<td>832-055C</td>
</tr>
<tr>
<td>98</td>
<td>832-059C</td>
</tr>
</tbody>
</table>

Liquid Fertilizer Tank
Tank and cart plumbing subsystems:

<table>
<thead>
<tr>
<th>Option Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225/1625 Tank Kit</td>
<td>407-214L</td>
</tr>
</tbody>
</table>

For operations, see: “Fertilizer Tanks (Option)” on page 34.

Ground Drive Fertilizer Pump
Planters ordered without a fertilizer pump system, or which have an older shaft-driven pump may be upgraded to ground drive:

<table>
<thead>
<tr>
<th>Option Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP JB GROUND DRIVE PISTON PUMP</td>
<td>407-213A</td>
</tr>
</tbody>
</table>

For operations, see the Seed Rate manual.

Hydraulic Drive
The standard YP1225 and YP1625 include elevated contact wheels on the seed cart to drive the meter system. The optional Hydraulic Drive replaces that with a hydraulic pump and precision population controller.

For new planter purchases, consult your Great Plains dealer for order codes.

For operations, see the DICKEY-john® Planter Drill Control operator manual.
82 bu. or 150 bu. Seed Hopper

A hopper may be purchased with the Product or added later.

The 150 bu. hopper is incompatible with the liquid fertilizer tank system, as it occupies the space used for the tanks.

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite (1 lb/0.45 kg bottle)</td>
<td>821-042C</td>
</tr>
<tr>
<td>Graphite (5 pound/2.3 kg jug)</td>
<td>821-060C</td>
</tr>
<tr>
<td>Ezee Glide Plus Talc-Graphite Mix</td>
<td>821-069C</td>
</tr>
</tbody>
</table>

The hoppers have no other prerequisites on the planter, but you will need a means of top-loading seed when the hopper is mounted on the seed box. Consider ordering the Auxiliary Hydraulic kit to power an auger.

The 82 bu. hopper is usually, and the 150 bu. hopper is almost always, too heavy to be safely fork-lifted onto the planter if already pre-loaded with seed.

For operations, see: “Loading Materials” on page 28.

Seed Lubricants

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite (1 lb/0.45 kg bottle)</td>
<td>821-042C</td>
</tr>
<tr>
<td>Graphite (5 pound/2.3 kg jug)</td>
<td>821-060C</td>
</tr>
<tr>
<td>Ezee Glide Plus Talc-Graphite Mix</td>
<td>821-069C</td>
</tr>
</tbody>
</table>

For use, see “Seed Lubricants” on page 102.

Auxiliary Hydraulic kit

When the planter is not in motion, these kits enable the marker hydraulic circuit to be used to drive off-planter equipment, such as a seed auger.

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225 Auxiliary Hydraulic Kit</td>
<td>401-435A</td>
</tr>
<tr>
<td>YP1625 Auxiliary Hydraulic Kit</td>
<td>407-441A</td>
</tr>
</tbody>
</table>

For operation, see “Using Auxiliary Hydraulic Circuit” on page 31.
Smart Box Mounting Kit

These kits support the mounting of AMVAC Smartbox® containers and meters above row units. Smartbox® is a delivery system for pelletized seed/row treatments.

<table>
<thead>
<tr>
<th>Planter Model</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-1230</td>
<td>403-196A</td>
</tr>
<tr>
<td>YP1225-16TR</td>
<td>-</td>
</tr>
<tr>
<td>YP1225-1820</td>
<td>403-197A</td>
</tr>
<tr>
<td>YP1225-2315</td>
<td>403-196A</td>
</tr>
<tr>
<td>YP1225-24TR</td>
<td>403-198A</td>
</tr>
<tr>
<td>YP1625-1630</td>
<td>403-199A</td>
</tr>
<tr>
<td>YP1625-2420</td>
<td>403-200A</td>
</tr>
<tr>
<td>YP1625-24TR</td>
<td>-</td>
</tr>
<tr>
<td>YP1625-3115</td>
<td>403-201A</td>
</tr>
<tr>
<td>YP1625-32TR</td>
<td>403-201A</td>
</tr>
<tr>
<td>YP2425-2430</td>
<td>403-218A</td>
</tr>
<tr>
<td>YP2425-3620</td>
<td>403-219A</td>
</tr>
<tr>
<td>YP2425-4715</td>
<td>403-218A</td>
</tr>
<tr>
<td>YP2425-48TR</td>
<td>403-220A</td>
</tr>
</tbody>
</table>

Row Options (Frame-Mounted)

Underframe Attachment Kit

Frame-mounted options require this kit, which is not standard on YP planters.

<table>
<thead>
<tr>
<th>Underframe Kits</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225</td>
<td>204-515L</td>
</tr>
<tr>
<td>YP1625</td>
<td>204-496L</td>
</tr>
</tbody>
</table>

Terra-Tines™

Stand-Alone Terra-Tines™

These row cleaners are available as frame-mounted, either stand-alone (attached to underframe attachment kits), or attached to frame-mounted coulters.

<table>
<thead>
<tr>
<th>Stand-Alone Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR (30 inch, double)</td>
<td>207-132A</td>
</tr>
<tr>
<td>YP1225-16TR (36 inch, double)</td>
<td>207-204A</td>
</tr>
<tr>
<td>YP1225-1230 (30 inch, single)</td>
<td>207-138A</td>
</tr>
<tr>
<td>YP1225-1820 (20 inch, single)</td>
<td>207-136A</td>
</tr>
<tr>
<td>YP1225-2315 (15 inch on 30 inch rows)</td>
<td>207-134A</td>
</tr>
<tr>
<td>YP1625-32TR (30 inch, double)</td>
<td>207-131A</td>
</tr>
<tr>
<td>YP1625-24TR (36 inch, double)</td>
<td>207-132A</td>
</tr>
</tbody>
</table>
### Coulter-Mounted Terra Tines

<table>
<thead>
<tr>
<th>Coulter-Mounted Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR</td>
<td>-</td>
</tr>
<tr>
<td>YP1225-16TR</td>
<td>-</td>
</tr>
<tr>
<td>YP1225-1230 (30 inch)</td>
<td>207-592A</td>
</tr>
<tr>
<td>YP1225-1820 (20 inch)</td>
<td>207-584A</td>
</tr>
<tr>
<td>YP1225-2315 (15 inch)</td>
<td>207-576A</td>
</tr>
<tr>
<td>YP1625-32TR (30 inch)</td>
<td>-</td>
</tr>
<tr>
<td>YP1625-24TR (36 inch)</td>
<td>-</td>
</tr>
<tr>
<td>YP1625-1630 (30 inch)</td>
<td>207-591A</td>
</tr>
<tr>
<td>YP1625-2420 (20 inch)</td>
<td>207-583A</td>
</tr>
<tr>
<td>YP1625-3115 (15 inch)</td>
<td>207-575A</td>
</tr>
</tbody>
</table>

For operations, see "Unit-Mount Cleaner Adjustments" on page 58.

### Frame-Mounted (Zone) Coulters

#### Vantage I Coulters

#### Frame-Mounted Couler Only

<table>
<thead>
<tr>
<th>Frame-Mounted Blade Packages</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-1230 (every row, fluted)</td>
<td>204-586A</td>
</tr>
<tr>
<td>YP1225-1230 (every row, turbo)</td>
<td>204-588A</td>
</tr>
<tr>
<td>YP1225-1820 (every row, fluted)</td>
<td>204-578A</td>
</tr>
<tr>
<td>YP1225-1820 (every row, turbo)</td>
<td>204-580A</td>
</tr>
<tr>
<td>YP1225-2315 (every row, fluted)</td>
<td>204-566A</td>
</tr>
<tr>
<td>YP1225-2315 (every row, turbo)</td>
<td>204-568A</td>
</tr>
<tr>
<td>YP1225-2315 (30 inch rows, fluted)</td>
<td>204-570A</td>
</tr>
<tr>
<td>YP1225-2315 (30 inch rows, turbo)</td>
<td>204-572A</td>
</tr>
<tr>
<td>YP1625-15 in. Blade Packages</td>
<td>Part No.</td>
</tr>
<tr>
<td>YP1625-1630 (every row, fluted)</td>
<td>204-585A</td>
</tr>
<tr>
<td>YP1625-1630 (30 inch rows, turbo)</td>
<td>204-587A</td>
</tr>
<tr>
<td>YP1625-2420 (every row, fluted)</td>
<td>204-577A</td>
</tr>
<tr>
<td>YP1625-2420 (30 inch rows, turbo)</td>
<td>204-579A</td>
</tr>
<tr>
<td>YP1625-3115 (every row, fluted)</td>
<td>204-565A</td>
</tr>
<tr>
<td>YP1625-3115 (30 inch rows, turbo)</td>
<td>204-567A</td>
</tr>
</tbody>
</table>

No combination of unit mounted and frame mounted attachments may be mixed.
### Frame-Mounted Vantage I Coulter

<table>
<thead>
<tr>
<th>YP1225 17 in. Blade Packages</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR (between rows)</td>
<td>204-628A</td>
</tr>
<tr>
<td>YP1225-16TR (between rows)</td>
<td>204-092A</td>
</tr>
<tr>
<td>YP1225-1230 (every row)</td>
<td>204-590A</td>
</tr>
<tr>
<td>YP1225-1820 (every row)</td>
<td>204-582A</td>
</tr>
<tr>
<td>YP1225-2315 (30 inch rows)</td>
<td>204-574A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YP1625 17 in. Blade Packages</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1625-32TR (between rows)</td>
<td>204-625A</td>
</tr>
<tr>
<td>YP1625-24TR (between rows)</td>
<td>204-628A</td>
</tr>
<tr>
<td>YP1625-1630 (every row)</td>
<td>204-589A</td>
</tr>
<tr>
<td>YP1625-2420 (every row)</td>
<td>204-581A</td>
</tr>
<tr>
<td>YP1625-3115 (30 inch rows)</td>
<td>204-573A</td>
</tr>
</tbody>
</table>
Row Options (Unit-Mount)

Unit-Mounted Row Cleaners

Optional Martin row cleaners are unit-mount as:

- UMRC “stand-alone”, via unit-mount assembly ①, or;
- UMC-RC via coulter disk mounting bracket ②, with or without a coulter disk.

These bundles include a manual.

<table>
<thead>
<tr>
<th>Single-Wheel, Coulter-Mount</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR (30 inch)</td>
<td>207-108A</td>
</tr>
<tr>
<td>YP1225-16TR (36 inch)</td>
<td>207-125A</td>
</tr>
<tr>
<td>YP1625-32TR (30 inch)</td>
<td>207-107A</td>
</tr>
<tr>
<td>YP1625-24TR (36 inch)</td>
<td>207-108A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Double-Wheel, Coulter-Mount</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225 (30 inch)</td>
<td>207-126A</td>
</tr>
<tr>
<td>YP1225 (20 inch)</td>
<td>207-120A</td>
</tr>
<tr>
<td>YP1225 (15 inch)</td>
<td>207-114A</td>
</tr>
<tr>
<td>YP1625 (30 inch)</td>
<td>207-113A</td>
</tr>
<tr>
<td>YP1625 (15 in. on 30 inch rows)</td>
<td>207-113A</td>
</tr>
<tr>
<td>YP1625 (20 inch)</td>
<td>207-119A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Single-Wheel, Stand-Alone</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR (30 inch)</td>
<td>207-112A</td>
</tr>
<tr>
<td>YP1225-16TR (36 inch)</td>
<td>207-129A</td>
</tr>
<tr>
<td>YP1625-32TR (30 inch)</td>
<td>207-111A</td>
</tr>
<tr>
<td>YP1625-24TR (36 inch)</td>
<td>207-112A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Double-Wheel, Stand-Alone</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225 (30 inch)</td>
<td>207-130A</td>
</tr>
<tr>
<td>YP1225 (20 inch)</td>
<td>207-124A</td>
</tr>
<tr>
<td>YP1225 (15 inch)</td>
<td>207-118A</td>
</tr>
<tr>
<td>YP1625 (30 inch)</td>
<td>207-129A</td>
</tr>
<tr>
<td>YP1625 (20 inch)</td>
<td>207-123A</td>
</tr>
<tr>
<td>YP1625 (15 in. on 30 inch rows)</td>
<td>207-117A</td>
</tr>
</tbody>
</table>

For operations, see:
See “Unit-Mount Cleaner Adjustments” on page 58.
Unit-Mounted Disk Coulters
Optional unit-mount disk coulters are available with 15 inch fluted blades, 15 inch turbo blades or 14 inch straight blades. If you need complete coulters, with unit mount and blade, the selection includes:

<table>
<thead>
<tr>
<th>15 inch Fluted Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR (30 inch)</td>
<td>204-528A</td>
</tr>
<tr>
<td>YP1225-16TR (36 inch)</td>
<td>204-551A</td>
</tr>
<tr>
<td>YP1225-1230 (30 inch)</td>
<td>204-552A</td>
</tr>
<tr>
<td>YP1225-1820 (20 inch)</td>
<td>204-546A</td>
</tr>
<tr>
<td>YP1225-2315 (15 inch, every row)</td>
<td>204-534A</td>
</tr>
<tr>
<td>YP1225-2315 (15 inch on 30 inch rows)</td>
<td>204-540A</td>
</tr>
<tr>
<td>YP1625-32TR (30 inch)</td>
<td>204-527A</td>
</tr>
<tr>
<td>YP1625-24TR (36 inch)</td>
<td>204-545A</td>
</tr>
<tr>
<td>YP1625-1630 (30 inch)</td>
<td>204-551A</td>
</tr>
<tr>
<td>YP1625-2420 (20 inch)</td>
<td>204-545A</td>
</tr>
<tr>
<td>YP1625-3115 (15 inch, every row)</td>
<td>204-533A</td>
</tr>
<tr>
<td>YP1625-3115 (15 inch, 30 inch rows)</td>
<td>204-539A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15 inch Turbo Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR (30 inch)</td>
<td>204-530A</td>
</tr>
<tr>
<td>YP1225-16TR (36 inch)</td>
<td>204-553A</td>
</tr>
<tr>
<td>YP1225-1230 (30 inch)</td>
<td>204-554A</td>
</tr>
<tr>
<td>YP1225-1820 (20 inch)</td>
<td>204-548A</td>
</tr>
<tr>
<td>YP1225-2315 (15 inch, every row)</td>
<td>204-536A</td>
</tr>
<tr>
<td>YP1225-2315 (15 inch on 30 inch rows)</td>
<td>204-542A</td>
</tr>
<tr>
<td>YP1625-32TR (30 inch)</td>
<td>204-529A</td>
</tr>
<tr>
<td>YP1625-24TR (36 inch)</td>
<td>204-547A</td>
</tr>
<tr>
<td>YP1625-1630 (30 inch)</td>
<td>204-553A</td>
</tr>
<tr>
<td>YP1625-2420 (20 inch)</td>
<td>204-547A</td>
</tr>
<tr>
<td>YP1625-3115 (15 inch, every row)</td>
<td>204-535A</td>
</tr>
<tr>
<td>YP1625-3115 (15 inch, 30 inch rows)</td>
<td>204-541A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14 inch Straight Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-24TR (30 inch)</td>
<td>204-532A</td>
</tr>
<tr>
<td>YP1225-16TR (36 inch)</td>
<td>204-555A</td>
</tr>
<tr>
<td>YP1225-1230 (30 inch)</td>
<td>204-556A</td>
</tr>
<tr>
<td>YP1225-1820 (20 inch)</td>
<td>204-550A</td>
</tr>
<tr>
<td>YP1225-2315 (15 inch on 30 inch rows)</td>
<td>204-544A</td>
</tr>
<tr>
<td>YP1625-32TR (30 inch)</td>
<td>204-531A</td>
</tr>
<tr>
<td>YP1625-24TR (36 inch)</td>
<td>204-549A</td>
</tr>
<tr>
<td>YP1625-1630 (30 inch)</td>
<td>204-555A</td>
</tr>
<tr>
<td>YP1625-2420 (20 inch)</td>
<td>204-549A</td>
</tr>
<tr>
<td>YP1625-3115 (15 inch, 30 inch rows)</td>
<td>204-543A</td>
</tr>
</tbody>
</table>

Coulter Blades
Replacement and alternate coulter blades include (qty. 1 per row unit):

<table>
<thead>
<tr>
<th>15 inch Turbo Packages</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbo, 15 inch (20 flutes)</td>
<td>820-327C</td>
</tr>
<tr>
<td>Fluted, 15 inch (50 flutes)</td>
<td>820-331C</td>
</tr>
<tr>
<td>Straight, 14 inch</td>
<td>820-259C</td>
</tr>
</tbody>
</table>

For operations, see: “Unit-Mounted Coulter Adjustments” on page 59.
Gauge Wheel Scrapers

When planting in moist or sticky soils, these scrapers are useful in preventing build-up that might otherwise result in shallow planting.

Order one part per wheel (2 per opener).

<table>
<thead>
<tr>
<th>Wheel Scrape</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½ inch Gauge wheel scraper</td>
<td>404-194D</td>
</tr>
<tr>
<td>3 inch Gauge wheel scraper</td>
<td>404-195D</td>
</tr>
<tr>
<td>4 inch Gauge wheel scraper</td>
<td>404-196D</td>
</tr>
</tbody>
</table>

The scrapers mount on the bottom rear of the depth wheel arm, using the existing bolt and lock washer. The slot in the scraper is long enough to clear the lower grease fitting, and allow adjustment as wheel and scraper wear.

For operations, see: “Adjusting Gauge Wheel Scrapers” on page 62.

Seed Meters

Seed meters are not standard in the base Product configuration. Normally, one or more sets are ordered with the original planter. One set is factory-installed.

Meters are simple to change. Available models include (part number are for a single row unit; each Singulator Plus includes one seed wheel):

<table>
<thead>
<tr>
<th>Meters</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singulator Plus</td>
<td>403-156K</td>
</tr>
<tr>
<td>12FP 12-Finger Pick-Up (30 inch)</td>
<td>403-158K</td>
</tr>
<tr>
<td>12FP 12-Finger Pick-Up (sunflower)</td>
<td>403-203K</td>
</tr>
<tr>
<td>6FP 6-Finger Pick-Up (Twin/20 inch)</td>
<td>403-169K</td>
</tr>
</tbody>
</table>

For operations, see: “25P Finger Meter Adjustments” on page 68.
Seed Meter Wheels

Singulator Plus meters accept a variety of seed wheels, each optimized for specific seeds. Wheels are simple to change. 25 Series meters accept only green seed wheels. Choices include:

<table>
<thead>
<tr>
<th>Meter Wheels</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean (1700-2000 seeds/lb, 3750-4400 seeds/kg)</td>
<td>403-122D</td>
</tr>
<tr>
<td>Soybean (2000-2700 seeds/lb, 4400-5950 seeds/kg)</td>
<td>403-123D</td>
</tr>
<tr>
<td>Soybean (2700-3200 seeds/lb, 5950-7050 seeds/kg)</td>
<td>403-124D</td>
</tr>
<tr>
<td>Soybean (3200-3600 seeds/lb, 7050-7940 seeds/kg)</td>
<td>403-125D</td>
</tr>
<tr>
<td>Soybean (3600-4000 seeds/lb, 7940-8810 seeds/kg)</td>
<td>403-126D</td>
</tr>
<tr>
<td>Cotton (4000-4600 seeds/lb, 8810-10140 seeds/kg)</td>
<td>403-133D</td>
</tr>
<tr>
<td>Cotton (4600-5200 seeds/lb, 10140-11460 seeds/kg)</td>
<td>403-134D</td>
</tr>
<tr>
<td>Cotton (5200-6000 seeds/lb, 11460-13230 seeds/kg)</td>
<td>403-135D</td>
</tr>
<tr>
<td>Milo (low rate/solid, 51 pockets)</td>
<td>403-136D</td>
</tr>
<tr>
<td>Milo (low rate/row, 102 pockets)</td>
<td>403-137D</td>
</tr>
<tr>
<td>Milo (high rate/solid, 135 pockets, 10500-14000 seeds/lb, 23150-30860 seeds/kg)</td>
<td>403-138D</td>
</tr>
<tr>
<td>Milo (high rate/solid, 135 pockets, 12000-18000 seeds/lb, 26460-39680 seeds/kg)</td>
<td>403-140D</td>
</tr>
<tr>
<td>Milo (high rate/row, 270 pockets, 10500-14000 seeds/lb, 23150-30860 seeds/kg)</td>
<td>403-139D</td>
</tr>
<tr>
<td>Milo (high rate/row, 270 pockets, 12000-18000 seeds/lb, 26460-39680 seeds/kg)</td>
<td>403-141D</td>
</tr>
</tbody>
</table>

Seed-Lok® Seed Firmer

The base Product includes no seed firmers. A choice of firmers is an option in the product bundles, or may be field-installed as kits. Only one type of seed firmer may be installed at the same time.

The Seed-Lok® seed firmer also supports low-rate fertilizer delivery. For this use, the optional fertilizer system (page 106) must also be installed.

<table>
<thead>
<tr>
<th>Meters</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 Series Seed-Lok® kit (per opener)</td>
<td>404-093K</td>
</tr>
</tbody>
</table>

For operations, see: "Seed Firmer Adjustments" on page 70.
Keeton® Seed Firmer

The base Product includes no seed firmers. A choice of firmers is an option in the product bundles, or may be field-installed as kits. Only one type of seed firmer may be installed at the same time.

<table>
<thead>
<tr>
<th>Meters</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keeton® seed firmer (per opener)</td>
<td>890-796C</td>
</tr>
<tr>
<td>Keeton® seed firmer (per opener)</td>
<td>890-840C</td>
</tr>
</tbody>
</table>

The Keeton® seed firmer also supports low-rate fertilizer delivery. For this use, the optional fertilizer system (page 104) must also be installed.

For operations, see: “Seed Firmer Adjustments” on page 70.

Row Unit Press Wheels

The base Yield-Pro® planter 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 Great Plains dealer.

For operations, see: “Press Wheel Adjustments” on page 71.
# Specifications and Capacities

## YP1225 Models

<table>
<thead>
<tr>
<th>YP1225 Model</th>
<th>-1230</th>
<th>-16TR36</th>
<th>-1820</th>
<th>-2315</th>
<th>-24TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Row Count</td>
<td>12</td>
<td>16 (8 twin)</td>
<td>18</td>
<td>23</td>
<td>24 (12 twin)</td>
</tr>
<tr>
<td>Row Spacing</td>
<td>30 in.</td>
<td>36 in.</td>
<td>20 in.</td>
<td>15 in.</td>
<td>30 in.</td>
</tr>
<tr>
<td>Working Width</td>
<td></td>
<td></td>
<td>30 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Span (width between end rows)</td>
<td>330 in.</td>
<td>260 in.</td>
<td>340 in.</td>
<td>330 in.</td>
<td>338 in.</td>
</tr>
<tr>
<td>Swath (Channel Width)</td>
<td>360 in.</td>
<td>288 in.</td>
<td>360 in.</td>
<td>345 in.</td>
<td>360 in.</td>
</tr>
<tr>
<td>Seed Capacity</td>
<td>Optional 82 or 150 bu hoppers, or PROBOX® 50 unit bulk seed container</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Width</td>
<td>13 ft. 6 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Length</td>
<td>26 ft. 2 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Length</td>
<td>36 ft. 2 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Height</td>
<td>11 ft. 3 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Height</td>
<td>12 ft. 2 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Clearance</td>
<td>22 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Tractor Requirement</td>
<td>140 hp</td>
<td>165 hp</td>
<td>175 hp</td>
<td>200 hp</td>
<td>205 hp</td>
</tr>
<tr>
<td>Hitch</td>
<td>3-Point, Hydraulic Tongue Optional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulic Circuits Required</td>
<td>Closed-Center, 3 Remotes (4 w/Hydraulic Drive), 2250 psi, 25 gal/min (fan circuit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight* (empty, base configuration)</td>
<td>15540 lb</td>
<td>16410 lb</td>
<td>16850 lb</td>
<td>17940 lb</td>
<td>18160 lb</td>
</tr>
<tr>
<td>Weight* (full, max. configuration)</td>
<td>28500 lb</td>
<td>29610 lb</td>
<td>30170 lb</td>
<td>31550 lb</td>
<td>31830 lb</td>
</tr>
<tr>
<td>Transport Tire Size</td>
<td>Standard: 14.9R46 8 Star Radial R-1 (380/90R46) Optional: 18.4R42 3 Star R1 (480/80R42)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wing Gauge Wheel Tire Size</td>
<td>19.0/45-17 18-Ply (480/45-17)$^1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Drive Tire Size</td>
<td>20x8.00-10 Turf NHS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opener Down Pressure</td>
<td>200 to 500 lbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opener Travel (Up - Down)</td>
<td>10 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opener Depth Range</td>
<td>0 to 4 in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^*$ See page 27 for additional weight data.
## YP1625 North America Models

<table>
<thead>
<tr>
<th></th>
<th>YP1625 Model</th>
<th>-1236</th>
<th>-1630</th>
<th>-2420</th>
<th>-24TR36</th>
<th>-3115</th>
<th>-32TR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Row Count</strong></td>
<td></td>
<td>12</td>
<td>16</td>
<td>24</td>
<td>24 (12 twin)</td>
<td>31</td>
<td>32 (16 twin)</td>
</tr>
<tr>
<td><strong>Row Spacing</strong></td>
<td></td>
<td>36 in.</td>
<td>30 in.</td>
<td>20 in.</td>
<td>36 in.</td>
<td>15 in.</td>
<td>30 in.</td>
</tr>
<tr>
<td><strong>Working Width</strong></td>
<td></td>
<td>40 ft.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Span (width between end rows)</strong></td>
<td></td>
<td>396 in.</td>
<td>450 in.</td>
<td>460 in.</td>
<td>404 in.</td>
<td>450 in.</td>
<td>458 in.</td>
</tr>
<tr>
<td><strong>Swath (Channel Width)</strong></td>
<td></td>
<td>432 in.</td>
<td>480 in.</td>
<td>480 in.</td>
<td>432 in.</td>
<td>465 in.</td>
<td>480 in.</td>
</tr>
<tr>
<td><strong>Seed Capacity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Optional 82 or 150 bu hoppers, or PROBOX® 50 unit bulk seed container</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transport Width</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13 ft. 6 in.</td>
<td></td>
</tr>
<tr>
<td><strong>Working Length</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26 ft. 2 in.</td>
<td></td>
</tr>
<tr>
<td><strong>Transport Length</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36 ft. 2 in.</td>
<td></td>
</tr>
<tr>
<td><strong>Working Height</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 ft. 3 in.</td>
<td></td>
</tr>
<tr>
<td><strong>Transport Height</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 ft. 2 in.</td>
<td></td>
</tr>
<tr>
<td><strong>Transport Clearance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22 in.</td>
<td></td>
</tr>
<tr>
<td><strong>Minimum Tractor Requirement</strong></td>
<td></td>
<td>165 hp</td>
<td>190 hp</td>
<td>230 hp</td>
<td>230 hp</td>
<td>270 hp</td>
<td>275 hp</td>
</tr>
<tr>
<td><strong>Hitch</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-Point, Hydraulic Tongue Optional</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hydraulic Circuits Required</strong></td>
<td></td>
<td>Closed-Center, 3 Remotes (4 w/Hydraulic Drive), 2250 psi, 25 gal/min (fan circuit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em><em>Weight</em> (empty, base configuration)</em>*</td>
<td></td>
<td>15800 lb</td>
<td>16670 lb</td>
<td>18420 lb</td>
<td>18420 lb</td>
<td>19940 lb</td>
<td>20160 lb</td>
</tr>
<tr>
<td><em><em>Weight</em> (full, max. configuration)</em>*</td>
<td></td>
<td>28770 lb</td>
<td>29880 lb</td>
<td>32100 lb</td>
<td>32100 lb</td>
<td>34040 lb</td>
<td>34320 lb</td>
</tr>
<tr>
<td><strong>Transport Tire Size</strong></td>
<td></td>
<td>Standard: 14.9R46 8 Star Radial R-1 (380/90R46) Optional: 18.4R42 3 Star R1 (480/80R42)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Wing Gauge Wheel Tire Size</strong></td>
<td></td>
<td>19.0/45-17 18-Ply (480/45-17)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Contact Drive Tire Size</strong></td>
<td></td>
<td>20x8.00-10 Turf NHS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Opener Down Pressure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>200 to 500 lbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Opener Travel (Up - Down)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 in.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Opener Depth Range</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 to 4 in.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* See page 27 for additional weight data.
### YP1625 Export Model

<table>
<thead>
<tr>
<th>Model</th>
<th>YP1625-1670</th>
</tr>
</thead>
<tbody>
<tr>
<td>Row Count</td>
<td>16</td>
</tr>
<tr>
<td>Row Spacing</td>
<td>70 cm</td>
</tr>
<tr>
<td>Working Width</td>
<td>12.2 m</td>
</tr>
<tr>
<td>Span (width between end rows)</td>
<td>1050 cm</td>
</tr>
<tr>
<td>Swath (Channel Width)</td>
<td>1120 cm</td>
</tr>
<tr>
<td>Seed Capacity</td>
<td>Optional 2890 or 5290 liter hoppers, or PROBOX® 50 unit bulk container</td>
</tr>
<tr>
<td>Transport Width</td>
<td>4.1 m</td>
</tr>
<tr>
<td>Working Length</td>
<td>9.5 m</td>
</tr>
<tr>
<td>Transport Length</td>
<td>12.5 m</td>
</tr>
<tr>
<td>Working Height</td>
<td>3.4 m</td>
</tr>
<tr>
<td>Transport Height</td>
<td>3.7 m</td>
</tr>
<tr>
<td>Transport Clearance</td>
<td>56 cm</td>
</tr>
<tr>
<td>Minimum Tractor Requirement</td>
<td>290 kW</td>
</tr>
<tr>
<td>Hitch</td>
<td>3-Point, Hydraulic Tongue Optional</td>
</tr>
<tr>
<td>Hydraulic Circuits Required</td>
<td>Closed-Center, 3 Remotes (4 w/Hydraulic Drive), 155 bar, 95 liters/min (fan circuit)</td>
</tr>
<tr>
<td>Weight* (empty, base configuration)</td>
<td>7570 kg</td>
</tr>
<tr>
<td>Weight* (full, max. configuration)</td>
<td>13560 kg</td>
</tr>
</tbody>
</table>
| Transport Tire Size | Standard: 380/90R46 (14.9R46 8 Star Radial R-1)  
Optional: 480/80R42 (18.4R42 3 Star R1) |
| Wing Gauge Wheel Tire Size | 480/45-17 (19.0/45-17 18-Ply)¹ |
| Contact Drive Tire Size | 20x8.00-10 Turf NHS |
| Opener Down Pressure | 90 to 225 kg |
| Opener Travel (Up - Down) | 25 cm |
| Opener Depth Range | 0 to 10 cm |

¹ See page 27 for additional weight data.

### Tire Inflation Chart

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>380/90R46 w/82 bu. or PROBOX®, and no fertilizer</td>
<td>49 psi</td>
</tr>
<tr>
<td></td>
<td>(339 kPa)</td>
</tr>
<tr>
<td>380/90R46 w/150 bu. hopper or fertilizer system</td>
<td>49 psi</td>
</tr>
<tr>
<td></td>
<td>(339 kPa)</td>
</tr>
<tr>
<td>18.4R42 3 Star R1 (480/80R42)</td>
<td>30 psi</td>
</tr>
<tr>
<td></td>
<td>(205 kPa)</td>
</tr>
<tr>
<td>33x15.5x16.5 12 Ply Skid Steer NHS (395/55B16.5)</td>
<td>60 psi</td>
</tr>
<tr>
<td></td>
<td>(415 kPa)</td>
</tr>
<tr>
<td>20x8.00-10 Turf NHS</td>
<td>16 psi</td>
</tr>
<tr>
<td></td>
<td>(110 kPa)</td>
</tr>
</tbody>
</table>

### Tire Warranty Information

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

- ManufacturerWeb Site
- Titan: www.titan-intl.com
- Goodyear: www.titan-intl.com
- Firestone: www.firestoneag.com
Hydraulic Diagrams

Optional Hydraulic Drive diagram is on page 126.

Lift Hydraulics

Figure 142
Lift Hydraulics
Fan Hydraulics

Figure 143
Fan Hydraulics
YP1225 Fold & Marker (w/o Aux.)
(S/N A1153K-)

Figure 144
YP1225 Fold and Marker Hydraulics (without Aux.)
YP1225 Fold and Marker (w/o Aux.)
(S/N A1154K+)

Figure 145
YP1225 Fold and Marker Hydraulics (without Aux.)
YP1625 Fold & Marker (w/o Aux.)
(S/N A1174B-)

Figure 146
YP1625 Fold and Marker Hydraulics (without Aux.)
YP1625 Fold and Marker (w/o Aux.)
(S/N A1175B+)

Figure 147
YP1625 Fold and Marker Hydraulics (without Aux.)
Auxiliary Hydraulics (Option)

Figure 148
Auxiliary Hydraulics
Hydraulic Tongue (Option)

Figure 149
Hydraulic Tongue
Chain Routing
Hydraulic Drive

Figure 150
Wing Drive Chain Routing
Contact Drive Chains

![Diagram of contact drive chains]

**Figure 151**
Contact Drive Chain Routing

**Legend:**
- **A** Range Sprockets: 15T, 18T, 20T, 30T, 60T
- **B** Transmission Sprockets: 17T, 19T, 23T, 24T, 25T, 26T, 27T, 28T

Range Sprockets:
- 15T
- 18T
- 20T
- 30T
- 60T

Transmission Sprockets:
- 17T
- 19T
- 23T
- 24T
- 25T
- 26T
- 27T
- 28T
Wing Drive Chains

Figure 152
Wing Drive Chain Routing

Wing Shaft Input Sprocket:
23T: Hydraulic Drive
25T: Contact Drive
25 Series Final Meter Drive

25P: Meter Drive (Front type)
① No idlers on mount.
② Top chain passes over single idler on shank
③ Be sure to reconnect idler spring

25P: Meter Drive (Mid type)
① Be sure to reconnect idler spring
② Top chain passes between 2 idlers at mount
③ Top chain passes between 2 idlers at shank

25P: Meter Drive (Rear type)
① Be sure to reconnect idler spring
② Top chain passes between 2 idlers at mount
③ Top chain passes between 2 idlers at shank
### Torque Values Chart

<table>
<thead>
<tr>
<th>Bolt Size in-tpi</th>
<th>Bolt Head Identification</th>
<th>Bolt Size</th>
<th>Bolt Head Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grade 2</td>
<td>Grade 5</td>
<td>Grade 8</td>
</tr>
<tr>
<td></td>
<td>N-m</td>
<td>ft-lb</td>
<td>N-m</td>
</tr>
<tr>
<td>1/4-20</td>
<td>7.4</td>
<td>5.6</td>
<td>11</td>
</tr>
<tr>
<td>1/4-28</td>
<td>8.5</td>
<td>6.0</td>
<td>13</td>
</tr>
<tr>
<td>5/16-18</td>
<td>15</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>5/16-24</td>
<td>17</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>3/8-16</td>
<td>27</td>
<td>20</td>
<td>42</td>
</tr>
<tr>
<td>3/8-24</td>
<td>31</td>
<td>22</td>
<td>47</td>
</tr>
<tr>
<td>7/16-14</td>
<td>43</td>
<td>32</td>
<td>67</td>
</tr>
<tr>
<td>7/16-20</td>
<td>49</td>
<td>36</td>
<td>76</td>
</tr>
<tr>
<td>5/8-13</td>
<td>66</td>
<td>49</td>
<td>105</td>
</tr>
<tr>
<td>5/8-20</td>
<td>75</td>
<td>55</td>
<td>115</td>
</tr>
<tr>
<td>9/16-12</td>
<td>95</td>
<td>70</td>
<td>150</td>
</tr>
<tr>
<td>9/16-18</td>
<td>105</td>
<td>79</td>
<td>165</td>
</tr>
<tr>
<td>5/16-11</td>
<td>130</td>
<td>97</td>
<td>205</td>
</tr>
<tr>
<td>5/16-18</td>
<td>150</td>
<td>110</td>
<td>230</td>
</tr>
<tr>
<td>3/4-10</td>
<td>235</td>
<td>170</td>
<td>360</td>
</tr>
<tr>
<td>5/8-16</td>
<td>260</td>
<td>190</td>
<td>405</td>
</tr>
<tr>
<td>5/8-9</td>
<td>225</td>
<td>165</td>
<td>585</td>
</tr>
<tr>
<td>7/16-14</td>
<td>250</td>
<td>185</td>
<td>640</td>
</tr>
<tr>
<td>1-8</td>
<td>340</td>
<td>250</td>
<td>875</td>
</tr>
<tr>
<td>1-12</td>
<td>370</td>
<td>275</td>
<td>955</td>
</tr>
<tr>
<td>11/6-7</td>
<td>480</td>
<td>355</td>
<td>1080</td>
</tr>
<tr>
<td>11/6-12</td>
<td>540</td>
<td>395</td>
<td>1210</td>
</tr>
<tr>
<td>11/4-7</td>
<td>680</td>
<td>500</td>
<td>1520</td>
</tr>
<tr>
<td>11/4-12</td>
<td>750</td>
<td>555</td>
<td>1680</td>
</tr>
<tr>
<td>3/8-6</td>
<td>890</td>
<td>655</td>
<td>1990</td>
</tr>
<tr>
<td>11/8-12</td>
<td>1010</td>
<td>745</td>
<td>2270</td>
</tr>
<tr>
<td>11/2-6</td>
<td>1180</td>
<td>870</td>
<td>2640</td>
</tr>
<tr>
<td>11/2-12</td>
<td>1330</td>
<td>980</td>
<td>2970</td>
</tr>
</tbody>
</table>

- 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.
Appendix B - Initial Setup

Hydraulic Charge and Bleed

Connect the planter to a suitable hydraulic source and check the condition of the hydraulic systems:
“Unfolding The Product” on page 19, “Raising/Lowering Product” on page 22, “Folding the Planter” on page 24, “Fan Operation” on page 38, “Marker Operation” on page 41, and if hydraulic drive is installed, run a Fill Disk sequence to check motor.

See “Bleeding Hydraulics” on page 83 if any circuits do not operate smoothly.

Console Installation

The Product # Product’s standard seed monitor system includes a virtual terminal and switch panel that must be mounted in the tractor cab. As supplied by DICKEY-john®, the kit includes a flat bracket for the modules, and ball swivel for mounting the bracket in the tractor.

The ball swivel includes four 10-32 screws. You or your dealer must provide the mounting holes for the screws. Your dealer may have alternate suction cup or clamping brackets available if you prefer to avoid drilling holes.

Refer to the DICKEY-john® manual for harness connections. Route wiring harnesses with enough slack to allow for tractor movement, especially on articulating tractors.

Monitor Setup

Refer to the DICKEY-john® IntelliAg® Operator manual for general system information. Data specific to your product model is provided in a separate Quick Start Guide. Configure the system with this information prior to first use. The Quick Start guides, however, are not specific to individual model row spacings. Use the following data:

### YP1225 Row Spacing Setup Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Active Rows</th>
<th>Channel Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1225-1230</td>
<td>12</td>
<td>360 in</td>
</tr>
<tr>
<td>YP1225-16TR36</td>
<td>16</td>
<td>288 in</td>
</tr>
<tr>
<td>as -0836</td>
<td>8</td>
<td>288 in</td>
</tr>
<tr>
<td>YP1225-1820</td>
<td>18</td>
<td>360 in</td>
</tr>
<tr>
<td>YP1225-2315</td>
<td>23</td>
<td>345 in</td>
</tr>
<tr>
<td>as -1230</td>
<td>12</td>
<td>360 in</td>
</tr>
<tr>
<td>YP1225-24TR</td>
<td>24</td>
<td>360 in</td>
</tr>
<tr>
<td>as -1230</td>
<td>12</td>
<td>360 in</td>
</tr>
</tbody>
</table>

### YP1625 Row Spacing Setup Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Active Rows</th>
<th>Channel Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP1625-1236</td>
<td>12</td>
<td>432 in</td>
</tr>
<tr>
<td>YP1625-1630</td>
<td>16</td>
<td>480 in</td>
</tr>
<tr>
<td>YP1625-2420</td>
<td>24</td>
<td>480 in</td>
</tr>
<tr>
<td>YP1625-24TR36</td>
<td>24</td>
<td>432 in</td>
</tr>
<tr>
<td>as -1236</td>
<td>12</td>
<td>432 in</td>
</tr>
<tr>
<td>YP1625-3115</td>
<td>31</td>
<td>465 in</td>
</tr>
<tr>
<td>as -1630</td>
<td>16</td>
<td>480 in</td>
</tr>
<tr>
<td>YP1625-32TR</td>
<td>32</td>
<td>480 in</td>
</tr>
<tr>
<td>as -1630</td>
<td>16</td>
<td>480 in</td>
</tr>
<tr>
<td>YP1625-1670</td>
<td>16</td>
<td>1120 cm</td>
</tr>
</tbody>
</table>
Level Planter

All frame sections must be level to maintain even planting depth. Before using the planter in the field, make sure the planter is level side-to-side.

Periodic frame-leveling adjustments should not be necessary, but if there are problems with uneven depth, check planter levelness and follow these procedures.

Before making any adjustments be sure the lift cylinders are re-phased and operating properly.

Complete the steps under “Bleeding Hydraulics” on page 83, before proceeding.

Level frame in planting conditions or the product may not produce desired results.

Refer to Figure 154

1. Unfold the product fully and set down. Put in field position by lowering and pulling forward.

2. When setting hitch, lower lift cylinders completely. Set the 3-point hitch or hydraulic tongue so that the top of the tongue tube ① is:
   - 46 inch (116.8 cm) above ground for YP1225, or
   - 42 inch (106.7 cm) above ground for YP1625.
   - This is the starting point for adjustments.

Refer to Figure 155

3. If planting 1 1⁄2 inch (3.8 cm) deep, adjust the hitch until frame measures approximately 26 inches (66 cm) from ground to frame at the pivots. When planting at other depths, frame height will vary.

**NOTICE**

Height Mis-adjustment Risk:
Planter must be fully lowered to field position and hitch height set before making side-to-side adjustments.

Parallel arms should be parallel with ground, or up to 1 inch (2.5 cm) lower in back. Adjusting a 3-point hitch to level parallel arms may cause frame to sit higher or lower than 26 inches

4. Check parallel arms behind the pivots to ensure that parallel arms are parallel with ground or up to 1 inch lower in back. If needed, raise or lower the 3-point to adjust parallel arms.

5. Once parallel arms are parallel with ground or up to 1 inch lower in back and 3-point is set, measure distance from ground to frame at the pivots.

Refer to Figure 156

6. Measure wings at gauge wheel. If not level with center of frame, adjust eye bolt accordingly.

Eye-bolt adjustments are easier if the planter is first lowered to the ground to remove some of the force on the cylinder.
Wing Alignment

To check and adjust wing alignment:

1. Unfold planter, see “Important Safety Information” on page 1, and place a block ahead of each wing gauge wheel. Pull planter forward against blocks to rock frames back.

Refer to Figure 157

2. Check for proper alignment by running a string line across back of planter toward outer ends of wings. For proper alignment, outside ends of wings (dimension A) should be 0 to 1/4 inch (0 to 6 mm) ahead of inside ends (dimension B).

3. To adjust wing alignment, shorten or lengthen eye bolts to change the length of the wing pull bar. Adjust eye bolts in or out until dimension A is 0 to 1/4 inch (0 to 6 mm) greater than dimension B.

4. Be sure both wings are adjusted equally or the planter will tend to pull sideways behind the tractor.

Angle of wings is exaggerated for ease of clarification.

Figure 157
Box Alignment
Speed Calibration

At the first opportunity to operate the planter in the field (with or without planting), the speed sensor component of the seed monitor needs to be calibrated. The seed monitor manual describes the procedure.

Cross-check the monitor speed reading with the tractor speedometer. Investigate if they do not match.

Speed Sensor Operation

Refer to Figure 158

The monitor uses a pickup wheel for measuring planter ground speed. The pickup sensor should be set at a distance of 1/16 inch to 1/8 inch (1.6 to 3.2 mm) from pickup wheel.

Initial Marker Extensions for Common Configurations

<table>
<thead>
<tr>
<th>Model: YP1225-YP1625</th>
<th>1230</th>
<th>16TR36</th>
<th>1236</th>
<th>1630</th>
<th>1820</th>
<th>2420</th>
<th>3115</th>
<th>3115</th>
<th>32TR</th>
<th>32TR</th>
<th>24TR36</th>
<th>24TR36</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Row Spacing</strong></td>
<td>30.0 in</td>
<td>36.0 in</td>
<td>36.0 in</td>
<td>20.0 in</td>
<td>15.0 in</td>
<td>30.0 in</td>
<td>30.0 in</td>
<td>30.0 in</td>
<td>27.6 in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Span</strong></td>
<td>76.2 cm</td>
<td>91.4 cm</td>
<td>91.4 cm</td>
<td>50.8 cm</td>
<td>38.1 cm</td>
<td>76.2 cm</td>
<td>76.2 cm</td>
<td>76.2 cm</td>
<td>70 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Swath</strong></td>
<td>330.0 in</td>
<td>260.0 in</td>
<td>260.0 in</td>
<td>340.0 in</td>
<td>330.0 in</td>
<td>330.0 in</td>
<td>338.0 in</td>
<td>338.0 in</td>
<td>413.4 in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marker Extension</strong></td>
<td>838 cm</td>
<td>660 cm</td>
<td>660 cm</td>
<td>864 cm</td>
<td>838 cm</td>
<td>838 cm</td>
<td>859 cm</td>
<td>859 cm</td>
<td>1050 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Opposing Passes</strong></td>
<td>360.0 in</td>
<td>288.0 in</td>
<td>288.0 in</td>
<td>360.0 in</td>
<td>345.0 in</td>
<td>360.0 in</td>
<td>360.0 in</td>
<td>360.0 in</td>
<td>440.9 in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Left</strong></td>
<td>914 cm</td>
<td>732 cm</td>
<td>732 cm</td>
<td>914 cm</td>
<td>876 cm</td>
<td>914 cm</td>
<td>914 cm</td>
<td>914 cm</td>
<td>1120 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Right</strong></td>
<td>915 cm</td>
<td>401 cm</td>
<td>381 cm</td>
<td>483 cm</td>
<td>457 cm</td>
<td>495 cm</td>
<td>485 cm</td>
<td>465 cm</td>
<td>595 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Model: YP1625

| **Rows**               | Standard | Standard | as -1630 | Standard | as -1630 | Standard | as 1630 | Standard | as 1236 |
| **Row Spacing**        | 36.0 in | 30.0 in | 20.0 in | 15.0 in | 30.0 in | 30.0 in | 30.0 in | 30.0 in | 36.0 in |
| **Span**               | 91.4 cm | 76.2 cm | 50.8 cm | 38.1 cm | 76.2 cm | 76.2 cm | 76.2 cm | 91.4 cm | 91.4 cm |
| **Swath**              | 396.0 in | 450.0 in | 460.0 in | 450.0 in | 450.0 in | 458.0 in | 458.0 in | 458.0 in | 458.0 in |
| **Marker Extension**   | 1006 cm | 1143 cm | 1168 cm | 1026 cm | 1026 cm | 1143 cm | 1143 cm | 1163 cm | 1163 cm |
| **Opposing Passes**    | 432.0 in | 480.0 in | 480.0 in | 480.0 in | 480.0 in | 480.0 in | 480.0 in | 432.0 in | 432.0 in |
| **Left**               | 1097 cm | 1219 cm | 1219 cm | 1097 cm | 1097 cm | 1181 cm | 1197 cm | 1219 cm | 1219 cm |
| **Right**              | 1234 in | 255.0 in | 250.0 in | 240.0 in | 255.0 in | 251.0 in | 259.0 in | 230.0 in | 238.0 in |

## Appendix B - Initial Setup

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Marker Setup

Although markers are factory- or dealer-installed, they are not precisely adjusted for your product configuration. Prior to first use, set the following:

- marker speed (page 49), and;
- marker extension (below).

You may also want to set/check:

- marker disc angle (page 49).

Marker Extension

Refer to Figure 159

Marker Extension is the distance from the mark in the ground to the centerline (or furrow) of the end row unit (whether that row is in use or not).

The tables on page 134 provide suggested initial values for various standard and altered configurations. When operating with rows locked up, measure to the outside row whether in use or not. Extension values may be different for left and right side, and may be different for opposing passes (each pass in the opposite direction) and concentric passes (each pass in the same direction). The table only includes data for opposing passes.

Refer to Figure 160

To adjust marker extension:

1. Loosen nuts ④ on U-bolts ③.
2. Move marker disk tube ⑤ in or out to get the proper adjustment.
3. To measure for marker width adjustment:
4. Lower planter in the field and drive forward a few feet.
5. Measure from the centerline/furrow of the outside active row to the mark in the ground made by marker disk.

When correctly adjusted, there is a gap of one row space between passes, as measure between center-lines of outside active rows for single-row, or between center-lines outside active twin row pairs.
Appendix R - Row-Pro™

Preparation and Setup

Row-Pro™ Setup (Option)

The factory default setting for down-force is likely to differ from that required by your next field conditions.

Before modifying the monitor setting for down-force, determine what actual down force is ideal for the initial use of the planter. One method of determining an initial setting involves operating in the field (without seeding).

1. Set planting depth at T-handles (page 60).
2. Review unit-mount coulter depth relative to opener disc. Adjust as needed (page 52).
3. Start with the row unit down pressure springs in the lowest, or second-lowest notch (page 54).

   Adjustment to the spring pressure may need to be made if the depth is reset or the closing wheel down pressure is adjusted.

4. Operate in the field for a short distance.
5. Evaluate the seed trench (page 55).
6. Adjust the springs until depth and closure are ideal. If the ideal setting seems to be in between two notch values, use the higher setting. Rows in wheel tracks may be higher still.
7. Engage the Row-Pro™ system. Set the initial target weight at 80 pounds.
8. Operate in the field. Evaluate furrow and closing. Adjust Row-Pro™ force setting for optimal results.
9. When verifying the final setting, and when planting, watch for Unable to Control alarms, which may indicate that the cams are a notch or more too high or too low.

   If the IntelliAg® alarm indicates a value too high, reduce spring pressure. If the IntelliAg® alarm indicates a value too low, increase spring pressure.

The actual target rate is going to be different depending on the field conditions, soil type and other factors. The best way to gauge where you want the setting is to operate the system for a short time then go behind the planter and check the furrow.

---

a. Optionally operate the Row-Pro™ system in Monitor Only mode, and note the forces reported.
Operating Instructions

Refer to Figure 161

Row-Pro™ is a factory installed option for implements with 25-series openers that are equipped with DICKEY-john® IntelliAg®. It helps the spring down force system to maintain a user-determined, ideal weight for the side depth gauge wheels. Once the springs are set, Row-Pro™ pneumatically increases/decreases pressure on the openers.

The row units are already getting their down pressure from the springs on the parallel arms. Row-Pro only acts to vary that pressure as needed to maintain consistency in different soil conditions.

There is one cylinder ① for each row located between the parallel arms. Based on loading on the side depth wheels, Row-Pro™ adjusts air pressure in the air cylinders.

Refer to Figure 162

There is one valve set per opener section, located in the center of the section. It allows each section to be controlled independently.

For twin row there are two valve sets ② per section: one for the front openers and one for the rear openers.

Figure 161
Row-Pro™ Cylinder

Figure 162
Row-Pro™ Valve Sets
Row-Pro™ Components

Refer to Figure 163 and Figure 164

The main systems of Row-Pro™ consist of:

1. **An air compressor system**: one 12VDC air compressor (11) with air tank (12), two extension cables (13), and one fuse assembly (14).

2. **A load sensing system**: DPLCM (Down Pressure Load Cell Module) (15) and the load cells (16).

3. **An adjusting system**: valves (17) and air cylinders (18).

Load Cell, DPLCM and Valves

The DPLCM (15) and valves (17) are mounted together on a plate and are connected to the DICKEY-john® Row-Pro™ wiring harness (19).

Two leads on the Row-Pro™ harness each connect to a load cell (16) which is located in the opener body (see fig.162). Four leads connect to the valve sets. There is one pair (one air intake, one exhaust) for each valve.

- For single row planters:
  - There is one load cell and one valve set per each opener section located at mid section.

- For twin row planters:
  - There are two load cells and two valve sets per each opener section located on the long and short center row unit of the section.

The Row-Pro™ harness connects to the implement name’s CANbus at connector ends (20).

The load cell provides feedback so the system can maintain the target pressures.

The DPLCM uses the readings from the load cell to regulate the air valves in order to increase or decrease pressure in the air cylinders.
Row-Pro™ Air Compressor System

Row-Pro™ Air Compressor

Refer to Figure 165

The 12VDC compressor requires both an electrical connection and a mounting location. It should be mounted in a location on the tractor or planter where most convenient. Mount where cool clean air can get to it. The battery connection is equipped with one large 60 amp spade fuse (automotive type).

If your tractor has an on-board engine driven compressor capable of 150 psi, it can be used instead of the one supplied with the planter. Hook the on-board compressor to the air tank with lines provided.

The air filter should be placed in the tractor cab where it can pull clean air from the cab. The remote air filter line should be as short as possible.

The air compressor pressurizes the air tank reservoir.

Row-Pro™ Air Tank

Refer to Figure 166

An air tank is provided and mounted on the wing. Open the air tank petcock once daily to drain water accumulation.

The air tank is used in conjunction with the air valves to maintain a set pressure value for the air cylinders.

Air valves are used to increase or decrease the amount of air provided to the air cylinders.

Row-Pro™ Air Tank Lines

Refer to Figure 167

The air tank has two lines. A 1/2 inch line attaches the compressor to the air tank. A 1/4 inch line splits at a T-junction and goes to the valves while the remaining end attaches to the compressor plate where it activates the pressure switches.

If an on-board compressor is used, plug/bypass the pressure switch branch.
Row-Pro™ Air Pressure Gauge

Refer to Figure 168

Row-Pro™ is designed to run at 150 psi. When the psi drops to 135 the compressor engages and builds back up to 150 psi. Duty cycle varies based on air usage.

Check for Air Leaks

Before going to the field check for air leaks.

1. Turn the compressor on to pressure up the primary system until it automatically shuts off. If the system loses pressure, check for leaks.
2. Use the Leak Test mode to cycle through the sections and check for leaks.
Row-Pro™ Adjustments

Refer to Figure 169

Load Cell Reading

These readings are displayed and adjusted from the IntelliAg® seed monitor console.

**Control Mode:** *Auto* is the normal running mode. *Manual* is used to control the valves only when the operator touches the increase or decrease icon on the work screen.

**Monitor Only:** This screen disables control, but still reports sensor feedback. From there, press the *Down Pressure Diagnostic* key and then press the *Float Mode ON* button to release all of the air from the system. Next, press the *Float Mode OFF* button. Stay on the *Diagnostic* screen and make a planting pass. Note the pressure displayed on the *Diagnostic* screen and then evaluate the seed trench. If the seed trench results are acceptable, use the displayed pressure as your target rate.

**Front-Rear Linked:** “*Enabled*” links the front and rear row units so that the same amount of pressure increase/decrease set at the screen is applied to front/rear row units. When “*Disabled*” - front/rear row units are not linked. Two sets of buttons appear on the screen that allow for adjustments of front and rear rates independently.

**Target Rate:** This is the desired down pressure on the side depth wheels. The target rate to be entered is the set rate (pounds) of the down force to determine how much pressure is applied. The system monitors and adjusts pressure to meet the defined rate set at this screen.

⚠ Pressure displayed on screen and target pressure both refer to the amount of weight carried by the side depth gauge wheels, and not overall row unit down pressure.

**Inc/Dec:** Sets the amount that the Target Rate is changed with each key press during planting operations.
**Sensitivity Adjust:** Determines how responsive the Controller is to input from the DPLCM. The range is from -10 to +10. Zero (0) is the average setting. Going below 0 decreases the reaction time. Going above 0 increases the reaction time.

**Disable Down Pressure Modules:** Modules interfacing with feedback sensors can be independently disabled so that down pressure to rear and/or front row units are not monitored or controlled. Modules that have been disabled are ignored by the system and will not report down pressure data or react to soil conditions.

(The IntelliAg® screen shows both row modules enabled 🗝. An unchecked box indicates disabled.)

If a section fails, that individual section can be turned on and off to locate the problem.

---

**Refer to Figure 172**

**Reset Offset Value:** Resetting Offset Values clears previous down pressure readings and resets values to zero.

1. At Main WORK SCRN press NEXT PAGE button.
2. Press MODULE CFG button.
3. At Module Configuration screen, press DPRESS SET.
4. At the Down Pressure Setting screen press OK to clear values.

**IMPORTANT:** The implement must be lifted and the implement lift switch in the up state before the OK button appears and values can be cleared.

- Make sure side depth wheels are all in the lowered position so there is no tension on the load cell. Values other than OFF or 1-6 mV may indicate stuck side depth wheels. If the reading is 0 mV, there may be a problem with load cell grounding. See “Row-Pro™ Troubleshooting”, page 178.

- **Initial Setup:** Zero out the load cell reading.

---

**Figure 171**

IntelliAg® Screen

**Figure 172**

IntelliAg® Screen
### Row-Pro™ Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor won’t turn on</td>
<td>Switch turned “off”. Turn switch “on”.</td>
</tr>
<tr>
<td></td>
<td>Poor electrical connection. Clean connections and reassemble.</td>
</tr>
<tr>
<td></td>
<td>Fuse blown. Replace fuse (60A).</td>
</tr>
<tr>
<td>Compressor won’t turn off (runs continuously)</td>
<td>Section opener valves are installed in reverse. Install opener valves correctly.</td>
</tr>
<tr>
<td></td>
<td>Stuck pressure switch(es). Replace pressure switch(es).</td>
</tr>
<tr>
<td>Compressor cycles more than normal</td>
<td>Water build-up in air tank. Drain tank to keep reserve volume at proper size.</td>
</tr>
<tr>
<td>Erratic down pressure reading</td>
<td>Poor electrical connection to load cell. Clean connection and reassemble.</td>
</tr>
<tr>
<td></td>
<td>Load cell malfunction. Replace load cell.</td>
</tr>
<tr>
<td>Persistent “high” alarm</td>
<td>Row unit spring tension too high. Lower spring tension.</td>
</tr>
<tr>
<td></td>
<td>Air leak preventing cylinders from holding pressure. Fix leak.</td>
</tr>
<tr>
<td>Persistent “low” alarm</td>
<td>Row unit spring tension too low. Raise spring tension.</td>
</tr>
<tr>
<td></td>
<td>Air leak preventing cylinders from holding pressure. Fix leak.</td>
</tr>
<tr>
<td>System won’t hold air pressure</td>
<td>Pinched/torn hose. Replace hose.</td>
</tr>
<tr>
<td></td>
<td>Hose not pushed into quick connect fitting far enough. Push hose in until fully seated.</td>
</tr>
<tr>
<td>Voltage reads “0” on monitor, or is unaffected by load on load cell</td>
<td>Signal wire grounded to frame. Inspect for pinched or broken wiring harness between the load cell and DPLCM. Replace damaged wiring.</td>
</tr>
</tbody>
</table>

### Row-Pro™ Maintenance

Check the tractor cab air filter as per manufacturer recommendation.
Yield-Pro® Planter Warranty

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

A Second year limited warranty covers units utilizing Yield-Pro (YP) planter frames with 25 series row units and singulating type meters. The second year limited warranty covers parts only (personal usage only excluding labor and wear items) on the following: hitch main frame, gauge wheels, and markers, air box/manifold, Y-splitter tubes, and fan and housing, row unit weldments, unit mounted attachments, and frame mounted attachments.

This Warranty is limited to the replacement of any defective part by Great Plains and the installation by the dealer of any such replacement part. Great Plains reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship.

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

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

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

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