Export Pre-Delivery Instructions

YP625PD, YP625TD and YP925TD
6- and 9-Row Planters with Air-Pro® Seed Meters

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

Illustrations may show optional equipment not supplied with standard unit, or may show pull-type, two-point or three-point models where differences are immaterial to the immediate topic.
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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” starting on page 6 of 401-754M or 401-755M Operator manual thoroughly.
▲ Read all instructions noted on the decals.
▲ Keep decals clean. Replace damaged, faded and illegible decals.
Wear Protective Equipment

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

Use A Safety Chain
(Applies to model YP625PD only.)

▲ 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 in chain to permit turning.
▲ Replace chain if any links or end fittings are broken, stretched or damaged.
▲ Do not use safety chain for towing.

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.

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.
Use Safety Lights and Devices

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

▲ Use flashing warning lights and turn signals whenever driving on public roads.

Use lights and devices provided with implement

Keep Riders Off Machinery

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

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

Transport Machinery Safely

Maximum transport speed for implement is 32 kph. Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

▲ Do not exceed 32 kph or 20 mph. Never travel at a speed which does not allow adequate control of steering and stopping.
▲ Comply with national, regional and local laws.
▲ Do not tow a pull-type implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.
▲ Do not tow a 2-point implement unless the tractor is rated for the load, and is properly ballasted for the load.
▲ 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” in Operator manual.
▲ Do not fold or unfold markers while the tractor is moving

Shutdown and Storage

▲ Use transport locks, and parking stands or tongue jack.
▲ Block tires.
▲ Detach and store planter in an area where children normally do not play.
Practice Safe Maintenance

▲ Understand procedure before doing work. Use proper tools and equipment. Refer to this manual.
▲ Work in a clean, dry area.
▲ Unfold and 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 planter to cool completely.
▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems.
▲ Welding: Disconnect battery ground. Protect hydraulic lines. Avoid fumes from heated paint.
▲ Inspect all parts. Make sure parts are in good condition and installed properly.
▲ Remove buildup of grease, oil or debris.
▲ Remove all tools and unused parts from 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 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.
Introduction

The 6- and 9-Row Planters with Air-Pro® Seed Meters have been designed with care and built by skilled workers using quality materials. Proper setup, maintenance, and safe operating practices will help the customer get years of satisfactory use from the machine.

This manual will familiarize you with planning, unloading, and assembly of this planter. Most operating information is contained in the Operator manual.

Models Covered

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<td>YP625PD18TP110</td>
<td>6 triple-row, pull-type, 18 openers, 110 cm spacing</td>
</tr>
<tr>
<td>YP625TD12TR110</td>
<td>6 twin-row, two-point, 12 openers, 110 cm spacing</td>
</tr>
<tr>
<td>YP625TD18TP110</td>
<td>6 triple-row, two-point, 18 openers, 110 cm spacing</td>
</tr>
<tr>
<td>YP925TD0965</td>
<td>9 single rows, three-point, 9 openers, 65 cm spacing</td>
</tr>
</tbody>
</table>

Topics Covered

This manual covers final assembly of the basic YP625PD/TD/925TD planter, as containerized for export, and some features and options.

Features/Options Covered Include:
- implement assembly
- dry fertilizer system installation
- coulter installation
- row cleaner installation

Topics Not Covered Include:
- monitor console installation (see 401-754M or 401-755M Operator manual)
- marker installation (see 113-870M)

Description of Unit

The YP625/925 Planters are integrated precision seeding implements. Seed is gravity fed from the standard row hoppers, and singulated with the Air-Pro® seed meters. Separate hoppers meter dry fertilizer to coulters. The YP625PD is pull-type. The YP625TD is 2-point with lift-assist. The YP925TD is 3-point.

Document Family

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<tr>
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<tr>
<td>401-754P</td>
<td>YP625PD Parts Manual</td>
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<tr>
<td>401-755M</td>
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<td>11001-1378</td>
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<tr>
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<td>Rigid Row Cleaner manual (Option)</td>
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<tr>
<td>207-016M</td>
<td>Terra-Tine™ Row Cleaner manual (Option)</td>
</tr>
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Note: Marker installation is not covered in this Pre-Delivery manual. Rely on the manual above.

Note: Save, and deliver to the customer, all documents.

a. North American models YP425A, YP625A and YP825A are covered in manuals 401-651M and 401-652M.
Using This Manual

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

Definitions

The following terms are used throughout this manual.

**NOTICE**

**A crucial point of information related to the preceding topic.**

*Read and follow the directions to remain safe, avoid serious damage to equipment and ensure successful assembly.*

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

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

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

**Call-Outs**

- Single-character callouts in the ranges 1-9, a-z or A-Z identify elements from only the most recently referenced Figure or Figures. These numbers and letters may be re-used for other elements on other pages.

- Three-character callouts in the range 101 to 405 reference Great Plains part numbers from a common Parts List in the Appendix. These numbers always refer to the same part in all cases.

**About Parts**

**Fasteners**

Fasteners called out are often loosely installed in one of the two parts to be joined, and must be removed before the parts are mated. To avoid mix-ups and misplaced parts, do not remove fasteners from shipping locations until the “Select” instruction that calls for those parts.

**Tags**

Some parts have engraved metal tags attached. These tags are for parts ID and may be removed and discarded as the part is installed. In some cases, the tag must be removed or it will interfere with part installation. Parts may alternatively be marked with grease pencil. These marks may be left on and removed at close-out.

**Assembly and Setup Assistance**

To order additional copies of pre-delivery instructions, operator or parts manuals, write to the following address. Include model numbers in all correspondence. If you do not understand any part of this manual or have other assembly or setup questions, assistance is available.

For further assistance, contact:

**Product Support**

Great Plains Mfg. Inc., Service Department

PO Box 5060

Salina, KS 67402-5060

USA

 gp_web_cs@greatplainsmfg.com

785-823-3276

**Figures**

**NOTICE**

*Photo Advisory:*

None of the photographs in this manual were taken during an actual export assembly. They may include parts, assemblies, and other artifacts that will not be present at the same point in an actual export assembly. Rely on the text narrative. Rely on the Figures only insofar as they support the text narrative.
Preparation

Shipment Manifest

Refer to Figure 2
The planter components are delivered in one or more standard ISO intermodal shipping containers, typically a single “40-Foot High-Cube”.

Have a copy of the shipment manifest, invoice or purchase order available. The assemblers need a list of planter serial numbers, and documentation of the configuration of each planter (options and accessories).

Once the contents have been removed, the containers are returned to commerce. Before releasing the container(s), verify that the planters are the correct models and row-spacings, and have all specified options.

Inside the containers, the planter components are on unpainted steel racks. Major sub-assemblies are secured to rack tubing. Smaller sub-assemblies, cartons, bags, and loose components may be on the rack floors, on pallets or inside hoppers.

After the planter is assembled, the racks, crates, pallets, and most fasteners used to secure components to the racks, are not returned to Great Plains. They may be salvaged or scrapped.

Work Area

Container Unload Clearance

Refer to Figure 3
The longest rack in the container is 7.4m. Spot the container to allow for the length of the container, the longest rack, and the forklift or tug used to remove and reposition the racks.

Planter Assembly and Test Clearance

Refer to Figure 4
Designate a space for planter assembly (which begins with the cart mainframe). Allow for forklift access from any direction, and final tractor hitching. Allow for forklift and tractor turns.

Whether or not the planter has markers, allow for at least 4 m beyond the unfolded wings for lift access.
Tools Required

Refer to Figure 5

- Two mobile lifters, such as some combination of forklifts, hoists or cranes, one of which has a capacity of at least 5000 kg (11,000 pounds), the maximum weight of one fully loaded opener rack.

- To lift an entire loaded mainframe stack, the lifters must have a combined capacity of 12000 kg (26,500 pounds). The fully loaded container may weigh as much as 25000 kg (55,000 pounds).

- Planter Operator and Parts manualsa:
  Operator manual (401-754M or 401-755M) and Parts manual (401-754P or 401-755P).

- Adjustable support stands

- Jacks

- Cartons or tote boxes for temporary storage

- 3 meter fish tape, stout line or cable snake for installing markers (see manual 113-870M).

- De-greasing solution safe to use on polyethylene plastic (page 54).

- Clear exterior silicone sealant, with applicator tip (page 54).

- Touch-up paint in Great Plains green:
  DuPont 262
  PPG 43817
  Pantone 356C

  Use gloss exterior enamel suitable for use on metal surfaces.

- Basic hand tools, including:
  + wrenches in common SAE (inch) sizes
  + 9.5mm (3/8in, letter size V) drill bit (page 49)
  + 7.0mm (9/32in, letter size K) drill bit (page 53)
  + torque wrench
  + plastic tubing cutter

---

a. These manuals are also available in PDF form on the Great Plains web site.
Rack Unloading

A single planter’s components are provided on two racks plus one or more pallets. Each shipping container may hold up to three planters, and four racks. Mainframe racks are stacked up to three high.

Racks with floor panels are designed to tolerate some amount of sliding on paved surfaces. Avoid pushing or dragging on irregular surfaces, as the floor panels may tear loose.

1. Remove the racks and pallets from the container. Position them clear of the assembly area.

About the Mainframe Rack

Refer to Figure 6
The mainframe rack stack contains:
• one to three planter mainframes, partially-assembled
• one to three air system manifolds
• ground drive arms (if dismounted)
• tires, press wheels, coulters, hoppers, row cleaners and cartons with numerous small parts and accessories such as meter discs

Mainframe Serial Number

Refer to Figure 7
2. Take note of each planter's model number and serial number, located on the rear face of the main tool bar tube, at the right side of the planter, for example:
   Model # YP925TD0965
   * GP - C1001E *

This number must match the manifest, invoice or order for this shipment. Other components in the container may be marked or tagged with the last six characters of the serial number, for example:
   C1001E

Those components are intended for installation on the planter with serial number GP-C1001E.

Designate Staging Areas
3. Set up a staging area for each serial number. As parts are unloaded and dismounted, put all parts for the same planter in the same staging area. Distribute parts without serial numbers equally to each staging area.
About the Pallets or Crates

Refer to Figure 8
Components not on racks, or on rack floors, are shipped in the same container, in crates or on pallets.

Some items are marked or tagged with six-character serial numbers, intended for use with the planter whose serial number plate ends with these same six characters.

About the Opener Rack

Refer to Figure 9
The Opener rack contains:

- all mid-length and long openers (which are too long for the mainframe rack)
- 2-point lift assist weldments, parallel arms and cylinders
- hydraulic fans and cylinders
- cartons with numerous small parts and accessories
- optional markers

Un-rack Main Frames

Remove Floor Components

Refer to Figure 10

4. Remove any loose cartons and components in implement frames and on the floor of the main frame rack stack. This includes air system manifolds, and may include ground drive arms, as well as other parts. Move these to the staging areas.
Start with the top mainframe rack section.

**Dismount Relocated Drive Parts**

*Refer to Figure 11*

If the remainder of the drive system looks exactly as depicted in Figure 11, continue at “Unbolt Top Rack Section” on page 11.

5. Some components may have been relocated for shipment (to avoid interference with a planter stacked above).

   Locate the two seed drive sprocket trees (163 and 174).

   Locate the dry fertilizer jackshaft 229 and jackshaft bracket 227, and the fertilizer sprocket tree 207.

6. Dismount any relocated drive system components, and place them in the staging area for this planter.

**Unbolt Top Rack Section**

For the bottom rack section, skip to “Unfasten Mainframe” on page 13.

*Refer to Figure 12*

Note: It is safe to un-bolt rack sections before attaching hoist lines. Each corner joint has a locator hole above and a peg below to keep the sections from sliding apart.

*Refer to Figure 13*

7. Remove all (8 to 16) nuts, lock washers and bolts securing the rack section to the next section below. These fasteners are not re-used.
Attach Hoist Lines

8. Secure hoist lines to the rack frame, or to the planter frame, as follows:

   Rack Frame:
   Refer to Figure 14
   Loop around the corner post of the section being removed, under the end cross-tubes.

   or

   Planter Frame:
   Refer to Figure 15
   Loop around the front tool bar inside the end tubes and just outboard of the ribs. Loop around the outer gauge wheel weldment at rear.

   **CAUTION**
   Loss of Control Hazard:
   Do not loop lines around 2-point or 3-point gauge wheel arms if the spring yoke is disconnected (as shown in Figure 19 on page 14). An arm could snap up violently, and the rear of the main frame fall, when bolts are removed at step 15 on page 14.

Remove Rack Section

   Refer to Figure 16

9. Carefully lift the rack section off the stack. Minimize sway, to prevent lower portions of lifted planter from striking planter below.
Refer to Figure 17

10. Carefully set the rack section on the floor or ground.

Note: In some upper rack sections, planter components extend below the post bases. When set down, one side of these sections rests on the planter opener disks (this is the case for the figure at right).

When unfastening the planter from the rack at step 20 on page 15, it is necessary to support the elevated side of the rack. In Figure 14 (page 12) a forklift was used. In Figure 16 at right a hoist chain is used. Stands or blocks could also be used.

11. If one side of the rack is elevated, support that side with a hoist, lift or other supports.

⚠️ DANGER

Crushing Hazard:
Support a rack frame prior to unfastening. Removing bolts on a rack that is not supported will result it falling to the ground. This could result in serious injury or death. It is also likely to seriously damage the planter.

Unfasten Mainframe

12. Identify all the locations at which the mainframe is attached to the rack.

This includes at least one of the following places:

2. 2-Point hitch pins (Figure 18)
b. Gauge wheel arms (Figure 19)
c. Front tool bar U-bolts (Figure 20, page 14)
d. Front tool bar clamp plates (Figure 21, page 14)

e. Rear tool bar ends (Figure 23, page 15)

13. Loosen all nuts on bolts at these locations. Do not remove the bolts until instructed.

Release Hitch Pins

Refer to Figure 18
If the planter is pull-type, or if the hitch pins do not secure the mainframe to the rack, continue at step 15 on page 14.

14. Remove and save two sets:

- 805-105C PIN COTTER 1/4 X 2 1/2 PLT
- 805-168C PIN HITCH 1 7/16 X 8 3/8 PLT
Release Gauge Wheel Arms

Refer to Figure 19 (which depicts a 2-point or 3-point type gauge wheel, with disconnected spring adjuster)
If the gauge wheel arms are not secured to the rack, continue at step 17.

15. Remove all (one to six) sets of nuts, lock washers and bolts that secure gauge wheel arms to the rack. These fasteners are not re-used.

16. If the gauge wheel arm spring adjuster is disconnected, as shown at right, re-connect it at this time.

Remove and save the bolt and sleeve from each side of the spring adjuster block.

Push the arm down at the rack connection, to align the spring adjuster block with the lower set of holes at the mount weldment.

Re-insert and secure the bolts and sleeves.

Note: If the spring adjuster was not disconnected, but is in the upper weldment holes, leave it as is. This shipping configuration is changed to field configuration at step 67 on page 24.

Release Front Tool Bar

Refer to Figure 20 or Figure 21
If the front tool bar is not secured to the rack, continue at step 18.

17. Remove any nuts, lock washers and U-bolts that secure the front tool bar to the rack. Remove any nuts, lock washers, straight bolts and plates that secure the front tool bar to the rack. These fasteners are not re-used.
Support the Main Frame
When completely released (after step 20), the mainframe is lifted out of the rack frame.

Refer to Figure 22
18. Unless lines are still connected to the planter main frame from step 8 on page 12. Connect lines to support the weight prior to releasing the final bolts.

Loop around the front tool bar inside the end tubes ① and just outboard of the ribs. Loop around the outer gauge wheel weldments ② at rear.

Refer to Figure 23
19. Use the hoist to lift the planter main frame just until the tool bar end bolts ③ are loose.
20. Remove the nuts, lock washers and bolts. They are not re-used.
21. Hoist the planter main frame clear of the rack. Keep it level during movement. Set it on the ground near its staging area for further assembly.

Secure Drive Shaft
Refer to Figure 24
The meter drive shaft ④ is partially assembled, with all final driving “DRIVING” sprockets, and shipped inside the rear planter main frame tool bar. The frame caps ①, and their fasteners, are also in the tube.

22. If there is any concern about the shaft getting lost, remove the frame caps ① and loosely secure the caps to the end of the tool bar tubes.

Rack Section Closeout
23. If the rack is the bottom rack (with the floor), inspect it for additional parts not removed at step 4. Save any parts found. Dispose of rack.

Repeat step 57 through step 23 for the remaining rack sections.
Dismount Some Opener Rack Items

Refer to Figure 25

Unless they obstruct access to parts needed sooner, leave the openers on the shipping rack until you transfer them to main frames beginning at step 103 on page 29.

Other components need to be dismounted from the rack sooner, because they do not necessarily come off in the order needed for planter installation.

Clear Rack Floor

24. Remove loose items from opener tops and rack floor.

If any items have serial number tags, place them with other items intended for installation on the planter having that same serial number.

Dismount Lift-Assist Mounts

If the planter model is pull-type or 3-point, continue at “Dismount Pull-Type Tongue” on page 17.

Start with the top mount weldment on the rack. Note that the second (middle) mount is shipped upside-down, and requires a different hoist attachment.

Refer to Figure 26

25. Attach two hoist lines on the mount to be dismounted. For the first (top) and third (bottom) mount, use line through the holes 1.

For the middle (upside-down) mount, use one line through the forward hole 2, and one line around the tube 3 at the rear. Secure the line so that it cannot slip forward during lift.

Be sure to run the lines so that they do not get entangled with the lift-assist casters.

26. Use the hoist to support some of the weight of the mount to be removed. Loosen the nuts at the front rack plate 4 and the rear rack lug 5.

27. Use the hoist to support enough of the mount weight to allow easy removal of the shipping nuts, lock washers and bolts. These fasteners are not re-used. Leave the U-bolts on the mount for later installation.

28. Move the released mount to a planter staging area.

29. Repeat step 25 through step 28 for each lift-assist mount.
Dismount Lift-Assist Pivot Arms

Refer to Figure 27

30. Secure a hoist line around one of the pivots, at the a caster spindle ®.

⚠️ CAUTION

Spinning Caster - Swinging Load:
Do not attach lines to the caster arms. The casters are generally free to pivot about their spindles. Lifting by the arms could result in a sudden slumping of the load, and a rapid swing. Expect the pivot to swing somewhat when released. No particular hoist line attachment point is likely to be at the precise center of gravity of the pivot.

31. Support some of the weight of the pivot with the hoist.

32. Loosen the eight nuts at the four U-bolts ® that secure the pivot to the rack frame.

33. Increase hoisting to support all of the weight of the pivot.

34. Starting at the bottom, remove nuts, lock washers and U-bolts for the bottom three U-bolts. None of these fasteners are re-used.

35. Carefully remove the final nuts, lock washers and U-bolt at the top. Control load swing.

36. Move the pivot to a staging area.

37. Repeat step 30 through step 36 for all pivots on the opener rack.

Dismount Pull-Type Tongue

If the planter shipment is 2-point or 3-point models, continue at “Planter Assembly” on page 18.

Refer to Figure 28

38. Secure a hoist line to the hitch loop (if installed), or through the hitch bolt holes ®.

39. Support some of the weight of the tongue with the hoist.

40. Loosen the six nuts at the three U-bolts ® that secure the tongue to the rack frame.

41. Increase hoisting to support all of the weight of the tongue.

42. Starting at the bottom, remove nuts, lock washers and U-bolts for the bottom three U-bolts. None of these fasteners are re-used.

43. Carefully remove the final nuts, lock washers and U-bolt at the top. Control load swing.

44. Move the tongue to a staging area.

45. Repeat step 38 through step 44 for all tongues on the opener rack.
Planter Assembly

Support the Main Frame

46. Hoist or lift the main frame onto stands, jacks or other supports rated for the full final weight. Elevate so that the openers are not touching the ground. Use supports that cannot tip.

Install Parking Stands

If the implement is a pull-type planter, continue at “Erect Manifold Supports”.

Refer to Figure 29

47. Select one parking stand:

To ease installation, remove leg pin (334) and slide out the inside leg (149). For easiest installation, also remove weldment pin (148), nut (290), bolt (279) and outside leg weldment (148).

48. For each side of the frame, on front face of front tool bar, align the weldment (148) 401-273H BRACKET PRK STD SUP WLDMT at 15 to 30 cm from the end of the frame.

Secure with two:

- (338) 806-050C U-BOLT 3/4-10 X 7 X 8 1/2
- four sets:
  - (314) 804-023C WASHER LOCK SPRING 3/4 PLT
  - (291) 803-027C NUT HEX 3/4-10 PLT

49. Re-assemble any parts removed from the stands.

50. Extend the legs to assist in supporting planter weight during assembly.

Re-align Shifted Openers

If the planter was in the top rack, one or both outside row units may have been shifted slightly toward center, to avoid interference with the planter in the middle rack.

51. Check the position of the outside rows against the opener station layouts on page 82 through page 94.

52. If any need to be moved, first mark the center-line (which mark may already be present). Loosen the nuts on the U-bolts. Move the opener and re-tighten. See ‘Mount Openers’ on page 29 for details on mount fasteners.
Erect Manifold Supports

If the air pipe supports are already installed in their final vertical positions, continue at “Install Drive Components” on page 20.

Refer to Figure 31

To prevent damage during shipment, air pipe supports are installed inside the main frame at their tool bar stations.

53. At each air pipe support, remove and save two sets:

- 803-021C NUT HEX 5/8-11 PLT
- 804-022C WASHER LOCK SPRING 5/8 PLT

and one each:

- 806-052C U-BOLT 5/8-11 X 7 1/32 X 8 1/2
- 403-690D AIR PIPE SUPPORT, REAR

Refer to Figure 32

54. At the same mounting station (left-right position on the tool bar), re-orient the support to the top of the tool bar, and as needed, rotate it so that the manifold clamp faces forward.

Loosely secure the support to the tool bar with the U-bolt, lock washer and nut.
Install Drive Components

Refer to Figure 33
If both seed drive sprocket trees are already installed, continue at “Check Seed Drive Idler” on page 21.

Mount Range Sprocket Tree

Refer to Figure 34 (which has excess sprockets on the tree)
If the range sprocket tree is already installed, continue at “Mount Transmission Sprocket Tree”.

55. Select the:

- 402-339S RANGE SPRKT STORAGE ASSY
  This tree normally has four sprockets on it, and includes fasteners (not all shown):
  - 802-022C HHCS 3/8-16X1 1/2 GR5
  - 804-011C WASHER FLAT 3/8 USS PLT
  - 804-013C WASHER LOCK SPRING 3/8 PLT
  - 803-014C NUT HEX 3/8-16 PLT

Attach the tree to the left side of the range support weldment (176). Insert the bolt (257) through the foot of the tree. Add a flat washer (308), lock washer (309) and nut (285) (not shown).

Mount Transmission Sprocket Tree

Refer to Figure 35
56. Select the:

- 402-021S SPRKT STORAGE ASSY
  This tree normally has seven sprockets on it, and includes fasteners (none shown):
  - 802-022C HHCS 3/8-16X1 1/2 GR5
  - 804-011C WASHER FLAT 3/8 USS PLT
  - 804-013C WASHER LOCK SPRING 3/8 PLT
  - 803-014C NUT HEX 3/8-16 PLT

Attach the tree to the lower rear hole on the left side of the fertilizer transmission plate (“fertilizer case” (213)). Insert the bolt (257) (not shown) through the foot of the tree. Add a flat washer (308), lock washer (309) and nut (285) (not shown).
Check Seed Drive Idler

Refer to Figure 36
57. Inspect the drive systems at the left end of the planter. If the seed drive jackshaft chain is running under idler (366), remove the idler, and re-install it with the chain routed over the idler.

Assemble Fertilizer Transmission

Refer to Figure 37
Inspect the fertilizer drive to see if both the sprocket tree (207) and the jackshaft (227) are in place.

Mount Fertilizer Sprocket Tree
If the fertilizer transmission is already completely installed, continue at “Adjust Gauge Wheel Arms” on page 23.

58. Select the:
   (207) 407-023S SPKT STORAGE ASSY FERT
   This tree normally has seven sprockets on it, and includes fasteners (only the bolt is shown):
   (257) 802-022C HHCS 3/8-16X1 1/2 GR5
   (308) 804-011C WASHER FLAT 3/8 USS PLT
   (309) 804-013C WASHER LOCK SPRING 3/8 PLT
   (285) 803-014C NUT HEX 3/8-16 PLT

Attach the tree to the lower front hole on the left side of the fertilizer transmission plate (“fertilizer case” (213)). Insert the bolt (257) through the foot of the tree. Add a flat washer (308), lock washer (309) and nut (285) (not shown).
Install Fertilizer Jackshaft and Shaft

Refer to Figure 38

59. Select the fertilizer jackshaft bracket assembly [227], which may have been removed at step 6:

[227] 407-657D FERT HOPPER JACKSHAFT MNT BRKT

It includes the following fasteners:

[340] 806-073C U-BOLT 3/8-16 X 7 1/32 X 7 7/8 with two sets:
[309] 804-013C WASHER LOCK SPRING 3/8 PLT
[285] 803-014C NUT HEX 3/8-16 PLT

60. Select also the jackshaft itself:

[229] 407-660D DRY FERTILIZER JACK SHAFT which may have been removed for shipping even if the bracket is installed. This shaft may have been dismounted prior to shipping by removing a pin, a collar, a coupler or flangettes.

61. Mount the bracket [227] on the rear face of the front tool bar, slotted end up, at the following distance from the left end of the frame:

<table>
<thead>
<tr>
<th>Planter Model</th>
<th>Bracket Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP625PD18TP110</td>
<td>44.4 cm</td>
</tr>
<tr>
<td>YP625TD12TR110</td>
<td>44.4 cm</td>
</tr>
<tr>
<td>YP625TD18TP110</td>
<td>44.4 cm</td>
</tr>
<tr>
<td>YP925TD0965</td>
<td>28.3 cm</td>
</tr>
</tbody>
</table>

Secure with U-bolt [340], lock washers [309] and nuts [285].

Refer to Figure 38 and Figure 39

62. Install the jackshaft [229] from the fertilizer transmission plate (“fertilizer case” [219]) to the bracket [227].

From left to right, the ordering of parts is:

a. [329] 805-126C PIN LINCH 1/4 X 1 3/4 PLT
b. [348] 808-150C SPKT 40C23 X 7/8 HEX BORE
c. [333] 805-180C PIN ROLL 1/4 X 1 1/2 LG PLT
d. [379] 822-032C FLANGETTE 52 MST

[380] 822-119C BRG 7/8HEXX2.05OD SPH
e. [213] 407-308D FERTILIZER CASE
f. [165] 402-058D COLLAR LOCK 7/8 HEX
g. [381] 822-175C FLANGETTE 52 3-BOLT PLT

[380] 822-119C BRG 7/8HEXX2.05OD SPH
h. [209] 407-147D ADJUSTABLE SHAFT SUPPORT
i. [208] 407-073D COUPLER, DRY FERT

(This part may be on a hopper assembly)

Leave fasteners at flangettes [379] and [381] only finger-tight. Shaft alignment is adjusted at step 219 on page 50.
Adjust Gauge Wheel Arms

Pull-Type Gauge Wheel Adjustment

If this is a 3-point planter, continue at “3-Point Gauge Wheel Adjustment” on page 24.

Refer to Figure 40

For shipment, the pull-type lift cylinder mount plates (167) may be inverted from their field position. Adjust them to field position prior to delivery.

63. Inspect how the cylinders are mounted at all four gauge wheels. Skip any that have the plates (167) 402-094D CYL MOUNT PLATE, GAUGE WHEEL installed as shown in the right panel of Figure 38.

For each gauge wheel that needs adjustment:

64. Make sure that the gauge wheel arm is free to move downward. If the planter is resting on the arm, this adjustment cannot be made.

Note: Be prepared to support the arm and cylinder, which are likely to move downward when the last bolt is removed.

65. At one side, remove and save four sets:
- 258 802-051C HHCS 5/8-11X1 1/2 GR5
- 313 804-022C WASHER LOCK SPRING 5/8 PLT

66. Invert the orientation of the plates (167) by rotating them on the cylinder trunnions, placing the flat edge down and the crowded edge up. Secure with bolt (258) and lock washer (313).

Continue at “Install Gauge Wheels” on page 24.
3-Point Gauge Wheel Adjustment

If this is a pull-type planter, continue “Pull-Type Gauge Wheel Adjustment” on page 23.

Refer to Figure 41 and Figure 42

If all of the gauge wheel yokes (169) are bolted into the lower mount holes (1), continue at “Yoke Spring Length”.

For shipment, the gauge wheel yokes (169) may be in flat-ground position (upper mount holes (2), as depicted in left panel of Figure 42) or detached entirely (right panel of Figure 42).

Note: Prepare to support the gauge wheel arm before removing bolts.

67. Remove and save two sets:
   (261) 802-064C HHCS 3/4-10X2 GR5
   (180) 400-586D SLEEVE SPRING LINK MOUNT

68. Adjust the arm position to allow alignment of the yoke block (169) with the lower holes (1) of the mount. Secure the yoke in that position with the sleeves (180) and bolts (261).

Yoke Spring Length

69. Check the length of the spring. See “Gauge Wheel Adjustments” in the 401-754M or 401-755M Operator manual.

Install Gauge Wheels

Refer to Figure 43

70. If gauge wheels (359) are already installed, check where the axle bolts (261) are installed in the arm holes. If they are in the lower holes (3) (the bedded planting configuration), continue at step 72 on page 25.

   If installed in the upper holes, remove the bolts (262) and washers (314), and continue at step 71.

71. At each gauge wheel arm, select one:
   (359) 814-385C TIRE & WHL ASY 8R19.5LT
   and two sets:
   (262) 802-065C HHCS 3/4-10X2 1/4 GR5
   (314) 804-023C WASHER LOCK SPRING 3/4 PLT
   Align the wheel axle with the lower holes (3) of the gauge wheel arm. Secure with lock washers (314) and bolts (262).
Install Ground Drive Arm

Refer to Figure 44
If the ground drive arm is installed, and the spring is connected, continue at “Install Lift Assist Weldment” on page 27.

Note: Leave the packet of hub bolts (277) in place on the arm. These are for the toothed drive wheel, which is not installed until step 343 on page 76.

Install Ground Drive Arm

Refer to Figure 45
If the ground drive arm is installed, and only requires spring connection, continue at “Connect Ground Drive Spring” on page 27. If the drive mount appears as in Figure 45, install the arm.

Remove Ground Drive Pivot Shaft

Refer to Figure 45 and Figure 46 (on page 26)
72. Relax the upper stage idlers (4). Lift the upper chain (107) off the pivot driving sprocket (349).

73. Remove and save the lock collar:
   - (164) 402-025S LOCK COLLAR, 7/8 HEX W/ SET SC
   - (349) 808-222C SPKT 40C21 X 7/8 HEX BORE
   and a spacer (not visible in photo):
   - (179) 402-566D 7/8 HEX SHAFT SPACER TB X 1/2

74. Prepare to catch the driven sprocket (348) and spacers (103 and 105). From the left, withdraw the shaft:
   - (178) 402-563D DRIVE HEX SHAFT
   - leave the machine washers (318), not visible in photo) on the shaft,
   - (318) 804-061C WASHER MACH 1.50 X 1.00 X 18GA
   and recover the sprocket and spacers:
   - (105) 120-310D SPACER TUBE 1 ID X 2.25
   - (348) 808-150C SPKT 40C23 X 7/8 HEX BORE
   - (103) 120-263D SPACER TUBE 1 ID X 2 13/16

75. At each pivot bearing (104), remove and save three sets:
   - (264) 803-020C NUT HEX 1/2-13 PLT
   - (310) 804-015C WASHER LOCK SPRING 1/2 PLT
   - (264) 802-082C HHCS 1/2-13X1 3/4 GR5
   then remove the bearing assemblies:
   - (104) 120-269S 3 BOLT PIVOT BRG ASSY

76. Insert the unpinned end of the shaft (178), with machine washers (178) still in place, into the external side of a bearing (104). Place the medium length (5.7cm, 2.25in) spacer (105) onto the unpinned end of the shaft.
Install Arm at Pivot

Refer to Figure 46

77. Select the ground drive arm:

402-310H GROUND DRIVE ARM WELDMENT
With the spring lug side up, align the open end of the arm with the bearing mount holes of the mount bracket (171).

78. Select the shaft (178) with pin (333), washers (318), bearing (104) and spacer (105) on it.

Insert the unpinned end of the shaft through the left plate of the mount (171), and part-way into the arm (170).

79. Select the 23T driven pivot sprocket:

808-150C SPKT 40C23 X 7/8 HEX BORE

80. Recover the arm chain (108) from inside the arm. Verify that the chain is seated in both idler pulleys (not shown). It may be necessary to remove the guard (177) for inspection. Fully relax the arm idler ® to provide ample chain slack.

Place the sprocket (348) inside the chain (108) loop. Place both inside the pivot. Slide the shaft (178) into the sprocket and fully seat the shaft against the left bearing.

81. Select the longer (7.1 cm, 2 13/16in) spacer:

120-263D SPACER TUBE 1 ID X 2 13/16
Add it to the unpinned end of the shaft (178).

82. Select the other bearing:

120-269S 3 BOLT PIVOT BRG ASSY
Add it to the shaft.

83. Select six sets saved:

803-020C NUT HEX 1/2-13 PLT
804-015C WASHER LOCK SPRING 1/2 PLT
802-082C HHCS 1/2-13X1 3/4 GR5
Loosely secure the bearings to the bracket plates.

84. Select the shorter (13 mm, 1/2in) spacer:

402-566D 7/8 HEX SHAFT SPACER TB X 1/2
Add it to the shaft.

85. Select the 21T driving pivot sprocket:

808-222C SPKT 40C21 X 7/8 HEX BORE
Add it to the shaft.

86. Select the lock collar:

402-058D COLLAR LOCK 7/8 HEX
Add it to the shaft.

87. Check that the shaft rotates freely. Tighten the lock collar (165) set screw and bearing nuts (286). Engage the arm idler ®. See page 98 for idler tensioning.

88. Route the upper chain (107) around the driven sprocket (349). Re-engage the upper idler.
Connect Ground Drive Spring

Refer to Figure 47

89. At the ground drive arm spring yoke (106), remove and save:
   - (324) 805-064C PIN COTTER 7/64 X 1 LONG
   - (330) 805-127C PIN CLEVIS 1/2 X 1 3/4

90. Align the yoke (106) with the lug (170) on the ground drive arm. Secure with clevis pin (330) and cotter (324).

Install Lift Assist Weldment

If the planter is a pull-type model, continue at “Mount Openers” on page 29.

Refer to Figure 48

The lift-assist weldment (155) must be installed prior to installing components that would otherwise interfere with installation of this weldment. The axle, casters and hydraulics are not installed until page 33.

**CAUTION**

**Pinch and Crush Hazard:**
Use two lift lines. Maneuver the weldment carefully. The weldment weighs over 300 kg.

91. Select one:
   - (155) 401-751H LIFT ASSIST MOUNT WELD
   Secure hoist lines at the forward (7) and top rear (8) holes.

92. Select four sets:
   - (259) 802-055C HHCS 5/8-11X2 GR5
   - (313) 804-022C WASHER LOCK SPRING 5/8 PLT
   - (287) 803-021C NUT HEX 5/8-11 PLT
   Bring the forward plate of the lift-assist weldment into contact with the mid plate of the main frame. Loosely secure with bolts (259), lock washers (313) and nuts (287).

93. Select two:
   - (338) 806-050C U-BOLT 3/4-10 X 7 X 8 1/2
   and four sets:
   - (314) 804-023C WASHER LOCK SPRING 3/4 PLT
   - (291) 803-027C NUT HEX 3/4-10 PLT
   Secure the mid plate of the lift-assist weldment to the rear tool bar of the main frame with U-bolts (338), lock washers (314) and nuts (291); Grade 5 torque.

94. Secure bolts (259) at forward plates.
Setup Parallel Arms

Refer to Figure 49, Figure 50 and Figure 51
Row units pre-installed on the main frame may have shipping braces 1 to provide clearance from other planters in shipment. If braces are installed, parallel arms springs 346 are also removed for shipment.

If no openers are pre-installed, or all installed openers have springs, and no braces, continue at “Mount Openers” on page 29.

For each pre-installed row unit:

95. Support the weight of the row unit opener (at some point to the rear of the parallel arms).

96. Set the spring adjuster cam 2 to position one (See Operator manual for settings. Figure 49 shows position one).

97. Remove the fasteners that secure the shipping brace 1. Remove the brace. Lower the opener. The brace and fasteners are not re-used.

98. Select two:
(120) 198-240D 3 13/32 SPRING STRAP
Hook the large “keyhole” end of the straps 120 onto each end of the spring anchor pin 144 in the upper parallel arm weldment.

99. Select two:
(346) 807-076C SPRING EXT 1.575 OD X .225 W
Hook one end of the spring 346 through the smaller (bottom) hole of the strap 120.

Note: With the row unit fully lowered on the parallel arms, it is possible to make the next attachment by hand. Wear gloves.

100. Hook the bottom end of the springs 346 onto the spring anchor pins 199 of the bottom parallel arm casting.
Mount Openers

Depending on planter model and shipment method, the planter may have all openers (row units) already installed, or may have the rear (long mount) openers removed, or may have all the row units removed.

Check the planter configuration against the opener station drawings on page 82 through page 94. If all rows are installed, continue at “Install Drive Shaft” on page 30.

Refer to Figure 52
101. Inspect the rear face of the rear tool bar for opener station marks ①. Any factory marks present denote the opener center-lines.

If no marks are present, measure and make marks with grease pencil or paint pencil. Distances from implement center-line to opener stations are given in the drawings on page 82 through page 94.

Refer to Figure 53
102. Attach a hoist line to an opener on the rack. Attaching under the parallel arms, just aft of the adjust cam ② is near the center of gravity.

Have one worker stabilize the opener while another removes the shipping bolts.

Note: Uninstalled openers are shipped on the opener rack. The U-bolts used on the opener rack are only for shipping.

Refer to Figure 54
103. Move the opener from the shipping rack to the main frame. Center the opener on the station mark. Secure the opener mount to the frame using the fasteners provided:

- ③ 806-050C U-BOLT 3/4-10 X 7 X 8 1/2
- and four sets:
  - ③ 804-023C WASHER LOCK SPRING 3/4 PLT
  - ③ 603-027C NUT HEX 3/4-10 PLT

Tighten to Grade 5 torque.

Note: To provide a clear work-space above the mainframe, hoppers are not installed until page 49.
Install Drive Shaft

Refer to Figure 55

**NOTICE**

Component Damage Risk:
Use two workers to remove the shaft from the tube. Place the removed shaft on a long flat surface or level supports. Avoid bending the shafts or stressing the coupler connecting them.

104. Open cap 145 at right end of main tool bar. Have two people remove the drive shaft assembly 181 from the tool bar.

105. Re-attach the cap to the end of tool bar and secure it with fasteners provided.

106. Secure the fasteners of the cap at the other end of the tool bar.

Refer to Figure 56 and Figure 57
The drive shaft is in two sections: (181 and 182, or 181 and 183), held together at a coupling 166 with pins 337 partially inserted. The meter driving sprockets 350 are shipped on this shaft, and may held in place with their own set screws, or by lock collars 1.

107. Remove and save the pins and the coupler that join the shafts:
- 337 805-428C PIN SPIROL 1/4X2 HEAVY PLN
- 166 402-076D COUPLER, SHEAR OUTPUT

108. A second coupler is required for connecting the shafts to the output of the meter drive transmission. Locate this coupler and its pins. It may be on the shafts, installed at the transmission, or in a carton.

Refer to Figure 57
109. Remove any locking collars 1 that retain sprockets 350 on shaft. The collars are not re-used.

110. Remove and save all sprockets:
- 350 808-395C SPKT 41C12 W/SS SPCL PLT

---

*Figure 55 Remove Drive Shaft*

*Figure 56 Shaft Coupling Detail*

*Figure 57 Sprockets on Drive Shaft*
About Shafts and Sprockets
Shaft and sprocket installation must be done in a specific order, or there will be substantial re-work, or chain damage in field use.

Refer to Figure 58, a top view of two openers
- Shafts are inserted into opener mounts and bearings from the right side of the planter, left shaft first.
- Unless the shaft will pass entirely through the opener mount during insertion, sprockets, with meter drive chains around them, are placed on the shaft as it passes through the mount.
- Sprockets must be on a specific side of the bearing, and with the lock collar side of the sprocket away from the bearing:
  - Short mount: sprocket on left side of bearing
  - Mid mount: sprocket on right side of bearing
  - Long mount: sprocket on left side of bearing
- Drawings on page 82 through page 94 show sprocket placement and orientation for each planter model.

Place Left Shaft
Refer to Figure 59
111. Select one 303.5 cm hex shaft:

   181 402-635D SHAFT METER DRIVE YP625 T
   This shaft is the left shaft for all planter models covered by this manual.

Note: No sprocket placement is required on the right side of the planter for the left shaft.

112. Insert the shaft through all the mount bearings on the right half of the planter. Stop insertion just to the right of the mount that is at center, or just left of center if there is no center mount.

Refer to Figure 60
113. For the next mount to the left, lift the meter drive idler spring off one of its anchor pins. This provides chain slack for the next steps.

114. Select one:

   350 808-395C SPKT 41C12 W/SS SPCL PLT
   Back out the set screws until the hex bore is clear. Determine the sprocket orientation required for the next opener mount to the left. Hold the sprocket in that orientation. Loop the meter chain around it.

115. Hold the sprocket (with chain) in position against the mount bearing. Leave set screws accessible (for tightening at step 129 on page 32). Insert the shaft. Stop shaft insertion just before the next mount to the left.

116. At the mount just completed, re-connect the idler spring.

117. Repeat step 113 through step 116 for the remaining mounts on the left side of the planter.
Place Right Shaft

118. Select one of the shafts from the table at right, based on planter model.

119. Start at the right end opener mount.

Refer to Figure 61

120. For the next mount to the left, lift the meter drive idler spring (347) off one of its anchor pins. This provides chain slack for the next steps.

121. Select one:
   - 808-395C SPKT 41C12 W/SS SPCL PLT
     Back out the set screws until the hex bore is clear. Determine the sprocket orientation required for the next opener mount to the left. Hold the sprocket in that orientation. Loop the meter chain around it.

Refer to Figure 62

122. Hold the sprocket (with chain) in position against the mount bearing. Leave set screws accessible (for tightening at step 129). Insert the shaft. Stop shaft insertion just before the next mount to the left.

123. At the mount just completed, re-connect the idler spring.

124. Repeat step 120 through step 123 for the remaining mounts on the right side of the planter.

Closeout Shafts

Refer to Figure 63

125. Rotate the left drive shaft (181) to align the pin hole with the pin hole in the transmission output shaft (not visible in figure).

126. Select one:
   - 402-076D COUPLER, SHEAR OUTPUT
   - 805-428C PIN SPIROL 1/4X2 HEAVY PLN
     Place the coupler on the transmission output shaft. Secure with roll pin. Slide the left drive shaft into the coupler. Secure with roll pin.

127. Rotate the left or right shafts to align the pin holes.

128. Select one:
   - 402-076D COUPLER, SHEAR OUTPUT
   - 805-428C PIN SPIROL 1/4X2 HEAVY PLN
     Place the coupler on the right end of the left shaft. Secure with roll pin. Slide the tight drive shaft into the coupler. Secure with roll pin.

129. Slide all sprockets into contact with mount bearings. Tighten all set screws.
Install Lift-Assist

If the planter is a pull-type implement, continue at “Install Tongue” on page 39.

Install Wheels

Refer to Figure 65

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

Note: The pivot arm 154 is shown hoisted. The work can be performed with the arm resting on the ground.

Dismount Spindles

130. At each caster frame 110, remove and save two sets:

- 802-065C HHCS 3/4-10X2 1/4 GR5
- 804-023C WASHER LOCK SPRING 3/4 PLT

and then remove the spindle:

- 815-200C HUB ASSY 6BOLT 6"BC 4.62PILOT

131. At each spindle, remove and save six:

- 802-845C BOLT WHL 9/16-18X1 1/8 GR5

Assemble Wheels

Refer to Figure 66

132. Select one:

- 161-046K 6 BOLT WHL&TIRE 8 PLY TUBELESS

Note: The “outside” of the wheel 358 has the valve stem 361. The bolt holes are raised to the outside, and counter-sunk for the self-centering bolts 282.

The “outside” of the spindle is the threaded end with two jam nuts 301.

133. Insert the spindle 282 into the wheel 358. Insert bolts 360 to finger-tight.

Refer to Figure 67

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

Refer to Figure 67 (which depicts the caster frame to the front of the caster arm)

135. Align the wheel/spindle assemblies in the caster frames. Orient the wheels with the valve stems to the outside (which is toward the inside is the caster frames are reversed, as in the figure). Secure with saved bolts 282 and lock washers 314.
Install Pivot

Refer to Figure 69

136. Select the pivot mount:
   111 151-171H LIFT ASSIST REAR PVT MNT
   Remove and save from it one each:
   114 151-381D LIFT ASSIST AXLE PIVOT PIN
   239 500-064D WASHER - SAFETY CHAIN SA
   260 802-060C HHCS 5/8-11X4 GR5
   289 803-024C NUT LOCK 5/8-11 PLT
   292 803-031C NUT HEX 1-8 PLT
   315 804-027C WASHER LOCK SPRING 1 PLT
   and two:
   116 161-056D CASTER SPACER

137. Orient the pivot mount 111 with the (front) parallel arm plates 8 on the pivot lock 113 (front) side of the pivot arm weldment 154. The caster stabilizers 143 are on the rear side of the pivot arm. Align the pivot holes.

NOTICE

Part Damage Risks:
During pivot pin 114 insertion, take care to avoid damaging the spacers 116 or dislodging the bushings 394.

138. Select one each:
   114 151-381D LIFT ASSIST AXLE PIVOT PIN
   116 161-056D CASTER SPACER
   Insert the spacer 116 between the front holes of the pivot mount 111 and pivot arm 154. From the front, insert the threaded end of the pin 114 into the pivot mount. Carefully adjust the spacer position until the pin passes through it.

139. Select one:
   116 161-056D CASTER SPACER
   Insert the spacer 116 between the rear holes of the pivot mount 111 and pivot arm 154. Carefully adjust the spacer position until the pin passes through it.

140. Select one each:
   260 802-060C HHCS 5/8-11X4 GR5
   289 803-024C NUT LOCK 5/8-11 PLT
   Align the pin bolt hole 114 with the bolt hole in the front tube of the pivot mount 111. From the top, insert the bolt 260. Secure with lock nut 289. Use Grade 2 torque.

141. Select one each:
   239 500-064D WASHER - SAFETY CHAIN SA
   292 803-031C NUT HEX 1-8 PLT
   315 804-027C WASHER LOCK SPRING 1 PLT
   At the threaded end of the pivot pin 114, add a flat washer 239, lock washer 315 and nut 292. Tighten nut to Grade 2 torque.
Connect Parallel Arms

Refer to Figure 70 and Figure 71

142. Select one:

\[ \text{112} \ 151-173H \text{ LIFT ASSIST LWR PARALLEL ARM} \]

Note: The lower parallel arms (112) have a cross-tube with a cylinder lug (1). The arms are installed with the cross-tube closer to the front, lug up, and lug pointing to the rear.

143. Select one set:

\[ \begin{align*}
\text{281} & \ 802-728C \text{ HHCS 1-8X18 GR5} \\
\text{316} & \ 804-029C \text{ WASHER FLAT 1 SAE} \\
\text{315} & \ 804-027C \text{ WASHER LOCK SPRING 1 PLT} \\
\text{292} & \ 803-031C \text{ NUT HEX 1-8 PLT}
\end{align*} \]

144. Bring the forward tube of the lower arms (112) into alignment with the lower holes (155) of the lift-assist mount (155). Insert a bolt (281). Add a flat washer (316) and lock washer (315). Secure with nut (292), tightened to Grade 2 torque.

145. Select one set:

\[ \begin{align*}
\text{281} & \ 802-728C \text{ HHCS 1-8X18 GR5} \\
\text{316} & \ 804-029C \text{ WASHER FLAT 1 SAE} \\
\text{315} & \ 804-027C \text{ WASHER LOCK SPRING 1 PLT} \\
\text{292} & \ 803-031C \text{ NUT HEX 1-8 PLT}
\end{align*} \]

Bring the lower holes (3) of the lift-assist pivot (111) into alignment with the rear tube of the lower arms (112). Insert a bolt (281). Add a flat washer (316) and lock washer (315). Secure with nut (292), tightened to Grade 2 torque.

146. Select one:

\[ \text{168} \ 402-172H \text{ 16R PARALLEL ARM WLDMNT 2} \]

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

147. Repeat step 143 through step 145 for the upper arms and upper holes.
Install and Adjust Eyebolt

Refer to Figure 72 and Figure 73
If the eyebolt (117) is already installed, skip to step 151.

148. Select one each:
   - 117 161-107H NTA35 WING EYEBOLT WELDMENT
   - 293 803-034C NUT HEX 1 1/4-7 PLT
   Thread the nut (293) onto the eyebolt (117), leaving
   10.2 cm (4.0 in) of exposed thread.

149. From below, insert the eyebolt (117) into the top hold
   of the lift-assist mount (155). Check that the reveal
   (length of exposed eyebolt) is 7.0 cm (2.75 in).

150. Select one each:
   - 317 804-030C WASHER LOCK 1 1/4 SPRING PLT
   - 293 803-034C NUT HEX 1 1/4-7 PLT
   Add the washer (317) and second nut (293) to the
   eyebolt.

151. Re-check the reveal. Tighten to Grade 2 torque.
Install Lift Cylinder

Refer to Figure 74 (which depicts the cylinder already installed - it is easier to remove the rod end plug prior to cylinder installation)

152. Select one:
810-316C CYL 3.5X12X1.25 ROD (TIE ROD)

153. Remove the SAE 9/16 ORB plug ⑤ at the rod end of the cylinder. This plug is not re-used.

Note: There are two ports at the base end of the cylinder.

154. At the base end port ⑥ that is on the opposite side of the cylinder from the rod end port, remove the SAE 9/16 ORB plug ⑤. This plug is not re-used.

155. Select one set:
805-159C PIN CLEVIS 1 X 3 1/8 GR5 PLT
804-029C WASHER FLAT 1 SAE
805-104C PIN COTTER 3/16 X 1 1/2 PLT

156. With the cylinder's open base port ⑥ facing to the rear, align the base end clevis of the cylinder ⑥ with the eyebolt ⑬. Insert the clevis pin ⑦. Add the washer ⑩. Secure with cotter ⑪.

Note: It may require some effort to extend the cylinder rod, but it is possible with the plugs removed. It is not possible to move the rod with plugs installed.

157. Select one set:
805-159C PIN CLEVIS 1 X 3 1/8 GR5 PLT
804-029C WASHER FLAT 1 SAE
805-104C PIN COTTER 3/16 X 1 1/2 PLT

158. Extend the cylinder rod clevis to align with the lug ① on the lower parallel arms. Insert the clevis pin ⑦. Add the washer ⑩. Secure with cotter ⑪.

159. Select two new:
811-216C EL 3/4MJIC 9/16MORB
Remove any protective caps from the MORB ends of these elbows.

160. Back the jam nuts fully away from the MORB ends. Thread the MORB ends of these elbows ⑫ into the open cylinder ports (⑥, ⑤). Screw them in until the MORB just touches bottom, or the jam nut washer stops travel. Do not tighten yet.

Refer to Figure 76

161. Orient the MJIC ends of the base end elbow ⑥ to point down and left.

Orient the MJIC end of the rod end elbow ④ to point down and slightly left.

Tighten the MORB jam nuts to specification (page 81).
Install Lift Hydraulic Hoses

Refer to Figure 78 and Figure 77

162. Select two:
   - (355) 811-514C HH1/2R2 187 3/4JIC 1/2MNPT

163. Select two:
   - (356) 811-856C CP 1/2FNPT MALE QD
   (Do not use these if they are incompatible with the remote ports on the tractor to be used. Substitute the local standard couplers.)

164. Remove any protective caps from the elbows (353) at the cylinders. Remove any protective plugs from one open MNPT end of each hose (355).

165. Connect the hose MPNT ends to the QD couplers (356). Tighten connection to NPT torque specification (page 81).

166. Route QD ends of hoses as shown from the parallel arms, to the front hitch.
Install Tongue

If the implement has a 2-point hitch, continue at “Install Air System” on page 40.

**CAUTION**

Crush and Pinch Hazards:
Use adequate lifting means. The tongue may weigh 145 kg (320 pounds).

Refer to Figure 79

167. Select one:

- 401-023H TONGUE WELDMENT
- 806-102C U-BOLT 3/4-10 CORNER 7 SQ
- 804-023C WASHER LOCK SPRING 3/4 PLT
- 803-027C NUT HEX 3/4-10 PLT

Attach the tongue to the front sub frame using the corner U-bolts, lock washers and nuts.

If the parking jack is already installed, and does not need to be moved, continue at step 169.

168. Select one:

- 890-245C SCREW JACK 2000# 15-30 TOP WND

Unless needed to support the front of the tongue during assembly, attach the jack to the parking stob on top of the tongue. Secure with pins provided.

Refer to Figure 80

If the hitch hose loop is already installed, continue at step 170.

169. Select one set:

- 802-079C HHCS 3/8-16X1 1/4 GR5
- 804-011C WASHER FLAT 3/8 USS PLT
- 807-023C SPRING HOSE LOOP
- 803-014C NUT HEX 3/8-16 PLT

Place the flat washer on the bolt. Insert the bolt through the base of the loop. Secure to top of hose holder plate with lock washer and nut.

If hitch is already installed, continue at step 171 on page 40.
170. Select one:
   (146) 401-022H HITCH WELDMENT
   and two sets:
   (273) 802-262C HHCS 5/8-11X7 GR5
   (303) 803-263C NUT HEX FLANGE LOCK 5/8-11 PLT
   Attach hitch weldment (146) to tongue using two
   bolts (273) through both tongue weldment and hitch.
   See 401-754M Operator manual for leveling
   adjustment. Secure with lock nuts (303).

If the safety chain is already installed, continue at “Install
Air System”.

171. Select one set:
   (263) 802-064C HHCS 3/4-10X2 GR5
   (118) 177-587D SAFETY CHAIN WASHER
   (385) 890-182C SAFETY CHAIN 10000 LB
   (296) 803-181C NUT HEX FLANGE LOCK 3/4-10 PLT
   Place the washer (118) on the bolt (261). Attach the
   safety chain (385) to the left side of the hitch plates at
   the tongue. Secure with lock nut (296).

**Install Air System**

**Prepare Air Pipe Supports**

*Refer to Figure 81*

172. At each air pipe support (200), loosen the lock
   washer (307) and nut (284) at the upper bolt (269).
   Remove and save the lower fasteners:
   (269) 802-172C HHCS 5/16-18X2 1/2 GR5
   (307) 804-009C WASHER LOCK SPRING 5/16 PLT
   (284) 803-008C NUT HEX 5/16-18 PLT
   Swing the clamp (197) to vertical and slightly tighten
   the upper fasteners.

**Install Air Manifold**

*Refer to Figure 82*

173. Select one of:
   (194) 403-569K 6 ROW TRIPLE MANIFOLD ASY
   (194) 403-571K 6 ROW TWIN MANIFOLD ASY 110
   (194) 403-573K 9 ROW SINGLE MANIFOLD ASY 65
   Identify which are “front” and “top” on the manifold.
   The open inlet of the center pipe fitting (fig 369)
   faces to front. The supporting square tube (194) is on
   top.
Refer to Figure 83
174. With the manifold \(196\) facing front, and the supporting tube \(194\) on top, rest the main pipe on the air pipe supports \(200\).

Align the center of the open end of the inlet tee \(369\) at 10.2 cm (4.0 in) left of implement center-line.

Adjust the position of the air pipe supports \(200\) as necessary to avoid interference between parts.

Rotate the manifold so that the outlets \(371\) point straight down.

Tighten fasteners at lower U-bolts and clamps.

Install Fan Mast
Refer to Figure 84
175. Select one:
\(151\) 401-656H FAN MOUNT WELDMENT
This typically has pre-installed on it:
\(186\) 403-361S SENSOR CHAMBER ASY
\(\text{two}:\)
\(339\) 806-052C U-BOLT 5/8-11 X 7 1/32 X 8 1/2
\(\text{and four sets:}\)
\(313\) 804-022C WASHER LOCK SPRING 5/8 PLT
\(287\) 803-021C NUT HEX 5/8-11 PLT

176. Install the mast (fan mount weldment) \(151\) on the front face of the rear tool bar. Position it just to the left of the manifold inlet \(369\). Face the sensor chamber \(186\) to the left. Secure with U-bolts \(339\), lock washers \(313\) and nuts \(287\).
Install Hydraulic Fan

Refer to Figure 85
177. Select one:
   (153) 401-744K YP 4, 6, 8 FAN ASSEMBLY 6" 
   and four sets:
   (308) 804-011C WASHER FLAT 3/8-16 PLT 
   (309) 804-013C WASHER LOCK SPRING 3/8 PLT 
   (285) 803-014C NUT HEX 3/8-16 PLT 

Place a flat washer (308) on each bolt (263).

178. Hoist the fan assembly (153) to the top of the mast (151). Orient the fan with the cage to the right and the outlet facing straight down.

Refer to Figure 86
179. Secure the fan mount (152) to the mast (151) with bolts (263)+flat washers (308), lock washers (309) and nuts (285).
Install Fan Hydraulic Hoses

Assemble Fan Hoses

Refer to Figure 87

If the fan hoses 389 already have quick-disconnect (QD) fittings (354 and 390) attached, continue at “Install Fan Hoses”.

180. Select one each:
   - 354 811-394C CP 3/4FORB MALE QD POPPET TYPE
   - 389 841-481C HH1/2R2 230 3/4FJIC 3/4MORB

Note: The tractor(s) to be used may require a different style of quick-disconnect fitting.

181. Remove any protective plug from the QD fitting 354, and from the MORB end of the hose 389. Retain any tethered cap for field use.

   Attach the QD coupler fitting 354 to the MORB end of the hose 389. This hose is the pressure hose P.

182. Select one each:
   - 390 841-529C CP 3/4FORB MALE QD RELIEF
   - 389 841-481C HH1/2R2 230 3/4FJIC 3/4MORB

NOTICE

Equipment Damage Risk:

If the tractor(s) to be used require a different style of quick-disconnect fitting, be sure to use a relief coupler or low-seep coupler. If the fan return line is completely sealed by a poppet or check valve fitting, fan seals could be damaged. Normal temperature changes can cause damaging oil pressure changes in a completely sealed fan hydraulic system.

183. Remove any protective plug from the QD fitting 390, and from the MORB end of the hose 389. Attach the QD coupler fitting 390 to the MORB end of the hose 389. This hose is the return hose ℓ.

Install Fan Hoses

If the hoses were pre-assembled, examine the hoses, and the instructions above, to identify which is pressure P and which is return ℓ.

Note: If the QD fittings must be replaced due to tractor requirements, see the instructions and Notice above.

184. Remove any protective plugs from the FJIC ends of the hoses (P and ℓ) and any protective caps on the fan elbows 352.

185. Connect the FJIC end of the pressure hose P to the bottom (inlet) elbow 352 at the hydraulic fan.

186. Connect the FJIC end of the return hose ℓ to port ℓ, the top (return) elbow 352 at the hydraulic fan.

Figure 87
Fan Hoses

Figure 88
Fan Hydraulics
Install Air Hoses

Install Fan Air Hose

Refer to Figure 89

187. Select one:

| 816-656C HOSE 6.0 ID DUCTING X 1.2 FT |
| 800-151C CLAMP WRM DRV #96SS (4.75-6.5) |

Place a clamp on each end of the hose. Connect the hose from the fan outlet to the manifold inlet. Secure the clamps.

Install Meter Hoses

Meter hose is supplied in uncut coils. It is cut to length based on general rules for routing, clearance and slack.

Refer to Figure 90

The connection to a meter is from the nearest open port on a ducting adaptor. Ducting adaptors are pre-installed for specific row spacings. There are three varieties of these adaptors, requiring attention to connections.

<table>
<thead>
<tr>
<th>Variety and Part Number</th>
<th>Usage</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Outlet 817-815C</td>
<td>Air supply for two meters</td>
<td>Connect hoses to both open ① legs.</td>
</tr>
<tr>
<td>Single, Orifice 403-549D</td>
<td>Air supply for one meter. Pressure balancing orifice for odd row count.</td>
<td>Connect one hose to the completely open leg ① only. Leave the orifice leg unblocked.</td>
</tr>
<tr>
<td>Single Outlet 817-816C</td>
<td>Air supply for one meter. Other leg blocked ③.</td>
<td>Connect one hose to the completely open leg ① only.</td>
</tr>
</tbody>
</table>
Refer to Figure 91

Start at the left side of the implement.

188. Select a coil of:
   404 990-253R HOSE 2 ID POLYP HELIX

189. Select one:
   248 800-203C CLAMP WRM DRV #32SS (1.56-2.5)
   Place the clamp loosely on an open end of the hose.

190. Slide this end of the hose 404 fully on to the
    left-most fully open leg 1 of a ducting adaptor 371.
    Do not place the hose on a vented (orifice) adaptor
    leg 2 or on a blocked leg 3. Do not skip open legs.

191. Carefully tighten the clamp. Do not over-tighten, as
    the clamp could crush the adaptor leg.

192. Route the hose 404 across the top of the opener
    mount, then to the left side of the parallel arms, to
    the meter air supply inlet 368. The air supply inlet is
    the top/forward elbow fitting. The lower/rear elbow
    fitting 373 is for seed hose (connected later).

193. Check that the hose has enough slack to reach the
    meter with the row unit fully lowered, and that there
    is not so much slack that the hose can contact
    rotating parts. Allow enough length for the hose to
    slide onto the inlet fitting 368 by 4 cm (1.5 in).
    Cut the hose.

194. Select one:
   248 800-203C CLAMP WRM DRV #32SS (1.56-2.5)
   Remove any protective bag on the inlet 368. Place
   the clamp loosely on the cut end of the hose. Slide
   the hose onto the meter inlet fitting 368. Carefully
   tighten the clamp. Do not over-tighten, as the clamp
   could crush the fitting.

195. Repeat step 189 through step 194 for each meter.
Install Lights

Note: The lights (397 and 398) are different for each side.

Refer to Figure 92
If the lights (397 and 398) are already mounted on brackets 206, continue at step 198.

196. Select one each:
   - 397 890-311C DUAL AG LIGHTS LH
   - 398 890-312C DUAL AG LIGHTS RH
   - 206 406-026D LIGHT MOUNTING BRACKET
   and four:
   - 253 801-081C SCREW HEX SELF TAP 1/4-20X3/4
If the underside of the light has a choice of cable exit channels, route the cable toward the end with the red lens.

197. Mount the lights (397 and 398) on the long break side of the brackets 206, away from the short break side of the bracket, and with the amber lenses at the end of the long break (what will be the top).

198. At the outside top of the leftmost and right-most row units, remove and save the forward set of fasteners:
   - 255 802-017C HHCS 3/8-16X1 GR5
   - 309 804-013C WASHER LOCK SPRING 3/8 PLT
   - 285 803-014C NUT HEX 3/8-16 PLT
   that secure the hopper support weldments 192 to the left front hopper supports 204.

199. At each side of the planter, select the mounted lift assembly that has:
   - the red light to the rear with
   - the break to the outside
   Secure the bracket with the saved bolts 256, lock washers 309 and nuts 285 at the same set of holes where those fasteners were removed.

Refer to Figure 92, Figure 93 and Figure 89 on page 44

200. Select one:
   - 400 890-648C LIGHT HARNESS, 15’ WISHBONE
   Route this cable along the top of the manifold, in between the clamps. Connect the ends to the leads from the lights.

201. Select one each:
   - 399 890-391C LIGHT HARNESS, 15’ LEAD
   Connect this cable to the center connector of the wishbone light harness 400. Route the 7-pin circular connector to the hitch.

Note: It may be necessary to replace the supplied 7-pin connector with one compatible with the tractor to be used.
Route Speed Sensor Cables

Refer to Figure 94
A magnetic speed sensor (234) is pre-installed at the output of the ground drive.

Refer to Figure 92
202. Select one:

833-452C DJ SENSOR TO RADAR 15.5 EXT.
Connect the WeatherPak end of the cable 833 to the lead from speed sensor 234. Route the cable along the rear tool bar to implement center-line, and then to the hitch.

Install Seed Harness

203. Based on planter model, select one of the harness part number shown in the table at right. Refer to harness diagrams on page 83 through page 95 for illustrations of each harness.

204. Route the rear sections of the harness along the top of the rear tool bar, with connector “ROW1” at the left end of the tool bar.

205. Starting with the left-most row, route the row’s seed sensor lead across the top of the opener mount. Plug it into the harness lead for that row. Work row-by-row, from left to right, so that connections are made in order, and not skipped or crossed.

206. Select six (not shown):

800-244C CABLE TIE .19X15 PANDU BT4S-C0
Secure the seed harness and speed sensor to the rear tool bar.

<table>
<thead>
<tr>
<th>Planter Model</th>
<th>Seed Harness</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP625PD18TP110</td>
<td>467981766</td>
</tr>
<tr>
<td>YP625TD12TR110</td>
<td>467981765</td>
</tr>
<tr>
<td>YP625TD18TP110</td>
<td>467981764</td>
</tr>
<tr>
<td>YP925TD0965</td>
<td>467981763</td>
</tr>
</tbody>
</table>

Seed harnesses meet this general description:
- They have a central forward cable to the hitch, with one or two circular connectors.
- The rear section of the harness has left and right cable legs, with row sensor connectors spaced along them.
- The left leg of the rear cable has the sensor connector labelled “ROW1”. 
Install Markers (Option)

Markers may be installed at any time. The instruction is given at this point in this manual because it results in the least obstruction to both marker installation, and further installation of standard planter components.

Refer to Figure 96
Marker components are shipped in the opener rack.

Marker installation is covered in a separate manual:
113-870M MANUAL YP4-6-8-9 FF MARKER KIT

Defer setting initial marker extension until after performing the close-out items of this manual (page 77).

Route Hydraulic Hoses

Refer to Figure 97
207. Route all hoses to the top of the center tube ①, and from there to the hitch.

208. If the planter is a pull-type model, route the hoses under the clamps 241 provided on the tongue.
Install Fertilizer Hoppers (Option)

If the planter does not have optional dry fertilizer capability, continue at “Install Seed Hoppers” on page 58.

Adjust Hopper Mounts

The center hopper of a pull-type planter must have its mounts moved apart to clear the tongue weldments. This applies to only one hopper, and only one planter model: YP625PD18TP110 (Pull-Type). For three-point planters, continue at “Mount Hoppers” on page 49.

Refer to Figure 98 and Figure 99

209. Select one:

210. Remove and save eight:

and 16:

Dismount the hopper 374 from the mounts 210.

211. Mark eight hole positions at 44 mm (1.75 in) outside the existing holes ①. Drill 9.5 mm holes at these locations.

212. Re-attach the hopper 374 to the mounts 210 at the new holes, using the saved stainless steel bolts 304, washers 319 and nuts 304.

213. Select eight:

If these exact fasteners cannot be located, use any available 9 mm stainless steel or polymer fasteners that seal the holes against dry fertilizer leakage.

Mount Hoppers

Start with the left hopper.

Refer to Figure 100

Note: To avoid disturbing stiffener strap positions, attach hoist lines to the hopper straps 212 at the point where the side straps 211 join them.
Hopper Identification

<table>
<thead>
<tr>
<th>Planter Model</th>
<th>Hopper Assemblies</th>
<th>Coupler Shafts</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP625PD18TP110</td>
<td>407-560L a</td>
<td>407-661D</td>
</tr>
<tr>
<td>YP625TD12TR110</td>
<td>407-560L</td>
<td>407-661D</td>
</tr>
<tr>
<td>YP625TD18TP110</td>
<td>407-560L</td>
<td>407-661D</td>
</tr>
<tr>
<td>YP925TD0965</td>
<td>407-561L</td>
<td>407-659D</td>
</tr>
</tbody>
</table>

a. Center hopper modified per step 209 - step 213 on page 49.

Install Left Hopper

214. Select one of (per table above):
   (216) 407-560L 4-OUTLET DRY FERT HOPPER ASSY
   (217) 407-561L 3-OUTLET DRY FERT HOPPER ASSY
   Select an unmodified hopper. Attach hoist lines.

Refer to Figure 101, Figure 102 and Figure 103

215. Select one set:
   (208) 407-073D COUPLER, DRY FERT
   (325) 805-065C PIN WIRE RETAINING 1/4 X 1 3/4
   These may be located on the left end of the hopper shaft, or right end of the fertilizer jackshaft (229).

216. Place the coupler (208) on the jackshaft (229), with the pin hole closer to the right end of the coupler.
    Secure with pin (325) using the hole in the left shaft.

217. Hoist the hopper (216) or (217) to the front tool bar, with the meter drop lines (362) behind the tool bar.
    Bring the left end of the hopper shaft (233) nearly into contact with the installed jackshaft (229).

218. Select two:
   (339) 806-052C U-BOLT 5/8-11 X 7 1/32 X 8 1/2
   and four sets:
   (313) 804-022C WASHER LOCK SPRING 5/8 PLT
   (287) 803-021C NUT HEX 5/8-11 PLT
   Loosely secure the hopper assembly to the tool bar.

219. Adjust the jackshaft mount bracket (227) to bring the hopper shaft (233) into alignment with the jackshaft (229).

220. Adjust the hopper position on the tool bar for a shaft-to-shaft gap of:
    5 mm (3/16 in).

221. Engage the coupler (208). Secure with pin (325).
Install Center Hopper

Refer to Figure 104

222. Select one of (per table on page 50):
- 216 407-560L 4-OUTLET DRY FERT HOPPER ASSY
- 217 407-561L 3-OUTLET DRY FERT HOPPER ASSY

If the planter is a pull-type, select the hopper modified per step 209 to step 213 on page 49. Attach hoist lines.

223. Hoist the hopper (216 or 217) to the center of the front tool bar, with the meter drop lines 362 behind the tool bar.

224. Select two:
- 339 806-052C U-BOLT 5/8-11 X 7 1/32 X 8 1/2
- and four sets:
  - 313 804-022C WASHER LOCK SPRING 5/8 PLT
  - 287 803-021C NUT HEX 5/8-11 PLT

Loosely secure the hopper assembly to the tool bar.

225. Select one of (per table on page 50):
- 228 407-659D 9-ROW DRY FERT HPR CPLR SHAFT
- 230 407-661D FERT HOPPER CPLR SHAFT 41.5

226. With the coupler shaft held between the two hopper shaft ends, adjust the center hopper position on the tool bar for a shaft-to-shaft gap of:
   - 5 mm (3/16 in).

227. Select two sets:
- 208 407-073D COUPLER, DRY FERT
- 325 805-065C PIN WIRE RETAINING 1/4 X 1 3/4

These may be located on the hopper shafts, or on the coupler shaft (228 or 230).

228. Place one coupler (208) on the right end of the left hopper shaft, and on the left end of the center hopper shaft, with the pin hole closer to the end of the coupler that is away from the hopper.

229. Bring the coupler shaft (228 or 230) into alignment with the hopper shafts. Engage the couplers (208). Secure with pins (325).

Install Right Hopper

230. Select one of (per table on page 50):
- 216 407-560L 4-OUTLET DRY FERT HOPPER ASSY
- 217 407-561L 3-OUTLET DRY FERT HOPPER ASSY

Attach hoist lines.

231. Hoist the hopper (216 or 217) to the right of the front tool bar, with the meter drop lines 362 behind the tool bar. The position is as far from center-line as the left hopper is from center-line.

232. Select two:
- 339 806-052C U-BOLT 5/8-11 X 7 1/32 X 8 1/2
- and four sets:
  - 313 804-022C WASHER LOCK SPRING 5/8 PLT
  - 287 803-021C NUT HEX 5/8-11 PLT

Loosely secure the hopper assembly to the tool bar.

233. Select one of (per table on page 50):
- 228 407-659D 9-ROW DRY FERT HPR CPLR SHAFT
- 230 407-661D FERT HOPPER CPLR SHAFT 41.5

234. With the coupler shaft held between the two hopper shaft ends, adjust the right hopper position on the tool bar for a shaft-to-shaft gap of:
   - 5 mm (3/16 in).

235. Select two sets:
- 208 407-073D COUPLER, DRY FERT
- 325 805-065C PIN WIRE RETAINING 1/4 X 1 3/4

These may be located on the hopper shafts, or on the coupler shaft (228 or 230).

236. Place one coupler (208) on the right end of the center hopper shaft, and on the left end of the right hopper shaft, with the pin hole closer to the end of the coupler that is away from the hopper.

237. Bring the coupler shaft (228 or 230) into alignment with the hopper shafts. Engage the couplers (208). Secure with pins (325).

Inspect Meter Gaps

If meter gaps are already sealed with silicone sealant, continue at “Install Hopper Dividers” on page 53.

Refer to Figure 105 and Figure 106

The gap between the top saddle on the meter, and the bottom of the hopper shell, is sealed at step 247 on page 54, but needs to be minimized prior to divider installation.

239. At each fertilizer meter, inspect the meter gap. The meters may have shifted on the hoppers during shipment.

Refer to Figure 107

240. If any gaps are excessive (more than is easily sealed with a bead of silicone sealant), loosen the 8 or 12 nuts [304] that secure the hoppers to the meters, re-seat the hoppers, and re-tighten the nuts.

241. De-grease the meter-hopper gap areas. Allow any fluids to dry before sealing.

242. Also clean and de-grease the top front center of the fertilizer hopper lids.
Install Hopper Dividers

Refer to Figure 108
If dividers are already installed, continue at “Seal Fertilizer Meters” on page 54.

<table>
<thead>
<tr>
<th>Planter Model</th>
<th>Dividers</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP625PD18TP110</td>
<td>(231) 407-662D</td>
</tr>
<tr>
<td>YP625TD12TR110</td>
<td>(231) 407-662D</td>
</tr>
<tr>
<td>YP625TD18TP110</td>
<td>(231) 407-662D</td>
</tr>
<tr>
<td>YP925TD0965</td>
<td>(232) 407-663D</td>
</tr>
</tbody>
</table>

243. Per the table above, select either three of:

231) 407-662D 4 ROW FERT HOPPER DIVIDER
or six of:

232) 407-663D 3-OUTLET DRY FERT HOP DIVIDER

Refer to Figure 109
244. At each hopper, position each divider (231) or (232) so that it covers the area between the meter inlets. With the mounting breaks (with bolt holes) flush against the hopper sides, ensure the divider ends are as flush as possible with the meter opening in the hopper shell.

Mark the hole locations, using the divider bolts holes as a template.

245. Drill 7 mm holes in the hopper shell at each marked location.

246. Select 36 or 48 sets of:

255) 802-001C HHCS 1/4-20X3/4 SS
297) 803-187C NUT HEX WHIZ 1/4-20 18-8 SS
Secure the dividers to the hopper shells with bolts (255) inserts from the inside and lock nuts (297) on the outside.
Seal Fertilizer Meters

Refer to Figure 110 and Figure 111
If meter gaps are already sealed with silicone sealant, continue at “Apply Fertilizer Decals”.

247. Apply silicone sealant to the left and right meter-hopper gap areas.

- Allow the sealant to penetrate the gap, but avoid injecting so much that it drips into the fertilizer meters.

248. Smooth the exterior application into a fillet shape.

- Inside the hopper, wipe off any excess silicone that protrudes into the meter inlet.

Apply Fertilizer Decals

Refer to Figure 112, page 84 and page 96
If the lids already have decal part number 848-520C, continue at “Install Seed Hoppers” on page 58.

249. If the lids were not cleaned at step 242 on page 52, do so now. Allow any fluids to dry.

250. Select three:

- 391 848-520C DECAL PIC CHEMICAL
  - Remove the backing paper. Apply the decals at the front center of each hopper lid 367. Remove any air bubbles by smoothing from center to edge.

Note: Connection of fertilizer drop hoses is done at step 320 on page 72.
Install SMV

SMV (Slow Moving Vehicle reflector) installation is different for pull-type (“PD”: below) and 3-point (“TD”: page 56).

PD: Install Pull-Type SMV

Refer to Figure 113 and Figure 114

PD: Install SMV on Mount

If the SMV (375) is already installed on its mount, continue at “PD: Install SMV Mount”.

251. Select one each:
   - 375 818-055C DECAL SLOW MOVING-GALV. BACKED
   - 205 406-025D SMV MOUNT BRACKET

   and two sets:
   - 270 802-196C HFSS 1/4-20X5/8 GR5
   - 302 803-230C NUT HEX FLANGE 1/4-20 PLT

252. Insert the bolts (270) through the reflective face of the SMV (375). Attach the SMV, narrow end up, wide end down, to the long break of the bracket (205), on the side away from the lower double break. Secure with flange nuts (302).

PD: Install SMV Mount

253. Select one each:
   - 344 806-191C U-BOLT 3/8-16X1 17/32X2 1/2

   and two:
   - 294 803-068C NUT HEX FLANGE 3/8-16 PLT

254. With the SMV reflective surface on top and facing to the rear, attach the bracket (205) to the air pipe support tube (194) using the U-bolt (344) and two flange nuts (294). Place the assembly at or near planter center-line.
TD: Install Three-Point SMV

Refer to Figure 115

If the reflector (375) is already installed on the mount (102), continue at step 256.

255. Select one each:
   - 375 818-055C DECAL SLOW MOVING-GALV. BACKED
   - 102 119-300D SMV BLADE MOUNT
   and two sets:
   - 251 801-018C SCREW RD HD 1/4-20 X 5/8
   - 306 804-006C WASHER LOCK SPRING 1/4 PLT
   - 283 803-006C NUT HEX 1/4-20 PLT

Insert the screws (251) through the reflective face of the SMV (375). Add the mount (102), with the break toward the wide (lower) edge of the SMV and away from the SMV. Secure with lock washers (306) and nuts (283).

256. Select two sets:
   - 267 802-092C RHSNB 5/16-18X3/4 GR5
   - 307 804-009C WASHER LOCK SPRING 5/16 PLT
   - 284 803-008C NUT HEX 5/16-18 PLT

With the reflective face to the rear, install the SMV (375) on the rear face of the lift-assist pivot tab (1).
Install Spring Wrench

Refer to Figure 116
This tool 185 and holder 184 are installed on the left side of the left (Row 1) row unit.

257. At the top rear, left side, of the row unit hopper frame, remove and save two sets:
   256 802-017C HHCS 3/8-16X1 GR5
   309 804-013C WASHER LOCK SPRING 3/8 PLT
   285 803-014C NUT HEX 3/8-16 PLT

258. Select one set:
   184 403-175H WRENCH HOLDER
   185 403-265D SPRING AND WHEEL WRENCH
   326 805-088C PIN, HAIR COTTER 3/16 WIRE DIA
   Remove the pin 326. Dismount the wrench 185. Install the holder 184 on the hopper frame. Stow the wrench and secure with pin.

---

Install Timing Tool

Refer to Figure 117
This tool 357 and holder 195 are installed on the right side of the left (Row 1) row unit.

259. At the top rear, right side, of the row unit hopper frame, remove and save two sets:
   256 802-017C HHCS 3/8-16X1 GR5
   309 804-013C WASHER LOCK SPRING 3/8 PLT
   285 803-014C NUT HEX 3/8-16 PLT

260. Select one set:
   195 403-556H TIMING TOOL HOLDER
   357 812-391C TIMING TOOL, 19 TOOTH
   335 805-240C PIN LINCH 3/16 X 1 9/16 LONG
   Remove the pin 335. Dismount the tool 357. Install the holder 195 on the hopper frame. Stow the wrench and secure with pin.
Install Seed Hoppers

Assemble Seed Hoppers

Refer to Figure 118 - depicting a left end hopper with “rear” style discharge weldment and decals.

If seed discharge weldments (190 or 191) are already present on all hoppers, continue at “Mount Seed Hoppers” on page 60. Any hoppers pre-installed on row units have the discharge weldments installed.

Hopper Orientation

Seed hoppers install with the lower hooks 1 toward the front of the implement.

Discharge Weldment Identification

Refer to Figure 119

Discharge weldments are provided in one or two styles:

(190) 403-467H SEED HOPPER DSCHRG WELD REAR

(191) 403-468H SEED HOPPER DSCHRG WELD FRONT

depending on the type of row unit:

Quantities Per Planter Model

<table>
<thead>
<tr>
<th>Planter Model</th>
<th>Weldment Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>190 Rear 191 Front</td>
</tr>
<tr>
<td>YP625PD18TP110</td>
<td>6 12</td>
</tr>
<tr>
<td>YP625TD12TR110</td>
<td>6 6</td>
</tr>
<tr>
<td>YP625TD18TP110</td>
<td>6 12</td>
</tr>
<tr>
<td>YP925TD0965</td>
<td>9 0</td>
</tr>
</tbody>
</table>

- Mid-length and long-mount row units use a hopper with a “rear” weldment (190). The discharge tube angles to the front.
- Short-mount (front) row units use a hopper with a “front” weldment (191). The discharge tube angles to the back.

Install Rear Weldments

Refer to Figure 118 and Figure 120

261. Select one each:

(365) 817-268C 96 CHEMICAL HOPPER

(190) 403-467H SEED HOPPER DSCHRG WELD REAR

and eight sets:

(275) 802-283C HHCS 1/4-20X1/2 GR2

(302) 803-230C NUT HEX FLANGE 1/4-20 PLT

262. Orient the weldment (190) with the exit tube angled toward the front. Insert the bolts (275) from below the weldment and into the hopper (365). Secure with lock nuts (302).
Install Front Weldments

Refer to Figure 121

263. Select one each:
- 365 817-268C CHEMICAL HOPPER
- 191 403-468H SEED HOPPER DSCHRG WELD FRONT

and eight sets:
- 275 802-283C HHCS 1/4-20X1/2 GR2
- 302 803-230C NUT HEX FLANGE 1/4-20 PLT

264. Orient the weldment [191] with the exit tube angled toward the rear. Insert the bolts [275] from below the weldment and into the hopper [365]. Secure with lock nuts [302].

Install Slide Gates

Refer to Figure 122

Slide gates [187] are installed from the rear, with the short break (handle) down. They are captured by a bolt [275] at the front. A chain [240] with removable cotter [322] is used to hold the gate in the open position.

265. Select one set:
- 187 403-429D SLIDE GATE
- 275 802-283C HHCS 1/4-20X1/2 GR2
- 306 804-006C WASHER LOCK SPRING 1/4 PLT
- 283 803-006C NUT HEX 1/4-20 PLT

From the rear of the hopper assembly, with the slide gate break down, insert the slide gate into the slot at the top of the weldment tube. From above, insert the bolt [275] through the front center hole of the slide gate. Secure with lock washer [306] and nut [283].

266. Select one set:
- 240 502-060D DUST PLUG CHAIN 10
- 243 800-051C KING, SPLIT 1-1/4 I.D.
- 322 805-031C PIN HAIR COTTER .092 WIRE

Pry the split ring [243] and rotate it onto one end of the chain [240] and through the hole in the slide gate handle [187]. Insert the cotter [322] through the other end of the chain.
Mount Seed Hoppers

If any hoppers have decals pre-applied, check page 84 or page 96 for the location of those hoppers on the planter.

Refer to Figure 123

Install Front Hoppers

If the planter model is YP925TD0965, or all front hoppers are already installed, continue at “Install Rear Hoppers”.

267. Select one:

188 403-465K FRONT SEED HOPPER ASSY YP4-6-8
Check that the hopper has a front weldment (191), with exit tube angled to the rear.

268. Tip the hopper assembly (188) forward. Engage the lower hopper hooks on the round cross-tube of the support weldment (192). Lower the rear end into the support. Secure with latch (246).

269. Repeat step 267 and step 268 for all front hoppers.

Install Rear Hoppers

If all rear hoppers are already installed, continue at "Install Stiffeners and Lids”.

270. Select one:

189 403-466K REAR SEED HOPPER ASSY YP4-6-8
Check that the hopper has a rear weldment (190), with exit tube angled to the front.

271. Tip the hopper assembly (189) forward. Engage the lower hopper hooks on the round cross-tube of the support weldment (192). Lower the rear end into the support. Secure with latch (246).

272. Repeat step 270 and step 271 for all rear hoppers.

Install Stiffeners and Lids

Refer to Figure 124

If stiffeners and lids are already installed, continue at “Install Seed Hoses” on page 61.

273. Select one:

203 403-739D HOPPER STIFFENER
Insert this into the grooves molded into the centers of the inside front and rear hopper walls. Hook the breaks over the hopper lid.

274. Select one:

364 817-264C 96 CHEMICAL HOPPER LID
With the “horizon” of the top logo forward, and the “furrows” of the top icon to the rear, hook both front lid lugs on the hopper lip. Pull the single rear lid lug over the rear hopper lip. See the 401-754M or 401-755M Operator manual for further information on hopper lids.
Install Seed Hoses

Refer to Figure 125
If seed hoses 404 are already connected, continue at “Apply Seed Hopper Decals”

Seed Hose Lengths
Seed hose 404 may be provided as an uncut coil. Required length is different for front and rear row units.

<table>
<thead>
<tr>
<th>Front Hose Length</th>
<th>Rear Hose Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 cm</td>
<td>22 cm</td>
</tr>
</tbody>
</table>

Connect Front Seed Hoses
If front seed hoses are already connected, or the planter only rear row units, continue at “Connect Rear Seed Hoses”.

275. Select or cut one 25 cm length of:
404 990-253R HOSE 2 ID POLYP HELIX

276. Select two:
248 800-203C CLAMP WRM DRV #32SS (1.56-2.5)
Place the clamps over each end of the cut hose length 404.

277. Slide each end of the hose 404 fully onto the discharge weldment exit tube 191 and onto the meter seed inlet elbow 373 for a length of 4 cm. Secure with clamps 248.

Connect Rear Seed Hoses
278. Select or cut one 22 cm length of:
404 990-253R HOSE 2 ID POLYP HELIX

279. Select two:
248 800-203C CLAMP WRM DRV #32SS (1.56-2.5)
Place the clamps over each end of the cut hose length 404.

280. Slide each end of the hose 404 fully onto the discharge weldment exit tube 190 and onto the meter seed inlet elbow 373 for a length of 4 cm. Secure with clamps 248.
Apply Seed Hopper Decals

Refer to Figure 126

If decals are already applied, continue at “Install Row Cleaners (Option)” on page 63.

Before applying decals, clean and de-grease the surfaces. Allow any residual fluids to dry before applying decals.

Apply decals by removing backing paper, carefully aligning, then applying from one edge first. Remove any air bubbles by smoothing from center to edge.

281. Select two:

838-265C DECAL REFLECTOR AMBER 1 1/2X9

These yellow decals are intended for the outside hoppers: row 1 and the last row on the right side, whether a front or rear unit. Apply them to the bottom outside face of the hoppers.

282. Select two:

838-266C DECAL REFLECTOR RED 1 1/2X9

These red decals are intended for the outside rear hoppers, which may not be the first and last rows. Apply them to the bottom rear face of the hoppers.

283. Select two:

838-267C DECAL REFLECTR DAYTIME 1 1/2X9

These orange decals are intended for the outside rear hoppers, which may not be the first and last rows. Apply them just above the red decals applied at step 282.

284. Select two:

848-542C DECAL YIELD-PRO SMALL

These “Yield-Pro®” decals are intended for the outside hoppers: row 1 and the last row on the right side, whether a front or rear unit. Apply them just above the amber decals applied at step 281.

285. Select two:

848-541C DECAL LOGO&GP F/STRIPE 3 X 12

These Great Plains decals are intended for the outside hoppers: row 1 and the last row on the right side, whether a front or rear unit. Apply them just above the Yield-Pro® decals applied at step 284.

If no extra decals remain, skip the next two steps.

286. Select two:

838-266C DECAL REFLECTOR RED 1 1/2X9

These red decals are intended for the rear hoppers left and right of center. Apply them to the bottom rear face of the hoppers.

287. Select two:

838-267C DECAL REFLECTR DAYTIME 1 1/2X9

These orange decals are intended for the rear hoppers left and right of center. Apply them just above the red decals applied at step 286.
Install Row Cleaners (Option)

Have the planter Operator manual (401-754M or 401-755M) available for initial row cleaner adjustment.

Refer to Figure 127

For Terra-Tine™ row cleaners, continue below. For rigid (Martin) row cleaners continue at “Install Rigid Row Cleaners”.

Install Terra-Tine™ Row Cleaners

Have manual 207-016M available for row cleaner assembly and some installation details.

Double Terra-Tine™ row cleaners mount ahead of the rear tool bar; the same tool bar on which the 25 Series row units are mounted.

Refer to Figure 127

Row cleaners are intended to align on nominal row spacing center-lines; this is:

- row cleaner pair center-line ahead of center-line of single-row units (YP925TD0965)
- row cleaner pair center-line ahead of pair center-line of twin-row units (YP625TD12TR110)
- row cleaner pair center-line ahead of center row of triple-row units (YP625PD18TP110 and YP625TD18TP110)

25 Series row unit mount usually interferes with a direct center-line mounting. The Terra-Tine™ kits include an offset shank (310). The row cleaner mount is typically installed to the outside of the center-line, but use any placement, or shank angle, that provides the alignment.

Terra-Tine™ Parts ID

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>125</td>
<td>204-040D CLAMP PLT 7 BAR</td>
</tr>
<tr>
<td>140</td>
<td>207-055L YP FRAME MOUNT DOUBLE T-T</td>
</tr>
<tr>
<td>126</td>
<td>204-072D CLAMP SHANK 1 1/2 DIA</td>
</tr>
<tr>
<td>252</td>
<td>801-040C SCREW SQ HD 5/8-11 X 1 CUP PT</td>
</tr>
<tr>
<td>274</td>
<td>802-269C HHCS 1/2-13X9 GR5</td>
</tr>
<tr>
<td>310</td>
<td>804-015C WASHER LOCK SPRING 1/2 PLT*</td>
</tr>
<tr>
<td>377</td>
<td>820-133C 1 1/2 X 26 OFFSET SHANK</td>
</tr>
</tbody>
</table>
* Not visible in Figure.

Continue at “Install Coulters” on page 64.

Install Rigid Row Cleaners

See manual 204-085M-A for assembly and installation of UMRCs (Unit-Mount Row Cleaners).

Rigid row cleaners mount on the front of the 25 Series row unit shank. Placement is intended to be:

- Double UMRC: aligned with single-row opener, or center row of a triple-row opener.
- Single UMRC: left singles mount on left units of twin-rows. Right singles mount on right units of twin-rows.

Sharp Object Hazard:

Observe all cautions in the 204-085M-A manual. Rigid row cleaners are shipped with tine wheels dismounted. These wheels have sharp tines.
### Install Coulters

Coulters mount to the front tool bar (on the front face, except for center rows on 3-point triple-row).

Lateral mount placement, relative to rows, depends on planter model and coulter kit.

Factory coulter stations layouts are provided on page 85 to page 97, and are set for “zone” application, with coulters aligned either 5.1 cm off-row, or in the center of the gap between outside and center or triple-row.

<table>
<thead>
<tr>
<th>Planter Model and Coulter Kits</th>
<th>Intended Alignment</th>
<th>Left Rows</th>
<th>Center Rows</th>
<th>Right Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP625PD18TP110 407-591A, 407-592A</td>
<td>12.7 cm off triplet center</td>
<td>Rows 1 to 18 use 12 clamp kits 204-024K and straight shank 204-013D, on tool bar front face</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YP625TD12TR110 407-589A, 407-590A</td>
<td>5.1 cm off row</td>
<td>Rows 1 to 5 use 5 clamp kits 204-024K and straight shank 204-013D, on tool bar front face</td>
<td>Rows 6 and 7 use 2 clamp kits 204-024K and offset shank 204-254S, on tool bar front face</td>
<td>Rows 8 to 12 use 5 clamp kits 204-024K and straight shank 204-013D, on tool bar front face</td>
</tr>
<tr>
<td>YP625TD18TP110 407-571A, 407-572A</td>
<td>12.7 cm off triplet center</td>
<td>Rows 1 to 6 use 2 clamp kits 204-024K and straight shank 204-013D, on tool bar front face</td>
<td>Rows 7 to 12 use 2 clamp kit 204-024K and offset shank 820-133C, on tool bar rear face</td>
<td>Rows 13 to 18 use 2 clamp kits 204-024K and straight shank 204-013D, on tool bar front face</td>
</tr>
<tr>
<td>YP925TD0965 407-573A, 407-574A</td>
<td>5.1 cm off row</td>
<td>Rows 1 to 4 use 4 clamp kits 204-024K and straight shank 204-013D, on tool bar front face</td>
<td>Row 5 uses 1 shank 820-133C and clamp kit 204-245K, on tool bar front face</td>
<td>Rows 6 to 9 use 4 clamp kits 204-024K and straight shank 204-013D, on tool bar front face</td>
</tr>
</tbody>
</table>

### Install Special (204-245K) Mount

Applies to YP925TD0965 only. For other models, continue at “Install Rear Face Mounts” on page 66.

**Note:** The rear plate (137, 204-372D) is abbreviated.

Three different bolt sizes are used. The longest (802-269C) relies on existing hopper support structure rather than a rear plate.

#### 204-245K Parts ID / Clamp Pre-Assembly

Refer to Figure 129

- **126** 204-072D CLAMP SHANK 1 1/2 DIA
- **136** 204-371D CLAMP PLT 7 CTR
- **137** 204-372D CLAMP PLT 7 SINGLE
- **252** 801-040C SCREW SQ HD 5/8-11 X 1 CUP PT
- **266** 802-091C HHCS 1/2-13X1 1/2 GR5
- **274** 802-269C HHCS 1/2-13X9 GR5
- **276** 802-289C HHCS 1/2-13X8 GR5
- **310** 804-015C WASHER LOCK SPRING 1/2 PLT
- **311** 804-016C WASHER FLAT 1/2 SAE PLT

288. Select one:

- **136** 204-371D CLAMP PLT 7 CTR
- and two sets:
  - **126** 204-072D CLAMP SHANK 1 1/2 DIA
  - **266** 802-091C HHCS 1/2-13X1 1/2 GR5
  - **310** 804-015C WASHER LOCK SPRING 1/2 PLT

Place the lock washer 310 on the bolt 266. Insert the bolts through the plate 136, at the outer holes on the edge with double holes. Thread loosely into right (set screw) side of clamps 126.
Remove One Hopper U-bolt

Refer to Figure 130

289. At the left mount weldment [218] of the center dry fertilizer hopper, remove two sets:
   287 803-021C NUT HEX 5/8-11 PLT
   313 804-022C WASHER LOCK SPRING 5/8 PLT
   and one:
   339 806-052C U-BOLT 5/8-11 X 7 1/32 X 8 1/2
   These parts are not re-used.

Install Clamp

Refer to Figure 129 on page 64, Figure 130 and Figure 130

290. Select one each:
   136 204-371D CLAMP PLT 7 CTR
   and two sets:
   274 802-269C HHCS 1/2-13X9 GR5
   310 804-015C WASHER LOCK SPRING 1/2 PLT
   311 804-016C WASHER FLAT 1/2 SAE PLT
   126 204-072D CLAMP SHANK 1 1/2 DIA

   Place the lock washer [310], then the flat washer [311] on each bolt [274]. Insert the bolts, from the rear, at the weldment [218] holes where the U-bolt [339] was removed in step 289. Add the clamp plate [136] partially assembled in step 288. at the front face of the tool bar. Thread each bolt into the left side of a shank clamp [126]. Leave loose for the moment.

291. Select one:
   137 204-372D CLAMP PLT 7 SINGLE
   and two sets:
   276 802-289C HHCS 1/2-13X8 GR5
   310 804-015C WASHER LOCK SPRING 1/2 PLT

   Place the lock washer [310] on the bolt [276]. Insert the bolts through the holes in the single plate [137]. Place this assembly on the back side of the tool bar. Thread the bolts into the threaded holes of the front plate [138]. Tighten all bolts to torque specification.
Install Rear Face Mounts
This applies to YP625TD18TP110 only. For other models, continue at “Install Standard (204-024K) Mounts” on page 67.

Refer to Figure 132 and Figure 133

The shank 1 is installed at “Mount Coulters” on page 68.

292. Select all of:
   123 204-024K CLAMP KIT 7X7 BAR

293. For each, select one:
   125 204-040D CLAMP PLT 7 BAR
   and four sets:
   274 802-269C HHCS 1/2-13X9 GR5
   310 804-015C WASHER LOCK SPRING 1/2 PLT

Place a washer 310 on each bolt 274. Insert all bolts through the plate 125. At a coulter alignment, place the plate around the front tool bar from the front face, just inside each 2-point hitch weldment 2.

Refer to Figure 133 (depicting the left side)

294. Select one:
   125 204-040D CLAMP PLT 7 BAR
   and two sets:
   126 204-072D CLAMP SHANK 1 1/2 DIA

Place this second plate 125 on the threaded ends of the bolts 274. Position each shank clamp 125, and loosely hold them on by threading in the bolts.
Install Standard (204-024K) Mounts

Refer to Figure 134
The shank ① is installed at “Mount Coulters” on page 68.

295. Select all of:
   ①204-024K CLAMP KIT 7X7 BAR

296. For each, select one:
   ①204-040D CLAMP PLT 7 BAR
   and four sets:
   ①274 802-269C HHCS 1/2-13X9 GR5
   ①310 804-015C WASHER LOCK SPRING 1/2 PLT
   Place a washer ①310 on each bolt ①274. Insert all bolts through the plate ①310. At a coulter alignment, place the plate around the front tool bar from the rear.

297. Select one:
   ①125 204-040D CLAMP PLT 7 BAR
   and two sets:
   ①126 204-072D CLAMP SHANK 1 1/2 DIA
   Place this second plate ①125 on the threaded ends of the bolts ①274. Position each shank clamp ①125, and loosely hold them on by threading in the bolts.

298. Select 18 or 24 (all of):
   ①252 801-040C SCREW SQ HD 5/8-11 X 1 CUP PT
   Add a set screw ①252 to each coulter clamp/①126. Thread it in well short of the shank gap.

Assemble Coulters

Install Applicator Arms
Refer to 401-754M or 401-755M Operator manual for details on extension arm position adjustment.

Refer to Figure 135
299. Select one:
   ①131 204-252K YP COULTER ASSEMBLY
   This may or may not already have a shank and disc installed.

300. Select one:
   ①214 407-435K YP COULTER FERT ASSY ATTACH
   specifically one each:
   ①128 204-172D BACKING PLATE
   ①129 204-179D EXTENSION ARM (CPH)
   and two sets:
   ①278 802-338C RHSNB 5/8-11X3 GR5
   ①312 804-019C WASHER FLAT 5/8 USS PLT
   ①320 804-019C WASHER FLAT 5/8 HARD ASTMF436
   ①298 803-196C NUT HEX FLANGE 5/8-11 PLT
   Place the bolts ①278 through the backing plate ①128, and then around the coulter arm ①128 from the hub/disc side. Add the extension arm ①129, and secure with flat washers ①312, flat washers ①320 and nuts ①298.

204-024K Front Coulter Mount
Figure 134

204-024K Front Coulter Mount

Coulter Applicator Arm
Figure 135
Install Discs

Refer to Figure 136

301. Select one of:

- 820-074C COULTER BLADE 20 FLUTED
- 820-180C 5/8 WAVY-20" TURBO BLADE

302. Place the disc (376 or 378) on the hub (121).

NOTICE

Performance and Wear Risk:

“Turbo” discs must be installed with the flutes perpendicular to the ground in front, and parallel to the ground in back.

303. Select four sets:

- 802-214C RHSNB 1/2-13X1 1/4 GR5
- 804-015C WASHER LOCK SPRING 1/2 PLT
- 803-020C NUT HEX 1/2-13 PLT

Insert the bolt (271) from the arm side of the hub (121), and through the disc. Secure with lock washer (310) and nut (286).

Mount Coulters

The planter may have one or two of the three types of coulter shanks shown at right. Whether to install the shank first, then mount the coulter on it, or install the shank in the coulter first, is at the installer’s choice. These instructions presume a shank-first install.

Shank installation at the coulter casting (141) may require loosening set screws (254) at the casting and stop mount (109).

Refer to Figure 137

The shank parts are:

**Offset Weldment Shank (133) 204-254S**
This is used on the center (inside hitch) rows of twin-row planter model YP625TD12TR110. Installation requires one each of:

- 204-253H YP LOW PRO 4 OFFSET SHANK
- 204-270H YP ATTACHMENT WLD PIN

and two:

- 805-255C PIN ROLL 3/8 X 2 1/2 PLT

**Offset Shank**
This is used on center rows of triple-row planters. Installation requires one each of:

- 820-133C 1 1/2 X 26 OFFSET SHANK
- 805-043C PIN SPIROL 3/8X2 1/2 PLAIN

**Straight Shank**
This is used on left and right rows, and all rows of pull-type model YP625PD18TP110. Installation requires one:

- 204-026D SHANK 1 1/2D X 22 FERT COULT

and two:

- 805-043C PIN SPIROL 3/8X2 1/2 PLAIN
Mount Coulters with Offset Weldments
This applies only to twin-row model YP625TD12TR110. For all other models, continue at “Mount Rear-Face Offset Coulters”.

Refer to Figure 138 and Figure 137 on page 68
304. Select two:
   204-254S YP LOW PRO 4 OFFSET SHANK ASY
   each of which includes:
   1 @ 204-253H YP LOW PRO 4 OFFSET SHANK
   1 @ 204-270H YP ATTACHMENT WLD PIN
   2 @ 805-255C PIN ROLL 3/8 X 2 1/2 PLT
   Disassemble this kit.

305. With no pin present, insert the top of the shank shaft (132) through both clamps (126). Drive a pin (336) through the top hole of the shaft.

306. Align the coulter casting (141) of the coulter arm assembly with the holes in the lower plates of the shank (132). Insert the pin weldment (135) through the plates, the coulter casting and the coulter stop (109). Secure with pin (336).

Coulter height is set at “Set Coulter Alignment and Height” on page 71.

Continue at “Mount Coulters with Straight Shanks” on page 70.

Mount Rear-Face Offset Coulters
This applies only to 3-point triple-row model YP625TD18TP110. For all other models, continue at “Mount Front-Face Offset Coulters” on page 70.

Refer to Figure 139 and Figure 137 on page 68
307. Select two:
   820-133C 1 1/2 X 26 OFFSET SHANK
   805-043C PIN SPIROL 3/8X2 1/2 PLAIN
   If the pins (323) are in the shank (377), remove them.

308. With no pin present, insert the longer end of the shank (377) through both clamps (126). Drive a pin (323) through the top hole of the shaft.

309. Slide the coulter casting (141) and coulter stop (109) of the coulter arm onto the shank (132). Secure with pin (336).

Coulter height is set at “Set Coulter Alignment and Height” on page 71.

Continue at “Mount Coulters with Straight Shanks” on page 70.
Mount Front-Face offset Coulters
This applies only to 9-row model YP925TD0965. For all other models, continue at “Mount Coulters with Straight Shanks”.

Refer to Figure 140 and Figure 137 on page 68

310. Select two:
- 820-133C 1 1/2 X 26 OFFSET SHANK
- 805-043C PIN SPIROL 3/8X2 1/2 PLAIN
  If the pins 323 are in the shank 377, remove them.

311. With no pin 323 present, insert the longer end of the shank 377 through both clamps 126. Drive a pin 323 through the top hole of the shaft.

312. Slide the coulter casting 141 and coulter stop 109 of the coulter arm onto the shank 132. Secure with pin 336.

Coulter height is set at “Set Coulter Alignment and Height” on page 71.

Mount Coulters with Straight Shanks

Refer to Figure 141 and Figure 137 on page 68

313. Select all of:
- 204-026D SHANK 1 1/2D X 22 FERT COULT
each of which includes or requires two:
- 805-043C PIN SPIROL 3/8X2 1/2 PLAIN
  If the pins 323 are in the shanks 124, remove them.

314. With no pin 323 present, insert the longer end of the shank 377 through both clamps 126. Drive a pin 323 through the top hole of the shaft.

315. Slide the coulter casting 141 and coulter stop 109 of the coulter arm onto the shank 132. Secure with pin 336.

Coulter height is set at “Set Coulter Alignment and Height” on page 71.
Set Coulter Alignment and Height

Check Coulter Alignment
Factory settings for coulters is “zone”. The blades are to operate as follows with respect to the opener furrow:

- 18-row pull-type triple-row YP625PD18TP110: coulters centered between front opener and each rear opener of the triple row (17.2 cm off front row)
- 12-row 3-point twin-row YP625TD12TR110: coulters 5.1 cm off to one side of each row unit
- 18-row 3-point triple-row YP625TD18TP110: coulters centered between front opener and each rear opener of the triple row (17.2 cm off front row)
- 9-row 3-point single-row YP925TD0965: coulters 5.1 cm off to one side of each row unit

316. Adjust coulter mount placement, and offset shank (not shown) angle as necessary to obtain correct coulter alignment.

Set Coulter Height

Refer to Figure 142
317. Adjust the coulter height at the tool bar clamps 126. See the Adjustments topic in the 401-754M or 401-755M Operator manual for details. Tighten set screws 252.

Set Coulter Swivel
318. With the coulter blade 1 aligned parallel to the row units, adjust the coulter stop 109 to the center of its travel in the coulter casting 141 slot. Tighten the stop set screw 2.

319. If it is not desired that the coulter be able to swivel, also tighten the casting set screws 3.

Set Fertilizer Applicator Height
Adjust the coulter height at the arm 4. See the Adjustments topic in the 401-754M or 401-755M Operator manual for details.
Connect Fertilizer Hoses

Start at planter left, and connect a hose between one meter port and coulter applicator at a time.

Refer to Figure 143

320. Select 9 or 12 of:

- 816-052C HOSE NATIVE GRASS SOLID STAND
- and 18 or 24 of:
  - 800-067C CLAMP BAND 2 1/2

321. Place a clamp (244) on one end of a hose (362). Slide the hose onto an outlet of a hopper meter. Secure the clamp.

322. Place a clamp (244) on the bottom end of the hose (362). Slide the hose over the tube collar (134), until the hose end is flush with the bottom of the collar. Center the clamp on the collar. Secure the clamp.

Install Pressure Gauge

Refer to Figure 144

The pressure gauge (402) is supplied largely pre-assembled, and protected in bubble wrap. It is installed right of center on the front tool bar.

The gauge must be located with between the center and right fertilizer hoppers, or to the right of the right fertilizer hopper (otherwise, it prevents the hopper from tilting forward during clean-out).

323. Remove the bubble wrap and any loose components. If the instruction sheet:

- Bulletin A-27
  Dwyer Magnehelic gauge instructions
  is present, store it with the planter manuals.

324. Select one each:

- 403-692D PRESSURE GAUGE MOUNT
- 806-084C U-BOLT 5/8-11 X 7 1/32 X 9 1/2
  and two sets:
- 804-022C WASHER LOCK SPRING 5/8 PLT
- 803-021C NUT HEX 5/8-11 PLT

Install the mount on the front tool bar, right of center, and clear of hoppers. Tighten nuts (287) only to Grade 2 torque, to avoid deforming the mount tube (201).
Connect Air Sensor Lines

Refer to Figure 145 (on page 73) and Figure 146

Lines from the sensor chamber (186) to the pressure gauge (402), and to meter ports (3 in Figure 147), are made by cutting lengths from a supplied coil of hose (403).

325. Select two:

830-276C AD 1/8MNPT X 1/4HB BRASS

Thread these into the rear ports (1 and 2) of the pressure gauge. Do not use pipe sealant; it is not necessary and may foul the gauge.

Connect Ambient Air Line

326. Select one:

800-395C CLAMP SPRING BAND 1/2 OD HOSE

and the coil of:

990-021R HOSE 1/4 RUBBER AIR

Cut a length of:

40 to 60 cm

from the coil. Use the clamp (250) to connect this short length of hose (403) to the lower 2 [*low pressure/ambient air] gauge port. Route the hose down the mount and tie it to the mount so that the open end is facing down.

Connect Gauge Line

327. Select two:

800-395C CLAMP SPRING BAND 1/2 OD HOSE

and the coil of:

990-021R HOSE 1/4 RUBBER AIR

Use a clamp (250) to connect one end of the tubing (403) to the upper 1 [*high pressure/sense] port of the gauge (402).

328. Route the hose (403) along tool bars and ribs to the sensor chamber (186). Secure the hose along the route with cable ties. Do not pull the ties too tight. Remove any protective cap on the bottom brass adaptor (383) on the chamber. Cut the hose to length. Place the other clamp (250) on the hose. Secure the hose to the chamber adaptor.
Prepare Meter Sense Ports

Refer to Figure 147, Figure 148 and Figure 149

Sense lines are connected from the chamber (386) to 5 or 6 meters. Sensing rows are:

<table>
<thead>
<tr>
<th>Planter Model</th>
<th>Sensing Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td>YP625PD18TP110</td>
<td>2, 3, 5, 6, 8, 9</td>
</tr>
<tr>
<td>YP625TD12TR110</td>
<td>1, 2, 3, 4, 5, 6</td>
</tr>
<tr>
<td>YP625TD18TP110</td>
<td>2, 3, 5, 6, 8, 9</td>
</tr>
<tr>
<td>YP925TD0965</td>
<td>1, 2, 3, 4, 5</td>
</tr>
</tbody>
</table>

329. Inspect the left side of all row units.

If all meters at the correct rows already have adaptor (401) fittings installed at their sense ports (3), continue at “Connect Meter Sense Lines”.

If incorrect rows have adaptors, exchange the adaptors with plugs (372) at the correct rows, and continue at “Connect Meter Sense Lines”. See step 330 to step 332 for exchange instructions.

If no rows have adaptors (401), continue at step 330.

330. At each Sensing Row from the table above, where an adaptor (401) is to be installed, remove:

(372) 817-829C PLUG, FLUSH HEAD POLYETH 7/16

This plug is located at (3), above the drive sprocket, in between the air and seed elbows. Remove the meter rain cover, and any seed disc present. Use a small blunt punch to push the plug out from the sprocket side. Unless needed where an adaptor is removed, this plug is not re-used.

331. At each incorrect row, where an adaptor is installed, remove and save one set:

(305) 803-374C NUT HEX JAM 7/16-20 PLT
(401) 891-122C AD 7/16MORB X 1/4HB BRASS

332. At each sense line row, select one set:

(305) 803-374C NUT HEX JAM 7/16-20 PLT
(401) 891-122C AD 7/16MORB X 1/4HB BRASS

Insert the threaded end of the adaptor (401), from the sprocket side, through the sense port (3) of the meter. Secure with jam nut (305).

Connect Meter Sense Lines

Refer to Figure 146 on page 73, and Figure 149

333. Select two:

(250) 800-395C CLAMP SPRING BAND 1/2 OD HOSE
and the coil of:
(403) 990-021R HOSE 1/4 RUBBER AIR

Place a clamp (250) on one end of the hose (403).
Connect that end to the top available adaptor fitting (383) on the sensor chamber (186). Route the hose along the air manifold, and then along the supply air hose at the row, to the fitting (401) at the meter port (3). Cut the hose to length. Secure hose (403) to fitting (401) with clamp (250).
Install Clean-Out Funnel

Refer to Figure 150

334. Select one:
   193 403-527S CLEANOUT FUNNEL & STORAGE BKT

335. Remove and save the funnel:
   370 817-811C FUNNEL, AIR METER CLEAN OUT
   and one set:
   280 802-388C HFS 3/8-16X1 GR5
   300 803-209C NUT FLANGE LOCK 3/8-16 PLT

336. At the right-most row hopper, use the bolt (280) and
     lock nut (300) to secure the bracket to the right hole
     of the rear cross-member of the seed hopper
     mount. Make sure the post of the storage bracket is
     upright, so that the wide end of the funnel (370) is
     down in storage.

337. Store the funnel (370) in the bracket.

Store Lift Lock Channels

This applies only to three-point planters. For pull-type
planters, continue at “Install Press Wheels” on page 76.

Refer to Figure 150

338. Select one:
   119 196-473H CYL LOCK CHANNEL 1 1/2X12 3/4
   with:
   321 805-001C PIN 3/8 X 3 USABLE LM/PIN

If the lift-assist is already raised, install the lock
channel (119) on the cylinder rod 1. Otherwise, pin it
to the storage hole 2 on the lift-assist weldment.
Install Press Wheels

To meet highway clearance requirements, press wheel arms and wheels on wing rows are not factory-installed.

Refer to Figure 152 and Figure 154

Note: With twin row planters, long and short press wheel arm mount boxes ③ are alternated every other row. The long box is identified by the notches ⑥ on its side plate. The long box belongs on the right hand row of a set of twins. With triple row the long box is mounted on the far right and far left of each row unit.

339. Remove and save the 1/2-13x1in hex head bolt and washer ② at the back of an incomplete row unit ③.

Note: There are four bolts at this location. Remove only the hex head bolts. Do not loosen or remove the square head bolts forward.

340. Remove and save the 1/2-13x11/2in hex head bolt ④, washer, and eccentric adjuster nut.

341. Align the 1/2in holes in the press wheel assembly with the 1/2-13 tapped holes in the row unit, loosely assemble with the 1/2-13x1in hex head bolt and washer ②.

342. Loosely screw in the 1/2-13x11/2in hex head bolt ④, washer, and eccentric adjuster nut. Rotate the adjuster to visually align the press wheel assembly with the row unit, and tighten the adjust and both bolts.

Install Ground Drive Wheel

⚠️ CAUTION

Sharp Object Hazard:
Use a hoist or two people. Wear gloves. The wheel is heavy and the tines are sharp.

Refer to Figure 153

343. Select one:
   - 215 407-473D GROUND DRIVE WHEEL
   and three sets:
   - 277 802-331C RHSNB 1/2-13X1 3/4 GR5
   - 310 804-015C WASHER LOCK SPRING 1/2 PLT
   - 286 803-020C NUT HEX 1/2-13 PLT

344. At the ground drive hub ⑦, orient the wheel so that at the top, the vertical face of the top tooth is to the rear, and the longer angled face is to the front.

345. Secure the wheel ⑦ to the hub with bolts ②, lock washers ⑤ and nuts ②.
Closeout

1. Lubricate all grease zerks per Operator manual.
2. Lubricate all chains per Operator manual.
3. Remove all numbered tags that may still be wired on.
4. Wipe off all grease pencil part numbers.
5. Touch up missing or damaged paint.
6. Place all documents in a waterproof bag, and store them in the left-most hopper (row 1) until delivery.

Initialize Monitor

7. Make a monitor connection per Operator manual and DICKEY-john® PM400 manuals.
8. Perform a monitor Quick-Start per Appendix B of the 401-754M or 401-755M Operator manual.
Install Options

Components in this section may or may not be part of pre-delivery. They are dealer-installed per prior arrangement with the customer.

- Markers - see 113-870M
- Inside Scrapers - see 401-754M or 401-755M Operator manual Appendix C.
## Appendix

### Torque Values Chart

<table>
<thead>
<tr>
<th>Bolt Size</th>
<th>Bolt Head Identification</th>
<th>Bolt Head Identification</th>
<th>Bolt Head Identification</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Grade 2</td>
<td>Grade 5</td>
<td>Grade 8</td>
</tr>
<tr>
<td>in-tpia</td>
<td>N·m b ft-lb d</td>
<td>N·m b ft-lb d</td>
<td>N·m b ft-lb d</td>
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<tr>
<td>1/4-20</td>
<td>7.4 5.6 11 8 16 12</td>
<td>8.5 6 13 10 18 14</td>
<td></td>
</tr>
<tr>
<td>1/4-28</td>
<td>15 11 24 17 33 25</td>
<td>17 13 26 19 37 27</td>
<td></td>
</tr>
<tr>
<td>5/16-18</td>
<td>27 20 42 31 59 44</td>
<td>31 22 47 35 67 49</td>
<td></td>
</tr>
<tr>
<td>5/16-24</td>
<td>43 32 67 49 95 70</td>
<td>49 36 75 55 105 78</td>
<td></td>
</tr>
<tr>
<td>3/8-16</td>
<td>66 49 105 76 145 105</td>
<td>75 55 115 85 165 120</td>
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</tr>
<tr>
<td>3/8-20</td>
<td>95 70 150 110 210 155</td>
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</tr>
<tr>
<td>5/16-14</td>
<td>105 79 165 120 235 170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/16-20</td>
<td>130 97 205 150 285 210</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/16-12</td>
<td>150 110 230 170 325 240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/8-18</td>
<td>235 170 360 265 510 375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/16-10</td>
<td>260 190 405 295 570 420</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/8-9</td>
<td>225 165 585 430 820 605</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/8-14</td>
<td>250 185 640 475 905 760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-8</td>
<td>340 250 875 645 1230 910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-12</td>
<td>370 275 955 705 1350 995</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13/32-9</td>
<td>480 355 1080 795 1750 1290</td>
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<td></td>
</tr>
<tr>
<td>13/32-12</td>
<td>540 395 1210 890 1960 1440</td>
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<td></td>
</tr>
<tr>
<td>11/32-7</td>
<td>680 500 1520 1120 2460 1820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/32-12</td>
<td>750 555 1680 1240 2730 2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13/32-6</td>
<td>890 655 1990 1470 3230 2380</td>
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<td>13/32-12</td>
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<td></td>
</tr>
<tr>
<td>15/32-12</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>M 5 X 0.8</td>
<td>4 3 6 5 9 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 6 X 1</td>
<td>7 5 11 8 15 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 8 X 1.25</td>
<td>17 12 26 19 36 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 8 X 1</td>
<td>18 13 28 21 39 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 10 X 1.5</td>
<td>33 24 52 39 72 53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 10 X 0.75</td>
<td>39 29 61 45 85 62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 12 X 1.75</td>
<td>58 42 91 67 125 93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 12 X 1.5</td>
<td>60 44 95 70 130 97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 12 X 1</td>
<td>90 66 105 77 145 105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 14 X 2</td>
<td>92 68 145 105 200 150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 14 X 1.5</td>
<td>99 73 155 115 215 160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 16 X 2</td>
<td>145 105 225 165 315 230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 16 X 1.5</td>
<td>155 115 240 180 335 245</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 18 X 2.5</td>
<td>195 145 310 230 405 300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 18 X 1.5</td>
<td>220 165 350 260 485 355</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 20 X 2.5</td>
<td>280 205 440 325 610 450</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 20 X 1.5</td>
<td>310 230 650 480 900 665</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 24 X 3</td>
<td>480 355 760 560 1050 780</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 24 X 2</td>
<td>525 390 830 610 1150 845</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 30 X 3.5</td>
<td>960 705 1510 1120 2100 1550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 30 X 2</td>
<td>1060 785 1680 1240 2320 1710</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 36 X 3.5</td>
<td>1730 1270 2650 1950 3660 2700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 36 X 2</td>
<td>1880 1380 2960 2190 4100 3220</td>
<td></td>
<td></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.
Hydraulic Connectors and Torque

Refer to Figure 127 (a hypothetical fitting)
Leave any protective caps in place until immediately prior to making a connection.

1. **NPT** - National Pipe Thread
   - Note tapered threads, no cone/flare, and no O-ring.
   - Apply liquid pipe sealant for hydraulic applications (do not use tape sealant, which can foul filters).

2. **JIC** - Joint Industry Conference (SAE J514)
   - Note straight threads and the 37° cone on “M” fittings (or 37° flare on “F” fittings). Use no sealants (tape or liquid) on JIC fittings.

3. **ORB** - O-Ring Boss (SAE J514)
   - Note straight threads and elastomer O-Ring.
   - Prior to installation, to prevent abrasion during tightening, lubricate O-Ring with clean hydraulic fluid. Use no sealants (tape or liquid) on JIC fittings.

ORB fittings that need orientation, such as the elbow depicted, also have a washer and jam nut (“adjustable thread port stud”). Back jam nut away from washer. Thread fitting into receptacle until O-Ring contacts seat. Unscrew fitting to desired orientation. Tighten jam nut to torque specification.

<table>
<thead>
<tr>
<th>Fittings Torque Values</th>
<th>Fitting</th>
<th>Ft-Lbs</th>
<th>N-m</th>
</tr>
</thead>
<tbody>
<tr>
<td>1⁄4 NPT</td>
<td>1.5-3.0 turns past finger tight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9⁄16 JIC</td>
<td>18-20</td>
<td>24-27</td>
<td></td>
</tr>
<tr>
<td>9⁄16 ORB w/jam nut</td>
<td>12-16</td>
<td>16-22</td>
<td></td>
</tr>
<tr>
<td>9⁄16 ORB straight</td>
<td>18-24</td>
<td>24-32</td>
<td></td>
</tr>
<tr>
<td>3⁄4 JIC</td>
<td>27-39</td>
<td>37-53</td>
<td></td>
</tr>
<tr>
<td>3⁄4 ORB w/jam nut</td>
<td>20-30</td>
<td>27-41</td>
<td></td>
</tr>
<tr>
<td>3⁄4 ORB straight</td>
<td>27-43</td>
<td>37-58</td>
<td></td>
</tr>
</tbody>
</table>

Tire Inflation Chart

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8R19.5 LT</td>
<td>760 kPa</td>
</tr>
<tr>
<td>9.5Lx15 305</td>
<td>305 kPa</td>
</tr>
</tbody>
</table>

Tire Warranty Information

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

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Web site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestone</td>
<td><a href="http://www.firestoneag.com">www.firestoneag.com</a></td>
</tr>
<tr>
<td>Gleason</td>
<td><a href="http://www.gleasonwheel.com">www.gleasonwheel.com</a></td>
</tr>
<tr>
<td>Titan</td>
<td><a href="http://www.titan-intl.com">www.titan-intl.com</a></td>
</tr>
</tbody>
</table>
Opener Stations: YP625PD18TP110
Harness: YP625PD18TP110

ROW2
ROW3
ROW4
ROW5
ROW6
ROW7
ROW8
ROW9
ROW10
ROW11
ROW12
ROW13
ROW14
ROW15
ROW16
ROW17
ROW18

273 cm
164 cm
55 cm
457 cm
546 cm
41 cm
69 cm

467981766

32096
Final Decal Placement: YP625PD18TP110
Coulter Stations: YP625PD18TP110
Opener Stations: YP625TD12TR110
Harness: YP625TD12TR110

273 cm

164 cm

55 cm

546 cm

457 cm

467981765

41 cm

69 cm

273 cm

164 cm

55 cm

164 cm

164 cm
Final Decal Placement: YP625TD12TR110
Coulter Stations: YP625TD12TR110
Opener Stations: YP625TD18TP110
Harness: YP625TD18TP110
Final Decal Placement: YP625TD18TP110
Coulter Stations: YP625TD18TP110
Opener Stations: YP925TD0965
Harness: YP925TD0965
Final Decal Placement: YP925TD0965

![Diagram of Final Decal Placement: YP925TD0965](image-url)
Coulter Stations: YP625TD18TP110
**Chain Setup**

Set chain clip orientation when mounting chains and check it before adjusting slack on factory-installed chains. Set or check initial slack on all chains prior to delivery.

**Chain Clip Orientation**

*Refer to Figure 156 (arrow shows chain direction)*

Whenever mounting a chain, make sure the clip at the removable link is oriented to minimize snags. Install clip with open end facing away from direction of chain travel (shown by gray or striped arrows in chain routing diagrams).

**Chain Slack**

*Refer to Figure 157, 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 91cm/36in): $2.1\text{cm/m (1} \frac{1}{4}\text{in per ft)}$
   - Vertical short chains: $2.1\text{cm/m (1} \frac{1}{4}\text{in per foot)}$
   - Horizontal short chains: $4.2\text{cm/m (1} \frac{1}{2}\text{in per foot)}$.

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.
### Parts List

This list shows the full part number and description for all part call-outs in this manual.

Fractional dimensions are inches unless otherwise stated.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>113-870M</td>
<td>MANUAL YP4-6-8-9 FP MARKER KIT</td>
</tr>
<tr>
<td>119-300D</td>
<td>SNV BLADE MOUNT</td>
</tr>
<tr>
<td>120-263D</td>
<td>SPACER TUBE 1 ID X 2 13/16</td>
</tr>
<tr>
<td>120-269S</td>
<td>3 BOLT PIVOT BRG ASSY</td>
</tr>
<tr>
<td>120-310D</td>
<td>SPACER TUBE 1 ID X 2.25</td>
</tr>
<tr>
<td>121-166D</td>
<td>ADJ. YOKE END</td>
</tr>
<tr>
<td>136-018D</td>
<td>CHAIN RL #40 107 PITCHES</td>
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<tr>
<td>136-051D</td>
<td>CHAIN RL #40 166 PITCHES</td>
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<tr>
<td>149-223H</td>
<td>LOW PRO COULTER STOP WLMT</td>
</tr>
<tr>
<td>151-165H</td>
<td>1007 REAR CASTER FRAME WELD</td>
</tr>
<tr>
<td>151-171H</td>
<td>LIFT ASSIST REAR PVT MNT</td>
</tr>
<tr>
<td>151-173H</td>
<td>LIFT ASSIST LWR PARALLEL ARM</td>
</tr>
<tr>
<td>151-355D</td>
<td>1007 LOCK OUT PLUNGER</td>
</tr>
<tr>
<td>151-381D</td>
<td>LIFT ASSIST AXLE PIN</td>
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<tr>
<td>161-046K</td>
<td>6 BOLT WHL&amp;TIRE 8 PLY TUBELESS</td>
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<tr>
<td>161-056D</td>
<td>CASTER SPACER</td>
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<tr>
<td>161-107H</td>
<td>NTA35 KING EYEBOOLT WELDMENT</td>
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<td>161-245K</td>
<td>CLAMP KIT 7X7 BAR</td>
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<tr>
<td>196-473H</td>
<td>CYL LOCK CHANNEL 1 1/2X12 3/4</td>
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<tr>
<td>198-240D</td>
<td>3 13/32 SPRING STRAP</td>
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<td>204-013D</td>
<td>SHANK 1 1/2D X 26 FERT COULT</td>
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<td>204-024K</td>
<td>CLAMP KIT 7X7 BAR</td>
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<tr>
<td>204-026D</td>
<td>SHANK 1 1/2D X 22 FERT COULT</td>
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<td>204-040D</td>
<td>CLAMP PLT 7 BAR</td>
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<tr>
<td>204-072D</td>
<td>CLAMP SHANK 1 1/2 DIA</td>
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<td>204-085M-A</td>
<td>MANUAL YP UNIT MNT &amp; RIGID CLTR</td>
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<td>204-172D</td>
<td>BACKING PLATE</td>
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<td>204-179D</td>
<td>EXTENSION ARM (CPH)</td>
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<td>204-245K</td>
<td>CLAMP KIT 7X7 DRY FERT CTR ROW</td>
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<td>204-252K</td>
<td>YP COULTER ASSEMBLY</td>
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<tr>
<td>204-253H</td>
<td>YP LOW PRO 4 OFFSET SHANK</td>
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<td>204-254S</td>
<td>YP LOW PRO 4 OFFSET SHANK ASY</td>
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<td>204-268D</td>
<td>DRY FERTILIZER TUBE COLLAR</td>
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<td>7 X CLAMP BUNDLE</td>
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<td>PVT CLTR CASTING MONT RH</td>
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<td>249-051H</td>
<td>CLTR SWING ARM WLMT</td>
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<tr>
<td>266-020D</td>
<td>UHMW RND 2.0 DIA X 2.0 LONG</td>
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<tr>
<td>288-374H</td>
<td>25 SERIES UPPER PARALLEL ARM</td>
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<td>Part No.</td>
<td>Descriptor</td>
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<td>403-571K</td>
<td>6 ROW TWIN MANIFOLD ASY 110</td>
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<tr>
<td>403-573K</td>
<td>9 ROW SINGLE MANIFOLD ASY 65</td>
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<tr>
<td>403-578D</td>
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<td>MOUNT, AIR PRESSURE GAGE</td>
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<td>MOUNT, AIR PRESSURE GAGE</td>
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<tr>
<td>403-667D</td>
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</tr>
<tr>
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<td>MOUNT, AIR PRESSURE GAGE</td>
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<tr>
<td>403-739D</td>
<td>HOPPER STIFFENER</td>
</tr>
<tr>
<td>403-726D</td>
<td>FRONT 3RD ROW HOP SUPPORT LH</td>
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<tr>
<td>403-739D</td>
<td>HOPPER STIFFENER</td>
</tr>
<tr>
<td>403-756D</td>
<td>FRONT 3RD ROW HOP SUPPORT LH</td>
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