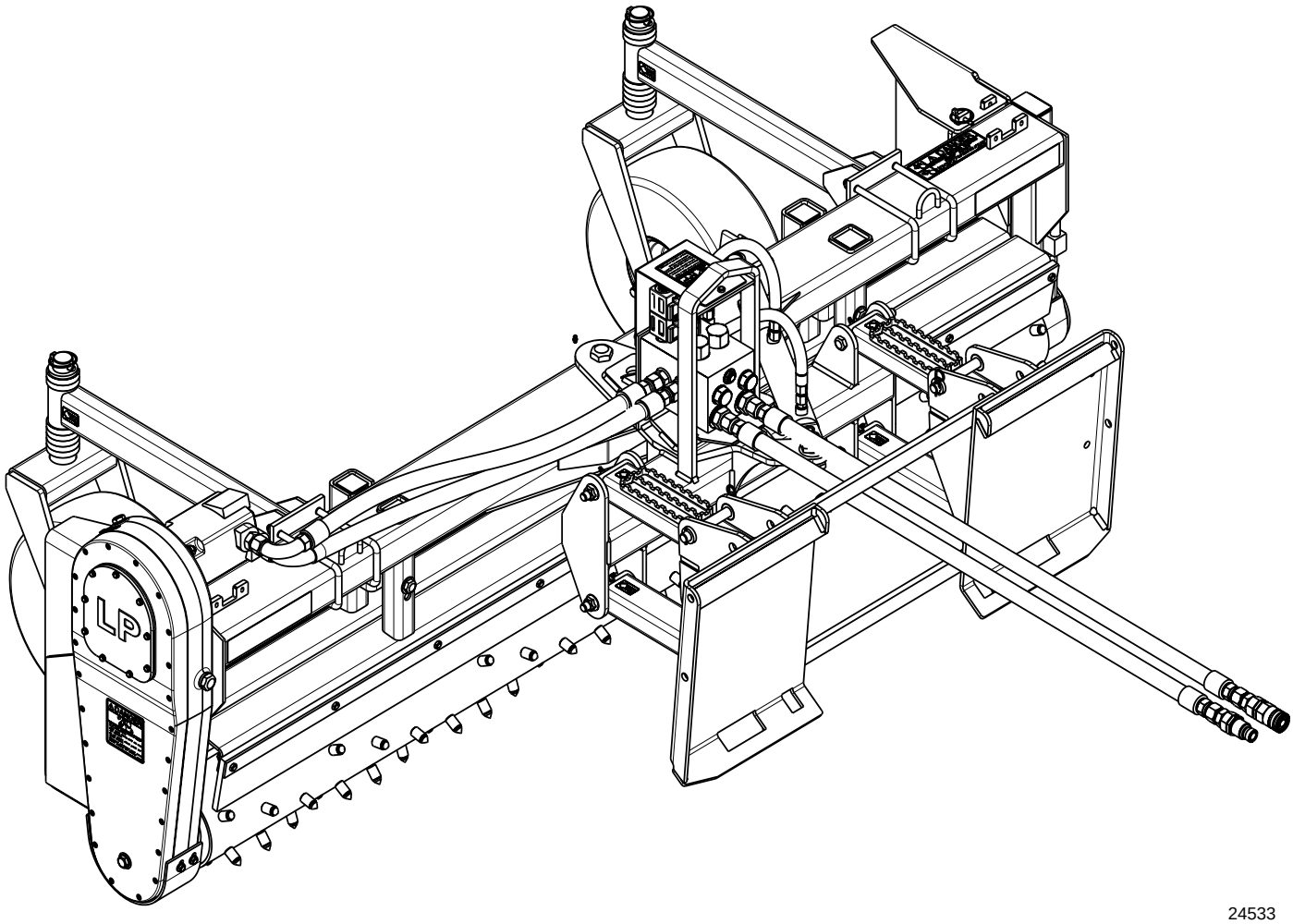
Table of Contents

# Powered Rakes

## SR2672 & SR2690 Skid Steer




24533

***321-004M***
***Operator's Manual***

Land Pride

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.***

 *Printed* **6/11/14**




*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.
- ▲ Make sure all guards and shields are in place and secured before operating implement.
- ▲ Keep all persons away from equipment and work area.
- ▲ Start skid steer with steering levers and hydraulic controls in neutral.
- ▲ Operate implement and loader arms from the driver's seat only.
- ▲ Dismounting from a moving unit can cause serious injury or death.
- ▲ Do not allow anyone to stand between skid steer and implement while hooking-up to implement.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ Watch out for objects overhead and along side such as fences, buildings, wires, trees, limbs, etc., while transporting and operating attached implement.
- ▲ Detach and store implement in an area where children normally do not play. Secure implement by using blocks and supports.

## *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:

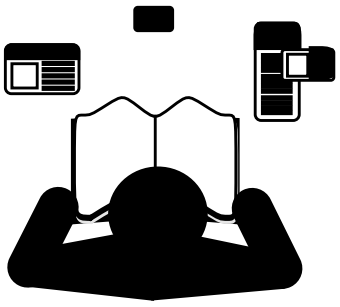
**⚠ DANGER**
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

**⚠ 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.



## 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.


## *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*

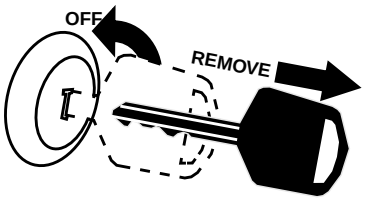
**The QR code on the left will link you to available dealers for Land Pride products. Refer to Parts Manual QR Locator on this page for detailed instructions.**

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

## Shutdown and Storage

***Before leaving operator's seat:***

- ▲ Lower lift arms and put attachment flat on the ground.
- ▲ Turn off engine and engage parking brake.
- ▲ If included, raise seat bar and move controls until both lock.
- ▲ Remove key to prevent unauthorized starting.
- ▲ Use steps, grab-handles and skid-resistant surfaces when getting on or off the loader.
- ▲ Detach and store implements in an area where children normally do not play. Secure implement by using blocks and supports.

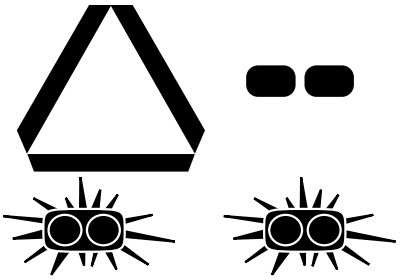



## Transport Safely

- ▲ Comply with state and local laws.
- ▲ Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrains require a slower speed.
- ▲ Avoid contact with any over head utility lines or electrically charged conductors.
- ▲ Always drive with load on end of loader arms low to the ground.
- ▲ Always drive straight up and down ramps with load on "uphill" side of skid steer.
- ▲ Engage parking brake when stopped on an incline.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of the vehicle towing the load.
- ▲ 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 towed trailer to swerve and upset. Reduce speed if towed trailer is not equipped with brakes.


## Use Safety Lights and Devices

- ▲ Slow moving 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.



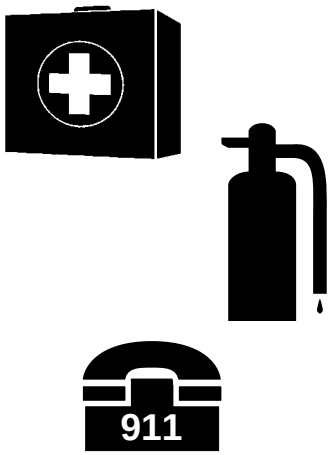
## Practice Safe Maintenance

- ▲ 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 and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- ▲ Allow implement to cool completely.
- ▲ 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 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

- ▲ 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

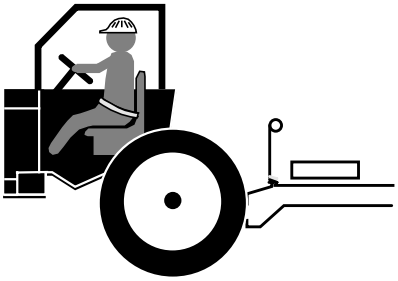
- ▲ Escaping fluid under pressure can penetrate the skin causing serious injury.
- ▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing work on the system.
- ▲ Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition 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.

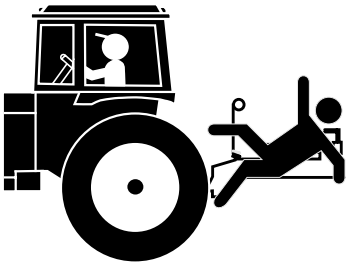
## Use Seat Belt and ROPS

- ▲ Operate only skid steers equipped with a Roll-Over Protective Structure (ROPS) and seat belt.
- ▲ Fasten seat belt snugly and securely to help protect against serious injury or death from falling and skid steer overturn.
- ▲ Wearing protective equipment such as safety shoes, safety glasses, hard hat, and ear plugs is highly recommended.



## Keep Riders Off Machinery

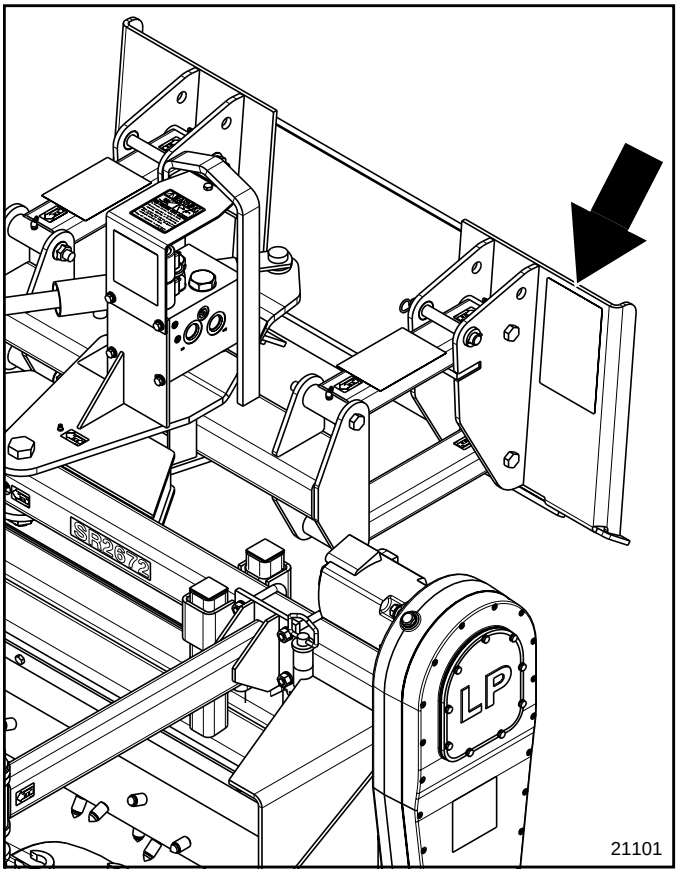
- ▲ Never carry riders or use machinery as a personlift.
- ▲ Riders obstruct operator's view.
- ▲ Riders could be struck by foreign objects or thrown from the machine.
- ▲ Never allow children to operate equipment.

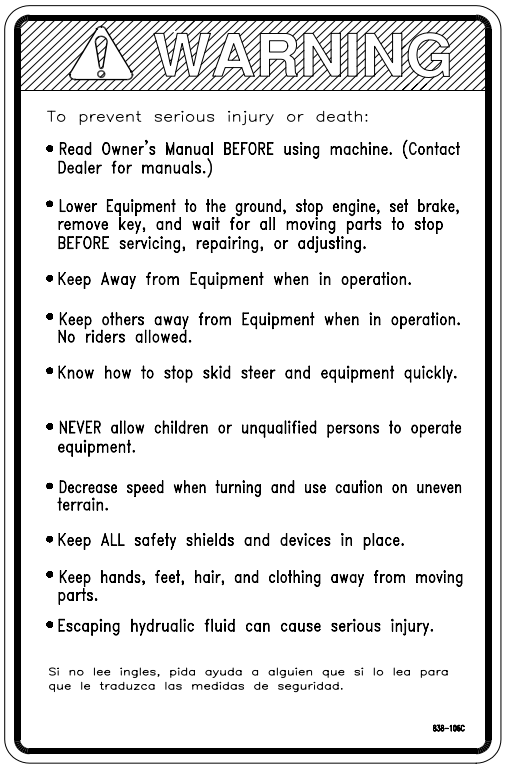


## Safety Labels

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

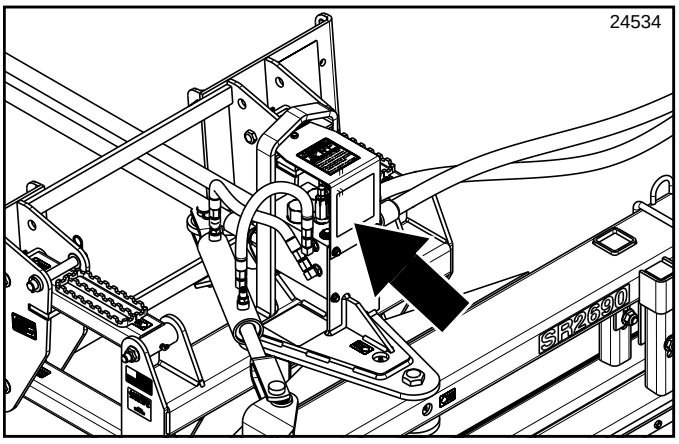
1. *Keep all safety labels clean and legible.*
2. *Refer to this section for proper label placement. Replace all damaged or missing labels. Order new labels from your nearest Land Pride dealer. To find your nearest dealer, visit our dealer locator at www.landpride.com.*
3. *Some new equipment installed 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.*




**838-106C**

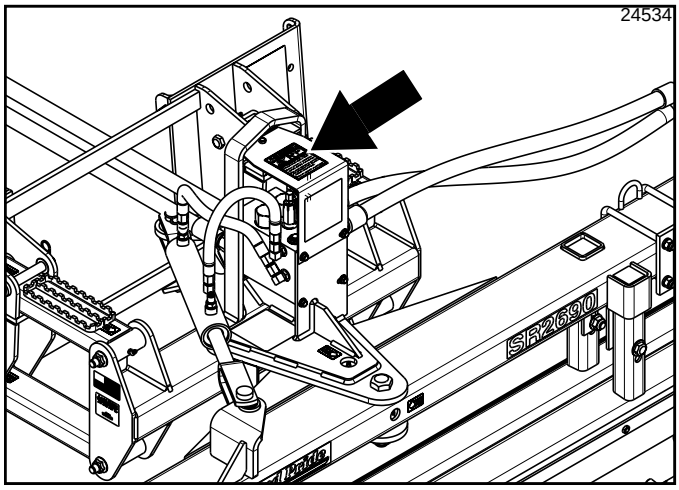
Warning: General Safety





**838-107C**

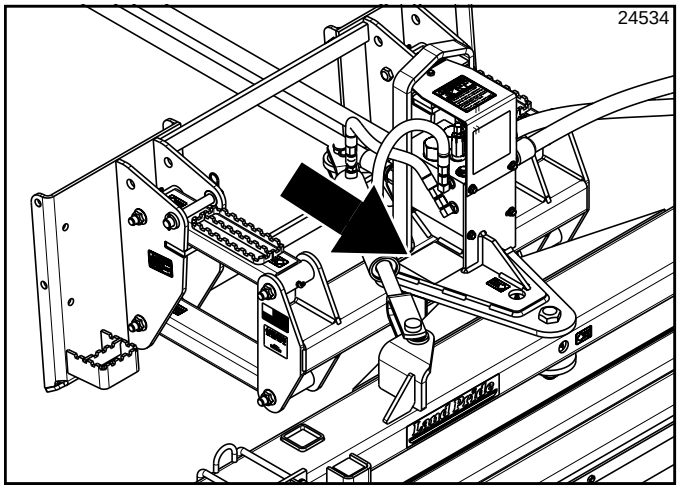
Warning: Thrown Object Hazard





## 818-339C

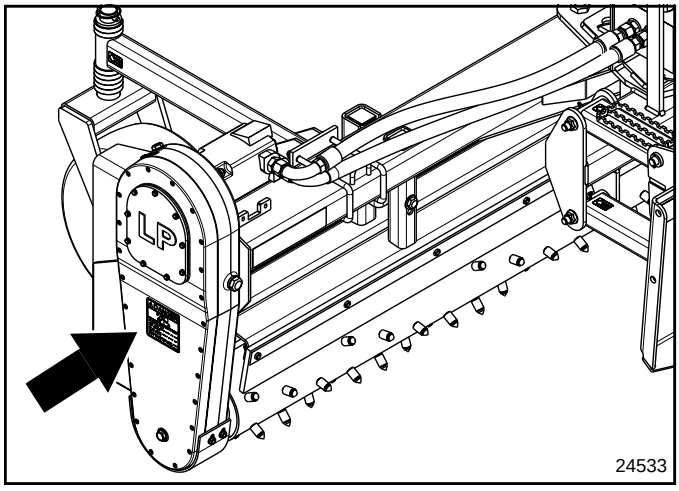
Warning: High Pressure Fluid Hazard





## 838-112C

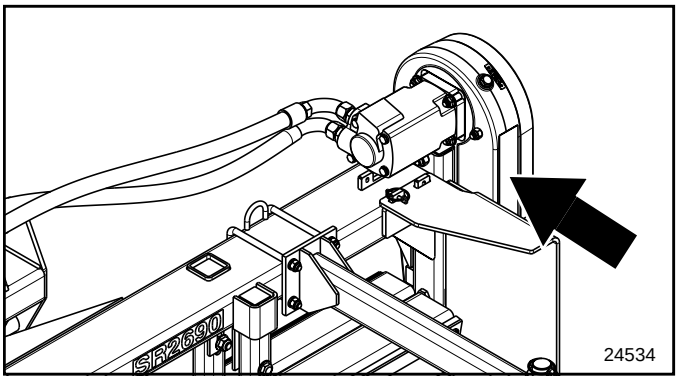
Danger: Pinching Hazard





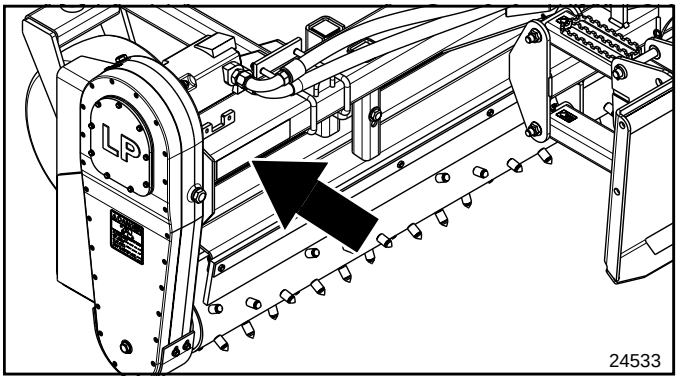
## 838-111C

Danger: Moving Parts



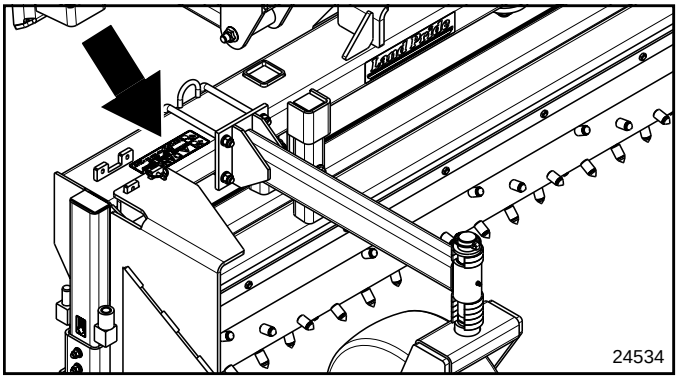

**838-615C**

2" x 9" Amber Reflector (1 place)




**838-614C**

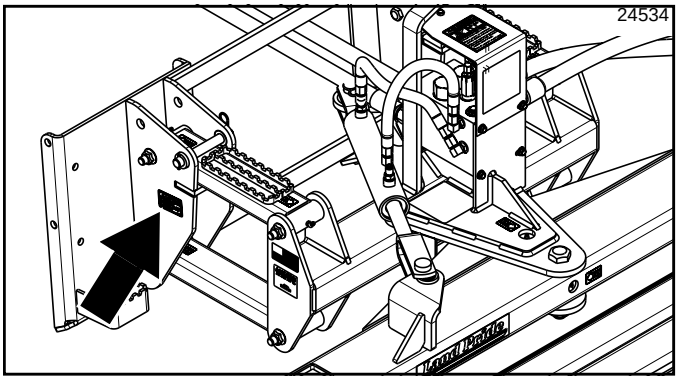
2" x 9" Red Reflector (2 places)





**818-254C**

Danger: Rotating Roller Hazard





**858-235C**

Caution: Hydraulic Hose Hazard

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

This Powered Rake 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

Land Pride's SR2672 and SR2690 Skid Steer Powered Rakes, with their carbide tipped studded roller, adjustable and highly durable urethane material control deflector, and 20-degree left and right angling will turn your skid steer loader into the perfect landscaping tool. These skid steer powered rakes are designed to grade, level, rake, and remove unwanted objects such as rocks, stones, clods, small roots, limbs, twigs, and other material of similar nature or size. They can also alleviate unwanted weed growth and prepare a seedbed for planting. These powered rakes are excellent tools to renovate and rejuvenate gravel and cinder driveways, storage lots, and warning tracks. They are also very effective at reconditioning earthen race tracks and arenas. The hydraulic driven roller rotates in both directions for traveling both forward and backward. Both models allow you to move dirt like a box scraper, windrow rocks like a rake and work soil like a pulverizer - all in one tool.

See **"Specifications & Capacities"** on page 23 and **"Features & Benefits"** on page 24 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

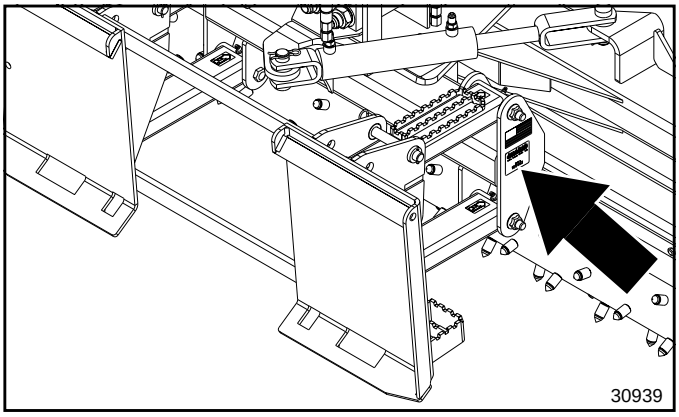
The Online Warranty Registration should be completed by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

The parts on your Powered Rake 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 27. 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 Powered Rake. 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

## Skid Steer Requirements

The Powered Rake is designed to fit on Skid Steer Loaders with the following minimum requirements:

- SR2672

  SAE Lift Capacity . . . . . 1200 lbs.
  Hydraulic Requirements . . . . . 11 GPM at 2200 psi
  Maximum Hydraulic Pressure . . . . . 3500 psi

- SR2690

  SAE Lift Capacity . . . . . 1600 lbs.
  Hydraulic Requirements . . . . . 15 GPM at 2500 psi
  Maximum Hydraulic Pressure . . . . . 3500 psi

**IMPORTANT:** Ballast may need to be added to your skid steer to maintain steering control and to prevent tipping of the skid steer. Refer to your skid steer's operator manual to determine if additional ballast is needed.

## Hydraulic Motor Hose Assembly

***Refer to Figure 1-1:***

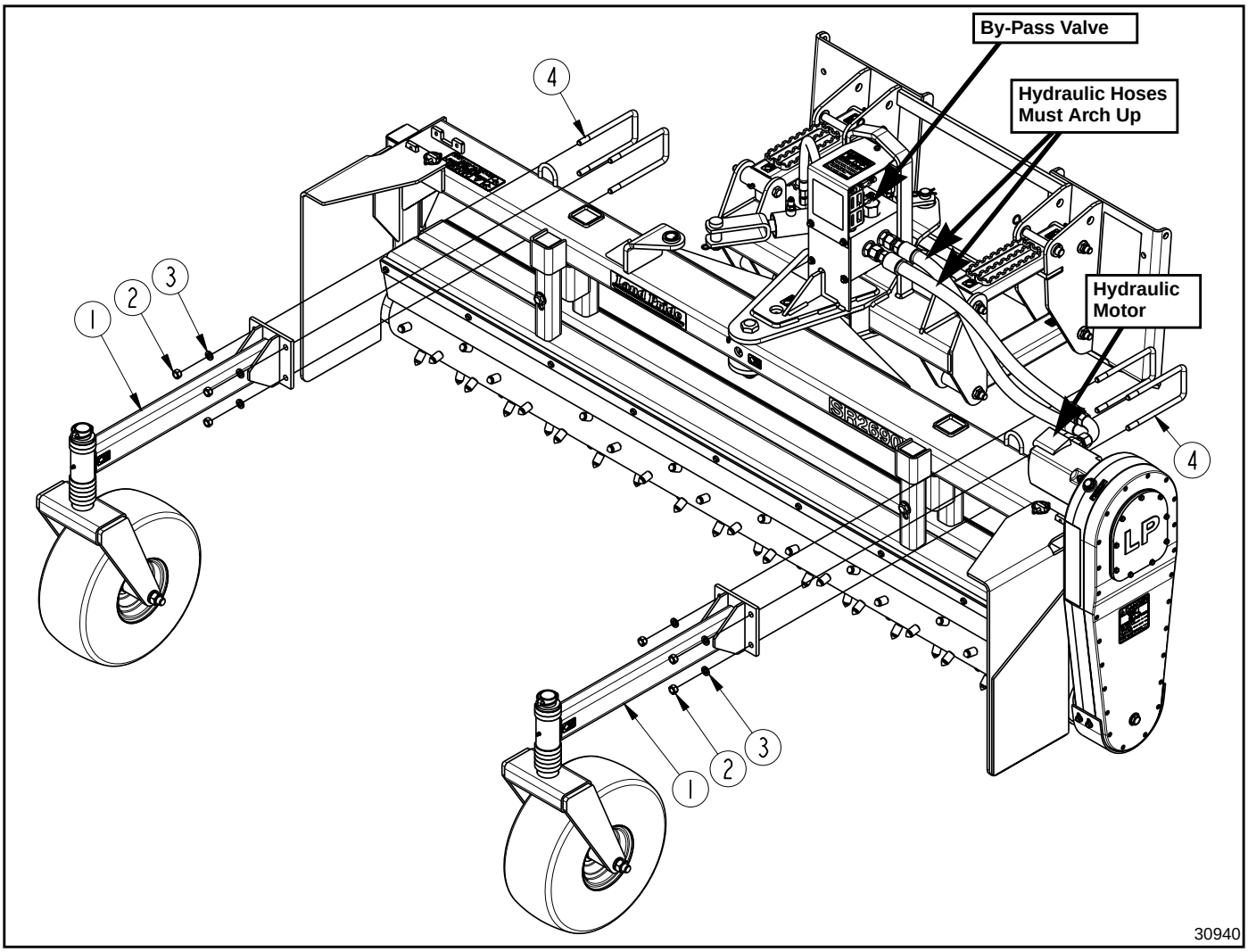
Check hoses between by-pass valve and hydraulic motor. Hoses must arch up to prevent becoming entangled in the hitch pivot points. If hoses do not arch up, the following should be done:

1. Loosen hose fittings at the valve by-pass.
2. Rotate hoses until they arch up.
3. Retighten hose fittings.

## Gauge Wheel Assembly

***Refer to Figure 1-1:***

1. Attach gauge wheels (#1) to the rear frame with u-bolts (#4), lock washers (#3), and nuts (#2) as shown.
2. Tighten nuts to correct torque.



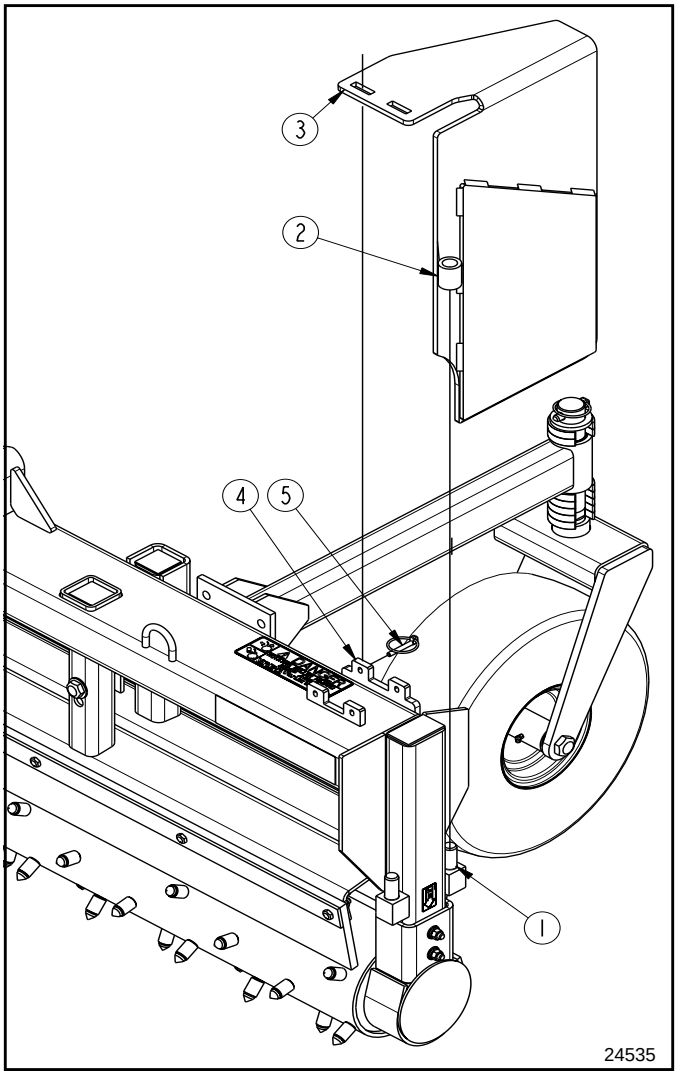

**Gauge Wheel Assembly**
**Figure 1-1**

## Side Plate Assembly

***Refer to Figure 1-2:***

Included with the Powered Rake are two side plates, one right-hand and one left hand.

1. Install rectangle holes in top of right-hand side plate (#3) over mounting tabs in the rake frame and pipe tube (#1) over side support pin (#2) as shown.
2. Secure right-hand side plate (#3) to the rake frame with linchpin (#4).
3. Repeat steps 1 through 2 for left-hand end plate.




**SR2672 Side Plate Assembly (Right-Hand Side Shown)**
**Figure 1-2**

## Skid Steer Hook-Up

**DANGER**

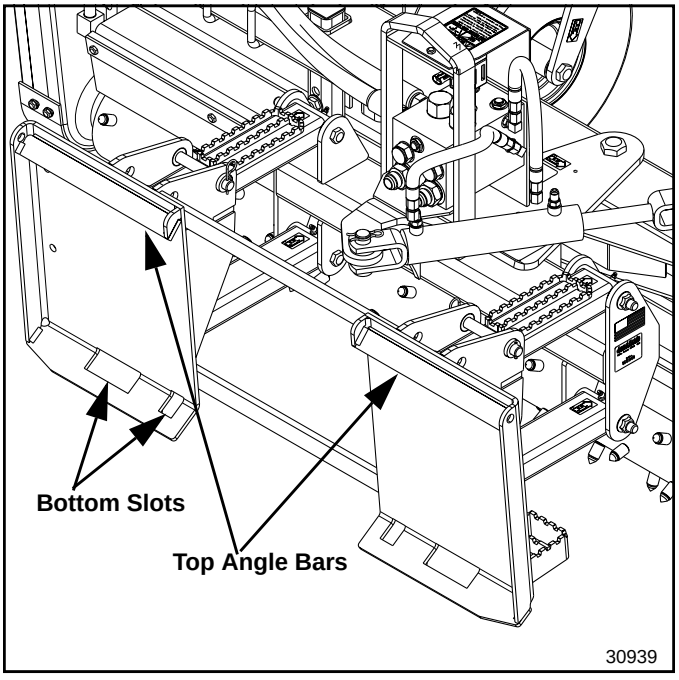
*Hydraulic fluid under high pressure can penetrate the skin. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for hydraulic leaks. If hydraulic fluid is injected into the skin or eyes, it must be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

***Refer to Figure 1-3:***

**CAUTION**

*Do not stand between the skid steer loader and implement during hookup.*

1. Drive the skid steer slowly to the Powered Rake making sure the front hitch plate of the skid steer is parallel with the Powered Rake hitch.
2. Tilt the top of the skid steer hitch plate slightly forward.
3. Place the skid steer's hitch plate top under the top angled bar of the Powered Rake.
4. Slowly lift the skid steer's hitch until the Powered Rake's hitch and the skid steer's top angle bar have come together.
5. Push lock handles of the skid steer down so that the pins go through the bottom slots of the Powered Rake's hitch and the handles lock down.
6. Connect hydraulic hoses on Powered Rake to the skid steer loader.




**Skid Steer Hitch Plate**
**Figure 1-3**

## Hydraulic Hose Hook-up

***Refer to Figure 1-4:***

**DANGER**

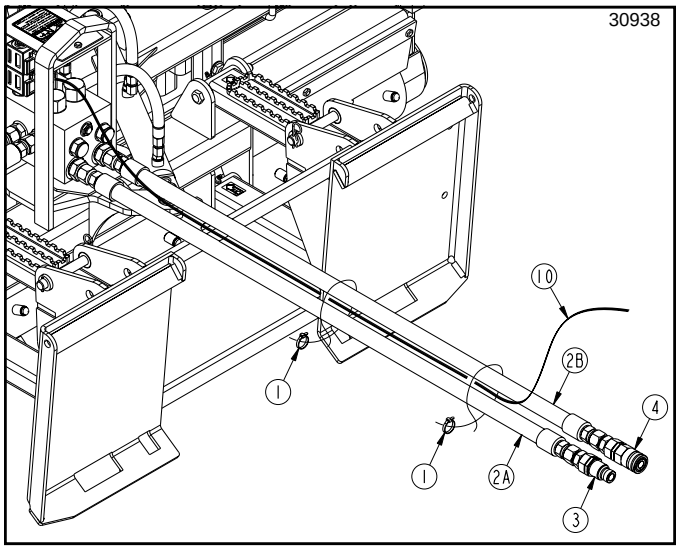
*Hydraulic fluid under high pressure can penetrate the skin. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for hydraulic leaks. If hydraulic fluid is injected into the skin or eyes, it must be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

**DANGER**

*Make sure hydraulic hoses are properly routed without twists to prevent becoming pinched or kinked while operating. A pinched or kinked hose can burst and leak hydraulic fluid.*

**NOTE:** The preferred hose connections will allow continues hydraulic flow for raking. Line (#2B) is the pressure line for raking. Therefore, attach line (2B) to the skid steer hydraulic line that is pressurized when controls are locked for continuous operation (continuous hydraulic flow).

7. See your Skid Steer Operator's Manual to determine which coupler on your unit is under pressure when unit is locked in continuous operation. If coupling (#4) does not mate with your unit's coupling that is under pressure, then switch couplings (#3) and (#4) on lines (#2A & 2B).
8. Make certain both couplings (#3 & #4) are screwed on tight. Connect couplings to the skid steer high pressure outlets.
9. Hydraulic hoses will be zip tied together after installation of wiring harness. Continue with **"Electrical Hook-up With Eyelets"** on page 12.




**Skid Steer Hitch Plate**
**Figure 1-4**

# Electrical Hook-Up Options

There are three electrical hook-up options available. Select the option purchased with the Powered Rake:

- 10' Long wire harness with Deutsch 14 pin power plug.
  Refer to **"Electrical Hook-up With Deutsch 14 Pin Plug"** below.
- Wire harness with Deutsch 2 pin power plug.
  Refer to **"Electrical Hook-up With Deutsch 2 Pin Plug"** below.
- Skid steer wire harness with red & black eyelets for connecting to 12V power source.
  Refer to **"Electrical Hook-up With Eyelets"** on page 12.

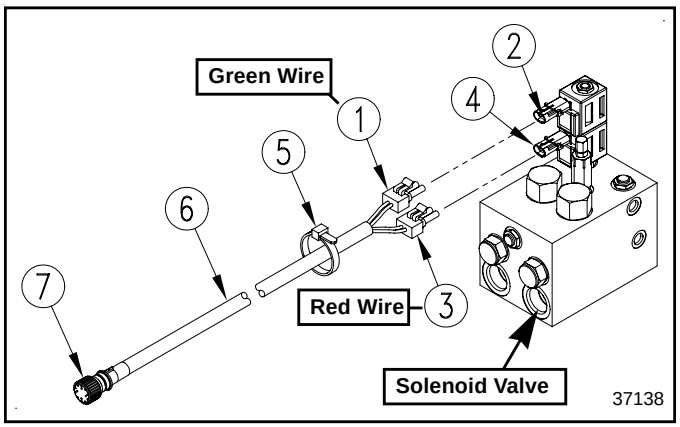
## Electrical Hook-up With Deutsch 14 Pin Plug

**823-095A . . . . . DEUTSCH HD30 14 PIN PLUG 10'**

***Refer to Figure 1-5:***

If Skid Steer Loader is equipped with a Deutsch 14 Pin male connector, then push button control box can be eliminated and the 10 foot long Deutsch 14 pin plug & cable (#6) can be purchased to connect the solenoid directly to the Skid Steer Loader controls.

1. Connect green & black wire plug (#1) to top solenoid wire (#2).
2. Connect red and white wire plug (#3) to bottom solenoid wire (#4).
3. Attach Deutsch 14 pin plug (#7) to the skid steer's Deutsch 14 pin male plug.
4. Skip to **"Operational Check"** on page 12.




**Deutsch 14 Pin Plug & Cable**
**Figure 1-5**

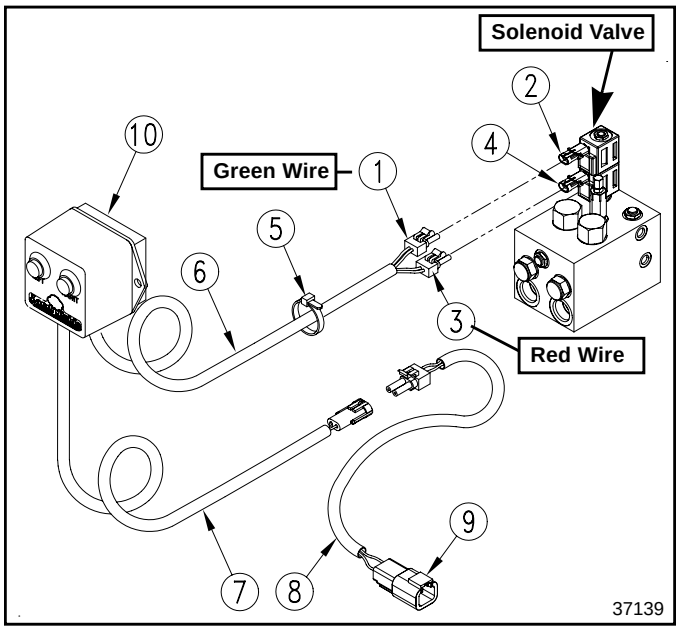
## Electrical Hook-up With Deutsch 2 Pin Plug

**323-096A . . .SWITCH & WIRE HARNESS DTP PLUG**

***Refer to Figure 1-6:***

This switch and wire harness is designed for attaching the Powered Rake to a Kubota CTL when a 14 pin Deutsch plug is not available and 2 pin Deutsch plug located behind the driver's seat is available. The 2 push button control switch (#10) can be placed approximately 9 ft. from the solenoid valve.

1. Attach Deutsch 2 pin plug (#9) to the Kubota CTL male plug located behind the driver's seat.
2. The push button control switch (#10) is mounted with magnets on the back. Locate and mount this switch in a convenient easy to reach location.
3. Connect power cord (#8) to control switch wire (#7).
4. Connect green & black wire connector (#1) to top solenoid wire (#2).
5. Connect red and white wire connector (#3) to bottom solenoid wire (#4).
6. Skip to **"Operational Check"** on page 12.




**Switch & Wire Harness For Kubota CTL Skid Steer**
**Figure 1-6**

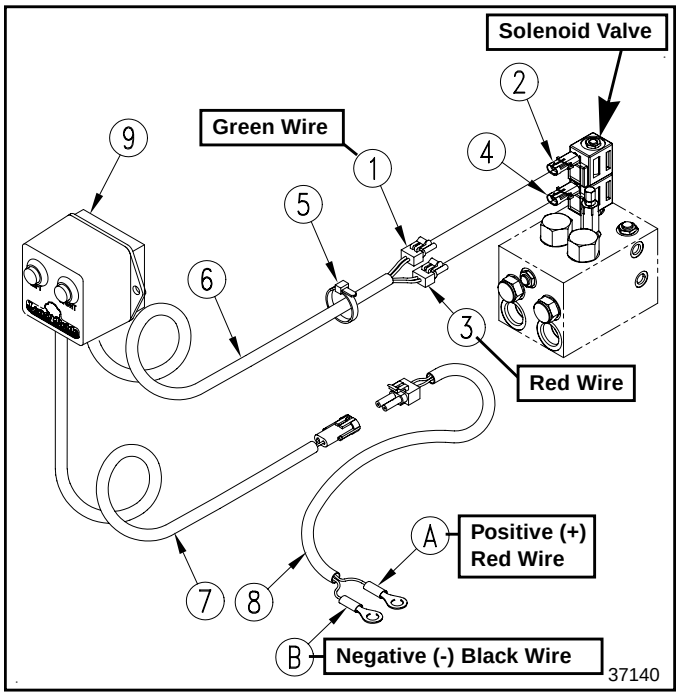
## Electrical Hook-up With Eyelets

**323-097A . . . . . SWITCH & WIRE HARNESS**

***Refer to Figure 1-7:***

This switch and wire harness is designed for attaching the Powered Rake to a Skid steer without a 2 pin or 14 pin Deutsch plug. The 2 push button control switch can be placed approximately 9 ft. from the solenoid valve.

1. Disconnect negative (-) black ground wire from the skid steer's battery post (Not shown).
2. Attach positive (+) red wire eyelet (A) to a 12 volt power source. Tighten fastener hardware.
3. Attach negative (-) black wire eyelet (B) to ground. Tighten fastener hardware.
4. Reconnect negative (-) black ground wire to the skid steer's battery. Tighten fastener hardware.
5. The push button control switch (#9) is mounted with magnets on the back. Locate and mount this switch in a convenient easy to reach location.
6. Connect power cord (#8) to control switch wire (#7).
7. Connect green & black wire connector (#1) to the top solenoid wire (#2).
8. Connect red and white wire connector (#3) to the bottom solenoid wire (#4).
9. Continue with **"Operational Check"** on this page.




**Switch & Wire Harness With Eyelets**
**Figure 1-7**

## Operational Check

***Refer to Figure 1-6 on page 11 or Figure 1-7:***

1. With hydraulics hooked-up, start skid steer and press buttons to angle broom to sweep material to the right and left.
2. If broom angles in opposite direction desired, switch plugs (#1 & #3) with solenoid wires (#2 & #4).
3. If everything is working correctly, secure harness (#6) near the solenoid valve with zip tie (#5).
4. Make certain hydraulic hoses from skid steer to broom are kept away from all pinch points.
5. Tie hydraulic hoses and electrical cables together 12" and 29" away from quick release couplers with zip ties (#5).

**NOTE:** Additional zip ties may be needed to properly secure all wiring harness. Customer to supply and locate all additional zip ties.

## Operating 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 Powered Rake. Therefore, it is absolutely essential that no one operates the Powered Rake 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**, page 1
- **Section 1: Assembly & Set-up,** page 8
- **Section 2: Operating Instructions**, page 13
- **Section 3: Adjustments**, page 16
- **Section 4: Maintenance & Lubrication**, page 19

Before beginning to operate your Powered Rake the following inspection should be performed.

### Operating Checklist

| ✔ | Check | Ref. |
|---|---|---|
| | Check roller chain tension. Refer to "Drive Chain Adjustment" | Page 17 |
| | Check oil level in chaincase. Refer to "Lubrication" | Page 21 |
| | Check chaincase to make sure oil plugs have been replaced. Refer to "Drive Chain" instructions. | Page 22 |
| | Check initially and periodically for proper chain tension. Refer to "Drive Chain Adjustment". | Page 17 |
| | Check initially and periodically for loose bolts and pins. Refer to "Torque Values Chart for Common Bolt Sizes". | Page 26 |
| | Grease driveline shaft and other grease fittings. Refer to "Lubrication" | Page 21 |
| | Check oil level in chain case. Make certain oil plugs are properly replaced. Refer to "Lubrication". | Page 21 |
| | Make sure all guards & shields are in place and secure. Refer to "Important Safety Information" | Page 1 |
| | Inspect hydraulic hoses for wear, damage and hydraulic leaks. Replace damaged and worn hoses with genuine Land Pride parts. | Page 3 |
| | Check air pressure in gauge wheel tires. Refer to "Tire Inflation Chart" | Page 26 |

Make the following inspections after attaching the Powered Rake to the skid steer. Make certain the rake is completely stopped before continuing.

1. Inspect skid steer safety equipment to make sure it is in good working condition.
2. Carefully raise and lower implement with the Powered Rake set at the maximum angle to ensure that the tires and other equipment on the skid steer do not contact the rake
3. Inspect hydraulic hoses for pinch points. Reposition hoses if needed. For correct hose set-up, see "Hydraulic Motor Hose Assembly" set-up instructions on Page 8.
4. Inspect hydraulic hoses for wear, damage and hydraulic leaks. See **"Avoid High Pressure Fluids Hazard"** on page 3. Replace damaged and worn hoses with genuine Land Pride parts.

## Safety Information

**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.*

**DANGER**

***Do not** operate lift controls with someone directly between the skid steer and Powered Rake or close to the rake.*

**DANGER**

*Never carry a person on the rake. A rider can fall and be ran over causing serious injury or death.*

**WARNING**

*Always shut off all power, disengage auxiliary hydraulics, set park brake, remove ignition key, and wait for the spiked roller to come to a complete stop before dismounting from skid steer.*

**WARNING**

*Do not use rake to lift or carry objects. Lifting and/or carrying objects can brake the rake* and/or *cause serious bodily injury.*

**WARNING**

*Do not become entangled in the hydraulic hoses. Tripping over the hoses while entering or exiting the Skid Steer operator station can cause serious injury to the body.*

**CAUTION**

*Keep bystanders at least 20 feet away when operating!*

**CAUTION**

*Do not rotate front loader hitch plate fully down. Doing so, can damage hydraulic hoses and cause a high pressure fluid leaks. Fluid under pressure can penetrate the skin and/or eyes.*

**IMPORTANT:** Do not allow hydraulic motor hoses to become pinched between rake frame and hitch plate pivot points. For set-up instructions, see "Hydraulic Motor Hose Assembly" on page 8.

**IMPORTANT:** Avoid catching hydraulic hoses on brush, post, stumps, and other protrusions that could damage and/or break them.

**IMPORTANT:** Immediately shut down Powered Rake and skid steer when Powered Rake is not operating properly or needs adjustment.

**IMPORTANT:** Avoid catching the hydraulic hoses on brush, post, stumps, and other protrusions that could damage and/or break them.

**IMPORTANT:** Shut off all power, disengage auxiliary hydraulics, set park brake and remove ignition key any time the Powered Rake is not operating properly or needs adjustment.

## Transporting

### WARNING

*When traveling on public roads 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. Be sure to reduce ground speed when turning; and, leave enough clearance to keep the attachment from making contact with obstacles such as buildings, trees or fences.
2. Select a safe ground travel speed when transporting from one area to another.
3. When traveling on public roadways, transport in such a way that faster moving vehicles may pass you safely. A slow moving vehicle sign should always be properly displayed when traveling on public roads or right-of ways.
4. Decrease transport speed when traveling over rough or hilly terrain.
5. When transporting skid steer on a trailer:
   - Use towing vehicle and trailer of adequate capacity.
   - Always drive up a ramp with heavy end uphill.
   - Engage skid steer park brake and remove ignition switch key once it is loaded.
   - Secure Skid Steer Loader and attachment using tie downs and chains.

## General Operating Instructions

First completely familiarize yourself with the Operator's Manual! Then complete the Operator's checklist, properly attach the Powered Rake to your skid steer, and make the initial depth setting, level settings, and roller angle adjustments. After completing the above, you will need to perform operational safety checks. Choose a work site and make any final adjustments before using your Land Pride Powered Rake.

It's now time for a running operational safety check. Make certain that the loader's park brake is engaged, auxiliary hydraulics are disengaged, and the Powered Rake is resting on the ground. Start the loader and back off engine RPM to approximately one-quarter throttle. Using the hydraulic lift control, lift the Powered Rake about half way off the ground and then engage auxiliary hydraulics. Increase throttle speed if everything is running smoothly until you have reached full operating speed. Never engage the auxiliary hydraulics at full engine RPM. Damage to the rake driveline and/or rake could occur.

To make final adjustments, choose a work site that is dry and allows you to make at least a 50 ft. straight run. Raise the Powered Rake half way off the ground, disengage the loader auxiliary hydraulics, release the park brake, and travel to your starting point. Travel speed should be between 3 and 5 mph and the rake height should be positioned for best road view.

Once at the site, idle the loader engine, engage the auxiliary hydraulics, and then increase engine speed until the loader is at full operating speed. Begin traveling forward while gently lowering the running Powered Rake to the ground. Make slight changes to the loader's ground speed as you travel forward to determine the desired ground finish. Generally, a slower speed results in a finer finish, while a higher speed results in a coarser finish. Excessive ground speed may result in dirt or material passing over the top of the material control deflector or too much material being windrowed off to the side. Powered Rakes do not perform well in wet sticky soil and making sharp turns when in contact with the ground.

Normal operating rake angle is 15 degrees left or right. However, you may want to make subtle auxiliary hydraulic adjustments to the roller angle to determine varying effects on the surface finish. The side plates can be taken out of storage position and installed to create a box blade effect which will greatly assist in filling in low spots and depressions.

You can also vary the effect on the surface finish by setting the material control deflector height above the roller. The material control deflector sifts out clods, rocks, and other debris as the soil passes over the top of the bar roller. Adjusting the blade down decreases the gap between the deflector and roller and will sift out more objects for a finer soil finish. Adjusting the blade up allows more clods, rocks, and debris to pass over the roller and produces a coarser soil finish.

Set the working depth and level the rake at the caster gauge wheels and not with the loader. Normally a 1" cultivation depth is considered ideal for a surface finish. Make adjustments to the working depth if too many rocks or excessive debris pass under the roller by changing the C-spacers on the gauge wheel spindles. Increase working depth by moving the spacers from below the support arms to above the support arms. Decrease working depth by moving the spacers from above the gauge wheel support arms to below the support arms.

The Powered Rake should also be set to operate level. It has a tendency to go in deeper on the driveline side (left side) because that is the heavy side of the rake. Compensate for this by changing the C-spacers on the right gauge wheel so that it is set approximately 1" deeper than the left gauge wheel.

After you have traveled 50 feet, properly shut down the skid loader and Powered Rake to inspect the finish and determine what, if any, additional adjustments need to be made. Check for any foreign objects that may be wrapped around the roller or lodged between the studs.

Remember that the right finish is achieved through a combination of proper soil moisture conditions, operating depth, ground speed, material control deflector opening and roller angle. Your Powered Raking capabilities will improve rapidly with experience.

## Powered Rake Roller

The roller is powered by a roller chain attached to a sprocket mounted on the hydraulic motor that runs off the auxiliary circuit of the skid steer loader.

A hydraulic directional valve is utilized to power a hydraulic cylinder that angles the roller frame 20 degrees in either direction for windrowing material to the side. This valve allows 3 gpm of oil to be routed from the auxiliary circuit of the skid steer loader and is actuated by a solenoid valve connected to a toggle switch in the cab.

## Gauge Wheels

***Refer to Figure 3-1:***

Caster type gauge wheels control roller height during field operation. Moving gauge wheels up or down to set working depth. Do not use skid steer to control roller height.

**NOTE:** The gauge wheel on the chain case side should be down approximately 1 inch more than the non-drive side to compensate for extra weight.

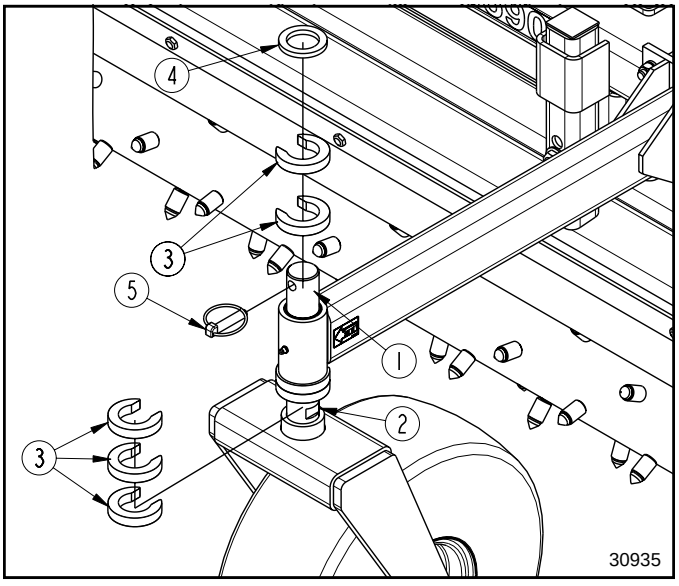
1. Remove linchpin (#5) and washer (#4).
2. Rotate open end of lower spacers (#3) to align with notch (#2).

   **To Increase Working Depth**

   Pull desired number of lower spacers (#3) from below the support arm and add to gauge wheel spindle (#1) above support arm.

   **To Decrease Working Depth**

   Pull desired number of upper spacers (#3) from above support arm and add to notch (#2) below support arm.
3. Replace washer (#4) and linchpins (#5).
4. Repeat above steps 1 thru 3 for the other side.

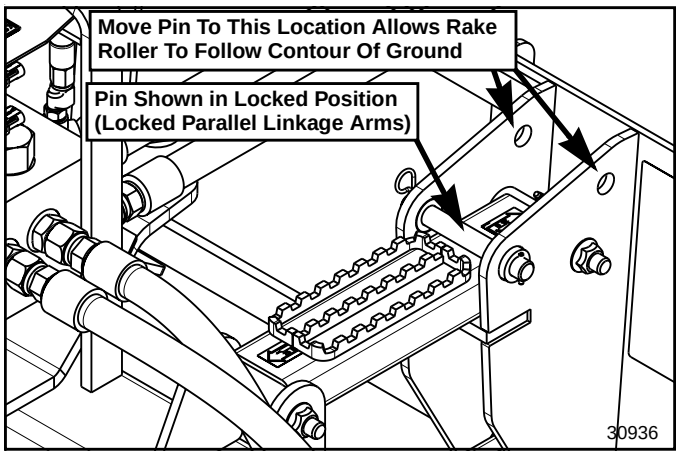



**Depth Adjustment**
**Figure 3-1**

## Parallel Linkage Mounting

***Refer to Figure 3-2:***

The skid steer loader parallel linkage mounting plates allows the operator to lock the parallel linkage arms in order to apply down pressure to the rake roller. The pin can be placed in the back hole to permit parallel linkage to move in float position. This allows the rake roller with the aid of the caster gauge wheels to follow the contour of the ground.



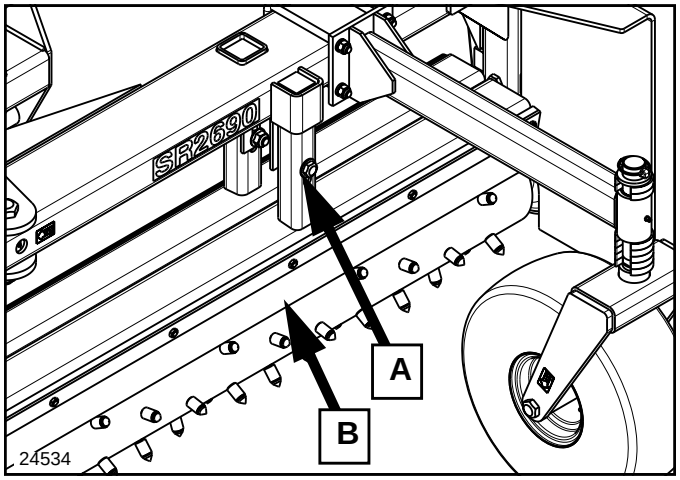

**Parallel Linkage**
**Figure 3-2**

## Material Control Blade Adjustment

***Refer to Figure 3-3:***

Material control blades are mounted above the roller so control can be established over both the size and shape of materials being cleaned or raked. The gap between the front material control blade and the rake roller can be adjusted to widen or narrow the opening. A wider opening will allow more dirt and rock to pass through. A narrow opening will allow for finer raking.

The height of the front material control blade can be adjusted by loosening bolt (A) and sliding material control blade (B) up or down to desired height.




**Front Material Control Blade Adjustment**
**Figure 3-3**

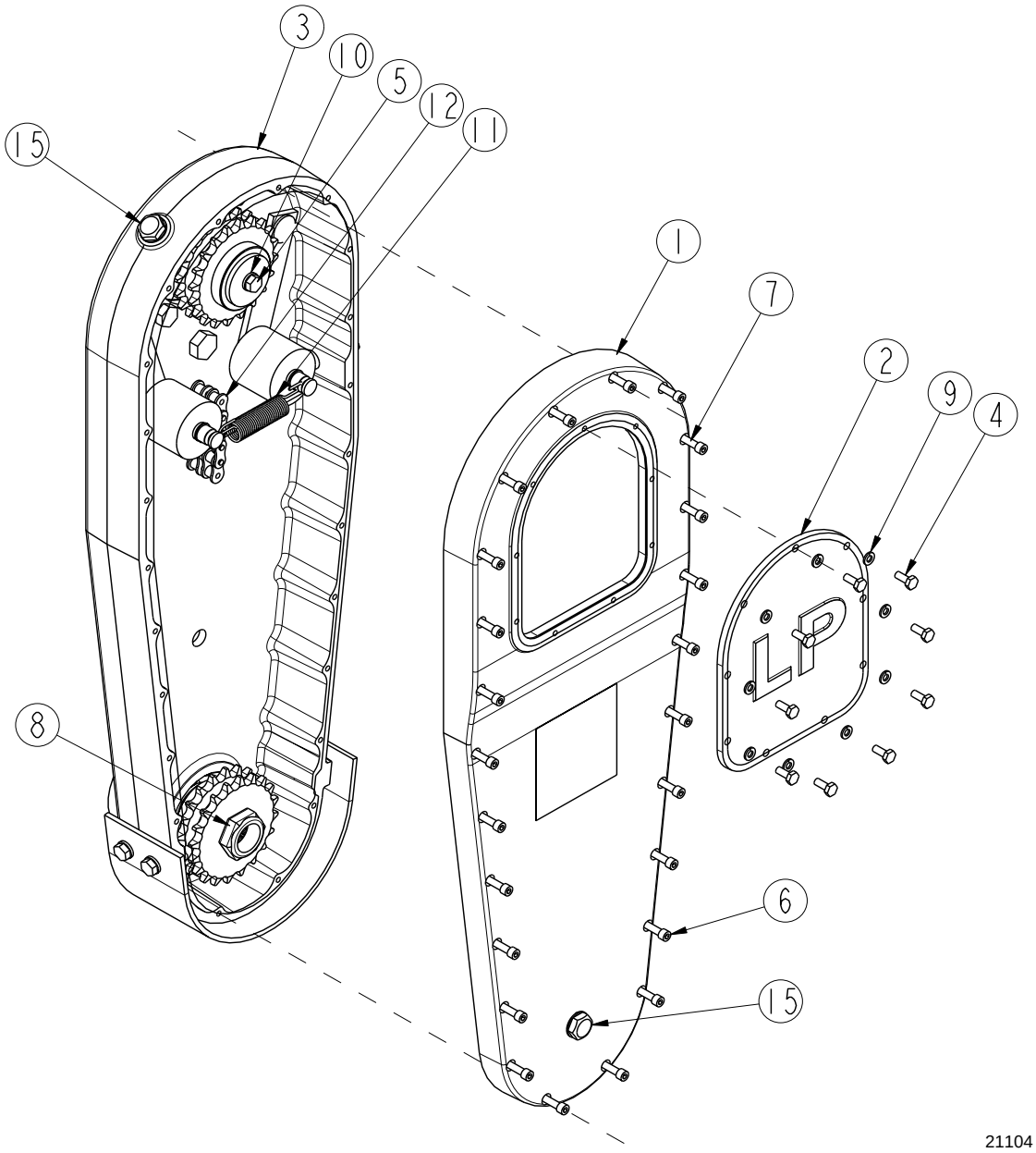
## Drive Chain Adjustment

***Refer to Figure 3-4:***

**CAUTION**

*BEFORE any maintenance is performed, lower the Powered Rake to the ground, stop skid steer loader engine and remove the key. DO NOT attempt to make maintenance adjustments while skid steer is running.*

1. Check chain tension by removing 1/4" x 5/8" hex bolts (#4), lock washers (#9), and access cover (#2) from the chain case.
2. Inspect chain for tightness and excess wear. Replace worn out chains. See **"Sprocket and Drive Chain Replacement"** page 19.
3. If the chain should become loose, either the spring (#11) on the idler arms or the chain (#12) needs to be replaced. See **"Drive Sprocket and Drive Chain Replacement"** page 19.
4. Apply 1/8" bead of Land Pride No. 821-049C sealant to the surface of the main cover (#1) where access cover (#2) contacts main cover (#1). Reinstall access cover (#2) and secure with lock washers (#9) and 1/4"-20 x 5/8" GR5 hex bolts (#4). Torque hex bolts to the correct torque.




**Drive Chain Adjustment**
**Figure 3-4**

## Side Plate Positioning

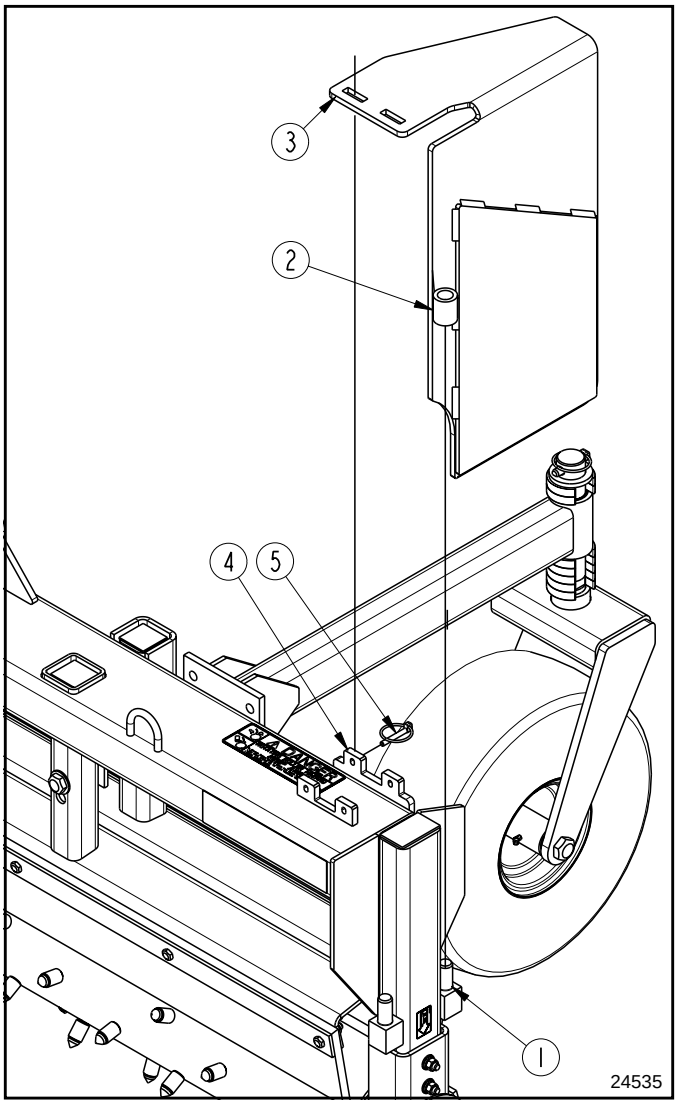
Side plates are utilized to gather and keep rocks and debris in front of the roller for the purpose of distributing material over low areas.

### Working Position

***Refer to Figure 3-5:***

The side plates are attached on the front side to mounting tabs and pins for gathering and distributing material while traveling forward.

1. Remove linchpin (#5) and install right-hand side plate (#3) over front mounting tabs (#4) and side plate guide (#2) over front mounting pin (#1).
2. Secure side plate (#3) with linchpin (#5).
3. Repeat steps 1 thru 2 for left-hand side plate.




**Working Position of Side Plates (Right-Hand Side Shown)**
**Figure 3-5**

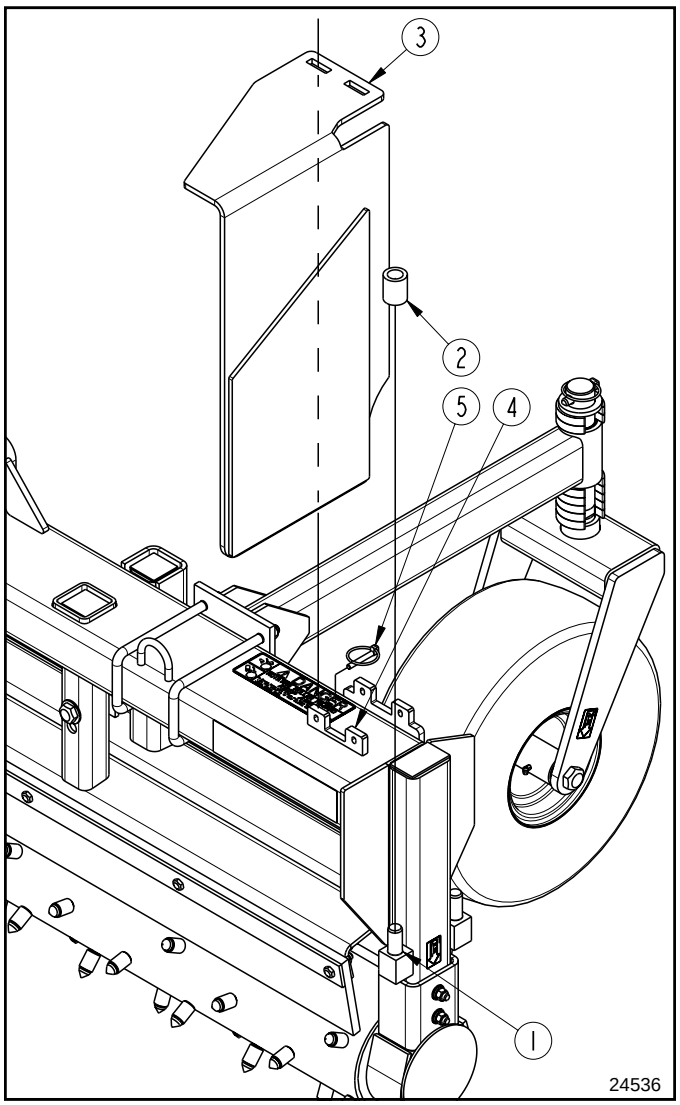
### Storage Position

The side plates can be removed and mounted on the back side at opposite ends for storage. This is often done to complete final grading.

***Refer to Figure 3-6:***

Store left-hand side plate on the right-hand side of the rake as follows:

1. Remove linchpin (#5) and install left-hand side plate (#3) over rear mounting tabs (#4) and side plate guide (#2) over rear mounting pin (#1).
2. Secure side plate (#3) with linchpin (#5).
3. Repeat steps 1 thru 2 to store right-hand side plate on the left-hand side.




**Storage Position of Side Plates (Right-Hand Side Shown)**
**Figure 3-6**

## 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 Powered Rake 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.

## ⚠ CAUTION

***BEFORE** any maintenance is performed, lower the Powered Rake to the ground, stop skid steer engine, and remove key. **DO NOT** attempt to make maintenance adjustments while skid steer is running.*

**IMPORTANT:** If chaincase and/or sprocket shafts are disassembled, it may be necessary to shim between the chaincase and frame tube during reassembly to properly realign the sprocket shafts. Shim Pack **314-254A** may be purchased from your nearest Land pride dealer for this purpose.

## Drive Chain Maintenance

The operator should check chain tightness after initial run in and periodically thereafter to make sure that the drive chain is tensioned correctly. If adjustment is needed refer to **"Drive Chain Adjustment"** on page 17.

## Sprocket and Chain Replacement

***Refer to Figure 4-1:***

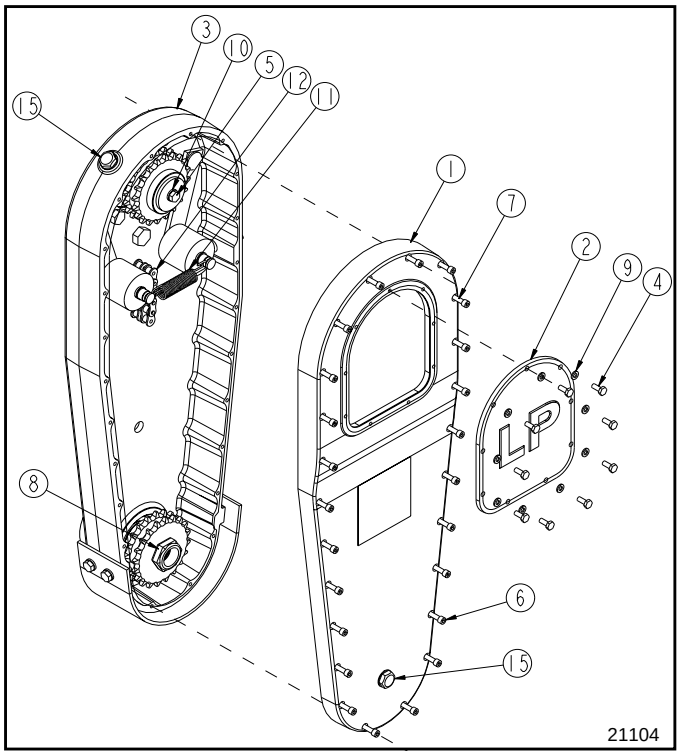
1. Remove 1/4" x 1 1/4" and 1/4" x 1 1/2" hex socket cap screws (#6 & #7).
2. Remove main cover plate (#1).

**NOTE:** Oil in chain case! Be prepared to capture oil when taking off bottom cover.

3. Loosen chain tension by removing spring (#11) from idler arms.
4. Remove bolt (#5) and lock washer (#10).
5. Remove top sprocket and chain.

**NOTE:** If bottom sprocket needs to be replaced, remove nut (#8) and bottom sprocket.

6. Install new chain and sprockets.
7. Reinstall bolt (#5), lock washer (#10), and nut (#8).
8. Reinstall spring (#11).
9. Turn the roller several turns and observe chain to make sure everything is working properly.
10. Apply 1/8" bead of Land Pride No. 821-049C sealant on the chain case edge where cover plate (#1) contacts the chain case. Reinstall cover plate with 1/4" -20 x 1 1/4" GR2 and 1/4" -20 x 1 1/2" GR2 hex socket cap screws (#6 & #7). Tighten cap screws to the correct torque.
11. Remove top and bottom plugs (#15). Fill chain case with 80-90 weight gear lube through top plug hole until oil escapes out bottom plug hole. (Equivalent to 2 1/2 pints.)
12. Reinstall and tighten top and bottom plugs (#15).

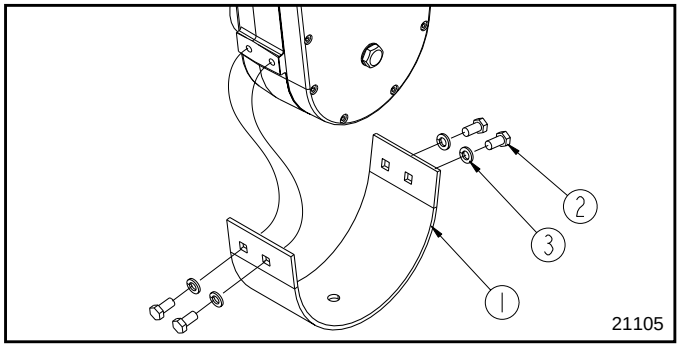



**Drive Sprocket and Drive Chain Replacement**
**Figure 4-1**

## Chain Case Skid Shoe Replacement

***Refer to Figure 4-2:***

1. Replace chain case skid shoe (#1) by removing four 3/8" x 3/4" hex head bolts (#2) and lock washers (#3).
2. Replace worn skid shoe with new shoe.
3. Secure skid shoe (#1) with 3/8" lock washers (#3) and 3/8" x 3/4" hex head bolts (#2).
4. Torque hex bolts to correct torque.

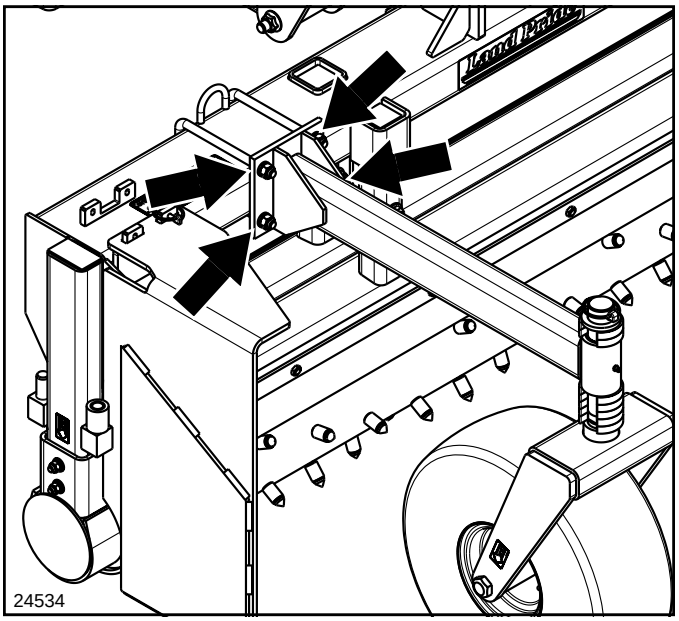



**Chain Case Skid Shoe Replacement**
**Figure 4-2**

## Gauge Wheel U-Bolts

***Refer to Figure 4-3:***

Torque gauge wheel u-bolts to 49 ft-lbs after first day of use and every 100 hours thereafter.




**Gauge Wheel U-Bolts**
**Figure 4-3**

## Storage

Clean, inspect, service, and make necessary repairs to the Powered Rake when parking it for long periods and when parking it at the end of a working season. This will help ensure that the rake is ready for field use the next time you hook-up to it.

### DANGER

*Always disconnect hydraulic lines from skid steer and secure rake in the up position with solid supports before servicing underside of the rake.*

1. Clean off any dirt and grease that may have accumulated on the rake and moving parts. Scrape off compacted dirt from the roller and then wash surface thoroughly with a garden hose.
2. Check the roller spikes for wear and replace the roller and/or spikes if necessary.
3. Inspect the Powered Rake for parts out of adjustment, loose, and damaged or worn.
   - Make required adjustments.
   - Tighten all loose hardware.
   - Replace damaged and worn parts as needed.
4. Repaint parts where paint is worn or scratched to prevent rust. Ask your Land Pride dealer for aerosol touch-up paint. Paint is also available in touch-up bottles with brush, quarts, and gallon sizes by adding TU, QT, or GL to the end of the aerosol part number.

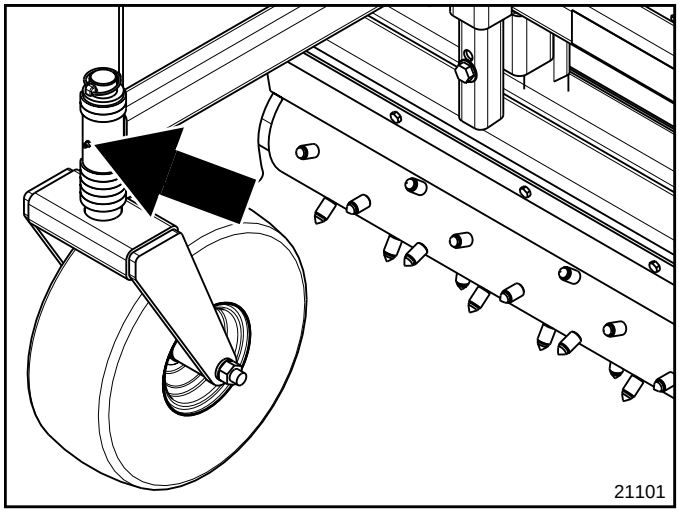
**Land Pride Aerosol Touch-up Paint**

| Part No. | Part Description |
|---|---|
| 821-011C | PAINT LP BEIGE AEROSOL SPRAY CAN |
| 821-002C | PAINT LP BLACK AEROSOL SPRAY CAN |
| 821-066C | PAINT ORANGE AEROSOL SPRAY CAN |

5. Replace all damaged or missing decals.
6. Lubricate as noted in “**Lubrication**” on page 21.
7. A light coat of oil or grease may be applied to the roller and to any exposed hydraulic cylinder rods to minimize oxidation.
8. Drain chain case oil by removing large cover (#1) Figure 4-1. Be sure to refill chain case with chain case oil. See **“Drive Chain”** on page 22 for detailed instructions
9. Store Powered Rake on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer rake life.

## Lubrication

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



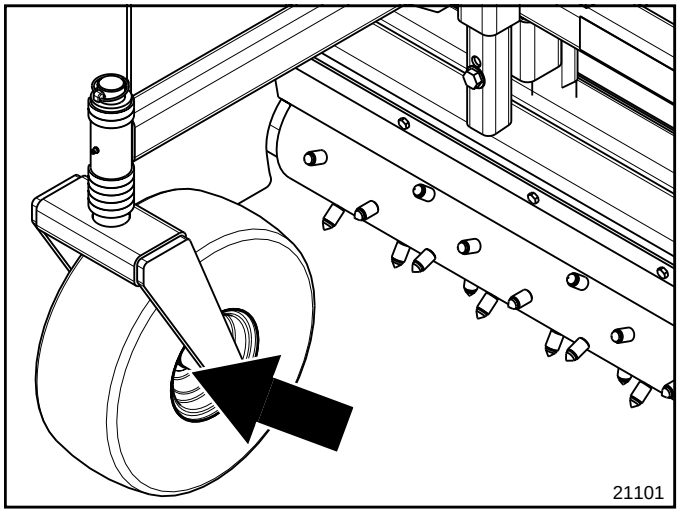

25 Hours

### Gauge Wheel Spindle

Grease gauge wheel spindle every 25 hours
One grease zerk for each gauge wheel

Type of Lubrication: Multi-Purpose Grease

Quantity: Add grease until grease begin to emerge from either top or bottom bushings.



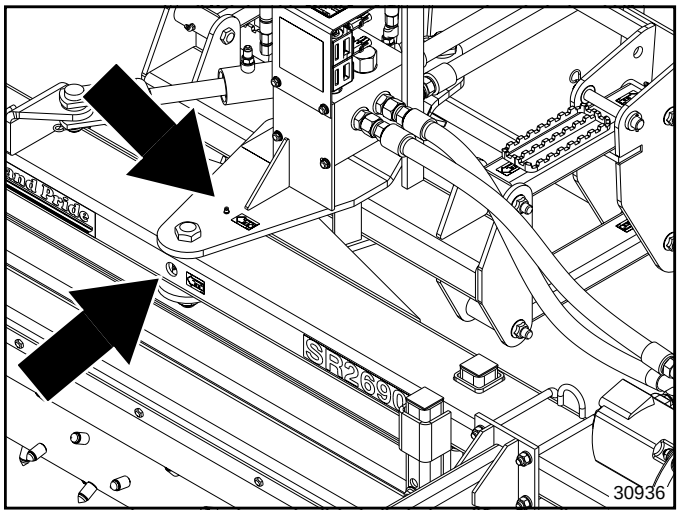

25 Hours

### Gauge Wheel

Grease gauge wheel axle every 25 hours
One grease zerk for each gauge wheel

Type of Lubrication: Multi-Purpose Grease

Quantity: Add grease until grease begin to emerge from either side of the axle hub.



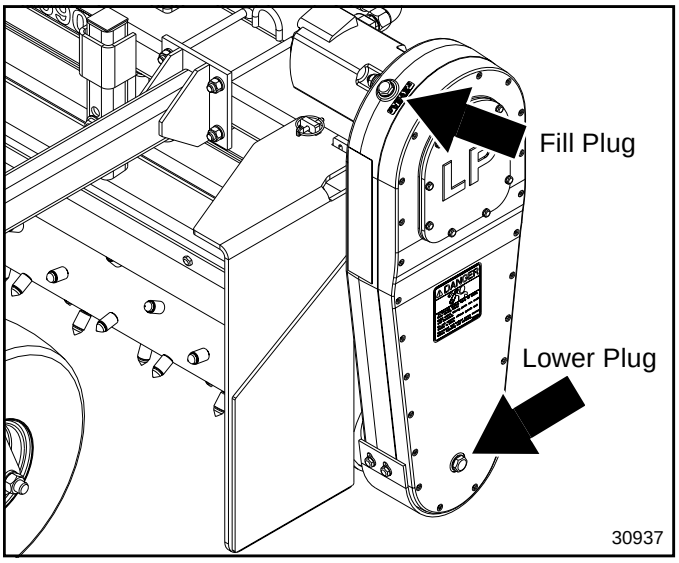

25 Hours

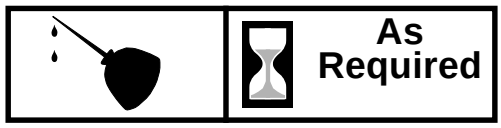
### Pivot

Grease pivot point every 25 hours
Two grease zerks

Type of Lubrication: Multi-Purpose Grease

Quantity: Add grease until grease begin to emerge from either top or bottom bushings.



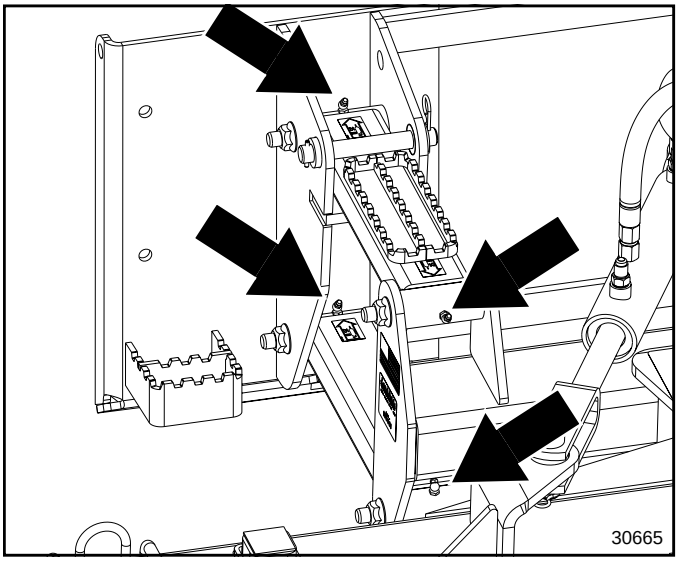



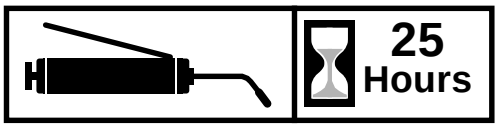

## Chaincase

IMPORTANT: Check oil level after the machine has been operating long enough to cause oil to become hot and fluid. Level machine and remove lower level plug. Oil should reach bottom of level plug hole. If needed, add recommended lubricant through the level hole or fill hole. Tighten all removed plugs.

Type of Lubrication:
Shell Gadus S2 V220 00 flowable grease or equivalent Land Pride #821-086C (14 oz [0.41 L] cartridge)

Quantity when empty: 22 oz (0,65 L)
Quantity when low: Oil should reach bottom of level plug hole when in the liquid state.



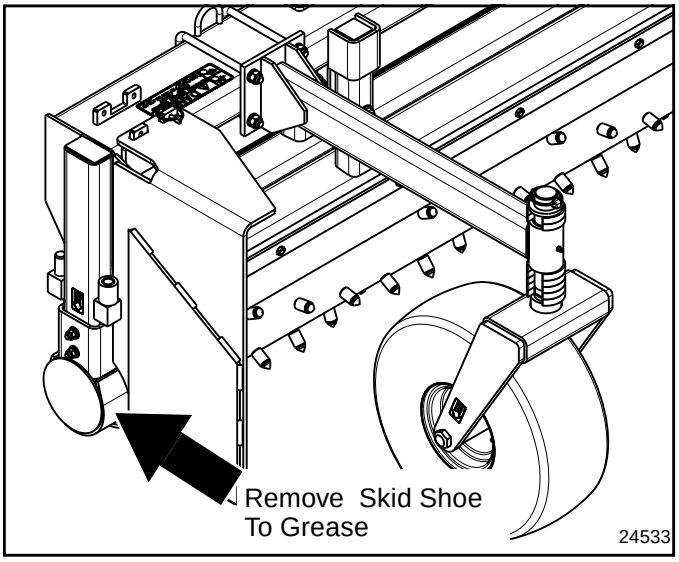



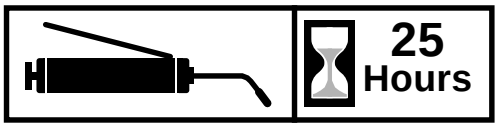

## Pivot Arm Bushings (8 Places)

Grease pivot arm bushings every 25 hours
Two grease zerks for each pivot arm

Type of Lubrication: Multi-Purpose Grease

Quantity: Add grease until grease begin to emerge from either side of the bushings.




## Non-Drive Bearing

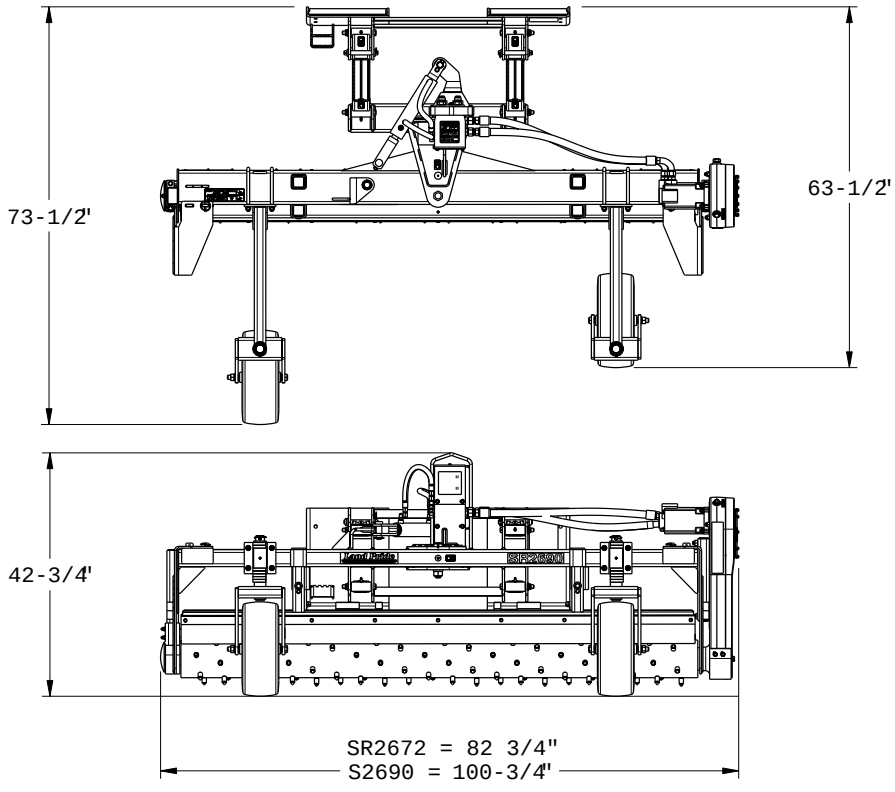
Grease gauge non-drive bearing every 10 hours
One grease zerk inside skid shoe

Type of Lubrication: Multi-Purpose Grease
(Remove Skid Shoe to grease)

Quantity: Add grease until grease begin to emerge from either side of the axle.

## Skid Steer Powered Rakes

| List | Specifications & Capacities | |
|---|---|---|
| **Model Numbers** | **SR2672** | **SR2690** |
| **Hydraulic Requirements** | 12 - 19 GPM | 15 - 23 GPM |
| **Hydraulic Pressure Range** | 2250 - 3500 psi | 2250 - 3500 psi |
| **Non-Angled Working Width** | 82 1/2" | 100" |
| **Angled Working Width** | 72 1/2" | 90" |
| **Non-Angled Length** | 73 1/2" | |
| **Overall Height** | 42 3/4" | 42 3/4" |
| **Machine Weight** | 930 lbs. | 1200 lbs. |
| **Direction of Travel** | Bi-directional | |
| **Material Control Blade** | 2 each - 1/2" x 5" Urethane | |
| **Spike Roller** | 9 3/8" Dia. with 3/4" x 1 1/2" Carbide Tipped Studs | |
| **Roller Speed** | Variable from 170 - 270 RPM | |
| **Roller Side Bearings** | Roller Bearings | |
| **Drive Chain** | #50 Double Continuous Roller Chain, High Tensile, Enclosed in oil bath | |
| **Angle Adjustment** | Hydraulically controlled 18 degrees right and 22 degrees left | |
| **Angle Cylinder** | 2" X 8" | |
| **Side Plates** | Standard, Removable with Storage Rack | |
| **Gauge Wheels / Depth Control** | 2 Each 16.5" x 6.5" Air Tires W/ sealant and 3/4" Roller bearings and Spacer height adjustment | |
| **Skid Shoes** | Replaceable | |
| **Chaincase Lubrication** | Shell Gadus S2 V2200 00 flowable grease or equivalent Capacity = 22 oz (0.65 L) | |

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## SR26 Series (Skid Steer)

| Features | Benefits |
|---|---|
| **Working width** | 72" & 90" |
| **Hydraulics** | 72": 11 GPM at 2200 psi<br>90": 15 GPM at 2500 psi |
| **15 cu. in. Displacement motor** | Able to handle high torque loads in heavy conditions. |
| **72" = 3" x 3" x 1/4" Tube Frame**<br>**90" = 6" x 3" x 1/4" Tube Frame** | Superior in strength. |
| **Angling adjustment:**<br>**22 degrees left & 18 degrees right** | Angling allows proper flow of material wanting to be windrowed to allow for easy collection of large rocks and debris. |
| **3/4" x 1 1/2"**<br>**Carbide tipped stud roller** | Carbide tipped studs are very tough, used in the mining industry, this offers a long life to the studs. Studs can be replaced one at a time. |
| **16.5" x 6.5" Gauge wheels with sealant** | Easy to adjust vertically to set working depth. Has tall and wide tires that keep turning in fluffy soil. Sealant helps seal against punctures. |
| **Side plates with storage** | Side plates can be used to hold dirt to aid in filling low spots. Easily store the side plates on the Powered Rake so that they are always with the Rake when needed. |
| **Two material control deflectors** | Material control deflectors determine what size of material to let pass through the roller and what size to move out. Two deflectors allow for forward and reverse rotation of the roller. |
| **Bi-directional roller** | Enables more complete finish and control |
| **Variable roller speed** | 180 to 260 RPM variable roller speed is controlled by the skid steer hydraulics and can be used in tight areas to lessen the possibility of flying debris. |
| **#50 Double continuous roller chain** | Double chain can take the fluctuation loads from the roller due to varying ground conditions. |
| **Cast Iron chain guard housing** | Strong enough to protect chain in harsh conditions. |
| **Drive chain enclosed in oil bath** | A small amount of oil keeps the chain and sprockets lubricated to keep abrasion to a minimum. |
| **Replaceable skid shoes** | Skid shoes protect larger and vital parts of the unit. As they wear due to soil contact, they can easily be replaced. |
| **Hydraulic Motor Warranty** | 2 Years parts and labor. Shows our confidence in the gearbox integrity. |
| **Universal fit** | Universal fit with new and late model skid steer units. |

## Troubleshooting Chart

| Problem | Cause |
|---|---|
| **Machine makes intermittent clicking noise** | Check for damaged gear and replace if necessary. |
| | Check for worn drive chain and replace if necessary. |
| **Rake angles wrong direction when pushing control box buttons** | Refer to Figure 1-6 on page 11:<br>Switch plugs (#1 & #3) with solenoid wires (#2 & #3). |
| **Roller will not turn** | Hydraulic valve on skid steer loader not engaged. |
| | Relief valve setting on skid steer loader not properly adjusted. See skid steer loader manual. |
| | Worn, damaged, insufficient, or inadequate hydraulic pump. |
| | Insufficient oil in system. |
| | Worn or damaged housing. |
| | Air in hydraulic hoses. |
| | Broken hose. |
| | Loose or damaged hoses. |
| | Obstruction between roller and material control blade. |
| | Drive Chain is off. |
| | Loose or damaged connections. |
| | Oil leaks. Worn or damaged seal. |
| **Operating depth insufficient** | Raise gauge wheels. |
| | Increase skid steer RPM. |
| | Clean roller. |
| **Roller gouging on the end** | The gauge wheel on chaincase side should be approximately 1" lower than the non-drive side gauge wheel for consistent leveling. |
| | Set gauge wheel depth. |
| | Correct air pressure in gauge wheels. |
| **Too much dirt going into the windrow or dirt going over the top of the material control blade** | Reduce ground speed. |
| | Raise material control blade. |
| | Lower gauge wheels. |
| **Too many rocks passing between material control blade and the roller** | Lower material control blade. |
| **Roller balling up with soil** | Wait until soil dries. |
| **Powered Rake bumping on ground** | Clean roller. |
| | Increase roller speed if roller is turning slow.<br>Decrease roller speed if roller is turning fast. |
| **Roller angling opposite of switch** | Move wire on top solenoid to bottom solenoid and wire on bottom solenoid to top solenoid. |

## 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

| Tire Size | PSI |
|---|---|
| 16.5 x 6.5 2- Ply | 45 |

## 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

**Hydraulic Motor:** Two years Parts and Labor

**Roller**: Considered a wear item

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 such as blades, belts, tines, etc. 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 must be made to the dealer which originally sold the product and all warranty adjustments must be made through such 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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