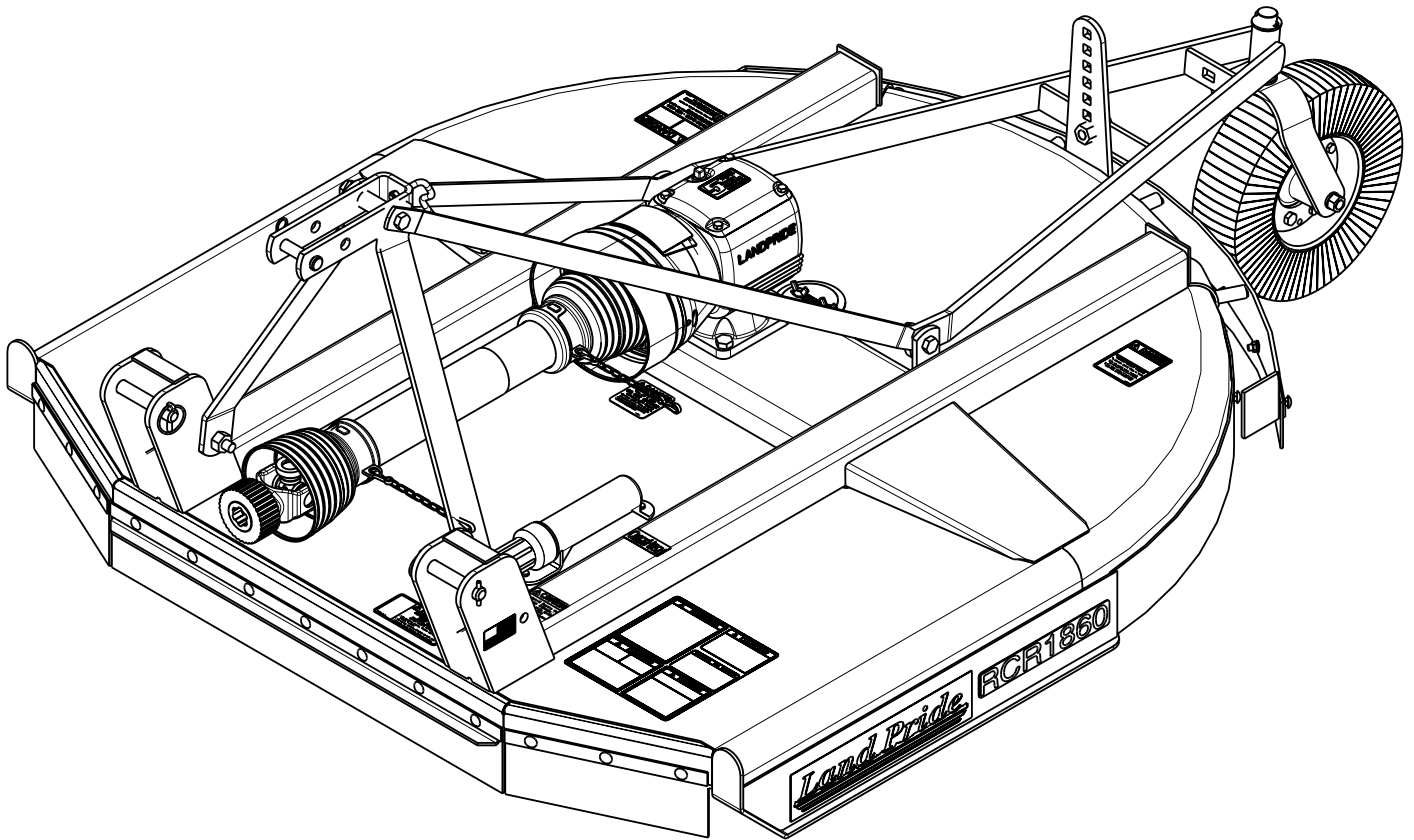


# Rotary Cutters

RCR1860 and RCR1872 Series



21416

## 312-849M 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!

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



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## Important Safety Information

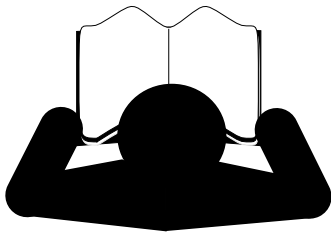
**These are common practices that may or may not be applicable to the products described in this manual.**

### 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 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 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.
- ▲ Watch out for wires, trees, etc., when raising implement. Make sure all persons are clear of working area.
- ▲ 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

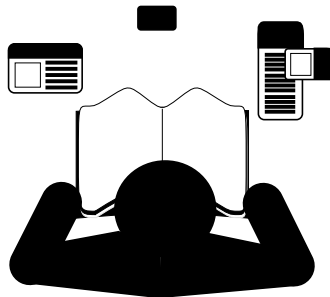
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

#### 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.

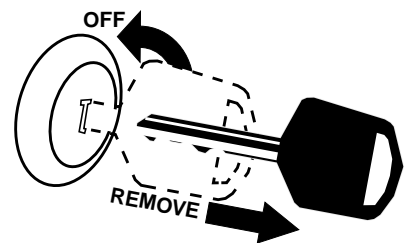
### For Your Protection

- ▲ 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.

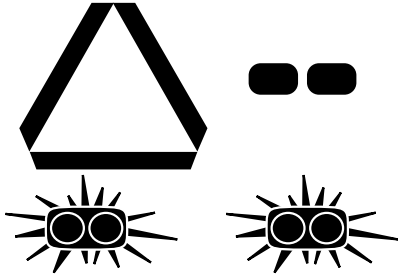


## Important Safety Information

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

### Use Safety Lights and Devices

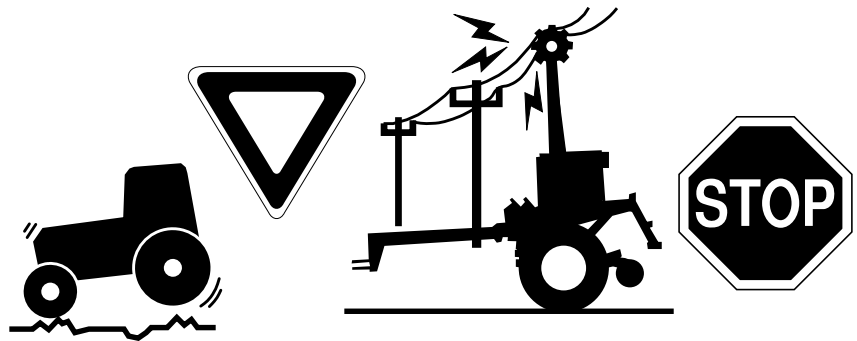
- ▲ Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads. Use lights and devices provided with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

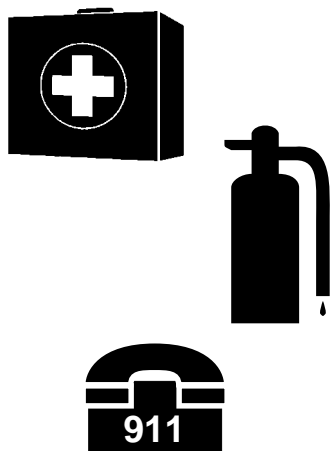


**Important Safety Information**

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

**Prepare for Emergencies**

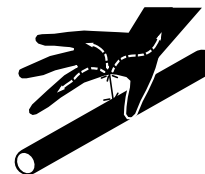
- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.

**Wear Protective Equipment**

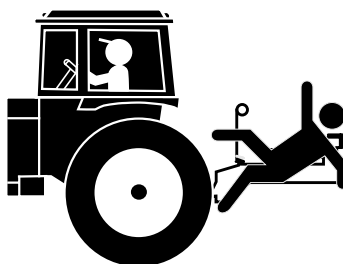
- ▲ Protective clothing and equipment should be worn.
- ▲ Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating 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.
- ▲ 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.



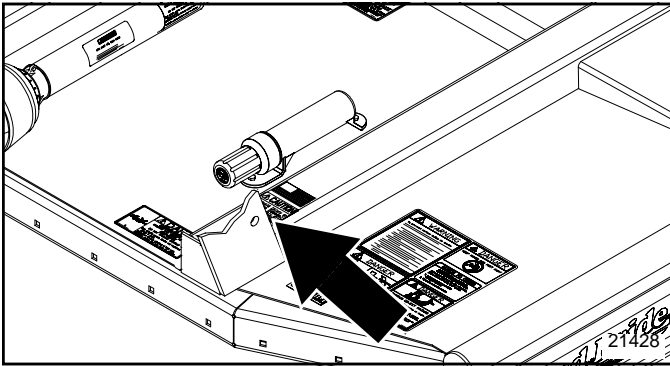
**Important Safety Information**

**Safety Labels**

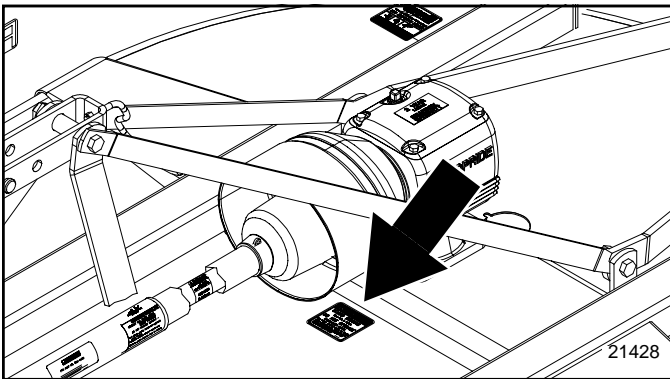
Your Rotary Cutter comes equipped with all safety labels in place. They were designed to help you safely operate your implement.

1. Read and follow label directions.
2. Keep all safety labels clean and legible.
3. Replace all damaged or missing labels.
4. Some new equipment installed during repair require 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. To order new labels go to your Land Pride dealer.

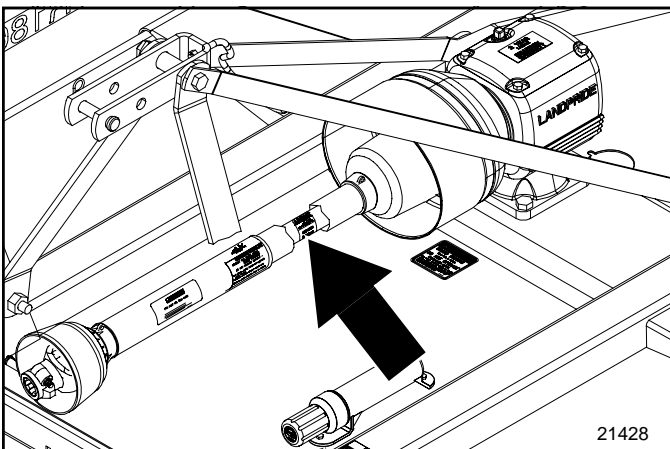
5. Refer to this section for proper label placement.  
To install new labels:
  - a. Clean the area the label is to be placed.
  - b. Spray soapy water on the surface where the label is to be placed.
  - c. Peel backing from label. Press firmly on surface
  - d. Squeeze out air bubbles with the edge of a credit card or with a similar type straight edge.



**818-130C**  
Caution 540 RPM



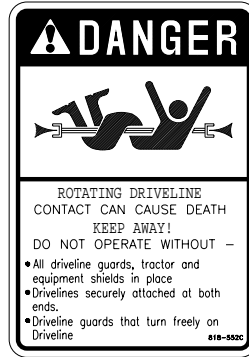
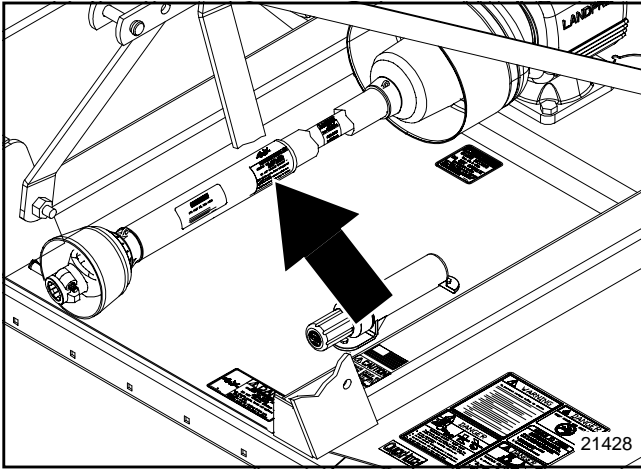
**818-543C**  
Danger PTO



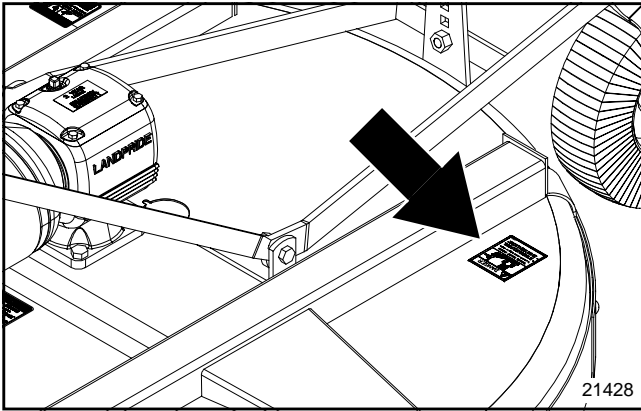
**818-540C**  
Danger Guard Missing



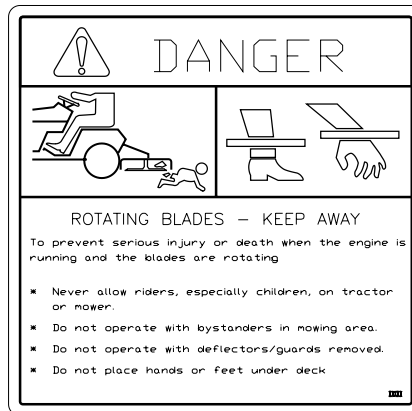
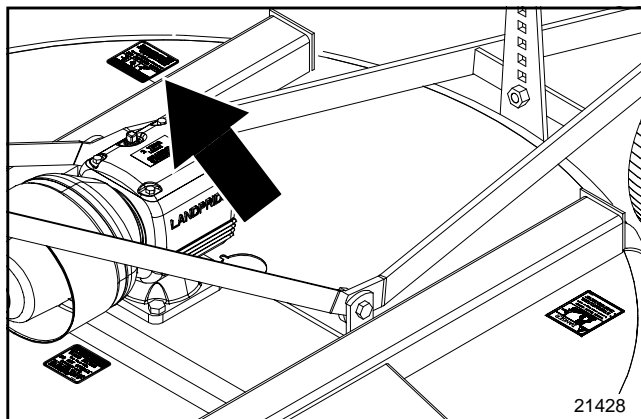
**Important Safety Information**



**818-552C**  
Danger PTO Driveline

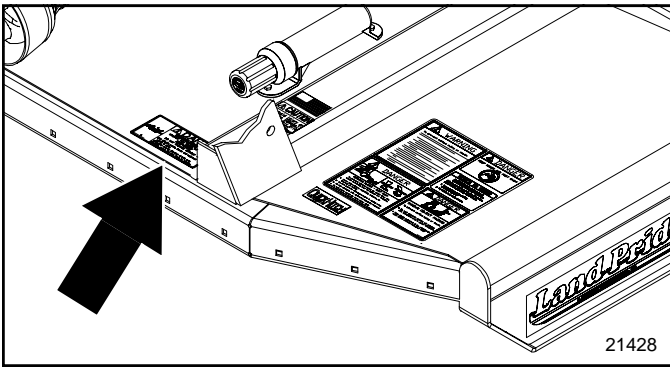


**818-556C**  
Danger Thrown Object

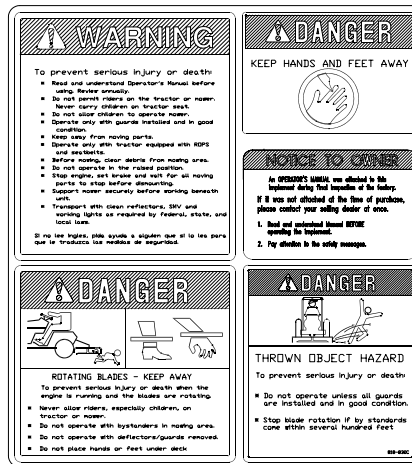
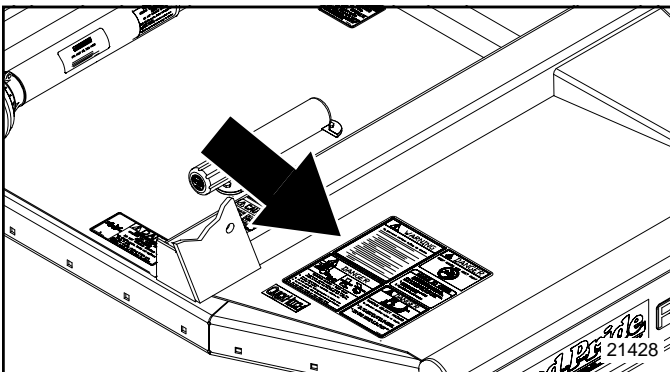


**818-564C**  
Danger Rotating Blades

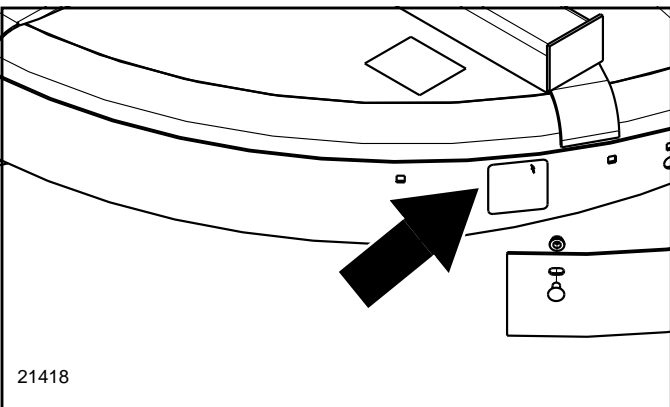
Important Safety Information



**818-142C**  
Danger Driveline



**818-830C**  
Safety Combo



**818-543C**  
Danger Guard Missing



## Introduction

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

This Rotary Cutter 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 Rotary Cutter.

## Application

Land Pride's RCR18 Series Rotary Cutters are built and designed by Land Pride for cutting on gentle slopes or slightly contoured right-of-ways, pastures, around the farm or around town. The cutting widths, 60" for RCR1860 and 72" for RCR1872, are compatible with the more maneuverable 20 to 50 horsepower tractors with 540 rpm PTO speed. The cutters have a category I three-point hitch and are Quick Hitch adaptable. They are offered with a standard ASAE Category 3 driveline with either shear bolt or slip-clutch protection. Also, they are offered with either a laminated or a solid rubber tailwheel.

RCR18 Series Cutters cut through grass, weeds, and light brush up to 1 in. diameter. The RCR 1860 has a cutting height range of 1-1/2" to 13" and the RCR1872 has a cutting height range of 1-1/2" to 11-1/2". Cutting blade tip speed for the RCR1860 is 16,363 fpm and for the RCR1872 is 14,955 fpm. These units come with 10 ga. (.135" thick) x 24" diameter standard-duty stump jumpers and welded on full length skid shoes. A metal band shield is standard equipment for the rear. Optional shields for the front and rear are rubber deflectors and chain guards. See "**Section 7: Features & Benefits**" for additional 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](http://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.

The RCR18 Series Rotary Cutter has been specially designed with genuine Land Pride parts. Contact a Land Pride dealer if any repair parts are required or when in need of customer service. Our Land Pride dealers have trained personnel, repair parts and equipment needed to service the implement.

## 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.

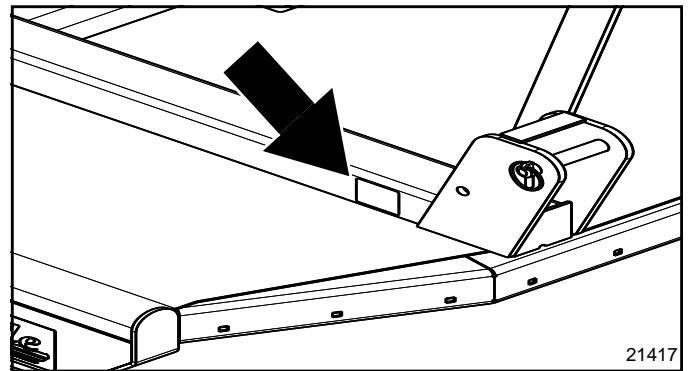


Figure 1

## Further Assistance

Your dealer wants you to be satisfied with your new Rotary Cutter. 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  
[lp servicedept@landpride.com](mailto:lp servicedept@landpride.com)

## Section 1: Assembly and Set-Up

### Tractor Requirements

The RCR18 Series Rotary Cutters are designed for use with tractors that are equipped with a (540 RPM 1 3/8"-6 spline) rear power take-off (PTO).

The tractor must also provide for 3-point hitch attachment Category I. The tractors rated drawbar PTO horsepower on a 3-point should be no less than 20 HP and no more than 50 HP.

**NOTE:** Ballast weights may be required to maintain steering control. Refer to your tractor's operator's manual to determine proper ballast requirements.

### Dealer Assembly

**NOTE:** Do not tighten hardware until assembly is complete. Refer to "Torque Values Chart For Common Bolt Sizes" on page 28.

### RCR1872 Tailwheel A-Frame

Refer to Figure 1-1:

1. The RCR1872 tailwheel A-Frame (#1) is shipped with its short cross brace attached to the adjusting bracket (#2). Remove 5/8" locknut (#3) and 5/8" x 1 1/2" bolt (#4).
2. Remove 5/8" locknuts (#5) and 5/8" x 2" bolts (#6) from tailwheel A-frame.
3. Reinsert 5/8" x 2" bolts (#6) through deck tab, rear brace (#7) and tailwheel A-frame (#1). Secure with 5/8" locknuts (#5). Draw nuts up snug. Do not tighten.
4. Reinsert 5/8" x 1 1/2" bolt (#4) and secure with 5/8" locknut (#3). Do not tighten.

### RCR1860 & RCR1872

Refer to Figure 1-1:

1. Loosen 5/8" locknuts (#5 & #13).
2. Remove 5/8" x 5" bolt (#9) and lay aside pivoting upper hitch (#10) and hitch spacer (#11).
3. Rotate A-frame braces (#12) and rear frame braces (#7) up to align with each other as shown. Rear braces (#7) should be located outside of front A-frame braces (#12).
4. Attach pivoting upper hitch (#10) and spacer (#11) to A-frame braces (#12) with 5/8" x 5" bolt (#9). Secure in place with locknut (#8).
5. Draw lock nuts (#5) up snug. Do not tighten. Tighten all other 5/8" locknuts (#3, #8 & #13) to 170 ft.-lbs.
6. Install machine washer (#15) on pivot shaft of tailwheel (#14).
7. Insert tailwheel pivot shaft (#14) into tailwheel A-frame (#1).
8. Install second machine washer (#15) on pivot shaft of tailwheel and secure with roll pin (#16).
9. Attach driveline hook (#17) to pivoting upper hitch (#10) with 3/8" hex nut (#19). Tighten nut to the correct torque.
10. Attach manual storage tube (#22) to the cutter deck with two 1/4"-20 x GR5 hex head cap screws (#18), 1/4" lock washers (#21) and hex head nuts (#20). Tighten nuts to the correct torque.

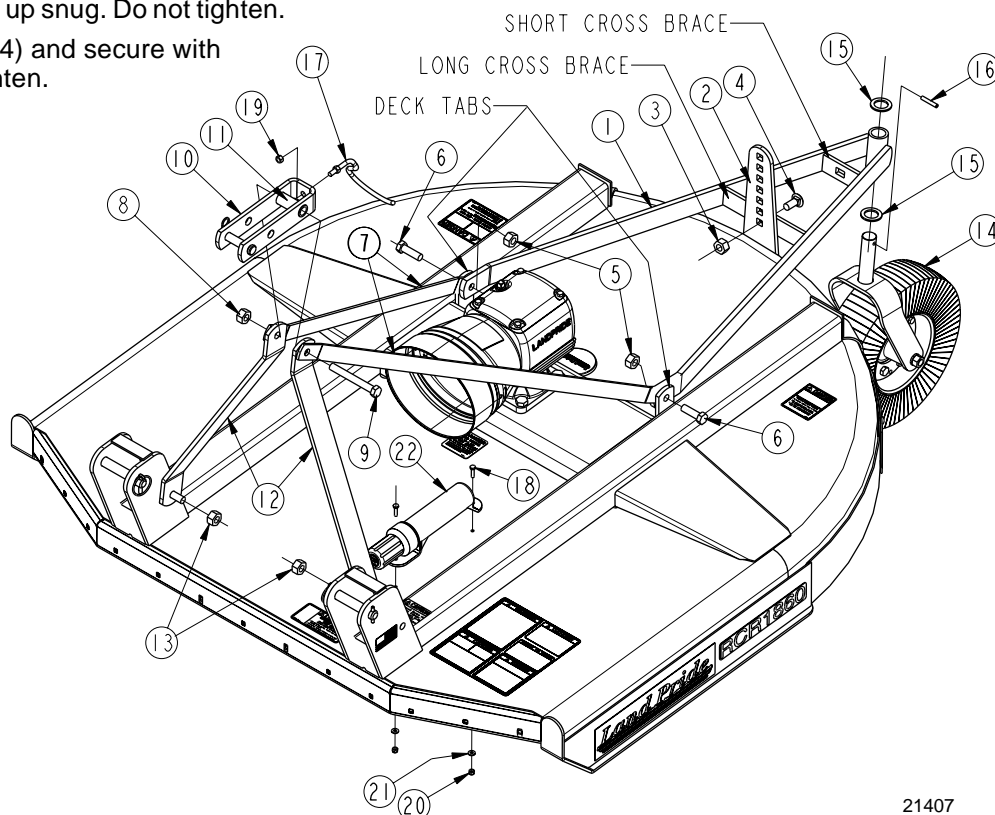


Figure 1-1

21407

## Section 1: Assembly and Set-Up

### Gearbox Vent Plug

Refer to Figure 1-2:

Remove gear box fill plug and replace with combination vent/level plug shipped separate with Operator's Manual.

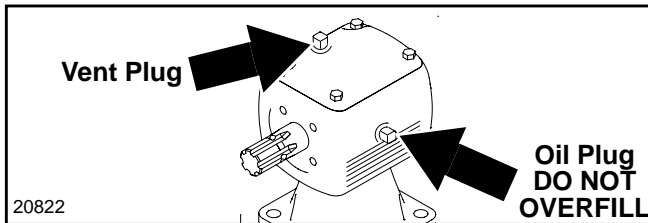


Figure 1-2

### Tractor Hook-Up

Refer to Figure 1-3:

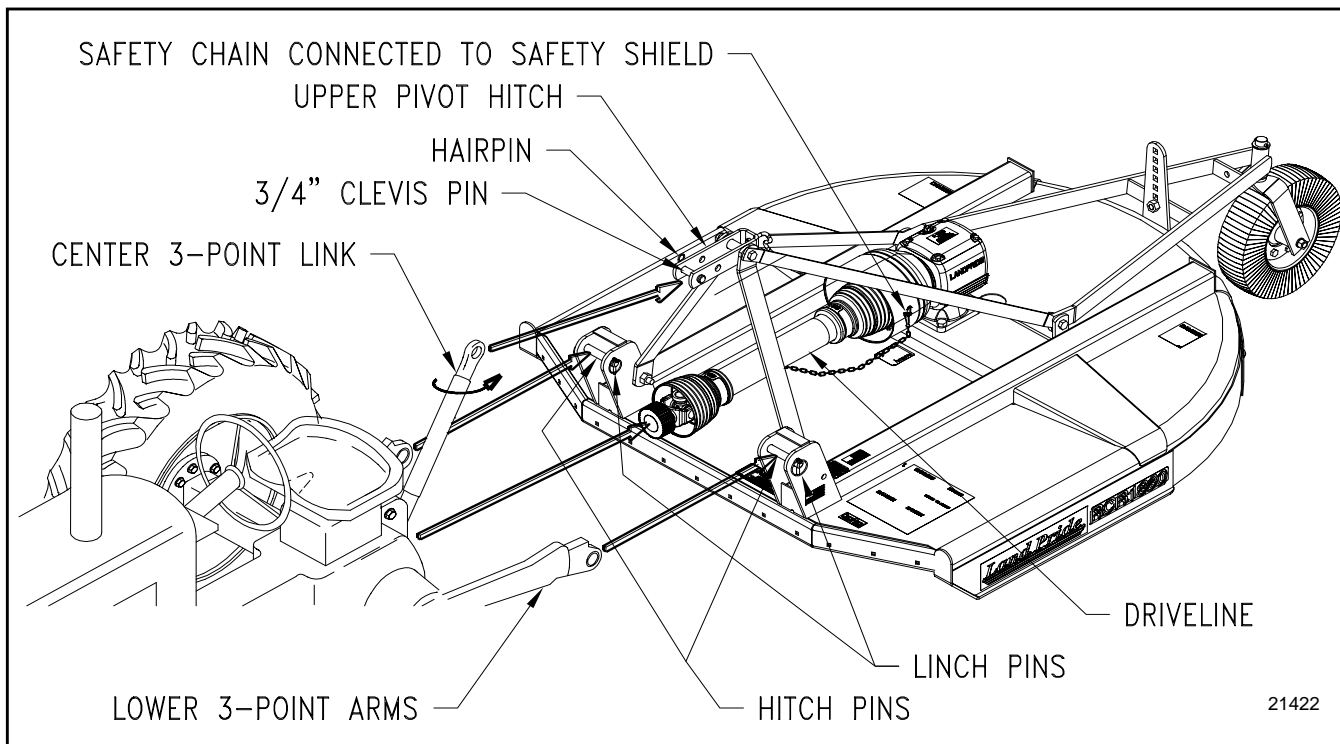


#### DANGER

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

A 3-Point Category I hitch is required. The lower 3-Point arms of the 3-Point hitch must be stabilized to prevent side-to-side movement. Most tractors have sway blocks or adjustable chains for this purpose.

1. Locate cutter on a flat level surface.
2. Slowly back tractor up to the Rotary Cutter while using the tractor's 3-point hydraulic control to align lower 3-point arm holes with clevis lug holes on the cutter.
3. Engage tractor park brake, shut tractor engine off and remove key before dismounting from tractor.
4. With tractor's lower hitch arms aligned and positioned in the clevises, attach lower arms to the clevises with hitch pins and secure with linch pins.
5. Connect top center 3-point link to upper pivot hitch using customer supplied clevis pin and linch pin.
6. Ensure that the lower hitch arms are blocked to prevent excessive side movement.
7. Return to the tractor and slowly raise and lower implement carefully to ensure that the drawbar, tires, and other equipment on the tractor do not contact cutter frame. Move or remove drawbar if it interferes with the cutter.
8. Manually adjust one of the two lower lift arms up or down to level the Rotary Cutter from left to right.
9. Manually adjust the length of the top-link to level the Rotary Cutter from front to rear. Final deck leveling adjustments will be made later.
10. The arm lift rods on your tractor's 3-point hitch should be adjusted to allow for lateral float. Please consult your tractor's manual for adjusting instructions.



Tractor Hook-Up  
Figure 1-3

Section 1: Assembly and Set-Up

**Driveline Installation**

If the Rotary Cutter is to be used on more than one tractor, an additional driveline may be required especially if a quick hitch is used.

**CAUTION**

Do not use a PTO adaptor. A PTO adapter will increase strain on the tractor's PTO shaft resulting in possible damage to the shaft and driveline.

**CAUTION**

Tractor PTO shield and all Rotary Cutter guards must be in place at all times during operation!

**CAUTION**

Always engage parking brake, shut off tractor and remove key before dismounting from tractor.

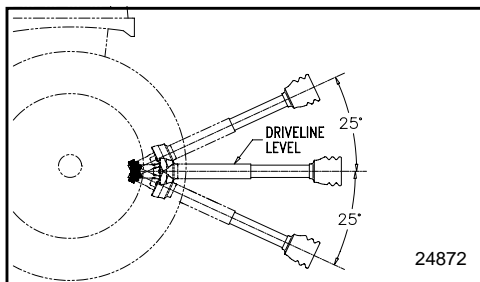
**WARNING**

Damaged drivelines can cause serious injury or death.

**IMPORTANT:** The driveline must be lubricated before putting it into service. Refer to "Lubrication" on page 22.

**IMPORTANT:** Some tractors are equipped with multispeed PTO ranges. Be certain your tractor's PTO is set for 540 rpm.

**IMPORTANT:** Avoid premature driveline breakdown. A driveline that is operating **must not exceed** an angle of 25 degrees up or down while operating the 3-point lift. See Figure 1-4 below.



Maximum PTO Driveline Movement During Operation  
Figure 1-4

**Driveline Minimum Length**

**IMPORTANT:** Always check driveline minimum length during initial setup, when connecting to a different tractor and when alternating between using a quick hitch and a standard 3-point hitch. More than one driveline may be required to fit all applications.

**NOTE:** A driveline that is too long can damage tractor, gearbox and/or driveline. Check driveline with gearbox shaft aligned and level with the tractor's PTO shaft. This arrangement will provide the shortest distance possible between the two shafts.

Refer to Figure 1-6 on page 11:

1. Obtain the shortest distance possible between tractor PTO shaft and gearbox shaft by starting the tractor and slowly engaging 3-point lift to move the lower arms up or down until the gearbox shaft is aligned and level with the tractor's PTO shaft. Securely block cutter deck in this position.
2. Place tractor gear selector in park, shut tractor engine off, set park brake and remove switch key.

Refer to Refer to Figure 1-5:

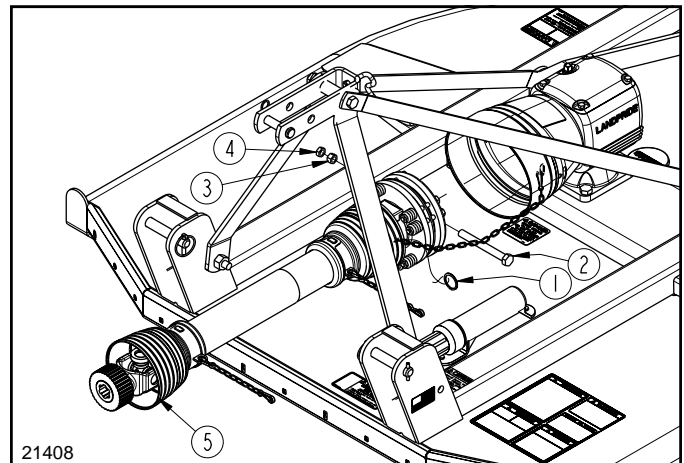
3. Remove snap ring (#1) from the 3rd link pin shipping location. Remove rubber protective sleeve from gearbox input shaft and install driveline as follows:

**SLIP-CLUTCH DRIVELINE:**

- a. Discard snap ring (#1).
- b. Slide slip-clutch driveline (#5) onto the gearbox input shaft.
- c. Align holes in driveline with hole in gearbox shaft and insert 1/2" x 3 1/2" long GR8 bolt (#2). Secure with 1/2" nut (#3) and 1/2" jam nut (#4).
- d. Push and pull driveline to be sure it is securely fastened to the gearbox shaft.

**SHEAR-BOLT DRIVELINE:**

- a. Slide shear-bolt driveline onto gearbox shaft.
- b. Install snap ring (#1) on gearbox shaft groove. The snap ring is added security in the event the shear-bolt should break.
- c. Align holes in driveline with hole in gearbox input shaft and insert 1/2" x 3 1/2" GR2 shearbolt (#2). Secure with 1/2" nut (#3) and 1/2" jam nut (#4).
- d. Push and pull the driveline to be sure it is securely fastened to the gearbox shaft.

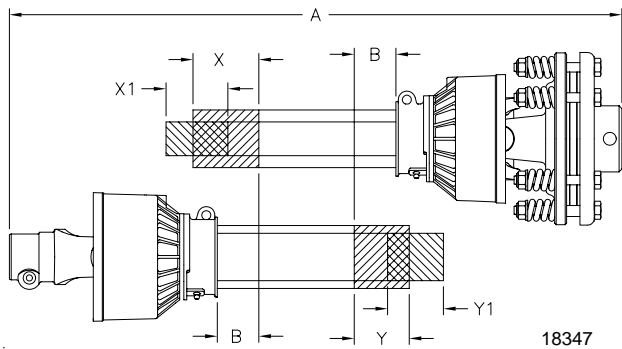


Driveline Installation with Slip-Clutch Driveline Shown  
Figure 1-5



**Section 1: Assembly and Set-Up**

4. Slide outer yoke of driveline over tractor's PTO shaft and secure with locking collar.
5. If driveline fits, skip to "Driveline Maximum Allowable Length". If driveline does not fit, continue with step 6 below.
6. The driveline will require shortening if it is too long to fit between tractor and Rotary Cutter. Shorten driveline as follows:
  - a. Check to make sure cutter and tractor PTO shafts are level with each other and the deck is securely supported at this height with support blocks.
  - b. Pull driveline profiles apart into two sections as shown in Figure 1-6.
  - c. Attach outer driveline universal joint to tractor PTO shaft and inner driveline universal joint to gearbox shaft. Pull on each driveline section to be sure universal joints are secured.
  - d. Hold driveline sections parallel to each other to determine if they are too long. The inner and outer shields on each section should end approximately 1" short of reaching the universal joint shield on the adjacent section (see "B" dimension). If they are too long, measure 1" ("B" dimension) back from the universal joint shield and make a mark at this location on the inner and outer shields.
  - e. Cut off inner shield at mark ("X" dimension). Cut same amount off inner shaft ("X1" dimension). Repeat cut off procedure ("Y" & "Y1" dimensions) to cut outer driveline half.
  - f. Remove all burrs and cuttings.



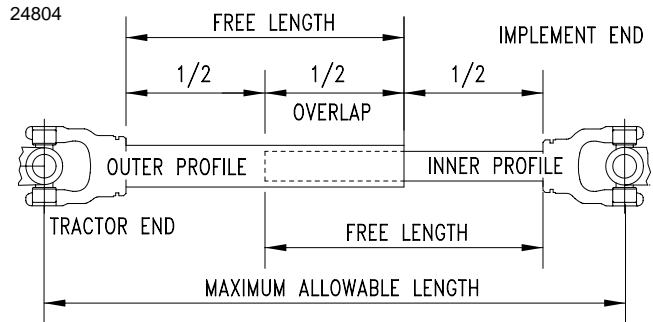
**Driveline Shortening**  
**Figure 1-6**

**Driveline Maximum Allowable Length**

Be sure to check driveline minimum length before checking driveline maximum allowable length.

**Refer to Figure 1-7:**

Driveline maximum allowable length, when fully extended, must have a minimum overlap of profile tubes by not less than 1/2 the free length with both inner and outer profile tubes being of equal length.



Outer Shielding has been removed for clarity.

**Driveline Maximum Length**  
**Figure 1-7**

1. Measure and record driveline free length.
2. With the driveline profiles pulled apart, apply multi-purpose grease to the inside of the outer profile and reassemble the two profiles.
3. Move driveline halves together until profile tubes overlap by 1/2 the free length. Measure and record maximum allowable length shown in Figure 1-7.
4. Attach inner driveline yoke to gearbox shaft and outer driveline yoke to tractor's PTO shaft.
5. The driveline should now be moved back and forth to insure that both ends are secured. Reattach any end that is loose.

**IMPORTANT:** Two small chains are supplied with the driveline. These chains must be attached to outer and inner driveline yoke shields and to the cutter and tractor to keep driveline shields from rotating.

6. Hook a safety chain in the hole on the outer driveline yoke shield and its opposite end to the tractor.
7. Hook the other safety chain in the hole on the inner driveline yoke shield and its opposite end to the cutter.
8. Start tractor and raise Rotary Cutter just enough to remove support blocks from under the cutter deck.
9. Slowly engage tractor's 3-point controls to lower cutter. Check for sufficient drawbar clearance. Move drawbar ahead, aside or remove if required.
10. Raise and lower implement to find the maximum possible extended driveline length. Check to make certain that the driveline has not extended beyond the maximum allowable length recorded in step 3.

## Section 2: Optional Equipment Set-Up

### Front Guards

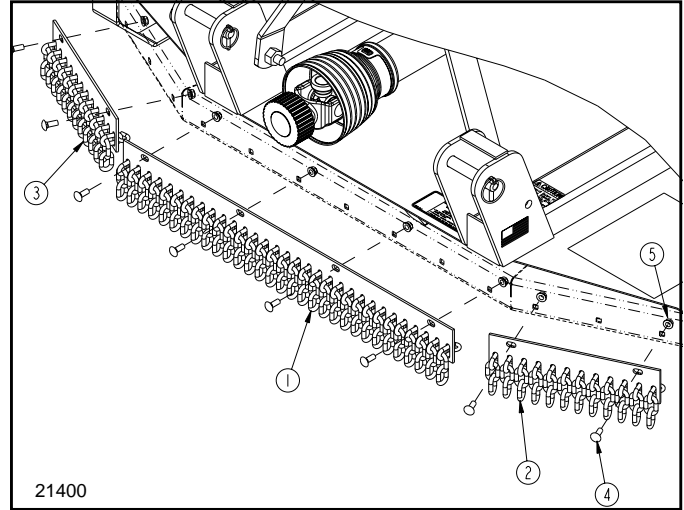
#### DANGER

Rotary Cutters have the ability to discharge objects at high speeds. Use front and rear safety guards when cutting along highways or in an area where people may be present.

### Front Chain Guard Installation

Refer to Figure 2-1:

1. Install chain guards (#1, #2 & #3) as shown in Figure 2-1, with 3/8" x 1" long carriage bolts (#4), and 3/8" flange nuts (#5).
2. Tighten all nuts to 31 ft-lbs as indicated in the "Torque Values Chart For Common Bolt Sizes" on page 28.

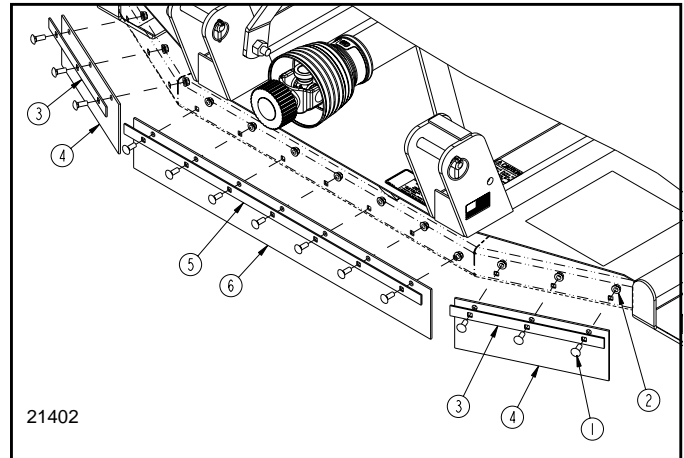


Front Chain Guard  
Figure 2-1

### Front Rubber Guard Installation

Refer to Figure 2-2:

1. Install center rubber guard as shown with 3/8" x 1" long carriage bolts (#1), flat strip (#5), rubber deflector (#6) and 3/8" flange nuts (#2).
2. Install side rubber guards as shown with 3/8" x 1" long carriage bolts (#1), flat strips (#3), rubber deflectors (#4) and 3/8" flange nuts (#2).
3. Tighten all 3/8" flange nuts (#2) to 31 ft-lbs as indicated in the "Torque Values Chart For Common Bolt Sizes" on page 28.



Front Rubber Guard  
Figure 2-2

### Rear Guards

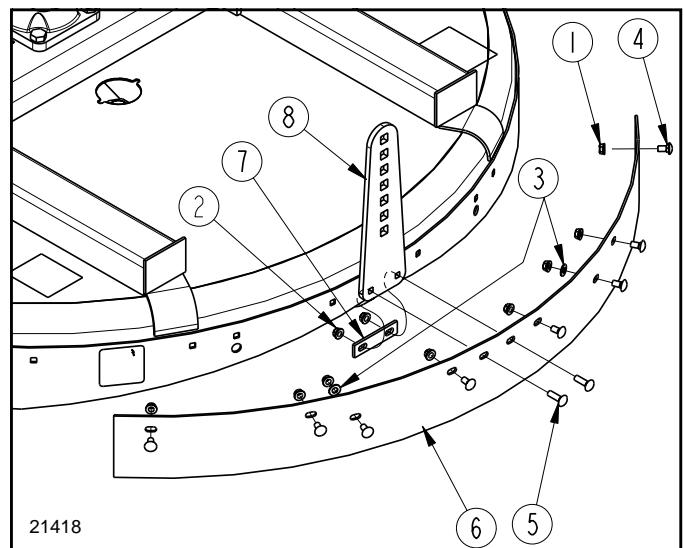
#### Rear Metal Guard Removal

Refer to Figure 2-3:

#### DANGER

Do not operator cutter without a rear guard. Do not remove rear metal guard (#6) unless it is replaced by a Land Pride chain guard or rubber guard. Serious body injury or loss of life can result without a rear guard.

1. To remove rear metal guard, unscrew 3/8" flange nuts (#1 & #2), remove flat washers (#3) and 3/8" carriage bolts (#4 & #5).
2. Remove tailwheel adjusting bracket (#8) and rear metal guard (#6). Reattach (#1, #3 & #4) hardware to the metal guard for safe keeping. Store rear metal guard for future use (i.e. when not using chain guard or rubber guard).
3. Reattach tailwheel adjusting bracket (#8) with 3/8" x 1 1/2" carriage bolt (#5), flat bar (#7) and 3/8" flange nuts (#2).
4. Torque flange nuts (#2) to 31 ft-lbs.



Standard Rear Metal Band  
Figure 2-3

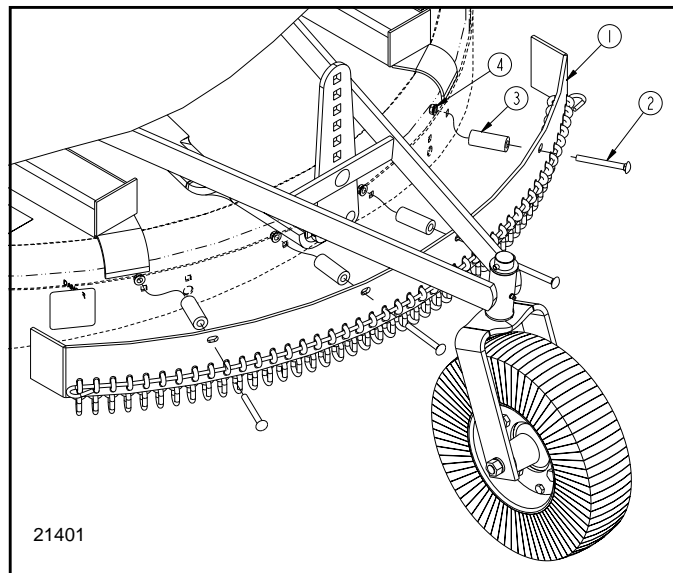


## Section 2: Optional Equipment Set-Up

### Rear Chain Guard Installation

Refer to Figure 2-4:

1. Remove Rear Metal Guard. See "Rear Metal Guard Removal" on page 12.
2. Install rear chain guard (#1) with 3/8" x 3 1/2" long carriage bolts (#2), deflector spacer (#3) and 3/8" flange nuts (#4).
3. Tighten all nuts (#4) to 31 ft-lbs as indicated in the "Torque Values Chart For Common Bolt Sizes" on page 28.

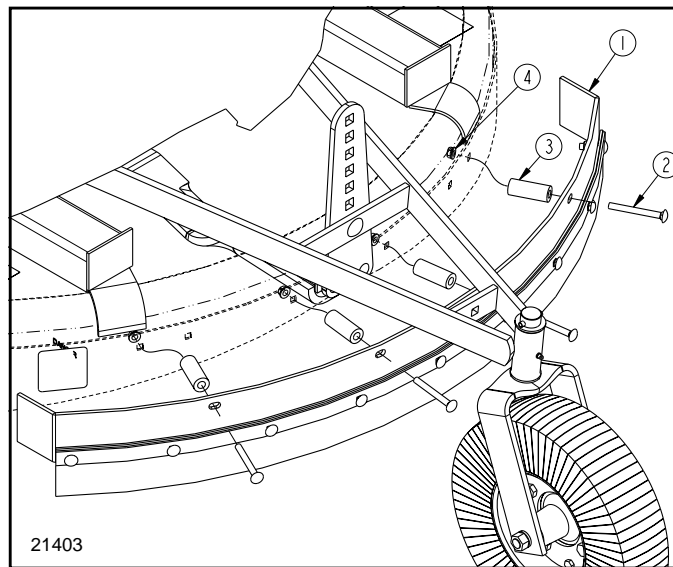


Rear Chain Guard  
Figure 2-4

### Rear Rubber Guard installation

Refer to Refer to Figure 2-5:

1. Remove Rear Metal Guard. See "Rear Metal Guard Removal" on page 12.
2. Install rear rubber guard (#1) with 3/8" x 3 1/2" long carriage bolts (#2), deflector spacer (#3) and 3/8" flange nuts (#4).
3. Tighten all 3/8" flanged nuts (#4) to 31 ft-lbs as indicated in the "Torque Values Chart For Common Bolt Sizes" on page 28.



Rear Rubber Guard  
Figure 2-5

Section 3: Adjustments

### Deck Leveling & Height Adjustments

There are 4 primary adjustments that should be made prior to actual field operation:

1. Deck Leveling From Left to Right
2. Deck Cutting Height
3. Center 3-Point Link Length
4. Tailwheel Height Adjustment

Proper adjustment of each of these items will provide for higher efficiency, improved cutting performance and longer blade life. The following tools will be needed:

- Pliable tape measure
- Spirit or carpenters level
- Open end or hex end wrench or socket set
- Protective gloves

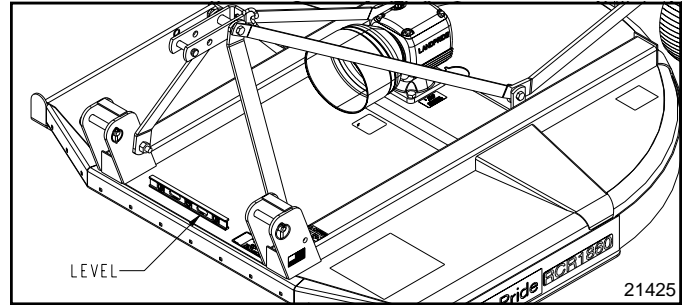
#### DANGER

Engage parking brake, disengage PTO, shut off tractor and remove key before proceeding. Ensure that all moving parts have come to a complete stop before dismounting the tractor.

#### Deck Leveling From Left to Right

Refer to Figure 3-1:

1. Locate tractor with Rotary Cutter on a flat, level surface.
2. Use tractor's hydraulic 3-point control lever to lower cutter until the tailwheel makes contact with the ground surface.
3. Place a level or another suitable leveling device on the front of the cutter deck as shown in Figure 3-1. Manually adjust either one or both of the tractor's lower 3-point arm height adjustments to level the deck from left to right. Some tractors have only a single adjusting crank.



Deck Leveling  
Figure 3-1

#### Deck Cutting Height

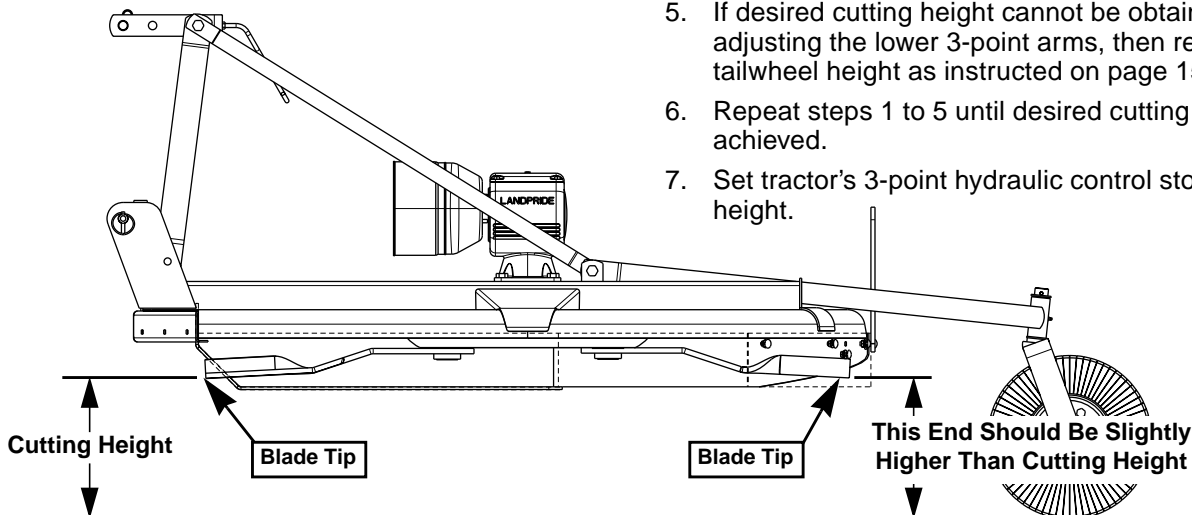
Refer to Figure 3-2:

#### CAUTION

Wear a pair of gloves when checking cutting height. Avoid direct contact with cutting edge of blade.

**IMPORTANT:** The blades should be positioned to cut material only at the front of the cutter. If deck is level or back of cutter is lower than the front, then the blades are subject to continuous material flow resulting in additional blade wear, horsepower loss and frequent blade sharpening.

1. Using tractor's 3-point hydraulic control, raise or lower the 3-point arms until the front of the deck is slightly lower than the rear of the deck.
2. The top center link should be loose when deck rear is supported by the tailwheel. If not, lengthen center link until loose. Final adjustment will be made later.
3. With gloves on, carefully rotate each blade tip to the position shown in Figure 3-2.
4. Measure distance from cutting tip of blade to ground surface. This distance is the cutting height.
5. If desired cutting height cannot be obtained by adjusting the lower 3-point arms, then readjust tailwheel height as instructed on page 15.
6. Repeat steps 1 to 5 until desired cutting height is achieved.
7. Set tractor's 3-point hydraulic control stop at this height.



Cutting Height  
Figure 3-2

### Section 3: Adjustments

#### Center 3-Point Link Length

Refer to Figure 1-3 on page 9:

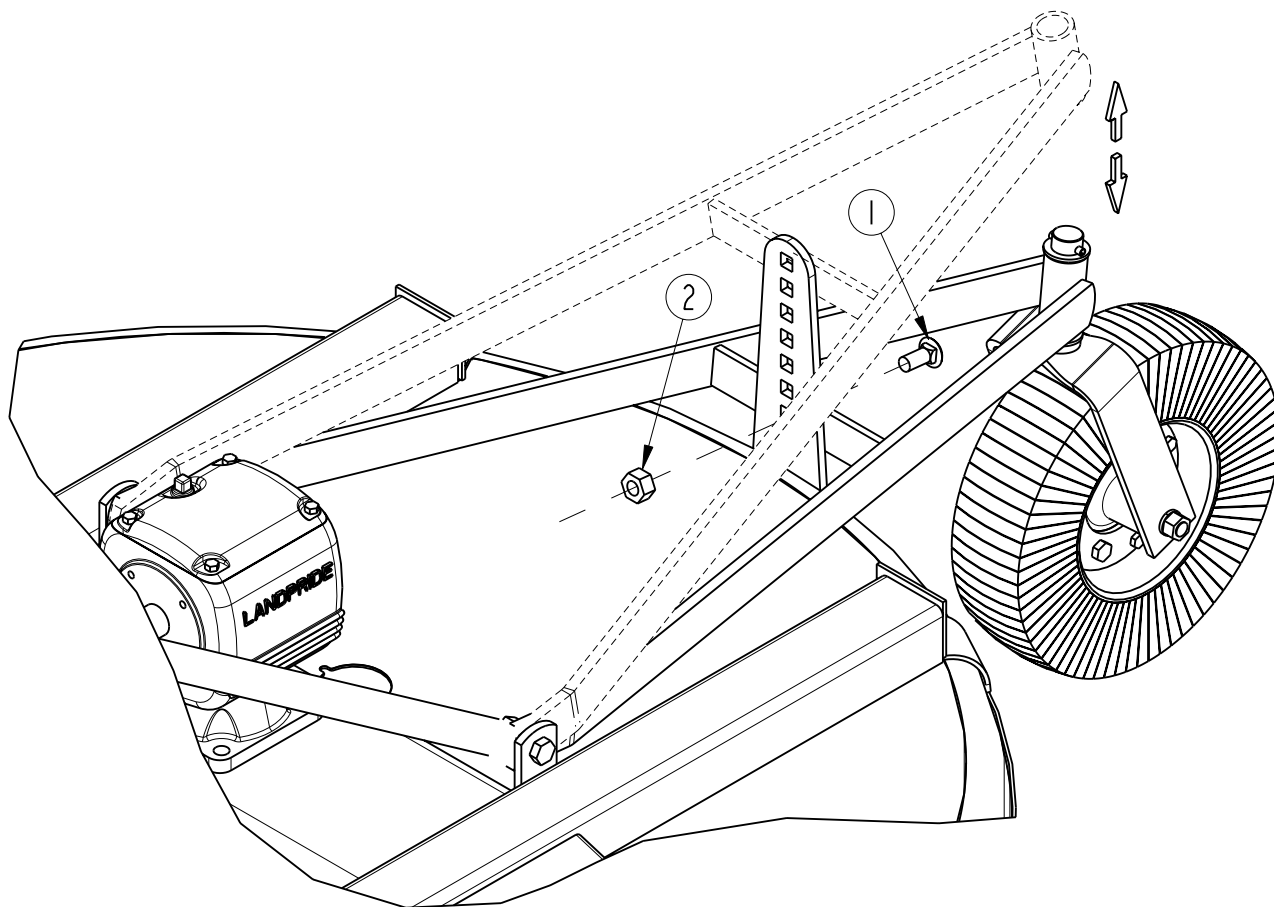
1. Lower cutter deck to the nominal cutting height.
2. Adjust length of center 3-point link so that the upper pivot hitch rest at a slight downhill position. This arrangement allows for optimum ground contour following performance.
3. Lock center link in this position once correct length is achieved.
4. The second set of holes on the upper pivot hitch should be used when tractor's center 3-point link is too short.

#### Tailwheel Height Adjustment

Refer to Figure 3-3:

If deck slope is slightly lower at the front than at the back and cutting height is not at the desired height, then the tailwheel must be adjusted up or down as follows:

1. Use tractor's 3-point hydraulic control to lift cutter until the tailwheel clears the ground.
2. Remove carriage bolt (#1) and 5/8" flange nut (#2).
3. Adjust tailwheel as follows:
  - To lower cutting height, adjust tailwheel up.
  - To increase cutting height, adjust tailwheel down.
4. With tailwheel adjusted to the correct height, replace 5/8" x 1 1/2" long carriage bolt (#1) and 5/8" flange nut (#2). Tighten flange nut to the correct torque.
5. Readjust tractor's lower 3-point arm height as needed. See section titled "Deck Cutting Height" on page 14.



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Tailwheel Height Adjustment  
Figure 3-3

Section 4: Operating Instructions

**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 Rotary Cutter. Therefore, it is absolutely essential that no one operates the Rotary Cutter 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 6
- **Section 1: Assembly and Set-Up**, page 8
- **Section 3: Adjustments**, page 14
- **Section 4: Operating Instructions**, page 16
- **Section 5: Maintenance and Lubrication**, page 19

The following inspection should be performed before using the cutter.

**Operating Checklist**

Check	Referen
<input type="checkbox"/> Read " <b>Important Safety Information</b> "	Page 1
<input type="checkbox"/> Read " <b>Assembly &amp; Set-up</b> " Instructions.	Page 8
<input type="checkbox"/> Read " <b>Operating Instructions</b> "	Page 16
<input type="checkbox"/> Check cutter initially and periodically for loose bolts & pins, See "Torque Values Chart For Common Bolt Sizes".	Page 28
<input type="checkbox"/> Make sure all guards and shields are in place.	Page 1
<input type="checkbox"/> Check oil level in gearbox.	Page 22
<input type="checkbox"/> Lubricate cutter and driveline as needed. Refer to section on " <b>Lubrication</b> ".	Page 22

Make the following inspections with cutter attached to a tractor and PTO disengaged and completely stopped:

1. Inspect tractor safety equipment to make sure it is in good working condition.
2. Carefully raise and lower implement to ensure that the drawbar, tires, and other equipment on the tractor do not contact cutter frame or PTO driveline.
3. Check PTO guards to make certain they are in good working condition and in place.
4. Disconnect main driveline from tractor PTO and secure.
5. With cutter deck resting on solid supports, PTO disengaged and completely stopped, check cutting blades for sharpness.
6. Remove solid supports from under the deck and then verify cutter deck is set to the correct height. See "Deck Leveling & Height Adjustments" on page 14.

The remaining inspections are made by engaging the PTO to check for vibrations.

**IMPORTANT:** Stop PTO immediately if vibration continues after a few revolutions during start-up and anytime it occurs thereafter. Wait for PTO to come to a complete stop before dismounting from tractor to check for probable causes. Make necessary repairs and adjustments before continuing on.

**IMPORTANT:** Do not exceed rated cutter PTO speed. Excessive engine speed will cause damage to the power train components.

7. Start tractor, set throttle to idle or slightly above idle and slowly engage PTO. Initial start-up vibration is normal and should stop after a few revolutions. Stop PTO rotation immediately if vibration continues.
8. Once the cutter is running smoothly, increase tractor PTO speed to 540 RPM. Stop PTO rotation immediately if vibration occurs.

**Transporting**



**CAUTION**

*When traveling on public roads, use accessory lights and devices for adequate warning to operators of other vehicles. Comply with all federal, state and local laws.*

**IMPORTANT:** Always disengage the tractor's PTO before raising the cutter to transport position.

1. Make sure driveline does not contact tractor or cutter when raising cutter to transport position.
2. Reduce tractor ground speed when turning and leave enough clearance so cutter does not contact obstacles such as buildings, trees or fences.
3. Limit transport speed to 20 mph. Transport only with a farm tractor of sufficient size and horse power.
4. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
5. Shift tractor to a lower gear when traveling over rough or hilly terrain.

**Un-hooking the Rotary Cutter**

Un-hook Rotary Cutter from the tractor as follows:

1. Park on a level solid surface.
2. Lower deck to ground level or onto blocks supporting the deck just above ground level.
3. Engage tractor park brake, shut tractor engine off and remove key before dismounting from tractor.
4. Disconnect driveline from tractor PTO shaft.
5. Un-hook 3-point hitch from tractor. Reinstall hitch pins, linch pins and hair pin cotters in cutter hitch.
6. Rotate driveline storage hook down and place driveline in storage hook.
7. See "Cutter Storage" on page 21 if cutter is to be stored for a long time.

## Section 4: Operating Instructions

### Cutting Instructions



#### CAUTION

Do not over speed PTO or machine damage may result. This cutter is designed to be used only with a tractor having a 540 RPM rear PTO.



#### WARNING

The RCR18 series cutter is designed to cut grass and brush up to 1" in diameter. Using this cutter for another type of work can damage drive components, deck and support frame.



#### DANGER

Gearbox and driveline shields must be secured in place when operating to avoid injury or death from entanglement in rotating drivelines.



#### DANGER

Rotary Cutters have the ability to discharge objects at high speeds. Therefore, the use of front & rear deck safety shields is strongly recommended when cutting along highways or in an area where people may be present!



#### DANGER

Never operate the cutter in the raised position. The cutter can discharge object at high speeds resulting in injury or death.



#### DANGER

Do not cut on steep inclines. The tractor and cutter could flip over causing damage to the equipment, bodily injury or death.



#### DANGER

Do not use cutter to lift or carry objects. Lifting and/or carrying objects can result in damage to the cutter, serious bodily injury or death.



#### DANGER

Never carry a person on the cutter. A person can fall and be ran over by the cutter or tractor causing serious injury or death.



#### DANGER

Do not use deck as a working platform. The deck is not properly designed or guarded for this use. Using deck as a working platform can cause serious injury or death.



#### DANGER

Do not use deck as a fan. Cutting blades are not properly designed or guarded for this use. Using the deck as a fan can result in injury or death.

**NOTE:** Your Rotary Cutter is equipped with free swinging cutting blades to reduce shock loads when striking obstacles. However, it is best to avoid striking obstacles to extend cutter life and life of cutting blades.

**IMPORTANT:** It is important to maintain correct PTO speed. Loss of PTO speed will allow blades to hinge back and result in ragged, uneven cutting.

This cutter was designed to cut grass and brush in right-of-ways, pastures and for shredding row crop residues. Cutting should not be done in dry conditions. Wet material will build up on the deck underside creating additional horsepower, high wear, and poor discharge.

1. Thoroughly inspect the area to be cut for debris and unforeseen objects. Mark any potential hazards.
2. Start the machine slowly; do not use full throttle. Allow 10 seconds for cutter blades to become aligned properly before going to 540 RPM.
3. Travel only as fast as the tractor is capable of making smooth even cuts without overloading the tractor. Ground speed depends upon two things:
  - The density of the material being cut.
  - The size of tractor operating the cutter.
4. After the first 50 feet, stop and check to see that the cutter is adjusted properly.
5. Do not engage PTO when cutter is in the fully raised or lowered positions.
6. Periodically disengage PTO, turn off tractor, remove ignition key and check for foreign objects wrapped around the rotor shaft. Block cutter deck up before removing objects.
7. Frequently inspect the cutter for loose bolts and nuts. Tighten all loose bolts and nuts as indicated in the "Torque Values Chart For Common Bolt Sizes" on page 28.

### General Operating Instructions

It is important that you familiarized yourself with the Operator's Manual, completed Operators Checklist, properly attached cutter to your tractor, made leveling adjustments, and preset your cutting height before beginning a running operational safety check on your Land Pride Rotary Cutter.

The running operational safety check may now be done. It is important that at any time during this safety check you detect a malfunction in either the cutter or tractor that you immediately shut the tractor off, remove its' key, and make necessary repairs and/or adjustments before continuing on.

Make sure before starting the tractor that the park brake is engaged, the PTO is disengaged, and the cutter is resting on the ground. Start the tractor and set the engine throttle speed at a low idle. Raise the cutter with the



## Section 4: Operating Instructions

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tractor's rear hydraulic lift control lever to transport position making sure that the PTO shaft does not bind and does not contact the cutter frame. Lower the cutter to the ground and at a low engine speed engage the PTO. If everything is running smoothly at a low idle, slowly raise the cutter to transport height checking for bind or chatter in the driveline. Lower the cutter to the ground and increase the tractor's engine rpm until it reaches the cutter full PTO operating speed of 540 rpm. If everything is still running smoothly, once more raise the cutter to transport height to check for driveline bind or chatter. Lower the cutter to the ground, return the engine to a low idle, and disengage the PTO. Position the adjustable stops on the tractor's hydraulic lift lever so the cutter can be consistently returned to the same cutting and transport height.

You should now be ready to transport to your cutting site at a safe ground speed. On roadways transport in such a manner that faster moving vehicles can easily see you and pass you safely. Reduce your speed when travelling over rough and hilly terrain. Avoid quick or sharp steering corrections. Take extra care to insure that the mower doesn't come into contact with obstacles such as trees, buildings or fences. Use accessory lights and appropriate reflective devices to provide adequate warning to pedestrians and other vehicle operators when traveling on public roads and in the dark of night. Comply with all local, state and federal laws.

It is important that you inspect the area where you will be cutting and clear it of safety hazards and foreign objects either before or after you arrive at the cutting site. Never assume the area is clear. Cut only in areas you are familiar with and are free of debris and unseen objects. Extremely tall grass should be cut twice to detect potential hazards. In the event you do strike an object stop the cutter and tractor immediately to inspect and make necessary repairs to the cutter before resuming operation. It really pays to inspect a new area and to develop a safe plan before cutting.

You will need to maintain 540 rpm PTO speed and 2 to 5 mph ground speed to produce a clean cut. Make a tractor gear and range selection that will enable you to maintain these speed combinations. Generally the quality of cut is better at lower ground speeds. Dense ground cover will create the need to slow down even more. In certain conditions tractor tires will roll grass down resulting in an uneven cut when the grass fails to rebound. Should this happens you may try reversing the direction of cut and/or double cut to achieve the desired finish. Avoid very low cutting heights especially on extremely uneven terrain. Always cut downward on slopes and avoid crossing the face of steep slopes. Avoid sharp drops and cross diagonally through dips to prevent hanging up the tractor and cutter. Slow down in turns. Remember to look back often.

Now that you're prepared and well briefed you may begin cutting. Begin mowing by doing the following:

- Reducing the tractor's engine rpm
- Make sure the cutter is on the ground in cutting position
- Engage the PTO
- Raise the engine rpm to the appropriate PTO speed
- Begin mowing.

Make wide turns when possible. Three-point hitch and optional Quick-Hitch models can be lifted into transport position to make tight turns and to reverse direction. Try increasing or decreasing ground speed to determine the effect on quality of cut. With a little practice you will be pleased with what you and your Land Pride Rotary Cutter can do.

Whether you are done mowing, need to take a break, or just need to make a few adjustments to the cutter, remember to always do the following:

- Reduce the tractor's engine rpm
- Disengage the PTO
- Stop on level ground
- Set the park brake
- Turn off the engine and remove the key
- Stay on the tractor until the cutter blades have come to a complete dead stop.



## Section 5: Maintenance and Lubrication

### Maintenance

Proper servicing and adjustment is the key to the long life of any farm implement. Careful and systematic inspection can avoid costly down time, maintenance and repairs.

After using your cutter 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.

### Service Cutter Blades



#### DANGER

Always disconnect main driveline from tractor PTO before servicing underside of cutter deck. Cutter can be engaged if tractor is started resulting in damage to the cutter, bodily injury or death.



#### WARNING

Always secure cutter deck in the up position with solid supports before servicing underside of cutter. 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 cutter instantly even when power to hydraulics is shut off.

**IMPORTANT:** Replace cutting blades with genuine Land Pride blades only. Blades must be replaced in mating pairs. Not replacing both blades will result in an out-of-balance condition that will contribute to premature bearing break down on the spindle hub and create structural cracks in cutter housing.

Always inspect cutting blades before each use. Make certain they are properly installed and are in good working condition. Replace any blade that is damaged, worn, bent, or excessively nicked. Small nicks can be ground out when sharpening.

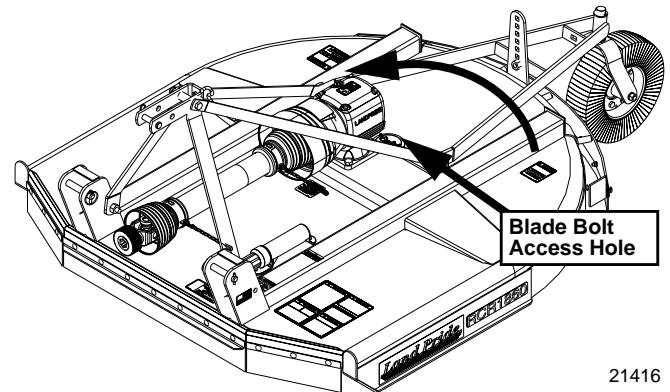
1. Place tractor gear selector in park and/or set brakes, shut engine off and remove ignition key.
2. Disconnect main driveline from tractor PTO and secure cutter deck in the up position with solid supports before servicing underside of cutter.
3. Inspect cutting blades. Make certain they are properly installed and are in good working condition. Replace any blade that is damaged, worn, bent, or excessively nicked. Small nicks can be ground out when sharpened.
4. To remove blades from the cutter, align blade bolts with blade bolt access hole located on the deck See Figure 5-1.
5. Both blades should be sharpened at the same angle as the original cutting edge and must be replaced or re-ground at the same time to maintain proper

balance. The following precautions should be taken when sharpening blades:

- a. Do not remove more material than necessary.
- b. Do not heat and pound out a cutting edge.
- c. Do not grind blades to a razor edge. Leave a blunt cutting edge approximately 1/16" thick.
- d. Always grind cutting edge so end of blade remains square to cutting edge and not rounded.
- e. Do not sharpen back side of blade.
- f. Both blades should weigh the same after sharpening with not more than 1 1/2 oz. difference.

Refer to Figure 5-1:

6. Carefully check cutting edges of blades in relation to blade carrier rotation to ensure correct blade placement. Blade rotation is counterclockwise with cutting edge leading. Airfoil (lift) must be oriented towards the top of the deck.



Counterclockwise Blade Rotation  
Figure 5-1

Refer to Figure 5-2 on page 20:

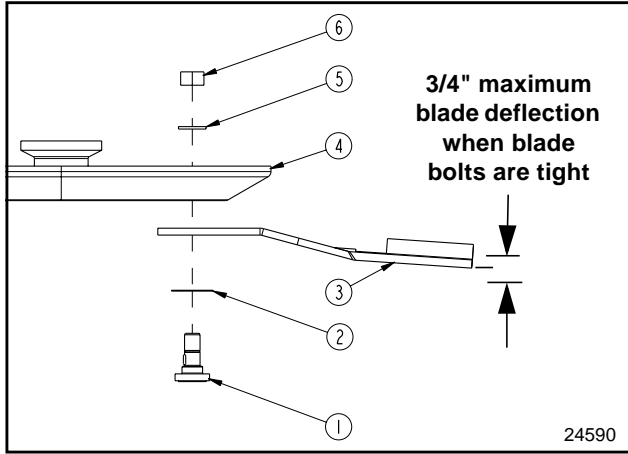
**IMPORTANT:** Examine blade bolts (#1) and washers (#5) for excessive wear and replace if worn.

**IMPORTANT:** Locknuts can lose their ability to lock properly once removed. Therefore, always use a used blade nut or plain nut in steps 7 & 8 below and then **replace used nut with new locknut in step Step 9.**

7. Start by assembling blades without shim (#2). Insert blade bolt (#1) through blade (#3), dish pan (#4) and flat washer (#5). Temporary secure blade with a used 1 1/8"-12 nut. **Draw nut up snug. Do not tighten.**
8. Check blade deflection. If deflection is greater than 3/4", remove blade bolt and reassemble as before except include shim (#2) in the assembly. Select shim thickness based on deflection. The greater the deflection, the thicker the shim.

Section 5: Maintenance and Lubrication

9. Once blade deflection is correct, **replace used nut with new locknut (#6)** and torque to 450 ft-lbs.
10. If replacing dishpan (#4), nut on gearbox output shaft should be torqued to 450 ft-lbs. minimum and cotter pin installed in nut with legs securely bent around nut.



Cutter Blade Assembly  
Figure 5-2

Land Pride Cutter Blade Parts

Item	Part No.	Part Description
	318-586A	BLADE BOLT KIT (Includes items 1, 2, 5, & 6 below)
1	802-277C	BLADE BOLT 1 1/8-12 x 3 7/16 WITH KEY
2	312-075D	BLADE SPACER 16 GA. (.060")
2	312-082D	BLADE SPACER 18 GA. (.048")
2	312-089D	BLADE SPACER 20 GA. (.036")
2	312-808D	BLADE SPACER 24 GA. (.024")
3	820-198C	RCR1860 STANDARD BLADE 25"LG. CCW
3	820-199C	RCR1872 STANDARD BLADE 31"LG. CCW
3	820-212C	RCR1860 LOW LIFT BLADE 25"LG. CCW
3	820-213C	RCR1872 LOW LIFT BLADE 31"LG. CCW
4	312-815H	RCR1860 15" DISHPAN WELDMENT
4	312-841H	RCR1872 15" DISHPAN WELDMENT
5	804-147C	WASHER FLAT 1 HARD ASTM F436
6	803-170C	NUT HEX TOP LOCK 1 1/8-12 PLATE

Shearbolt Protected Drivelines

The Standard Shear Bolt Driveline is secured to the cutter with a shearbolt for protection of driveline and gearbox. The shearbolt is designed to shear off when the blade impacts objects that the cutter is not designed to cut through. Replace shearbolt with Land Pride part #802-264C. Refer to Figure 1-5 on page 10.

**IMPORTANT:** A snap ring is installed so that the driveline does not come loose from the gearbox should the shearbolt shear. (Replace damaged or worn snap ring with Land Pride part #800-079C)

**CAUTION**

Engage parking brake, disengage PTO, shut off tractor, and remove key before making any of the following adjustments.

Slip-Clutch Protected Drivelines

Driveline components are protected from shock loads by a two plate slip-clutch. The clutch must be capable of slippage during operation to protect the gearbox, driveline and other drivetrain parts. The slip-clutch driveline is secured to the cutter with a grade 8 bolt.

The clutch should be "run-in" prior to initial operation and after long periods of inactivity to remove any oxidation that may have accumulated on the friction surfaces. Repeat "run-in" instructions at the beginning of each season and when moisture and/or condensation seizes the inner friction plates.

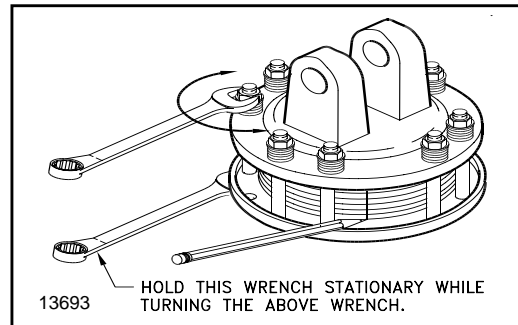
**CAUTION**

Engage parking brake, disengage PTO, shut off tractor, and remove key before making any of the following adjustments.

Clutch Run-In

Refer to Refer to Figure 5-3:

1. Using a pencil or other marker, scribe a line across the exposed edges of the clutch plates and friction discs.



Clutch  
Figure 5-3

2. Carefully loosen each of the 8 spring retainer nuts by exactly 2 revolutions. It will be necessary to hold hex end of retainer bolt in order to count the exact number of revolutions.
3. Start tractor and engage PTO drive for 2-3 seconds to permit slippage of the clutch surfaces. Disengage PTO, then re-engage a second time for 2-3 seconds. Disengage PTO, shut off tractor and remove key. Wait for all components to stop before dismounting from tractor.
4. Inspect clutch and ensure that the scribed markings made on the clutch plates have changed position. Slippage has not occurred if any two marks on the friction disc and plate are still aligned. A clutch that has not slipped must be disassembled to separate the friction disc plates. See "Clutch Assembly and Disassembly" on page 21.

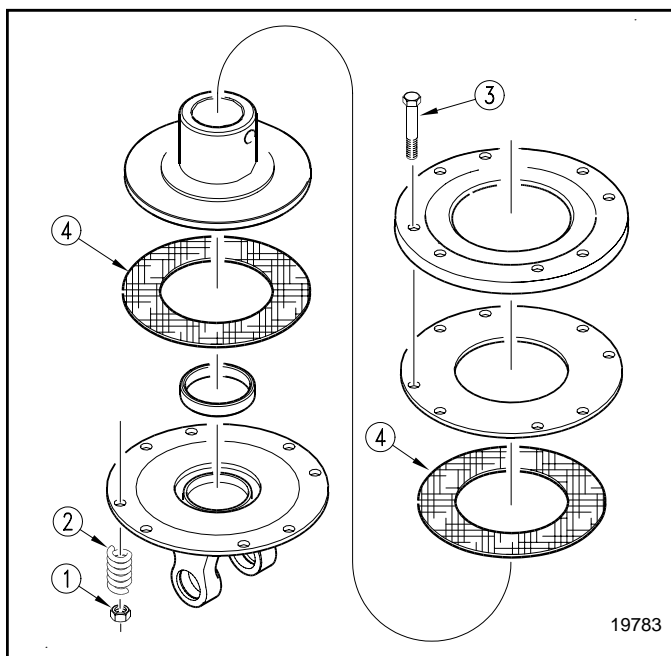
**Section 5: Maintenance and Lubrication**

5. Tighten each of the 8 spring retainer nuts on the clutch housing exactly 2 revolutions to restore clutch to original setting pressure.
6. The clutch should be checked during the first hour of cutting and periodically each week. An additional set of scribe marks can be added to check for slippage. See Figure 5-5 to adjust spring length.

**Clutch Assembly and Disassembly**

**Refer to Figure 5-4:**

If the clutch run-in procedure, (see "Clutch Run-In" on page 20), indicated that one or more of the friction discs did not slip, the clutch must be disassembled to separate the friction discs. Refer to the Parts Manual for a detailed parts breakdown.



**Clutch Disassembly  
Figure 5-4**

**Disassembly**

To disassemble the clutch, first remove spring retainer nuts (#1), springs (#2) and bolts (#3) from the assembly. Each friction disc (#4) must then be separated from the metal surface adjacent to it.

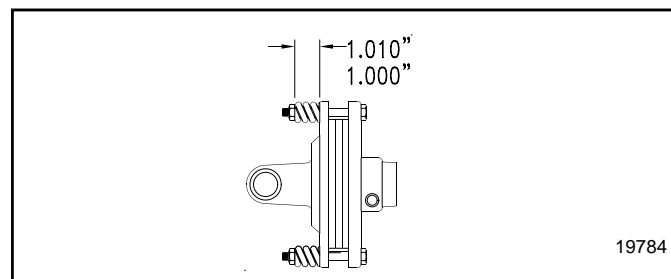
**Inspection**

Inspect all parts for excessive wear and condition. Clean all parts that do not require replacement. The original friction disc thickness is 1/8" (3.2mm) and should be replaced if thickness falls below 3/64" (1.1mm). If clutches have been slipped to the point of "smoking", the friction discs may be damaged and should be replaced. Heat build-up may also affect the yoke joints.

**Assembly**

**Refer to Figure 5-5:**

Reassemble each friction disc (#4) next to the metal plate it was separated from. Install bolts (#3) through the end plates and intermediate plates as shown. Place springs (#2) over the bolts and secure with nuts (#1). Progressively tighten each spring retainer bolt until correct spring height "A" is reached.



**Clutch Adjustment  
Figure 5-5**

**Cutter Storage**

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





1. Clean off any dirt or grease that may have accumulated on the cutter and moving parts. Scrape off compacted dirt from the bottom of deck and then wash surface thoroughly with a garden hose. A coating of oil may also be applied to the lower deck area to minimize oxidation.
2. Check blades for wear and replace if necessary, see "Service Cutter Blades" on page 19.
3. Inspect cutter for loose, damaged or worn parts and adjust or replace as needed.
4. Lubricate as noted in "Lubrication" starting on page 22.
5. Store cutter in a clean, dry place for longer cutter life. The deck should be positioned on a flat stable surface. Use auxiliary supports if necessary.
6. Repaint parts where paint is worn or scratched to prevent rust. Ask your dealer for Aerosol Land Pride touch-up paint. They are 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.

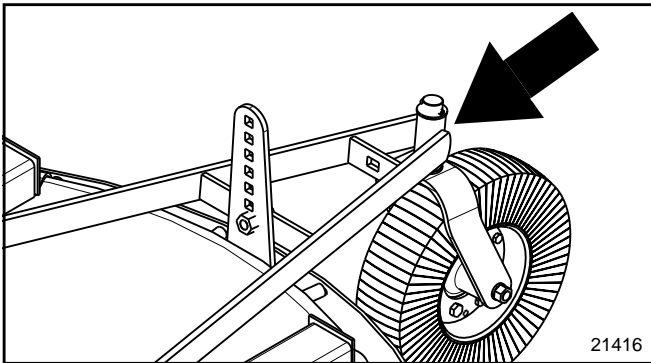
**Land Pride Aerosol Touch-up Paint**



Part No.	Part Description
821-011C	PAINT LP BEIGE AEROSOL SPRAY CAN
821-002C	PAINT LP BLACK AEROSOL SPRAY CAN
821-054C	PAINT MEDIUM RED AEROSOL SPRAY CAN
821-058C	PAINT GREEN AEROSOL SPRAY CAN
821-066C	PAINT ORANGE AEROSOL SPRAY CAN
821-067C	PAINT BLUE AEROSOL SPRAY CAN

Section 5: Maintenance and Lubrication

Lubrication

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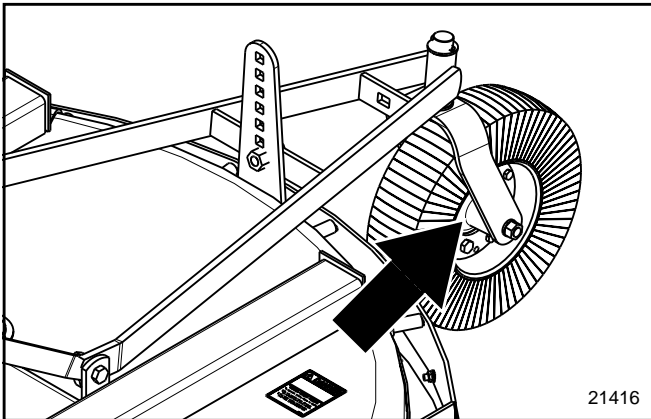




	
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Gauge Wheel Spindle Tube

Type of Lubrication: Grease

Quantity = 6 pumps



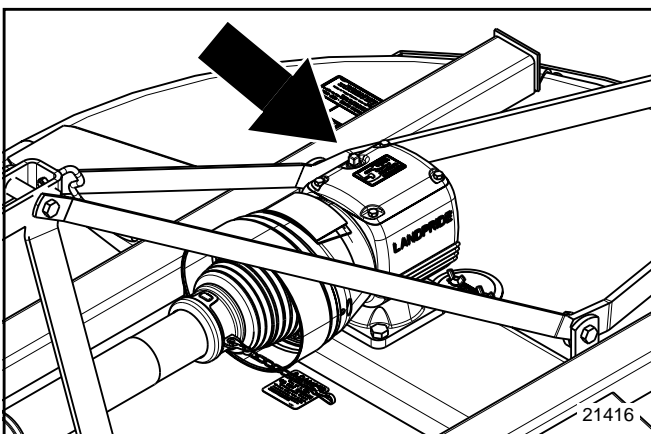
	
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Gauge Wheel Hub

The gauge wheel hub is equipped with a relief hole located directly opposite the grease fitting. The relief hole releases pressure from inside the hub casting when it is greased. The hub should be greased until grease purges from the relief hole.

Type of Lubrication: Multi-purpose Grease

Quantity = Until grease purges from the relief hole



	
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Gearbox

**IMPORTANT:** Do not overfill! Level cutter and wait for gearbox oil to cool before checking. An unlevel cutter or a gearbox with hot oil will not show correct oil level on the dipstick.

Unscrew top vent plug in gearbox to remove dipstick. Wipe oil from dipstick and screw it back in without tightening. Unscrew dipstick and check oil level mark. If low, fill through top plug hole in gearbox with EP 80-90W oil until oil reaches full mark on the dipstick. Reinstall vent plug with dipstick and tighten.

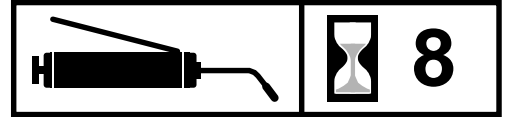
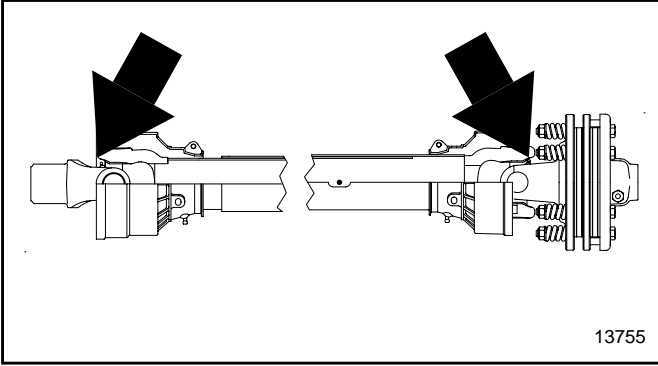
Take your gearbox to a Land Pride dealer if it requires service.

Type of Lubrication: Gear Lube EP 80-90W

Quantity = Fill until oil reaches full mark on dipstick.

**IMPORTANT:** Your cutter is shipped with the gearbox vent plug with dipstick packaged in the Operator's Manual bag and should have been installed in the gearbox by your Land Pride dealer. Please see your Land Pride dealer if the vent plug with dipstick was not included.

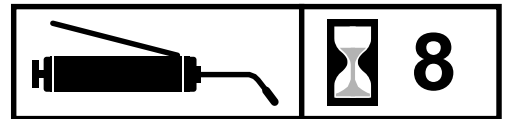
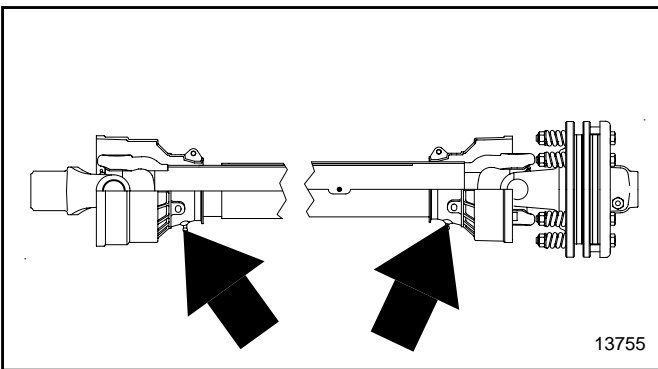
Section 5: Maintenance and Lubrication



**Driveline U-Joints**

Type of Lubrication: Grease

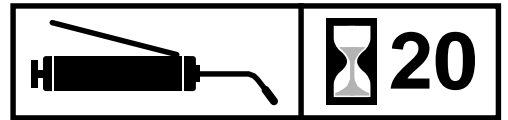
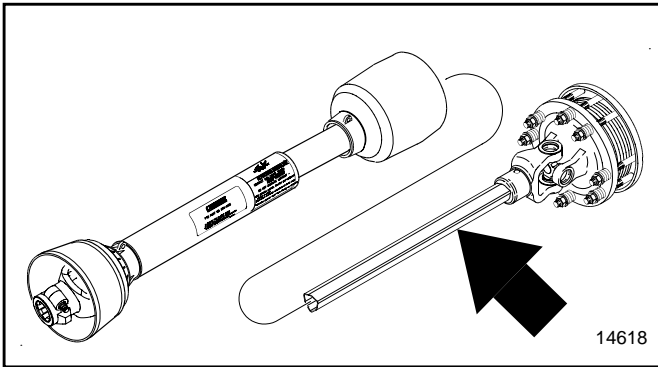
Quantity = 6 pumps



**Driveline Shield Bearings**

Type of Lubrication: Grease

Quantity = 6 pumps



**Driveline Profiles**

Quantity = Clean & coat inner tube of driveline with a light film of grease and then reassemble.



## Table of Contents

### Section 6: Specifications & Capacities



<b>RCR18 Series Rotary Cutters</b>		
	<b>RCR1860</b>	<b>RCR1872</b>
<b>Cutting Width</b>	60"	72"
<b>Overall Width</b>	65"	77"
<b>Overall Length</b>	97"	110"
<b>Blade Tip Speed</b>	16,363 fpm	14,955 fpm
<b>Machine Weight (with laminated tailwheel, slip clutch driveline, Front Rubber Guards and Rear Metal Band)</b>	599 lbs.	737 lbs.
<b>Driveline</b>	ASAE Category 3 Shear Bolt or 2-plate Slip Clutch	
<b>Recommended Tractor PTO HP</b>	20-50 HP	
<b>PTO Speed</b>	540 rpm	
<b>Gearbox</b>	1:1.93 Speed-Up Beveled Gears Cast Iron Housing 50 HP	1:1.46 Speed-Up Beveled Gears Cast Iron Housing 50 HP
<b>Gearbox Lubricant</b>	EP 80-90W oil	
<b>Cutting Height</b>	1 1/2" - 13"	1 1/2" to 11 1/2"
<b>Deck Construction</b>	All Welded Deck	
<b>Deck Material Thickness</b>	11 Ga. (.120")	10 Ga. (.134")
<b>Side Skirt Material Thickness</b>	11 Ga.	10 Ga.
<b>Deck Height (Bottom of Deck to Bottom of Skid Shoe)</b>	7 1/2"	9"
<b>Skid Construction</b>	Full length welded on	
<b>Tailwheel Mount Assembly</b>	Welded A-arm and Caster Fork with 360 degree swivel	
<b>Tailwheel</b>	4" x 8" x 15" Laminated Tire with cast iron hub or 4" x 16" Molded Rubber Tire	
<b>Hitch</b>	Category I with Floating Clevis Top Link, Quick Hitch Adaptable	
<b>Blade Holder</b>	Blade Holder Bar with Stump Jumper Round Pan 10 ga. x 24"	
<b>Blades</b>	2 each, 1/2" x 3" Heat Treated Alloy Steel Free-Swinging High Lift - Low Friction	
<b>Blade Bolts</b>	Keyed with harden flat washers & lock nuts.	
<b>Blade Cutting Capacity</b>	1" Diameter	
<b>Optional Front Guard</b>	Rubber Belting or Chain Guard	
<b>Rear Guard</b>	Standard Metal Banding or Optional Rubber Belting or Optional Chain Guard	



**Section 7: Features & Benefits**
**RCR1860 & RCR1872 Rotary Cutters**

Features	Benefits
<b>Surpassed rugged industry standards</b>	All Land Pride Cutters have been designed and tested and meet rigorous voluntary testing procedures specified by ANSI.
<b>Available in 5 packs</b>	Order 5 packs and save money.
<b>Tractor HP range</b>	20 - 50 HP
<b>2 Year gearbox warranty</b>	Shows our confidence in the gearbox integrity.
<b>Cat. 3 driveline with shear-bolt</b>	Shear-bolt offers maximum driveline protection.
<b>Cat. 3 driveline with 2-plate slip-clutch</b>	Slip-clutch driveline offers convenience for continual work.
<b>Dual position clevis type 3-point floating top link</b>	Permits deck to follow the terrain for an even cut. Additional set of holes for tractors with shorter top links.
<b>Lower clevis type 3-point hitch</b>	Allows for ease of hook-up to tractor. Also adds additional strength allowing for an even pull from the tractor's lower arms, vs. pulling on a single pin design.
<b>Cutting widths</b>	60" and 72"
<b>Heavy gauge deck construction</b>	11 gauge on 60" and 10 gauge on 72".
<b>Box tubing deck supports</b>	Makes for a stronger rigid deck.
<b>Fully welded deck</b>	Robotic welded. Adds additional strength.
<b>Extended cutter front</b>	For increased material flow and added protection.
<b>Round back design</b>	Helps discharge grass better than enclosed or partially enclosed cutters.
<b>Deck Height</b>	7 1/4" Deck height on 60" and 8 7/8" deck height on 72" model Allows cutter to handle heavy cutting conditions.
<b>Cutting height</b>	1"-9" for a wide range of cutting conditions.
<b>Rear metal band, rubber or chain guards</b>	Aids against flying debris.
<b>Full length skid shoes</b>	Provides sidewall reinforcement and full protection to bottom of sidewall.
<b>Splined blade bar hub</b>	Allows for tight positive fit of stump jumper and blade bar to gearbox output shaft.
<b>10 Gauge stump jumper</b>	Standard round stump jumper slides over stumps, rocks and debris.
<b>High blade tip speed</b>	Ensures clean cut.
<b>15" Laminated tailwheel</b>	Laminated material is long lasting in rough conditions.
<b>4" x 16" Solid rubber tailwheel</b>	Can't go flat.
<b>Heavy-duty spindle on tailwheel</b>	Tailwheels take a beating, 1 1/4" spindle gives the strength to protect tailwheel assembly.



Problem	Cause	Solution
<b>Oil seal leaking</b>	Gearbox overfilled	Drain to side plug hole
	Seals damaged	Replace seals
	Grass or wire wrapped on shaft in seal area	Check seal areas daily
<b>Driveline yoke or cross failing</b>	Shock load	Avoid hitting solid objects
	Needs lubrication	Lubricate every 8 hours
<b>Driveline clutch slipping</b>	Scalping the ground	Raise cutting height
	Cutting too fast	Reduce travel speed
	PTO being engaged too fast at high engine rpm	Slowly engage PTO at low engine rpm
	Cutting over solid objects	Avoid solid objects
<b>Bent Driveline (NOTE: driveline should be repaired or replaced if bent)</b>	Contacting frame	Reduce lift height in transport position
	Contacting drawbar	Reposition drawbar
	Bottoming out	Shorten driveline
	Binding up	Not lubricating enough
<b>Driveline telescoping tube failing</b>	Shock load	Avoid hitting solid objects
<b>Driveline telescoping tube wearing</b>	Needs lubrication	Lubricate every 20 hours
<b>Blades wearing excessively</b>	Cutting on sandy ground	Raise cutting height
	Contacting ground frequently	Raise cutting height
<b>Blades breaking</b>	Hitting solid objects	Avoid hitting solid objects
<b>Blades coming loose</b>	Blades not tightened properly	Tighten blade hardware (refer to "Service Cutter Blades" on page 19)
	Improper deck attitude	Lower front of deck, see page 15
<b>Blade carrier becomes loose</b>	Running loose in the past	Replace gearbox output shaft and blade carrier
	Blade carrier hardware not tight enough	Tighten to specified torque
<b>Blade bolt holes worn</b>	Blade hardware running loose	Replace blades and blade bolts if worn
<b>Blade carrier bent</b>	Hitting solid objects	Avoid hitting solid objects and replace blade carrier
<b>Excessive side skid wear</b>	Cutting height not level	Adjust cutter height
	Soil abrasive	Adjust cutter height
	Cutting too low	Adjust cutter height
<b>Tailwheel support failing</b>	Lowering too fast	Adjust rate of drop
	Hitting objects when turning	Reduce speed on turns

**Section 8: Troubleshooting**

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<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
<b>Excessive vibration</b>	Driveline bent	Replace driveline
	Blades loose	Tighten blade bolts
	Blade carrier bent	Replace blade carrier
	Blade broken	Replace blade
	Blade will not swing	Remove and inspect blade
	Blades have unequal weight	Replace both blades

Torque Values Chart For Common Bolt Sizes													
Bolt Size (Inches) in-tpi <sup>1</sup>	Bolt Head Identification						Bolt Size (Metric) mm x pitch	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
	N · m	ft-lb <sup>3</sup>	N · m	ft-lb	N · m	ft-lb		N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" - 12	750	555	1680	1240	2730	2010							
1 3/8" - 6	890	655	1990	1470	3230	2380							
1 3/8" - 12	1010	745	2270	1670	3680	2710							
1 1/2" - 6	1180	870	2640	1950	4290	3160							
1 1/2" - 12	1330	980	2970	2190	4820	3560							
Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.													
Additional Torque Values													
Blade Carrier Hub Nut			450 ft-lbs Minimum										

<sup>1</sup> in-tpi = nominal thread diameter in inches-threads per inch  
<sup>2</sup> N · m = newton-meters  
<sup>3</sup> ft-lb = foot pounds  
<sup>4</sup> mm x pitch = nominal thread diameter in millimeters x thread pitch

## 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 and Driveline:** One year Parts and Labor

**Gearbox:** 5 years Parts and Labor

**Blades, tires and driveline friction discs:** 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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Salina, Kansas 67402-5060 USA  
[www.landpride.com](http://www.landpride.com)

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