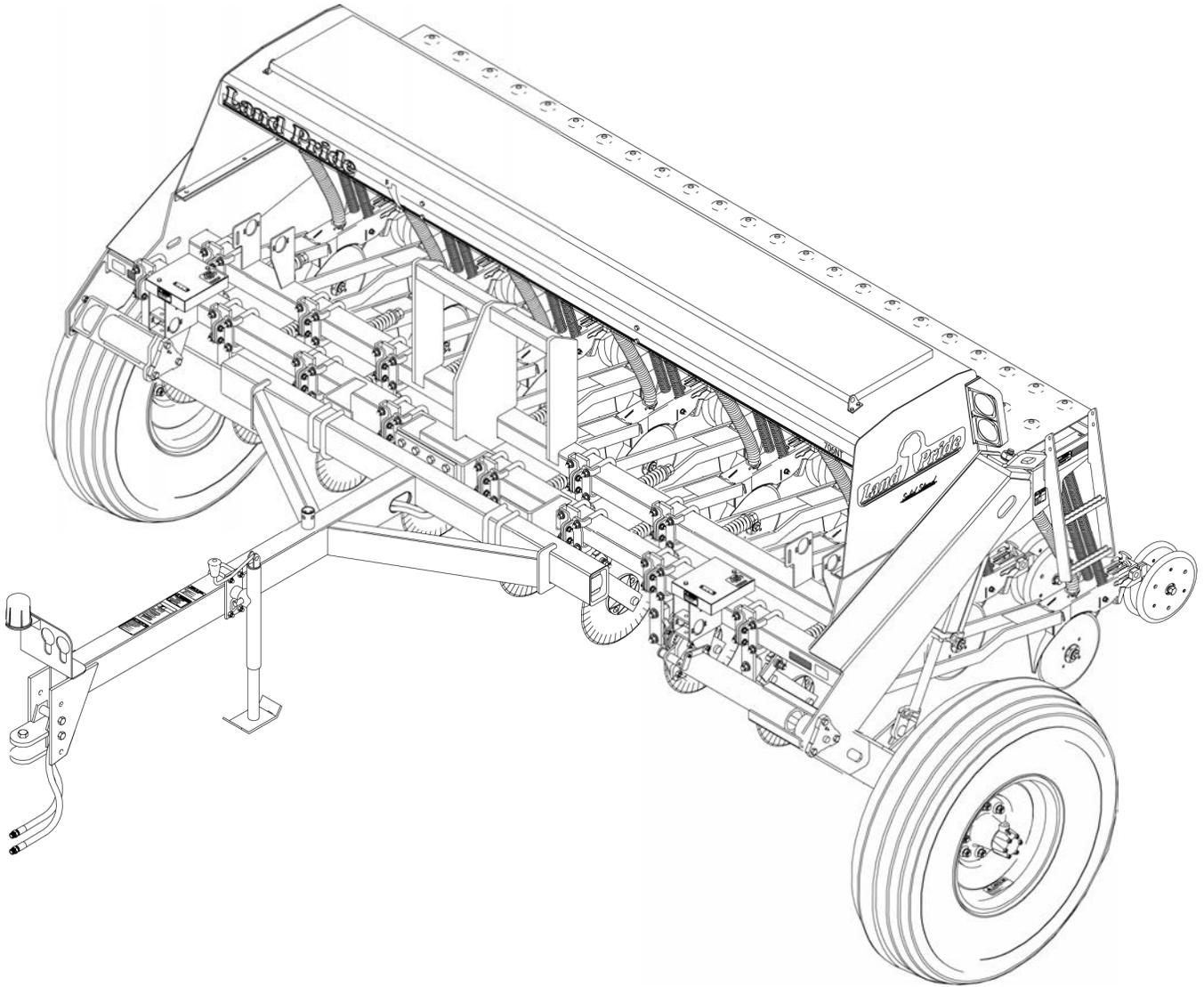


End-Wheel, No-Till Drill

706/1006NT



ORIGINAL INSTRUCTIONS

313-855Q
Pre-Delivery Manual



Read the Pre-Delivery 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.



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Important Safety Information

Look for Safety Symbol

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



Be Aware of Signal Words

Signal words designate a degree or level of hazard seriousness.

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



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



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



Prepare for Emergencies

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



Be Familiar with Safety Decals

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





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



Dealer QR Locator
 The QR Code® at left will link you to available dealers for Land Pride products. Refer to Parts Manual QR Locator for detailed instructions.

Wear Protective Equipment

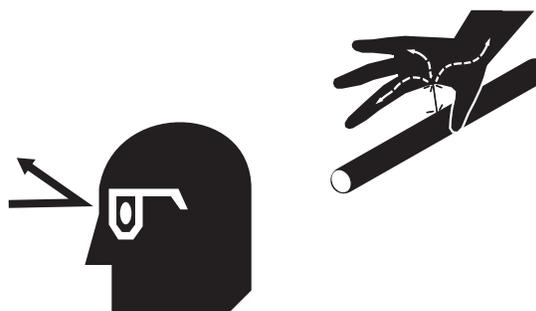
- ▲ *Wear protective clothing and equipment.*
- ▲ *Wear clothing and equipment appropriate for the job. Avoid loose-fitting clothing.*
- ▲ *Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection such as earmuffs or earplugs.*
- ▲ *Because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



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.*
- ▲ *If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result.*



Handle Chemicals Properly

- ▲ *Read and follow chemical manufacturer's instructions.*
- ▲ *Wear protective clothing.*
- ▲ *Handle all chemicals with care.*
- ▲ *Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.*
- ▲ *Inhaling smoke from any type of chemical fire is a serious health hazard.*
- ▲ *Store or dispose of unused chemicals as specified by the chemical manufacturer.*
- ▲ *Immediately and thoroughly flush any area of the body that is contaminated by chemicals.*
- ▲ *If chemical is swallowed, carefully follow the chemical manufacturer's recommendations and consult with a doctor.*
- ▲ *If persons are exposed to a chemical in a way that could affect their health, consult a doctor immediately with the chemical label or container in hand. Any delay could cause serious illness or death.*
- ▲ *Dispose of empty chemical containers properly. By law rinsing of the used chemical container must be repeated three times. Puncture the container to prevent future use. An alternative is to jet-rinse or pressure rinse the container.*
- ▲ *After working with chemicals, wash hands and face before eating. Shower when application is completed for the day.*
- ▲ *Never wash out the tanks within 100 feet (30m) of any freshwater source or in a car wash.*
- ▲ *Rinse out the tank. Apply rinse water on last field treated.*



Keep Riders Off Machinery

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

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



Use Safety Lights and Devices

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

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



Transport Machinery Safely

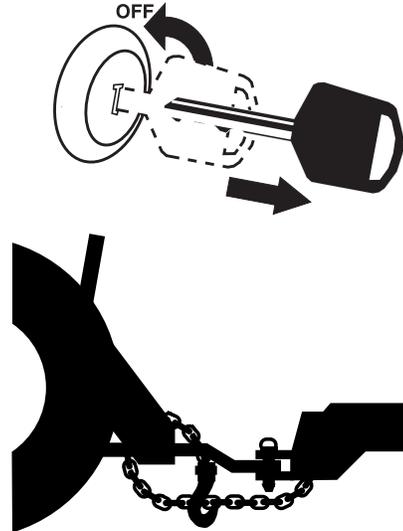
Maximum transport speed for implement is 20 mph (32 km/h). Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

- ▲ *Do not exceed 20 mph (32 km/h). Never travel speeds which do not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.*
- ▲ *Comply with state and local laws.*
- ▲ *Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.*
- ▲ *Carry reflectors or flags to mark drill in case of breakdown on the road.*
- ▲ *Keep clear of overhead power lines and other obstructions when transporting. Refer to transport dimensions in the Operator's Manual.*



Shutdown and Storage

- ▲ Lower drill, put tractor in park, turn off engine, and remove the key.
- ▲ Secure drill using blocks and supports provided.
- ▲ Detach and store drill in an area where children normally do not play. Use A Safety Chain
- ▲ Use a safety chain to help control drawn machinery should it separate from tractor drawbar.
- ▲ Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
- ▲ Attach chain to tractor drawbar support or other specified anchor location. Allow only enough slack in chain to permit turning.
- ▲ Replace chain if any links or end fittings are broken, stretched or damaged.
- ▲ Do not use safety chain for towing.



Tire Safety

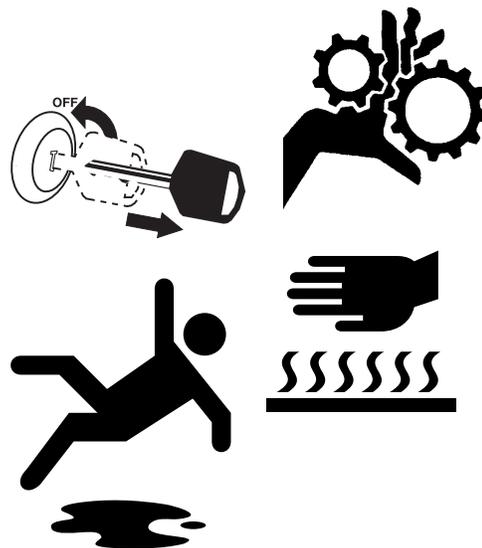
Tire changing can be dangerous and must be performed by trained personnel using correct tools and equipment.

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



Practice Safe Maintenance

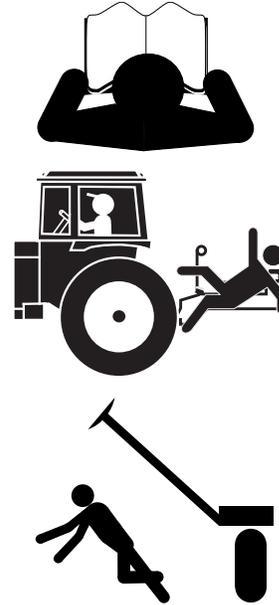
- ▲ Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.
- ▲ Work in a clean, dry area.
- ▲ Lower the drill, put tractor in park, turn off engine, and remove key before performing maintenance.
- ▲ Make sure all moving parts have stopped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



Safety At All Times

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

- ▲ *Be familiar with all drill functions.*
- ▲ *Operate machinery from the driver's seat only.*
- ▲ *Do not leave drill unattended with tractor engine running.*
- ▲ *Do not dismount a moving tractor. Dismounting a moving tractor could cause serious injury or death.*
- ▲ *Do not stand between the tractor and drill during hitching.*
- ▲ *Keep hands, feet and clothing away from power-driven parts.*
- ▲ *Wear snug-fitting clothing to avoid entanglement with moving parts.*
- ▲ *Watch out for wires, trees, etc., when folding and raising drill. Make sure all persons are clear of working area.*
- ▲ *Do not turn tractor too tightly, causing drill to ride up on wheels. This could cause personal injury or equipment damage.*



Safety Decals

Safety Reflectors and Decals

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

- ▲ *Read and follow decal directions.*
- ▲ *Keep lights in operating condition.*
- ▲ *Keep all safety decals clean and legible.*
- ▲ *Replace all damaged or missing decals. Order new decals from your Great Plains dealer. Refer to this section for proper decal placement.*
- ▲ *When ordering new parts or components, also request corresponding safety decals. To install new decals:*

To install new decals:

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

Introduction

Land Pride wants you to be satisfied with any new machine delivered by the Great Plains Trucking network. To ease the assembly task and produce a properly working machine, read this entire manual before setting up new equipment.

Description of Unit

The 706NT/1006NT End-Wheel No-Till Drills are 7- or 10-foot grain drills of end wheel design, which couples Land Pride spring mounted coulters with a straight arm design of our Solid Stand opener to achieve no-till drilling capabilities. The end wheel design keeps the ground-working components in line with the end wheels for accurate coulters depth and seed placement over uneven terrain and allows the unit to follow field curves without side-loading the openers.

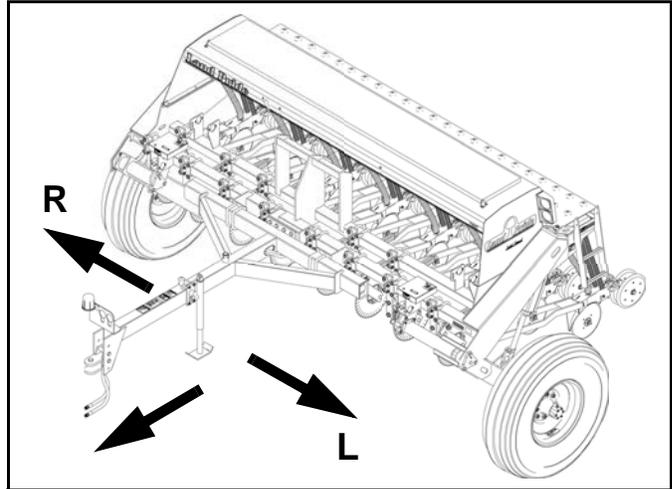


Figure 1
Left/Right Notation

38001

Implements Covered

706NT-1008	7-foot, 10-row, 8-inch row spacing
706NT-1075	7-foot, 10-row, 7.5-inch row spacing
706NT-1107	7-foot, 11-row, 7-inch row spacing
1006NT-1408	10-foot, 14-row, 8-inch row spacing
1006NT-1575	10-foot, 15-row, 7.5-inch row spacing
1006NT-1607	10-foot, 16-row, 7-inch row spacing

Document Family

313-855Q	Pre-Delivery Instructions (this manual)
313-855M	706NT/1006NT Operator's Manual
313-855P	706NT/1006NT Parts Manual
313-855B	706NT/1006NT Seed Rate Charts

Intended Usage

This machine is intended to be used primarily for No-Till drilling. It is adaptable for conventional drilling.

Using This Manual

This manual was written to help you assemble and prepare the new machine for the customer. The manual includes instructions for assembly and setup. Read this manual and follow the recommendations for safe, efficient and proper assembly and setup.

An operator's manual is also provided with the new machine. Read and understand "**Important Safety Information**" and "**Operating Instructions**" in the operator's manual before assembling the machine. Keep the operator's manual on hand while assembling.

Definitions

The following terms are used throughout this manual.

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

NOTICE

Paragraphs in this format present a crucial point of information related to the current topic.

Read and follow the directions to:

- remain safe,
- avoid serious damage to equipment and
- ensure desired field results.

Note: Paragraphs in this format provide useful information related to the current topic.

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

Further Assistance

Your Land Pride dealer wants you to be satisfied with your new drill. If for any reason you do not understand any part of this manual or are otherwise dissatisfied with the product please contact:

Land Pride Service Department

P.O. Box 5060

Salina, KS 67402-5060

Or go to www.landpride.com and follow the contact information at the bottom of your screen for our service FAQs.

Preparation

Step-by-step instructions for assembling the drill begin in the next section of the manual. Before commencing work, review the Tools Required and Pre-Assembly Checklist to make sure you have all necessary parts and equipment.

The drill is shipped via flat bed truck. It is the dealer's responsibility to unload the new machine. Unload all equipment before beginning assembly.

The general sequence of work is:

Assembly

- a. Unload frame, tongue and accessories from truck.
- b. Assemble tongue to mainframe.
- c. Route hoses and harness.

Unloading the Truck

- a. Secure lifting lines.
- b. Lift drill from truck.
- c. Use hoist or lift to remove tongue and accessories.

Setup

- a. Adjust hitch height.
- b. Hitch to tractor.
- c. Level drill.
- d. Bleed hydraulics.
- e. Install accessories and Options.
- f. Set coulter depth control.
(Do not skip this step!)

Tools Required

- Lift or overhead hoist with 6000-pound (2722 kg) capacity
- A tractor of sufficient size and horsepower with remote hydraulics. Refer to "**Specifications and Capacities**" in the Operator's Manual.

Note: If the tractor to be used with the drill is not available during setup, obtain a measurement of its hitch height.

- General hand tools
- Jack stands or blocks and safety chain

Note: You need about 1 gallon (3.8 liters) of hydraulic oil to refill the tractor hydraulic reservoir after initial bleeding and cycling of the hydraulic system.

Unloading Truck

See page 11 for hoisting tongue.

NOTICE

Hoist drill from above.

*Do not fork-lift from beneath drill.
There are no suitable lift points.*

*Do not hoist via lugs after tongue is installed.
Drill is not balanced at lugs with tongue installed.*

Refer to Figure 2

1. Secure lifting lines to the lugs above the lift cylinder eyebolts. Prior to tongue installation, these lugs permit nearly level lifting of the drill.
2. Lift drill from truck and spot at assembly point.
3. Use hoist or lift to remove tongue and accessories from truck.
4. When ready to assemble, remove small parts from main seed box.

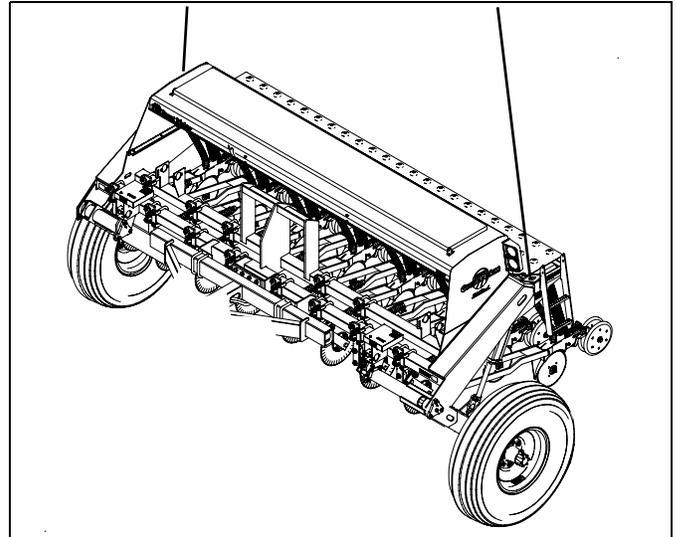


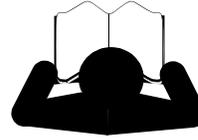
Figure 2
Hoisting Lines

21718

Assembly

Pre-Assembly Checklist

1. Read and understand “**Important Safety Information**” on page 1 before assembling.
2. Have at least two people on hand while assembling.
3. Make sure the assembly area is level and free of obstructions (preferably an open concrete area).
4. Have all major components accounted for.
5. Have all fasteners and pins shipped with drill.
6. Have a copy of the drill Parts Manual (313-855P) on hand. If unsure of proper placement or use of any part or fastener, refer to the Parts Manual.
7. Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
8. Check that all safety labels and reflectors are correctly located and legible. Replace if improperly located or damaged. Refer to **Safety Decals**, in the “**Important Safety Information**” section of the implement Operator’s Manual.
9. Inflate tires to recommended pressure as listed on the “**Tire Inflation Chart**” on page 23.
10. Tighten wheel bolts as specified on “**Torque Values Chart**” on page 23.
11. Check for proper slack on all chains.
12. Hitch height of intended field tractor available.



Prepare Tongue for Mounting

Refer to Figure 3

1. Remove the parking stand (1) from the stob on the top of the tongue (or, as shown, from the top of the rear of the folding tongue (2)).
2. Remove six sets of fasteners from the mounting plates on the mainframe:
 - (23) 803-027C NUT HEX 3/4-10 PLT
 - (28) 804-023C WASHER LOCK SPRING 3/4 PLT
 - (21) 802-212C HHCS 3/4-10X2 1/2 GR5
3. Remove eight sets of fasteners from the rear of the tongue:
 - (28) 804-023C WASHER LOCK SPRING 3/4 PLT
 - (23) 803-027C NUT HEX 3/4-10 PLT
 and four:
 - (32) 806-128C U-BOLT 3/4-10 X 6 1/32 X 5 5/8

If the tongue is the folding model, check that it is both assembled and securely unfolded. If the drill has the standard rigid tongue, continue at the “**Install Tongue**” topic on page 11.

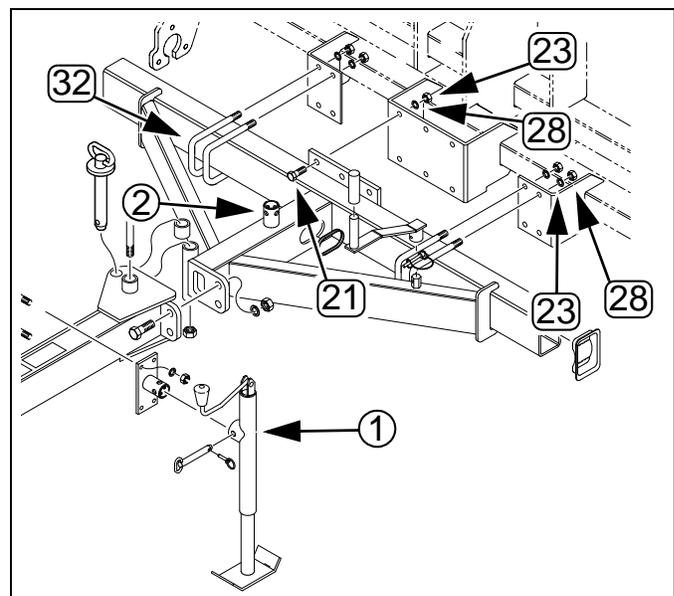


Figure 3
Parking Stand

21828

Prepare Folding Tongue

If tongue is already unfolded, continue at “Install Tongue” on page 11.

Refer to Figure 4

1. Locate two sets:
 - (22) 802-615C HHCS 1-8X2 3/4 GR. 5
 - (29) 804-027C WASHER LOCK SPRING 1 PLT
 - (24) 803-031C NUT HEX 1-8 PLT

These fasteners may need to be removed from a tongue weldment to allow the weldments to mate.
2. Support the forward end of the rear tongue weldment off the ground (3) by at least 6in (15cm). Use a hoist line or place a block under it.
3. Remove the locking pin (31) from the folding tongue. Swing the folding tongue forward, and secure with bolts (22), lock washers (29) and nuts (24).
4. Store locking pin (31) in lock tube (4) on rear tongue weldment (3).

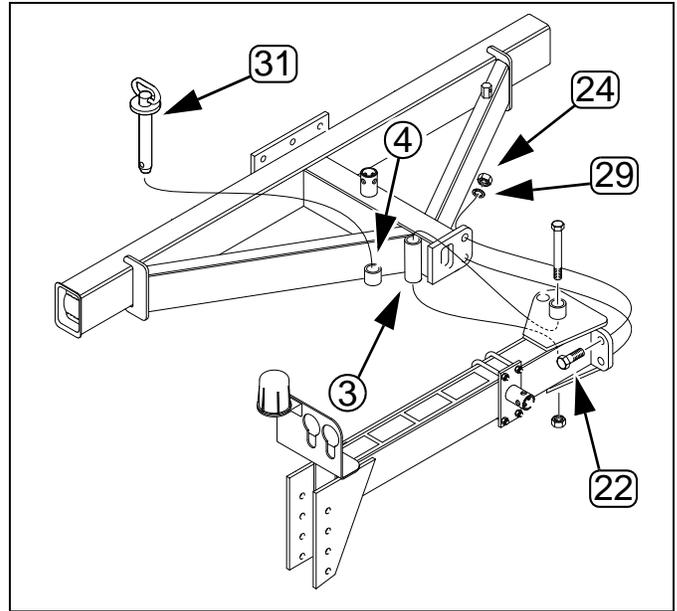


Figure 4
Unfolding Tongue

28119

Install Tongue

Tongue Hoist

Refer to Figure 5

1. Connect hoist lines at available hitch holes (2), and around rear tongue tube (3), behind brace tubes.



Crushing hazard. You may be severely injured by frames if they fall. Always support frame sections with jack stands or blocks before working under frames raised off ground.

2. Align the tongue and mainframe mounting plate holes. Insert a bolt (21) at the top center hole (4) and secure finger tight with lock washer (28) and nut (23).
3. Level tongue from side to side relative to mainframe, and add seven more bolts at the center mounting plates. Secure with bolts (21), finger tight.
4. Mount the parking jack (1) to the stob (5) on the side of the tongue. Secure it with the pin provided.
5. Crank the jack down just until the weight of the forward end of the tongue is supported by the jack. It is now safe to remove the hoist/lift and blocks.

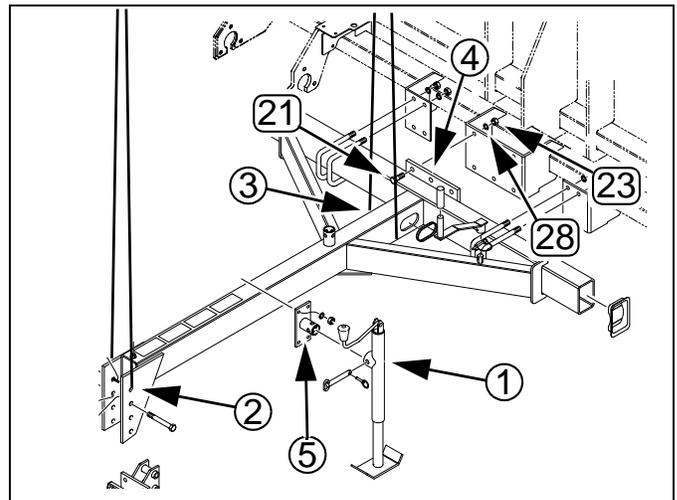


Figure 5
Position Tongue

21719

Secure Tongue

Refer to Figure 6

1. Insert all four U-bolts (32), and add lock washers (28) and nuts (23), finger tight.
2. Make final side-to-side leveling adjustments, and tighten all nuts (23) to torque specifications.

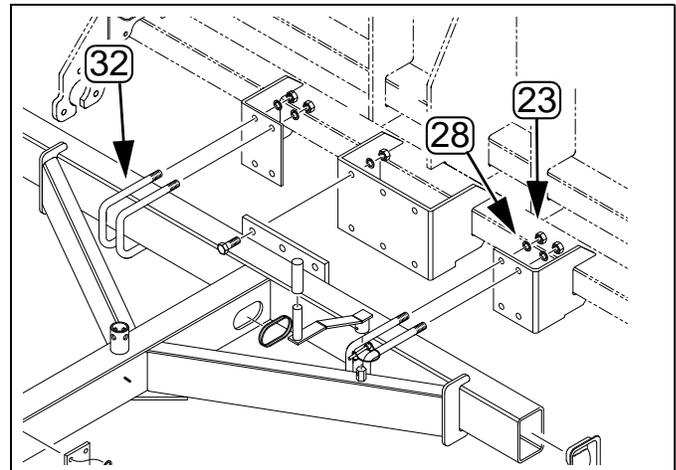


Figure 6
Secure Tongue

21719

Lamp Installation

The lights may be assembled on the drill, or may be shipped in the seed box or separately to prevent damage to the lighting system during transport and loading.

NOTICE

If the drill is delivered with the lights not assembled, the dealer **must** assemble the lights on the drill prior to selling the drill.

Refer to Figure 7 and Figure 8

1. At one end of the drill, install a spacer (1), lamp bracket (2), and handle (3) using two 1/2-13 x 1 inch bolts (4) and two flange lock nuts (5).

Note: Make sure the horizontal flange of the lamp bracket is toward the front of the drill.

2. Install an amber lamp (6) on outside of the bracket with two 1/4-20x3/4 inch self tapping screws (7).
3. Install a red lamp (8) on the inside of the bracket with two 1/4-20x3/4 inch self tapping screws (7).

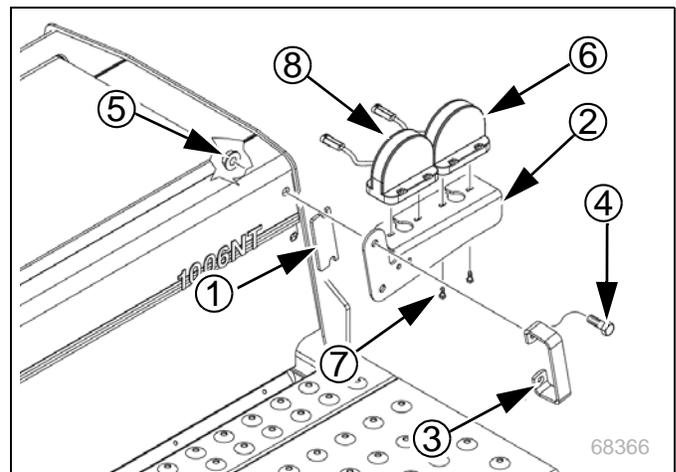


Figure 7
Lamp Installation

68366

NOTICE

Make sure the lamps are installed as instructed, with the amber lamp on the outside and the red lamp on the inside.

4. Install a hose clip (9) to the lamp bracket with a 3/8-16x3/4 bolt (10), lock washer (11), and nut (12).
5. Secure the wiring harnesses to the hose clip.
6. **For 1006NT only** - Place a red reflector (13) on the lamp bracket facing rearward.
7. Repeat the procedure for the other lamp set.

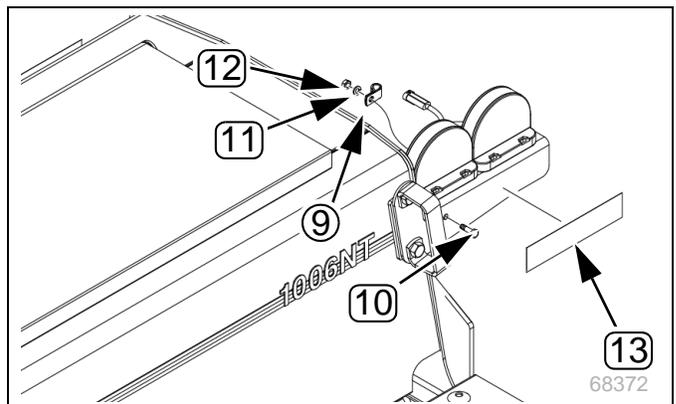


Figure 8
Reflector Installation

68372

Route Hoses and Harness

The hydraulic hoses are pre-installed on the drill and are tied to the hitch mounting plate.

Refer to Figure 9

1. Connect the rear lighting harness (1) to the red and amber lamps.
2. Fasten the module (2) of the middle lighting harness (3) to the tongue with 1/4-20x1 inch bolts (4) and nuts (5). Connect the middle lighting harness to the rear wiring harness.
3. Connect the front lighting harness (6) to the middle lighting harness. Use wire ties (7) to fasten the wiring harnesses to the drill.
4. Tape or tie the tractor connector (8) on the front lighting harness to the hose bundle at the quick-disconnect fittings.

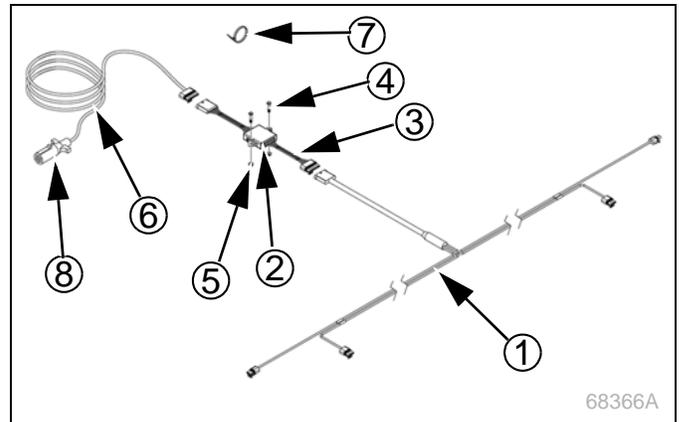


Figure 9
Connect Light Harnesses

Refer to Figure 10

5. Route the hose and harness bundle (9) under the rear cross-tube of the tongue, into the access hole (10), and out the front of the tongue tube near the hitch.
6. Un-tape/tie the lighting harness. Fasten the lighting connector and hydraulic quick disconnect fittings to the holder plate (11).

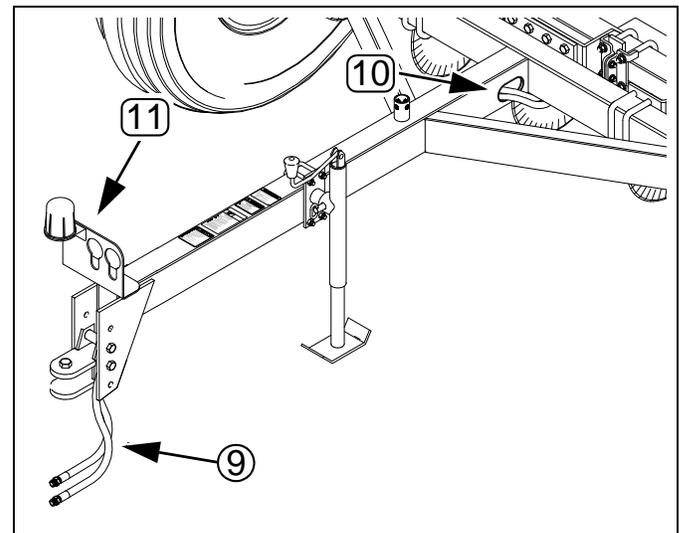


Figure 10
Route Hoses and Harness

Deferred Option Assembly

Some optional drill features are not factory-installed, or may have been ordered for field installation. Although they are “assembly” items, they may require a hitched tractor, and/or that drill hydraulics are already functioning (for drill lift/lower); steps not yet completed.

If any of the following items require installation, defer them until page 21 of “**Setup**”:

- Native Grass
- Agitator
- Fertilizer
- Seed Firmers
- Small Seeds
- Harrow

Setup

In addition to basic assembly, there are several items requiring adjustment or installation, in order to deliver a drill ready for planting.

Note: The final adjustment, coulter depth (page 22), is particularly important.

Adjust Hitch Height

Although the specified hitch option (clevis or pintle) is factory-installed, it may not be at the ideal height for the intended tractor.

The drill needs to be lowered (in field position) for the following measurements and any adjustments.

1. If that tractor is available, and has an adjustable or invertible drawbar, set the drawbar to the operator's preferred height. If the tractor is not available, obtain a measurement of the height:
 - clevis hitch: to the bottom surface of the drawbar
 - pintle hitch: to the top surface of the lower claw
2. Use the parking jack to adjust the tongue until it is level from front to back. If the work surface itself is level, use a carpenter's level on top of the tongue tube. When level, the top of the tube is approximately 26³/₄in (68cm) above ground at the hitch.

Refer to Figure 12 on page 15

3. Measure from ground to:
 - clevis hitch: to the top surface of lower lug
 - pintle hitch: to the bottom of ring
4. If the hitch height is already close to the drawbar height, no further adjustment is possible at the drill hitch. Continue at "**Hitching**" on page 17.

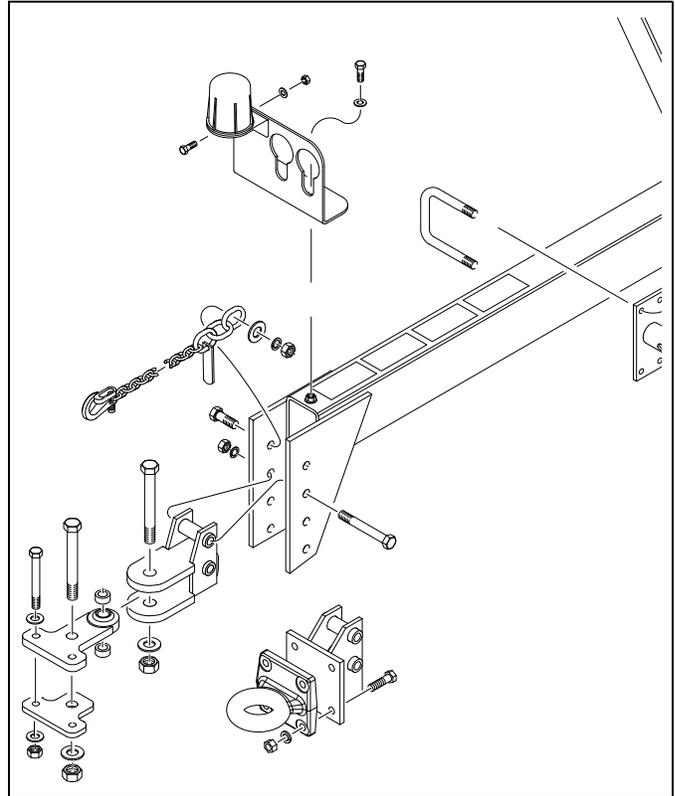


Figure 11
Hitch Details

21719

Hitch Heights

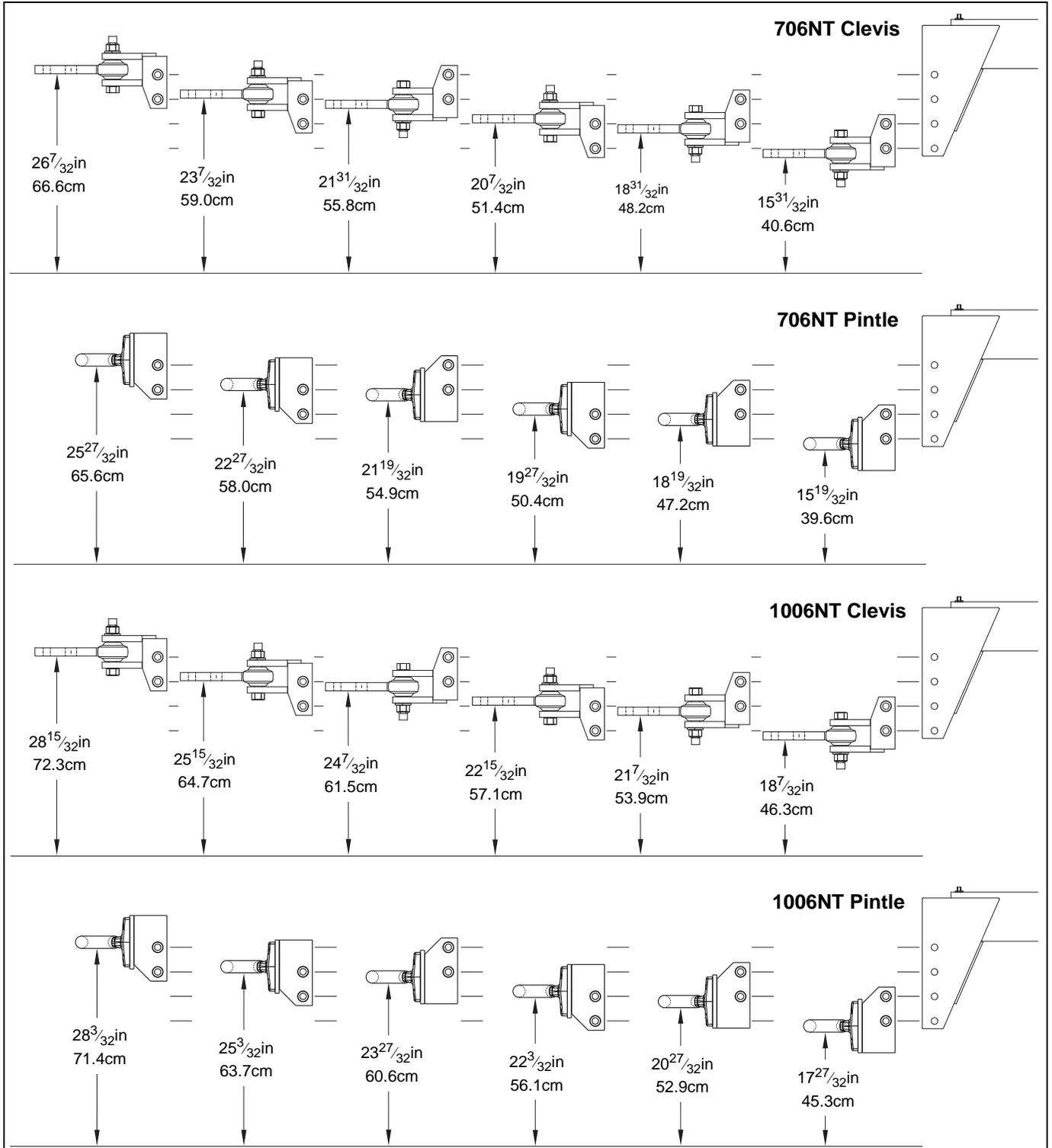


Figure 12
Clevis and Pintle Hitch Heights

28115

Adjusting Either Hitch

If the proposed hitch adjustment does not involve the hole used for the safety chain, skip step 2 and step 4.

Refer to Figure 12 (previous page)

1. Determine which tongue mounting holes and which hitch orientation provide the necessary height.
2. If chain is presently using either new hole pair, remove and save one each:
 - (21) 802-212C HHCS 3/4-10X2 1/2 GR5
 - (33) 890-182C SAFETY CHAIN 10000 LB
 - (15) 177-587D SAFETY CHAIN WASHER
 - (28) 804-023C WASHER LOCK SPRING 3/4 PLT
 - (23) 803-027C NUT HEX 3/4-10 PLT

Adjusting Clevis Ball Hitch

Refer to Figure 13 and Figure 14

1. If new position requires inverting hitch, remove:
 - (20) 802-205C HHCS 1-8X5 1/2 GR5
 - (30) 804-028C WASHER FLAT 1 USS PLT
 - (25) 803-038C NUT HEX 1-8 NYLON INSERT PLT

Insert bolt (20) from other side of hitch and secure with flat washer (30) and lock nut (25). Bolt must always be inserted from top in final position.

2. Remove:
 - (18) 802-070C HHCS 3/4-10X6 GR5
 - (28) 804-023C WASHER LOCK SPRING 3/4 PLT
 - (23) 803-027C NUT HEX 3/4-10 PLT

Adjust hitch to new position and re-secure with bolts (18), lock washers (28) and nuts (23).

3. If ball swivel mount bottom plate (16) is present, make sure it is under mount weldment (14), and the bolts are inserted from top. See page 17 for details.

Adjusting Pintle Hitch

Refer to Figure 14

Remove two sets:

- (18) 802-070C HHCS 3/4-10X6 GR5
- (28) 804-023C WASHER LOCK SPRING 3/4 PLT
- (23) 803-027C NUT HEX 3/4-10 PLT

Adjust pintle hitch (1) to new position and re-secure with bolts (18), lock washers (28) and nuts (23).

Reinstall Chain

Refer to Figure 13

Secure the chain at the highest available mounting hole. Insert the bolt (21) from the outside of the hitch.

Add the chain (33), then add the chain washer (15), lock washer (28) and nut (23).

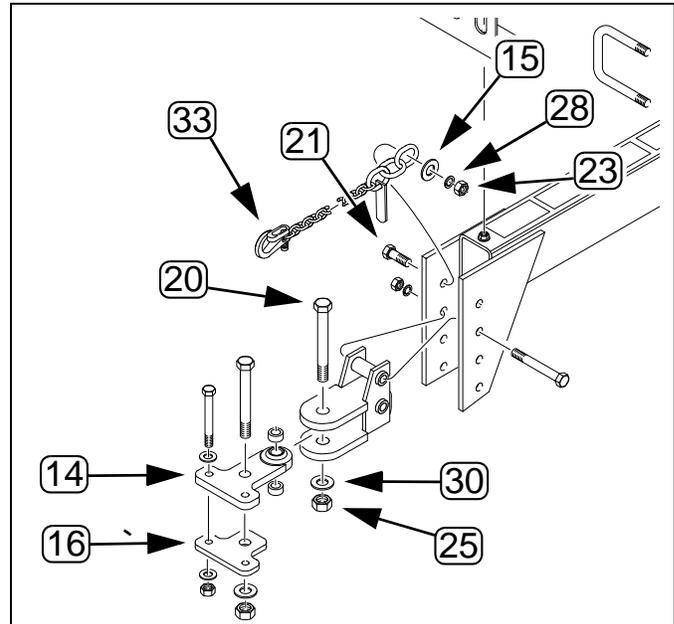


Figure 13
Clevis Hitch and Chain Detail

21719

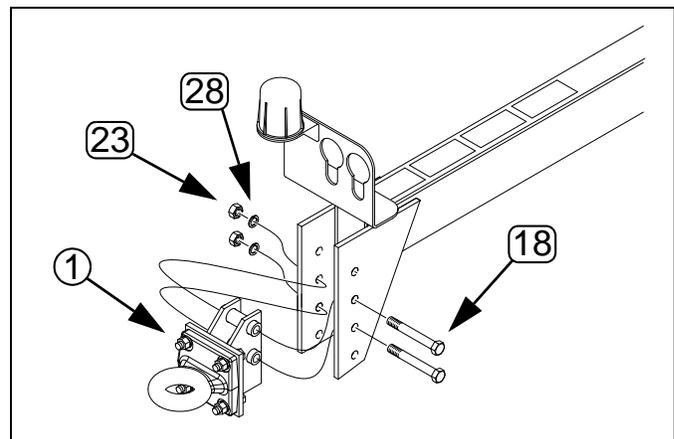


Figure 14
Pintle Hitch Detail

28120

Hitching

⚠ DANGER

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

Either Hitch

Back tractor close to hitch, and use parking jack to match heights between tractor hitch/drawbar and drill hitch.

Ball Hitch

Refer to Figure 15

- Remove hitch bottom plate:
(16) 177-589D BALL SWIVEL MOUNT BOTTOM PLATE
by removing:
two (26) 803-148C NUT HEX NYLOCK 5/8-11 PLT
four (27) 804-019C WASHER FLAT 5/8 USS PLT
two (17) 802-060C HHCS 5/8-11X4 GR5
- Remove hitch bolt:
(19) 802-098C HHCS 1-8X4 1/2 GR5
(30) 804-028C WASHER FLAT 1 USS PLT
(25) 803-038C NUT HEX 1-8 NYLON INSERT PLT
- Back tractor drawbar (1) under swivel top plate (14).
Position bottom plate (16) under drawbar, and
secure with bolts, washers and nuts.

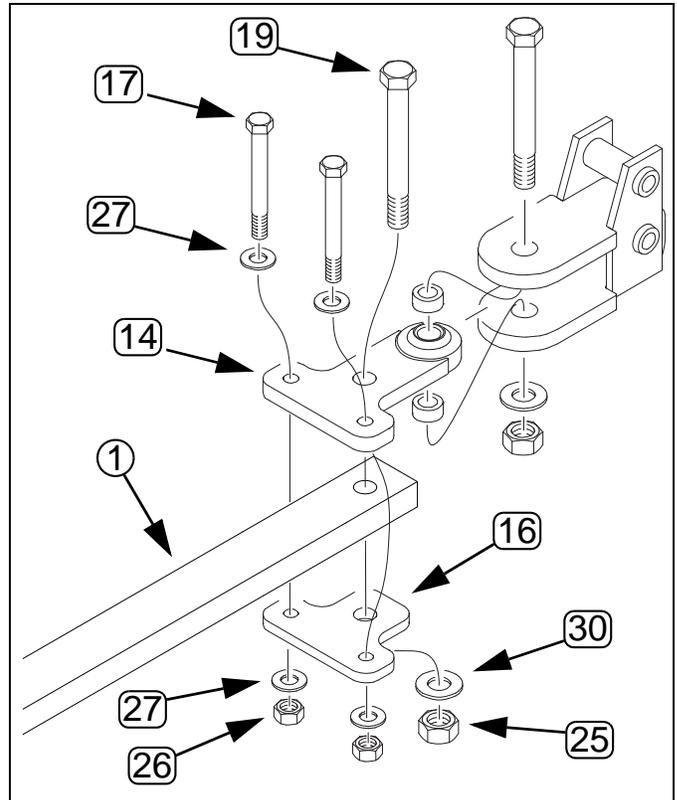


Figure 15
Ball Hitch

28117

Safety Chain

Connect the safety chain around a suitable anchor location on the tractor. Take up enough chain slack so that no part of the chain touches the ground.



Electrical Connection

Refer to Figure 16

Make sure tractor is shut down with accessory power off before making connections.

Mate the lighting receptacle to the outlet on the tractor.

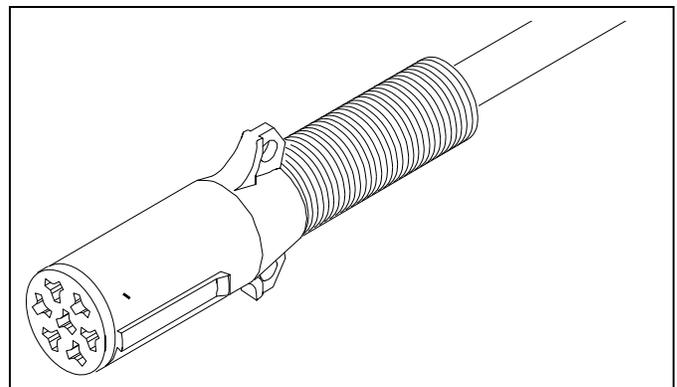


Figure 16
Lighting Connector

26467

Hydraulic Connections



Only trained personnel should work on system hydraulics!

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



Refer to Figure 17

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

1. Connect the hydraulic hoses to the tractor remotes.

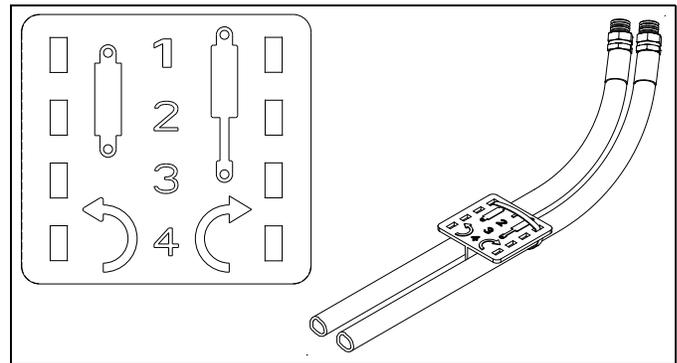


Figure 17
Plastic Hose Label

817-348c
17641

Hydraulic Charge and Bleed

Refer to Figure 18

The drill lifting system is equipped with rephasing type hydraulic cylinders that require a special procedure for bleeding air from the hydraulic circuits. Read and follow this procedure carefully. Rephasing type cylinders will not function properly with air in hydraulic circuit.

1. Check hydraulic fluid in tractor reservoir and fill reservoir to proper level. Drill-system capacity is about one gallon (3.8 liters). Add fluid to system as needed. A low reservoir level may draw air back into the system, causing jerky or uneven cylinder movements.
2. With drill attached to tractor, jack drill up and support frame at ends near gauge wheels.
3. With drill raised and supported, un-pin cylinders from gauge wheel arms and frame. Turn cylinders "rod end up". Wire or otherwise safely support rod ends higher than base ends.

Note: In order to prevent trapped air pockets, rod end must be higher than any other part of cylinder during bleeding operation.

4. With tractor engine idling, engage tractor hydraulics to extend cylinder rods. When cylinder rods are completely extended, hold remote lever on for one minute.
5. Retract cylinders. Extend cylinders again and hold remote lever on for one more minute. Repeat this step two more times to completely charge and bleed system.
6. Re-pin cylinders to drill frame and gauge wheel arm with transport cylinder locks in place. If any air still is trapped in either cylinder, the cylinder will have a spongy, erratic movement and drill will not raise evenly. If necessary, repeat bleeding process.
7. Refill tractor hydraulic fluid reservoir to its proper level.

Note: After the drill is raised, a slight settling occurs due to the action of the rephasing cylinders.

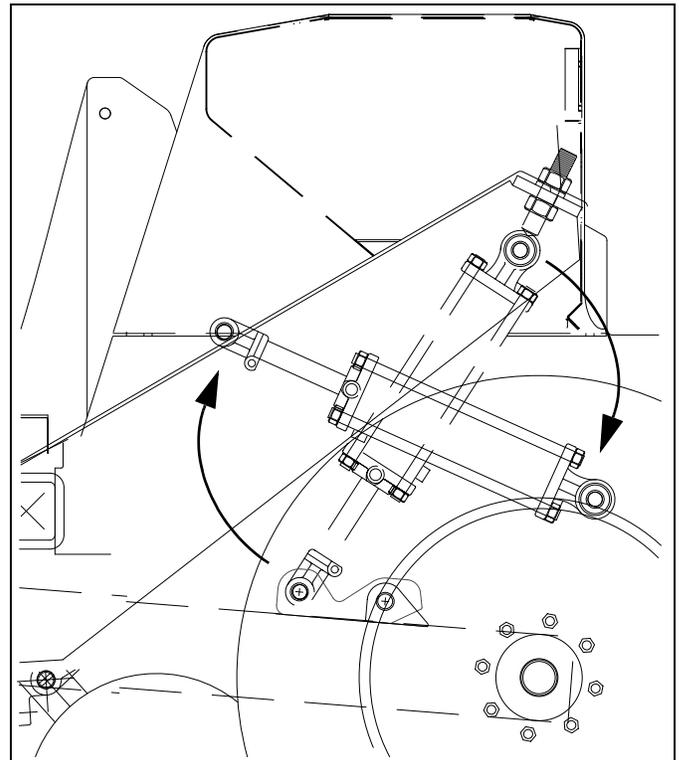


Figure 18
Elevate Cylinder

28118

Leveling Drill

Refer to Figure 19

1. Loosen jam nuts (1) and adjust cylinder eyebolt nuts (2). The eyebolts (3) are factory pre-set to:
 - (4) 4 $\frac{3}{4}$ in (12.1cm) of exposed thread above mounting plate.
2. Raise drill with hydraulics until openers and coulters are 1 to 2 inches (2.5-5cm) off ground.
3. Measure height (5) of coulters from ground on both ends of drill.
4. Adjust eyebolt to level drill from end to end.
5. Tighten jam nuts (1) on eyebolts (3) when drill is level.

Note: Do not exceed 5in (12.7cm) of thread above mounting plate. This could result in hydraulic cylinder damage.

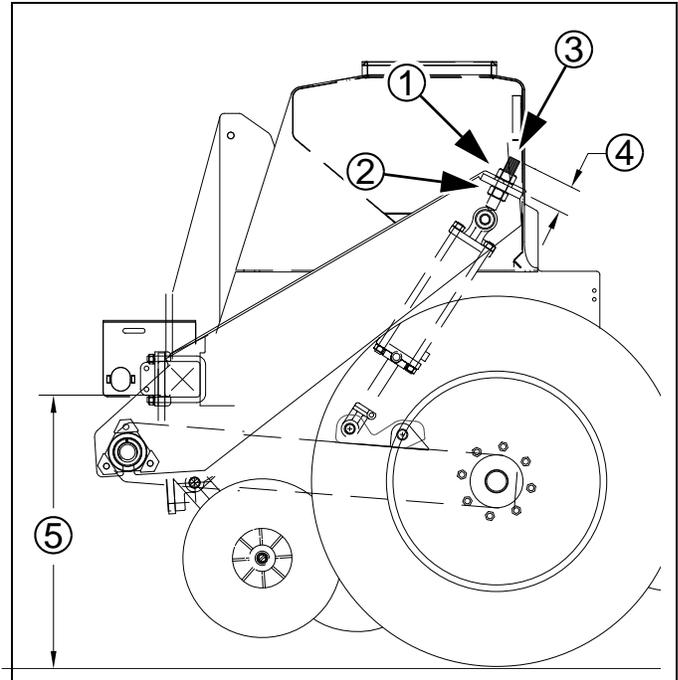


Figure 19
Leveling Drill

21704

Install Accessories and Options

Acrometer Installation

Refer to Figure 20

The acrometer (1) is supplied from the factory in a separate carton, to minimize risk of shipping damage.

Note: The electronic acrometer display is normally blank. To confirm that it is working properly prior to installation, rotate the housing several times. When shaft rotation stops, the LCD display activates after 30 to 60 seconds, and remains visible for 30 to 45 minutes.

Screw the threaded end of the meter into the $\frac{1}{2}$ -20 tapped hole (2) in the left end of the gearbox input shaft.

Tighten the threaded end only enough to prevent it from working loose from normal vibration. In use, there is no torque or tension that might tend to unscrew it.

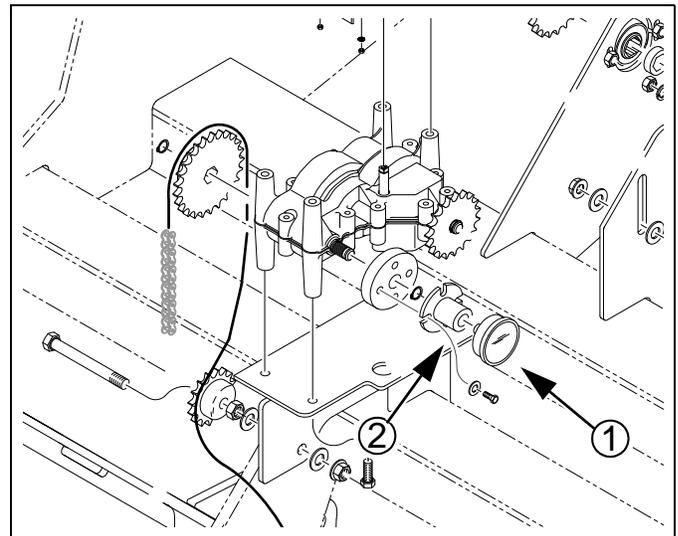


Figure 20
Acrometer Installation

21788

Scraper Installation

Optional carbide disk scrapers are not factory installed.

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

Refer to Figure 21

3. If Seed-Lok is present, or also being mounted, do not use the hex nut (1) supplied with the scraper, and place the lock washer (2) under the bolt (3) head.
4. Place the flat washer (4) on the bolt (3).
5. Insert the bolt through the scraper blades (5), the spacer (6), and the mount (7). Secure with lock washer (2) and hex nut (1) (If Seed-Lok is present, screw bolt into thread hole in Seed-Lok).
6. If the blade spring (8) was not pre-assembled, connect it between the upper holes of the blades (5).
7. Tighten bolt (3).
8. Re-mount the removed disk blade.

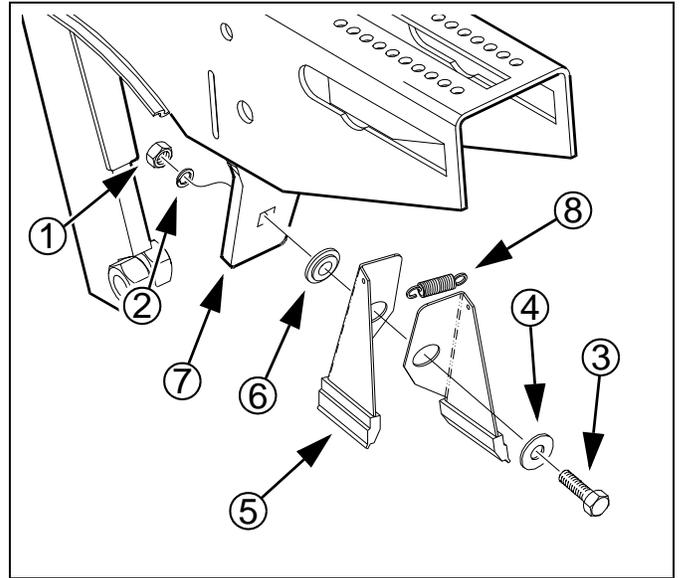


Figure 21
Scraper Installation

19000

Install Other Options

Prior to Setup, install any other optional features that were not factory-installed, such as Native Grass, Fertilizer, Small Seeds, Agitator, Seed Firmers and Harrow. These options include their own Installation Instructions.

Coulter Depth Control

NOTICE

Coulter depth control is not factory pre-set for planting. Adjustment is required prior to first field use of drill, or planting will be too deep.

The drill is shipped with the valve and bracket assembly in the highest position, to prevent shipping damage.

Refer to Figure 22

The drill lift cylinders control coulter depth. A depth valve (8) regulates the retracted length of the cylinders. The valve is mounted on a bracket that adjusts vertically in a 5in (12.7cm) slot.

- Coarse adjustment of the valve operating point is provided by a depth stop engagement arm (6), mounted by U-bolts on the rockshaft (7).
- Fine adjustment of the valve operating point is provided by a knob (9) controlling the vertical position of the valve bracket. The valve needs to be slightly above center in the slot to provide a useful adjustment range.

If planting depth is known, and suitable conditions are available, perform this adjustment in the field. Otherwise, to roughly adjust for a presumed 2in (5cm) coulter depth:

1. Fully raise drill, to provide freedom of adjustment.
2. Turn adjustment knob counter-clockwise ("SHALLOWER") to place the valve bracket at the upper $\frac{1}{3}$ of travel.
3. Lower drill until coulters just touch the ground.
4. Loosen the nuts on the arm U-bolts, and adjust the arm ⑥ until it just touches the valve ⑧ actuator.
5. Raise drill. Turn knob clockwise ("DEEPER") a few turns.
6. Lower drill and confirm that valve is stopping downward movement at or above ground.
7. Adjust knob, then raise and lower drill a few times to recheck depth, until movement stops with coulters at ground level.
8. Turn knob to coulter depth. Each rotation lowers the coulters approximately $\frac{1}{4}$ in (6mm). This is 8 turns clockwise for 2in (5cm) depth.

Note: Changing depth of coulters affects planting depth of openers. In field conditions, adjust press wheels to compensate.

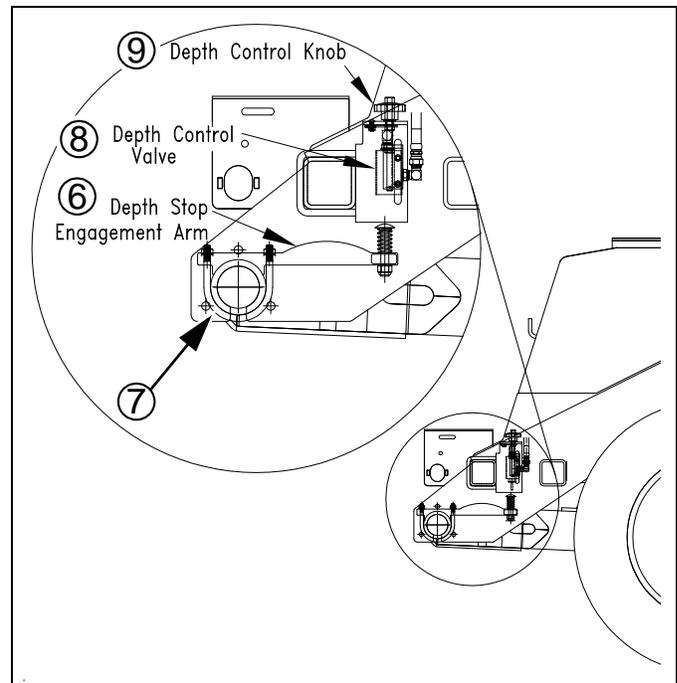
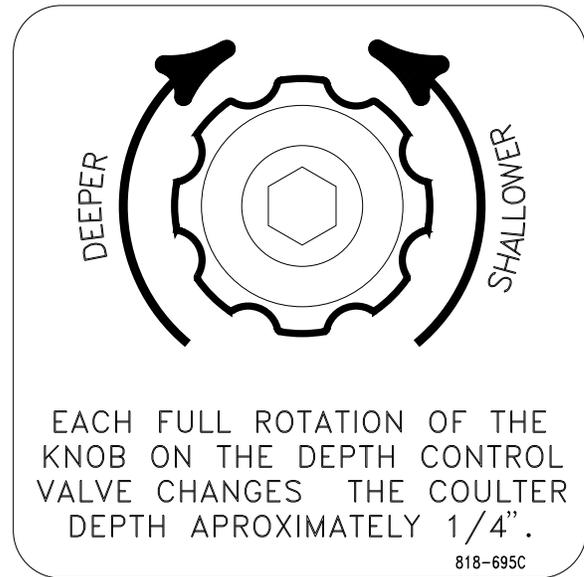


Figure 22
Coulter Depth Control

21708

Appendix

Torque Values Chart

Bolt Size in-tpi ^a	Bolt Head Identification						Bolt Size mm x pitch ^c	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
	N-m ^b	ft-lb ^d	N-m	ft-lb	N-m	ft-lb		N-m	ft-lb	N-m	ft-lb	N-m	ft-lb
1/4-20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4-28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16-18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16-24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8-16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8-24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16-14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16-20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2-13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2-20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16-12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16-18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8-11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8-18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4-10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4-16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8-9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8-14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1-8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1-12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1 1/8-7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8-12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4-7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4-12	750	555	1680	1240	2730	2010							
1 3/8-6	890	655	1990	1470	3230	2380							
1 3/8-12	1010	745	2270	1670	3680	2710							
1 1/2-6	1180	870	2640	1950	4290	3160							
1 1/2-12	1330	980	2970	2190	4820	3560							

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

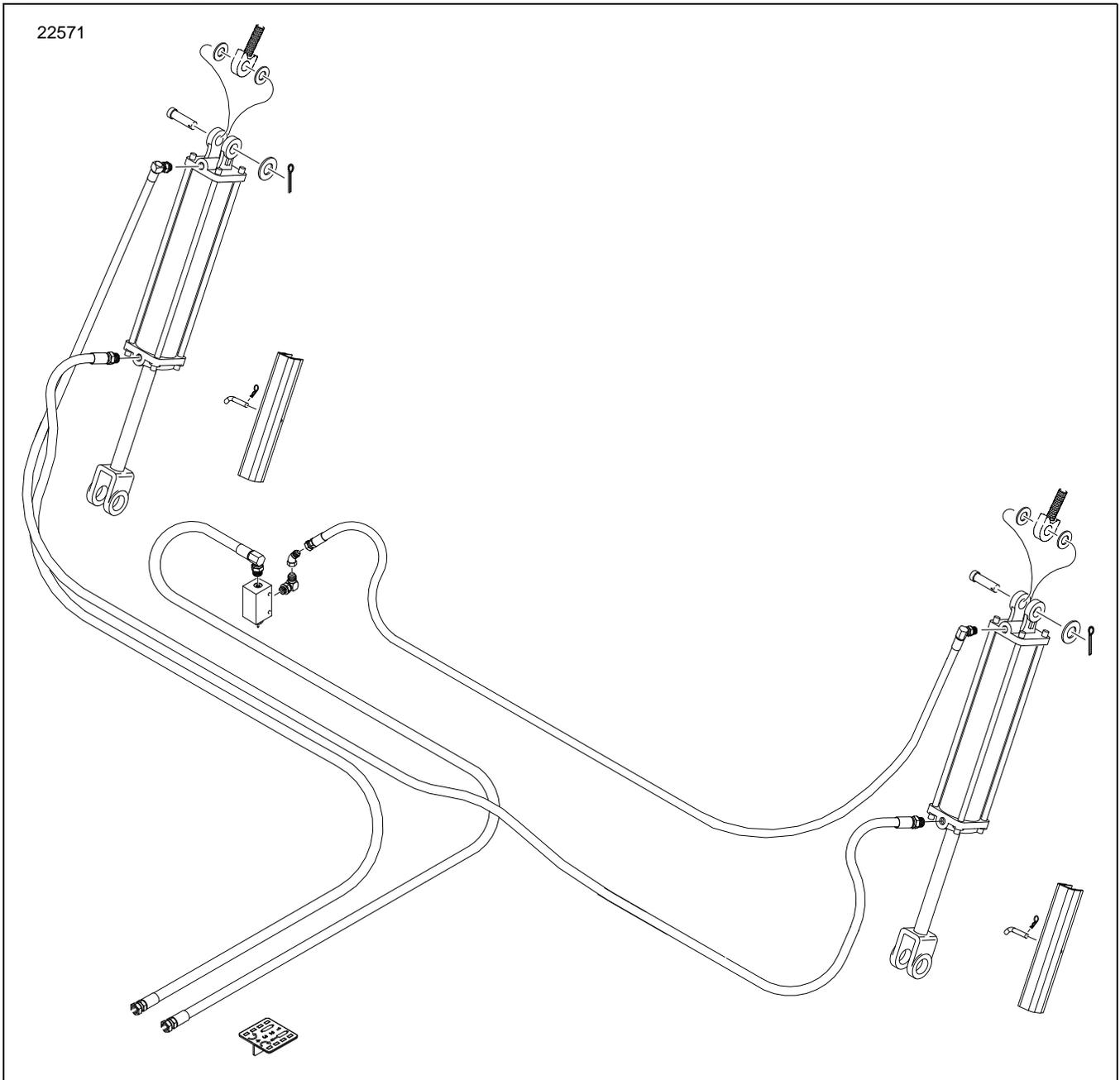
Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

25199

Tire Inflation Chart

Tire Size	Inflation
9.0 x 24 8-Ply Rib Implement	40 psi 276 kPa

Hydraulic Diagram



[Table of Contents](#)



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