



Alfalfa Seeder

Medium Capacity Sure Stand

Operator's Manual - Models 108/110/112



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Chapter 1

Safety Information

Introduction

The implement described in this manual has been designed with care and built by skilled workers using quality materials and processes. Proper assembly, maintenance and safe operation will allow this machine to provide you with satisfactory use for seasons to come.



DANGER

Read this entire manual before attempting to assemble, adjust or operate this machine. Failure to comply with this warning can result in personal injury or death, damage to the machine or its components and inferior operation.

Description of Unit

The Brillion SS1 series Seeder combines the features of our popular and reliable Sure Stand Seeder with additional box capacity and 4-1/4" meter spacing.

Using this Manual

This manual will familiarize you with safety, assembly, operation, adjustment, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

- The information in this manual is current at time of printing. Some parts may change to assure top performance.
- Location reference: Right and Left designations in this manual are determined by facing the direction the machine will travel during field operation, unless otherwise stated.

Owner Assistance

If customer service or repairs are needed, contact your Brillion dealer. They have trained personnel, parts and service equipment specially designed for Brillion products. Your machine's parts should only be replaced with Brillion parts. If items covered in this manual are not understood, contact your local Brillion Dealer.

Warranty Registration

Brillion Farm Equipment, by Landoll, shall have no warranty obligation unless each product is registered, within 10 days of retail purchase, using the Landoll Corporation Ag Products on-line registration process. Please refer to the Ag Products Policy and Procedures Manual, accessible at www.landoll.com for step by step instructions regarding product registration.

Enter your product information below for quick reference.

MODEL NUMBER

SERIAL NUMBER

DATE OF PURCHASE

Refer to the ID plate as shown in **Figure 1-1**. The ID plate is located on the right front of the machine.

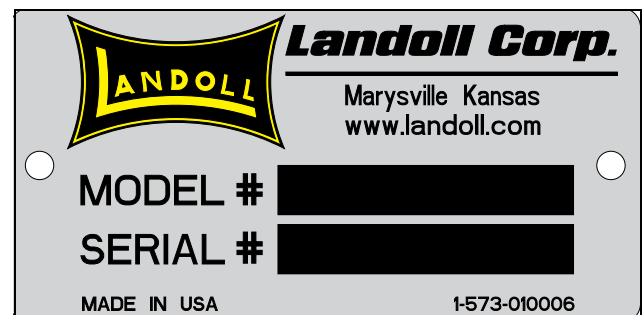


Figure 1-1: ID Plate

SAFETY INFORMATION

Federal law requires that you explain the safety and operating instructions furnished with this machine to all operators before they are allowed to operate the machine. These instructions must be repeated to the operators at the beginning of each season. Be sure to observe and follow the instructions for the safety of anyone operating or near the machine.

NOTE

Investigation has shown that nearly 1/3 of all farm accidents are caused by careless use of machinery. Insist that all people working with you or for you abide by all safety instructions.

Understanding Safety Statements

You will find various types of safety information on the following pages and on the machine decals (signs) attached to the implement. This section explains their meaning.

NOTICE

Special notice - read and thoroughly understand.



CAUTION

Proceed with caution. Failure to heed caution may cause injury to person or damage product.



WARNING

Proceed with caution. Failure to heed warning will cause injury to person or damage product.



DANGER

Proceed with extreme caution. Failure to heed notice will cause injury or death to person and/or damage product.

NOTE

You should read and understand the information contained in this manual and on the machine decals before you attempt to operate or maintain this equipment.

Examine safety decals and be sure you have the correct safety decals for the machine. See "Safety Signs" on page 1-5 for decal locations.

Order replacement decals through your Brillion dealer.

Keep these signs clean so they can be observed readily. It is important to keep these decals cleaned more frequently than the machine. Wash with soap and water or a cleaning solution as required.

Replace decals that become damaged or lost. Also, be sure that any new machine components installed during repair include decals which are assigned to them by the manufacturer.

When applying decals to the machine, be sure to clean the surface to remove any dirt or residue. Where possible, sign placement should protect the sign from abrasion, damage, or obstruction from mud, dirt, oil etc.

Keep Riders Off of Machinery



DANGER

- Do not allow anyone to ride on tractor or machine. Riders could be struck by foreign objects or thrown from the machine.
- Never allow children to operate equipment.
- Keep bystanders away from machine during operation.

Transporting Safety

IMPORTANT

It is the responsibility of the owner/operator to comply with all state and local laws.

When transporting the machine on a road or highway, use adequate warning symbols, reflectors, lights and slow moving vehicle sign as required. Slow moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.

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

Carry reflectors or flags to mark tractor and implement in case of breakdown on the road.

Do not transport at speeds over 20 MPH under good conditions. Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes

Avoid sudden stops or turns because the weight of the machine may cause the operator to lose control of the tractor. Use a tractor heavier than the machine.

Use caution when towing behind articulated steering tractors; fast or sharp turns may cause the machine to shift sideways.

Keep clear of overhead power lines and other obstructions when transporting. Know transport height and width of your machine. Refer to transport dimensions on **page 5-1**.

Attaching, Detaching and Storage

- Do not stand between the tractor and implement when attaching or detaching implement unless both are not moving.
- Before applying pressure to the hydraulic system, be sure all connections are tight and that hydraulic lines and hoses are not damaged.
- Lower machine to ground when not in use so that the shanks are taking the load.
- Block machine so it will not roll when unhitched from the tractor.
- Relieve pressure in hydraulic lines before uncoupling hydraulic hoses from tractor.

NOTE

On most tractors relieving hydraulic pressure can be accomplished by operating valves after the engine is stopped.

Maintenance Safety

Block the machine so it will not roll when working on or under it to prevent injury in case of hydraulic failure or inadvertent lowering by another person.

Do not make adjustments or lubricate machine while it is in motion.

Make sure all moving parts have stopped and all system pressure is relieved.

Understand the procedure before doing the work. Use proper tools and equipment. Refer to “General Torque Specifications” on page 4-1 for additional information.

High Pressure Fluid Safety

Escaping fluid under pressure can be nearly invisible and have enough force to penetrate the skin causing serious injury. Use a piece of cardboard, rather than hands, to search for suspected leaks.

Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.

Avoid the hazard by relieving pressure before disconnecting hydraulic lines.

NOTE

On most tractors relieving hydraulic pressure can be accomplished by operating valves after the engine is stopped. Also, the machine should be lowered to ground so that the shanks are taking the load.

Wear protective gloves and safety glasses or goggles when working with hydraulic systems.

Protective Equipment

- Wear protective clothing & equipment.
- Wear clothing & 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.

Chemical Safety

Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil & property.

Read chemical manufacture’s instructions and store or dispose of unused chemicals as specified. Handle chemicals with care & avoid inhaling smoke from any type of chemical fire.

Store or dispose of unused chemicals as specified by the chemical manufacturer.

Prepare for Emergencies

- Keep a First Aid Kit and Fire Extinguisher handy
- Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.

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 to allow you to stand to one side, not in front of or over the tire assembly. Use a safety cage if available.

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

Use a safety chain to help control drawn machinery should it separate from the tractor drawbar.

SAFETY INFORMATION

Use a chain with a strength rating equal to or greater than the gross weight of towed machinery, which is 10,100 pounds minimum in accordance with ASAE S338.2 specifications. If two or more machines are pulled in tandem, a larger chain may be required. Chain capacity must be greater than the TOTAL weight of all towed implements.

A second chain should be used between each implement.

Attach the chain to the tractor drawbar support or specified anchor location. Allow only enough slack in the chain to permit turning. The distance from hitch pin to attachment point or intermediate support point should not exceed 9 inches. **See Figure 1-2.**

Replace chain if any links or end fittings are broken, stretched or damaged.

Do not use a safety chain for towing.

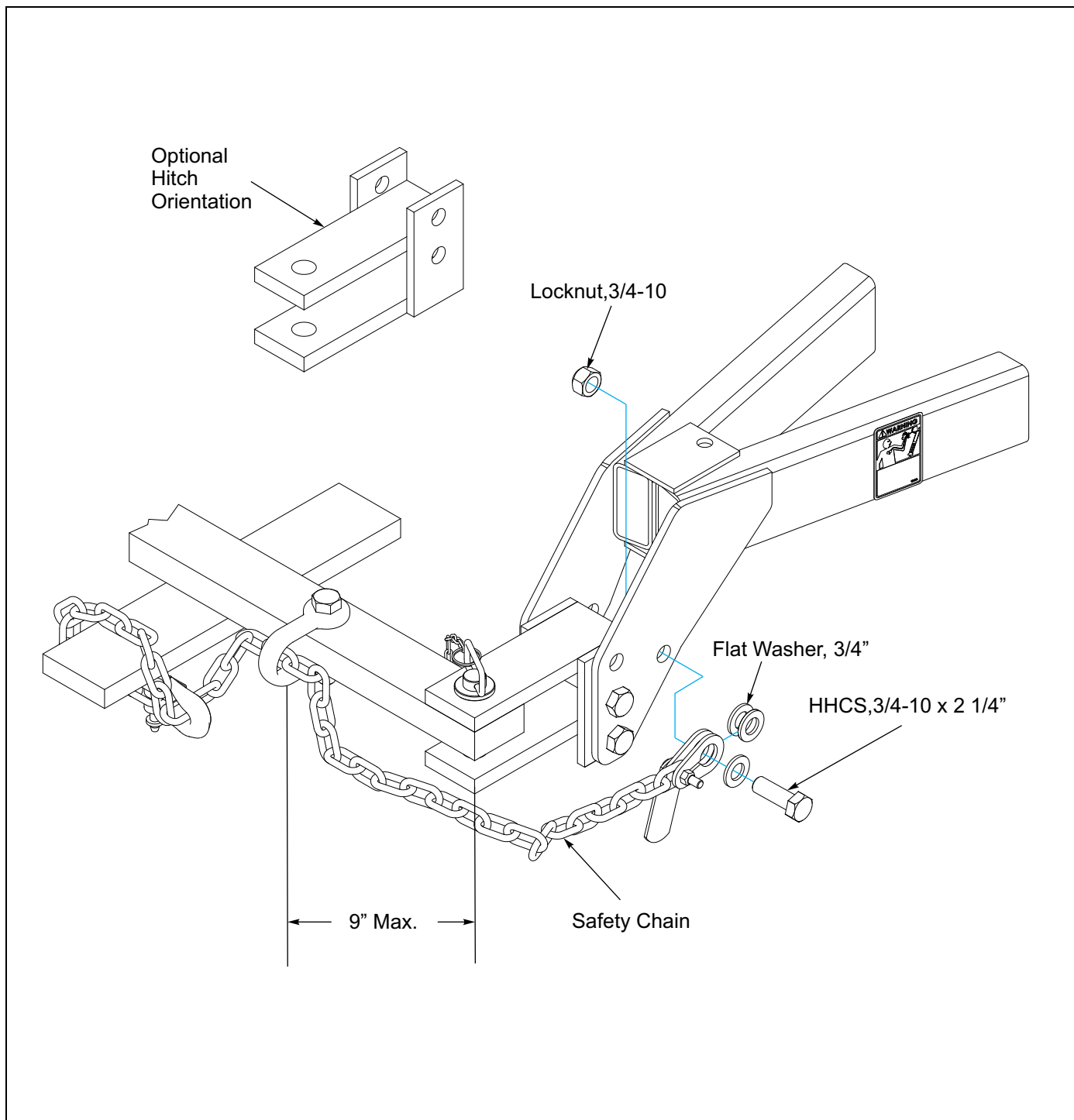


Figure 1-2: Safety Chain

Safety Signs

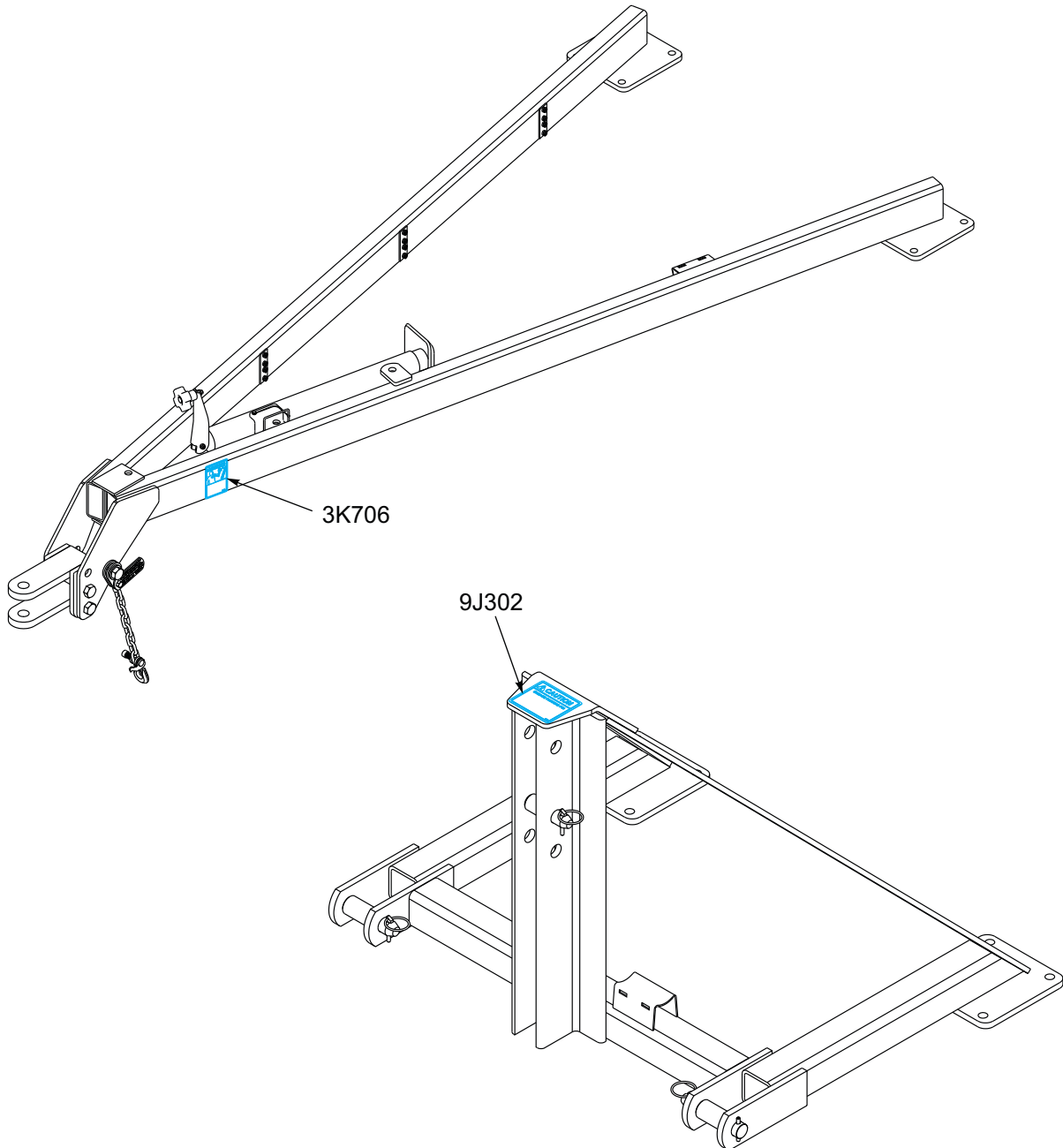


Figure 1-3: Hitch Decals

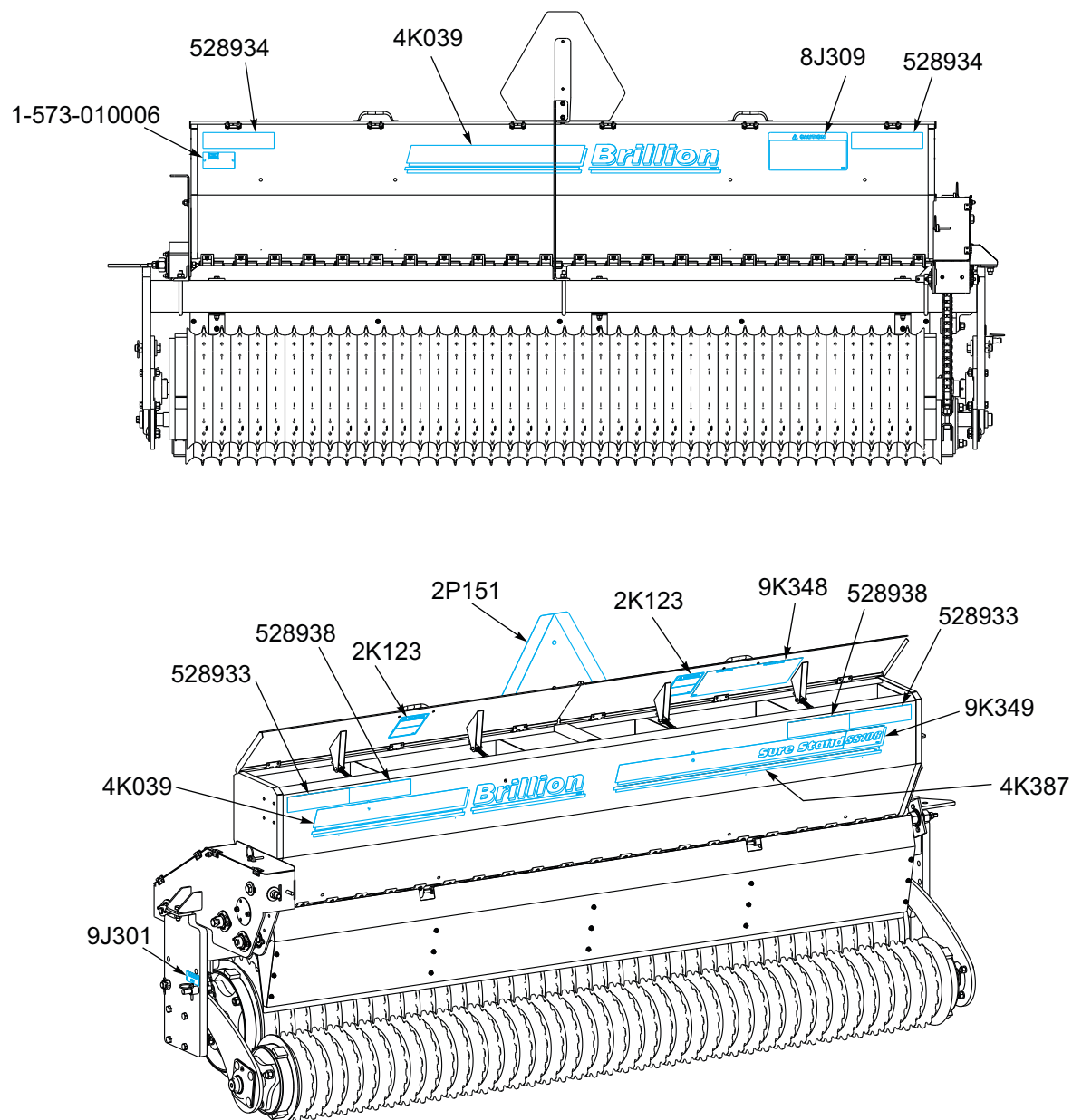


Figure 1-4: 8 Ft Models

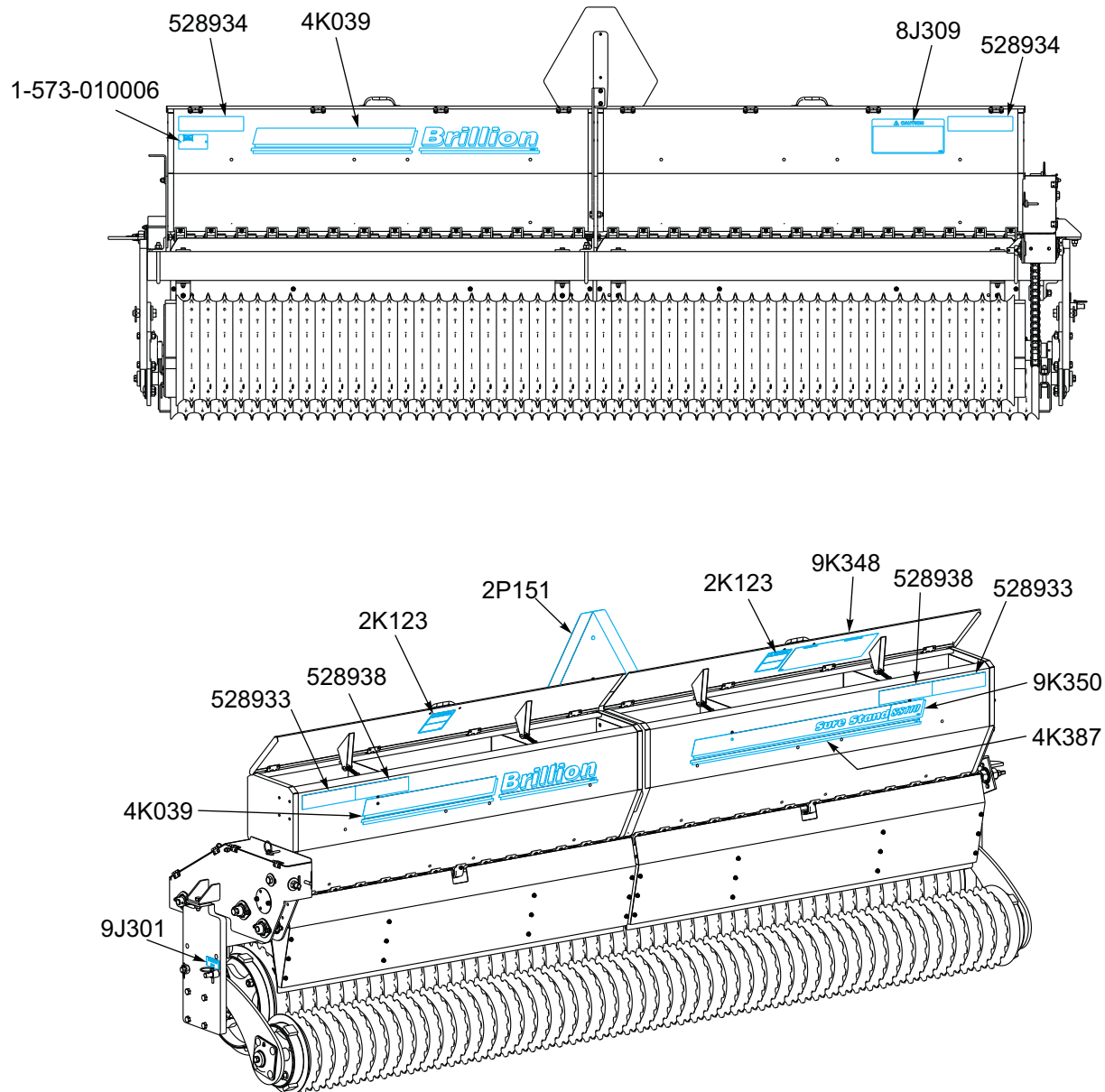


Figure 1-5: 10 Ft Models

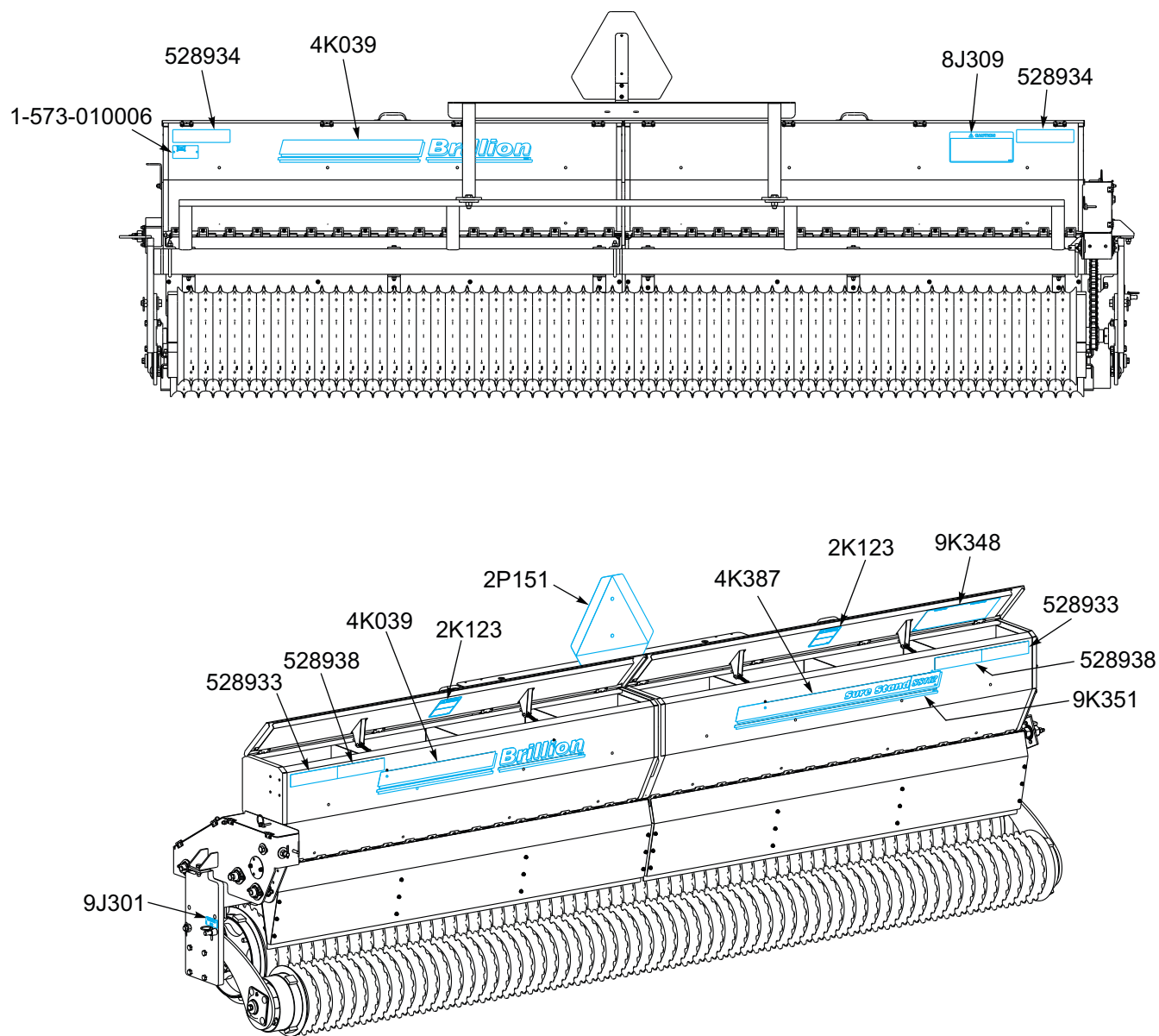


Figure 1-6: 12 Ft Models



528933



528934



528938



9J302



4K039



9J301



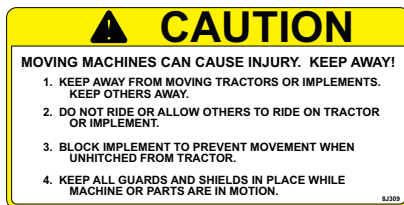
9K349



9K350



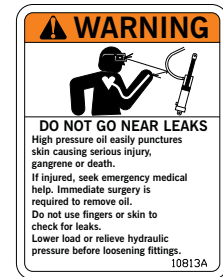
9K351



8J309



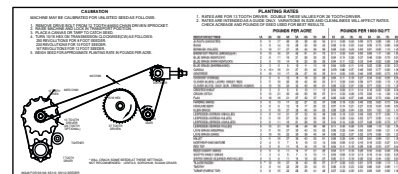
2P151



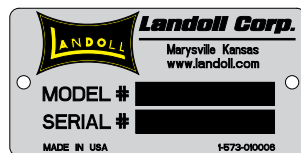
3K706



4K387



9K348



1-573-010006



2K123

Figure 1-7: Decals

Table provided for general use.

[illegible]

Chapter 2

Assembly Instructions



CAUTION

Do Not Work On Or Under This Machine Unless Securely Blocked And Supported By A Hoist Or Tractor Or By Other Sufficient Means!

NOTE

Your exact seeder model may vary slightly from the illustration. (Additional parts identification and location can be obtained from reviewing parts catalog 9K712.)

IMPORTANT

If a pre-assembled component or fastener is temporarily removed, ensure it is correctly re-installed per these instructions.

- Check that all working parts move freely, bolts are tight and cotter pins are spread.

- Park the seeder in a work area that has a level surface and make sure it is blocked securely so that it cannot roll.

NOTE

“Left” and “Right” refer to directions seen as if standing behind the machine and facing in the direction of forward travel.

Pick Up Seeder Assembly

When shipped, seeder comes assembled except for lights and 3 pt. Hitch.

1. Support seeder assembly with a hoist or by similar means capable of supporting its weight without tipping.
2. Position 3 point hitch assembly on center of frame and fasten with four 5/8" U-bolts, Lockwashers and Nuts from bag in seedbox. **See Figure 2-1.**

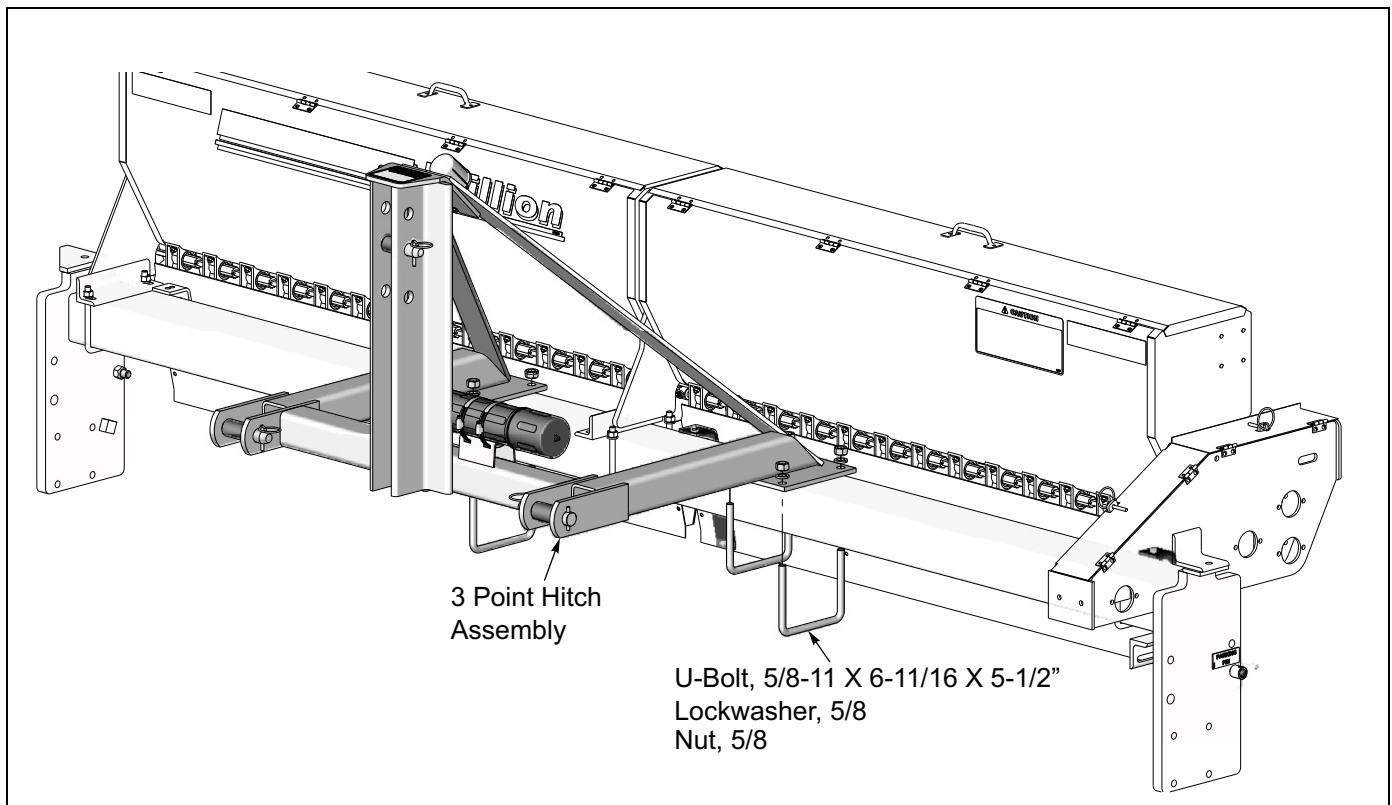


Figure 2-1: Attach 3 Pt. Hitch

ASSEMBLY INSTRUCTIONS

3. Remove 5/8" shipping bolt from right side of frame which locks rear roller down. Bolt is located in a position similar to the parking pin.
4. Install the LED Warning Lamps and Harnesses. See **Figures 2-7, 2-8 and 2-10.**



CAUTION

Do not disengage pin unless seeder is fully attached to a tractor. Seeder may be rear-heavy and tip backward on frame

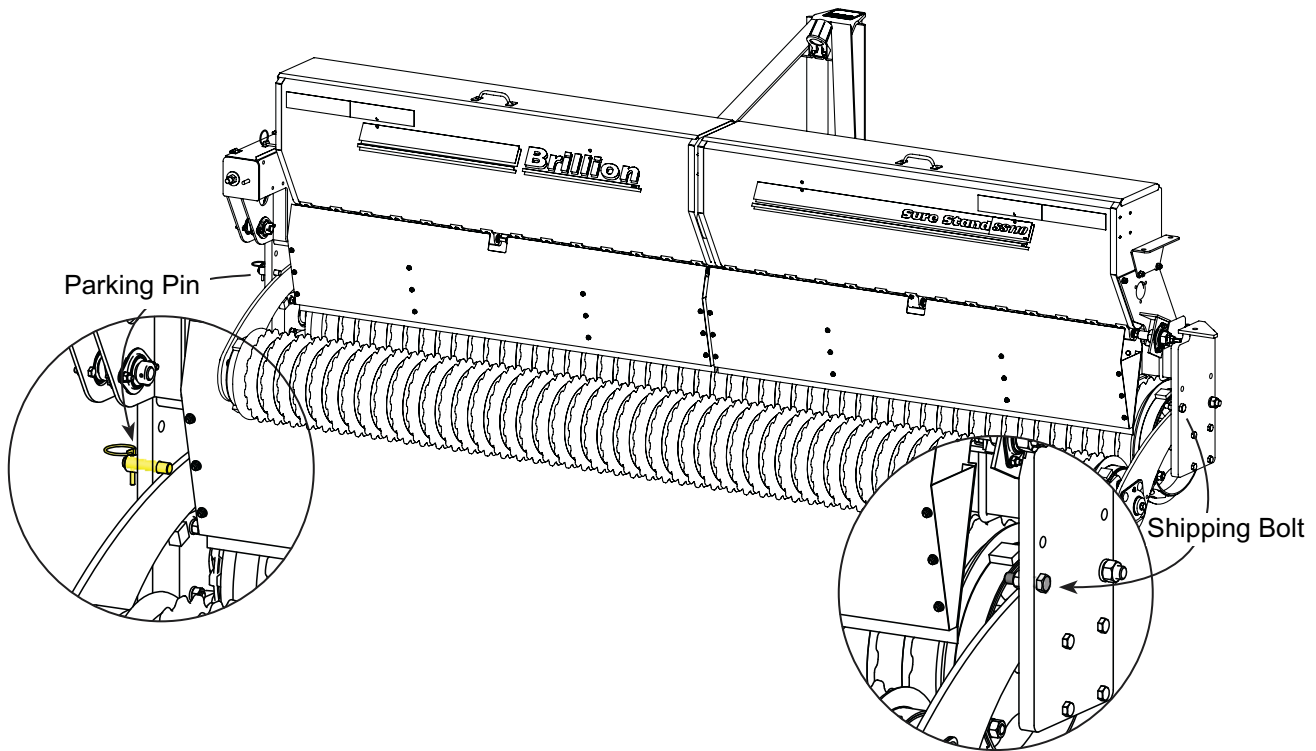


Figure 2-2: Shipping Bolt and Parking Pin

Pull Type Seeder Assembly

Drawbar Assembly

When shipped, seeder comes assembled except for lights, wheels, and drawbar.

NOTE

Your exact seeder model may vary slightly from the illustration. (Additional parts identification and location can be obtained from reviewing parts catalog 9K712.)

IMPORTANT

If a pre-assembled component or fastener is temporarily removed, ensure it is correctly re-installed per these instructions.

- Check that all working parts move freely, bolts are tight and cotter pins are spread.

- Park the seeder in a work area that has a level surface and make sure it is blocked securely so that it cannot roll.

NOTE

“Left” and “Right” refer to directions seen as if standing behind the machine and facing in the direction of forward travel.

1. Loosen the two rolled up hydraulic hoses from the front frame shipping position. Ensure the hoses are not interfering with where the drawbar is to be attached.
2. Position the drawbar on center of frame and secure with four 5/8-11 x 6-11/16" x 5-1/2" U-bolts, Lockwashers, and Nuts from bag in seedbox. **See Figure 2-3.**
3. Attach the Hose Support to the Drawbar with 5/8-11 x 1-1/2" Screws, Lockwashers and Nuts.

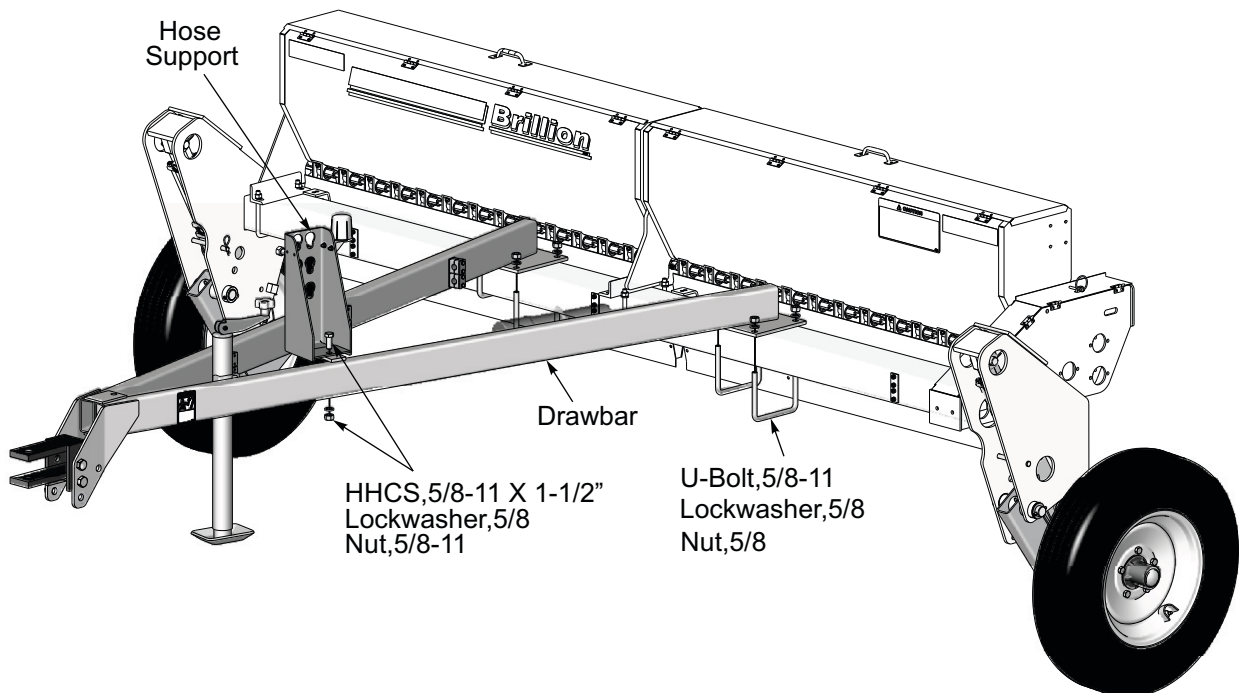


Figure 2-3: Pull Seeder Drawbar Installation

4. After the drawbar is attached route the hoses along drawbar toward the tractor. Use the hose clamps provided to anchor the hoses to the drawbar. **See Figure 2-4.**

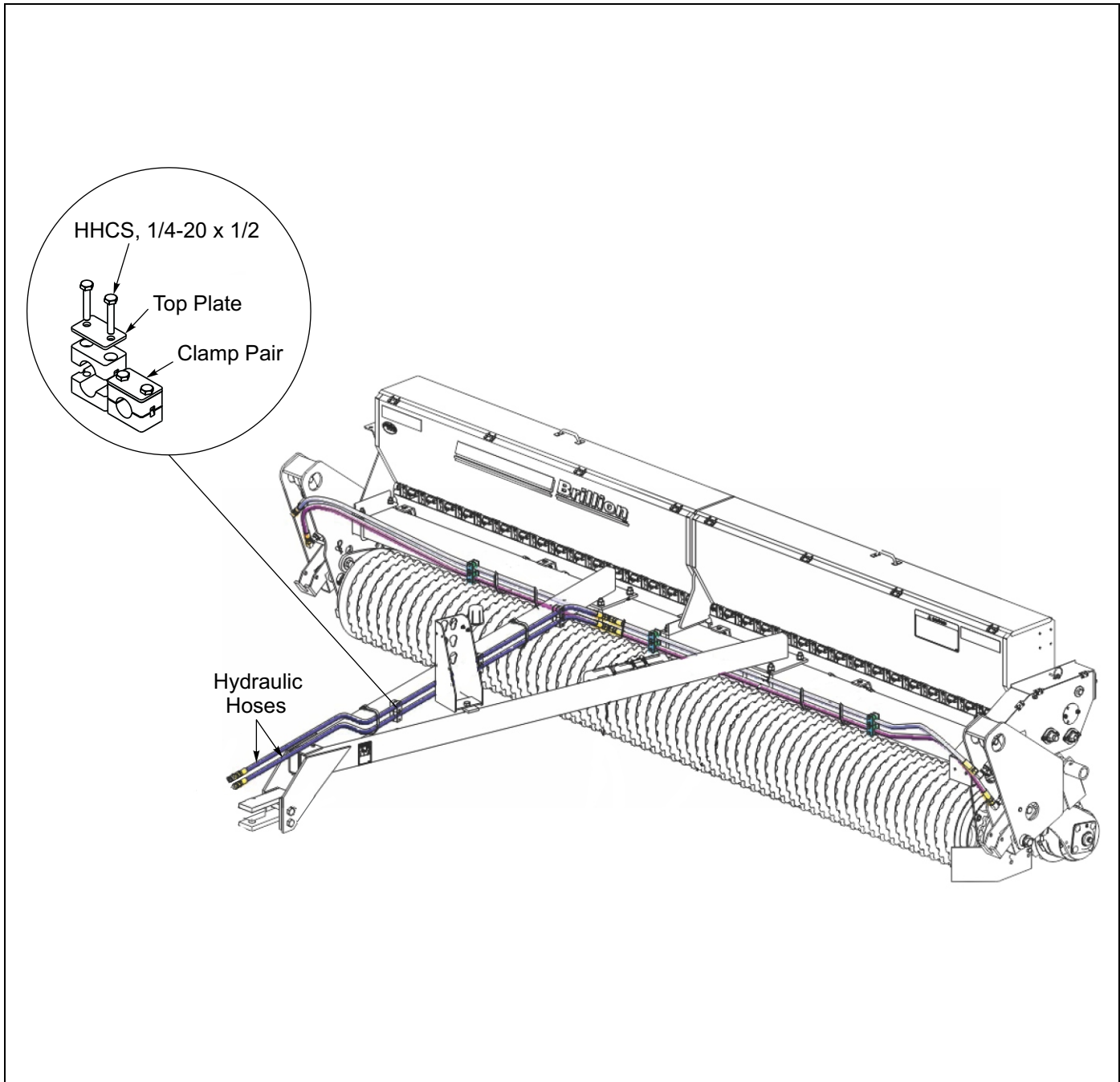
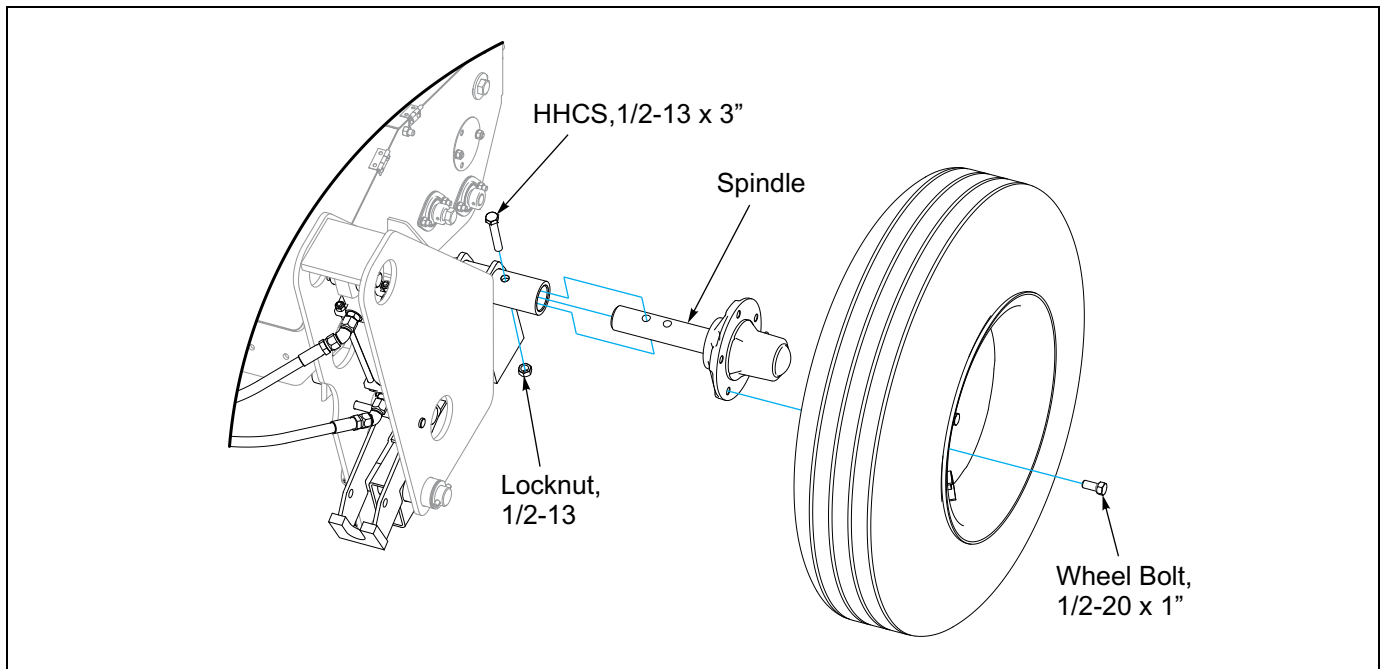


Figure 2-4: Drawbar Hydraulic Hoses

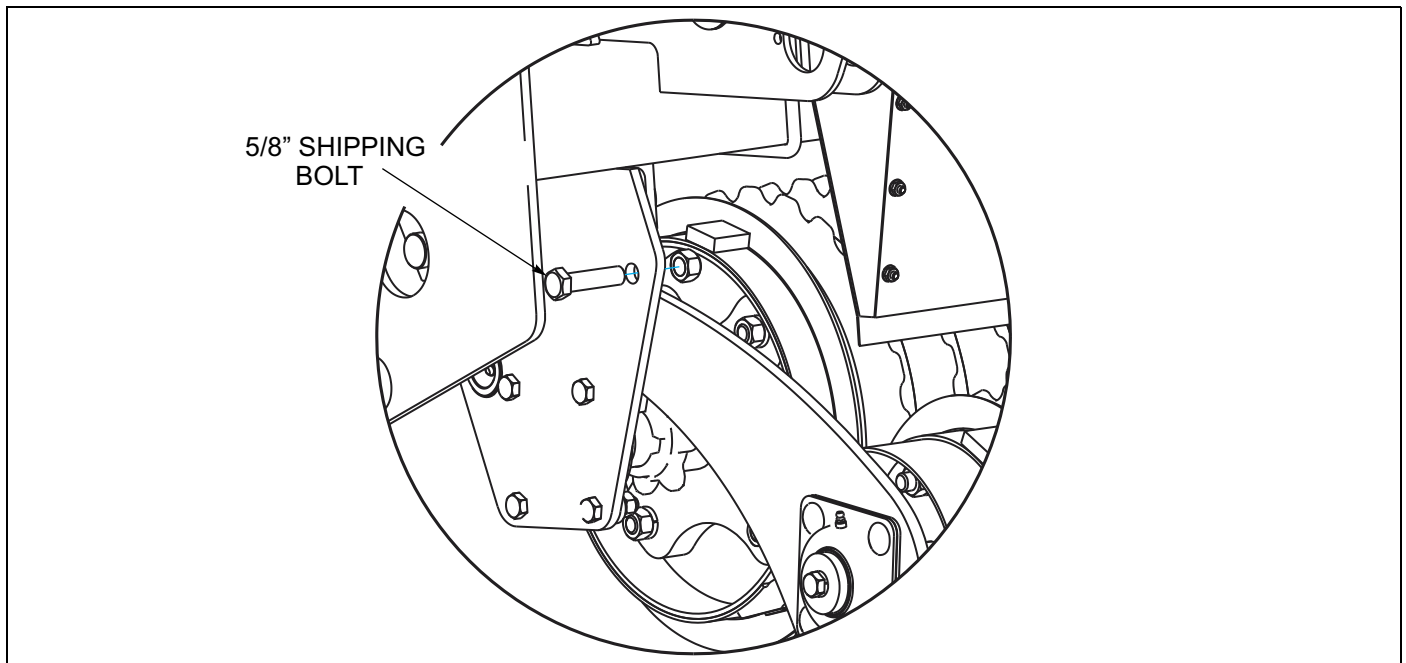
5. Install hub and spindles into the wheel arms and secure in outside hole farthest from the hub. Secure with 1/2-13 x 3" Screws and Locknuts. **See Figure 2-5.**
6. Install wheels and tires to hubs using ten 1/2-20 x 1 Wheel Bolts.

Charge the Hydraulic System.

For a more detailed view, refer to the Hydraulic Schematic Diagram. **See Figure 4-8.**

**Figure 2-5: Spindle**

7. Remove the two 5/8" shipping bolts which lock the rear roller arms down. One bolt is used on each side of the machine. **See Figure 2-6.**

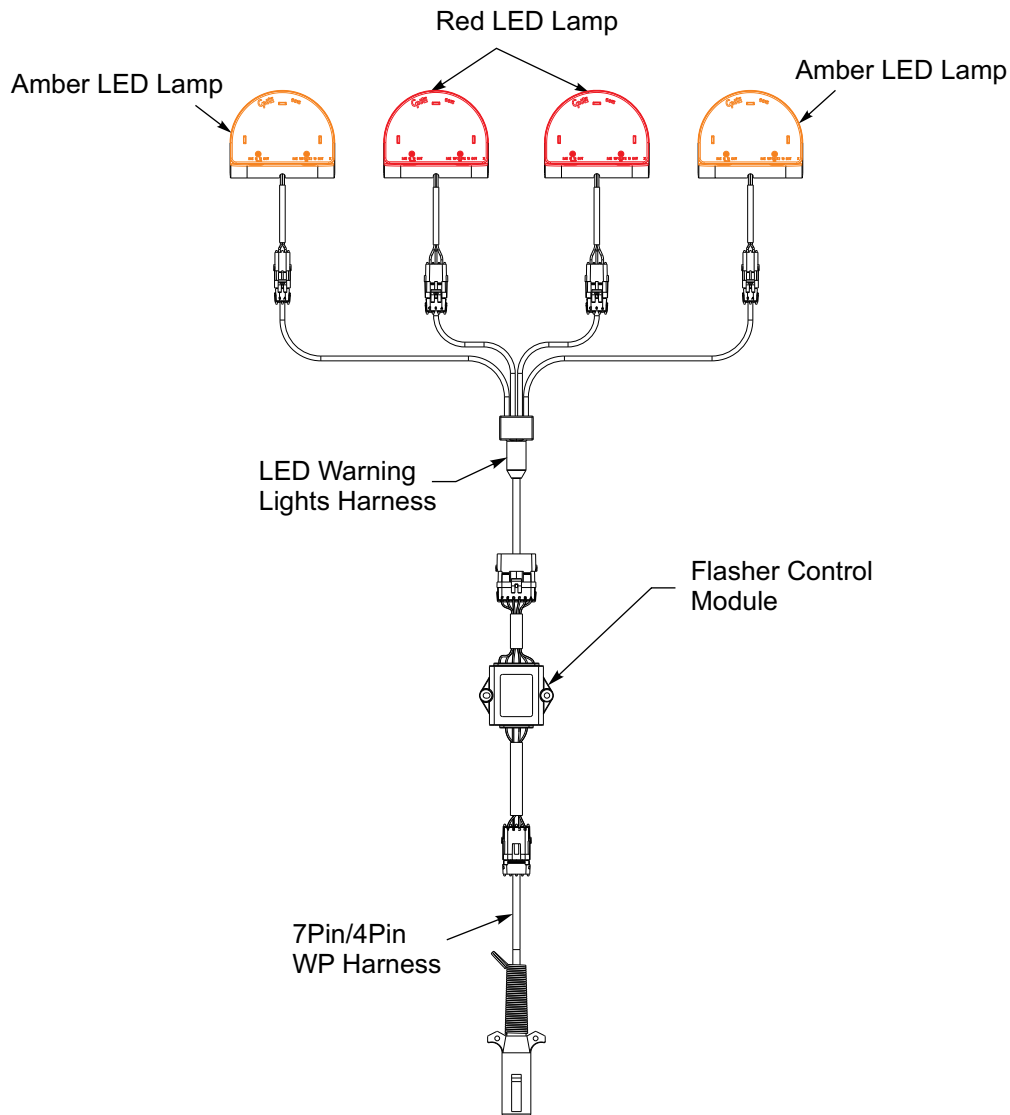
**Figure 2-6: Shipping Bolt**

8. Install the LED Warning Lamps and Harnesses.
See Figures 2-7 through 2-10.

**CAUTION**

Do not disengage pin unless seeder is fully attached to tractor. Seeder may be rear-heavy and tip backward on frame.

LED Warning Lights



When plugging in the LED 7-pin connector:

- 1) Make sure the tractor has a good clean receptacle, free of dirt and corrosion.
- 2) Make sure the 7-pin connector is inserted ALL the way in. With tighter fitting pins, operator may think the connector is all the way in, but really isn't.
- 3) Make sure the tractor receptacle cover latches over the keyway on the 7-pin connector to hold the connector in place.

If an operator plugs in the 7-pin connector, but the lights do not seem to work right, check the above items to make sure there is a good connection with the 7-pin connector.

Figure 2-7: LED Warning Lights

[illegible]

ASSEMBLY INSTRUCTIONS

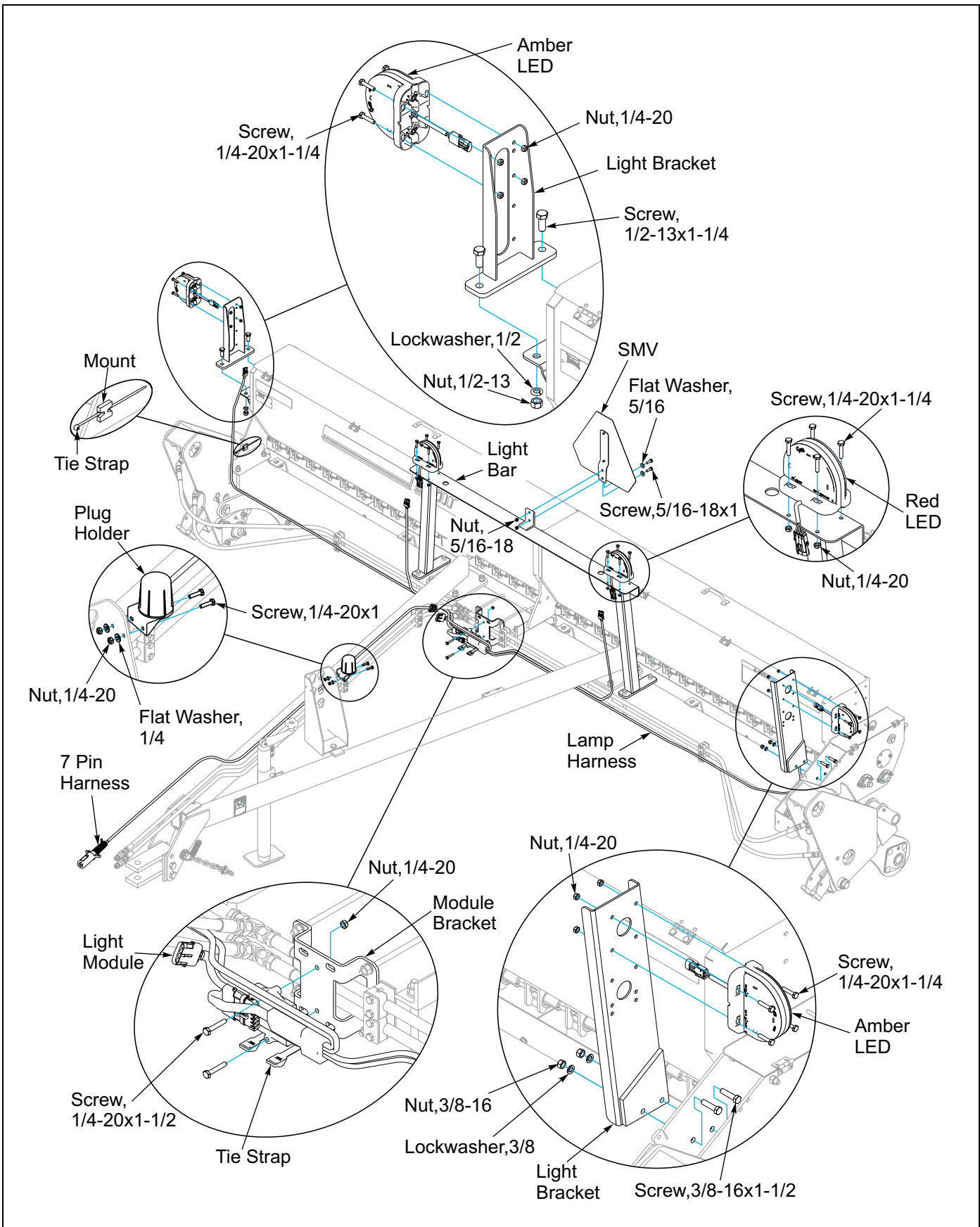


Figure 2-8: LED Warning Lights, 12' Drawbar Assembly

NOTE

12 foot drawbar model is shown, 8 and 10 foot models similar.

1. Attach both Red LED's to the ends of the light bar using (4) 1/4-20 x 1 1/4 Screws and Locknuts for each lamp.
2. Attach longer Light Bracket to the transmission housing located on the left side of the seeder, using (2) 3/8-16 x 1 1/4 Screws, Lockwashers and Nuts. Attach Amber LED to the outside of the Light Bracket using (4) 1/4-20 x 1 1/4 Screws and Locknuts.
3. On the right side attach the shorter Light Bracket to the angle bracket using (2) 1/2-13 x 1 1/4 Screws, Lockwashers and Nuts. Attach Amber LED to the outside of the Light Bracket using (4) 1/4-20 x 1 1/4 Screws and Locknuts.
4. Attach the Light Module to the Module Bracket using (2) 1/4-20 x 1 1/2 Screws and Locknuts. **See Figure 2-9.**
5. Layout the Lamp Harness, noting that the connectors marked with Green Tape is Right Side and Yellow Tape is Left Side.
6. Plug the Lamp Harness into the Light Module, route the plugs with Green Tape along the front right side of the frame. Route the 3 prong cord up the Light Bar and plug into the Red LED. Continue routing the 2 prong cord along the front of frame, up the outer Light Bracket and plug it into the Amber LED.
7. Repeat for the Left Side (Yellow Tape).
8. Plug the 7 Pin Harness into the Light Module, then route the harness along the drawbar with the hydraulic hoses and secure with Tie Straps.
9. Bundle and secure excess cord to the Module Bracket with Tie Straps. Secure cords along frame and drawbar using Adhesive Mounts and Tie Straps.

NOTE

If equipped with optional electrical clutch, install, route and secure electric clutch wire harness with the warning light harness.

IMPORTANT

All wires must be firmly attached to machine frame members or hydraulic lines so they do not sag or become torn loose by field debris.

10. Attach the SMV sign to the SMV Mount located on the center on the Light Bar using (2) 5/16-18 x 1 Screws, Flat Washers, and Locknuts.
11. Attach the Plug Holder to the Hose Support using (2) 1/4-20 x 1 Screws, Flat Washers, and Locknuts.

NOTE

The plug on the other end of the 7 Pin harness connects to the tractor socket when in use. When not in use, it can be stored in the Plug Holder on the hose support bracket. Allow enough harness length to reach tractor socket and roll or fold up excess and secure drawbar or hydraulic hose.

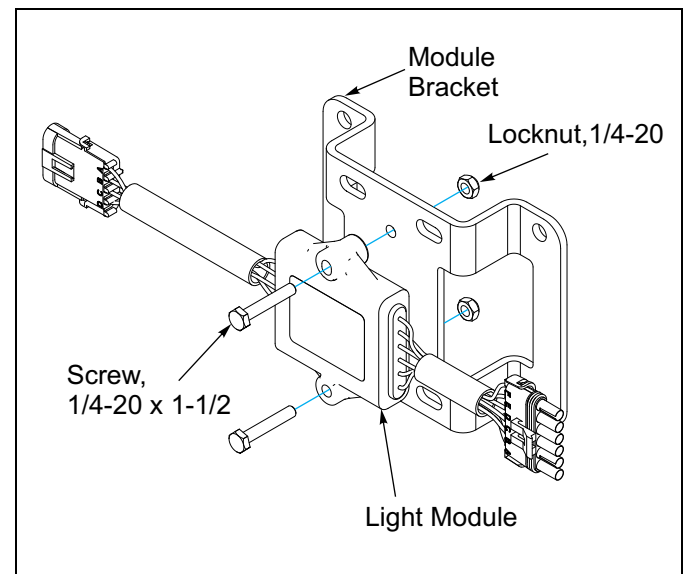


Figure 2-9: Light Module and Bracket

ASSEMBLY INSTRUCTIONS

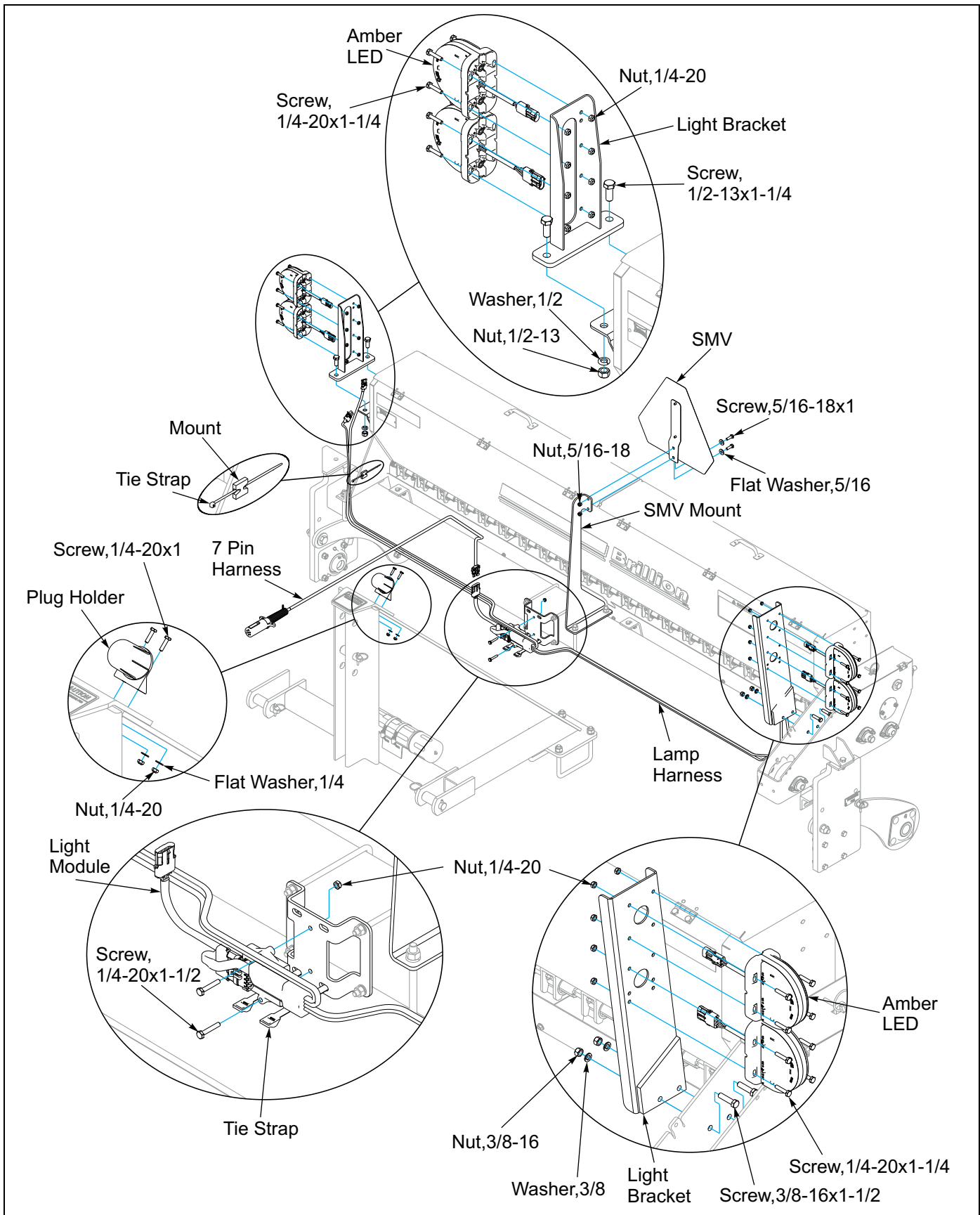


Figure 2-10: LED Warning Lights, 8' 3 Pt. Assembly

NOTE

8 foot pick-up model is shown, 10 and 12 foot models similar.

1. Attach longer Light Bracket to the transmission housing located on the left side of the seeder, using (2) 3/8-16 x 1 1/4 Screws, Lockwashers and Nuts.
2. Attach Amber LED to the upper portion of the longer Light Bracket using (4) 1/4-20 x 1 1/4 Screws and Locknuts. attach a Red LED below the Amber LED using (4) 1/4-20 x 1 1/4 Screws and Locknuts. Ensure Red LED lenses faces rearward. **See Figure 2-10.**
3. On the right side of the seeder attach the shorter Light Bracket to the angle bracket using (2) 1/2-13 x 1 1/4 Screws, Lockwashers and Nuts.
4. Attach Amber LED to the upper portion of the Light Bracket using (4) 1/4-20 x 1 1/4 Screws and Locknuts. attach a Red LED below the Amber LED using (4) 1/4-20 x 1 1/4 Screws and Locknuts. Ensure Red LED lenses faces rearward.
5. Attach the Light Module to the Module Bracket using (2) 1/4-20 x 1 1/2 Screws and Locknuts. **See Figure 2-11.**
6. Layout the Lamp Harness, noting that the connectors marked with Green Tape is Right Side and Yellow Tape is Left Side.
7. Plug the Lamp Harness into the Light Module, route the plugs with Green Tape along the front right side of the frame up the outer Light Bracket and plug the 2 prong cord into the Amber LED. Plug the 3 prong cord into the Red LED.
8. Repeat for the Left Side (Yellow Tape).
9. Plug the 7 Pin Harness into the Light Module, then route the harness along the 3 pt. hitch.
10. Bundle and secure excess cord to the Module Bracket with Tie Straps. Secure cords along frame and 3 pt. hitch using Adhesive Mounts and Tie Straps

NOTE

If equipped with electrical clutch, install, route and secure electric clutch wire harness with the warning light harness.

IMPORTANT

All wires must be firmly attached to machine frame members or hydraulic lines so they do not sag or become torn loose by field debris.

11. Attach the SMV sign to the SMV Mount located on the center on the Front Frame using (2) 5/16-18 x 1 Screws, Flat Washers, and Locknuts.
12. Attach the Plug Holder to the 3 pt. hitch using (2) 1/4-20 x 1 Screws, Flat Washers, and Locknuts.

NOTE

The plug on the other end of the 7 Pin harness connects to the tractor socket when in use. When not in use, it can be stored in the Plug Holder on the 3pt. hitch. Allow enough harness length to reach tractor socket and roll or fold up excess and secure hydraulic hose or 3 pt. hitch.

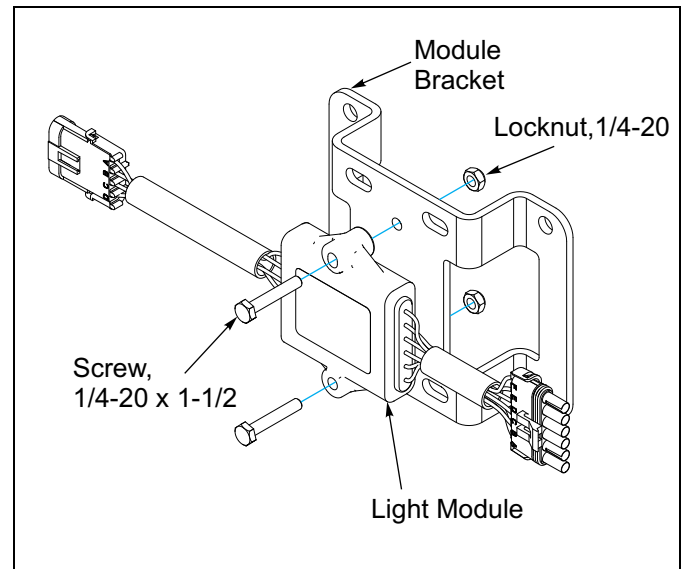


Figure 2-11: Light Module and Bracket

ASSEMBLY INSTRUCTIONS

Electronic Acre Meter Kit 5K745 (Optional)

NOTE

The acre meter consists of three main parts, the acre meter, the pick-up and the magnet wheel.

1. Use the acre meter bracket as a guide and drill two 13/32" holes into seedbox at location shown in illustration. Then attach the acre meter bracket as shown with two 3/8-16 x 1" capscrews, lock washers and nuts. **See Figure 2-12.**
2. Attach the pick up switch to the top of the 5K714 bracket with two 8 -32 x 1 1/4 machine screws, flat washers, lock washers and nuts. Do not tighten screws at this time. **See Figure 2-13.**
3. Press the magnetic wheel onto the clutch shaft until it is vertically centered with the pickup switch.

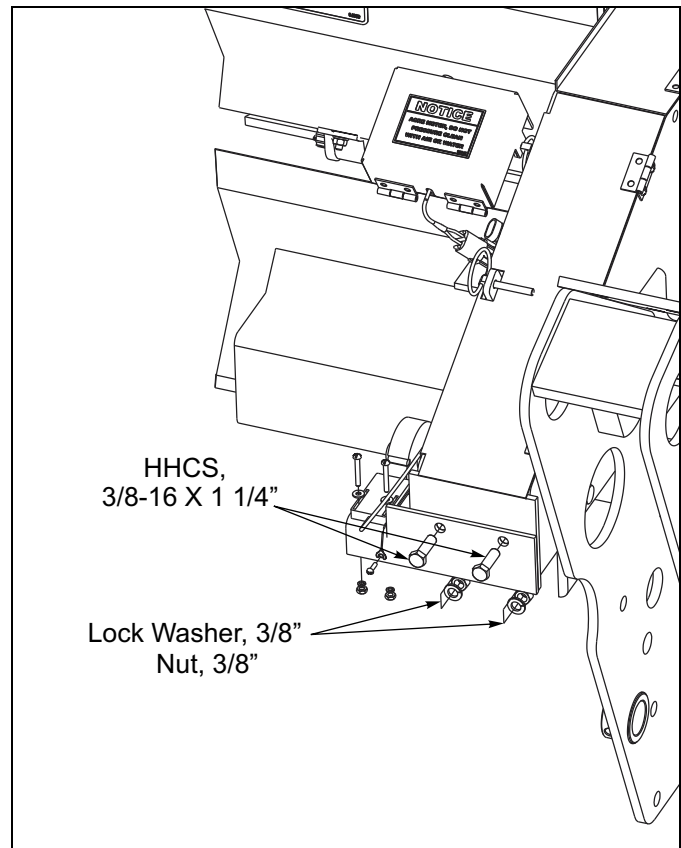


Figure 2-12: Electronic Acre Meter (1 of 3)

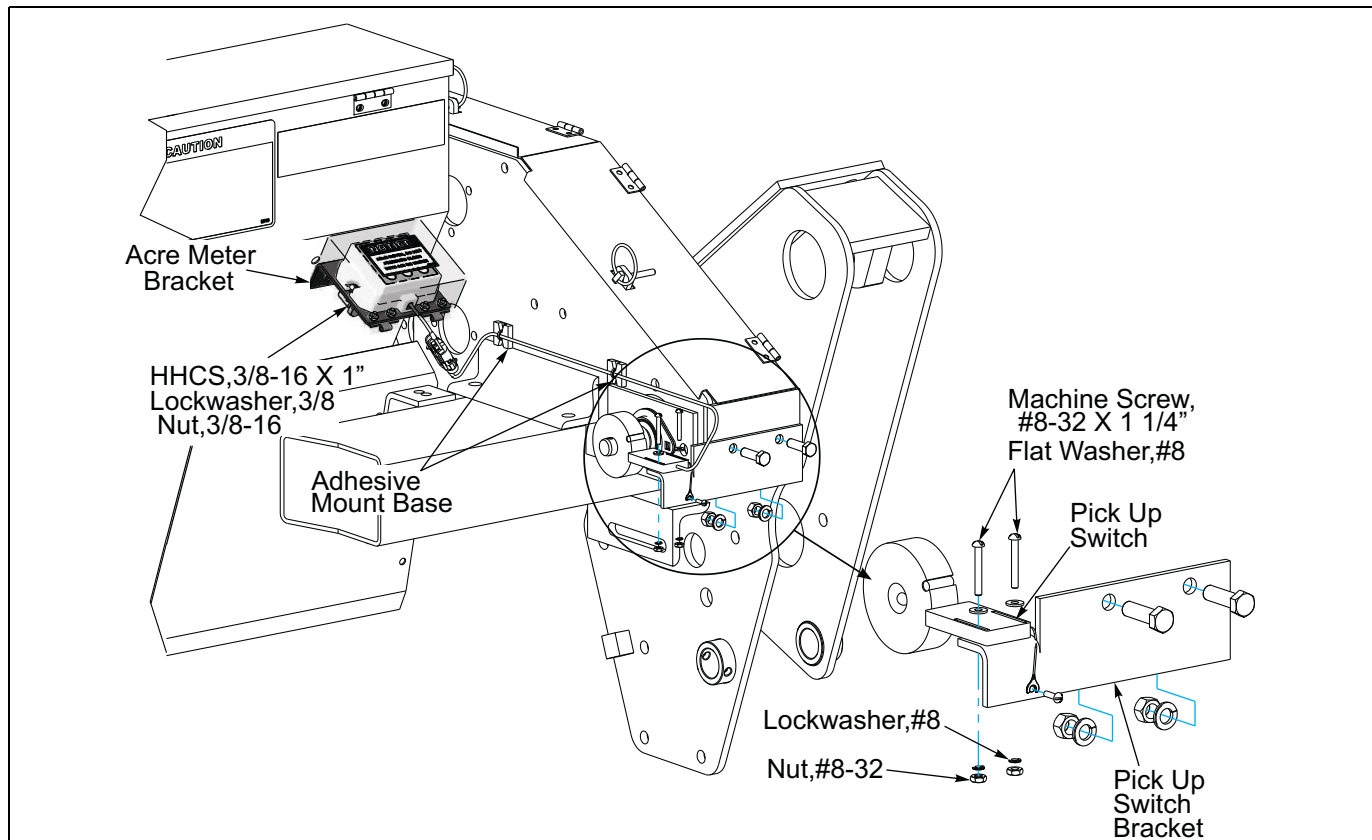


Figure 2-13: Electronic Acre Meter (2 of 3)

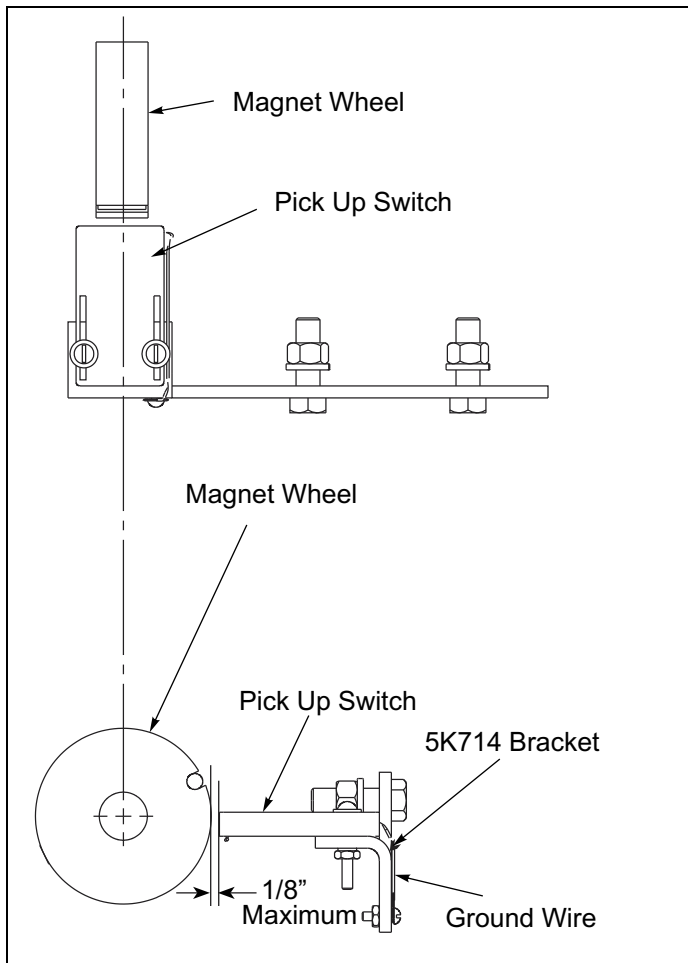


Figure 2-14: Electronic Acre Meter (3 of 3)

4. Adjust the pickup switch and bracket so the centerline of magnet wheel and pick up switch are horizontally and vertically aligned with maximum 1/8" between magnet wheel and pick up switch. Firmly tighten all screws. **See Figure 2-14.**

NOTE

Alignment of the pickup switch and magnet wheel is critical. Improper alignment will cause the acre counter to record acres erratically or not at all.

5. Attach the short pickup switch ground wire to the small hole in the 5K714 bracket with a #6-32 x 1/2" machine screw, removing paint under the wire connector to assure a good electrical ground connection. **See Figure 2-14.**
6. Route the wire from the acre meter down the front of the seed box to the pickup switch and connect the mating plugs.
7. Securely fasten the wire to the seed box and transmission drive using the adhesive mounting bases and wire ties to prevent wire from becoming entangled or rubbing moving parts.

Acre Meter programming instructions. **See page 3-7.**

ASSEMBLY INSTRUCTIONS

Scraper Kit (Optional)

(Cannot be used with Coil Tine Track Remover Kit)

See Figure 2-15.

1. Assemble 1K212 brackets to front of seeder frame tube. The brackets are provided. (If you have a wheel track remover kit on your seeder you will not need these brackets on the outer ends). You can mount to the same brackets provided with the wheel track
2. Attach vertical brackets loosely and assemble scraper angle to them. Attach two center scrapers at center hole locations and then attach all of the regular scrapers. Center entire assembly on machine, position scrapers for proper fit and tighten hardware.
3. Scrapers should be close enough to the wheels to be functional but without interference. Some final adjustments maybe required in the field.

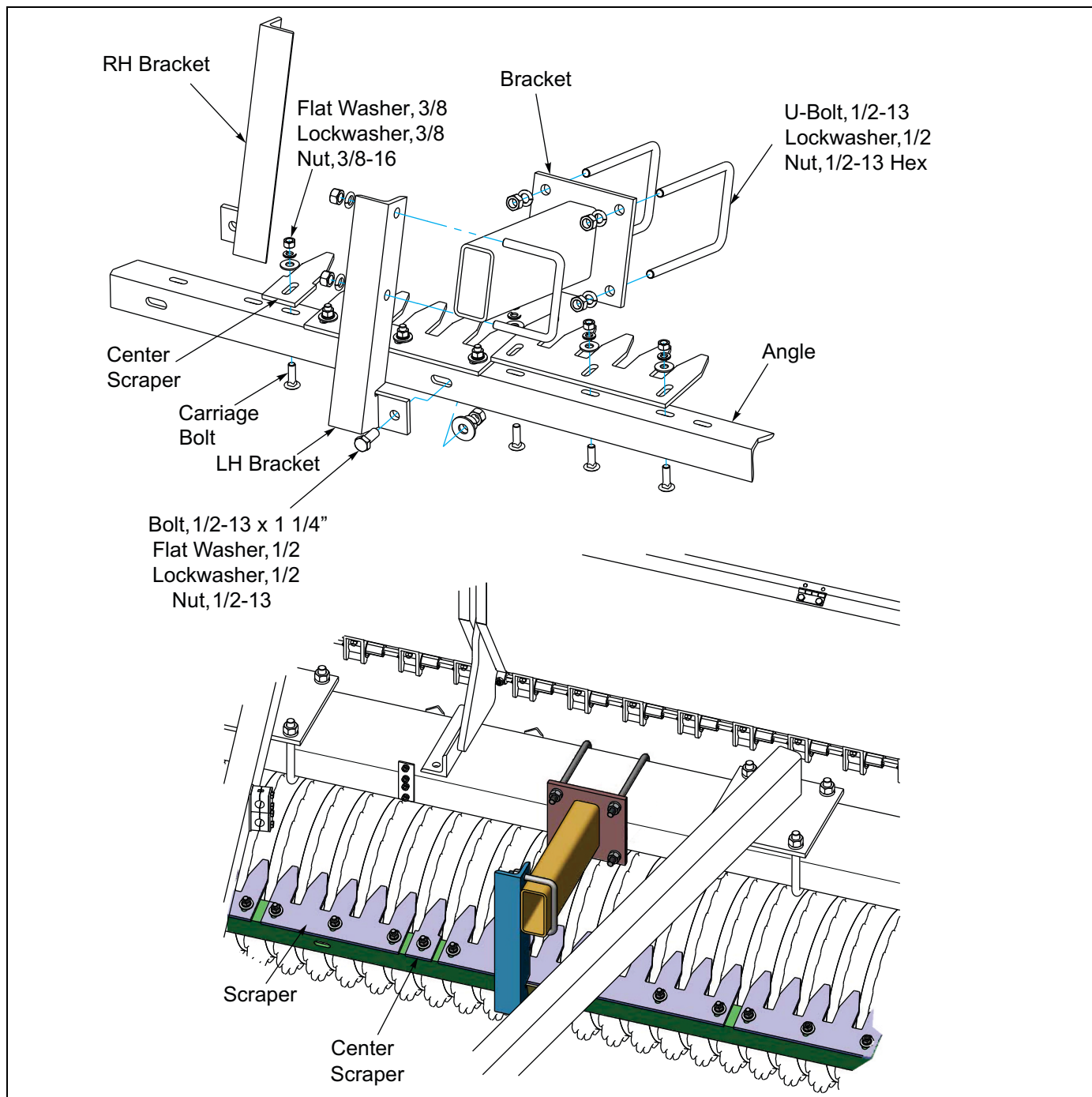


Figure 2-15: Scraper Kit

S-Tine Tire Track Remover (Optional)

1. Attach brackets to frame with u-bolts ($\frac{1}{2}$ " x $4\frac{1}{2}$ " centers x $7\frac{1}{2}$ " deep), lock washers, and nuts. Note that long ends of brackets are downward. Brackets should be about 53" from center of machine. See **Figure 2-16**.
2. Attach tube to brackets using straps and $\frac{1}{2}$ -13 bolts, lock washers, and nuts.
3. Locate and install S-tines as needed to cover tractor tire tracks. Suggested pattern is to use $1\frac{3}{8}$ " point on center tine and $2\frac{1}{2}$ " points on each side. If needed, additional tines may be purchased and

installed. This kit must be used with standard 9J442 long three point hitch on pickup machines. The Wheel Track Remover is furnished with 6 S-tines. More or less tines may be used as required.

NOTE

S-tines should not be operated any deeper than necessary to remove tractor tire tracks. Otherwise, moist soil is brought up which will stick to the rollers, draft load is increased, and under some conditions, tines may deflect back to rollers and break.

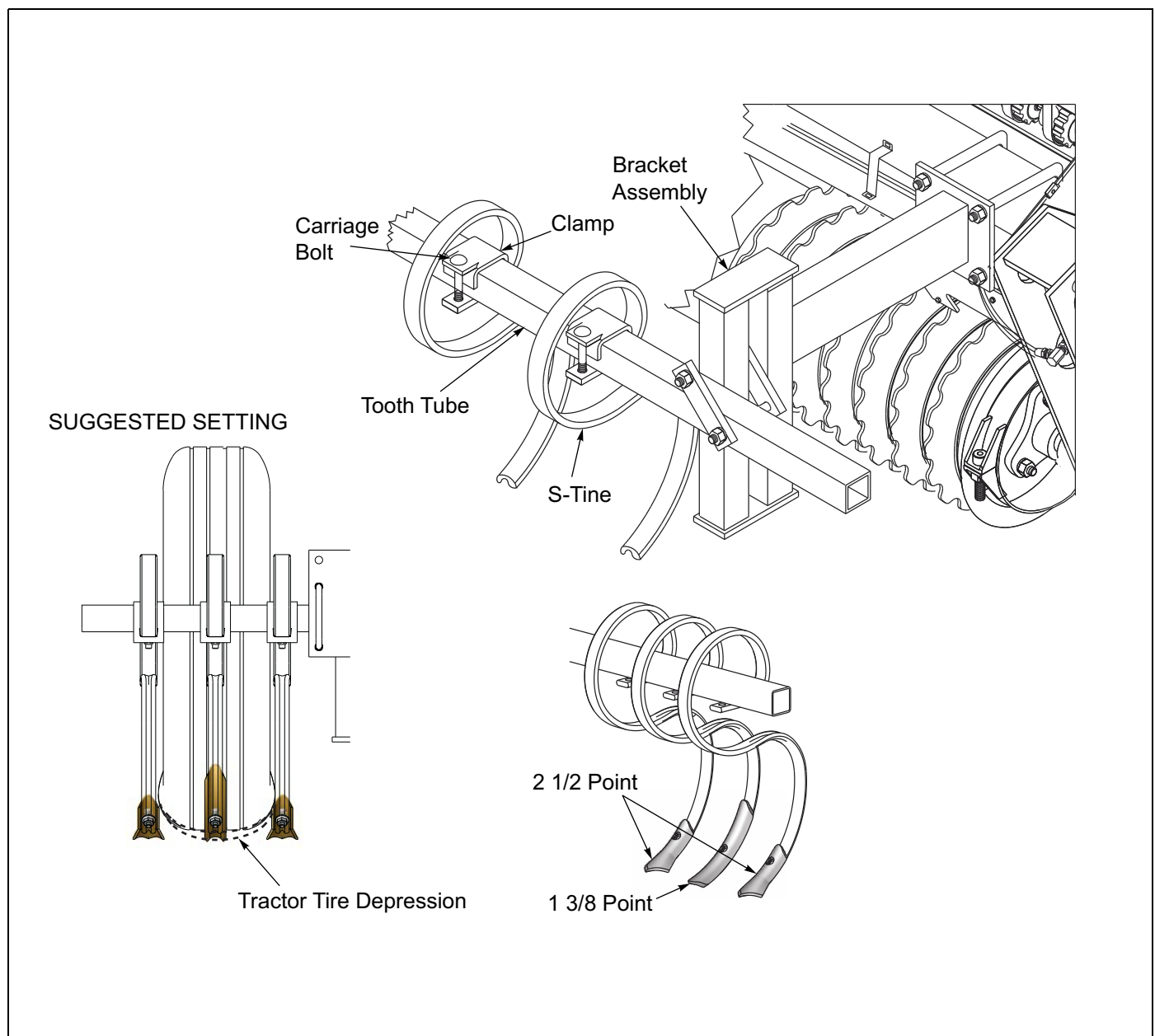


Figure 2-16: S-Tine Setup

ASSEMBLY INSTRUCTIONS

Coil Tine Track Remover (Optional)

NOTE

Cannot be used with the Scraper Kit

1. Assemble the coil tines and arm weldments to the 1-1/2" diameter x 29" bar. The arm weldments may be placed anywhere along the bar, but it is suggested that they be mounted in the second hole from the right end, and the third hole from the left end. (Left end and right end designations are those related to the operator when sitting in the operating position).
 2. Mount 6 of the coil tines to the bar with 3/8" x 2- 1/2" capscrews, flat washers, lockwashers, and nuts.
 3. Mount the other two coil tines to the bar with the 3/8" x 3" capscrews, lockwashers, and nuts which also attach the arm weldments to the bar.
 4. Clamp the brackets loosely to the seeder frame, with u-bolts, lockwashers, and nuts.
 5. Attach the adjusting angles to frame brackets with lockscrews. Secure the adjusting angle from swinging with a 1/2" clevis pin and hair pin cotter.
 6. Fasten the bar and tine assemblies to the adjusting angles with 1/2" x 1-3/4" capscrews and locknuts. Tighten the locknuts to allow the free side to side swing.
 7. Center the entire wheel track leveler behind the tractor tires. Tighten the u-bolts against the seeder frame. **See Figure 2-17.**
 8. Attach the chains' end links to the adjusting angles with 3/8" x 1-1/4" capscrews, flat washers, lockwashers and nuts. There is one chain for the left side and one chain for the right side.
- The vertical position can be changed by removing the clevis pins and lock screws and moving the adjusting angles up or down.
- To inactivate the tines, remove the 1/2" clevis pins and loosen the lock screws. Then swing the bar and tine assemblies upward and sideways. To hold in place, wrap the chain under the bar and place the chain into the slot in the adjusting angle. Re-tighten the lock screws.

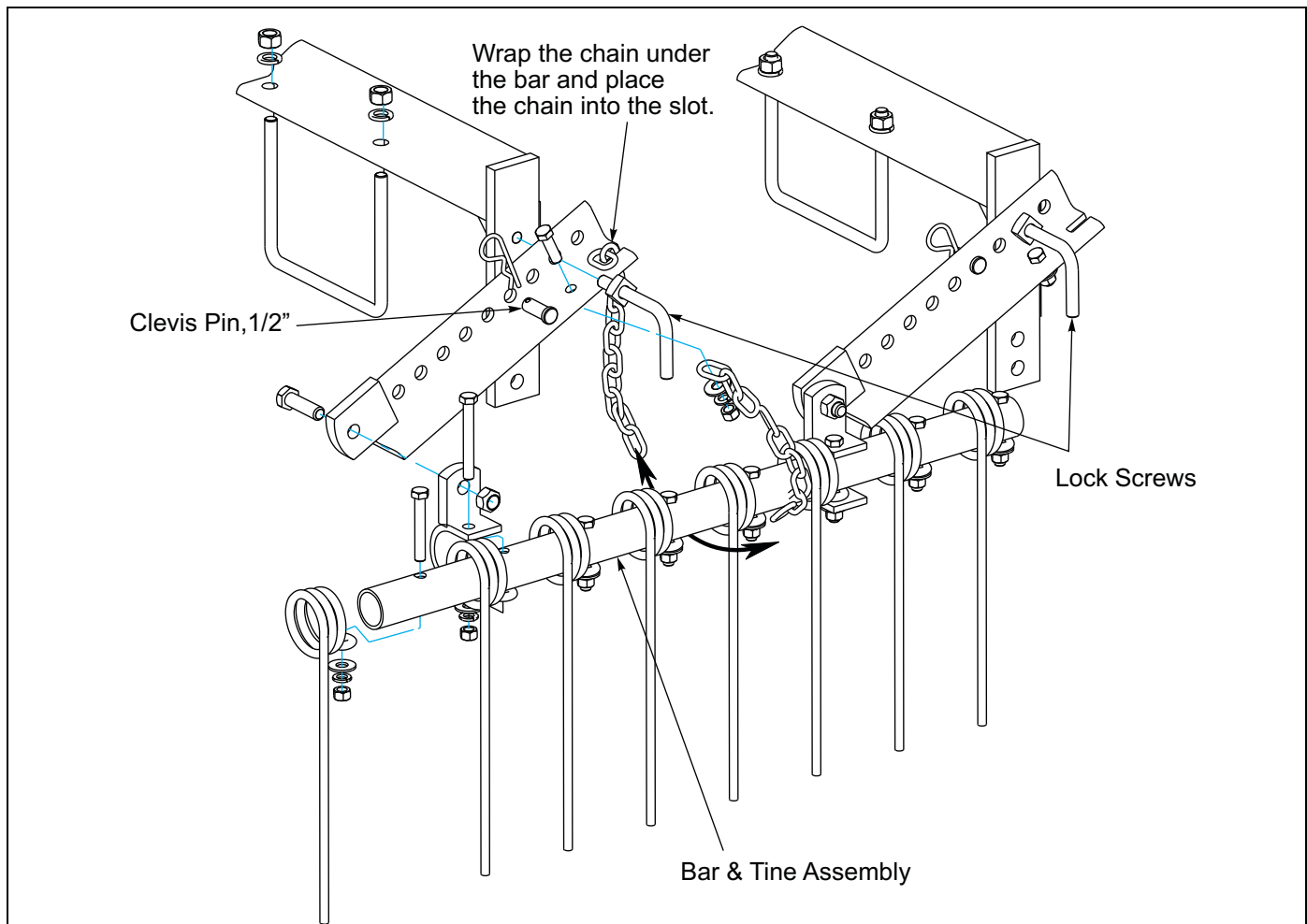


Figure 2-17: Coil Tine Setup

Speed Up Kit (Optional)

Seed rates can be doubled by using a 26-tooth sprocket. Procedure is as follows: **See Figure 2-18.**

1. Loosen and remove both drive chains.
2. Remove 1/4" x 2 1/4" capscrew, lock washer, and nut from #55 (large) sprocket hub on front transmission shaft.
3. Remove roll pin from #40 (small) sprocket hubs on the front transmission shaft.
4. Remove locking collar from left side of the front transmission shaft.
5. Remove bearing bolts from right side of the front transmission shaft.
6. Move shaft far enough to the right to remove small sprocket.
7. Install new sprocket.
8. Replace all items (except #40 chain) in reverse order.
9. Add extra links to #40 chain.
10. Adjust to proper tension.

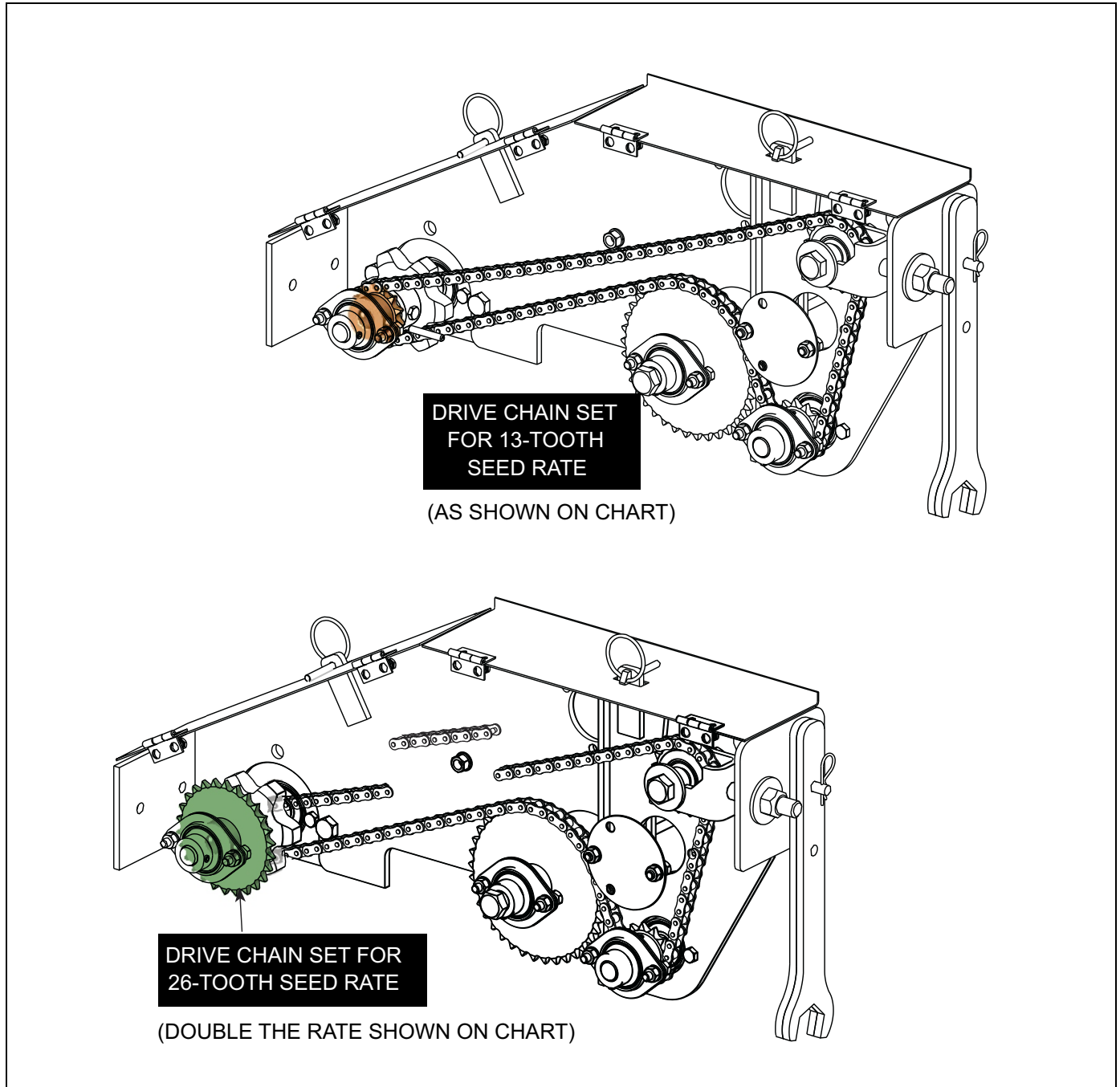


Figure 2-18: Speed Up Kit Setup

ASSEMBLY INSTRUCTIONS

Electric Clutch Kit (Optional)

The clutch is controlled by a toggle switch mounted to the tractor by a hook and loop fastener.

Clutch characteristics are as follows:

1. The clutch is disengaged when power (12 volts) is applied. If there is a power failure or electrical problem, the seeder will continue to operate and the implement must be raised to stop seeding.
2. Seed shafts will not rotate when implement is backed up.
3. The Switch box contains a standard 5 amp fuse.
4. The clutch must be disengaged (power applied) when seed shafts are turned manually for calibration.
5. Check that the clutch case has proper clearance between rubber bumper stop. Improper clearance may prevent the clutch from engaging or disengaging. **See Figure 2-19.**

6. Connect clutch wiring harness to clutch lead, and route wire along frame and drawbar. Secure to frame and drawbar or with hydraulic hoses and warning light harness by cable ties or adhesive mounts.
7. Install switch on tractor in a convenient location with the Hook and Loop included or other type of mount (not included).
8. Attach the wire lead to power source and secure wire.
9. Check clutch operation: Clutch will disengage when power is applied. (Clutch will make a clicking sound). Set seeder on the ground and drive a short distance while turning switch on and off. The seed cup shaft will stop rotating when switch is turned to "OFF" position.
10. Turn switch to "ON" position when seeder is not used to shut off power to prevent possible overheating of clutch coil.

At no time use high pressure water or air to clean the clutch as damage could occur.

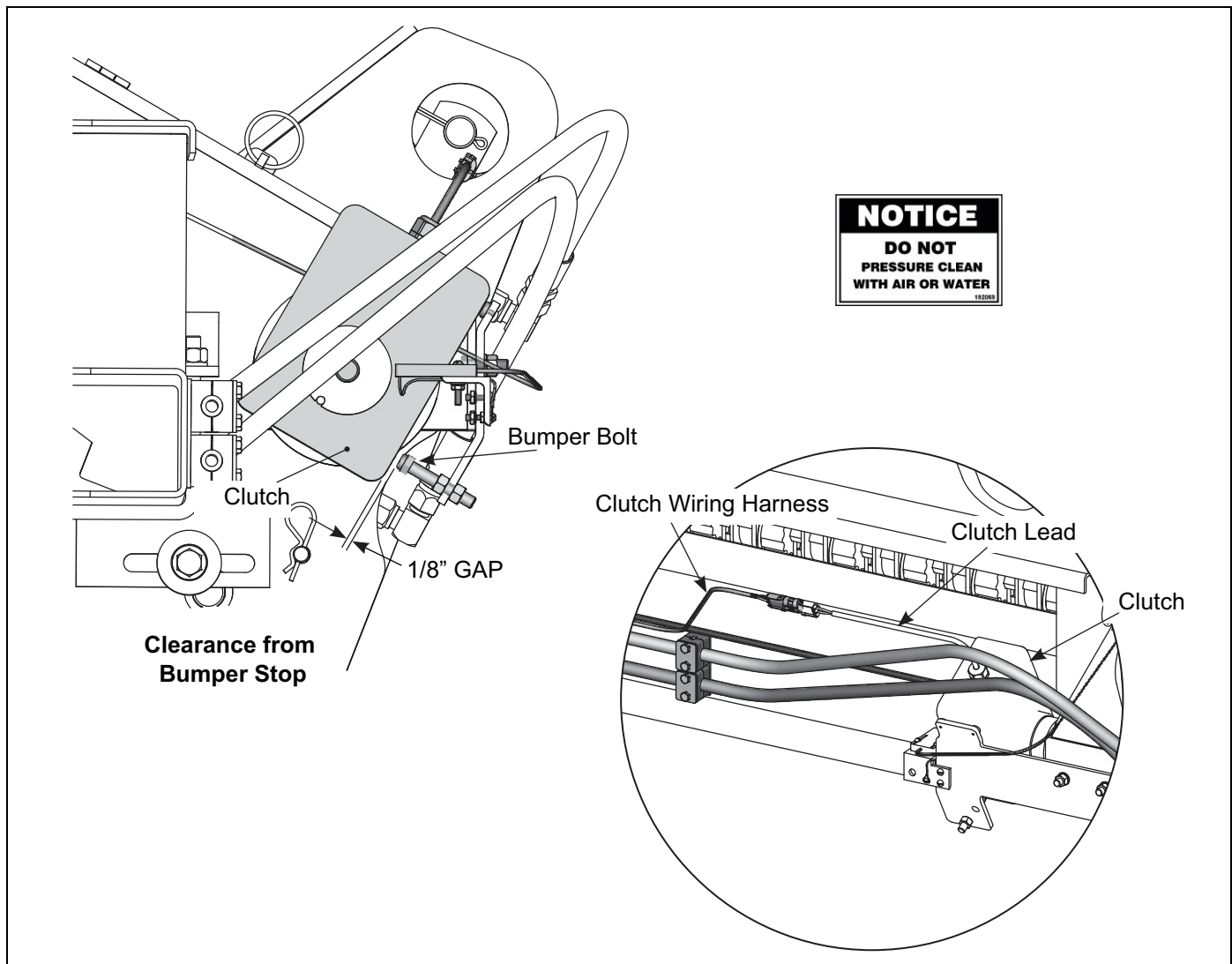


Figure 2-19: Electric Clutch

[illegible]

ASSEMBLY INSTRUCTIONS

Seed Shaft Sensor Kit (Optional)

Remove the two #10 x 24 x 3/4 self tapping screws from the Magnet Wheel Assembly. Position the rounded half of the Magnet Wheel Assembly on the seed shaft. Ensure it fits squarely onto shaft. Mount magnet half to the rounded half. ensure it fits squarely onto shaft. Fasten the two halves together using two #10-24 x 3/4 self tapping screws. *Do not over tighten.*

Identify the seed cups on either side of the Magnet Wheel Assembly and remove the 1/4-20 hardware. Insert Sensor into Shaft Sensor Bracket slot.

Insert a 1/4-20 x 3/4" machine screw into each seed cup. Align the Shaft Sensor Bracket with the two 1/4-20 x 3/4" screws. Secure with existing lockwashers and nuts.

Slide/Position Seed Shaft Sensor so it is 1/8" from the magnet. **See Figure 2-21.** Tighten both retaining nuts.

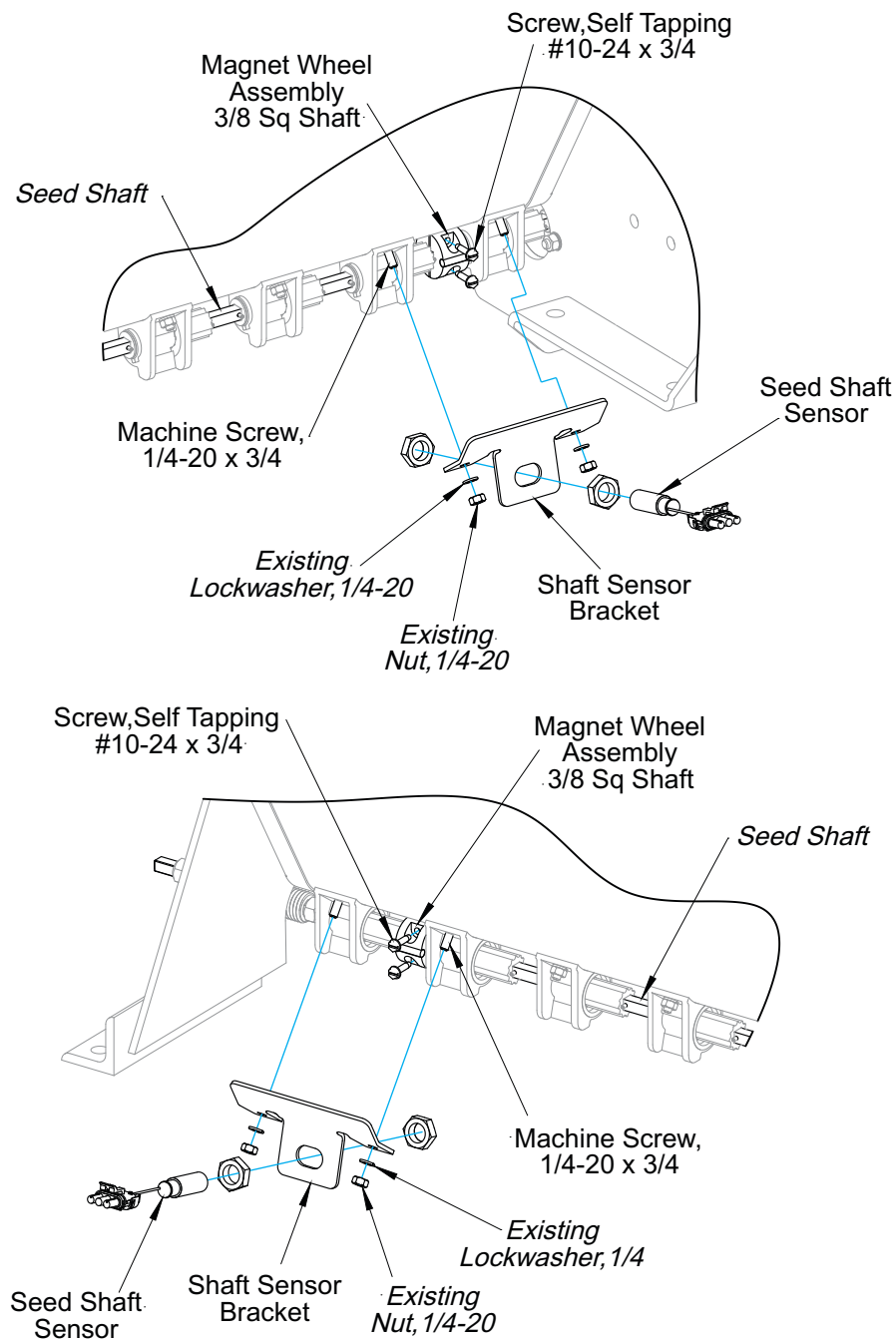


Figure 2-20: Seed Box Brackets

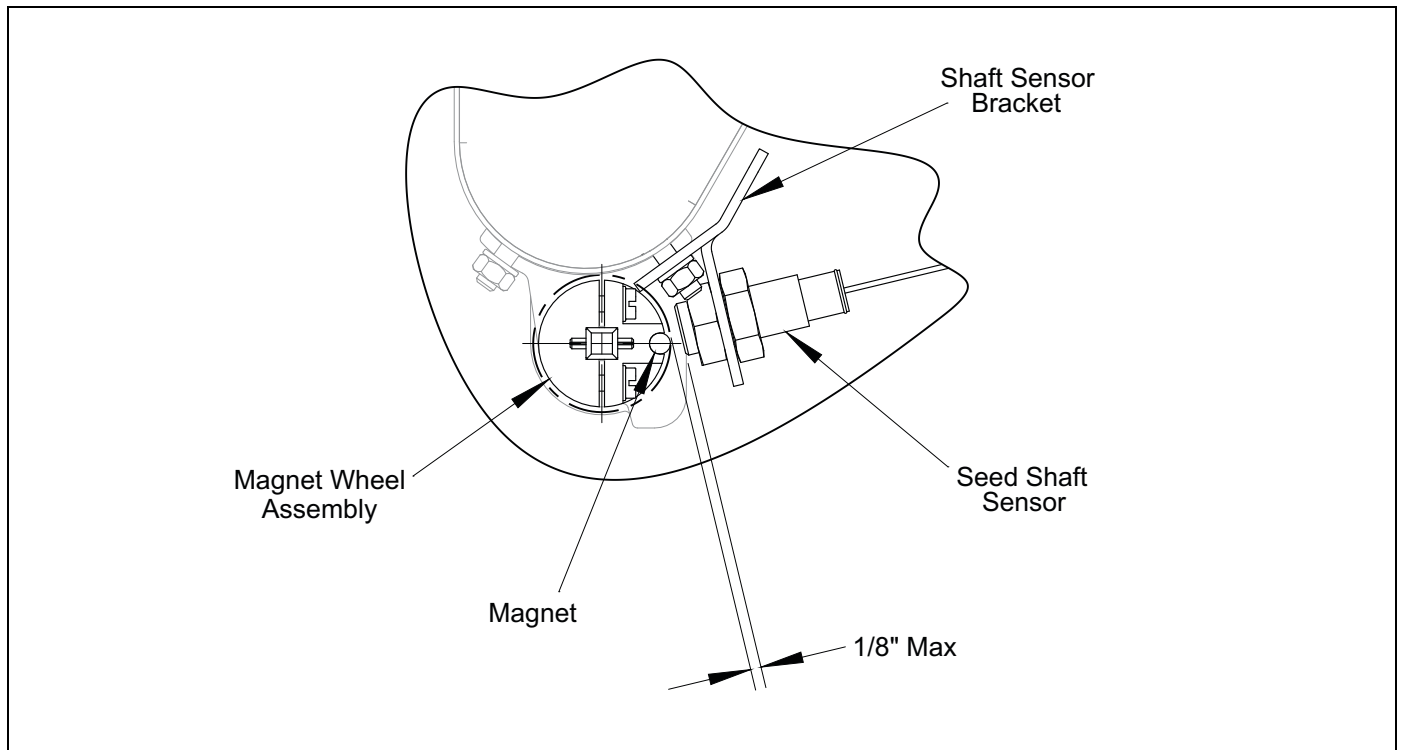


Figure 2-21: Seed Shaft Sensor Mounting Dimension - Seedmeter

ASSEMBLY INSTRUCTIONS

Seed Shaft Sensor Layout

Mount Console with Clutch Control on Tractor.

1. Route Console Harness with 9 Pin Connector to the Seeder Harness.
2. Attach 3 Pin Power Plug to tractor.
3. Secure console harness with Tie Straps.
4. Route Seeder Harness along front frame of seeder. Ensure plug labeled Electric Clutch Power is on the left side.
5. On left side connect plug labeled "Electric Clutch Power" to the Electric Clutch lead. If you do not have an Electric Clutch seal the plug end using a 2-Pin Shroud and Cavity Plug to protect it from the environment. **See Figure 2-22.**
6. Connect plug labeled "Left Front Seed Shaft Sensor" to the left front Seed Shaft Sensor. Seal the plug end using a 3-Pin Tower and Cavity Plugs to protect it from the environment.
7. Repeat for the right side.
8. Secure all harnesses and wires with cable tie and tie straps.

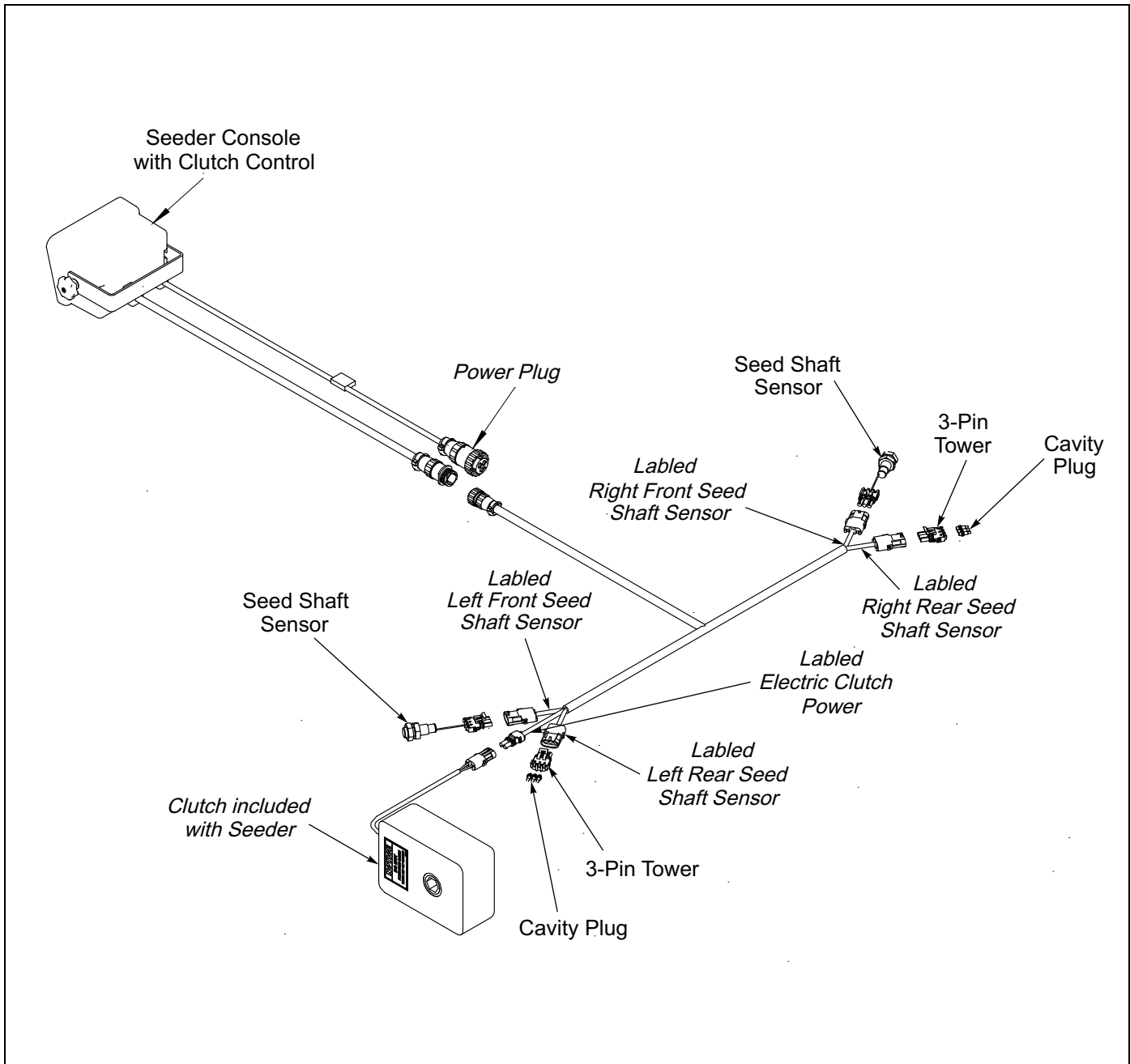


Figure 2-22: Seed Shaft Sensor Layout

Chapter 3

Operation

Operation of Seeder

This chapter will cover the basic operation and procedures for the Landoll Brillion Alfalfa Seeder. Be sure to read and understand the Safety Procedures and Cautions starting on page 1-1.

Seeder Transport Lock (Pull Type Only)

For field operation:

Disengage each transport lock and replace the pin. The lock rests on the wheel arm; the pin is in front of lock. See **Figure 3-1**.

IMPORTANT

If the pin is not installed, the transport lock may bounce up and cause significant damage to the cylinder and fittings.

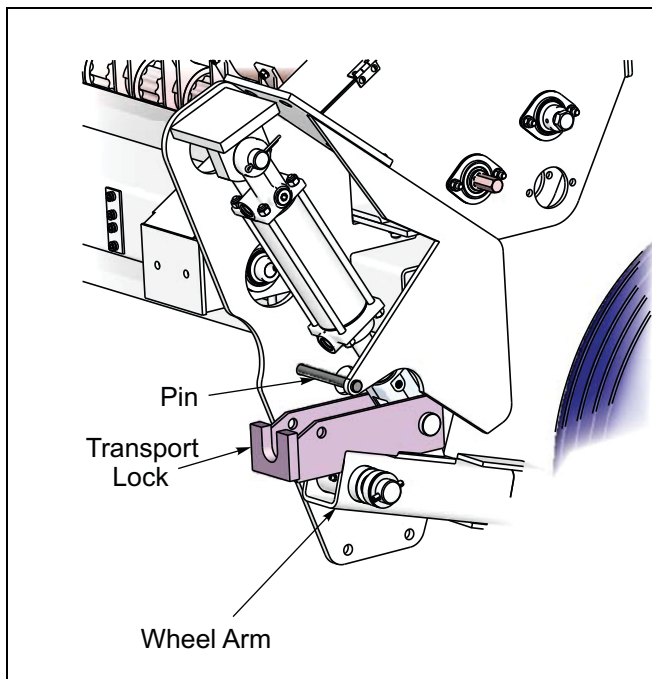


Figure 3-1: Field (Working) Position

To prepare the machine for transport:

Raise the machine fully and pin the transport lock in place on each lift cylinder. See **Figure 3-2**.

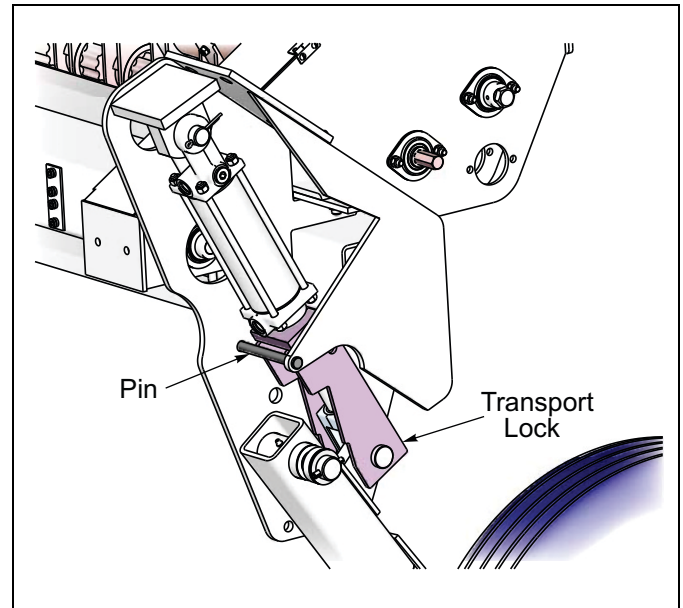


Figure 3-2: Transport Position

Hitch Adjustment

Adjust the hitch so when hooked to the tractor it is as parallel as possible with the top of the seedbox. See **Figure 3-3**.

OPERATION

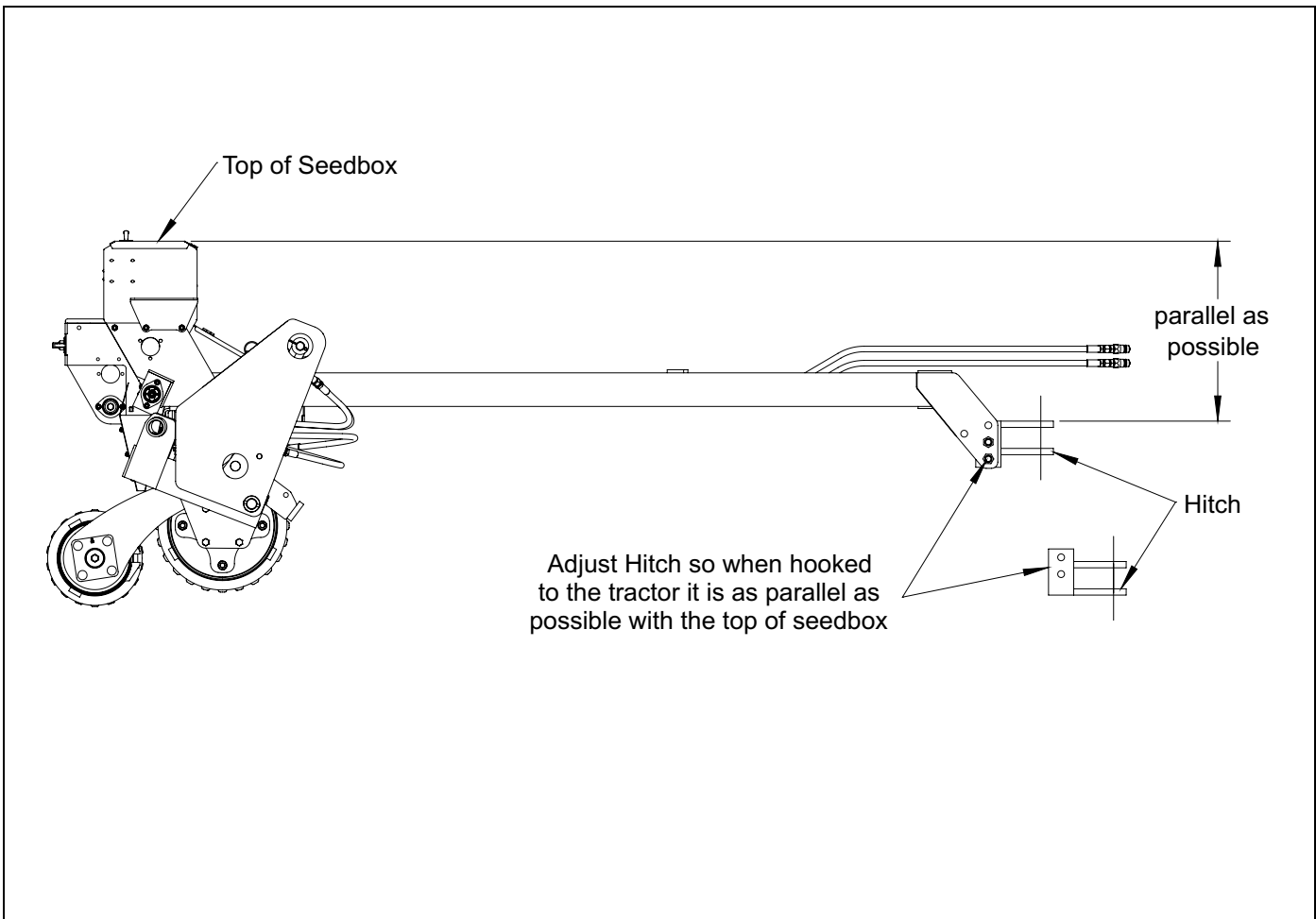


Figure 3-3: Hitch Adjustment

Parking Pin (Pick Up Only)



CAUTION

To prevent machine from tipping backward on frame, disengage parking pin only when the seeder is fully attached to the tractor.

Be sure to observe the following sequence:

When hooking up the seeder:

1. Attach the tractor.
2. Remove the Klik Pin, pull Parking pin in outer position, replace the Klik Pin.

When unhooking the seeder:

1. Remove the Klik Pin, push in Parking Pin, replace the Klik Pin.
2. Disconnect the tractor.

For clarity, **See Figure 3-4.**

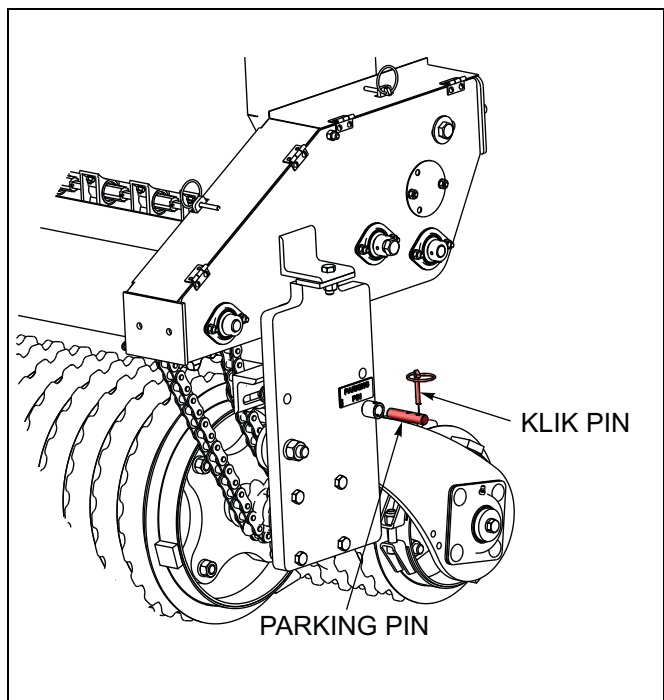


Figure 3-4: Parking and Klik Pins

Seed Rate Adjustment

NOTE

Wrenches used for adjustment are stored on a pin at the back of the transmission.



WARNING

- To Prevent damage to seed meters, do not apply excessive force to adjusting nuts. This is especially important when closing meters as seed in flutes can be pinched between cut-off and washer in seed cup.
- Do not close meters more than 1/8" when there is seed in the meters without rotating the seed shaft to prevent damage to the rotating washers and retainer rings in the seed meters.
- Do not attempt to open meters more than 1". (Feed rolls could become disengaged from washer in the seed cup.)

Seed rate chart is located inside the seed box cover and in this manual. **See Table 3-1.** It should be used as a general guide only. Because of seed variation, a more accurate rate can be determined by calibrating the seeder as shown in the chart.

Seed rate is set by adjusting the micro-meter on the right side. **See Figure 3-5.**

- To increase the rate of seeding, loosen the large locknut (see NOTE above "WARNING" notice) on inside of the bearing and turn the outer seed rate adjusting nut to the desired higher number setting, then tighten the large inner locknut.
- To decrease the rate of seeding, loosen the inner seed rate adjusting nut and set the outer adjusting nut to the new desired lower number position; then tighten the large inner locknut. **See Figure 3-7.**

Seed cups discharge to the front of the machine to aid the operator in determining proper operation.

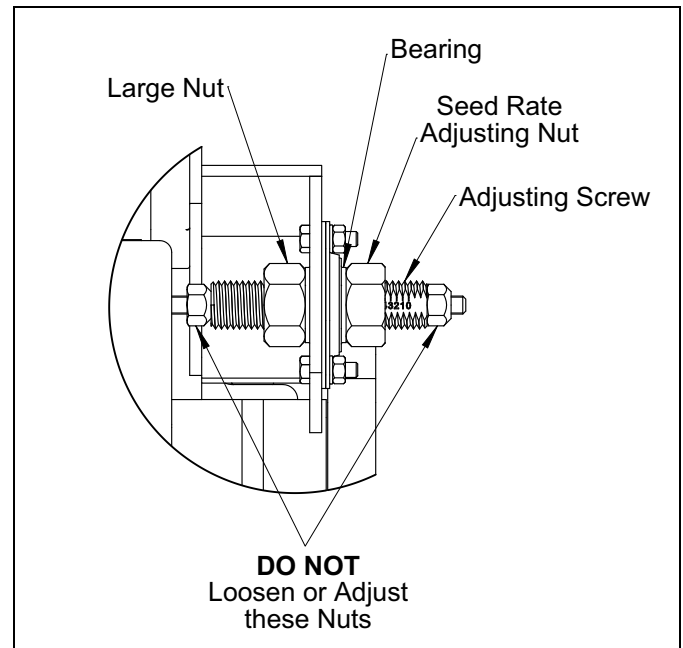


Figure 3-5: Micro-meter

Disengaging Transmission Drive Bolt

A 1/4-20 x 2-1/4" grade 5 bolt connects the 6 tooth #550 roller chain sprocket to the front transmission shaft. This bolt must be removed for calibration.

The bolt can also be removed if it is desired to use the seeder as a pulverizer only. **See Figure 3-6.**

NOTE

Acre meter will not register when bolt is removed.

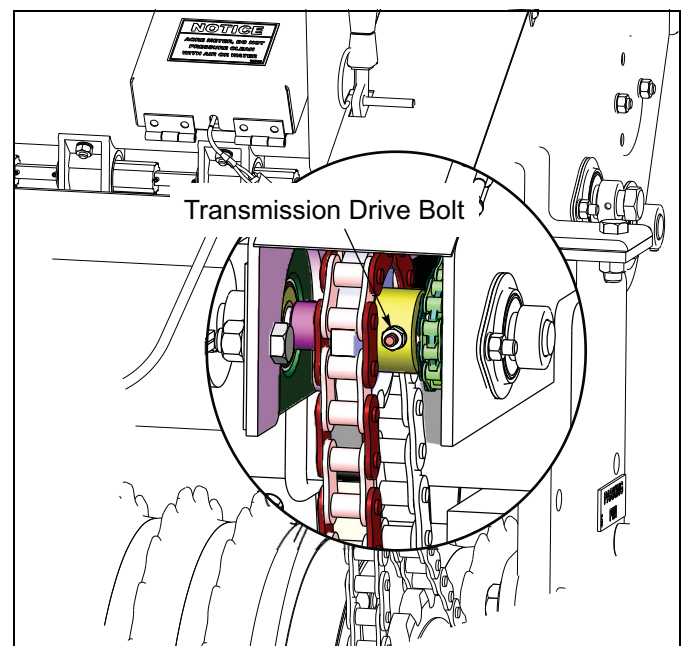


Figure 3-6: Transmission Drive Bolt

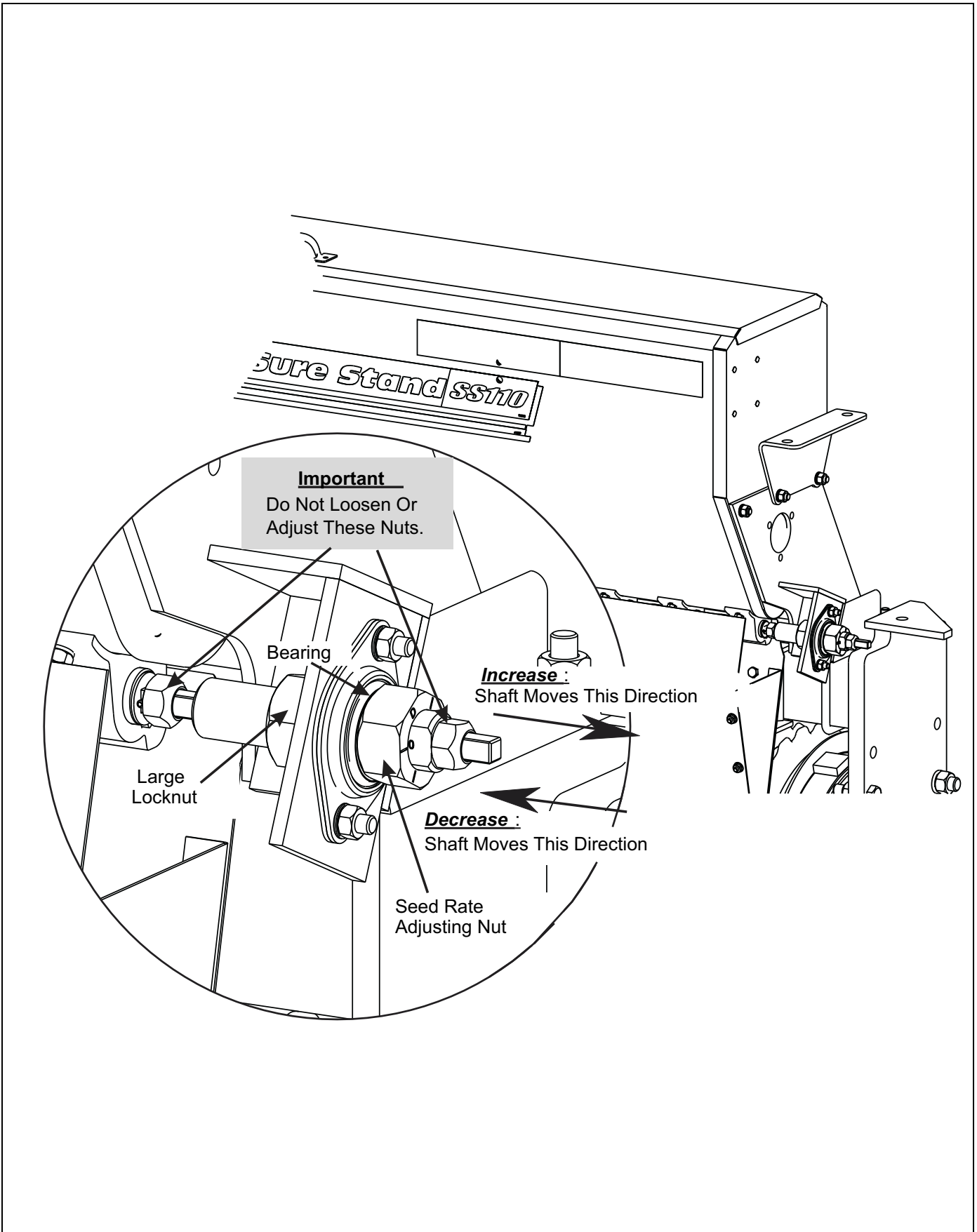


Figure 3-7: Seed Rate Adjustment

Seed Rate Calibration

Machine may be calibrated for unlisted seed as follows:

1. Remove the drive bolt from the 12 tooth #A550 chain driven sprocket. **See Figure 3-6.**
2. Raise the machine and lock in the transport position.
3. Place a canvas or tarp to catch loose seed.
4. Turn the 15/16" hex on the transmission clockwise as follows:
 - 250 revolutions for 8 foot seeder.
 - 200 revolutions for 10 foot seeder.
 - 167 revolutions for 12 foot seeder.
5. Weigh seed for the approximate planting rate in pounds per acre.

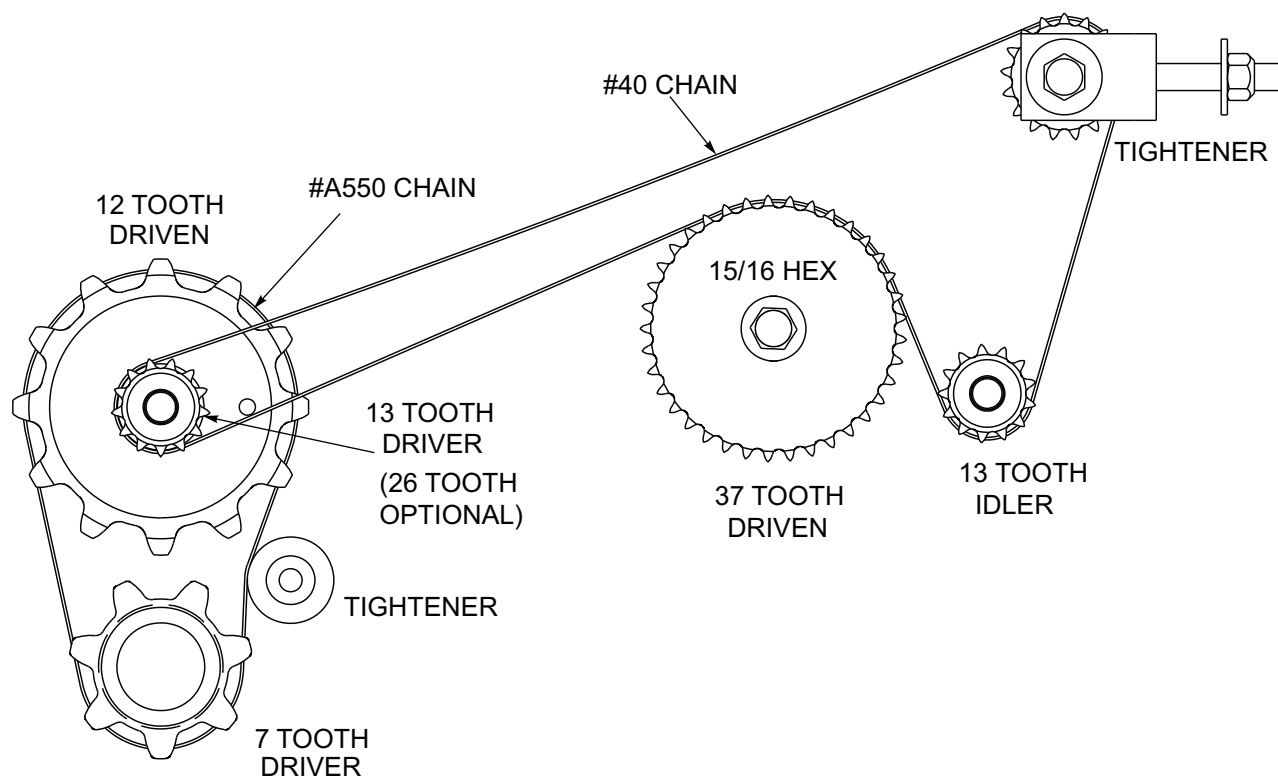


Figure 3-8: Seed Rate Calibration

OPERATION**Table 3-1: Seed Rate Chart**

Indicator Settings	POUNDS PER ACRE								POUNDS PER 1000 SQ FT							
	1A	2A	3A	4A	5A	6A	7A	8A	1A	2A	3A	4A	5A	6A	7A	8A
Alfalfa (Uncoated)	5	11	17	26	32	38	46	54	.11	.26	.40	.59	.73	.88	1.06	1.25
Bahia	3	8	14	19	26	32	38	43	.08	.18	.33	.44	.59	.73	.88	.99
Bermuda (Hulled)	3	10	17	27	35	42	48	56	.08	.22	.40	.63	.81	.95	1.1	1.28
Birdsfoot Trefoil (Broadleaf)	5	13	19	27	42	51	61	72	.11	.30	.44	.63	.95	1.17	1.39	1.65
Bluegrass (Kentucky)	2	6	11	16	21	26	30	35	.04	.14	.26	.37	.48	.59	.70	.81
Bluegrass (Park Kentucky)	2	5	10	14	19	22	26	29	.04	.11	.22	.33	.44	.52	.59	.66
Bluegrass (Sherman Big)	2	3	5	8	10	11	13	16	.04	.08	.11	.18	.22	.26	.30	.37
Canola	5	10	16	21	27	33	40	46	.11	.22	.37	.48	.63	.77	.92	1.06
Centipede	5	10	13	17	24	27	32	35	.11	.22	.30	.40	.55	.63	.73	.81
Chickory (Forage)	2	5	8	12	15	18	22	26	.04	.11	.18	.27	.34	.42	.5	.59
Clover (Alsike, Ladino, Sweet, Red)	5	11	19	26	33	42	48	54	.11	.26	.44	.59	.77	.95	1.10	1.25
Clover (Alyce, Calif, Bur, Crimson, Hubam)	3	10	16	24	33	40	48	61	.08	.22	.37	.55	.77	.92	1.1	1.39
Creasted Wheat	2	3	5	6	8	10	11	13	.04	.08	.11	.14	.18	.22	.26	.3
Crown Vetch	5	13	21	30	40	50	59	67	.11	.3	.48	.7	.92	1.14	1.36	1.54
Flax	3	10	16	21	27	32	37	43	.08	.22	.37	.48	.63	.73	.84	.99
Harding Grass	3	8	13	17	22	27	32	37	.08	.18	.3	.4	.52	.63	.73	.84
Highland Bent	3	6	9	12	15	17	20	23	.07	.14	.21	.27	.33	.4	.46	.52
Klein Grass	3	11	19	27	35	45	54	62	.08	.26	.44	.63	.81	1.03	1.25	1.43
Lespedeza (Korean Unhulled)	3	8	14	21	27	33	42	48	.08	.18	.33	.48	.63	.77	.95	1.1
Lespedeza (Korean Hulled)	5	11	19	27	33	42	50	56	.11	.26	.44	.63	.77	.95	1.14	1.28
Lespedeza (Sericea Unhulled)	2	6	11	16	21	26	30	33	.04	.14	.26	.37	.48	.59	.7	.77
Lespedeza (Sericea Hulled)	5	13	21	30	38	48	58	66	.11	.3	.48	.7	.88	1.1	1.32	1.5
Love Grass (Weeping)	3	11	19	27	35	43	53	62	.08	.26	.44	.63	.81	.99	1.21	1.43
Love Grass (Sand)	3	10	16	22	30	38	45	54	.08	.22	.37	.52	.7	.88	1.03	1.25
Millet	3	11	19	27	35	43	53	61	.08	.26	.44	.63	.81	.99	1.21	1.39
Northrup King Mixture	2	4	5	7	8	10	12	14	.04	.08	.12	.16	.19	.23	.27	.31
Red Top	2	5	8	11	13	14	16	19	.04	.11	.18	.26	.3	.33	.37	.44
Reed Canary Grass	2	5	8	11	14	17	21	26	.04	.11	.18	.26	.33	.4	.48	.59
Scott's Family Grass	1	3	4	6	7	8	10	11	.03	.06	.1	.13	.16	.19	.22	.25
Switch Grass (Cleaned and Hulled)	-	5	8	11	14	19	22	27	-	.11	.18	.26	.33	.44	.52	.63
Tillage Radish	5*	12	19	27	34	42	49	57	.11*	.28	.43	.61	.78	.96	1.13	1.31
Timothy	3	8	14	22	29	35	43	51	.08	.18	.33	.52	.66	.81	.99	1.17
Turnip (Purple Top)	3	9	15	22	28	35	41	48	.07	.22	.35	.51	.65	.81	.95	1.09

* WILL CRACK SOME SEEDS AT THESE SETTINGS

NOT RECOMMENDED: LENTILS, SORGHUM, SUDAN GRASS

NOTE

Brillion assumes no liability pertaining to seeding rates achieved with this seeder. Rates listed are general in nature and should be used as starting points only. Seed varieties and blends listed represent those calibrated through in-house test meters. Variations in actual rates may be realized due to differences in seed lots. For accurate rates with seeds being used, follow the calibration instructions listed on the seed chart inside the box cover or refer to the Operator's Manual. *The information listed in the above seed charts is subject to change without notice.*

Electronic Acre Meter Kit (Optional)

Settings for Loup Acre Meters After 05/15/2012

The battery operated acre counter operates in one of two modes. In sleep mode, the display is blank, and the counter is accumulating acres. Sleep mode will be entered if a button is not pressed for 20 seconds. In entry mode, the display is on, and the operator can enter values. To get into entry mode, press the ***/FUNC** button. If you continue to press the ***/FUNC** button, the acre counter will cycle through the functions that it can perform. The LEDs above the display indicate which function is selected.

The available functions are:

Field Acres, Total Acres, Pulses per 400 ft, Width, Password and Low Battery

Field Acres

Press the ***/FUNC** button until the **"FIELD"** LED is lit. The digits indicate the acres covered since the field acre counter was cleared.

To clear the field acre count, press the **UP** and **DOWN** buttons simultaneously for two seconds. If a password has been entered, you will not be able to clear the total acre count. Field acres will count in tenths of an acre up to 9999.9 acres.

Total Acres

Press the ***/FUNC** button until the **"FIELD"** and **"TOTAL"** LEDs are lit. The digits indicate the acres covered since the total acre counter was cleared.

To clear the total acre count, press and hold the **UP** and **DOWN** buttons for two seconds. If a password has been entered, you will not be able to clear the total acre count. Total acres will count from .1 to 99999 acres.

Pulses Per 400 Feet

Press the ***/FUNC** button until the **"PULSES"** LED is lit. The number in the display indicates how many pulses are generated for every 400 feet driven. There are two methods to enter the pulses per 400 feet:

If you know the number, select it using the **UP** and **DOWN** buttons. When you press the ***/FUNC** button, the Acre Counter will accept the number in the display as the new pulses per 400 feet. **See Table 3-2.**

If you do not know the pulses per mile, press and hold the **UP** and **DOWN** buttons until the "0000" appears in the display. The **"PULSES"** LED will blink. The acre counter is now counting shaft rotations. Enter the cab and drive 400 feet. Press the ***/FUNC** button to wake up the acre counter. The **"PULSES"** LED will again blink. The number displayed is the pulses per 400 feet. Press the ***/FUNC** button to accept the setting. The **"PULSES"** LED will stop blinking and remain on.

If a password is set, you will not be able to adjust the pulses per mile.

Width

Press the ***/FUNC** button until the **"WIDTH"** LED is lit. The number displayed is the length of your implement in feet.

To adjust the width, press the **UP** and **DOWN** buttons. If a password has been entered, you will not be able to adjust the width.

The length can be adjusted from .1 to 99.9 feet, in tenths of a foot.

Password

The password function allows you to protect the total acre count, pulses per 400 feet, and width settings with a password. This stops anyone from accidentally changing those settings. When the acre counter is shipped, the password is disabled. You can modify the pulses per 400 feet and implement width at any time.

Press the ***/FUNC** button until the **"PASS"** LED is lit. The digits will display the word **"Ent"** or **"dis"**.

If the display shows **"dis"**: The password is disabled. The total acre count, pulses/400 ft, width, and password settings can be adjusted using the **UP** and **DOWN** buttons. The password can also be changed using the **UP** and **DOWN** buttons.

If the display shows **"Ent"**: You must enter your password using the **UP** and **DOWN** buttons. When your password is displayed, press the ***/FUNC** button to test the password. If the password is correct, you will be able to change the acre counter settings. The password will be viewable until the acre counter powers down. When the acre counter is powered up again, you will have to re-enter the password to change settings.

If the password is not correct, you will not be able to change the acre counter settings. When the **"PASS"** function is selected again, **"Ent"** will appear in the display.

OPERATION

Changing The Password

Select a new password using the **UP** and **DOWN** buttons. Press the ***/FUNC** button until the word **"SET"** appears in the display. Release the ***/FUNC** button. The number in the display is your new pass code. Make sure you record this number. Press and hold the ***/FUNC** button until the word **"dis"** appears in the display.

If the password is forgotten, it can be disabled by removing the batteries. The password is intended for rental units. It is recommended that a seal be affixed to the rear plate of the acre counter to determine if the settings have been tampered with.

Quick-start Settings for Loup Acre Meters Prior to 05/15/2012

- When the meter is set to "count" mode in pulses screen, meter will register only magnetic wheel revolutions.
- The meter must be in sleep mode (blank screen) to calculate acres or to count pulses.
- The count screen must have a value other than zero (0000) to scroll to other modes or screens.
- To reset the FIELD ACRES screen to zero (0000), press the up and down buttons simultaneously.

To Program Meter

1. Press the function button to scroll to pulses screen.
2. Enter the number of pulses using the up or down buttons for the model listed in the chart. **See Table .**
3. Press the function button to set the pulses. (If screen goes blank before you press the function button, repeat steps 1 and 2).
4. Press the function button to scroll to the width screen.
5. Enter the width of seeder using the up or down buttons for the model listed in the chart.
6. Press the function button to set the width. (If screen goes blank before you press the function button, repeat steps 4 and 5).
7. Press the function to scroll through the screens to check that the correct pulses and width have been entered.

To Enter Password

1. Press the function button to scroll to password screen.
2. Pick a numeric password and enter it by using the up or down buttons, until your password is displayed.

3. Press the function button to set password; screen will show "(set)". Record number - it is required if you decide to disable password.
4. Let screen go blank - password is now entered.
5. Press the function button to scroll to the password screen it will show (ent). If the screen does not show (ent), repeat steps 2, 3 and 4.

To Disable Password

1. Press the function button to scroll to the password screen it will show (ent).
2. Use up or down button to enter password (number).
3. Press the function button to scroll around to pass screen again. Number entered in step 2 will appear.
4. Press up or down button to enter 0.
5. Press the function button; (dis) will appear. Password is now disabled.

Battery Replacement

The battery operated acre counter uses 3 AA batteries. The batteries should last between 5 and 10 years. The acre counter will last much longer than that. Eventually, you will have to replace the batteries. The **"BATT"** LED will light when the batteries require replacement. Remove the acre counter from the implement and undo the 4 screws on the back of the case. This will separate the housing from the rear plate. Replace the batteries with 3 high quality AA alkaline batteries.

This unit is dust and splash resistant, under no circumstances should this unit be submerged in any conductive, corrosive, or flammable liquid.

Table 3-2: Acre Meter Settings (After 05/15/2012)

MODEL				PULSES	WIDTH
SSP T604				22	5.0
SSP4	SS4			44	4.0
SSP5	SS5			44	5.0
SSP6	SS6			44	6.0
SSP8	SS8			58	8.0
SSP10	SS10			58	10.0
SSP12	SS12			58	12.0
SSP108	SS108			58	8.0
SSP110	SS110			58	10.0
SSP112	SS112			58	12.0
SSP208	SSP2081	SS208	SS2081	58	8.0
SSP210	SSP2101	SS210	SS2101	58	10.0
SSP212	SSP2121	SS212	SS2121	58	12.0
SSP308		SS308		29	8.0
SSP310		SS310		29	10.0
SSP312		SS312		29	12.0
SLP8		SL8		314	8.0
SLP10		SL10		314	10.0
SLP12		SL12		314	12.0
SLP204		SLP2041		128	4.0
SLP206		SLP2061		128	6.0
SLP304		SLP3041		64	4.0
SLP306		SLP3061		64	6.0
LSP5				128	5.0
LSP6				128	6.0
LSS6				128	6.0
SLP208	SLP2081	SL208	SL2081	116	8.0
SLP210	SLP2101	SL210	SL2101	116	10.0
SLP212	SLP2121	SL212	SL2121	116	12.0
SLP308	SLP3081	SL308	SL3081	58	8.0
SLP310	SLP3101	SL310	SL3101	58	10.0
SLP312	SLP3121	SL312	SL3121	58	12.0
BOS4F1	BOS4S1	BOS6F1	BOS6S1	45	4.0
BOSB4F1	BOSB4S12	BOSB6F1	BOSB6S1	45	6.0
BPS6	BPSB6			51	6.0
GLP643		SSLP643		69	5.3

OPERATION

Table 3-3: Acre Meter Settings (Prior to 05/15/2012)

MODEL				Pulses	Width
SSP T604				293	5
SSP4		SS4		578	4
SSP5				578	5
SSP6		SS6		578	6
SSP8		SS8		764	8
SSP10		SS10		764	10
SSP12		SS12		764	12
SSP108		SS108		760	8
SSP110		SS110		760	10
SSP112		SS112		760	12
SSP208	SSP2081	SS208	SS2081	764	8
SSP210	SSP2101	SS210	SS2101	764	10
SSP212	SSP2121	SS212	SS2121	764	12
SSP308		SS308		382	8
SSP310		SS310		382	10
SSP312		SS312		382	12
SLP8		SL8		4147	8
SLP10		SL10		4147	10
SLP12		SL12		4147	12
SLP204	SLP2041			1690	4
SLP206	SLP2061			1690	6
SLP304	SLP3041			845	4
SLP306	SLP3061			845	6
LSP5				1690	5
LSP6				1690	6
LSS6				1690	6
SLP208	SLP2081	SL208	SL2081	1528	8
SLP210	SLP2101	SL210	SL2101	1528	10
SLP212	SLP2121	SL212	SL2121	1528	12
SLP308	SLP3081	SL308	SL3081	764	8
SLP310	SLP3101	SL310	SL3101	764	10
SLP312	SLP3121	SL312	SL3121	764	12
BOS4F1	BOS4S1	BOS6F1	BOS6S1	600	4
BOSB4F1	BOSB4S1	BOSB6F1	BOSB6S1	600	6
BPS6	BPSB6			679	6
GLP643		SSLP643		917	5

Chapter 4

Maintenance & Adjustment

General Torque Specifications

(rev. 4/97)

This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and capscrews assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 33% to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 capscrews. Use value in [] if using prevailing torque nuts

TORQUE SPECIFIED IN FOOT POUNDS

UNC SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 8	UNF SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 8
1/4-20	4 [5]	6 [7]	9 [11]	1/4-28	5 [6]	7 [9]	10 [12]
5/16-18	8 [10]	13 [13]	18 [22]	5/16-24	9 [11]	14 [17]	20 [25]
3/8-16	15 [19]	23 [29]	35 [42]	3/8-24	17 [21]	25 [31]	35 [44]
7/16-14	24 [30]	35 [43]	55 [62]	7/16-20	27 [34]	40 [50]	60 [75]
1/2-13	35 [43]	55 [62]	80 [100]	1/2-20	40 [50]	65 [81]	90 [112]
9/16-12	55 [62]	80 [100]	110 [137]	9/16-18	60 [75]	90 [112]	130 [162]
5/8-11	75 [94]	110 [137]	170 [212]	5/8-18	85 [106]	130 [162]	180 [225]
3/4-10	130 [162]	200 [250]	280 [350]	3/4-16	150 [188]	220 [275]	320 [400]
7/8-9	125 [156]	320 [400]	460 [575]	7/8-14	140 [175]	360 [450]	500 [625]
1-8	190 [237]	408 [506]	680 [850]	1-14	210 [263]	540 [675]	760 [950]
1-1/8-7	270 [337]	600 [750]	960 [1200]	1-1/8-12	300 [375]	660 [825]	1080 [1350]
1-1/4-7	380 [475]	840 [1050]	1426 [1782]	1-1/4-12	420 [525]	920 [1150]	1500 [1875]
1-3/8-6	490 [612]	1010 [1375]	1780 [2225]	1-3/8-12	560 [700]	1260 [1575]	2010 [2512]
1-1/2-6	650 [812]	1460 [1825]	2360 [2950]	1-1/2-12	730 [912]	1640 [2050]	2660 [3325]

METRIC:

Coarse thread metric class 10.9 fasteners and class 10.0 nuts and through hardened flat washers, phosphate coated, Rockwell "C" 38-45. Use value in [] if using prevailing torque nuts

Nominal thread diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque)	Nominal Thread Diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque)
6	10 [14]	7 [10]	20	385 [450]	290 [335]
7	16 [22]	12 [16]	24	670 [775]	500 [625]
8	23 [32]	17 [24]	27	980 [1105]	730 [825]
10	46 [60]	34 [47]	30	1330 [1470]	990 [1090]
12	80 [125]	60 [75]	33	1790 [1950]	1340 [1450]
14	125 [155]	90 [115]	36	2325 [2515]	1730 [1870]
16	200 [240]	150 [180]	39	3010 [3210]	2240 [2380]
18	275 [330]	205 [245]			

MAINTENANCE & ADJUSTMENT**Hydraulic Fitting Torque Specifications****37 degree JIC, ORS, & ORB (REV. 10/97)**

This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and capscrews assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 33% to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 capscrews. Use value in [] if using prevailing torque nuts

TORQUE SPECIFIED IN FOOT POUNDS**PARKER® BRAND FITTINGS**

Dash Size	37 Deg. JIC	O-ring (ORS)	O-ring boss
-4	11-13	15-17	13-15
-5	14-16	-----	21-23
-6	20-22	34-36	25-29
-8	43-47	58-62	40-44
-10	55-65	100-110	58-62
-12	80-90	134-146	75-85
-16	115-125	202-218	109-121
-20	160-180	248-272	213-237
-24	185-215	303-327	238-262
-32	250-290	-----	310-340

AEROQUIP® BRAND FITTINGS

Dash Size	37 Deg. JIC	O-ring (ORS)	O-ring boss
-4	11-12	10-12	14-16
-5	15-16	-----	16-20
-6	18-20	18-20	24-26
-8	38-42	32-35	50-60
-10	57-62	46-50	75-80
-12	79-87	65-70	125-135
-14	-----	-----	160-180
-16	108-113	92-100	200-220
-20	127-133	125-140	210-280
-24	158-167	150-165	270-360

GATES® BRAND FITTINGS

Dash Size	37 Deg. JIC	O-ring (ORS)	O-ring boss
-4	10-11	10-12	14-16
-5	13-15	-----	-----
-6	17-19	18-20	24-26
-8	34-38	32-40	37-44
-10	50-56	46-56	50-60
-12	70-78	65-80	75-83
-14	-----	65-80	-----
-16	94-104	92-105	111-125
-20	124-138	125-140	133-152
-24	156-173	150-180	156-184
-32	219-243	-----	-----

Fasteners

Before operating your Brillion machine, check all hardware for tightness. Use the Tightening Torque Table reproduced below as a guide.

After a few hours of use, check entire machine and tighten any loose nuts or bolts. Daily or periodic checks should be made thereafter.

Tires

Recommended inflation pressure is as follows:

7.00/7.60-15 6 ply rating.....40 psi

9.5 L-15 6 ply rating.....32 psi

11 L-15 8 ply rating.....28 psi

Lubrication

- All machines have a grease zerk on the bearing on each end of the front and rear rollers. Pull type machines have a zerk on each wheel arm pivot as well. **See Figures 4-1 and 4-2.**
- Oil roller chains periodically.
- Repack wheel bearings annually.
- Grease all bearings every 20 hours.
- Grease wheel arms every 4 hours when machine is constantly raised.
- When the machine is not used for some time, exposed portions of the hydraulic cylinder rods must be cleaned and covered with a thick coat of grease to prevent corrosion, which will damage the seals.

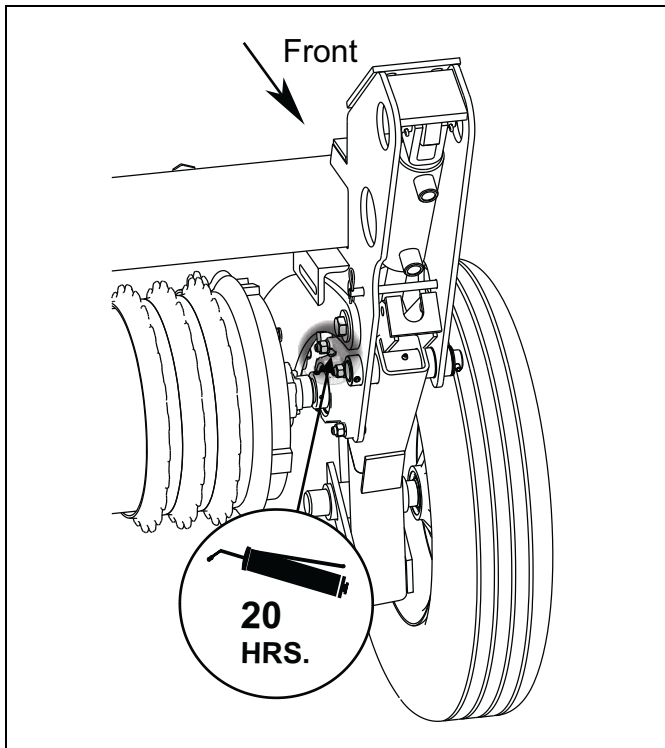


Figure 4-1: Lube Points (1 of 2)

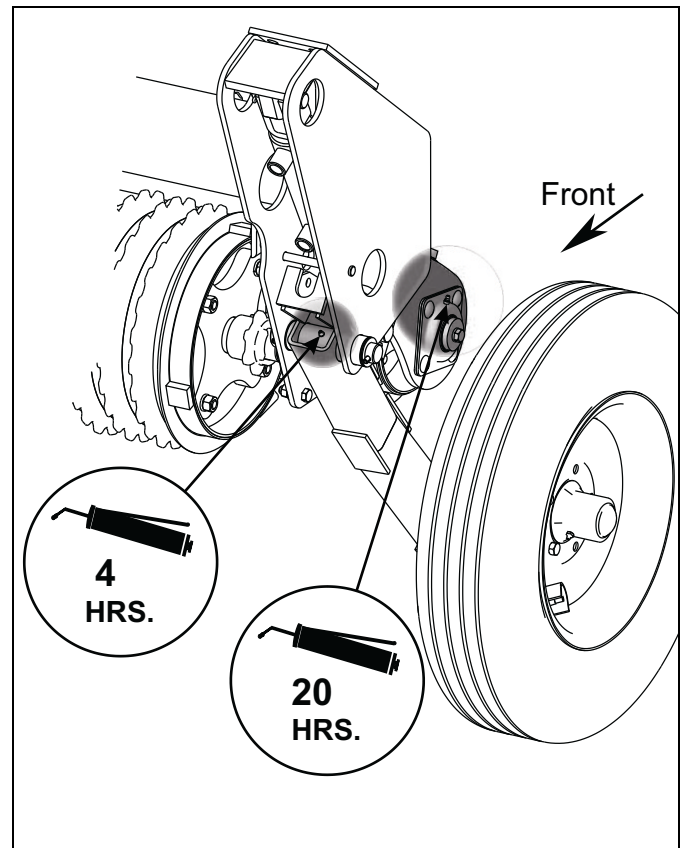


Figure 4-2: Lube Points (2 of 2)

Chain Tension

To adjust the transmission chain, first loosen the 5/8" idle axle bolt and then use the clevis bolt to obtain about 3/8" - 1/2" sag. Re-tighten axle bolt. Be careful not to over tighten this chain. **See Figures 4-3 and 4-4.**

Adjust the chain between the front roller and transmission to have approximately 2" of total deflection. **See Figure 4-4.**

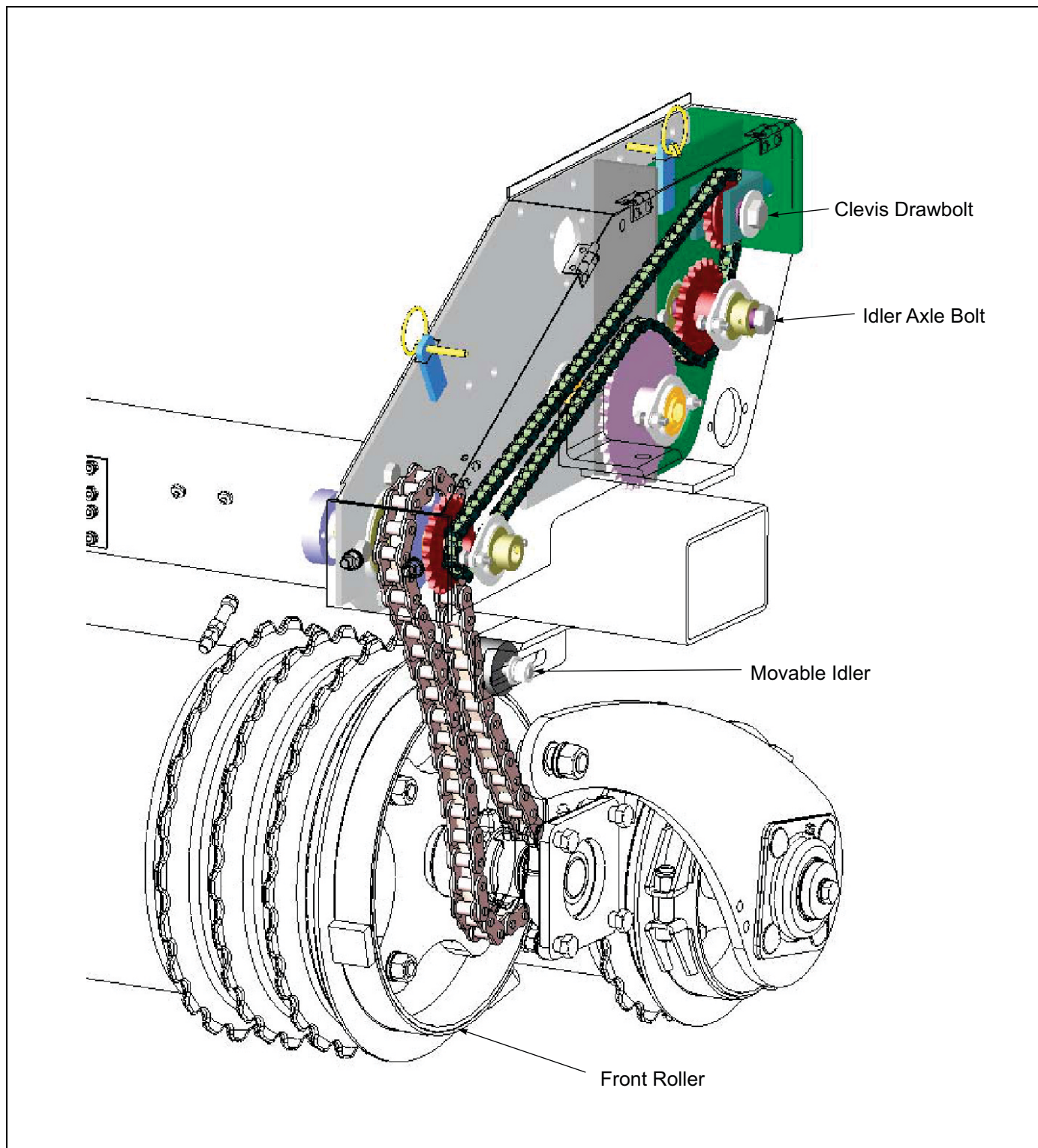


Figure 4-3: Chain Tension 1 of 2

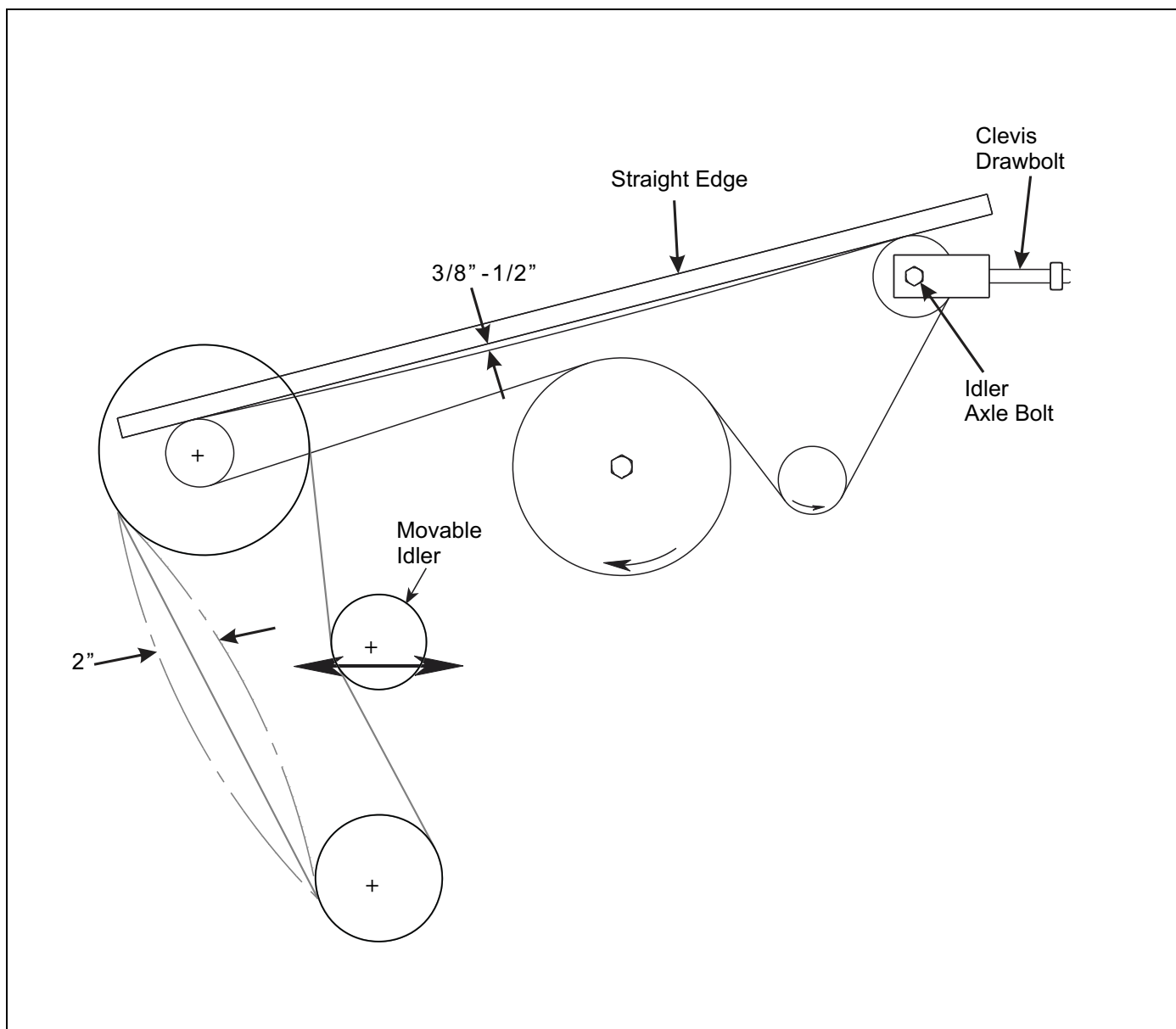


Figure 4-4: Chain Tension 2 of 2

Feed Cup Adjustment

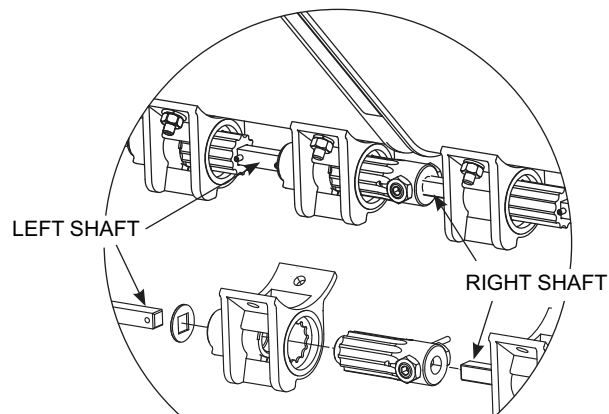
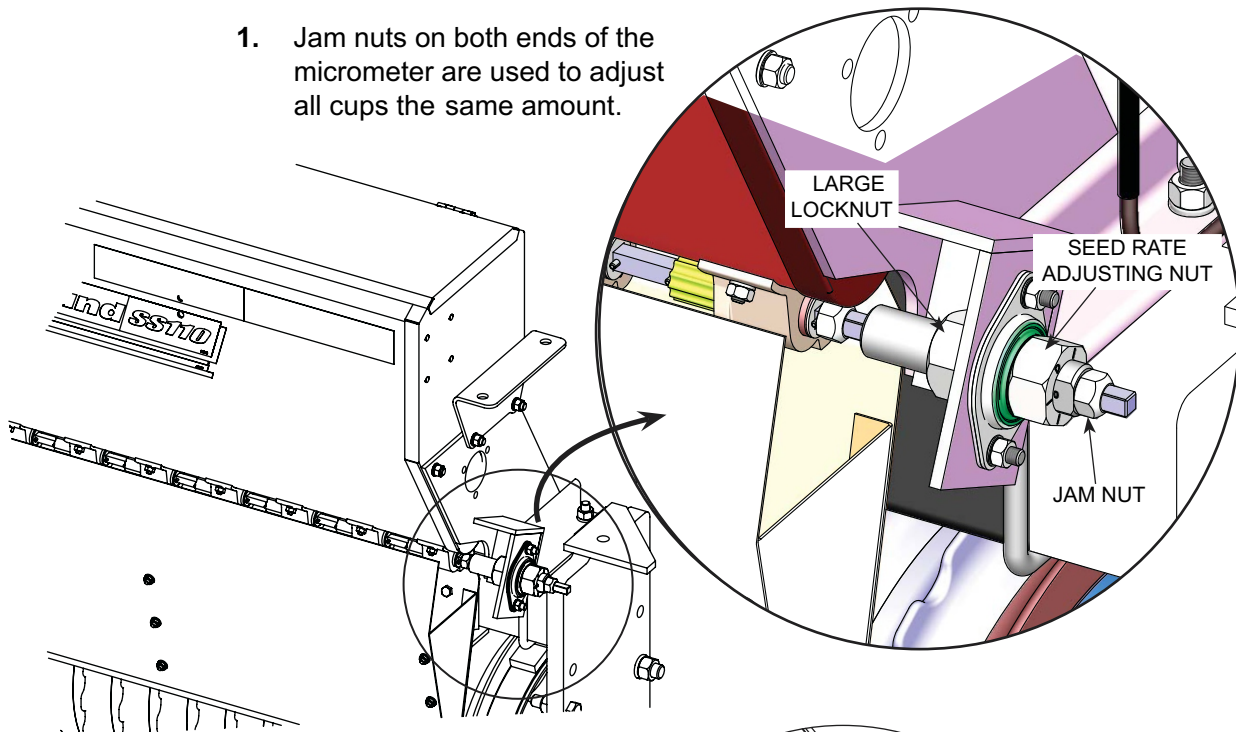
All cups must be set the same to ensure seed uniformly. To check, set the adjusting nut to 0-A. The "A" on the adjustment nut is positioned over the "0" (the nut covers half of the "0") with the adjustment nut snug against the bearing. All cups should be closed. If not, there are three adjustments to make as needed. **See Figure 4-5.**

1. Jam nuts on both ends of the micrometer are used to adjust all cups the same amount.
2. Loosen the feed roll coupling jam nuts and set screws. Turn right hand seed shaft in or out of coupling as required so all cups close at the same time.
3. Individual cups can be adjusted by loosening their mounting bolts, moving cups and then re-tightening.

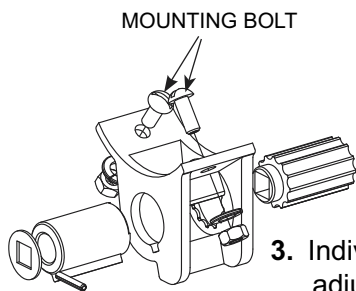
Feed Cup Adjustment

All cups must be set the same to seed uniformly. To check, set the adjusting nut to 0-A. All cups should be closed. If not, there are three adjustments to make as needed:

1. Jam nuts on both ends of the micrometer are used to adjust all cups the same amount.



2. Loosen feed roll coupling jam nuts and set screws. Turn right hand seed shaft in or out of coupling as required so all cups close at the same time. See step 3.



3. Individual cups can be adjusted by loosening their mounting bolts, moving cups, and then re-tightening.

Figure 4-5: Feed Cup Adjustment

Roller Wheels

Occasionally it is necessary to loosen clamp bands and tighten roller wheel assemblies. As nearly as possible, peaks on rear wheels should line up with valleys on the front wheels. This requires adjusting both end clamps on the rear axle drum.

Adjustment Procedure

Adjust the front roller wheels first. Loosen clamp bands and slide wheels snug against each other, centering the entire assembly under the deflector shields. Locate the bolt in the clamp band over the weld on the pipe. Slide the clamp band against the end wheel and tighten the clamp band bolt. **See Figure 4-6.**

To adjust the rear roller wheels follow the front wheel procedure. Start aligning the peaks of the rear wheels with the valley of the front wheels at the center of the rear roller. This will provide the best alignment of worn wheels.

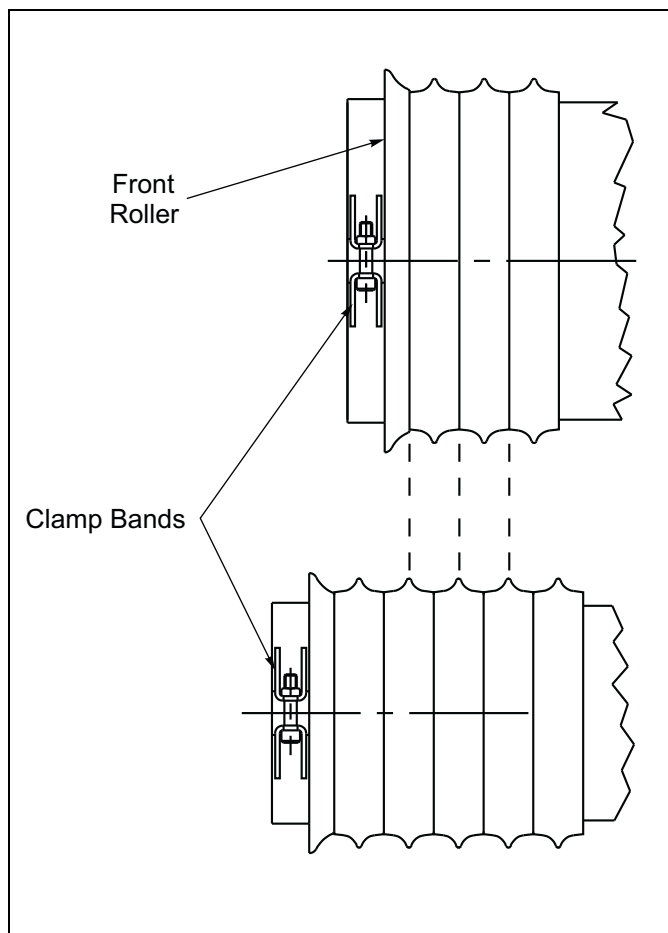


Figure 4-6: Roller Wheel Adjustment

Electric Clutch

IMPORTANT

If your machine is equipped with an Electric Clutch at no time use high pressure water or air to clean it, as this can damage the unit.



Figure 4-7: Electric Clutch

Hydraulic Maintenance

1. Check the tractor hydraulic fluid level per tractor owner's manual and after any leakage. Check fluid level with the cylinders in the retracted position.
2. If a cylinder or valve leaks, disassemble the parts to determine the cause of the leak. Any time a cylinder is opened up, or whenever any seal replacement is necessary, it is advisable to clean all parts and replace all seals. Seal kits are available from your Landoll/Brillion dealer.
3. Check all hydraulic hoses weekly. Look for binding or cracking. Replace all worn or defective parts immediately.

IMPORTANT

Lower the unit to the ground, and relieve hydraulic pressure before attempting to service any hydraulic component.

4. Transport locks are provided to hold the implement in a raised position. Do not attempt to perform any service work under the implement without first installing the transport locks. Before servicing any hydraulic component, lower the implement to the ground and relieve all system pressure. If a hydraulic component is disconnected, repaired, or replaced, it will be necessary to purge the system of air before operation.

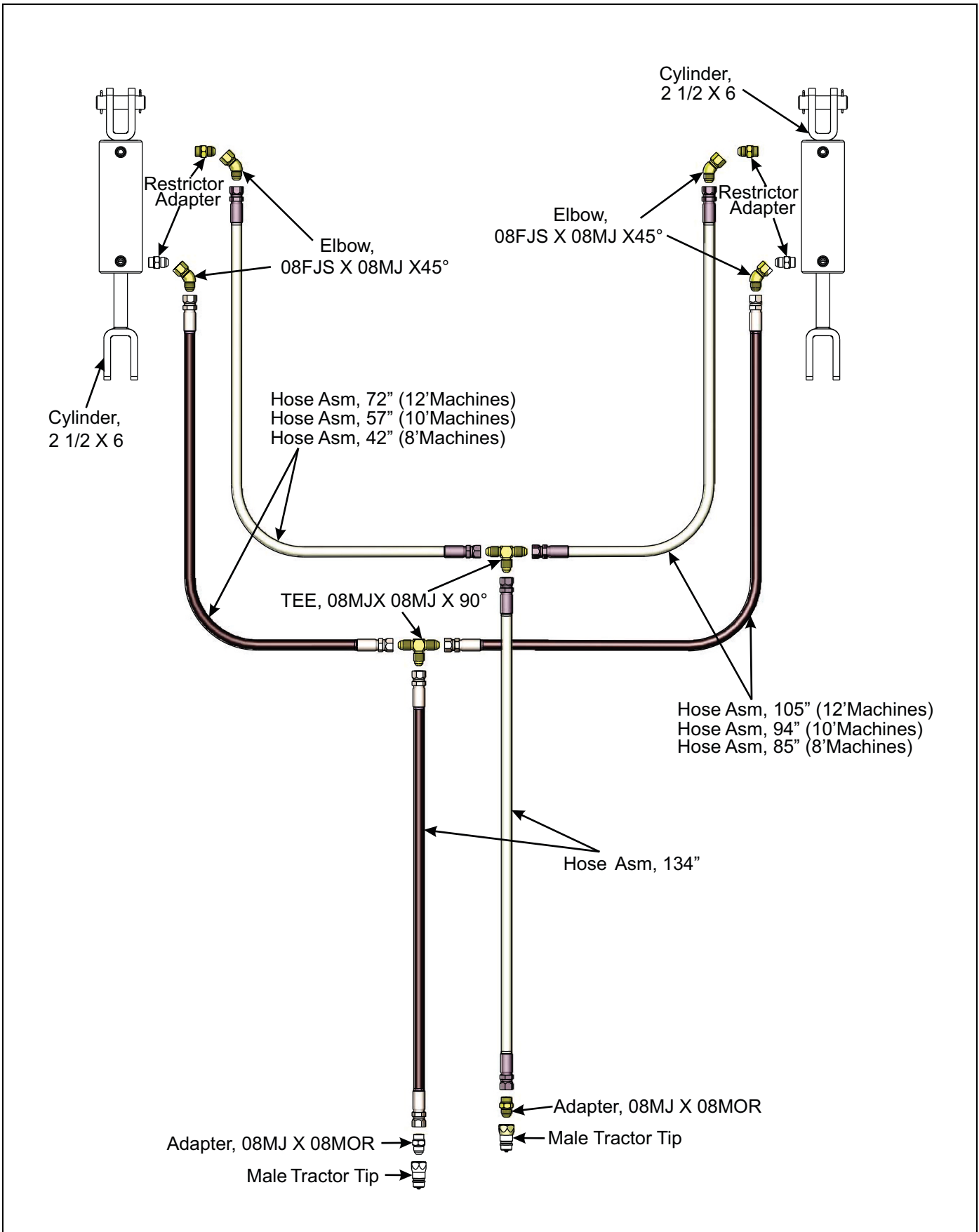


Figure 4-8: Hydraulic Schematic

Chapter 5

General Reference Tables and Specifications

Table 5-1:

Machine Specifications		
Model Designation	Description	Weight (lbs)
8-ft Mid-size Sure Stand Seeder		
SS108	8-ft. drawbar model	2054
SSP108	8-ft. pick-up model	1734
Seeding Width	8'	
Overall Width Pick up	9'6"	
Pull Type	11'1"	
Number of Seed Flow Meters	22	
Seed Box Capacity	6 Bushels	
Three-point hitch	Category 2	
10-ft Mid-size Sure Stand Seeder		
SS110	10-ft. drawbar model	2394
SSP110	10-ft. pick-up model	2074
Seeding Width	10'	
Overall Width Pick up	11'4"	
Pull type	12'11"	
Number of Seed Flow Meters	28	
Seed Box Capacity	7 1/2 Bushels	
Three-Point Hitch	Category 2	
12-ft Mid-size Sure Stand Seeder		
SS112	12-ft. drawbar model	2842
SSP112	12-ft. pick-up model	2488
Number of Seed Flow Meters	34	
Seeding Width	12'	
Overall Width Pick up	13'3"	
Pull Type	15' 0"	
Seed Box Capacity	9 Bushels	
Three-Point Hitch	Category 2	

Table 5-2:

Optional Equipment				
		Weight. lbs.		
		8'	10'	12'
5K745	Electronic Acre Meter	3	3	3
9J931 - 8ft.	Tire Track Remover Kit (includes 6 S - tines with shovel (Pick-up seeder requires standard 9J442 long hitch to use S - tine track remover kit).	148		
9J438 - 10ft.			154	
2K496 - 12ft.				159
9J932	Coil Tine Tire Track remover Kit (for use with all hitches)	105	105	105
1K225 - 8ft.	Scraper Kit (for front wheels)	85		
1K224 - 10ft.	Scraper Kit (for front wheels)		115	
2K526 - 12ft.	Scraper Kit (for front wheels)			122
9J936	Short-coupled (6") 3-Pt. Hitch (standard on SLP8)	127	127	127
9J464	Long-coupled (23") 3-Pt. Hitch (standard on SLP10 & SLP12)	170	170	170
1P152	Electric Clutch (factory installed in lieu of regular transmission)	81	81	81
194036	Seed Shaft Monitor Kit	13	13	13

Document Control Revision Log:

Date	Revision	Improvement(s) Description and Comments
7/7/2008	205rev7-7-08	Initial Release
09/2013	205rev0913	Added LED Warning Lights
12/15	205rev1215	Added Seedbox Dividers, moved Decals



Intertek

Equipment from Landoll Corporation is built to exacting standards ensured by ISO 9001 registration at all Landoll manufacturing facilities.

Alfa Seeder Medium Capacity Sure Stand Models 108/110/112

Operator's Manual

Re-Order Part Number 9K713rev1215

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