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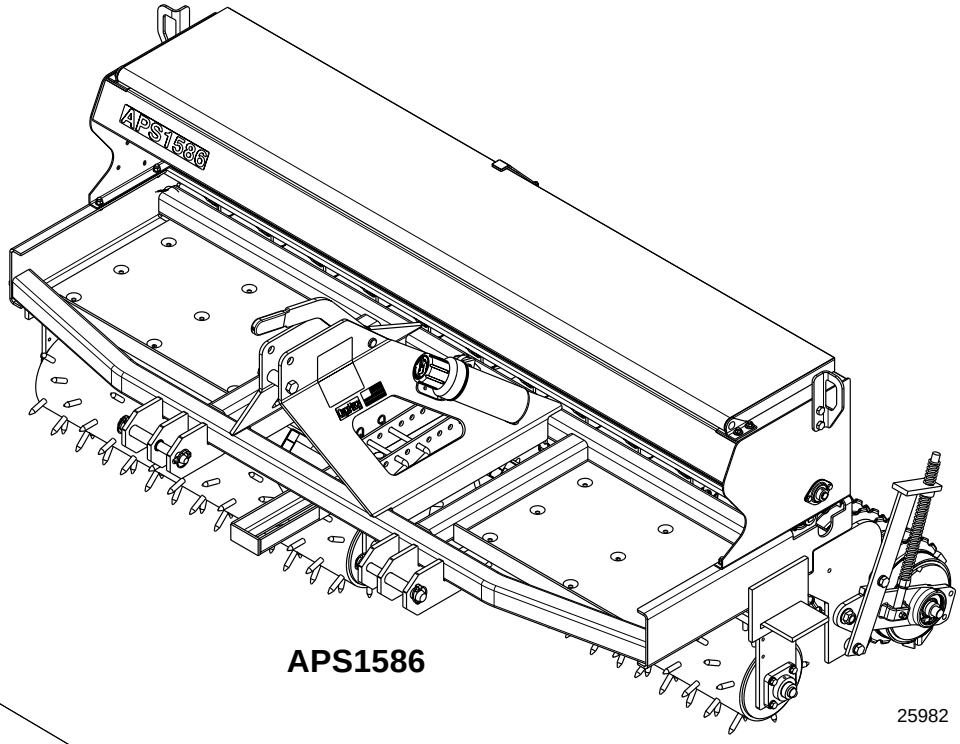
All Purpose Seeder

APS1548, APS1560, APS1572 & APS1586



APS1586

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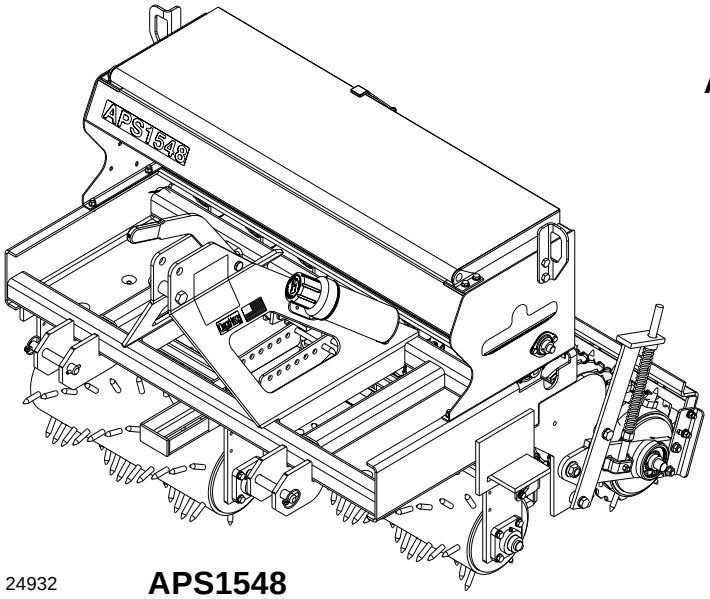

24932 **APS1548**

313-354M

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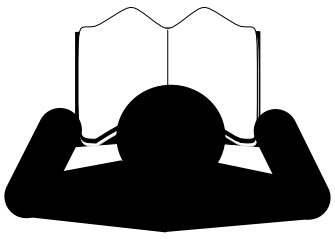
These are common practices that may or may not be applicable to the products described in this manual.

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.

- ▲ Operator should be familiar with all functions of the unit.
- ▲ Operate implement from the driver's seat only.
- ▲ Make sure all guards and shields are in place and secured before operating the implement.
- ▲ Do not leave tractor or implement unattended with engine running.
- ▲ Dismounting from a moving tractor could cause serious injury or death.
- ▲ Do not stand between the tractor and implement during hitching.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ Wear snug fitting clothing to avoid entanglement with moving parts.
- ▲ Turning tractor too tight may cause implement 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

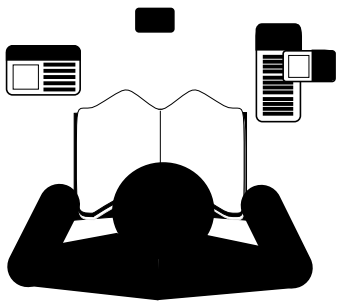
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

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.

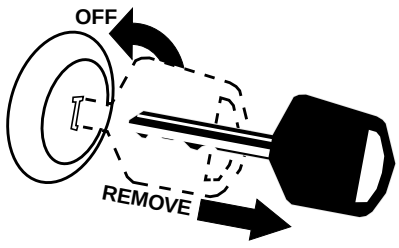
For Your Protection

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



Shutdown and Storage

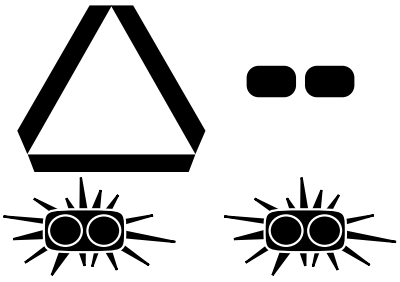
- ▲ Lower machine to ground, put tractor in park, turn off engine, and remove the key.
- ▲ Detach and store implements in a area where children normally do not play. Secure implement by using blocks and supports.



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. Use lights and devices provided with implement.

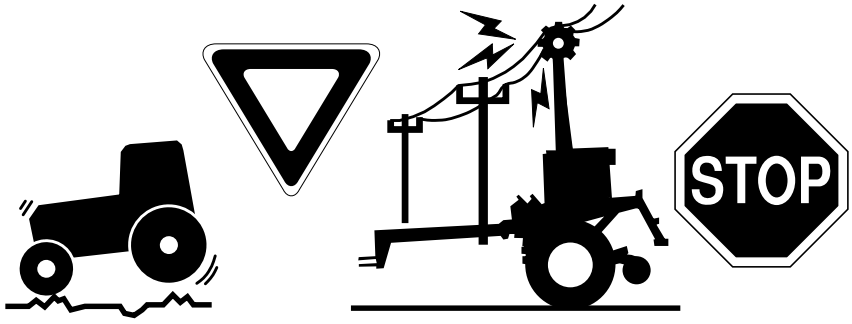


Transport Machinery Safely

- ▲ Comply with state and local laws.
- ▲ Maximum transport speed for implement is 20 mph. DO NOT EXCEED. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrain require a slower speed.
- ▲ Sudden braking can cause a towed load to swerve and upset. Reduce speed if towed load is not equipped with brakes.
- ▲ Use the following maximum speed - tow load weight ratios as a guideline:

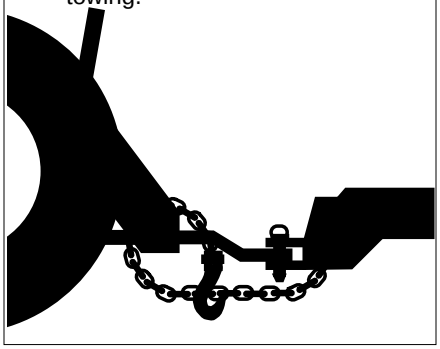
  20 mph when weight is less than or equal to the weight of tractor.

  10 mph when weight is double the weight of tractor.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of tractor.
- ▲



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.



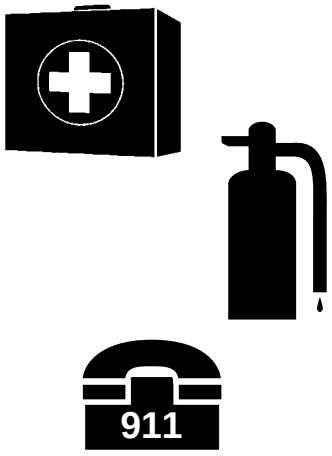
Practice Safe Maintenance

- ▲ 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 the implement to the ground, put tractor in park, turn off engine, and remove key before performing maintenance.
- ▲ Allow implement to cool completely.
- ▲ Do not grease or oil implement while it is in operation.
- ▲ Inspect all parts. Make sure 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

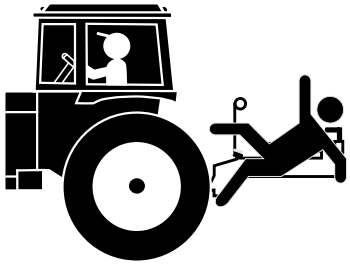
- ▲ Protective clothing and equipment should be worn.
- ▲ Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating equipment safely requires the full attention of the operator. 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.
- ▲ If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be treated within a few hours or gangrene may result.

Keep Riders Off Machinery

- ▲ Riders obstruct the operator's view, they could be struck by foreign objects or thrown from the machine.
- ▲ Never allow children to operate equipment.



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.

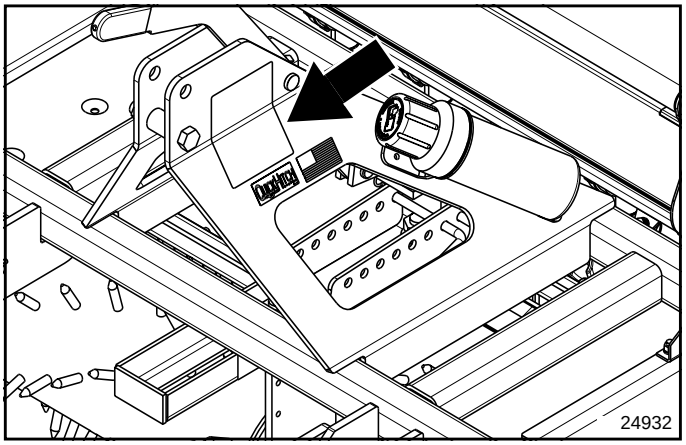
Handle Chemicals Properly

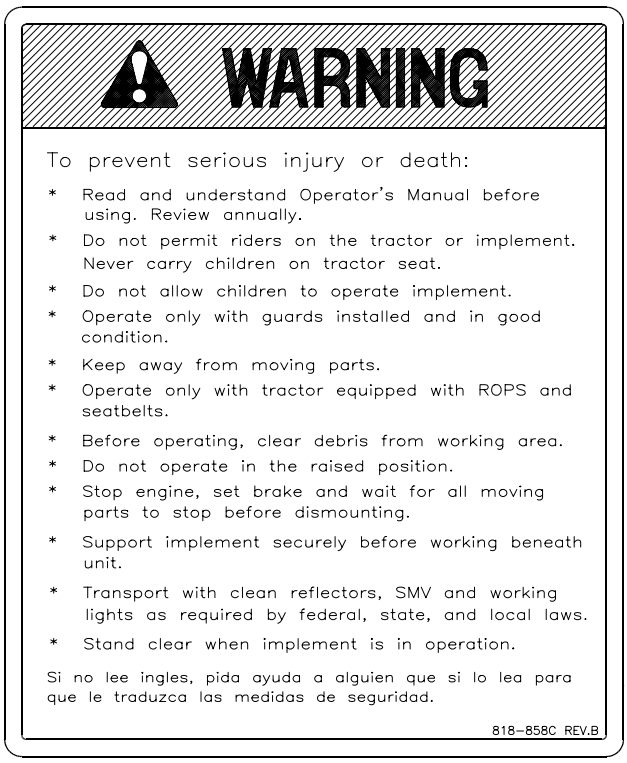
- ▲ Protective clothing should be worn.
- ▲ Handle all chemicals with care.
- ▲ Follow instructions on container label.
- ▲ Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil, and property.
- ▲ Inhaling smoke from any type of chemical fire is a serious health hazard.
- ▲ Store or dispose of unused chemicals as specified by the chemical manufacturer.

Safety Labels

Your All Purpose 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. *Replace all damaged or missing labels. To order new labels go to your nearest Land Pride dealer or visit our dealer locator at 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.*





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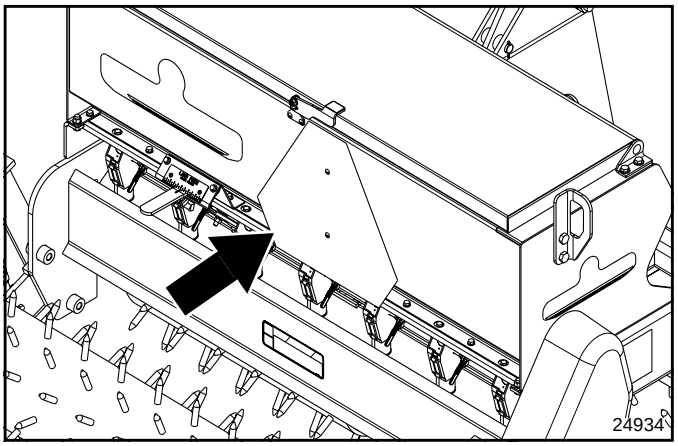
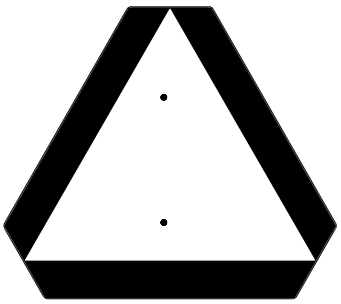
warning: General Information





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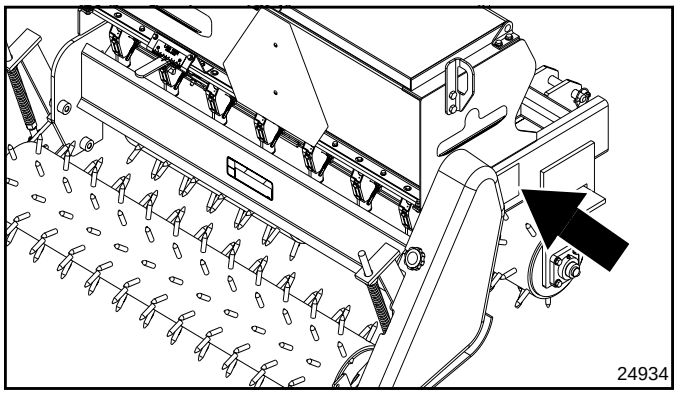
SMV: Slow Moving Vehicle



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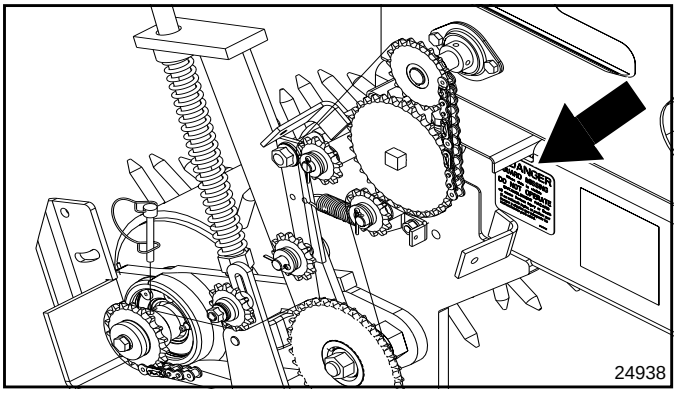
DANGER: Keep away, Moving Parts



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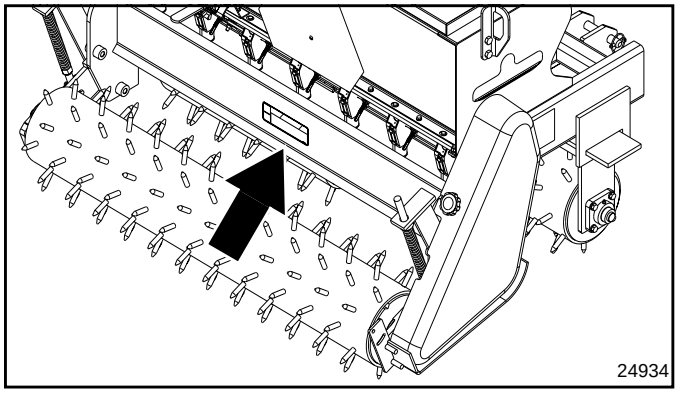
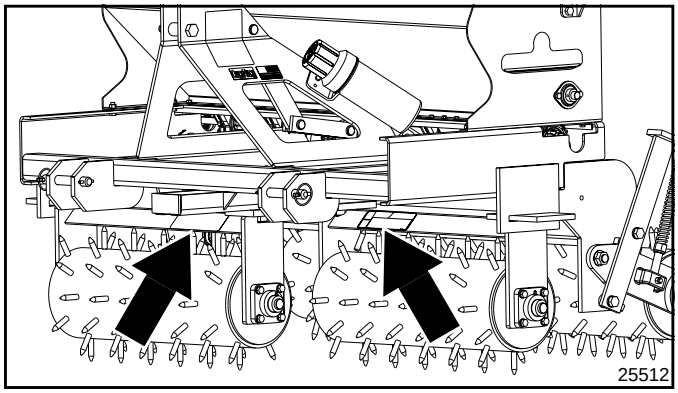
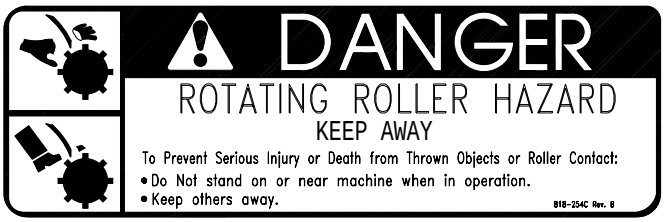
DANGER: Guard Missing (Beneath Guard)







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DANGER: Rotating Roller Hazard

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

This All Purpose 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 the machine.

Application

The APS1548, APS1560, APS1572 & APS1586 All Purpose Seeders are excellent combination planting and cultivation tools for golf courses, school systems, municipalities, rental yards, construction companies, sports fields, and college campuses. Their narrower widths make them effective in seeding applications on residential lots, grassy medians, grassy parkings or right-of- ways adjacent to sidewalks, community parks, sporting facilities, and golf courses. Unlike wider models of seeders these units will do a more effective job of planting in areas where undulations, moguls, and depressions are prevalent.

The seed box is equipped with our standard fluted seed cups and an agitator enabling highly accurate and uniform delivery of most turf grass seeds as well as a wide variety of other seeds ranging from alfalfa to peas. The spiked front rollers can be adjusted for more or less "crab-action cultivation" making them an ideal choice for opening up and planting in hard or thatchy soil profiles.

See "**Section 5: Specifications & Capacities**" on page 25 and "**Section 6: Features and Benefits**" on page 26 for additional product information.

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 or printed from the Land Pride Service & Support Center by your dealer.

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 its preceding topic. Land Pride's intention is that this information should be read and noted before continuing.

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

Owner Assistance

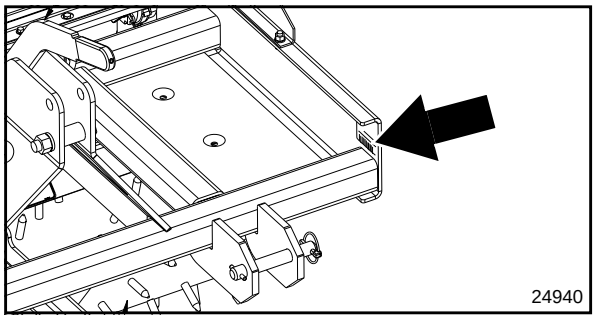
The Warranty Registration card should be filled out by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

If customer service or repair parts are required contact a Land Pride dealer. A dealer has trained personnel, repair parts and equipment needed to service the All Purpose Seeder.

The parts on your APS1548 or APS1572 seeder have been specially designed and should only be replaced with genuine Land Pride parts. Therefore, should your seeder require replacement parts go to your Land Pride Dealer.

Serial Number Plate

For prompt service always use the serial number and model number when ordering parts from your Land Pride dealer. Be sure to include your serial and model numbers in correspondence also. Refer to Figure 1 for the location of your serial number plate.



Serial Number Plate Location
Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new All Purpose 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 he is aware of any problems you may have and that he 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

Tractor horse power and hitch category should be within the range noted below. Tractors outside the horsepower range must not be used.

- Tractor Horse Power Rating

  APS1548, APS1560 & APS1572 . . . . . 65 HP
  APS1586 . . . . . 80 HP

- Hitch Category

  APS1548, APS1560 & APS1572 . . . . . Cat. I
  APS1586 . . . . . Cat. I & II

Make certain 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 25 for seeder weight.

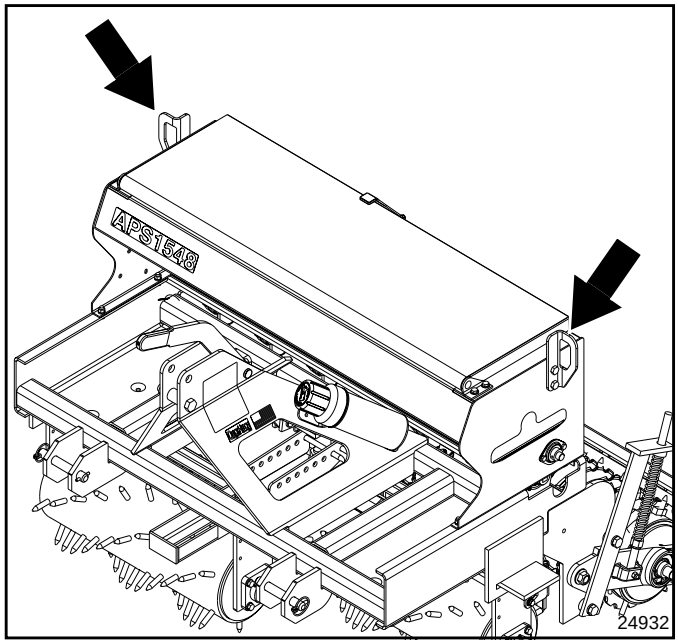
NOTE: Ballast may need to be added to your tractor to maintain steering control. Refer to your tractor's operator manual to determine if additional ballast is needed.

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.

Sling Bracket

Refer to Figure 1-1:

The sling brackets allow points at each end to hook a chain for lifting the unit. When hooking a chain to the sling brackets, be certain to either use a spreader bar on the chain or use a long chain to prevent bending the sling brackets.



Sling Brackets
Figure 1-1

Dealer Preparations

This All Purpose Seeder has been assembled at the factory. Some preparation will be necessary to attach the seeder to the customer's tractor. Make sure the intended tractor conforms to "Tractor Requirements".

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.	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.	Section 4 Page 23
☐	Proper tension and alignment on all drive chains.	Section 4 Page 22
☐	Safety decals are correctly located and legible. Replace if damaged.	Pages 4 & 5

Mud Scraper Installation (Optional)

Optional mud scrapers are available from your local Land Pride dealer. A scraper bundle consists of one rear roller scraper and two front roller scrapers and are identified by the rear roller type and seeder planting width.

Land Pride Mud Scrapers

Part No.	Part Description
APS1548	
313-431A	SPIKE SCRAPER BUNDLE . . . S/N 567003+
313-432A	PACKER SCRAPER BUNDLE . S/N 567003+
APS1560	
313-458A	SPIKE SCRAPER BUNDLE
313-459A	PACKER SCRAPER BUNDLE
APS1572	
313-429A	SPIKE SCRAPER BUNDLE. . . . S/N 547969+
313-430A	PACKER SCRAPER BUNDLE . . S/N 547969+
APS1586	
313-449A	SPIKE SCRAPER BUNDLE
313-453A	PACKER SCRAPER BUNDLE

Refer to “Torque Values Chart For Common Bolt Size” on page 28 when tightening hardware.

Front Mud Scrapers

Refer to Figure 1-4:

IMPORTANT: Some units will not accept a Mud Scraper attachment. Please be sure of your serial number to verify.

NOTE: Do not tighten bolts (#4 & #5) until after adjustments have been made. See “Mud Scraper Adjustment (Optional)” on page 14 for instructions.

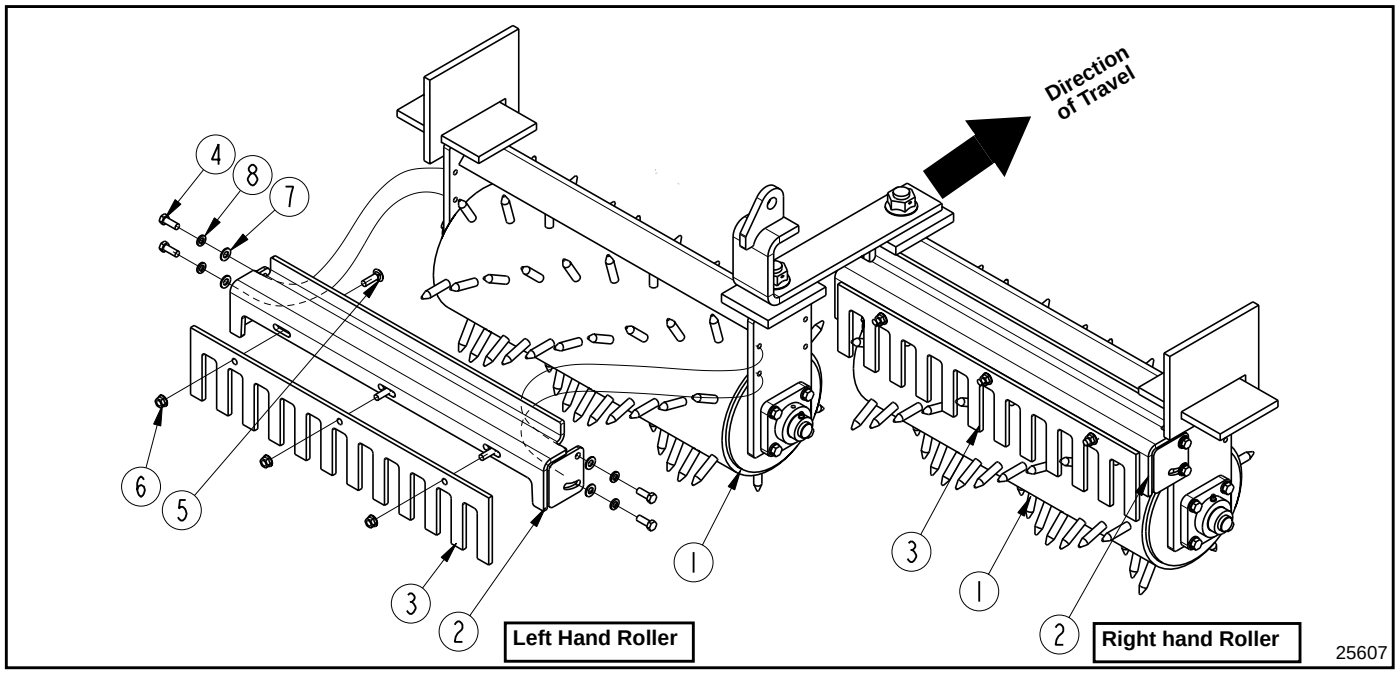
1. Attach spike scrapers (#3) to scraper hangers (#2) with 3/8"-16 x 1 1/4" GR5 round head square neck bolts (#5) and hex flange lock nuts (#6). Draw nuts up snug, do not tighten until after completing adjustments in Section 3.
2. Attach scraper hangers (#2) to the front rollers with four 3/8"-16 x 1" GR5 hex head cap screws (#4), 3/8" lock washers (#8) and 3/8" flat washers (#7). Draw nuts up snug, do not tighten until after completing adjustments in Section 3.

Rear Mud Scraper

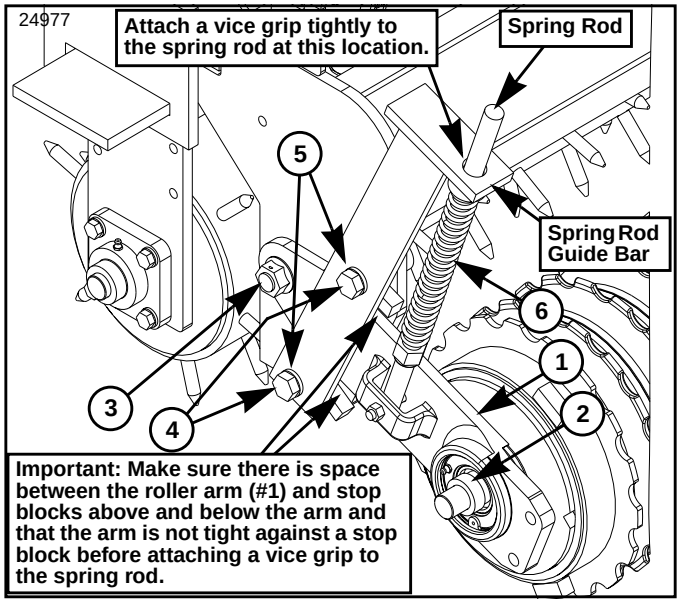
Refer to Figure 1-5 on page 9:

The instructions below apply to both the rear packer roller and rear spike roller.

1. Lower rear roller to ground level to compress spring (#6). Adjust 3-point lift height to make sure roller arm (#1) is positioned so that there is space between the arm and stop blocks located above and below the arm.
2. Support seeder frame at this height to keep seeder frame from creeping lower during assembly.
3. Shut tractor engine off and engage parking brake.
4. Attach vice grips tightly to the spring rod and tight against the spring rod guide bar to retain spring compression.
5. Loosen bearing set collar screw (#2) and remove lock nut (#3), cap screws (#4) and lock washers (#5). Keep hardware for reuse.



Front Mud Scraper Installation
Figure 1-4



Roller Arm Disassembly Position
Figure 1-5

Refer to Figure 1-6 below & Figure 1-7 on page 10:

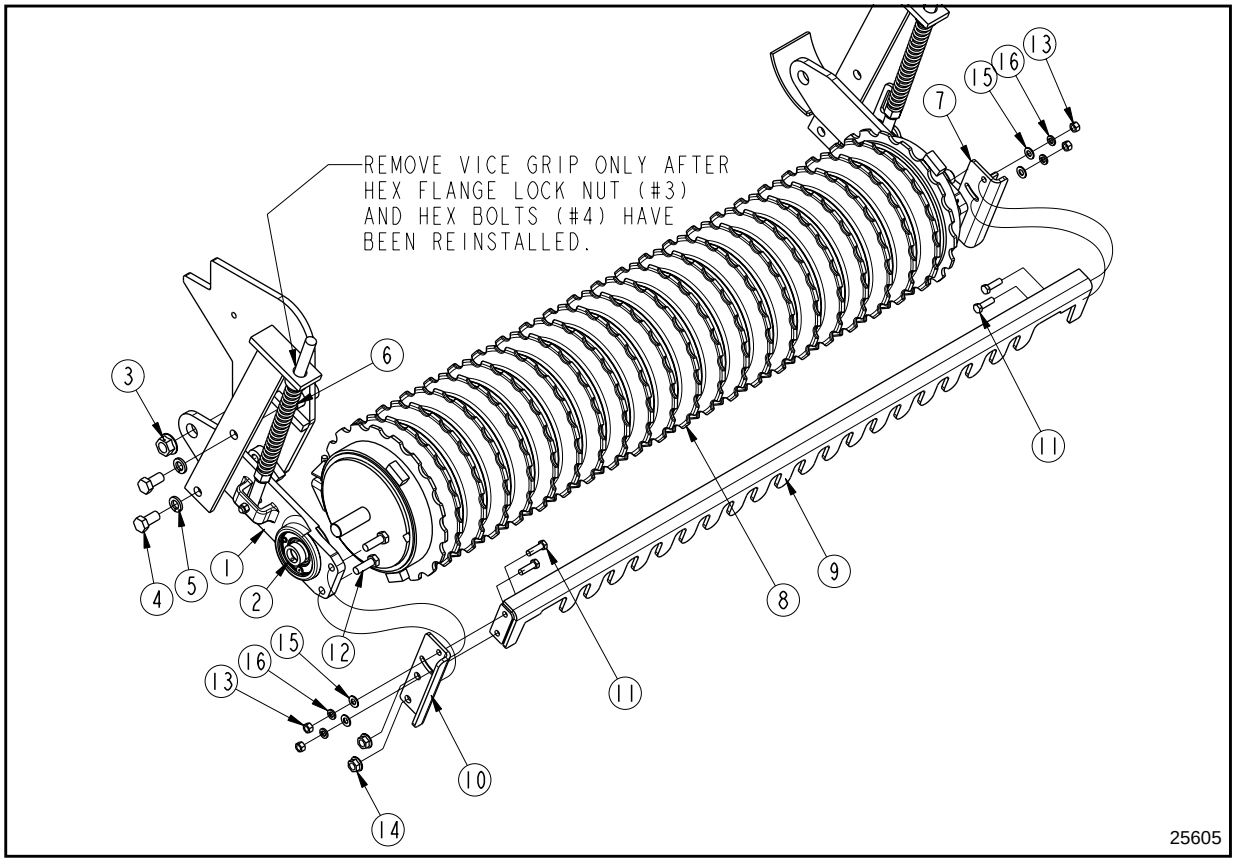
6. Pull roller arm assembly (#1) away from rear roller end plate and insert two 1/2"-13 x 1 1/2" GR5 hex cap screws (#12) from the inside as shown.
7. Reinstall roller arm assembly (#1) to the seeder side plate with existing 3/4"-10 hex flange lock nut (#3), 5/8"-11 GR5 hex head cap screws (#4) and lock washers (#5). Torque all hardware including bearing set collar screw (#2).
8. Remove vice grip from spring rod.
9. Attach left hand scraper mount (#10) to the left side roller arm (#1) with hex flange lock nuts (#14). Tighten lock nuts (#14) to the correct torque.

Special Instructions For Packer Roller

Refer to Figure 1-6:

NOTE: Do not tighten bolts (#16) until after adjustments have been made. See “Mud Scraper Adjustment (Optional)” on page 14 for instructions.

1. Attach rear roller scraper (#9) to chain guard mount (#7) with two 3/8"-16 x 1 1/4" GR5 hex head cap screws (#11), 3/8" flat washers (#15), 3/8" lock washers (#16) and hex nuts (#13). Draw nuts up snug, do not tighten until after completing adjustments in Section 3.
2. Attach opposite end to scraper mount (#10) with two 3/8"-16 x 1 1/4" GR5 hex head cap screws (#11), 3/8" flat washers (#15), 3/8" lock washers (#16) and hex nuts (#13). Draw nuts up snug, do not tighten until after completing adjustments in Section 3.



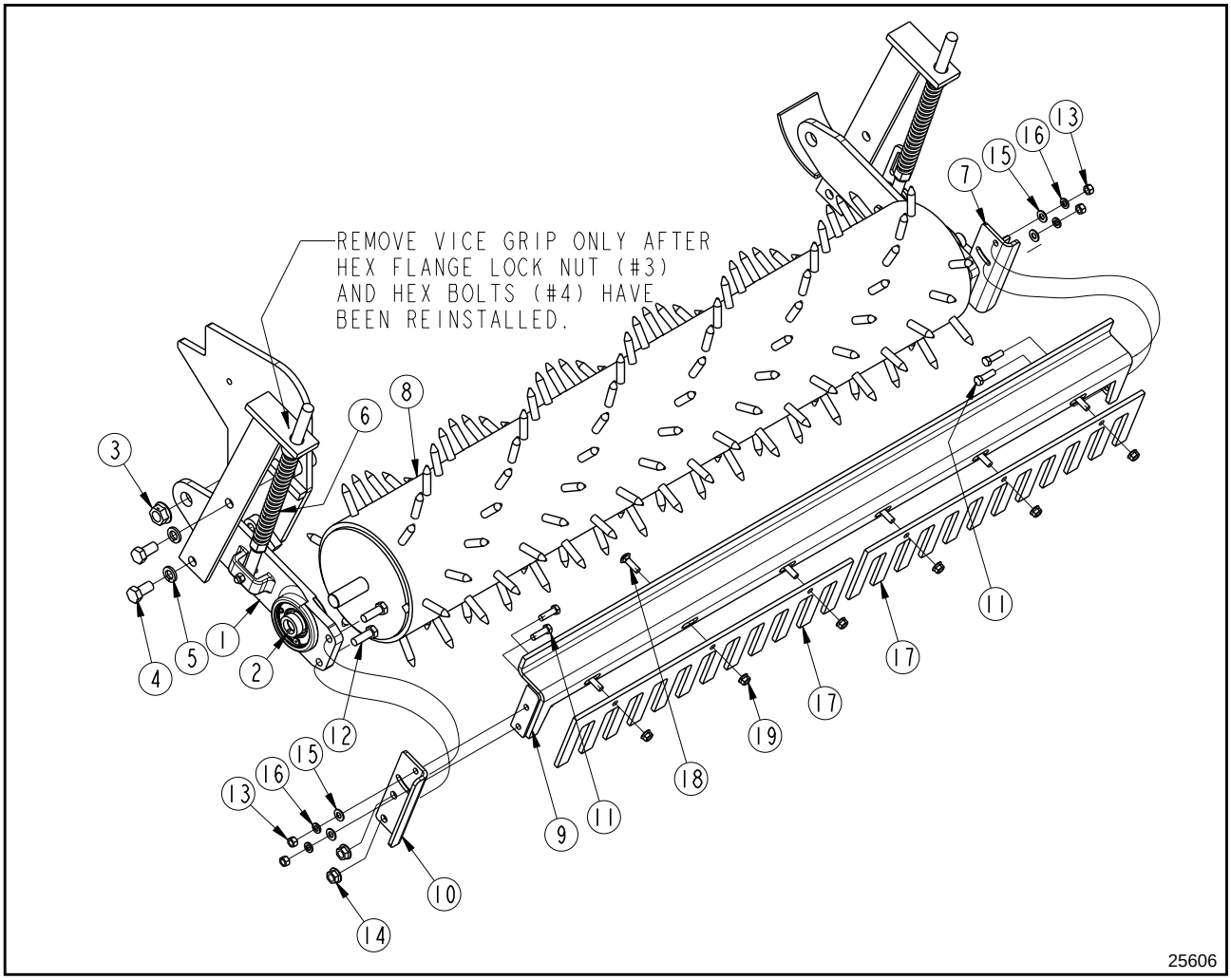
Rear Mud Scraper Installation to Packer Roller
Figure 1-6

Special Instructions For Spike Roller

Refer to Figure 1-7:

NOTE: Do not tighten bolts (#11 & #18) until after adjustments have been made. See “Mud Scraper Adjustment (Optional)” on page 14 for instructions.

1. Attach spike scrapers (#17) to scraper hanger (#9) with 3/8"-16 x 1 1/4" GR5 round head square neck bolts (#18) and hex flange lock nuts (#19). Draw nuts up snug, do not tighten until after completing adjustments in Section 3.
2. Attach scraper hangers (#9) to chain guard mount (#7) with two 3/8"-16 x 1 1/4" GR5 hex head cap screws (#11), 3/8" flat washers (#15) and 3/8" lock washers (#16). Secure scraper in place with hex nuts (#13). Draw nuts up snug, do not tighten until after completing adjustments in Section 3.
3. Attach opposite end to scraper mount (#10) with two 3/8"-16 x 1 1/4" GR5 hex head cap screws (#11), 3/8" flat washers (#15) and 3/8" lock washers (#16). Secure cap screws with hex nuts (#13). Draw nuts up snug, do not tighten until after completing adjustments in Section 3.



Rear Mud Scraper Installation to Spike Roller
Figure 1-7

Operating Check List

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

- **Important Safety Information**, pages 1 to 5
- **Section 1: Assembly & Set-up,** page 7
- **Section 2: Operating Instructions**, page 11
- **Section 3: Adjustments**, page 14
- **Section 4: Maintenance & Lubrication**, page 22

The following information should be known and inspections made before operating your seeder.

	Check	Reference
☐	Read and follow all "**Safety Rules**" carefully.	Important Safety Information
☐	Read and follow "**Tractor Hook-up**" instructions below.	Section 2 page 11
☐	Read and understand **"Operating** and **Adjustment Instructions"** in this manual	Operator's Manual
☐	Lubricate seeder as needed. Refer to "**Lubrication**"	Section 4 page 23
☐	Check seeder initially and periodically for loose bolts & pins, "**Torque Values Chart**".	Section 8 page 28
☐	Make sure all guards and shields are in place.	Operator's Manual
☐	Check initially and periodically for loose bolts, pins, and chains.	Operator' Manual
☐	Inspect seed cups and seed tubes for foreign matter.	Section 3 page 17
☐	Set speed change sprocket for drive type desired.	Section 3 page 16
☐	Set seed rate. See "**Seed Rate Charts**".	Section 3 pages 18 to 21

Tractor Hook-up

DANGER

Tractor hook-up to equipment is dangerous and can result in serious injury or death. ***Do not*** *allow anyone to stand between the seeder and tractor during hook-up operations.* ***Do not*** *operate hydraulic 3-point lift controls while someone is directly behind the tractor or near the seeder.*

1. Slowly back tractor up to the All Purpose Seeder while using the tractor's 3-point hydraulic control to align the tractor's lower hitch link holes with the seeder's clevis lug holes.
2. Engage tractor park brake, shut tractor engine off and remove key before dismounting from tractor.
3. Attach tractor's 3-Point lower links to the seeder's lower hitch clevises using 7/8" diameter hitch pins. Secure hitch pins with linch pins.
4. Attach tractor's top center link to the seeder's top hitch using a 3/4" diameter hitch pin. Secure hitch pin with a linch pin.
5. Ensure that the lower hitch arms are blocked to prevent excessive side movement.
6. Return to tractor and slowly operate controls up and down to make sure seeder clears tractor tires, frame and drawbar. Move or remove drawbar if it interferes.
7. Manually adjust one of the tractor's lower lift arms up or down to level the seeder from left to right.
8. With the seeder resting on level ground, manually adjust tractor's top link until the seeder is level from front to rear.

Transporting

CAUTION

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

1. This seeder can be transported with a full box of seed, however; it is best not to do this unless necessary because the increased weight does increase the chances for problems on the road.
2. Select a safe ground travel speed when transporting from one area to another. Do not exceed 20 miles per hour travel speed. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
3. Reduce tractor ground speed when turning. Leave enough clearance so the seeder does not contact obstacles such as buildings, trees or fences.
4. Shift tractor to a lower gear when traveling over rough or hilly terrain.

Filling the Seed Box

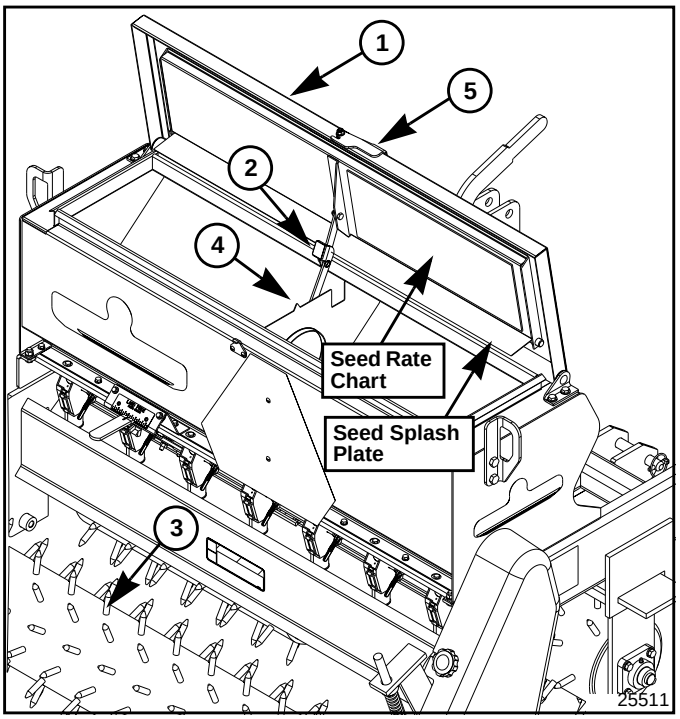
CAUTION

Always lower the All Purpose 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.

Refer to Figure 2-1 on page 12:

1. Always lower the All Purpose Seeder to the ground, engage tractor park brake, shut tractor engine off and remove key before filling the seed box.
2. Release lid latch handle (#5) and open seed box lid (#1) until over center latch arms (#2) 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 (#3) to fill the seed box. **Make sure** the rear roller (#3) is on the ground so it cannot turn while filling the box.

4. The bag opener (#4) (sharp point on top of the baffle plate) 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 (#2) 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 handle (#5) to keep moisture out.



Seed Box With Lid Open
Figure 2-1

How the Seeder Works

The following is a brief description of how your All Purpose Seeder works.

The power to drive the seed cups comes from the rear roller turning against the ground while traveling. Power is transmitted from the rear 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 front rollers cultivate the soil, crushes clods, presses down small stones and forms a seedbed. They can be angled form 0 degrees (non-aggressive) to 20 degrees (very aggressive).

The condition of soil and type of vegetation will determine front roller angle. Soil that has been pre-worked will not require as aggressive an angle as hard soil or soil with unwanted vegetation. The drive sprocket can be disengaged from the rear roller to make several passes over the soil before seeding. Grass that you plan to seed over, without killing, should have the front rollers set at 0 degrees or at a slight angle to remove thatch.

Seeds drops in front of the rear roller to allow the roller to firm the soil around the seeds. The rear roller assembly floats up and down under spring tension to follow field terrain.

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.

IMPORTANT: Reference Figure 3-3 on page 15. Never back up with rear roller drive sprocket (#2) engaged (retaining pin (#1) installed) and roller in contact with the ground. This will loosen the drive chain and damage the seeder.

Always disconnect drive sprocket from rear roller before backing up with roller on the ground.

IMPORTANT: Never make sharp turns with any of the rollers in contact with the ground. Always lift unit up off the ground when making sharp turns.

IMPORTANT: Attach seeder to a tractor before calibrating it for proper seed dispersal rate.

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 seeds. 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 17.

4. Make sure each seed cup door handle is set at the same height across the seeder. The highest position is usually used for grass seeds.
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. Tall grass and weeds should be mowed before seeding.
9. Never allow anyone to ride on the seeder.
10. Adjust front rollers to desired angle. Make some practice runs with drive sprocket disconnected to determine the best roller angle for your application.
11. Do not back up while seeder is on the ground unless rear roller is disconnected from drive sprocket.
12. Disconnect rear roller from drive sprocket before backing up seeder to clean front and rear mud scrapers of debris.
13. Disconnect drive sprocket if more than one pass is required to prepare a seed bed before seeding.
14. Reconnect drive sprocket when ready to seed.
15. Do not make sharp turns while the seeder is on the ground.
16. Seeding should not be done in wet conditions as soil will stick to the rollers.
17. 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.
18. After seeding the first 50 feet, stop and check to see that the seeder is adjusted properly.

Parking the Seeder

The following steps should be done when preparing to store the seeder or unhitch it from the tractor. See also **“Section 4: Maintenance & Lubrication”** on page 22 for additional information on long term storage of your seeder.

1. Park the All Purpose Seeder on a level, solid area.
2. Lower seeder to level ground or onto blocks supporting the seeder just above ground level.
3. Shut off tractor engine and engage parking brake.
4. Un-hook 3-point hitch from tractor. Reinstall hitch pins and linch pins in seeder hitch for storage.
5. See “**“Cleaning and Storing” on page 22**” if the seeder is not going to be used for a long time.

General Operating Instructions

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

The All Purpose 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 rear 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.

As the front spiked rollers pass over areas to be seeded they open up the soil profile. The more critical the angle adjustment on the front rollers, the more aggressive the cultivating action will be. 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 presses 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 may want to make a few passes with the seeder drive sprocket disconnected just to make sure your front rollers are adjusted to the proper angle and to determine correct ground speed for cultivating the soil profile to your expectations. Ridging of loose soil is possible when the front rollers are set at and angle and your ground speed is to fast. Slow your ground speed to eliminate ridging. Re-engage the seeder drive sprocket once you are satisfied that the proper amount of soil opening action is being achieved.

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 and choose a tractor gear selection that will deliver a ground speed of approximately 3-5 mph. Lower the three-point hitch and 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 you are seeding, 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 if you expect to develop a uniform seeding pattern. 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 rear mounted implement installed.

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

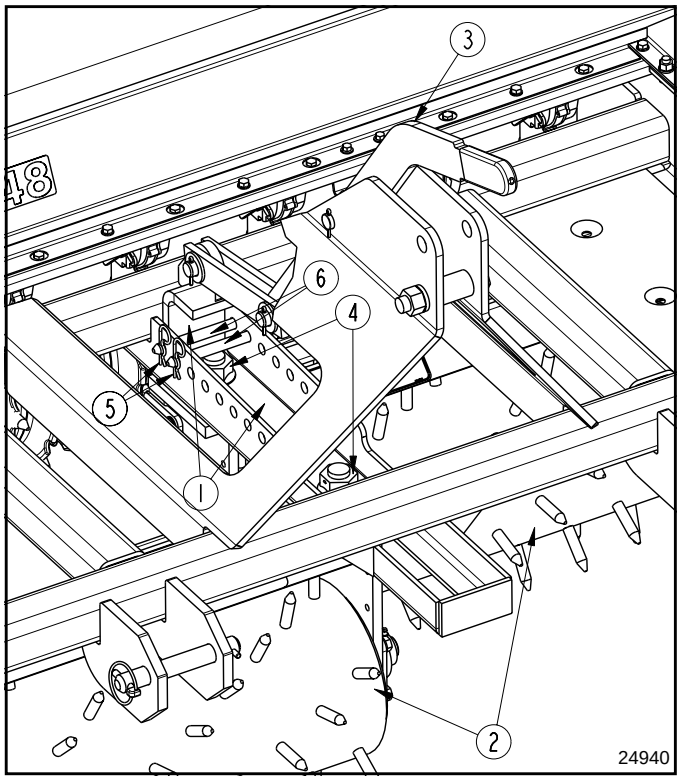
Front Roller Angle Adjustment

Refer to Figure 3-1:

NOTE: Gang slide (#1) is shown in its furthest back position. In this position, both bent pins (#6) are in front of the gang slide as shown. In all other positions, one bent pin is in back of the gang slide and the other is in front of the gang slide.

1. Lower seeder frame onto blocks supporting the front rollers just above ground level to allow the front rollers to move freely.
2. Shut tractor engine off and engage parking brake.
3. Remove bent pins (#6) and operate roller angling lever (#3) to reposition front rollers (#2) to the desired angle.
4. Replace bent pins (#6) with one on each side of gang slide (#1). Secure bent pins with hair pin cotters (#5).
5. Remove support blocks and lower seeder to ground level.

IMPORTANT: If 1" hex flange lock nuts (#4) have been loosened, they should be retightened until they make contact with gang slide (#1) and then backed off 1/3 revolution (2 hex flats). Some additional backing off of the nuts may be necessary to allow the gang slide to move easily when adjusting roller angle with lever (#3).



Front Roller Adjustment
(Gang Slide #1 Shown Positioned Fully Back)
Figure 3-1

Mud Scraper Adjustment (Optional)

Refer to “Torque Values Chart For Common Bolt Size” on page 28 when tightening hardware.

Refer to Figure 3-2:

Front Mud Scrapers

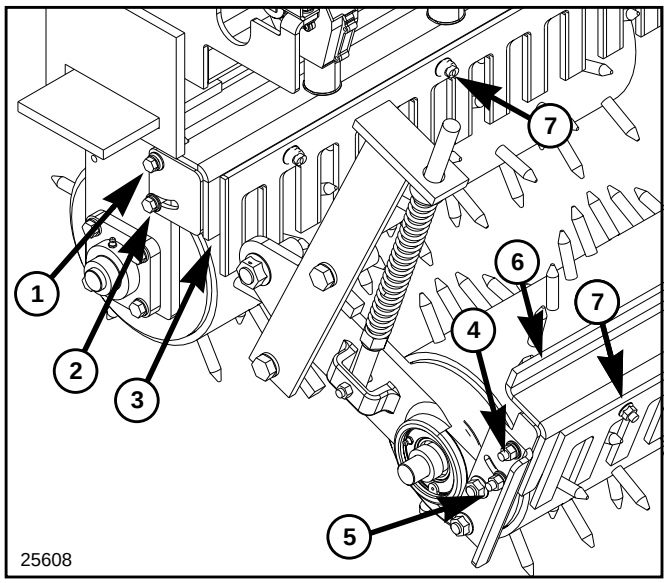
1. Loosen 3/8"-16 hex nuts (#1 & #2) at both ends of the left front mud scraper (#3).
2. Rotate teeth of mud scraper towards the front roller to increase removal of mud and debris and away if scraper teeth are interfering with the roller.
3. Retighten the four 3/8"-16 GR5 hex head bolts and nuts (#1 & #2) to the proper torque.
4. Repeat steps 1, 2 & 3 above for the right front mud scraper.

Rear Mud Scrapers

1. Loosen 3/8"-16 hex nuts (#4 & #5) at both ends of the rear mud scraper (#6).
2. Rotate teeth of mud scraper towards the front roller to increase removal of mud and debris and away if scraper teeth are interfering with the roller.
3. Retighten the four 3/8"-16 GR5 hex head bolts and nuts (#4 & #5) to the proper torque.

Special Instructions for Spike Rollers

1. With front and rear spike rollers off the ground, loosen round head square neck bolts (#7) and adjust front and rear scrapers left or right to align slots up with the roller spikes. Rotate spike rollers one or more revolutions to verify spikes are not touching the scraper teeth.
2. Tighten front and rear 3/8"-16 x 1 1/4" GR5 bolts (#7) to the correct torque.



Mud Scraper Adjustments
Figure 3-2

Drive Chain Engagement

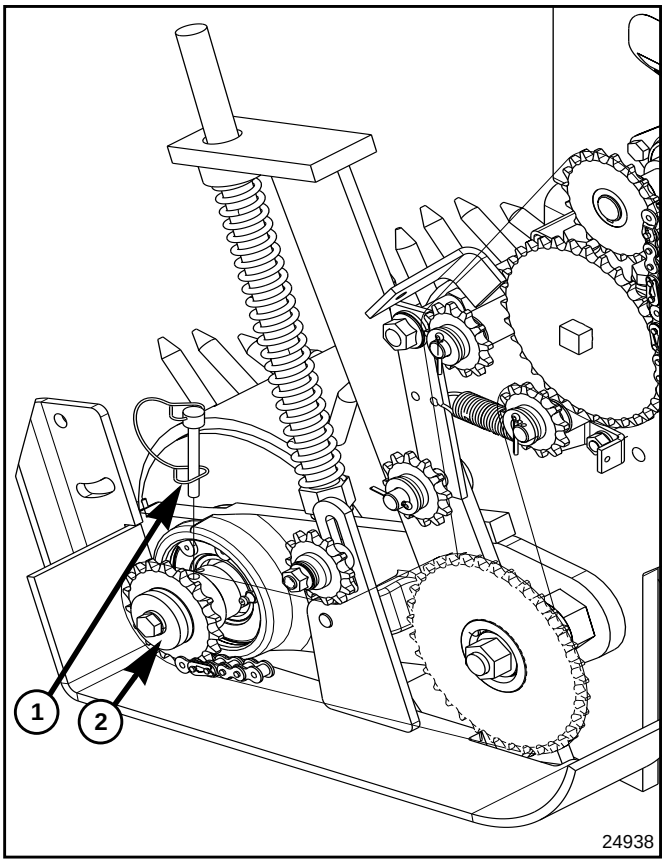
Refer to Figure 3-3:

Soil that is very hard or with a lot of unwanted vegetation may require several passes with the front rollers set at a very aggressive angle before planting begins. Disengage drive chain from the rear roller while making these passes and engage drive chain when ready to start planting seed.

1. Lower seeder frame onto blocks supporting rear roller just above ground level to allow roller to turn freely.
2. Shut tractor engine off and engage parking brake.
3. Remove drive guard (not shown).
4. Remove wire retaining pin (#1) from drive sprocket (#2). Store retaining pin for reuse.
5. Replace drive guard.

> **NOTE:** If needed, set front roller angle before lowering seeder to ground level. See Front Roller Angle Adjustment on this page.

6. Remove support blocks and lower seeder to ground.



Disengage Drive Chain
Figure 3-3

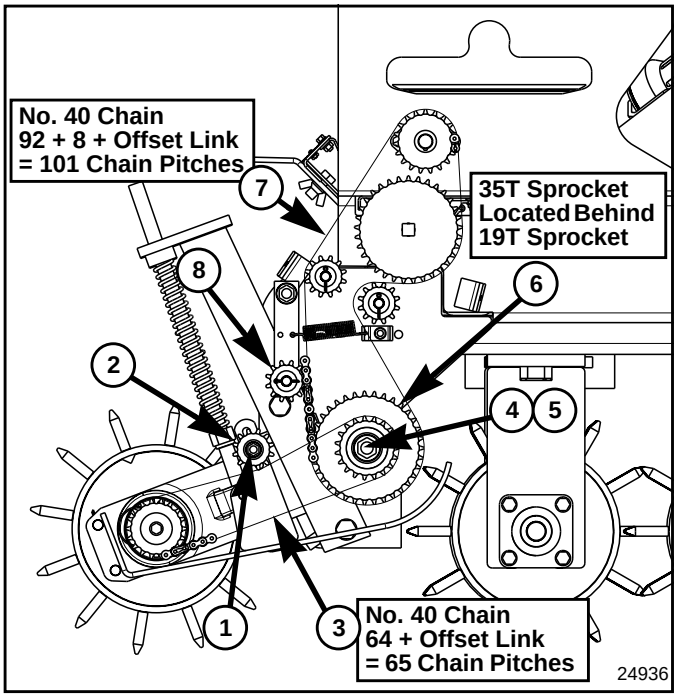
Speed Change Sprocket

The All Purpose 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).

High Range Set-up

Refer to Figure 3-4:

1. Loosen 3/8" flange lock nut(#1) and drive tension sprocket (#2). Remove drive chain (#3) from speed change sprocket (#6).
2. Remove 5/8” nut (#4) and 5/8” flat washer (#5).
3. Pull idler sprocket (#8) away from driven chain (#7) and remove driven chain.
4. Rearrange speed change sprocket (#6) so that the larger 35 tooth sprocket is behind the smaller 19 tooth sprocket as shown.
5. Secure sprocket with 5/8" flat washer (#5) and 5/8" - 11 nut (#4). Tighten nut to correct torque.
6. Drive chain (#3) should be 65 pitches long and driven chain (#7) 101 pitches long. If drive chain has 73 pitches, remove 8 pitches from it and add those 8 pitches to the driven chain.
7. Replace 101 pitch driven chain (#7) first and then the 65 pitch drive chain (#3).
8. Make sure idler sprocket (#8) is pressing against the driven chain.
9. Retention drive chain (#3) by pressing down on idler sprocket (#2). When tensioned properly, tighten 3/8" flange lock nut (#1) to maintain that tension.

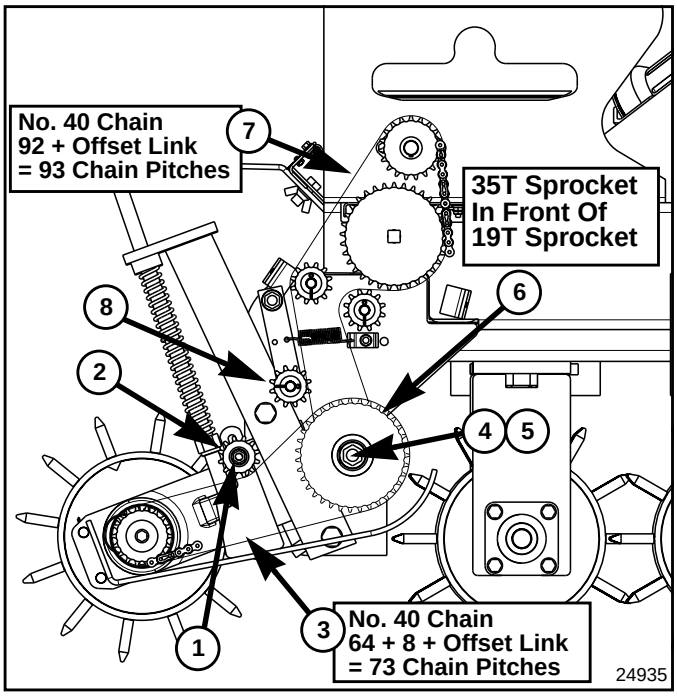


High Range Sprocket Arrangement & Chain Pitches
Figure 3-4

Low Range Set-up

Refer to Figure 3-5:

1. Loosen 3/8" flange lock nut(#1) and drive tension sprocket (#2). Remove drive chain (#3) from speed change sprocket (#6).
2. Remove 5/8” nut (#4) and 5/8” flat washer (#5).
3. Pull idler sprocket (#8) away from driven chain (#7) and remove driven chain.
4. Rearrange speed change sprocket (#6) so that the larger 35 tooth sprocket is in front of the smaller 19 tooth sprocket as shown.
5. Secure sprocket with 5/8" flat washer (#5) and 5/8" - 11 nut (#4). Tighten nut to correct torque.
6. Drive chain (#3) should be 73 pitches long and driven chain (#7) 92 pitches long. If driven chain has 101 pitches, remove 8 pitches from it and add those 8 pitches to the drive chain.
7. Replace 93 pitch driven chain (#7) first and then the 73 pitch drive chain (#3).
8. Make sure idler sprocket (#8) is pressing against the driven chain.
9. Retention drive chain (#3) by pressing down on idler sprocket (#2). When tensioned properly, tighten 3/8" flange lock nut (#1) to maintain that tension.



Low Range Speed Change & Chain Pitches
Figure 3-5

Seeding Adjustments

1. Use seed rate charts beginning on page 18 to determine correct seeding rate. Make adjustments as follows:
   a. Decide whether your drive needs to be set-up for low range or high range. If necessary, change the speed change sprocket to accommodate the correct speed range. See “Speed Change Sprocket” on page 16.

Refer to Figure 3-6:

> **IMPORTANT:** Use seed rate charts as a guide. There are many factors which will affect seeding rates: seed treatment, weight of seed, soil surface condition and rear roller slippage. Minor adjustments to the seed rate handle may be needed to compensate for these factors.

   b. Locate seed rate adjustment lever at rear of seeder and move it to indicator number obtained from the seed rate charts. For best results, first move adjustment lever all the way to the left. Then move lever to desired setting, moving from a lower to a higher number.
      - Increase seed rate setting if the seed is lighter than average.
      - Decrease seed rate 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 blocks supporting rear roller just above ground level to allow roller to turn freely.

> **NOTE:** Rotate rear roller by grasping the roller and pulling away from the seeder at the bottom of the roller and pushing toward the seeder at the top.

   c. Rotate rear 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 rear roller as noted in table below.

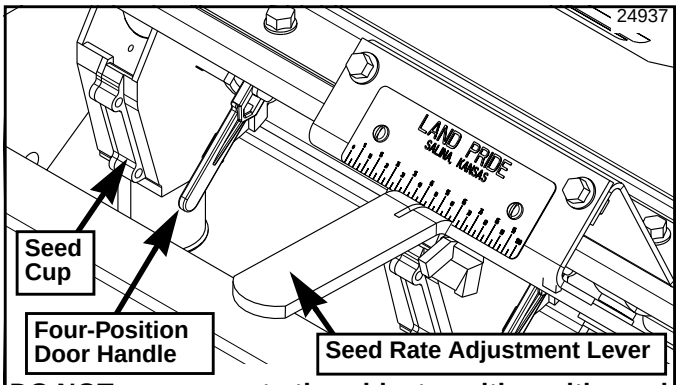
Model No	Rear Roller Rotations to Cover	
	1000 Sq. Ft.	1/10 ACRE
APS1548	103 rotations	450 rotations
APS1560	89 rotations	388 rotations
APS1572	73 rotations	319 rotations
APS1586	61 rotations	266 rotations

   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 your weight is in ounces, divide the weight by 48 to get the 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) 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 on the chart.

> **NOTE:** To determine seed rates for seeds not listed on the charts, compare weight and size to those listed in the seed rate charts and use a similar setting. Follow steps 4 and 5 to calibrate seed rate.

> **IMPORTANT:** Remember, field conditions will affect seeding rates. When seeding, check amount of seed you are using by noting acres or square feet seeded, amount of seed added to seeder, and level of seed in the seed box. You may need to adjust the seeding rate slightly to compensate for field conditions if you suspect that you are seeding more or less seed than desired; and you have accurately calibrated the seeder for your seed.

> **IMPORTANT:** This seeder 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 cup.



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

Seed Rate Adjustment Handle
Figure 3-6

Seed Rate Charts (English)

(Pounds per 1000 square foot and Pounds per acre)

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	412	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

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	4	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	0.2	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

Seed Rate Charts (Metric)

(Kilograms per 1000 square meter and Kilograms per hectare)

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	41	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 Unhulled (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 Unhulled (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

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	151	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	15	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

Maintenance

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

After using your All Purpose 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

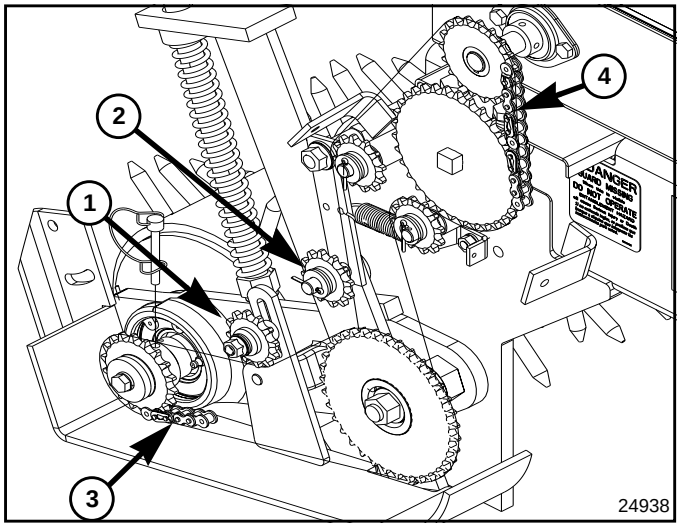
Always secure seeder in the up position with solid supports before servicing the underside. Never work under equipment supported by hydraulics. Hydraulics can drop equipment if controls are actuated or if hydraulic lines burst. Either situation can drop the seeder instantly even when power to the hydraulics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

Roller Chains

Refer to Figure 4-1:

Your drive system uses standard no. 40 roller chain and is designed for low maintenance.

1. Check drive idler (#1) and driven idler (#2) to ensure they are taking up excess chain slack.
2. Check drive chain (#3) and driven chain (#4) to ensure they are not over-tightened.
3. Clean and lubricate chains (#3 & #4) with chain lubricant as needed.



Roller Chains
Figure 4-1

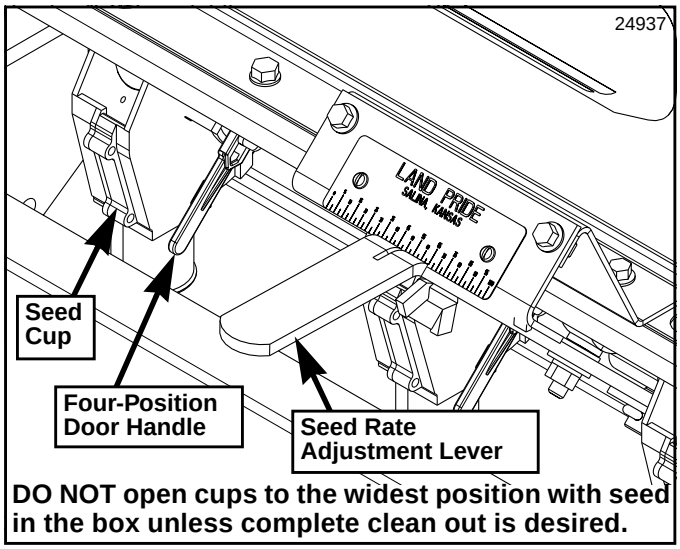
Cleaning and Storing

At the end of the working season or when your All Purpose Seeder will not be used for several days, it is good practice to clean off any dirt or grease that may have accumulated on the seeder and any of the moving parts.

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 4-2:

   b. Move seed rate adjustment lever all the way to the right to fully open fluted sprockets.
   c. Lower four position door handle to the lowest position at each seed cup.
   d. Run seeder over the ground to power the fluted sprockets and to finish cleaning out the seed cups.

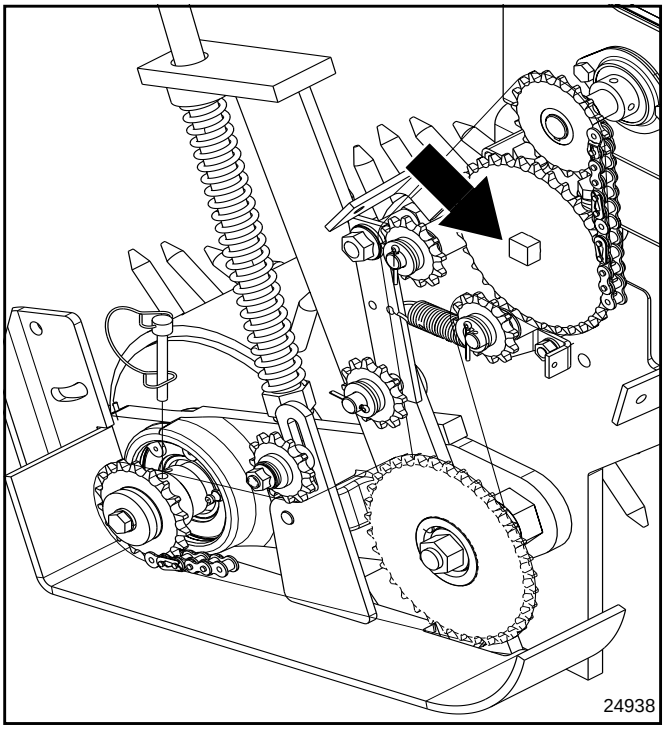


Clean-out Levers
Figure 4-2

2. Clean off all dirt and grease. Make sure rollers are clean of all dirt, trash and debris.
3. Oil the square bore of the seed cup drive sprocket hub to prevent seizing as noted under Lubrication Points on page 23.
4. Also, lubricate all grease fittings and roller chains as noted under Lubrication Points on pages 23 & 24.
5. When in storage, lower the seeder with rollers on a board or hard surface.
6. Repaint parts where paint is worn or scratched to prevent rust.
7. Replace all damaged or missing decals.
8. Store 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 Points

Lubrication Legend	Multi-purpose spray lube	Multi-purpose grease lube	Multi-purpose oil lube	50	Intervals in hours at which lubrication is required



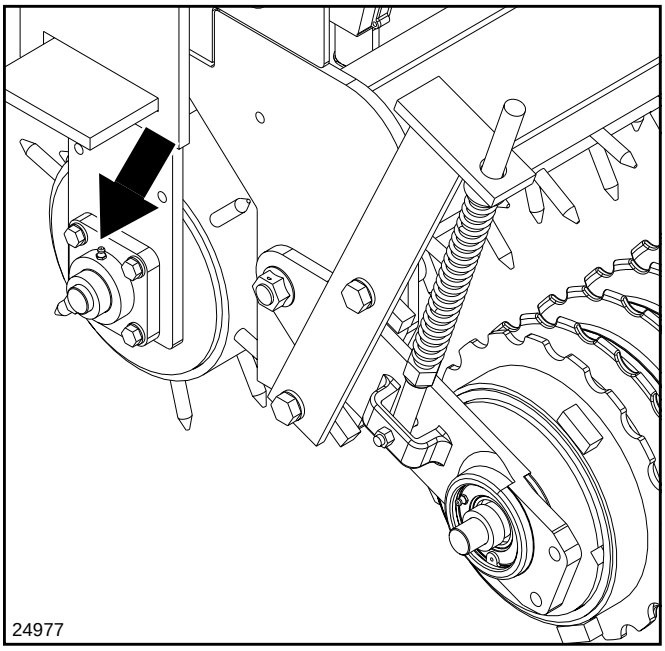
50 Hours

Feed Cup Drive Sprocket Square Bore

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.

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



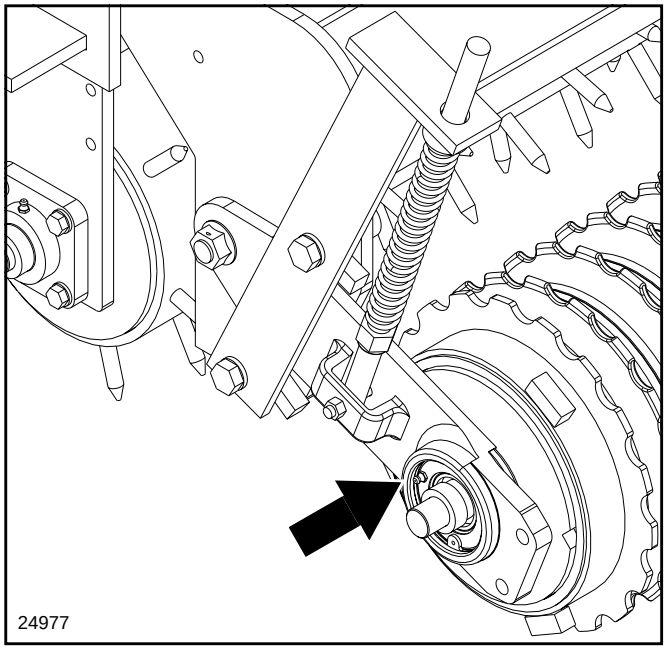
25 Hours

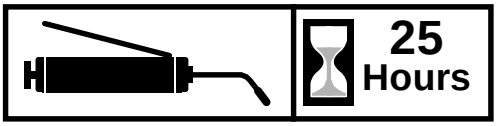
Front Roller Bearings

4 Zerks (1 At each front roller end)

Type of Lubrication: Multi-purpose Grease

Quantity: 4 - 5 pumps



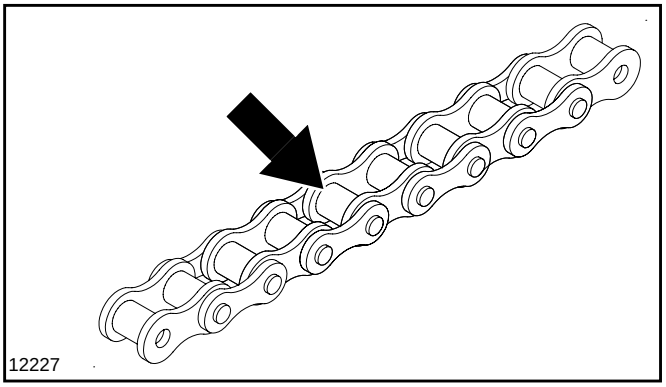


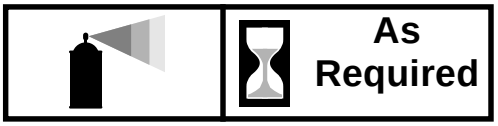
Rear Roller Bearings

2 Zerks (1 At each rear roller end)

Type of Lubrication: Multi-purpose Grease

Quantity: 4 - 5 pumps





Roller Chains

Type of Lubrication: Chain Lubricant

Quantity: Coat Generously

APS1548 & APS1572 All Purpose Seeder

Description	APS1548	APS1560	APS1572	APS1586
Overall Width	61 3/8”	73 3/8"	85 3/8”	99 3/8"
Seeding Width (Broadcast)	51”	60"	70 1/2”	86"
Weight (Approximate Pounds)	700#	884#	1046#	1320#
Seed Capacity	1 Bushel/Foot (4 bushel)	1 Bushel/Foot (5 bushel)	1 Bushel/Foot (6 bushel)	1 Bushel/Foot (7 bushel)
Number of Seed Cups	7	8	10	12
Seed Cup Type	Fluted for accurate metering			
Seed Cup Door	Four position door for different seed sizes and complete clean out of seed cup			
Seed Drop	Wind Guarded			
Seed Box	Water tight with paddle type agitating above seed cups			
Seed Box Lid	Heavy duty lid with seed splash guard			
Seed Cup Settings	Wide range of calibration settings per 1000 square feet and per acre			
Seed Cup Drive	Metering rear roller ground drive with spring loaded #40 roller chain, high/low speed change sprocket, spring tensioned idler & seed drive shut-off pin			
Front Rollers	Two 8" Diameter spiked rollers capable of angling from 0 to 20 degrees each and mounted on 1" sealed greaseable bearings			
Rear Roller				
Option	Straight 8" diameter spiked roller			
Option	Straight 11 9/16" diameter cast notched packer rings			
Rear Roller Mounting	Spring loaded mounted on 1" sealed greaseable bearings			
Roller Spike Size	1 1/2" x 1/2"			
Mud Scrapers				
Option	Bolt on mud scrapers for front and rear spiked rollers.			
Option	Bolt on mud scrapers for front spiked rollers & rear packer roller.			
Hitch				
APS1548, APS1560 & APS1572	Category I Formed A-frame plates; Fits Land Pride Quick-Hitch			
APS1586	Category I & II Formed A-frame plates; Fits Land Pride Quick-Hitch			

APS1548, APS1560, APS1572 & APS1586 Models

Features	Benefits
1548, 1560 & 1572 = Cat 1 QH 1586 = Cat1&2 QH	Fits Land Pride Quick Hitch for easy one person hook-up to tractor.
Seeding Width APS1548 & APS1560	48" & 60" seeding width provides capability to maneuver around landscape obstacles and over uneven hilly terrain.
Seeding Width APS1572 & APS1586	72" & 86" seeding width provides high productivity over wide areas and flat or gently sloping terrain.
Machine Weight	Heavier unit weight provides for better spike penetration and seed-to-soil contact.
Lift Hooks	Lift hooks mounted on each end of seedbox to attach lift straps or chains for easy loading and unloading.
Water-tight Seedbox	Keeps moisture and rodents out of the seedbox.
Large Seedbox Capacity	One bushel per foot. Keeps filling to a minimum and increases productivity.
Easy Seedbox Cleanout	Simply moving the flute lever to the proper position allows for easy cleanout and removal of all seeds.
Heavy Duty Hopper Lid with Stay Open Support	Precision fit to keep water and rodents out and HD construction with integral prop support keeps lid from slamming shut in windy conditions.
Seed Splash Guard	Prevents seed from being spilled out between the lid and the box during hopper filling.
Precision Grass Seed Cups	Proven fluted seed cups for highly accurate seed delivery.
Built-in Agitator	Prevents bridging and keeps seed flowing evenly to cups.
Powdered Metal in Fluted Sprockets	Helps dissipate any heat buildup from fluted area and plastic seed cup housing.
Easy Seed Rate Adjustment Capability	Proper seed rate lever positioning is conveniently indicated on the seed rate chart for ease of setting and adjustment with a high level of confidence.
Wind Guarded Seed Drop	Protects seed from blowing away and ensures uniform seed distribution across the full width of the seeder.
Seed Rate Chart	Conveniently positioned as large durable decal under the seed box lid for handy calibration reference.
#40 Roller Chain Drive	Provides for smooth and quiet running with a high degree of reliability and a spring loaded idler keeps the chain properly tensioned.
High and Low Speed Range Settings	A simple and easy repositioning of seed drive sprockets allows for an expanded range of seed drive settings.
Crab Action Spiked Front Rollers	Two 8" diameter front rollers can easily be angled from 0-20 degrees providing for more or less aggressive de-thatching action or soil cultivation and seedbed preparation.
Spring Mounted Rear Rollers	Full length rear rollers come in a choice of 8" diameter spiked steel or a cast steel and notched packer type roller that are spring loaded for maximum down pressure and seed to soil contact.
Ground Driven Metering	The rear roller serves as the primary seed meter drive providing a very high degree of accuracy, low maintenance costs, and long component life.
Rear Spiked Roller Option: **Rear Packer Roller Option:**	Opens ground surfaces covered with heavy vegetation and/or grasses to allow seed to make contact with the soil. Allows planting over existing grass without killing the grass. Presses seed into full contact with soil that has been worked into a seed bed.
Mud Scrapers(Accessory)	Reduces build-up of mud and debris on rollers when working in wet, sticky or trashy soil.
Spring loaded chain idler	Spring loaded idler keeps constant pressure on chain so seeding rate is consistent.

Troubleshooting Chart

Problem	Cause
Uneven seed spacing or uneven stand.	Check for plugging in seed cup.
	Reduce ground speed.
	Check for trash or mud buildup on rollers.
Actual seeding rate is different than desired.	Seed treatment will affect seeding rate if the chemicals buildup in seed cup. Unless cleaned regularly, this buildup 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.
Rollers not turning freely.	Check for trash or mud buildup on roller end.

Torque Values Chart For Common Bolt Size

Bolt Size (Inches)	Bolt Head Identification: Grade 2		Grade 5		Grade 8	
in-tpi [1]	N · m	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	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.

Additional Torque Values

Front Roller Gang Slide (1" Hex Flange Lock Nuts)	Tighten 1" nuts until they make contact with gang slide and then back nuts off 1/3 revolution (2 hex flats). Some additional backing off of the nuts may be necessary to allow the gang slide to move easily. See “Front Roller Angle Adjustment” on page 14.

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

Front & Rear Rollers: Considered wear items.

This Warranty is limited to the 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.

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