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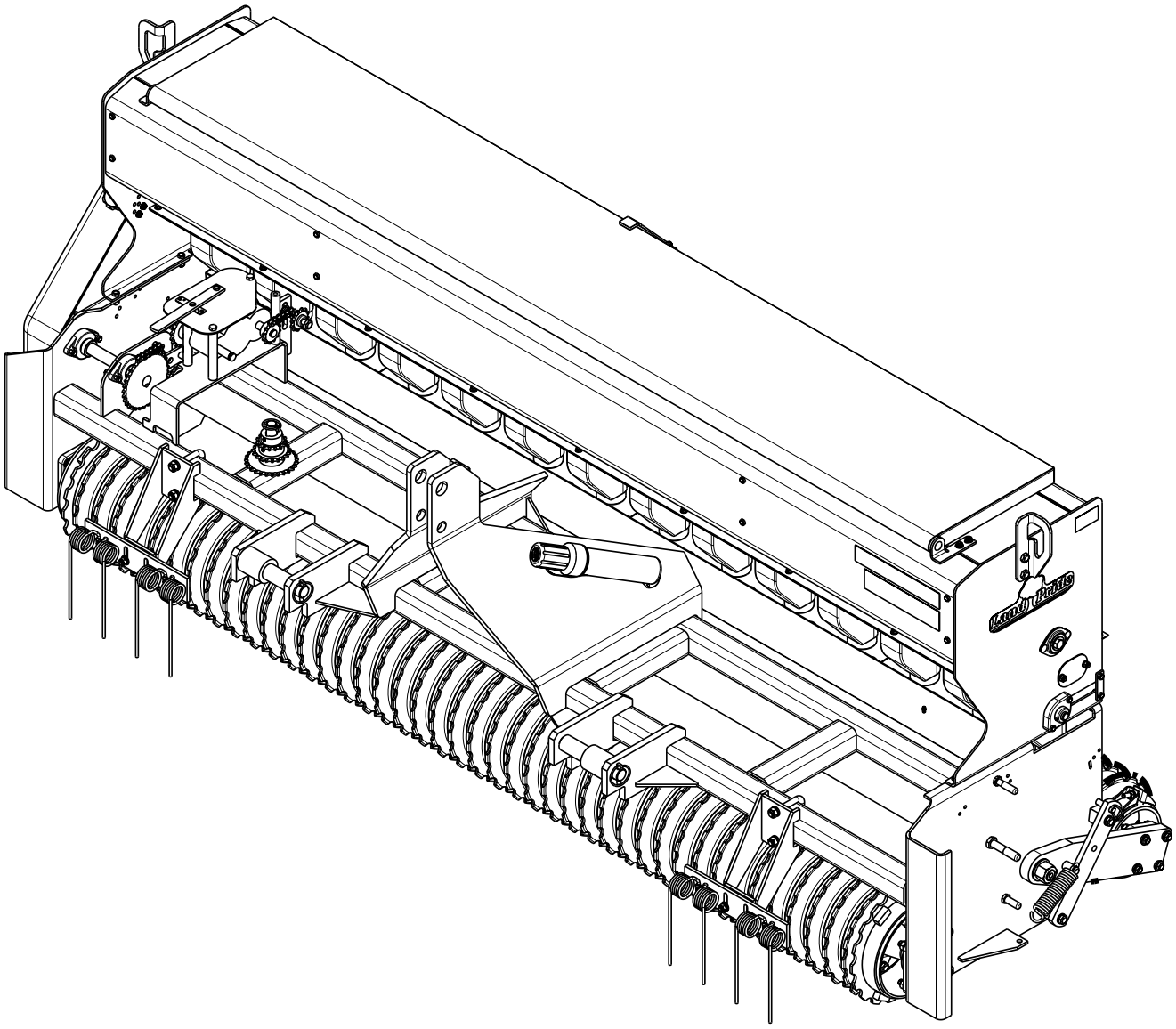
Primary Seeder

PSN2096



27611

313-306M

Operator's Manual

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

Cover photo may show optional equipment not supplied with standard unit.

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Printed in the United States of America.

These are common practices that may or may not be applicable to the products described in this manual.

Safety at All Times

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Label" section, read all instructions noted on them.

Do not allow anyone to operate this equipment who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the equipment.

- ▲ The operator must not use drugs or alcohol as they can change the alertness or coordination of that person while operating equipment. The operator should, if taking over-the-counter drugs, seek medical advice on whether he/she can safely operate the equipment.
- ▲ Operator should be familiar with all functions of the unit.
- ▲ Operate controls from the driver's seat only. Never operate controls from the ground.
- ▲ Make sure all guards and shields are in place and secured before operating implement.
- ▲ Keep all bystanders away from equipment and work area.
- ▲ Do not leave tractor or implement unattended with engine running.
- ▲ Dismounting from a moving tractor can cause serious injury or death.
- ▲ Do not allow anyone to stand between tractor and implement while backing up to implement.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ Watch out for fences, trees, rocks, wires, etc., while operating and transporting implement.
- ▲ Turning tractor too tight may cause hitched machinery to ride up on wheels. This could result in injury or equipment damage.

Look For The Safety Alert 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

A Signal word designates a degree or level of hazard seriousness. The signal words are:

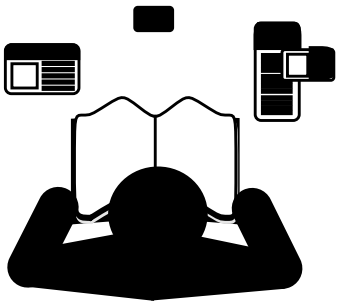
⚠ DANGER
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

⚠ 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.

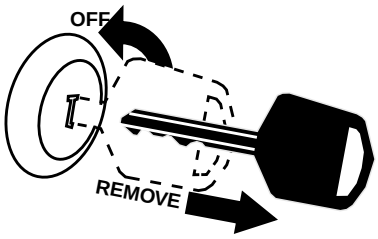
For Your Protection

- ▲ Thoroughly read and understand the "Safety Label" section, read all instructions noted on them.



Shutdown and Storage

- ▲ Lower attached implement to ground, put tractor in park, turn off engine, and remove the key.
- ▲ Detach and store implements in an area where children normally do not play. Secure implement by using blocks and supports.



Parts Manual QR Locator

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

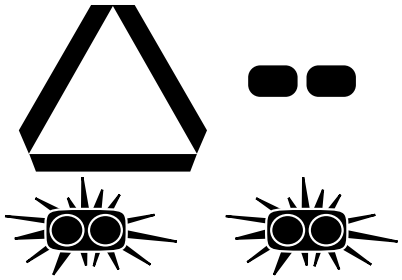
Dealer QR Locator

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

These are common practices that may or may not be applicable to the products described in this manual.

Use Safety Lights and Devices

- ▲ Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads.



Transport Machinery Safely

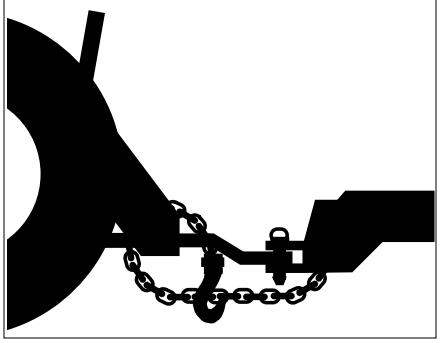
- ▲ Comply with state and local laws.
- ▲ Use towing vehicle and trailer of adequate size and capacity.
- ▲ Secure equipment towed on a trailer with tie downs and chains.
- ▲ Sudden braking can cause a trailer to swerve and upset. Reduce speed if trailer is not equipped with brakes.
- ▲ Avoid contact with any over head utility lines or electrically charged conductors.
- ▲ Engage parking brake when stopped on an incline.
- ▲ Maximum transport speed for an attached implement is 20 mph. DO NOT EXCEED. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrains require a slower speed.
- ▲ As a guideline, use the following maximum speed weight ratios for an attached implement:

  20 mph when weight of attached implement is less than or equal to the weight of machine towing the implement.

  10 mph when weight of attached implement exceeds weight of machine towing implement but not more than double the weight.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of the machine towing the load.

Use A Safety Chain

- ▲ A safety chain will help control drawn machinery should it separate from the tractor drawbar.
- ▲ Use a chain with the strength rating equal to or greater than the gross weight of the towed machinery.
- ▲ Attach the chain to the tractor drawbar support or other specified anchor location. Allow only enough slack in the chain to permit turning.
- ▲ Do not use safety chain for towing.



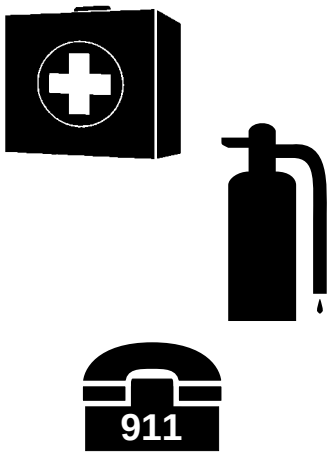
Practice Safe Maintenance

- ▲ Understand procedure before doing work. Use proper tools and equipment, refer to Operator's Manual for additional information.
- ▲ Work in a clean dry area.
- ▲ Lower attached implement to the ground, put tractor in park, turn off engine, and remove key before performing maintenance.
- ▲ Allow implement to cool before working on it.
- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on implement.
- ▲ Do not grease or oil implement while it is in operation.
- ▲ Inspect all parts. Make certain parts are in good condition & installed properly.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Remove all tools and unused parts from implement before operation.

These are common practices that may or may not be applicable to the products described in this manual.

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.



Wear Protective Equipment

- ▲ Wear protective clothing and equipment appropriate for the job. Clothing should be snug fitting without fringes and pull strings to avoid entanglement with moving parts.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating equipment safely requires the operator's full attention. Avoid wearing radio headphones while operating machinery.

Avoid High Pressure Fluids Hazard

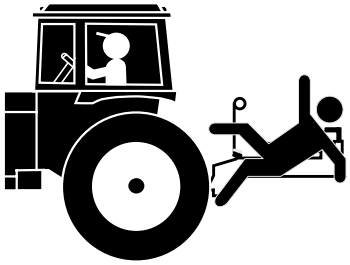
- ▲ Escaping fluid under pressure can penetrate the skin causing serious injury.
- ▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing work on the system.
- ▲ Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- ▲ 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.
- ▲ **DO NOT DELAY.** If an accident occurs, see a doctor familiar with this type of injury immediately. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene may result.

Tire Safety

- ▲ Tire changing can be dangerous and should be preformed by trained personnel using the 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 and 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 the weight involved.

Keep Riders Off Machinery

- ▲ Never carry riders or use machinery as a personlift.
- ▲ Riders obstruct operator's view.
- ▲ Riders could be struck by foreign objects or thrown from the machine.
- ▲ Never allow children to operate equipment.



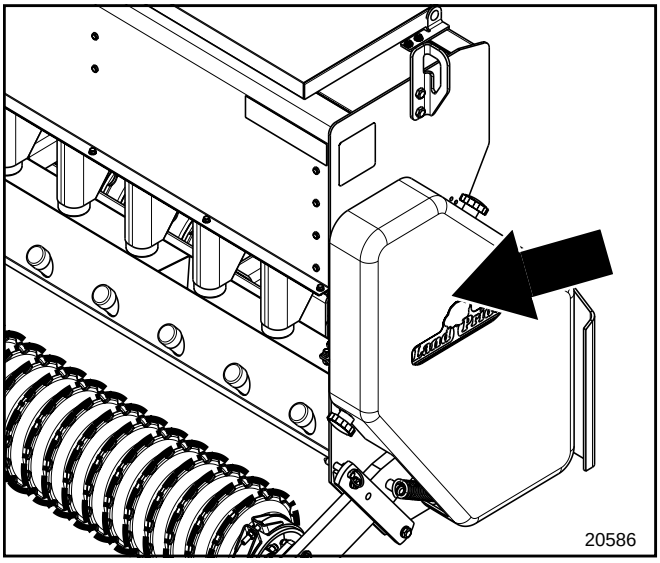
Avoid Underground Utilities

- ▲ **Dig Safe, Call 811.** Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before digging so that they may mark the location of any under ground services in the area.
- ▲ Be sure to ask how close you can work to the marks they positioned.

Safety Labels

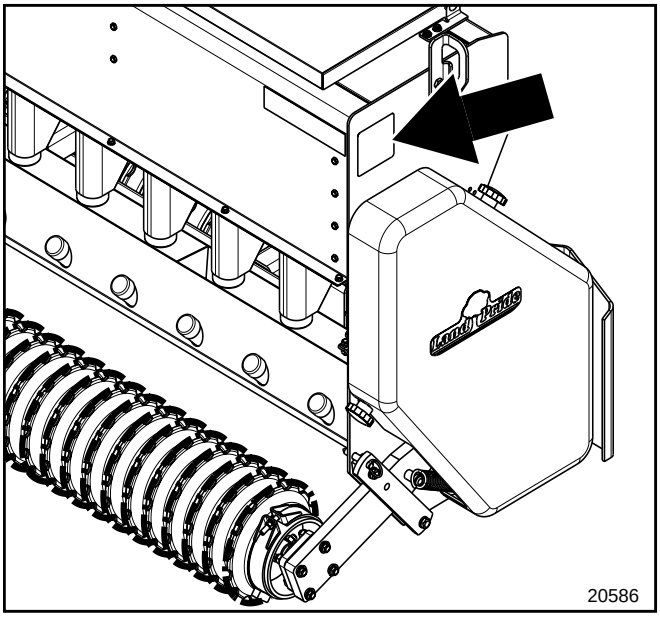
Your Primary Seeder comes equipped with all safety labels in place. They were designed to help you safely operate your implement. Read and follow their directions.

1. *Keep all safety labels clean and legible.*
2. *Refer to this section for proper label placement. Replace all damaged or missing labels. Order new labels from your nearest Land Pride dealer. To find your nearest dealer, visit our dealer locator at www.landpride.com.*
3. *Some new equipment installed during repair requires safety labels to be affixed to the replaced component as specified by Land Pride. When ordering new components make sure the correct safety labels are included in the request.*
4. *Refer to this section for proper label placement.*
   To install new labels:
   a. *Clean the area the label is to be placed.*
   b. *Spray soapy water on the surface where the label is to be placed.*
   c. *Peel backing from label. Press firmly onto the surface.*
   d. *Squeeze out air bubbles with the edge of a credit card or with a similar type straight edge.*



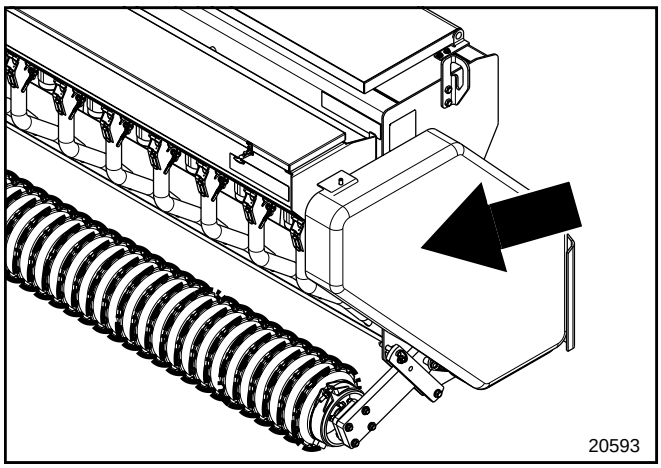
818-543C

DANGER: Guard Missing
(Beneath Guard)



838-111C

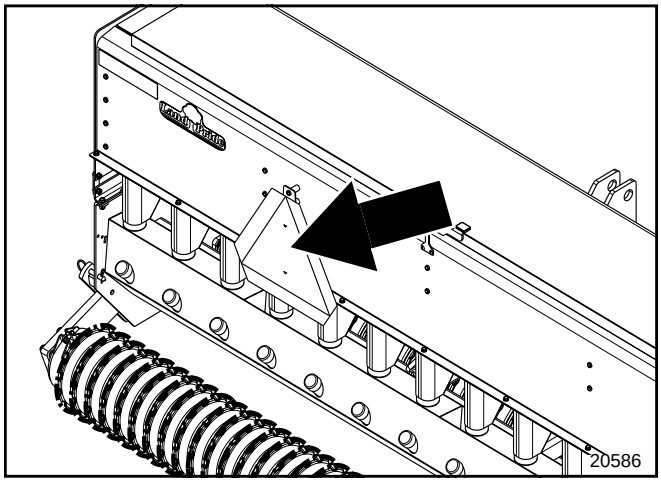
DANGER: Keep away, Moving Parts



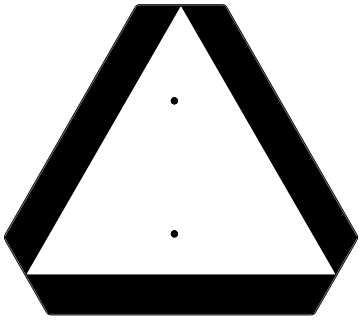
818-543C

Standard Seeds Box Option

DANGER: Guard Missing (Beneath Guard)

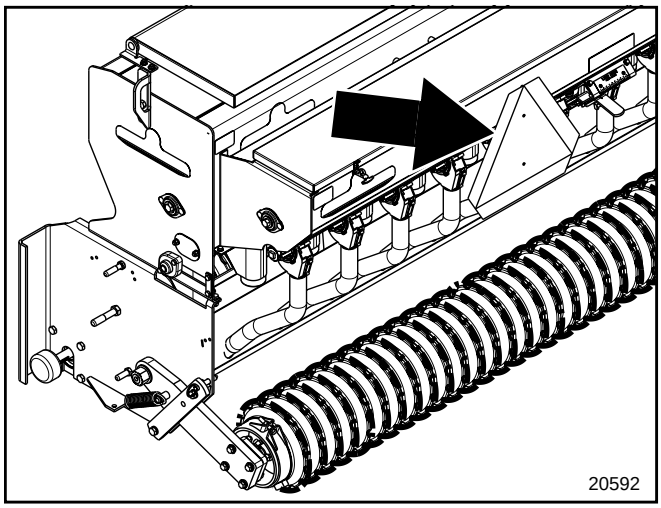


Native Grass Seedbox

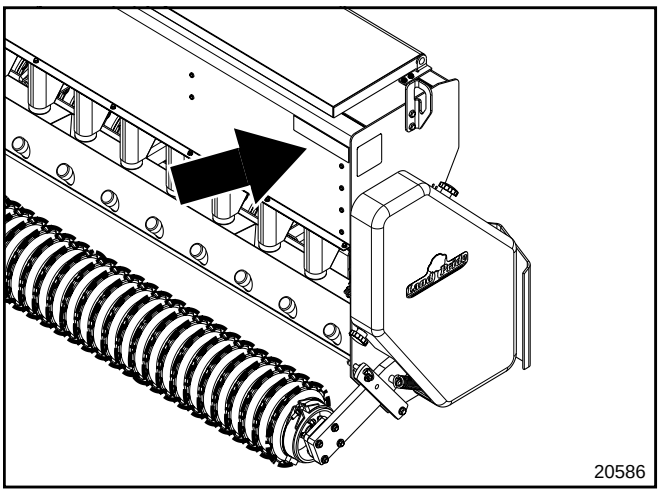


818-055C

SMV: Slow Moving Vehicle

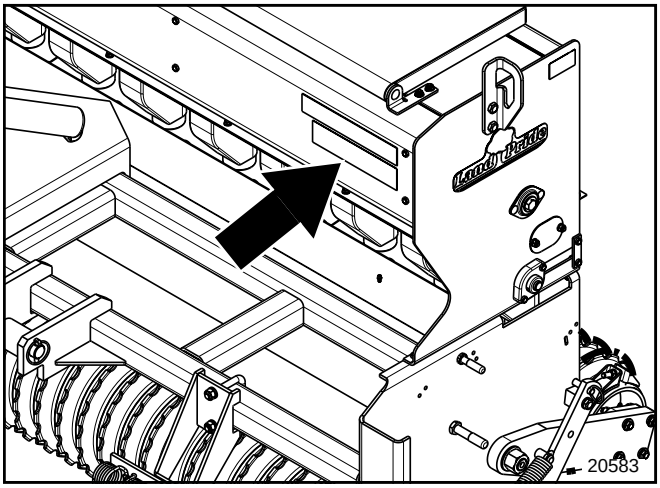


Standard Seeds Box (Option)



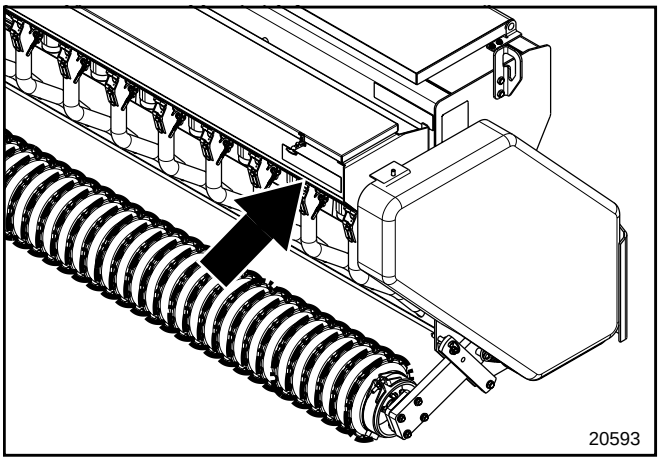
838-614C

2" x 9" Red Reflector
2- Places (Both ends of the main seedbox)



838-615C

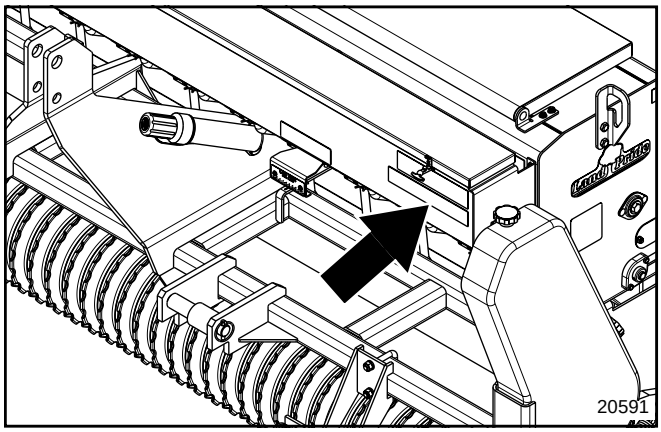
2" x 9" Amber Reflector
1- Place (Left end of main seedbox)



838-614C

Standard Seeds Box Option

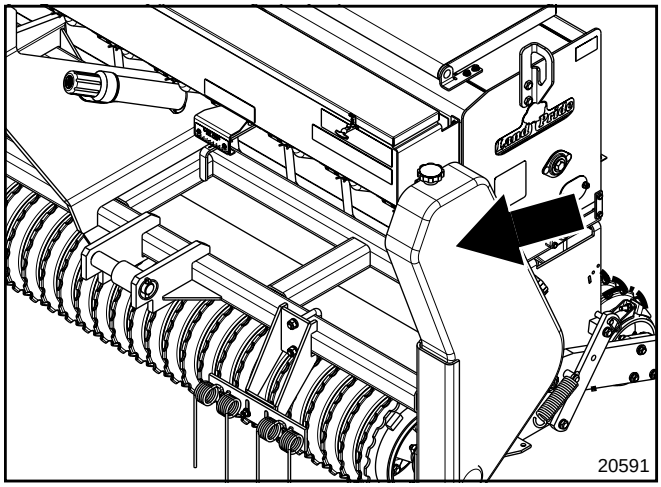
2" x 9" Red Reflector
2- Places (Both ends of Standard Seeds Box)



838-615C

Small Seeds Box Option

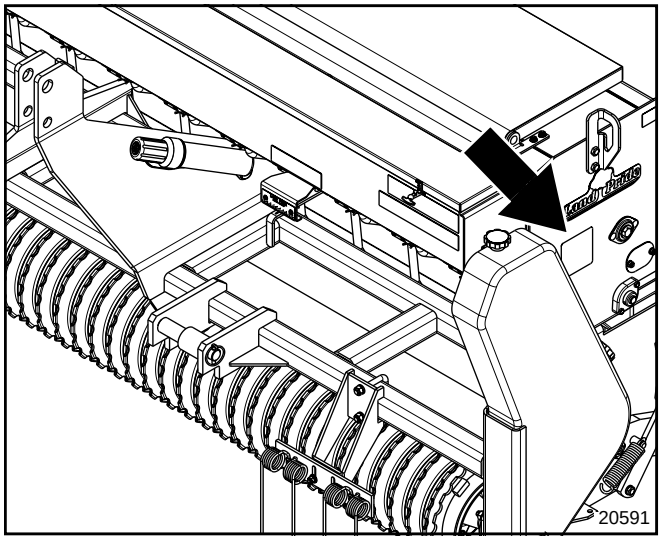
2" x 9" Amber Reflector
1- Place (Left end of Small Seeds Box)



818-543C

Small Seeds Box Option

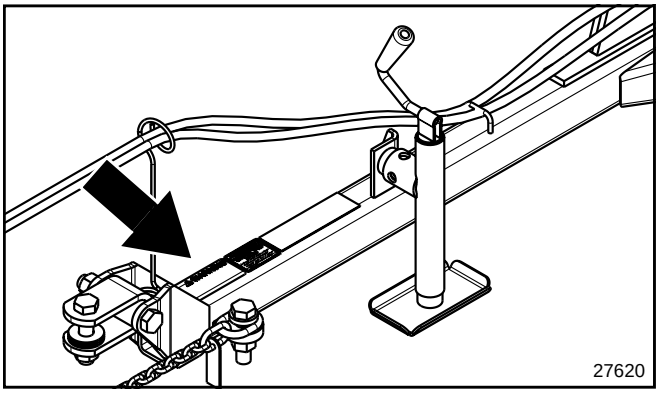
DANGER: Guard Missing (Beneath Guard)



838-111C

Small Seeds Box Option

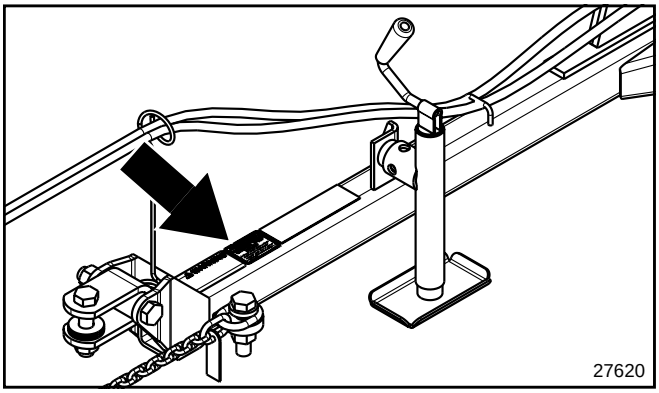
DANGER: Keep away, Moving Parts



838-094C

Pull Hitch Option

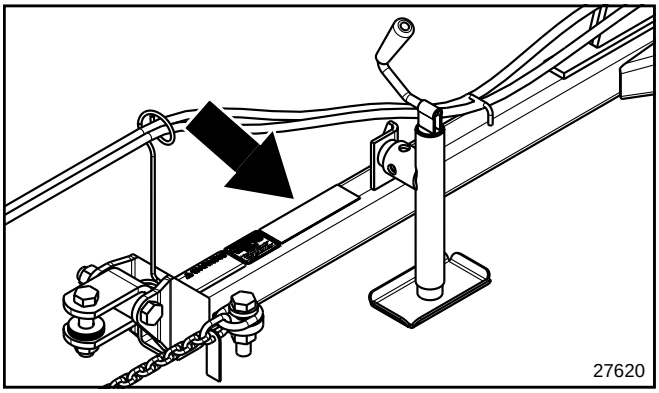
Warning: High Pressure Fluid Hazard

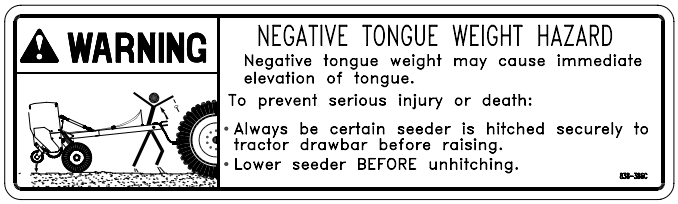


818-337C

Pull Hitch Option

Warning: Excessive Speed Hazard

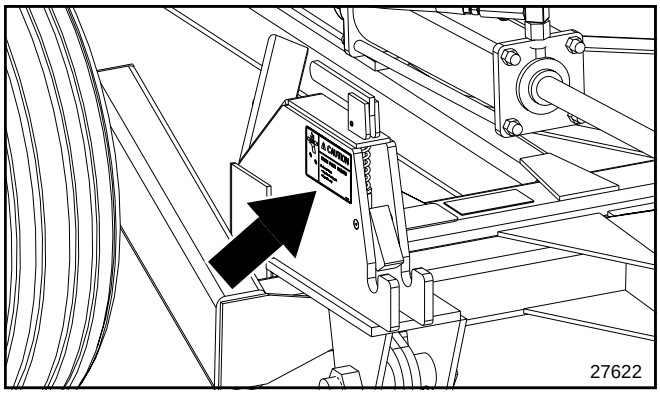




838-386C

Pull Hitch Option

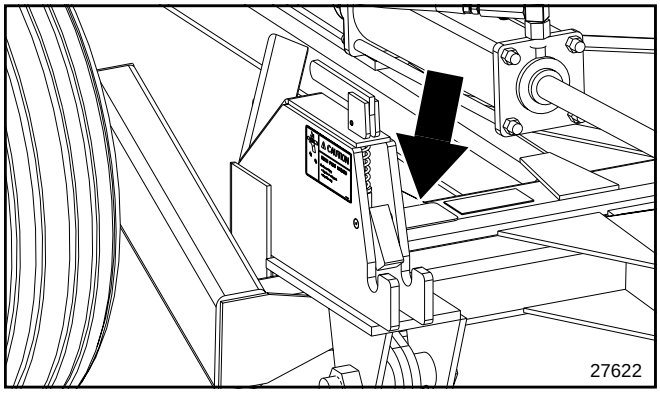
Warning: Negative Tongue Weight Hazard

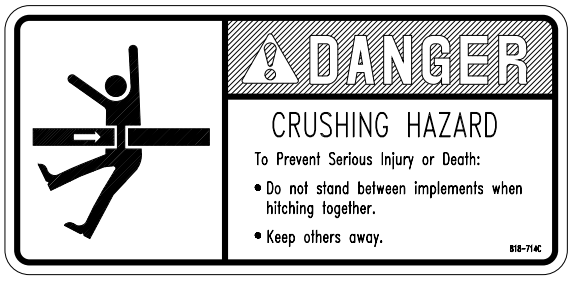


818-230C

Pull Hitch Option

Caution: Pinch Point Hazard
2- Places (Outside Plate of Latches)

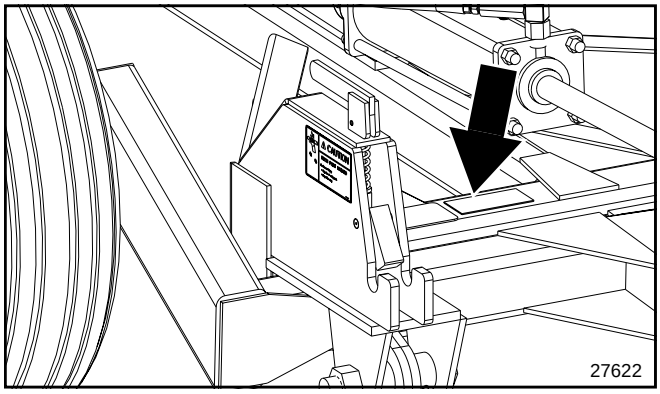




818-230C

Pull Hitch Option

Danger: Crushing Hazard



818-230C

Pull Hitch Option

Caution: Injury or Machine Damage

Land Pride welcomes you to the growing family of new product owners.

This Primary Seeder has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from this machine.

Application

The PSN2096 Primary Seeder is ideal for landscaping, sod farms, grain farms, or highway reclamation work. You can seed Alfalfa, nearly all types of Native Grass and most types of turfgrass with this seeder. If the majority of your seeding is done with Native Grass or "fluffy" seeds like Big Blue Stem, Indian Grass or Side Oats Grama, the main seedbox (Native Grass Seedbox) is equipped with an aggressive picker wheel design to keep seed moving at a consistent feeding rate.

It is possible to seed three different types of seed at different rates by adding the smaller optional seed boxes to the front and back of the main seedbox. The optional Standard Seeds Box has a 4.8 bushel capacity and is mounted on the back of the main box. It is equipped with our standard fluted seed cups and agitation to seed most turf type grasses as well as a variety of other seeds from peas to alfalfa. An optional Small Seeds Box with 2 bushel capacity can be mounted on the front and is used to dispense small seeds such as alfalfa and clover.

See **"Specifications & Capacities"** on page 35 and **"Features & Benefits"** on page 36 for additional information and performance enhancing options.

Using This Manual

- This Operator's Manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.
- The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.
- To order a new Operator's or Parts Manual, contact your authorized dealer. Manuals can also be downloaded, free-of-charge, from our website at www.landpride.com

Terminology

"Right" or "Left" as used in this manual is determined by facing the direction the machine will operate while in use unless otherwise stated.

Definitions

IMPORTANT: A special point of information related to the following topic. Land Pride's intention is this information must be read & noted before continuing.

NOTE: A special point of information that the operator should be aware of before continuing.

Owner Assistance

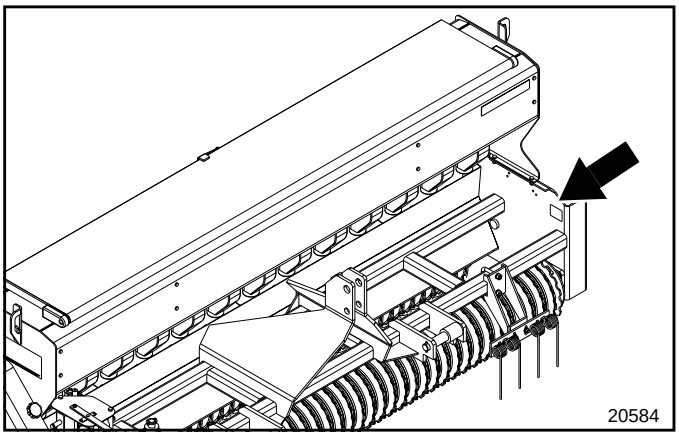
The Online Warranty Registration should be completed by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

The parts on your Primary Seeder have been specially designed by Land Pride and should only be replaced with genuine Land Pride parts. Contact a Land Pride dealer if customer service or repair parts are required. Your Land Pride dealer has trained personnel, repair parts, and equipment needed to service the implement.

Serial Number

Model No. _____Serial No. _____

For quick reference and prompt service, record model number and serial number in the spaces provided above and again on warranty page 39. Always provide model number and serial number when ordering parts and in all correspondences with your Land Pride dealer. Refer to Figure 1 for location of your serial number plate.



Serial Number Plate Location
Figure 1

Further Assistance

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

1. Discuss the matter with your dealership service manager making sure that person is aware of any problems you may have and has had the opportunity to assist you.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the problem, and request assistance.
3. For further assistance write to:

Land Pride Service Department
1525 East North Street
P.O. Box 5060
Salina, Ks. 67402-5060

E-mail address
lpservicedept@landpride.com

Tractor Requirements

This Primary Seeder is designed for tractors with a 3-point Category 2 or 3 and Cat. 2 Quick-Hitch. Tractors outside the hitch category must not be used. Make certain that the tractor's 3-point lifting capacity and weight is capable of lifting and controlling the seeder under all operating conditions. Refer to "**Specifications & Capacities"** on page 35 for seeder weight.

A Pull-Type hitch is available as an option. This Pull-Type Hitch can be used with smaller HP tractors, which may not have the required capacity to maneuver a 3-point hitch configuration.

> **NOTE:** In order to maintain steering control, ballast may need to be added to your tractor. Refer to your tractor's operator manual to determine if additional ballast is needed.

The lower 3-point arms must be stabilized to prevent side-to-side movement. Most tractors have sway blocks or adjustable chains for this purpose.

Torque Requirements

Refer to **"Torque Values Chart for Common Bolt Sizes"** on page 38 to determine correct torque values when tightening hardware.

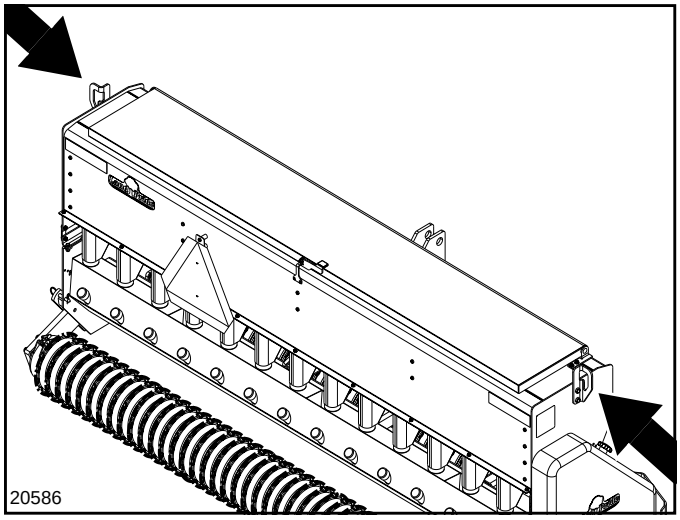
Pre-Assembly Checklist

	Check	Reference
☐	All major frame components.	Operator's Manual
☐	Location of fasteners and pins. **NOTE:** All hardware from the factory has been installed in the location where it will be used. If a part is temporarily removed for assembly reasons, remember where it goes. Keep parts separated.	Operator's Manual
☐	Be sure the part gets used in the correct location. Use parts manual to identify location of parts that have been removed and are unsure where to replace them. By double checking while you assemble, you will lessen the chance of using a bolt incorrectly that may be needed later.	313-306P Parts Manual
☐	All working parts are moving freely, bolts are tight and cotter pins are spread.	Operator's Manual
☐	All grease fittings are in place and lubricated.	Page 31-34
☐	Proper tension and alignment on all drive chains.	Page 21
☐	Safety decals are correctly located and legible. Replace if damaged.	Pages 4 - 9

Sling Bracket

Refer to Figure 1-1:

The sling brackets on each end of the Native Grass Seedbox provide points to hook the chain for lifting the unit. When hooking a chain to the sling brackets, be certain to use a spreader bar on the chain or a long chain to prevent bending the sling brackets.



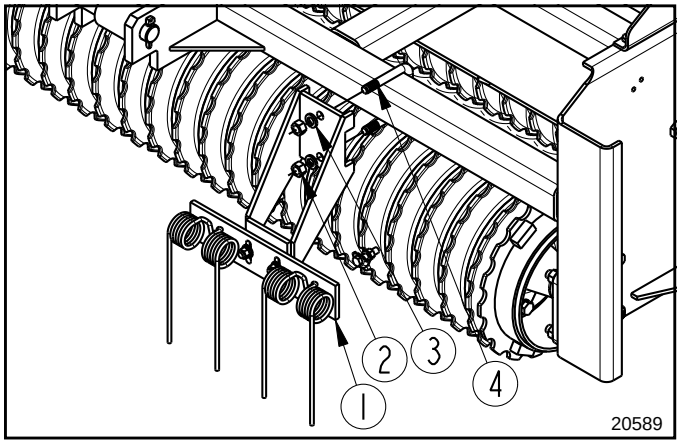
Sling Bracket
Figure 1-1

Tire Track Remover Assembly

Refer to Figure 1-2:

The Tire Track Removers are assembled 180 degrees from their operating position for shipping purposes.

1. Remove Track Remover (#1). Keep hardware for reuse.
2. Flip Track Remover over 180 degrees and reassemble as shown with 1/2" u-bolt (#4), lock washers (#3), and nuts (#2). Tighten nuts to the correct torque.
3. Repeat steps 1 & 2 for the other side.



Tire Track Remover
Figure 1-2

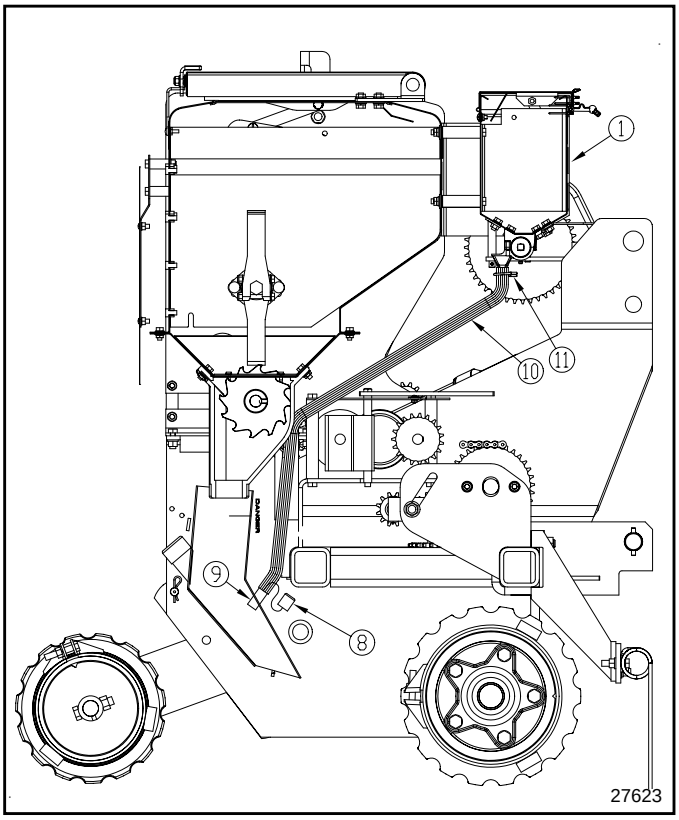
Small Seeds Box Assembly

Refer to Figure 2-1:

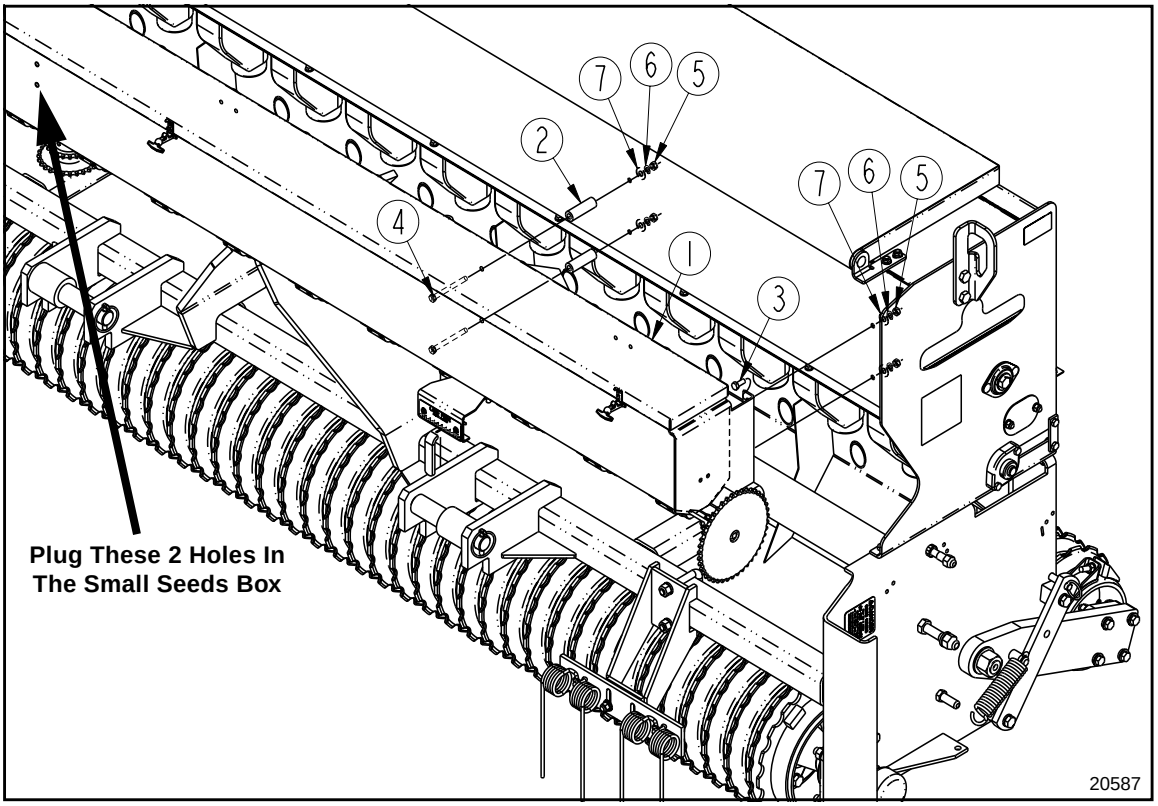
1. Remove eight bolts, lock washers, and nuts from the front panel of the Native Grass Seedbox. Plug two holes in the front of the Small Seeds Box with two of the removed bolts, lockwashers, and nuts.
2. Assemble both ends of the Small Seeds Box (#1) with four 5/16"-18 x 3/4" bolts (#3), flat washers (#7), lock washers (#6), and nuts (#5). Do not tighten nuts until spacers (#2) in step 3 are installed.
3. Align four seedbox spacers (#2) with inner holes of the Small Seeds Box and Native Grass Seedbox. Assemble four 5/16"-18 x 3 1/4" bolts (#4), flat washers (#7), lock washers (#6), and nuts (#5).
4. Tighten nuts (#5) to the correct torque (8 places).

Refer to Figure 2-2:

5. Remove rubber caps (#8) from the small metal tubes (#9) on the front side of the seed drop chamber.
6. Attach 5/8" seed drop hoses (#10) to the feeder cups on the Small Seeds Box (#1) with wire clamps (#11).
7. Install drop hoses (#10) over the small metal tubes (#9) without wire clamps. Trim rubber hoses as required to remove excess slack.



Cut Away Of Small Seeds Box Drop Tube Assembly
Figure 2-2

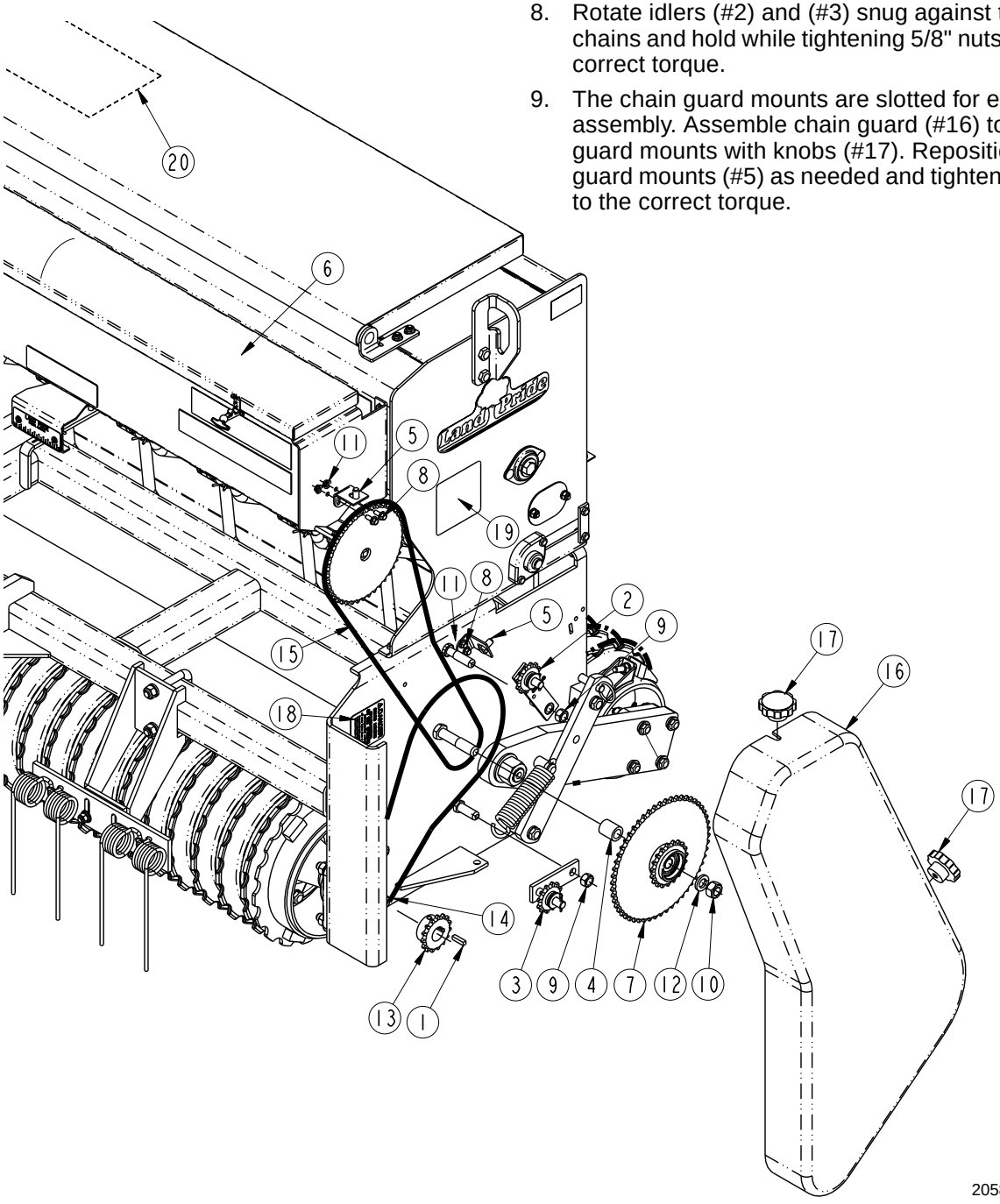


Small Seeds Box Assembly
Figure 2-1

Small Seeds Box Drive Assembly

Refer to Figure 2-3:

1. Place decal **"Danger Guard Missing**" (#18) and **"Danger Moving Parts**" (#19) on the left side in the locations shown.
2. Place decal **"Seed Rate Chart"** (#20) under the lid in the location shown.
3. Assemble chain guard mounts (#5) with 1/4" flange bolts (#8) and 1/4" flange nuts (#11). Do not tighten 1/4" nuts until step 9 when all drive components and chain guard (#16) have been installed properly.
4. Install chain idler with spacer (#2) and chain idler without spacer (#3) with 1/2" nuts (#9). Do not tighten nuts until step 8.
5. Assemble spacer (#4) and speed change sprocket assembly (#7) to the welded on 5/8" bolt. Secure sprocket assembly with 5/8" lock washer (#12) and hex nut (#10). Tighten 5/8" nut to the correct torque.
6. Assemble front roller sprocket (#13) and key (#1) to the front roller shaft. Tighten set screws in sprocket.
7. Install #40 x 82 pitch roller chain (#14) first and then #40 x 118 pitch roller chain (#15).
8. Rotate idlers (#2) and (#3) snug against the roller chains and hold while tightening 5/8" nuts (#9) to the correct torque.
9. The chain guard mounts are slotted for easy assembly. Assemble chain guard (#16) to the chain guard mounts with knobs (#17). Reposition chain guard mounts (#5) as needed and tighten nuts (#11) to the correct torque.

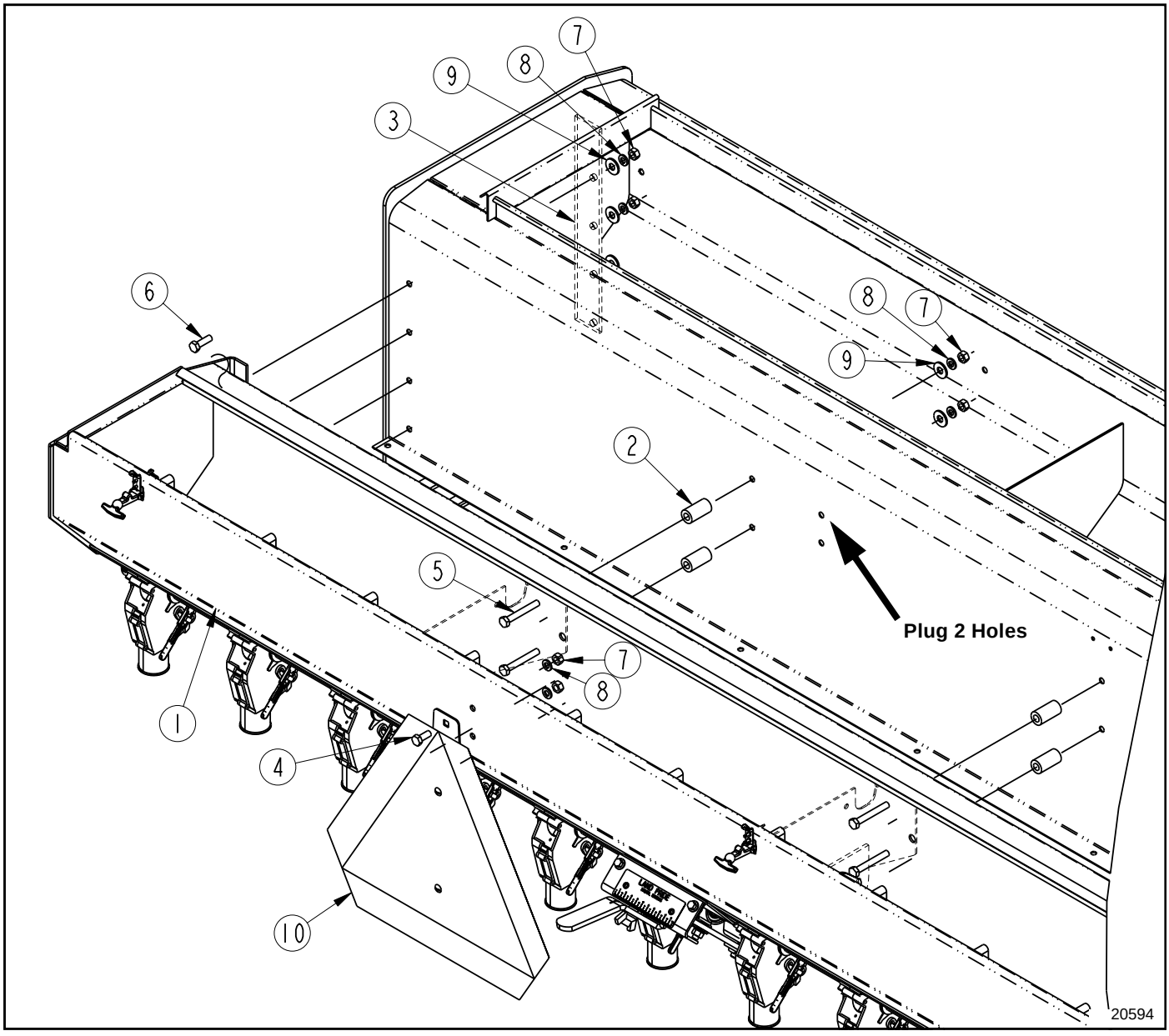


Small Seeds Box Drive Assembly
Figure 2-3

Standard Seeds Box Assembly

Refer to Figure 2-4:

1. Remove Slow Moving Vehicle Sign (SMV) (#10) with mounting bracket from the Native Grass Seedbox.
2. Remove 14 bolts, lock washers, and nuts assembled in the rear panel of the Native Grass Seedbox. Plug the two holes in the Native Grass Seedbox where the SMV sign was mounted with two of the removed bolts, lockwashers, and nuts.
3. Assemble ends of Standard Seeds Box (#1) with eight 5/16"-18 x 1" bolts (#6), backing plates (#3), flat washers (#9), lock washers (#8), and hex nuts (#7). Do not tighten nuts until spacers (#2) in step 4 are assembled.
4. Align six seedbox mounting spacers (#2) with inner holes of the Standard Seeds Box and Native Grass Seedbox. Assemble six 5/16"-18 x 2 1/4" bolts (#5), flat washers (#9), lock washers (#8), and nuts (#7). Tighten Small Seeds Box mounting nuts (#7) to the correct torque.
5. Remove 1 1/2" rubber caps attached to the large metal tubes in the back of the seeder frame. Attach 1 1/2" rubber seed drop tubes to the Standard Seeds Box feeder cups with provided clamps and then install the drop hoses over the 1 1/2" metal tubes in the seeder frame. (Clamps not required.)
6. Install SMV sign (#10) with mounting bracket to the Standard Seeds Box Assembly (#1) with removed 5/16"-18 x 3/4" cap screws (#4), lock washers (#8), and hex nuts (#7). Tighten nuts to the correct torque.

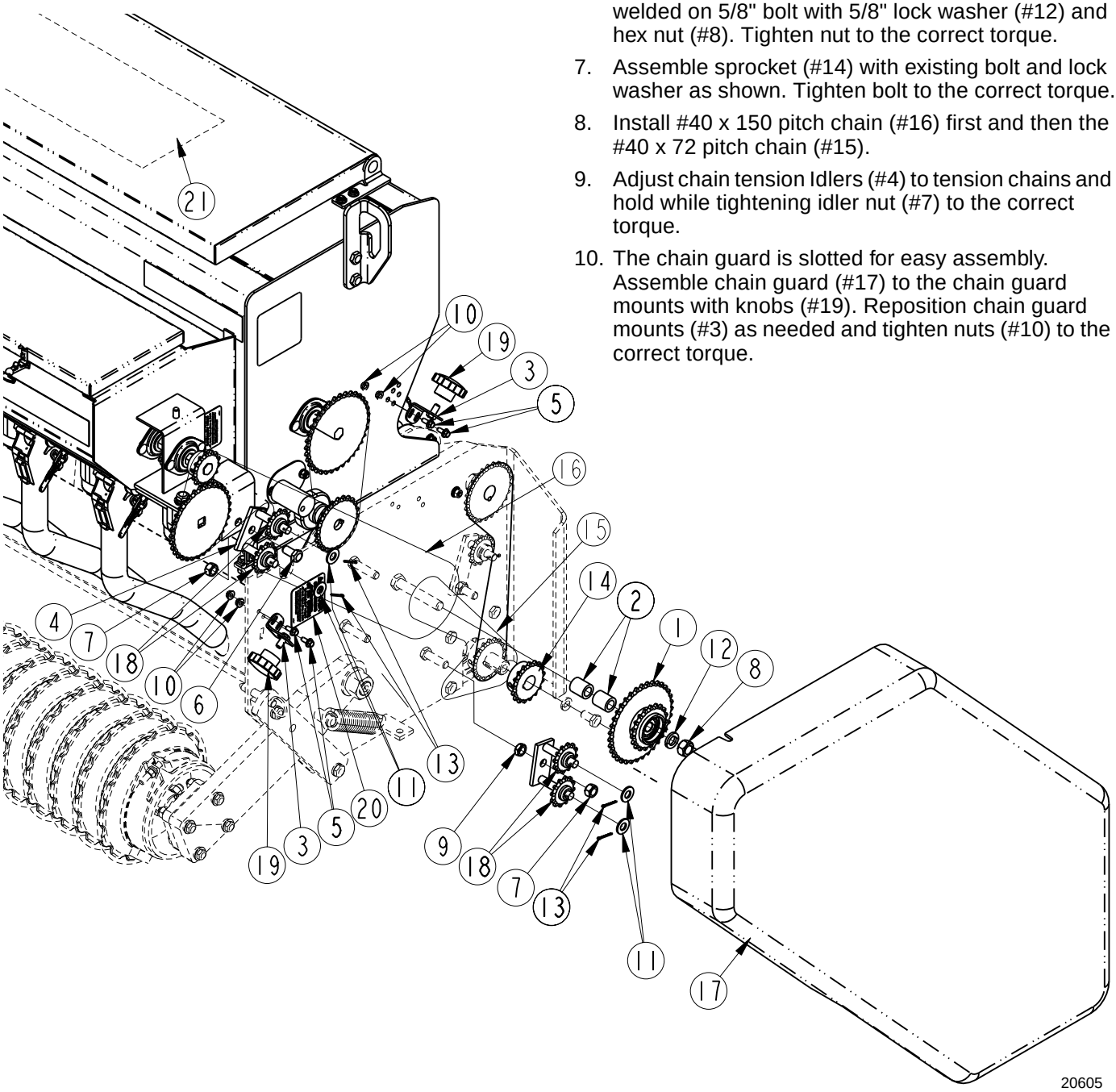


Standard Seeds Box Assembly
Figure 2-4

Standard Seeds Box Drive Assembly

Refer to Figure 2-5:

1. Attach decal **"Danger Guard Missing**" (#20) to the right side panel in the location shown. Attach **"Seed Rate Chart"** (#21) to the underside of the lid in the location shown.
2. Attach two chain guard mounts (#3) with 1/4"-20 x 5/8" flange bolts (#5) and flange nuts (#10). Do not tighten nuts until after all drive components and chain guard (#17) have been installed properly in step 10.
3. Screw 1/2" jam nut (#9) onto the lower side panel stud and then mount lower chain idler (#4) with hex nut (#7). Do not tighten idler hardware until step 9.
4. Mount upper chain idler (#4) to the Standard Seeds Box mounting bracket with 1/2"-13 x 1" bolt (#6) and nut (#7). Do not tighten idler hardware until step 9.
5. Assemble idler sprockets (#18) to chain idlers (#4). Secure with 1/2" flat washers (#11) and cotter pins (#13).
6. See **"Seed Rate Speed Change"** on page 22. Determine which drive type is required and attach spacers (#2) and speed change sprocket (#1) to the welded on 5/8" bolt with 5/8" lock washer (#12) and hex nut (#8). Tighten nut to the correct torque.
7. Assemble sprocket (#14) with existing bolt and lock washer as shown. Tighten bolt to the correct torque.
8. Install #40 x 150 pitch chain (#16) first and then the #40 x 72 pitch chain (#15).
9. Adjust chain tension Idlers (#4) to tension chains and hold while tightening idler nut (#7) to the correct torque.
10. The chain guard is slotted for easy assembly. Assemble chain guard (#17) to the chain guard mounts with knobs (#19). Reposition chain guard mounts (#3) as needed and tighten nuts (#10) to the correct torque.



Standard Seeds Box Drive Assembly
Figure 2-5

Pre-Start Checklist

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training involved in the operation, transport, storage, and maintenance of the Primary Seeder. Therefore, it is absolutely essential that no one operates the seeder without first having read, fully understood, and become totally familiar with the Operator's Manual. Make sure the operator has completed the Operating Checklist below.

Operating Checklist

✔	Check	Page
	Read and follow all Safety Rules carefully. Refer to "Important Safety Information".	Page 1
	Make sure all guards and shields are in place. Refer to "Important Safety Information".	Page 1
	Read & follow assembly & set-up. Refer to: "Section 1: Assembly & Set-Up (Standard)" "Section 2: Assembly & Set-Up (Optional)".	Page 11 Page 12
	Read and follow all operating procedures. Refer to "Section 3: Operating".	Page 16
	Read and follow "Tractor Hook-Up" and preparation instructions.	Page 16
	Read and make all required adjustments. Refer to "Section 4: Seeding Adjustments".	Page 21
	Adjust seed rate for the Native Grass Seedbox per the Native Grass Seed Chart.	Page 21
	Adjust seed rate for the Standard Seeds Box and Small Seeds Box. See "Seed Rate Charts".	Pages 23 to 28
	Read and follow all maintenance Instructions. Refer to "Section 6: Maintenance & Lubrication".	Page 30
	Read and follow all lubrication iinstructions. Refer to "Lubrication".	Page 31
	Make sure all gearboxes are properly lubricated. Refer to Gearbox lubrication.	Page 31
	Inspect seed cups and seed tubes for foreign matter.	Page 37
	Check seeder initially and periodically for loose bolts and pins. Refer to "Torque Values Chart".	Page 38

Tractor Hook-up

This Primary Seeder is designed for tractors with a 3-point Category 2 or 3 and Cat. 2 Quick-Hitch. A Pull-Type hitch is available as an option for smaller horsepower tractors that do not have the capacity to maneuver a 3-point configuration.

Tractor 3-Point Hook-Up

1. Back tractor up to the seeder until the lower 3-point links are aligned with seeder lower hitch clevises.
2. Secure tractor's 3-point lower arms to the hitch clevises using hitch pins supplied.
3. Secure tractor's top center link to the seeder's top center hitch using the 1" diameter hitch pin.
4. With seeder resting on level ground, adjust the tractor's top center link until seeder is level from front to back.

Refer to Figure 3-3 on page 17:

5. Remove rear roller lock pin from parking position and place in field position.

Pull Hitch Hook-Up

DANGER

Hydraulic fluid under high pressure can penetrate the skin. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for hydraulic leaks. If hydraulic fluid is injected into the skin or eyes, it must be treated by a doctor familiar with this type of injury within a few hours or gangrene may result. DO NOT DELAY.

Refer to Figure 3-1 on page 17:

IMPORTANT: The lower link handles should be in the down position before preceding.

1. Mount tongue of Pull Hitch to tractor drawbar and secure with safety chain.
2. Connect hydraulic hoses to tractor.
3. Fully extend lift cylinder to raise transport wheels and lower 3-point pull hitch.
4. Back Pull Hitch up to the seeder to align lower hitch links with the seeder's inside smaller hitch pins.
5. Retract lift cylinder to raise lower 3-point hitch links up until the seeder's inside smaller hitch pins lock into the 3-point hitch links.
6. Once pins are locked, adjust lift cylinder up or down as needed to level the seeder.
7. With seeder level and transport wheels resting on the ground, adjust top center link of Pull Hitch to install in the bottom holes of the seeder's upper center hitch. (Top center hitch pin is provided by the customer)

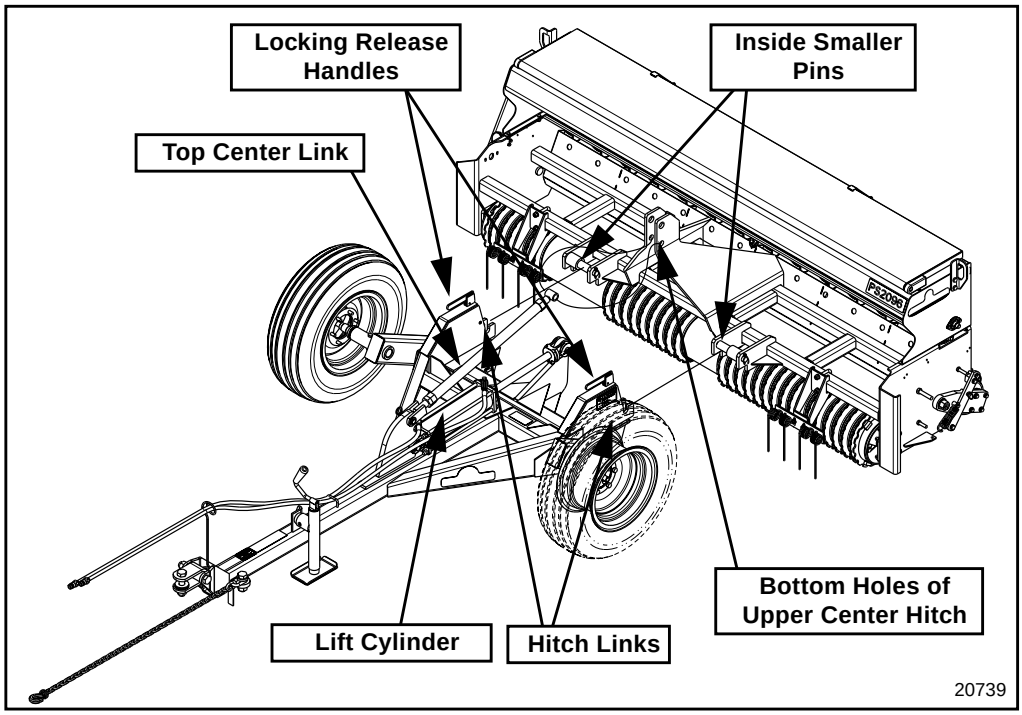
Pull Hitch Disconnect

Refer to Figure 3-1 on page 17:

CAUTION

The seeder will have negative tongue weight when it is lifted off the ground. Lower the seeder to the ground before proceeding with Pull Hitch disconnect. (Negative tongue weight is when most of the weight is to the rear of the implement causing the front of the tongue to be light and may rise up when disconnected.)

1. Remove top center hitch pin.
2. Flip locking release handles up.
3. Fully extend lift cylinder to lower 3-point hitch until hitch links are free from lower hitch pins.



Pull Tongue Assembly
Figure 3-1

Pull Hitch Operating Instructions

Refer to Figure 3-1:

1. See Section 2, **"Pull Hitch Hook-Up"** on page 16 for hook-up instructions.

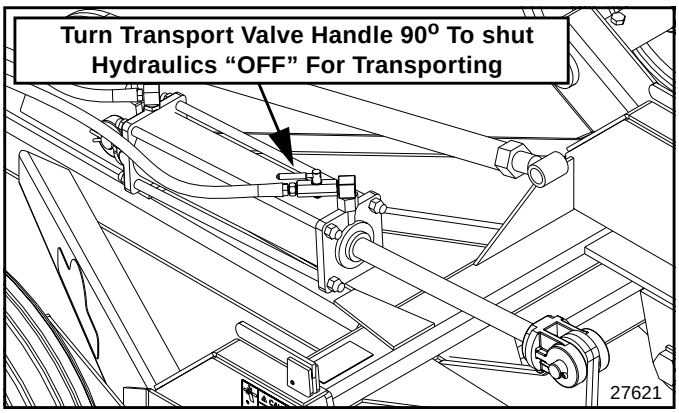
IMPORTANT: Always operate seeder with transport wheels on the ground and seeder level to prevent dirt build-up and seeder damage.

Refer to Figure 3-2:

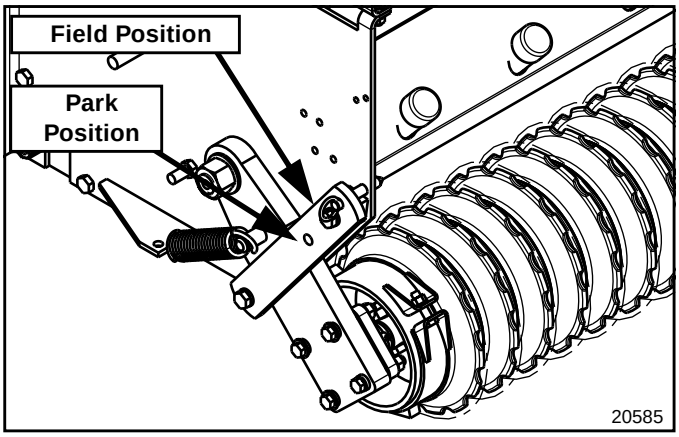
2. Turn transport valve "OFF" before transporting from site to site. This will protect the seeder from being damaged should the hydraulic system break.

Refer to Figure 3-3:

3. At the field site, remove rear roller lock pin from park position and place in field position.
4. Turn transport valve "ON" as shown in Figure 3-2.
5. Raise transport wheels to lower the seeder until it is resting on the ground. Transport wheels must also be resting on the ground to support some of the seeder's weight.
6. Set tractor hydraulic lever to return lift cylinder to this position each time the seeder is raised and lowered.
7. With seeder and transport wheels resting on level ground, readjust top center link on the Pull Hitch to level the seeder from front to back.



Transport Valve (Shown "ON" for Field Work)
Figure 3-2



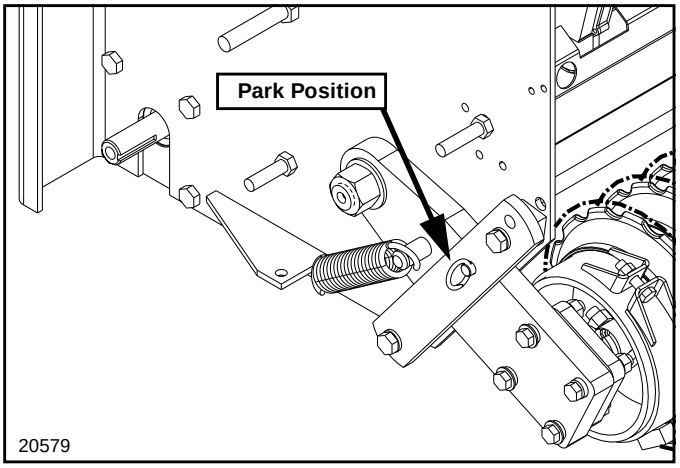
Rear Roller Pin in Field Position
Figure 3-3

Transporting

CAUTION

When traveling on public roads whether at night or during the day, use accessory light and devices for adequate warning to operators of other vehicles. Comply with all federal, state, and local laws.

1. It is best to transport on the road with an empty box unless necessary as the increased seed weight will increase the chances for road problems.
2. When transporting with a Pull Hitch, be sure to follow guide lines under **"Pull Hitch Operating Instructions"** on page 17.
3. Select a safe ground speed when transporting from one site to another. Never exceed 20 miles per hour travel speed. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
4. Reduce tractor ground speed when turning and allow enough room to keep the seeder from contacting obstacles such as buildings, trees, or fences.
5. Shift tractor to a lower gear when traveling over rough or hilly terrain.



Rear Roller Pin Parking Position
Figure 3-4

Parking

Refer to Figure 3-4:

The following steps should be done when preparing to store the seeder or unhitch it from the tractor. See also **"Storage"** on page 30 for additional information on long term storage of your seeder.

1. Park seeder on a level, solid area.
2. Shut tractor engine off and engage parking brake.
3. To prevent the seeder from tipping over backward, remove rear roller lock pin from field position and place in park position as show in the figure.
4. Chock front & back rollers to keep unit from moving.
5. Unhitch from tractor.

Filling the Seed Box

CAUTION

Always lower the Primary Seeder to the ground before filling and checking seed level in the seed box. This will keep the rollers from turning while working around them.

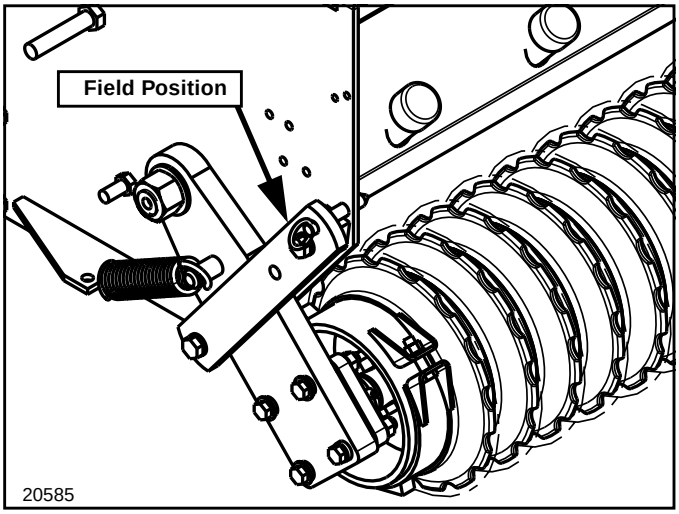
1. Always lower the Primary Seeder to the ground, engage tractor park brake, shut tractor engine off, and remove key before filling the seed box.
2. Release lid latch and open seed box lid until over center latch arms have locked in place. Doing this will keep the lid from falling while filling the box.
3. Fill seed box from the rear while standing on the ground. **Do not** step or climb on the rear roller to fill the seed box. **Make sure** the rear roller is on the ground so it cannot turn while filling the box.
4. The bag opener (sharp point on top of baffle plate located inside the seed box) can be used to tear open the seed bags.
5. Maker certain the seed box is filled uniformly to insure one side dose not run out of product ahead of the other side.
6. Close lid by pulling on the handle of the over center latch arms with one hand while holding the lid up with the other hand. Lower lid gently while keeping hands and fingers clear.
7. Lock lid down with lid latch to keep moisture out.

Packing Rollers

Refer to Figure 3-5:

The front and rear packing rollers should turn freely. If they do not, investigate and remove the cause.

The rear roller assembly should be free to float up and down to follow the field terrain. Remove rear roller lock pin from park position and place in field position as shown to free up the roller's floating capabilities.



Rear Roller Pin in Field Position
Figure 3-5

How the Seeder Works

The following information is a brief description of how this Primary Seeder works. It is included to help you understand the operation of this seeder.

The power to drive the seed cups comes from the front roller turning against the ground while traveling. Power is transmitted from the front roller through roller chains to the seed cups. Seed is metered out of the cups at a rate proportional to the distance driven. This ensures that the rate applied in pounds per 1000 square feet or pounds per acre remains constant as ground speed is varied.

Cup metering speed can be adjusted to either a high or low range by changing the speed change sprocket. Also, the rate seed falls through the seed cups is adjustable using the seed rate adjustment lever located at the back of the seeder.

The seed is dropped between cast iron rollers. The front roller crushes clods, presses down small stones, and forms a firm seedbed. The rear roller firms the soil around the seeds.

Operating the Seeder

WARNING

Do not use the seeder for pulling fence posts, stumps, etc., lifting objects, carry objects, or towing other equipment. Any of the above can result in equipment damage, serious bodily injury, or death.

DANGER

Never carry a person on the seeder. A person can become entangled in the seeder or fall and be ran over causing serious injury or death.

CAUTION

Never back up with the seeder down. This will loosen the drive chain and possibly damage the seeder.

IMPORTANT: Before proceeding with the first time set-up, or before making any adjustments mentioned in this section, make every effort to attach the seeder to a tractor.

1. Contact your local utility services so that they may mark location of any under ground utility services in the area. Thoroughly inspect the work area yourself for buried pipelines, sprinkler heads, and any unforeseen objects. Mark any potential hazards.
2. This seeder can be transported with a full box of seed. It is best not to do this unless necessary because the increased weight does increase the chances for problems on the road. Do not exceed 20 miles per hour.
3. Calibrate your seeder sprocket speed and seed cup rate adjustment lever based on type of seed you are using. Calibration information is located on the inside of your box lid or on page 21.
4. Make sure the seed cup door adjustment handle on each cup is set the same across the seeder.
5. Be sure all bolts and nuts are tight.
6. Be certain all guards are in place and secure.
7. Clear area to be seeded of rocks, branches, and other foreign objects. Mark any potential hazards.
8. Never allow anyone to ride on the seeder.
9. Check that all plugs and caps have been replaced properly.
10. At first begin seeding at a slow forward speed and shift up until the desired speed is achieved. Maximum speed to plant seed will vary according to soil conditions. Seeding should not be done in wet conditions as soil will stick to the rollers.
11. After seeding the first 50 feet, stop and check to see that the seeder is adjusted properly.

General Operating Instructions

Once you have read the Operator's Manual, properly installed the seeder to the tractor's 3-point hitch or pull type hitch, ran through the Operating Checklist, filled the box with seed, and calibrated the unit for proper seed rate delivery, it's time to do some serious seeding.

The Primary Seeders have ground driven seed delivery systems. The power to drive the seeder comes from the forward momentum of the tractor. As the tractor moves forward the ground driven front roller transfers power via chain driven sprockets to the seed metering system. Seed rate remains constant and in direct proportion to the distance traveled and is affected very little by actual ground speed. Seeding can be discontinued by raising the seeder off the ground before making a turnaround and when transporting from one area to another.

As the front roller opens up the soil profile as it passes over areas to be seeded, seed is then delivered at the precise predetermined rate through the wind guarded seed drop area between the front and rear rollers. The rear roller then covers and presses the seed into firm contact with the soil to promote a superbly high germination rate. Seeding should not be attempted in wet or muddy conditions.

Now that you understand how it works, it is time to begin seeding. You should already have removed any large stones or obstacles from the area you plan to seed. Line the tractor up for the first pass. Begin in a low gear as a full seeder can be a heavy load. Ground speed is determined based on safety, ground conditions and terrain. In most cases do not exceed 6 MPH. Lower the seeder slowly to the ground and begin driving forward slowly at first until you get comfortable with what you are doing. As you approach the end of the lane, slow down and come to a stop while simultaneously raising the seeder off of the ground. With the seeder raised, line up for your next pass and repeat the process. Look back often and avoid making very sharp turns with your seeder on the ground. The more experienced you become the better you will get at developing beautiful seed plots and beautiful lawns.

Whenever you are done seeding, always clean the seeder out and perform all maintenance prescribed in the Operator's Manual. Never leave seed stored in the hopper for prolonged periods. Never dismount your tractor without first coming to a full stop, turning off the tractor, and setting the park brake. Never allow riders on the tractor when working with any installed rear mounted implement.

With a little practice you should get very good at developing lush green stands with your Land Pride Primary Seeder.

Seed Rate Adjustment

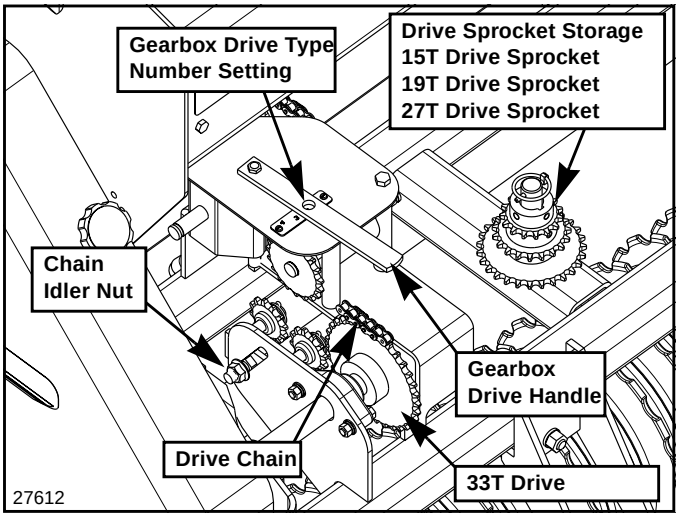
Native Grass Seedbox

The setting should be **INCREASED** for lighter than average seed and **DECREASED** for heavier than average seed.

1. Raise the seeder & support it in a safe manner so that the front drive roller assembly will rotate freely.
2. Partition off the outer end of the box so that seed can be placed only over 3 cups.

Refer to Native Grass Seed Rate Chart & Figure 4-1:

3. To adjust your seeding rate, first find the desired pounds/acre on the native grass seed rate chart below. Determine which drive sprocket and proper gearbox drive type 1, 2, 3, or 4 are required. Change drive sprocket and set drive type as follows:
   a. Loosen chain idler nut and remove drive chain from drive sprocket.
   b. Loosen the drive sprocket's two set screws and remove sprocket.
   c. Replace drive sprocket with the selected drive sprocket. (Sprockets are stored on the right hand side of the gearbox.)
   d. Reinstall drive chain. Adjust chain idler to tension chain and tighten idler nut to the proper torque.
   e. Set gearbox handle to the proper drive type.
4. Rotate drive roller assembly to verify that the drive system is working properly and that the seed cups are free from foreign matter.
5. Place a container under the three seed cups to gather all the seeds as they are metered.
6. Rotate drive roller assembly as follows:
   38 rotations for 1,000 sq. feet or 164 rotations for 1/10 of an acre. Make sure the three seed cups have plenty of seed falling into them and no other cups are receiving seed.
   a. Weigh the seed which has been metered out and divide that weight by three to get the number of pounds metered by each seed cup. If the total metered weight for 3 cups is in ounces, divide that weight by 48 to get the number of pounds metered by each seed cup.
   b. Next, multiply number of pounds per cup by number of cups on your seeder to arrive at total pounds per 1000 sq. ft. or pounds per 1/10 acre.
   c. If calculations are based on 1/10 acre, multiply total pounds per 1/10 acre by 10 to arrive at total pounds per acre.
   d. If this figure (total pounds per 1000 sq. ft. or per acre) is different than desired, then change gearbox drive type and/or drive sprocket.
7. You may want to repeat calibration procedure if the results of your calibration vary greatly from the suggested settings in the chart.



Drive Sprocket Location & Storage Placement
Figure 4-1

Native Grass Seed Rate Chart

(See Notes Below)	Drive Sprockets			
Gearbox Drive Type	**15 Teeth**	**19 Teeth**	**27 Teeth**	**33 Teeth**
1	2.8 lbs. per acre	3.5 lbs. per acre	5.0 lbs. per acre	6.2 lbs. per acre
2	5.8 lbs. per acre	7.3 lbs. per acre	10.4 lbs. per acre	12.7 lbs. per acre
3	8.6 lbs. per acre	10.9 lbs. per acre	15.5 lbs. per acre	19.0 lbs. per acre
4	14.1 lbs. per acre	17.8 lbs. per acre	25.4 lbs. per acre	31.0 lbs. per acre

Notes:

1 Seeding rates vary greatly with variations in types of seeds being seeded. The seed rate chart above is based on a seed mix of 5.7# of pure live seed per 11.1# of bulk. The pure live seed mix was Big Blue -1.5#, Little Blue -.8#, Side Oats Grama -.6#, Western Wheat Grass -1#, Switch Grass -.3#, and Indian Grass - 1.5#.

2. Factors which will affect seeding rates are: weight, size, relative humidity, and moisture content of the seed, ratio of inert material to seed, different proportions of seed types affecting density, and ground preparation.

3. TO HELP INSURE AN ACCURATE SEEDING RATE, LAND PRIDE RECOMMNENDS THAT YOU TEST AND ADJUST YOUR SEEDER PER THE SEED RATE CALIBRATION PROCEDURES PROVIDED ON THIS PAGE.

Seed Rate Speed Change

Standard Seeds Box Option

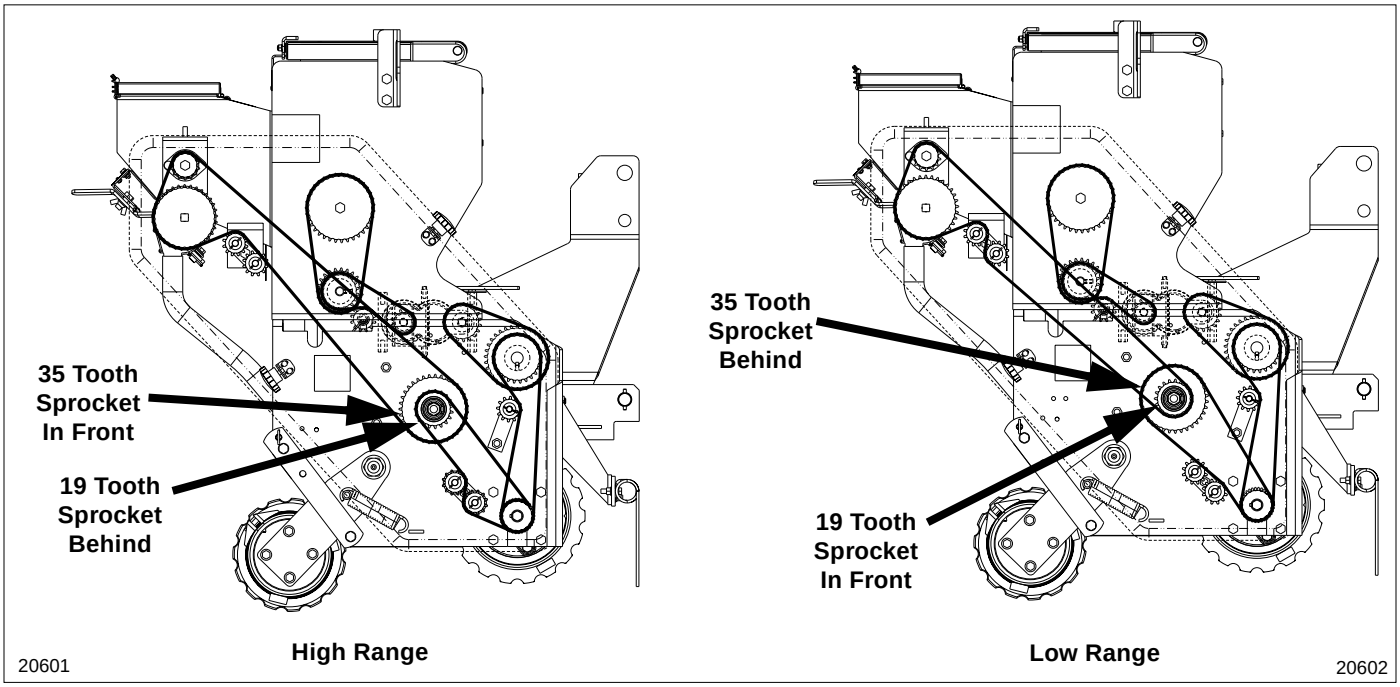
Refer to Figure 4-2 & Figure 4-3:

The Primary Seeder is designed with two drive speeds to accommodate different seed sizes and seed dispersal rates. The two drive speeds are high range (fast speed) and low range (slow speed). Use seed charts beginning on page 24 to determine which range is correct for the seed you are dispersing. Some seeds work with both ranges.

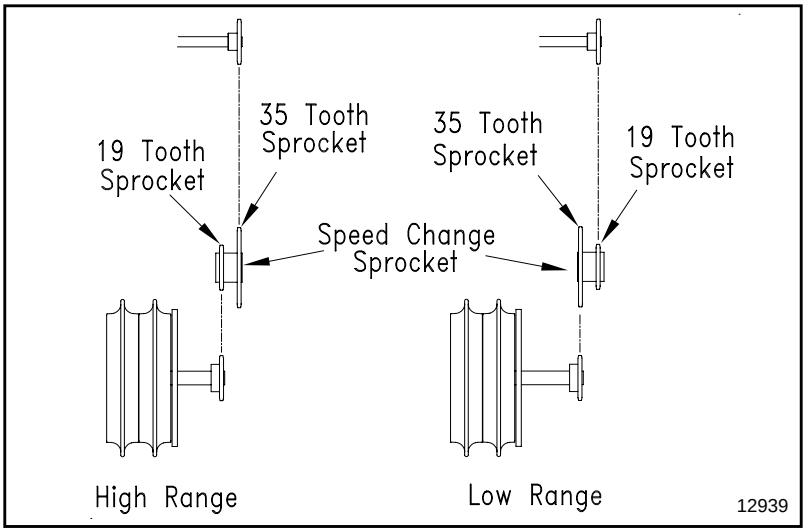
1. Loosen upper and lower chain idlers.
2. Remove 5/8" nut, lock washer, and flat washer from center of 19T/35T speed change sprocket.
3. Flip speed change sprocket to desired drive speed and reinstall flat washer, lock washer, and nut. Tighten 5/8" nut to the correct torque.
4. Adjust upper and lower chain idlers to retention chain and tighten adjusting nuts to the correct torque.

Small Seeds Box Option

There is not a high or low range setting for the Small Seeds Box. Instead, adjust cup settings using the Small Seeds Chart on page 28 to control rate of discharge.



Speed Change & Chain Pitches Standard Seeds Box Option
Figure 4-2



Sprocket Alignment
Figure 4-3

Seed Rate Adjustment

Standard Seeds Box & Small Seeds Box

1. Use seed rate charts beginning on page 24 for Standard Seeds Box and page 28 for Small Seeds Box. Make adjustments as follows:
   a. Decide if your Standard Seeds Box drive needs to be set-up for low range or high range. If necessary, change speed change sprocket to accommodate correct speed range, See Seed Rate Speed Change on page 22 for instructions.

Refer to Figure 4-4 & Figure 4-5:

   b. Move seed rate adjustment lever to cup setting number obtained from the seed rate charts. For best results, first move adjustment lever all the way to the left and then to the desired setting.
      - Increase setting if seed is lighter than average.
      - Decrease setting if seed is heavier than average.

2. Complete the following procedure to calibrate dispersal rate for your specific seed.
   a. Place several pounds of seed over three of the seed cups at the outboard end of the seeder. **Do not** allow any of the seed to reach other cups.
   b. Lower seeder frame onto support blocks that will support the front roller just above ground level.
   c. Rotate front roller by grasping the roller at the top and pulling away from the seeder. Rotate roller to make sure drive system is working properly and seed cups are free from foreign matter.
   d. Place a drop cloth under the seeder to collect all seeds that are metered out.
   e. Be sure to check the three seed cups to make sure each cup has plenty of seed falling into it and no other cups are receiving seed.
   f. Rotate front roller by pulling the top away from the seeder as many rotations as noted in table below.

Model No	Front Roller Rotations to Cover	
	1000 Sq. Ft.	1/10 ACRE
PSN2096	38 rotations	164 rotations

   g. Weigh the seed which has been metered out and divide that weight by three to get the number of pounds metered by each seed cup. If total weight for 3 cups is in ounces, divide the weight by 48 to get number of pounds metered by each seed cup.
   h. Next, multiply number of pounds per cup by number of cups on your seeder to arrive at total pounds per 1000 sq. ft. or pounds per 1/10 acre.
   i. If calculations are based on 1/10 acre, multiply total pounds by 10 to arrive at total pounds per acre.
   j. If this figure (total pounds per 1000 sq. ft. or acre) is different than desired, then readjust your seed cup adjustment lever accordingly.

3. You may want to repeat calibration procedure if results of your calibration vary greatly from suggested settings in the chart.

NOTE: To determine seed rates for seeds not listed on the charts, compare weight and size to those listed and use a similar setting. Follow steps 1 to 3 to calibrate seed rate.

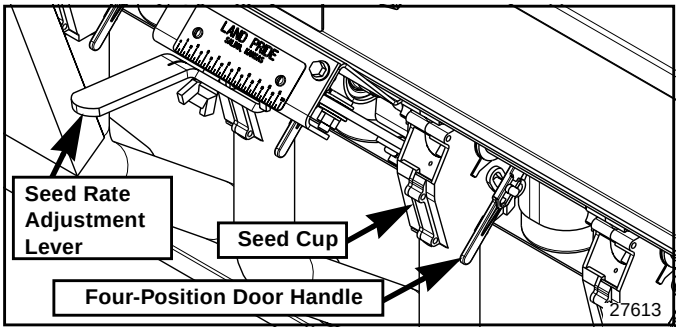
IMPORTANT: This Standard Seeds Box is equipped with a four-position door on each seed cup. The highest handle position is for small seeds, the second and third positions are for larger seeds. Grass seed applications usually require the highest position.

MAKE SURE all handles are in the same position before seeding. The wide open position (lowest position) will allow complete clean out of seed cups.

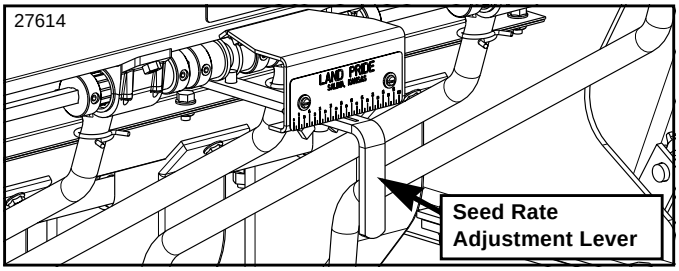
IMPORTANT: Do Not operate seed rate adjustment lever at -0- setting. Seed cup damage may occur.

Do Not set door handles and seed rate adjustment lever to the widest open position with seed in the box unless complete clean out is desired.

IMPORTANT: Remember, field and seed conditions will affect seeding rates. Check amount of seed being using by noting acres or square feet seeded, amount of seed added to the seeder, and level of seed in the seed box. It may be necessary to make minor adjustments the seeding rate to compensate if the seeder has been accurately calibrated and is seeding more or less seed than desired.



Standard Seed Rate Adjustments
Figure 4-4



Small Seeds Rate Adjustment
Figure 4-5

Seed Rate Charts (Standard Seeds Box)

Cup Setting	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Alfalfa (Pounds per Acre)																					
High Range	0	54	125	198	269	341	41248	485	555	626	699	769	842	913	985	1056	1129	1199	1270	1343	1413
Low Range	0	17	40	63	85	108	131	154	176	198	221	244	267	289	312	335	358	380	402	425	448
Alfalfa (Pounds per 1000 Square Feet)																					
High Range	0.0	1.2	2.9	4.5	6.2	7.8	9.2	11.1	12.8	14.4	16.1	17.7	19.4	21	22.6	24.3	25.9	27.6	29.2	30.9	32.5
Low Range	0.0	0.4	0.9	1.4	2	2.5	3	3.5	4	4.6	5.1	5.6	6.1	6.6	7.2	7.7	8.2	8.7	9.2	9.8	10.3
Bent Grass (Pounds per Acre)																					
High Range	0	37	80	115	152	185	206	239	265	293	326	358	380	413	439	467	499	528	554	586	619
Low Range	0	17	29	42	54	66	77	89	99	110	122	131	140	149	159	168	175	184	191	198	205
Bent Grass (Pounds per 1000 Square Feet)																					
High Range	0.0	0.8	1.8	2.6	3.5	4.2	4.7	5.5	6.1	6.7	7.5	8.2	8.7	9.5	10.1	11.5	12.1	12.7	12.7	13.5	14.2
Low Range	0.0	0.4	0.7	1	1.2	1.5	1.8	2	2.3	2.5	2.8	3	3.2	3.4	3.6	3.9	4	4.2	4.4	4.5	4.7
Bermuda - Unhulled (Pounds per Acre)																					
High Range	0	61	101	161	206	250	295	341	386	430	475	521	565	610	654	701	745	789	834	880	925
Low Range	0	19	32	51	65	79	93	108	122	136	150	165	179	193	207	222	236	250	264	279	293
Bermuda - Unhulled (Pounds per 1000 Square Feet)																					
High Range	0.0	1.4	2.3	3.7	4.7	5.8	6.8	7.8	8.9	9.9	10.9	12	13	14	15	16.1	17.1	18.1	19.2	20.2	21.3
Low Range	0.0	0.4	0.7	1.2	1.5	1.8	2.1	2.5	2.8	3.1	3.8	3.8	4.1	4.4	4.8	5.1	5.4	5.7	6.1	6.4	6.7
Buffalo Grass Sharps Improved (Pounds per Acre)																					
High Range	0	0	0	22	52	76	106	130	159	185	213	241	259	293	321	352	371	395	417	430	434
Low Range	0	0	0	13	21	29	38	46	56	65	73	83	92	99	109	118	127	134	143	147	150
Buffalo Grass Sharps Improved (Pounds per 1000 Square Feet)																					
High Range	0.0	0	0	0.5	1.2	1.7	2.4	3	3.6	4.2	4.9	5.5	6.2	6.7	7.4	8.1	8.5	9.1	9.6	9.9	10
Low Range	0.0	0	0	0.30	0.5	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.4	3.5
Clover - Red (Pounds per Acre)																					
High Range	0	77	143	202	263	321	380	438	499	557	616	676	734	793	852	913	971	1030	190	1149	1207
Low Range	0	24	45	64	83	102	120	139	158	177	195	214	233	251	270	289	308	326	346	364	383
Clover - Red (Pounds per 1000 Square Feet)																					
High Range	0.0	1.8	3.3	4.6	6	7.4	8.7	1.1	11.5	12.8	14.2	15.5	16.9	18.2	19.6	21	22.3	23.7	25.1	26.4	27.8
Low Range	0.0	0.6	1	1.5	1.9	2.3	2.8	3.2	3.6	4.1	4.5	4.9	5.4	5.8	6.2	6.6	7.1	7.5	7.9	8.4	8.8
Clover - White (Pounds per Acre)																					
High Range	0	77	151	224	297	372	444	517	592	664	737	812	884	957	1032	1104	1177	1252	1324	1397	1472
Low Range	0	24	48	71	94	118	141	164	187	211	234	257	280	303	327	350	373	397	420	443	466
Clover - White (Pounds per 1000 Square Feet)																					
High Range	0.0	1.8	3.5	5.2	6.8	8.5	10.2	11.9	13.6	15.3	16.9	18.7	20.3	22	23.7	25.4	27.1	28.8	30.4	32.1	33.8
Low Range	0.0	0.6	1.1	1.6	2.2	2.7	3.2	3.8	4.3	4.8	5.4	5.9	6.4	7	7.5	8	8.6	9.1	9.6	10.2	10.7
Fescue - Fine Blade, Turf Type (Pounds per Acre)																					
High Range	0	20	46	75	103	131	160	188	216	242	271	299	327	355	384	412	440	468	497	525	553
Low Range	0	6	15	24	33	42	51	60	69	77	86	95	104	113	122	131	140	148	157	166	175
Fescue - Fine Blade, Turf Type (Pounds per 1000 Square Feet)																					
High Range	0.0	0.5	1.1	1.7	2.4	3	3.7	4.3	5	5.6	6.2	6.9	7.5	8.2	8.8	9.5	10.1	10.8	11.4	12.1	12.7
Low Range	0.0	0.1	0.3	0.5	0.7	1	1.2	1.4	1.6	1.8	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6	3.8	4
Fescue K-31 (Pounds per Acre)																					
High Range	0	0	21	50	83	113	140	165	186	223	243	272	305	328	355	382	48	433	439	450	454
Low Range	0	0	6	15	26	35	44	51	58	69	76	84	95	102	110	118	127	134	136	140	141
Fescue K-31 (Pounds per 1000 Square Feet)																					
High Range	0.0	0.0	0.5	1.1	1.9	2.6	3.2	3.8	4.3	5.1	5.6	6.3	7	7.5	8.2	8.8	9.4	10	10.1	10.3	10.4
Low Range	0.0	0.0	0.1	0.4	0.6	0.8	1	1.2	1.3	1.6	1.7	1.9	2.2	2.3	2.5	2.7	2.9	3.1	3.1	3.2	3.2
Kentucky Blue Grass (Pounds per Acre)																					
High Range	0	23	48	73	103	125	155	178	205	227	250	274	293	322	334	365	387	406	426	442	455
Low Range	0	8	16	24	34	41	51	58	67	74	82	90	96	106	109	119	127	133	140	145	149
Kentucky Blue Grass (Pounds per 1000 Square Feet)																					
High Range	0.0	0.5	1.1	1.7	2.4	2.9	3.6	4.1	4.7	5.2	5.7	6.3	6.7	7.4	7.7	8.4	8.9	9.3	9.8	10.1	10.5
Low Range	0.0	0.2	0.4	0.5	0.8	0.9	1.2	1.3	1.5	1.7	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.1	3.2	3.3	3.4

IMPORTANT: Do Not operate seed rate adjustment lever at -0- cup setting. Seed cup damage may occur.

Cup Setting	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Lovegrass - Sand (Pounds per Acre)																					
High Range	0	89	140	191	242	293	343	394	445	496	547	598	649	700	751	802	852	925	977	1029	1081
Low Range	0	28	44	61	77	93	109	125	141	157	173	189	206	222	238	254	270	286	302	319	335
Lovegrass - Sand (Pounds per 1000 Square Feet)																					
High Range	0.0	2	3.2	4.4	5.6	6.7	7.9	9.1	10.2	11.4	12.6	13.7	14.9	16.1	17.3	18.4	19.6	21.3	22.5	23.7	24.9
Low Range	0.0	0.6	1	1.4	1.8	2.1	2.5	2.9	3.2	3.6	4	4.4	4.7	5.1	5.5	5.8	6.2	6.6	6.9	7.3	7.7
Lovegrass - Weeping (Pounds per Acre)																					
High Range	0	109	176	226	287	343	396	448	501	553	606	658	711	763	816	868	921	973	1026	1078	1133
Low Range	0	35	56	72	91	109	125	142	159	175	192	209	225	242	259	275	292	308	325	342	359
Lovegrass - Weeping (Pounds per 1000 Square Feet)																					
High Range	0.0	2.5	4	5.2	6.6	7.9	9.1	10.3	11.5	12.7	13.9	15.1	16.3	17.5	18.7	20	21.2	22.4	23.6	24.8	26
Low Range	0.0	0.8	1.3	1.6	2.1	2.5	2.9	3.3	3.6	4	4.4	4.8	5.2	5.6	5.9	6.3	6.7	7.1	7.5	7.8	8.2
Orchard Grass (Pounds per Acre)																					
High Range	0	4	6	10	15	20	27	34	41	49	58	66	75	85	94	103	112	121	130	138	146
Low Range	0	1	2	3	5	7	9	12	15	18	22	25	29	33	36	40	44	48	51	55	58
Orchard Grass (Pounds per 1000 Square Feet)																					
High Range	0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.3	1.5	1.7	1.9	2.2	2.4	2.6	2.8	3.0	3.2	3.3
Low Range	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3
Rye Grass - Annual (Pounds per Acre)																					
High Range	0	21	59	95	131	168	204	242	279	315	351	388	426	462	499	535	573	610	646	682	719
Low Range	0	7	19	30	42	53	65	77	88	100	111	123	135	147	158	170	182	193	205	216	228
Rye Grass - Annual (Pounds per 1000 Square Feet)																					
High Range	0.0	0.5	1.3	2.2	3	3.9	4.7	5.6	6.4	7.2	8.1	8.9	9.8	10.6	11.5	12.3	13.2	14	14.9	15.7	16.5
Low Range	0.0	0.2	0.4	0.7	1	1.2	1.5	1.8	2	2.3	2.6	2.8	3.1	3.4	3.6	3.9	4.2	4.4	4.7	5	5.2
Rye Grass - Perennial (Pounds per Acre)																					
High Range	0	36	77	115	156	196	234	275	315	353	394	434	475	513	553	594	632	672	713	751	791
Low Range	0	12	24	37	49	62	74	87	100	112	125	138	150	163	175	188	200	213	226	238	251
Rye Grass - Perennial (Pounds per 1000 Square Feet)																					
High Range	0.0	0.8	1.8	2.6	3.6	4.5	5.4	6.2	7.2	8.1	9	10	10.9	11.8	12.7	13.6	14.5	15.5	16.4	17.3	18.2
Low Range	0.0	0.3	0.6	0.8	1.1	1.4	1.7	2	2.3	2.6	2.9	3.2	3.5	3.7	4	4.3	4.6	4.9	5.2	5.5	5.8
Sudan Grass (Pounds per Acre)																					
High Range	0	35	68	103	141	179	220	262	306	352	398	446	495	545	596	648	701	754	808	862	916
Low Range	0	18	28	41	55	71	89	107	127	147	168	189	210	231	252	271	290	308	325	339	352
Sudan Grass (Pounds per 1000 Square Feet)																					
High Range	0.0	0.8	1.6	2.4	3.2	4.1	5.1	6.0	7.0	8.1	9.1	10.2	11.4	12.5	13.7	14.9	16.1	17.3	18.5	19.8	21.0
Low Range	0.0	0.4	0.6	0.9	1.3	1.6	2.0	2.5	2.9	3.4	3.9	4.3	4.8	5.3	5.8	6.2	6.7	7.1	7.5	7.8	8.1
Vetch (Pounds per Acre)																					
High Range	0	78	135	191	245	302	358	415	471	525	582	638	695	749	805	862	918	973	1029	1089	1142
Low Range	0	21	38	56	73	90	108	125	142	159	177	194	211	228	246	263	280	298	315	333	350
Vetch (Pounds per 1000 Square Feet)																					
High Range	0.0	1.8	3.1	4.4	5.6	6.9	8.2	9.5	10.8	12.1	13.4	14.7	16	17.2	18.5	19.8	21.1	22.4	23.7	25.1	26.2
Low Range	0.0	0.5	0.9	1.3	1.7	2.1	2.5	2.9	3.3	3.7	4.1	4.5	4.9	5.2	5.6	6	6.4	6.9	7.2	7.6	8
Wheatgrass - Crested (Pounds per Acre)																					
High Range	0	22	36	51	67	81	95	111	125	139	153	170	184	198	214	228	242	258	273	287	301
Low Range	0	7	12	16	21	26	30	35	40	44	49	54	58	63	68	72	77	82	86	91	95
Wheatgrass - Crested (Pounds per 1000 Square Feet)																					
High Range	0.0	0.5	0.8	1.2	1.5	1.9	2.2	2.6	2.9	3.2	3.5	3.9	4.2	4.5	4.9	5.2	5.6	5.9	6.3	6.6	6.9
Low Range	0.0	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2	2.1	2.2
Wheatgrass - Western (Pounds per Acre)																					
High Range	0	7	24	41	58	76	93	110	127	144	161	179	196	213	230	247	265	282	299	316	333
Low Range	0	2	8	13	19	24	29	35	44	46	51	57	62	67	73	78	84	89	95	100	106
Wheatgrass - Western (Pounds per 1000 Square Feet)																					
High Range	0.0	0.2	0.5	0.9	1.3	1.7	2.1	2.5	2.9	3.3	3.7	4.1	4.5	4.9	5.3	5.7	6.1	6.5	6.9	7.3	7.7
Low Range	0.0	0.0	0.2	0.3	0.4	0.5	0.7	0.8	0.9	1	1.2	1.3	1.4	1.5	1.7	1.8	1.9	2.1	2.2	2.3	2.4

IMPORTANT: Do Not operate seed rate adjustment lever at -0- cup setting. Seed cup damage may occur.

Seed Rate Charts, Metric (Standard Seeds Box)

Cup Setting	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Alfalfa (Kilograms per Hectare)																					
High Range	0	60	140	222	301	382	461	543	621	700	782	860	942	1021	1102	1181	1263	1341	1421	1503	1581
Low Range	0	19	45	70	95	121	147	172	197	222	247	273	299	323	349	375	401	425	450	475	501
Alfalfa (Kilograms per 1000 Square Meters)																					
High Range	0	6	14	22	30	38	45	54	62	70	79	86	95	103	110	119	126	135	143	151	159
Low Range	0	2	4	7	10	12	15	17	20	22	25	27	30	32	35	38	40	42	45	48	50
Bent Grass (Kilograms per Hectare)																					
High Range	0	41	90	129	170	207	230	267	296	328	365	401	425	462	491	522	558	591	620	656	693
Low Range	0	19	32	47	60	74	86	100	111	123	136	147	157	167	178	188	196	206	214	222	229
Bent Grass (Kilograms per 1000 Square Meters)																					
High Range	0	4	9	13	17	21	23	27	30	33	37	40	42	46	49	56	59	62	62	66	69
Low Range	0	2	3	5	6	7	9	10	11	12	14	15	16	17	18	19	20	21	21	22	23
Bermuda (Kilograms per Hectare)																					
High Range	0	68	113	180	230	280	330	382	432	481	531	583	632	682	732	784	834	883	933	985	1035
Low Range	0	21	36	57	73	88	104	121	136	152	168	185	200	216	232	248	264	280	295	312	328
Bermuda (Kilograms per 1000 Square Meters)																					
High Range	0	7	11	18	23	28	33	38	43	48	53	59	63	68	73	79	83	88	94	99	104
Low Range	0	2	3	6	7	9	10	12	14	15	19	19	20	21	23	25	26	28	30	31	33
Buffalo Grass (Kilograms per Hectare)																					
High Range	0	0	0	25	58	85	119	145	178	207	238	270	290	328	359	394	415	442	467	481	486
Low Range	0	0	0	15	23	32	43	51	63	73	82	93	103	111	122	132	142	150	160	164	168
Buffalo Grass (Kilograms per 1000 Square Meters)																					
High Range	0	0	0	2	6	8	12	15	18	21	24	27	30	33	36	40	42	44	47	48	49
Low Range	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	17
Clover - Red (Kilograms per Hectare)																					
High Range	0	86	160	226	294	359	425	490	558	623	689	756	821	887	953	1021	1086	1152	1219	1286	1350
Low Range	0	27	50	72	93	114	134	156	177	198	218	239	261	281	302	323	345	365	387	407	429
Clover - Red (Kilograms per 1000 Square Meters)																					
High Range	0	9	16	22	29	36	42	49	56	62	69	76	83	89	96	103	109	116	123	129	136
Low Range	0	3	5	7	9	11	14	16	18	20	22	24	26	28	30	32	35	37	39	41	43
Clover - White (Kilograms per Hectare)																					
High Range	0	86	169	251	332	416	497	578	662	743	825	908	989	1071	1155	1235	1317	1401	1481	1563	1647
Low Range	0	27	54	79	105	132	158	183	209	236	262	288	313	339	366	392	417	444	470	496	521
Clover - White (Kilograms per 1000 Square Meters)																					
High Range	0	9	17	25	33	42	50	58	66	75	83	91	99	107	116	124	132	141	148	157	165
Low Range	0	3	5	8	11	13	16	19	21	23	26	29	31	34	37	39	42	44	47	50	52
Fescue - Fine Blade, Turf Type (Kilograms per Hectare)																					
High Range	0	22	51	84	115	147	179	210	242	271	303	335	366	397	430	461	492	524	556	587	619
Low Range	0	7	17	27	37	47	57	67	77	86	96	106	116	126	136	147	157	166	176	186	196
Fescue - Fine Blade, Turf Type (Kilograms per 1000 Square Meters)																					
High Range	0	2	5	8	12	15	18	21	24	27	30	34	37	40	43	46	49	53	56	59	62
Low Range	0	0	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Fescue K-31(Kilograms per Hectare)																					
High Range	0	0	23	56	93	126	157	185	208	249	272	304	341	367	397	427	456	484	491	503	508
Low Range	0	0	7	17	29	39	49	57	65	77	85	94	106	114	123	132	142	150	152	157	158
Fescue K-31 (Kilograms per 1000 Square Meters)																					
High Range	0	0	2	5	9	13	16	19	21	25	27	31	34	37	40	43	46	49	49	50	51
Low Range	0	0	0	5	3	4	5	6	6	8	8	9	11	11	12	13	14	15	15	16	16
Kentucky Blue Grass (Kilograms per Hectare)																					
High Range	0	26	54	82	115	140	173	199	229	254	280	307	328	360	374	408	433	454	477	495	509
Low Range	0	9	18	27	38	46	57	65	75	83	92	101	107	119	122	133	142	149	157	162	167
Kentucky Blue Grass (Kilograms per 1000 Square Meters)																					
High Range	0	2	5	8	12	14	18	20	23	25	28	31	33	36	38	41	43	45	48	49	51
Low Range	0	1	2	2	4	4	6	6	7	8	9	10	11	12	12	13	14	15	16	16	17

IMPORTANT: Do Not operate seed rate adjustment lever at -0- cup setting. Seed cup damage may occur.

Cup Setting	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Lovegrass - Sand (Kilograms per Hectare)																					
High Range	0	100	157	214	271	328	384	441	498	555	612	669	726	783	840	897	953	1035	1093	1151	1209
Low Range	0	31	49	68	86	104	122	140	158	176	194	211	230	248	266	284	302	320	338	357	375
Lovegrass - Sand (Kilograms per 1000 Square Meters)																					
High Range	0	10	16	21	27	33	39	44	50	56	62	67	73	79	84	90	96	104	110	116	122
Low Range	0	3	5	7	9	10	12	14	16	18	20	21	23	25	27	28	30	32	34	36	38
Lovegrass - Weeping (Kilograms per Hectare)																					
High Range	0	122	197	253	321	384	443	501	561	619	678	736	795	854	913	971	1030	1089	1148	1206	1268
Low Range	0	39	63	81	102	122	140	159	178	196	215	234	252	271	290	308	327	345	364	383	402
Lovegrass - Weeping (Kilograms per 1000 Square Meters)																					
High Range	0	12	20	25	32	39	44	50	56	62	68	74	80	85	91	98	104	109	115	121	127
Low Range	0	4	6	8	10	12	14	16	18	20	21	23	25	27	29	31	33	35	37	38	40
Orchard Grass (Kilograms per Hectare)																					
High Range	0	4	7	11	17	23	30	38	46	55	65	74	84	95	105	115	126	136	145	155	164
Low Range	0	1	2	4	5	8	10	14	17	20	24	28	32	37	41	45	49	53	57	61	65
Orchard Grass (Kilograms per 1000 Square Meters)																					
High Range	0	0	1	1	2	2	3	4	5	6	6	7	8	9	11	12	13	14	15	15	16
Low Range	0	0	0	0	1	1	1	1	2	2	2	3	3	4	4	5	5	5	6	6	6
Rye Grass - Annual (Kilograms per Hectare)																					
High Range	0	23	66	106	147	188	228	271	312	352	393	434	477	517	558	599	641	682	723	763	804
Low Range	0	8	21	34	47	59	73	86	98	112	124	138	151	164	177	190	204	216	229	242	255
Rye Grass - Annual (Kilograms per 1000 Square Meters)																					
High Range	0	2	6	11	15	19	23	27	31	35	40	43	48	52	56	60	64	68	73	77	81
Low Range	0	1	2	3	5	6	7	9	10	11	13	14	15	17	18	19	21	21	23	24	25
Rye Grass - Perennial (Kilograms per Hectare)																					
High Range	0	40	86	129	175	219	262	308	352	395	441	486	531	574	619	665	707	752	798	840	885
Low Range	0	13	27	41	55	69	83	97	112	125	140	154	168	182	196	210	224	238	253	266	281
Rye Grass - Perennial (Kilograms per 1000 Square Meters)																					
High Range	0	4	9	13	18	22	26	30	35	40	44	49	53	58	62	66	71	76	80	84	89
Low Range	0	1	3	4	5	7	8	10	11	13	14	16	17	18	20	21	22	24	25	27	28
Sudan Grass (Kilograms per Hectare)																					
High Range	0	39	77	116	157	201	247	294	343	394	446	500	555	611	668	726	785	845	905	966	1027
Low Range	0	20	32	46	62	80	99	120	142	165	188	212	236	259	282	304	325	345	364	380	395
Sudan Grass (Kilograms per 1000 Square Meters)																					
High Range	0	4	8	12	16	20	25	29	34	39	45	50	56	61	67	73	79	84	91	97	103
Low Range	0	2	3	5	6	8	10	12	14	16	19	21	24	26	28	30	33	35	36	38	39
Vetch (Kilograms per Hectare)																					
High Range	0	87	151	214	274	338	401	464	527	587	651	714	778	838	901	964	1027	1089	1151	1218	1278
Low Range	0	23	43	63	82	101	121	140	159	178	198	217	236	255	275	294	313	333	352	373	392
Vetch (Kilograms per 1000 Square Meters)																					
High Range	0	9	15	21	27	34	40	46	53	59	65	72	78	84	90	97	103	109	116	123	128
Low Range	0	2	4	6	8	10	12	14	16	18	20	22	24	25	27	29	31	34	35	37	39
Wheatgrass - Crested (Kilograms per Hectare)																					
High Range	0	25	40	57	75	91	106	124	140	156	171	190	206	222	239	255	271	289	305	321	337
Low Range	0	8	13	18	23	29	34	39	45	49	55	60	65	70	76	81	86	92	96	102	106
Wheatgrass - Crested (Kilograms per 1000 Square Meters)																					
High Range	0	2	4	6	7	9	11	13	14	16	17	19	21	22	24	25	27	29	31	32	34
Low Range	0	1	1	2	2	3	3	4	4	5	5	6	6	7	8	8	9	9	10	10	11
Wheatgrass - Western (Kilograms per Hectare)																					
High Range	0	8	27	46	65	85	104	123	142	161	180	200	219	238	257	276	296	316	335	354	373
Low Range	0	2	9	15	21	27	32	39	45	51	57	64	69	75	82	87	94	100	106	112	119
Wheatgrass - Western (Kilograms per 1000 Square Meters)																					
High Range	0	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
Low Range	0	0	1	1	2	2	3	4	4	5	6	6	7	7	8	9	9	10	11	11	12

IMPORTANT: Do Not operate seed rate adjustment lever at -0- cup setting. Seed cup damage may occur.

Seed Rate Charts (Small Seeds Box)

Cup Setting	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Alfalfa (Pounds per Acre)																					
	0	0	2.82	4.51	6.20	7.75	9.58	11.27	12.68	14.37	16.21	17.76	19.45	21.14	22.55	24.52	26.07	27.62	29.45	31.00	32.55
Alfalfa (Pounds per 1000 Square Feet)																					
	0	0	.06	.10	.14	.18	.22	.26	.29	.33	.37	.41	.45	.49	.52	.56	.60	.63	.68	.71	.75
Sudan Grass (Pounds per Acre)																					
	0	0	0	2.82	4.23	7.89	10.43	13.81	16.35	19.73	22.55	25.36	28.18	31.00	33.82	36.64	39.46	42.56	45.09	47.91	50.73
Sudan Grass (Pounds per 1000 Square Feet)																					
	0	0	0	.06	.10	.18	.24	.32	.38	.45	.52	.58	.65	.71	.78	.84	.91	.98	1.04	1.10	1.16
Turnips - Purple Top (Pounds per Acre)																					
	0	0	2.11	3.95	5.35	7.19	9.30	10.71	12.68	14.66	16.63	18.46	20.57	22.55	24.52	26.77	28.75	30.44	32.69	34.95	37.34
Turnips - Purple Top (Pounds per 1000 Square Feet)																					
	0	0	.05	.09	.12	.16	.21	.25	.29	.34	.38	.42	.47	.52	.56	.61	.66	.70	.75	.80	.86
Orchard Grass (Pounds per Acre)																					
	0	0	0	.28	.85	1.13	1.69	1.97	2.54	3.10	3.66	4.23	4.51	5.07	5.64	6.20	6.48	7.05	7.33	7.89	8.17
Orchard Grass (Pounds per 1000 Square Feet)																					
	0	0	0	.01	.02	.03	.04	.05	.06	.07	.08	.10	.10	.12	.13	.14	.15	.16	.17	.18	.19
Sweet Clover (Pounds per Acre)																					
	0	0	1.97	4.37	6.76	9.16	11.55	14.66	17.05	19.73	21.98	24.52	26.77	29.03	31.56	34.10	36.50	38.89	41.43	43.68	45.94
Sweet Clover (Pounds per 1000 Square Feet)																					
	0	0	.05	.10	.16	.21	.27	.34	.39	.45	.50	.56	.61	.67	.72	.78	.84	.89	.95	1.00	1.05
Ladino Clover (Pounds per Acre)																					
	0	.85	2.25	4.23	6.06	7.75	10.15	12.54	14.94	16.91	18.88	21.14	23.39	25.08	27.06	29.03	30.86	32.97	35.23	37.77	39.46
Ladino Clover (Pounds per 1000 Square Feet)																					
	0	.02	.05	.10	.14	.18	.23	.29	.34	.39	.43	.49	.54	.58	.62	.67	.71	.76	.81	.87	.91
Red Clover (Pounds per Acre)																					
	0	.28	2.54	4.79	7.05	9.30	11.55	14.09	16.35	18.60	20.86	23.11	25.36	27.62	30.16	32.41	34.66	36.92	39.17	41.43	43.97
Red Clover (Pounds per 1000 Square Feet)																					
	0	.01	.06	.11	.16	.21	.27	.32	.38	.43	.48	.53	.58	.63	.69	.74	.80	.85	.90	.95	1.01
Timothy Grass (Pounds per Acre)																					
	0	0	1.41	3.10	4.79	6.76	8.74	10.99	13.25	15.50	17.76	20.01	22.26	24.52	26.77	29.31	31.28	33.82	36.07	38.05	40.30
Timothy Grass (Pounds per 1000 Square Feet)																					
	0	0	.03	.07	.11	.16	.20	.25	.30	.36	.41	.46	.51	.56	.61	.67	.72	.78	.83	.87	.93
Canary Grass (Pounds per Acre)																					
	0	0	1.97	3.80	5.64	7.61	9.58	11.55	13.53	15.50	17.47	19.73	21.98	23.96	26.49	28.46	30.72	32.83	35.23	37.20	39.46
Canary Grass (Pounds per 1000 Square Feet)																					
	0	0	.05	.09	.13	.17	.22	.27	.31	.36	.40	.45	.50	.55	.61	.65	.71	.75	.81	.85	.91
Birdsfoot Trefoil (Pounds per Acre)																					
	0	0	2.25	4.51	7.05	9.86	12.68	15.22	18.04	20.57	23.39	26.21	29.03	31.85	34.66	37.77	40.58	43.40	45.94	48.76	51.57
Birdsfoot Trefoil (Pounds per 1000 Square Feet)																					
	0	0	.05	.10	.16	.23	.29	.35	.41	.47	.54	.60	.67	.73	.80	.87	.93	1.00	1.05	1.12	1.18
Red Top Grass (Pounds per Acre)																					
	0	0	.85	1.69	2.54	3.95	5.07	6.20	7.05	8.17	9.30	10.15	10.71	11.55	12.12	12.96	13.81	14.94	15.78	16.91	17.76
Red Top Grass (Pounds per 1000 Square Feet)																					
	0	0	.02	.04	.06	.09	.12	.14	.16	.19	.21	.23	.25	.27	.28	.30	.32	.34	.36	.39	.41
Kentucky Blue Grass (Pounds per Acre)																					
	0	0	.28	1.52	2.17	3.72	4.37	5.33	6.12	6.90	7.61	8.40	9.02	9.72	10.40	10.99	11.64	12.29	12.82	13.39	13.95
Kentucky Blue Grass (Pounds per 1000 Square Feet)																					
	0	0	.01	.03	.05	.09	.10	.12	.14	.16	.17	.19	.21	.22	.24	.25	.27	.28	.29	.31	.32

IMPORTANT: Do Not operate seed rate adjustment lever at -0- cup setting. Seed cup damage may occur.

Standard Seeds Box

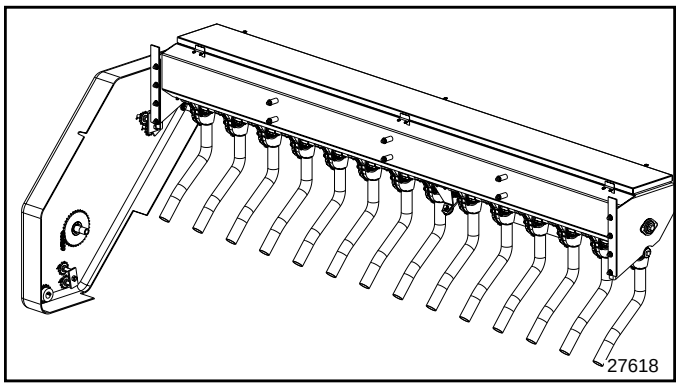
313-305A PSN2096 STANDARD SEEDS BOX

Refer to Figure 5-1:

The Land Pride Standard Seeds Box Assembly is an option made available to fit on the back of Land Pride's PSN2096 Native Grass Seedbox. The standard seeds attachment is designed to meter various grass and grain seeds. It features a 4.8 bushel capacity box.

The Standard Seeds Box option may be ordered with your Primary Seeder, or installed at a later time by you or your dealer. For additional information refer to:

- Standard Seeds Box Assembly on page 14
- Standard Seeds Box Drive Assembly on page 15
- Seed Rate Speed Change on page 22
- Seed Rate Adjustment on page 23
- Section 6: Maintenance & Lubrication on page 30
- Section 9: Troubleshooting on page 37



Standard Seeds Box Option
Figure 5-1

Small Seeds Box

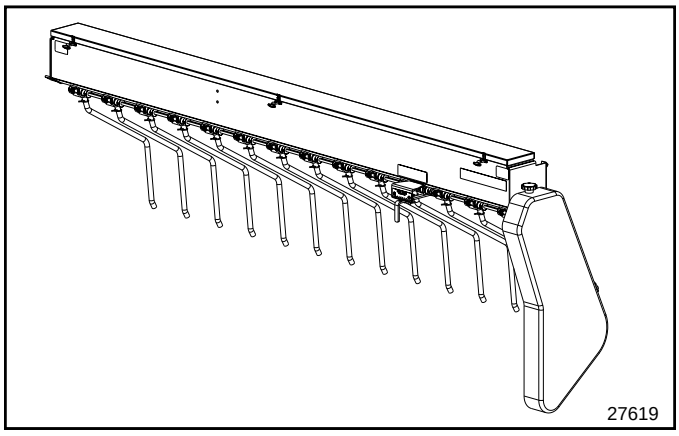
313-304A PSN2096 SMALL SEEDS BOX

Refer to Figure 5-2:

The Land Pride Small Seeds Box Assembly is an option made available to fit on the front of Land Pride's PSN2096 Native Grass Seedbox. The small seeds attachment is designed to meter various small seeds. It features a 2 bushel capacity box.

The Small Seeds Box option may be ordered with your Primary Seeder, or installed at a later time by you or your dealer. For additional information refer to:

- Small Seeds Box Assembly on page 12
- Small Seeds Box Drive Assembly on page 13
- Seed Rate Speed Change on page 22
- Seed Rate Adjustment on page 23
- Section 6: Maintenance & Lubrication on page 30
- Section 9: Troubleshooting on page 37



Small Seeds Box Option
Figure 5-2

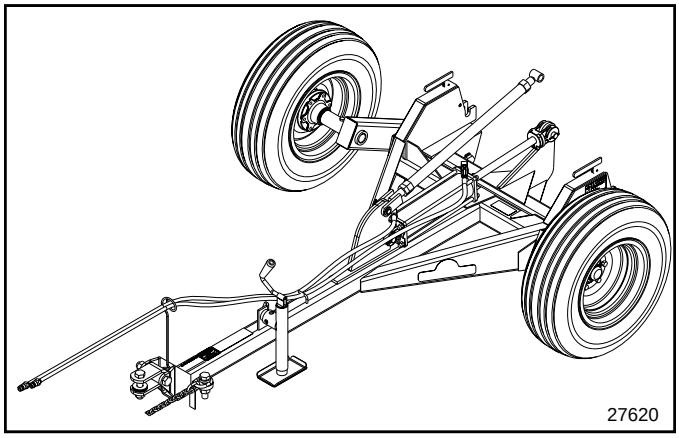
Pull Hitch

313-321A PULL HITCH ASSEMBLY

Refer to Figure 5-2:

The Land Pride Pull Hitch Package is complete with wheels and a single hydraulic cylinder for lifting and towing the Primary Seeder with smaller tractors. For additional information, refer to:

- Pull Hitch Hook-Up on page 16
- Pull Hitch Disconnect on page 16
- Pull Hitch Operating Instructions on page 17



Pull Hitch Option
Figure 5-3

Maintenance

Proper servicing and adjustment is the key to the long life of any implement. With careful inspection and routine maintenance, you can avoid costly downtime and repair.

After using and/or transporting your seeder for several hours, check all bolts to be sure they are tight.

Replace any worn, damaged, or illegible safety labels by obtaining new labels from your Land Pride Dealer.

WARNING

Always secure seeder in the up position with solid supports before servicing the underside. Never work under equipment supported by hydraulics. Hydraulics can drop equipment if controls are actuated or if hydraulic lines burst. Either situation can drop the seeder instantly even when power to the hydraulics is shut off.

Drive System

Your Primary Seeder uses standard no. 40 roller chain throughout its drive system. The drive system is simple and designed for low maintenance.

Check all drive idler arms to insure that they are taking up any excess chain slack and that the chain is not over-tightened. Clean and lubricate all roller chains with chain lubricant as needed.

Packing Rollers

The front and rear packing rollers should turn freely. If they do not, investigate and remove the cause. The rear roller assembly should be free to float up and down to follow the field terrain. If it does not, investigate and remove the cause.

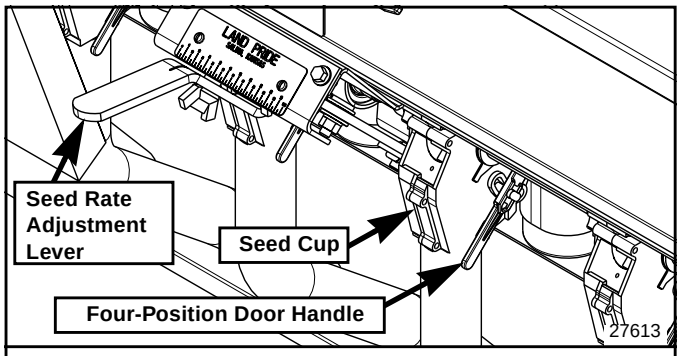
Storage

It is good practice to clean off any dirt or grease that may have accumulated on the seeder and moving parts at the end of each working season and when your seeder will not be used for several days.

1. Be sure that the seed box is completely cleaned before storing. It is best to do this while still hooked to the tractor.
   a. Scoop out any large quantities of seed left in the box. Finish by using a small broom or vacuum sweeper.

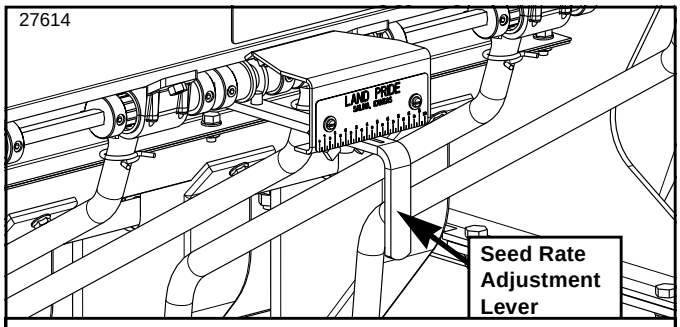
Refer to Figure 6-1 & Figure 6-2:

   b. Move Standard Seeds Box & Small Seeds Box rate adjustment lever(s) all the way to the right to fully open seed cups.
   c. Lower four position door handles to the lowest position at each Small Seeds Box seed cup.
   d. Run seeder over the ground to power the seed cups to remove out-of-reach seeds.
   e. Make a final sweep or vacuum the seed cups to finish the cleaning job.



DO NOT open cups to the widest position with seed in the box unless complete clean out is desired.

Standard Seeds Box Adjustment Levers
Figure 6-1



DO NOT open cups to the widest position with seed in the box unless complete clean out is desired.

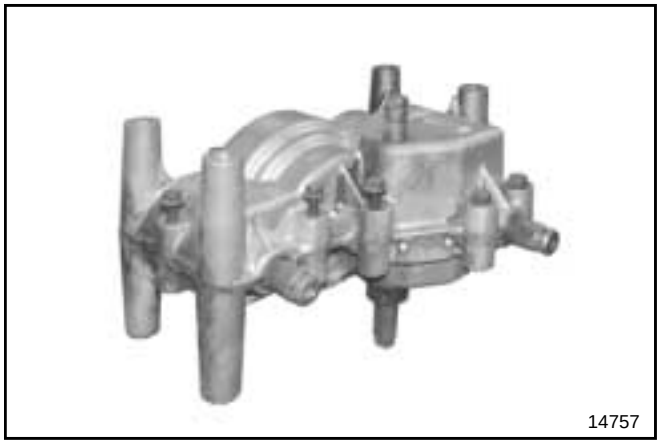
Small Seeds Box Clean Adjustment Lever
Figure 6-2

2. Place Rear Roller Pin in Parking position. (See Figure 3-4, page 18.)
3. The square bore of the seed cup drive sprocket hub should be oiled to prevent seizing. Squirt oil on to the square feed cup shaft and move seed cup adjustment lever back and forth in order to get the oil back into the square.
4. Lubricate all grease fittings and roller chains as noted under Lubrication Points starting on page 31.
5. When in storage, make sure rear roller pin is in Parking position and then lower seeder with rollers on a board or hard surface. Adjust tongue jack support the hitch on the Pull Hitch Option.
6. Repaint parts where paint is worn or scratched to prevent rust.
7. Replace all damaged or missing decals.
8. Store the seeder inside if possible. Inside storage will reduce maintenance and make for a longer seeder life.
9. Inspect seeder for loose, damaged, or worn parts and adjust or replace if needed with genuine Land Pride parts. Do not alter Land Pride equipment. Altering equipment can hinder performance and/or cause damage to the equipment.

Lubrication

Lubrication Legend

Multi-purpose spray lube | Multi-purpose grease lube | Multi-purpose oil lube | 50 Hrs — Intervals in hours at which lubrication is required



As Required

Gearbox

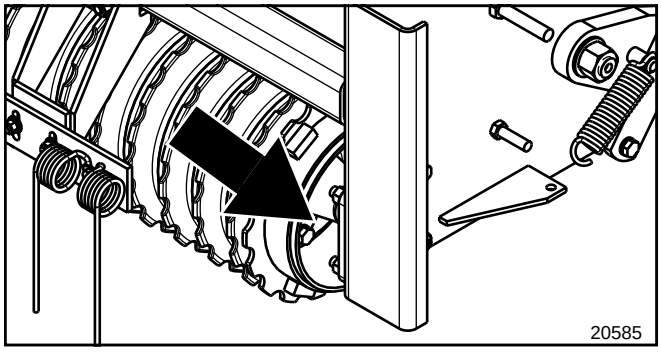
The gearbox is lubricated and sealed at the factory. Under normal conditions, it does not require maintenance or lubrication.

If the gearbox has been opened for repair, repack all gears and around shaft bearings using at least 7 oz. of gear lube, Part No. 788067.

Keep moisture and dirt out of gearbox. Inspect (replace if needed) the rubber seals on gearbox drive and shifter shafts.

Spread a small skin coat of anaerobic sealant (Loctite 525 or equivalent) to gear case mating surfaces before bolting them back together.

IMPORTANT: Use sparingly. Excess sealant may squeeze off the intended surface and into the bearings and gears causing them to lock up.



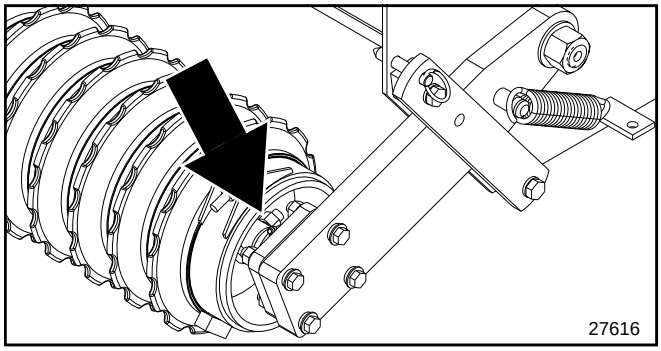
25 Hours

Roller Bearings

Front Roller (Both Ends)

Type of Lubrication: Multi-Purpose

Quantity = Coat Generously



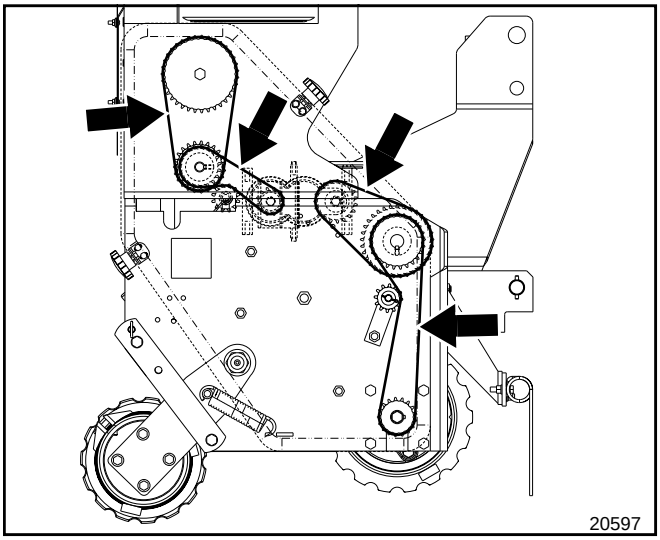
25 Hours

Roller Bearings

Rear Roller (Both Ends)

Type of Lubrication: Multi-Purpose

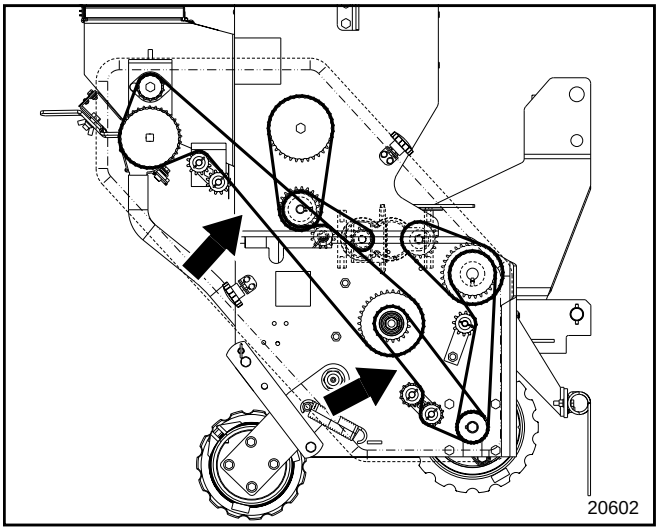
Quantity = Coat Generously



Roller Chains (4 chains)

Type of Lubrication: Chain Lubricant

Quantity = Generously

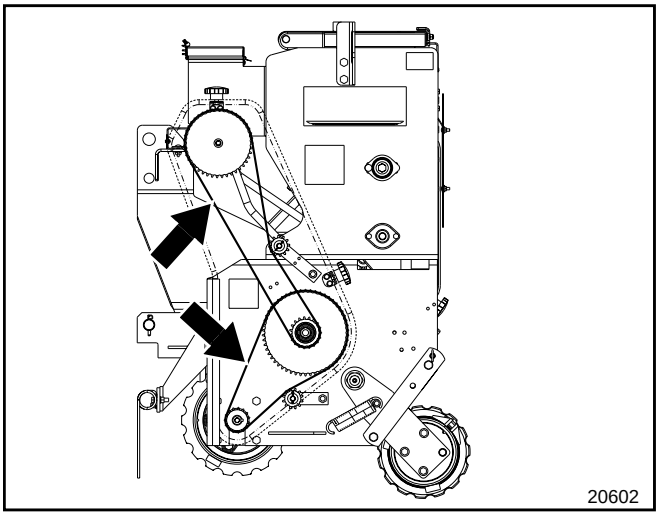


Roller Chains

Standard Seeds Box Option

Type of Lubrication: Chain Lubricant

Quantity = Generously

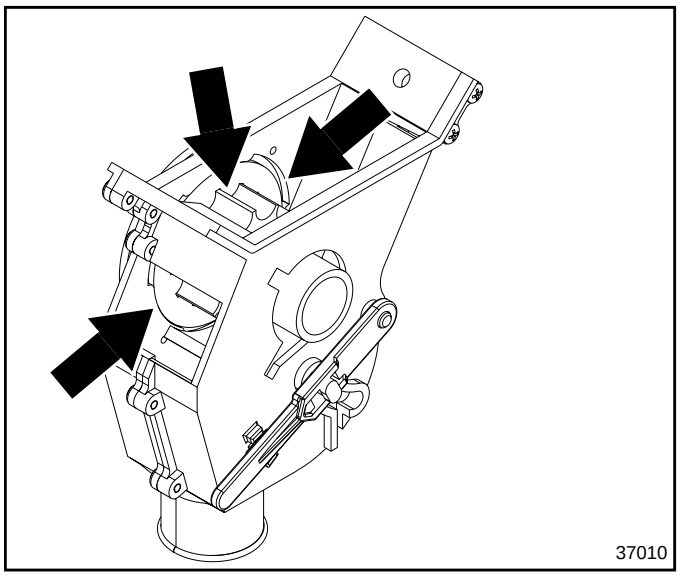


Roller Chains

Small Seeds Box Option

Type of Lubrication: Chain Lubricant

Quantity = Generously



Graphite Powder	As Needed

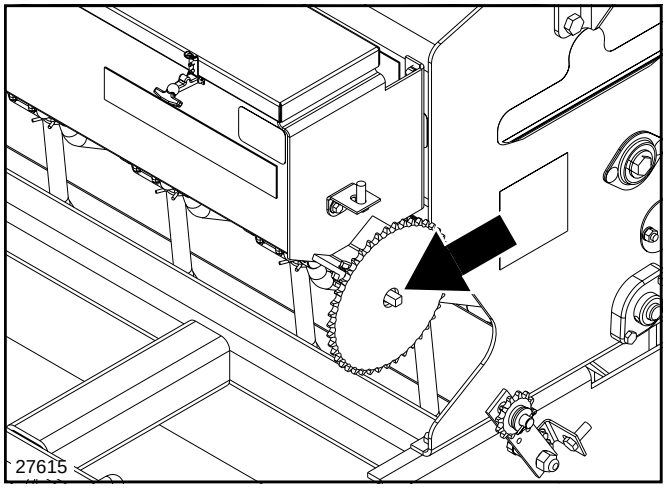
Seed Cup Sprockets & Nylon Washers

IMPORTANT: DO NOT use petroleum lubricant on plastic seed cups. Petroleum will absorb into the plastic and swell plastic components.

NOTE: Cleaning seed cups seasonally is often all that is required to keep seed cups working properly. Remove seed from seed box and seed cups. Rinse each seed cup thoroughly with water spray from a garden hose. Allow seed cups to air dry completely before putting seeder back into service.

Type of Lubrication: Graphite Powder
Land Pride # 821-042C (1 lb. Container)

Quantity = Mix as needed, 1 teaspoon of powdered graphite for every bushel of seed in the seed box.



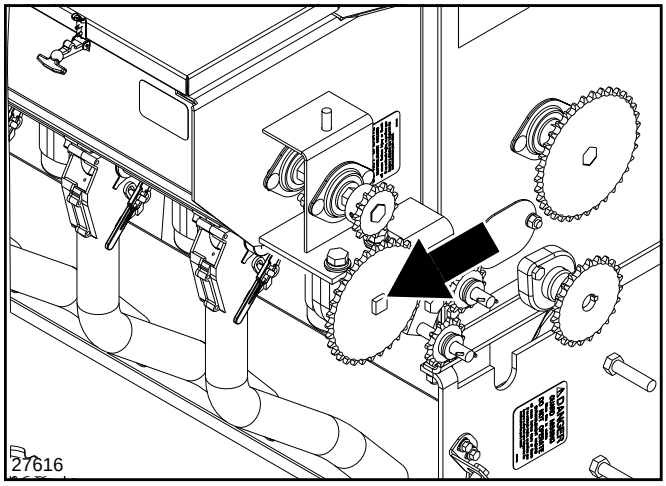
	25 Hours

Feed Cup Drive Sprocket Square Bore

Small Seeds Box Option

Type of Lubrication: Oil

Quantity: Squirt a generous amount of oil on to the square feed cup shaft and move seed rate adjustment lever back and forth in order to get oil back into the square bore.



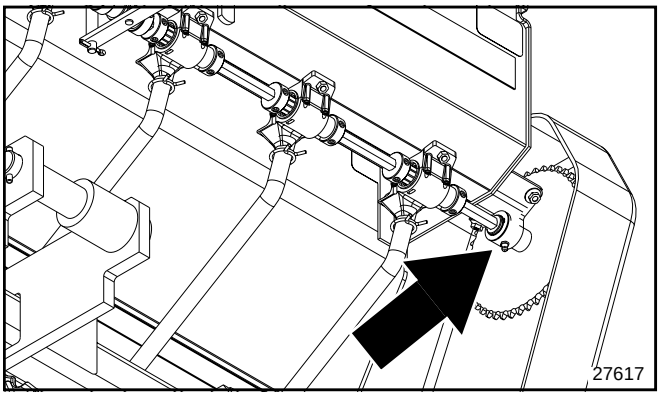
	25 Hours

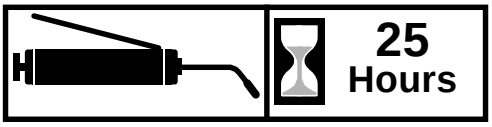
Feed Cup Drive Sprocket Square Bore

Standard Seeds Box Option

Type of Lubrication: Oil

Quantity: Squirt a generous amount of oil on to the square feed cup shaft and move seed rate adjustment lever back and forth in order to get oil back into the square bore.



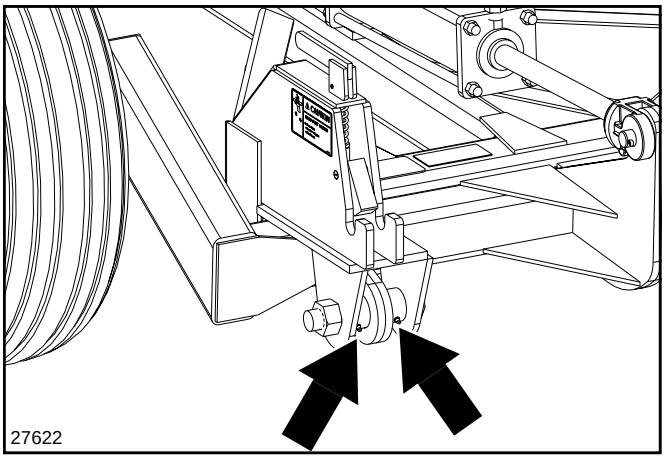


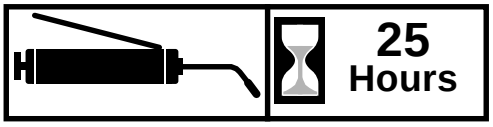
Drive Sprocket Hanger Bearing

Small Seeds Box Box Option

Type of Lubrication: Multi-Purpose

Quantity = Coat sprocket bore thoroughly; move seed-rate handle back and forth to get oil into sprocket bore.



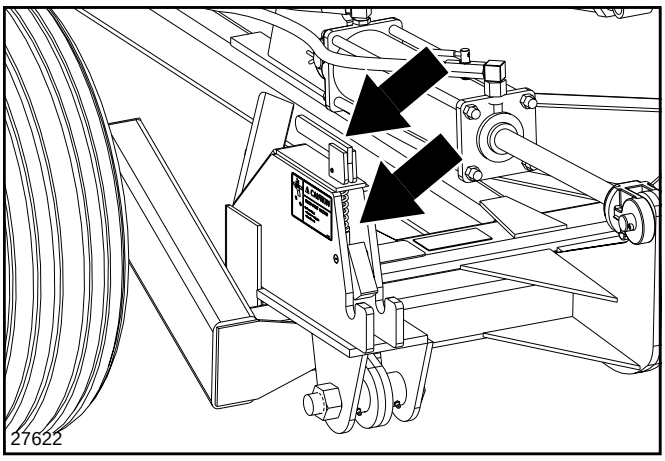


Axle Pivot

Pull Hitch Option

Type of Lubrication: Multi-Purpose

Quantity = Generously



Locking Mechanism Pivot Points

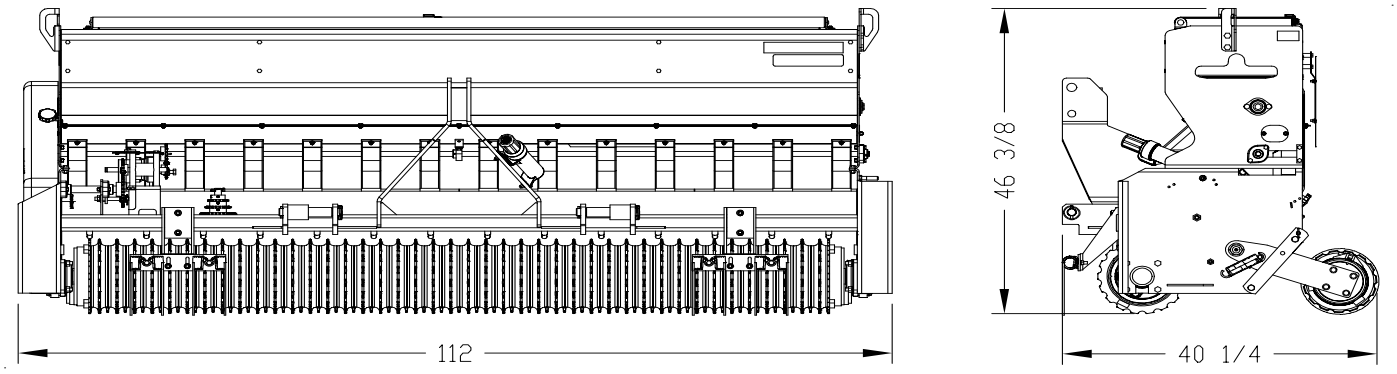
Pull Hitch Option

Type of Lubrication: Oil

Quantity = As Needed

PSN2096 Primary Seeder (Base Unit)

List	Specifications & Capacities
Seeding Width	8'-6"
Overall Width	9' 4"
Overall Height	46 3/8"
Overall Length	40 1/4"
Empty Weight	1930 lbs. (Includes base unit with standard seeds box and Small Seeds Box)
Native Grass Seedbox Capacity	8 bushels
3-Point Tractor Hitch	Category 2 & 3; Quick-Hitch Adaptable, See optional pull-type hitch below
Minimum HP Required	See hitch Category and/or capacity
Maximum HP	Cat. 3 Tractor hitch
Main Seedbox Construction	Continuous welded, 14 gauge steel
Lid construction	Heavy duty precision fit with seed splash guard
Ground Drive Metering	Driven from right side of front roller with #40 Roller chain
Seed Cup Drive	Chain Driven from right side of front roller
Seed Cup Agitation	Chain driven paddle type agitators above seed cups
Seed Cups	14 Fluted cups for Accurate Metering
Seed Settings	Wide range of calibration
Seed Drop	Wind guarded
Track Removers	Two each double torsion springs, height adjustable, and replaceable.
Bed Forming Rollers - Front	12" OD notched, cast iron, 42 each with 1 1/2" sealed greaseable bearings
Packer Rollers - Rear	9 1/2" OD notched, cast iron, 43 each with free floating mounting tube, and 1" greaseable bearing mounted on pivoting spring loaded arms
Optional Add-on Seed Boxes	
Standard Seeds box	5 bushels capacity with: • Chain driven seed cups. • Chain driven paddle type agitators above seed cups.
Small Seeds Box	2 bushels capacity with: • Chain driven seed cups.
Optional Pull Type Hitch	
Wheel Base	69" Center to Center
Length	95"
Hook-Up	Quick Attach Type Hook-Up
Tires - 2 ea.	9.5" L X 15" 12 Ply Tires
Cylinder	4" X 14" with Transport Lock valve
Tongue Jack	Standard
Weight (Approximate Pounds)	720 lbs.



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PSN2096 Primary Seeder

Features	Benefits
Cat. 2 & 3, Cat. 2 Quick-Hitch adaptable	Cat. 2 & 3 offers a wide variety of tractors, Cat. 2 Quick-Hitch allows for easy connecting and disconnecting.
Seeding width	8'-6" Seeding width is just right for small acreage, roadside native grass work, and small turf farms.
Lift hooks	Lift hooks on each side of the seedbox to attach chain or strap to for easy loading and unloading.
Native Grass model	Native Grass model allows the user who works primarily with native grasses to use the main box for native grass seed.
Heavy-duty lids with stay open support	Lids are precision fit to keep seeds dry and rodents out and they won't buckle or slam shut in high winds.
Seed splash guard	Seedbox lid has a welded in guard to prevent seed from being spilled between lid and box.
Water tight Seedbox	All-welded seedbox construction prevents twisting from uneven ground, offers years of service. Keeps moisture out of the seedbox.
Large capacity native grass seedbox	1 Bushel per foot (8 1/2 bushel) capacity keeps filling to a minimum, Increases productivity.
Native grass seed cup	Large aluminum seed cup with aggressive picker wheel is used on Native Grass main box.
Native grass agitator	Native Grass main box uses an aggressive paddle style agitator to keep the fluffy native grass from bridging.
4-Speed transmission for Native Grass Seedbox	Easy and fast speed change, saves time from removing chains.
Seed rate adjustment lever for Standard Seeds Box and Small Seeds Box	Easy adjustment of seed rates. Lever positions are located on seed rate charts.
Seed rate decal	Positioned on lid of each box. Easy access to seed rate information.
High/Low seed settings	Easy adjustment on sprocket arrangement on seed cup drive. This allows for a very broad range of seed settings.
Ground driven metering	Front packer rollers are in constant contact with the ground to ensure consistent metering of seed. Seed metering stops automatically when front packer is raised off the ground.
Cast iron front packer rollers	12" diameter front rings and 9" diameter rear rings are used to crush the clods and pack the seed in to promote seed to soil contact.
Spring mounted rear packer rollers	Rear packer rollers are spring loaded for additional down pressure, and to stay in contact with the ground.
Adjustable track removers	Spring tine track removers effectively scratch out the tracks from the tractor tires.
#40 Roller chain	All drives utilize #40 roller chain for smooth running.

Optional Features (PSN2096 Primary Seeder)

Features	Benefits
Standard Seeds Box	A 0.6 bushel per foot standard seed box can be bolted to the front of the main box for seeding turf grass seeds. • Seed cups are powder metal flutes for accurate seed rates. • Seed agitator is paddle style to keep seeds from bridging.
Small Seeds Box	A bolt-on Small Seeds Box can be added to the rear of the main box to mix small seeds in with other types, allowing them to be seeded at rates that compliment each other.
Pull Type Hitch	Allows for easier hook-up to tractor, adaptable to smaller tractors.

PSN2096 Troubleshooting

Problem	Solution
Uneven seed spacing or uneven stand.	Check for plugging in seed cup.
	Reduce ground speed.
	Check for trash or mud build-up on rollers.
Actual seeding rate is different than desired.	Seed treatment will affect seeding rate if the chemicals build-up in seed cup. Unless cleaned regularly, this build-up can cause breakage of the seed cup shaft.
Feed cup sprocket locked up or twisted feed cup drive shaft.	Check for foreign matter lodged in seed cup sprocket.
Packing rollers not turning freely.	Check for trash or mud build-up on roller end.

Torque Values Chart for Common Bolt Sizes

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

Bolt Size (Metric)	Bolt Head Identification 5.8 Class 5.8		8.8 Class 8.8		10.9 Class 10.9	
mm x pitch [4]	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	l215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

[1] in-tpi = nominal thread diameter in inches-threads per inch

[2] N· m = newton-meters

[3] ft-lb= foot pounds

[4] mm x pitch = nominal thread diameter in millimeters x thread pitch

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

Tire Inflation Chart

Pull Hitch Option

Tire Size	PSI
9.5L x 15-12 ply	64 MAX PSI

Warranty

Land Pride warrants to the original purchaser that this Land Pride product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit: One year Parts and Labor

Packer Rollers: Considered wear items

Optional Pull Tongue: One year Parts and Labor

This Warranty is limited to the repair or replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part, and does not cover common wear items. Land Pride reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Land Pride's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this Warranty should be made to the dealer which originally sold the product and all warranty adjustments must be made through an authorized Land Pride dealer. Land Pride reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Land Pride liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

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

This Warranty is not valid unless registered with Land Pride within 30 days from the date of purchase by the end user.

IMPORTANT: The Online Warranty Registration should be completed by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

Model Number _____ **Serial Number** _____

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