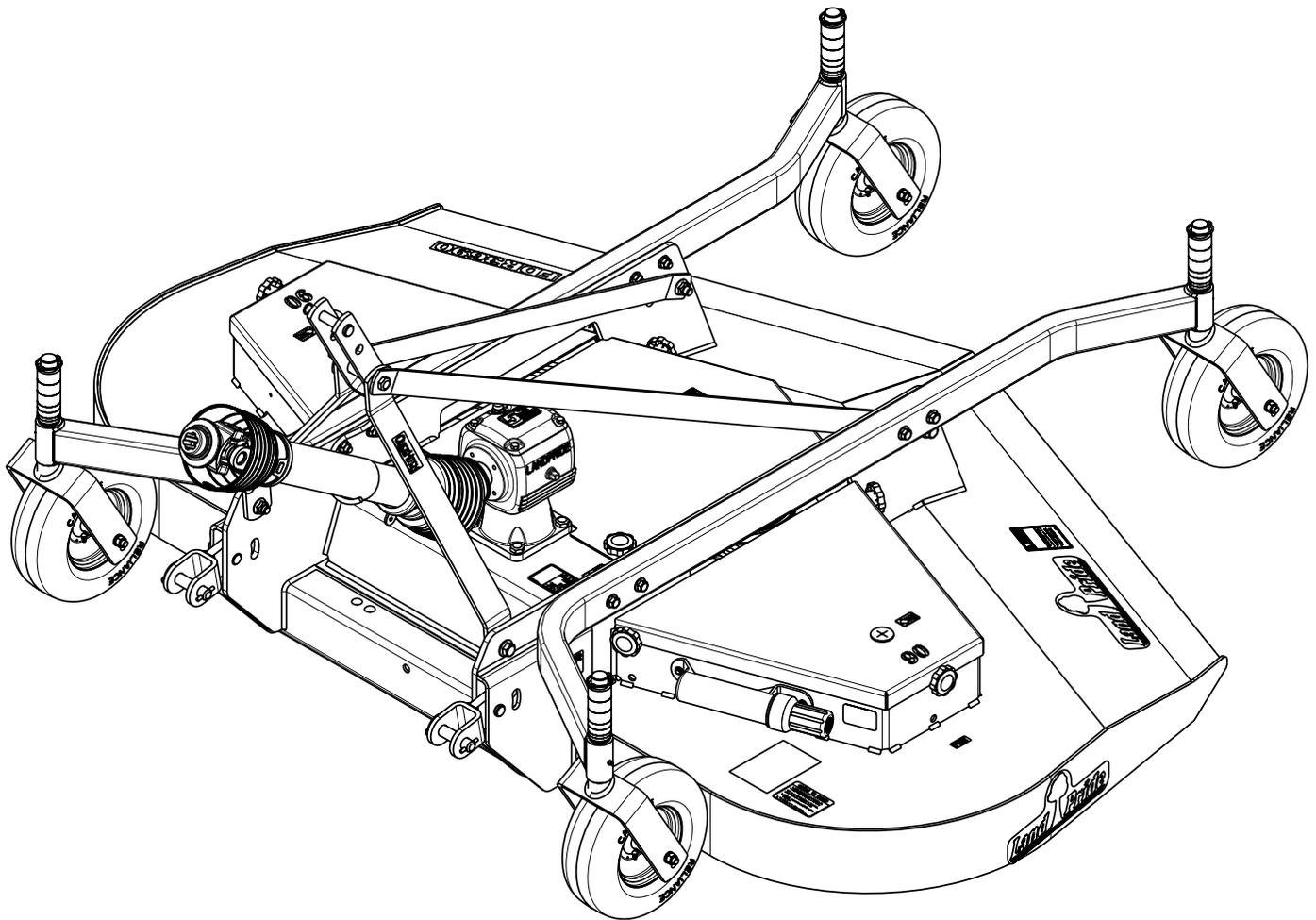


# Rear Discharge Grooming Mowers

FDR3690



33500

## 310-447M Operator's Manual



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

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

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## 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.

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

### Look For The Safety Alert Symbol



The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control, and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

#### Be Aware of Signal Words

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

##### ⚠ DANGER

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

##### ⚠ WARNING

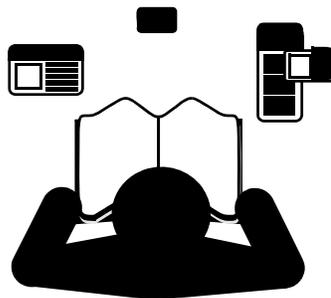
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

##### ⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

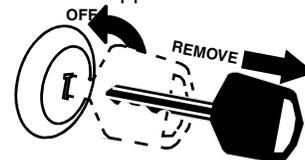
### For Your Protection

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



### Tractor Shutdown & Storage

- ▲ If engaged, disengage PTO.
- ▲ Lower attached implement to ground, put tractor in park or set park brake, turn off engine, and remove switch key to prevent unauthorized starting.
- ▲ Wait for all components to come to a complete stop before leaving the operator's seat.
- ▲ Detach and store implement in an area where children normally do not play. Secure implement using blocks and supports.



### Parts Manual QR Locator

The QR (Quick Reference) code on the front 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

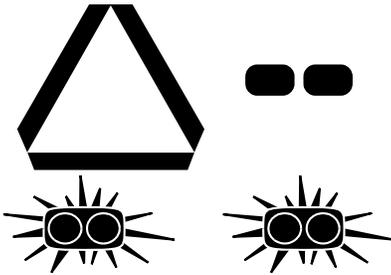
The QR code on the left will link you to available dealers for Land Pride products. Refer to Parts Manual QR Locator on this page for detailed instructions.

## 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.



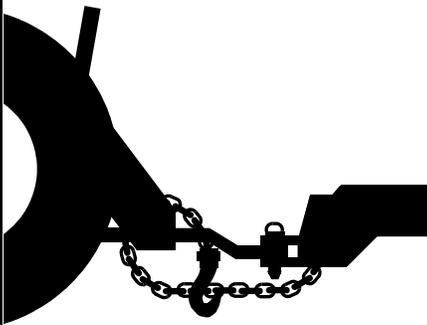
### Transport Machinery Safely

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



### Use A Safety Chain

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



### Practice Safe Maintenance

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

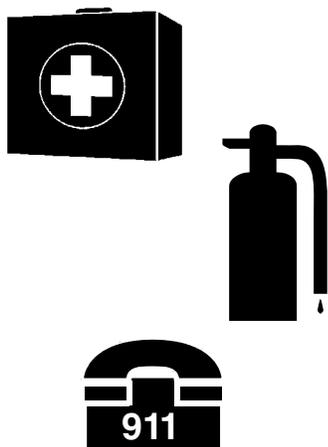


## Important Safety Information

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

- ▲ Wear protective clothing and equipment appropriate for the job such as safety shoes, safety glasses, hard hat, and ear plugs.
- ▲ Clothing should fit snug 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 immediately. Any fluid injected into the skin must be treated within a few hours or gangrene may result.



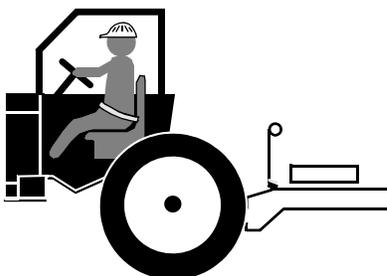
### Tire Safety

- ▲ Tire changing can be dangerous and should be performed 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 tractors 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 tractor overturn.
- ▲ Wear protective equipment such as a hard hat, safety shoes, safety glasses, and ear plugs.



### Keep Riders Off Machinery

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



## Important Safety Information

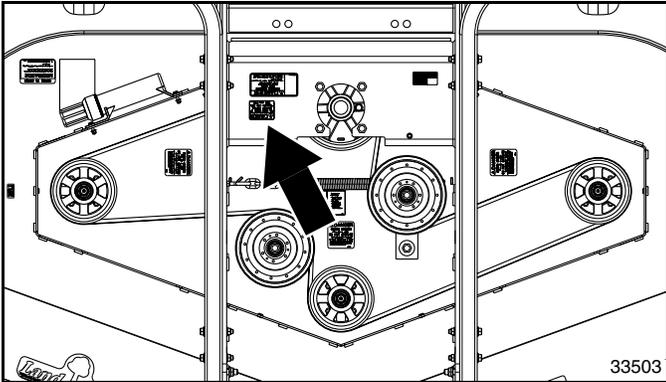
### Safety Labels

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

1. Keep all safety labels clean and legible.
2. Replace all damaged or missing labels. Order new labels from your nearest Land Pride dealer. To find your nearest dealer, visit our dealer locator at [landpride.com](http://landpride.com).
3. Some new equipment installed during repair requires safety labels to be affixed to the replaced component as

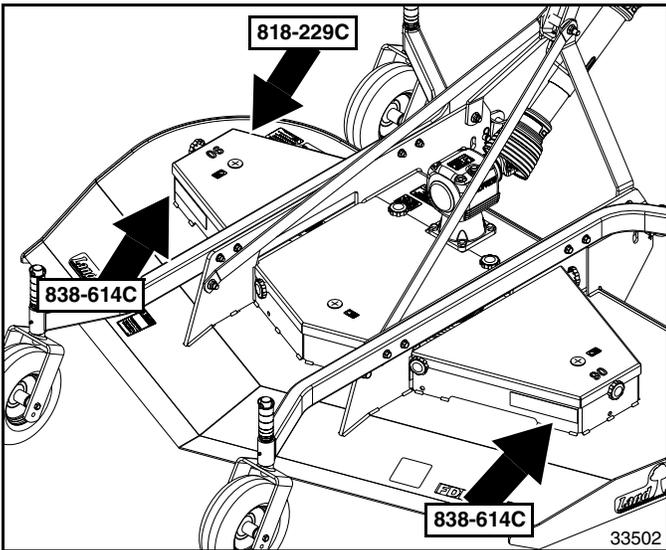
specified by Land Pride. When ordering new components make sure the correct safety labels are included in the request.

4. Refer to this section for proper label placement. To install new labels:
  - a. Clean the area where 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.



### 818-130C

Caution



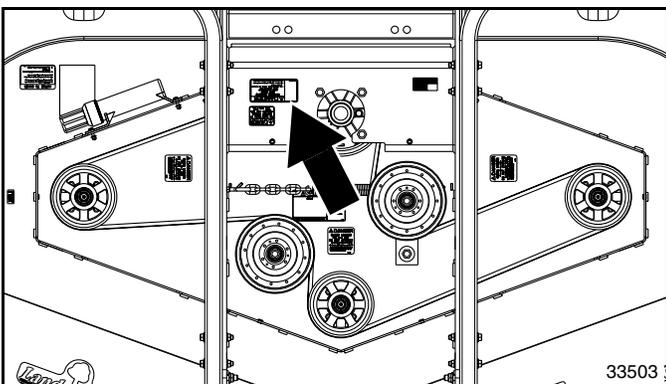
### 818-229C

Amber Reflector  
(1 each - Mounted on the left-hand side at the front)



### 838-614C

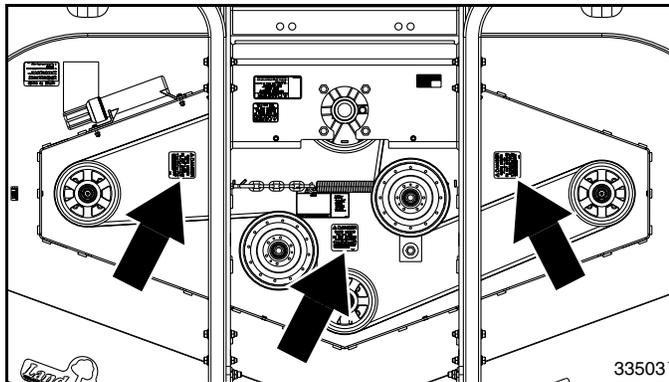
Red Reflectors (2 each - Mounted on the back)



### 818-142C

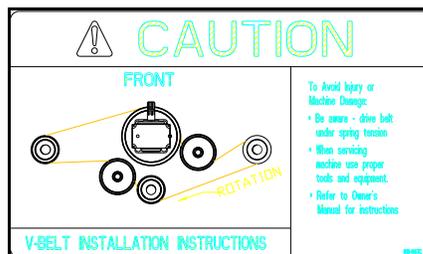
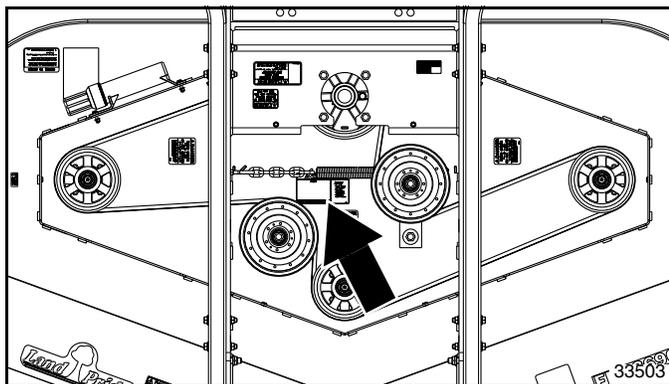
Danger: Rotating Driveline

Important Safety Information



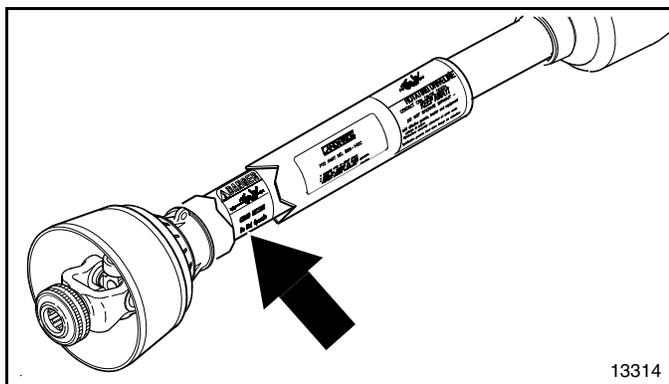
818-543C

Danger: Guard Missing



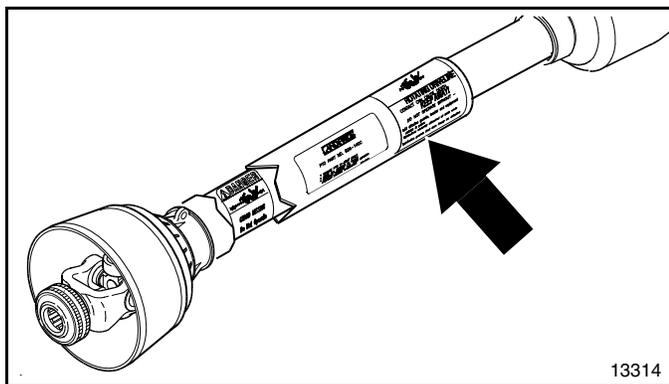
838-270C

Caution: V-Belt Installation



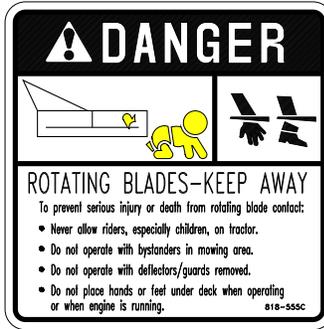
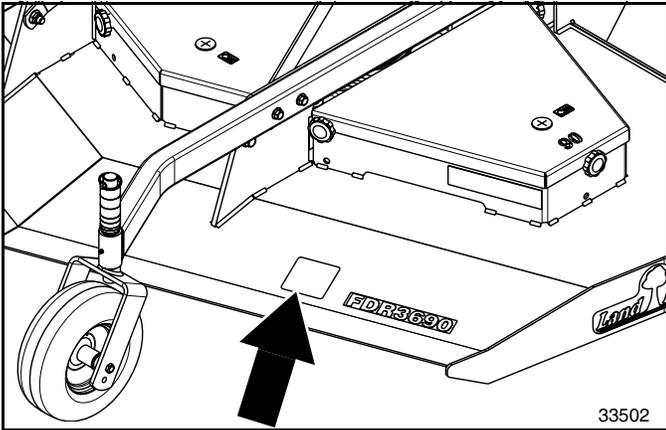
818-540C

Danger: Guard Missing



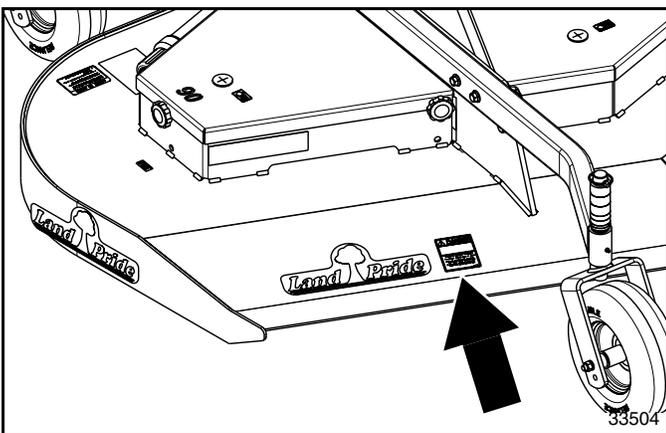
818-552C

Danger: Rotating Driveline



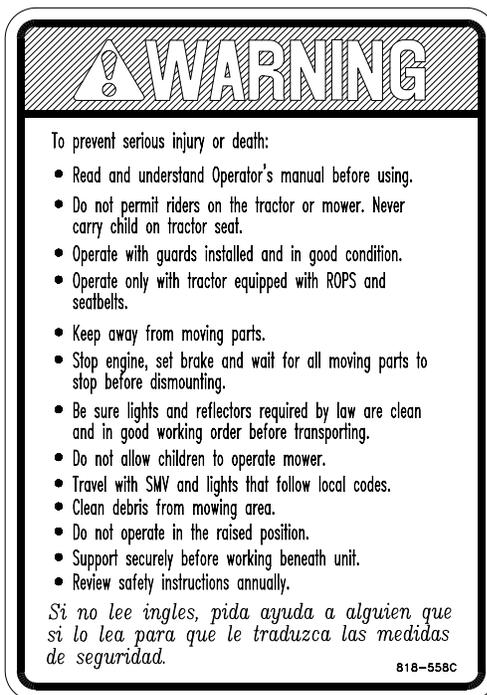
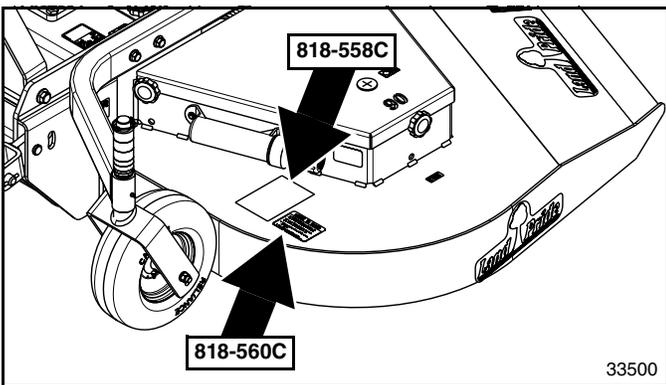
### 818-555C

Danger: Rotating Blade



### 818-556C

Danger: Thrown Object



### 818-558C

Warning: General

### NOTICE TO OWNER

An OPERATOR'S MANUAL was attached to this implement during final inspection at the factory.

If it was not attached at the time of purchase, please contact your selling dealer at once.

1. Read and understand Manual BEFORE operating the implement.
2. Pay attention to the safety messages.

818-560C

### 818-560C

Notice: Notice to Owner

## Introduction

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

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

## Application

The Land Pride FDR3690 Rear Discharge Grooming Mower is designed and built to provide high productivity and excellent cutting quality on well-maintained lawns and turf surfaces. This mower is adapted for category 1 attachment and operation on 30-60 hp utility tractors. The 90" rear discharge cutting deck and highly durable construction makes it well suited to meet the mowing needs of large estate owners, golf courses, theme parks, municipalities, ranchers, horse breeders, commercial mowing, and landscape operations. The rear discharge cutting deck will provide a superb quality of cut and superior clipping distribution when grass is cut on a frequent basis and ground conditions are not wet.

See “**Specifications & Capacities**” on page 25 and “**Features & Benefits**” on page 26 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](http://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

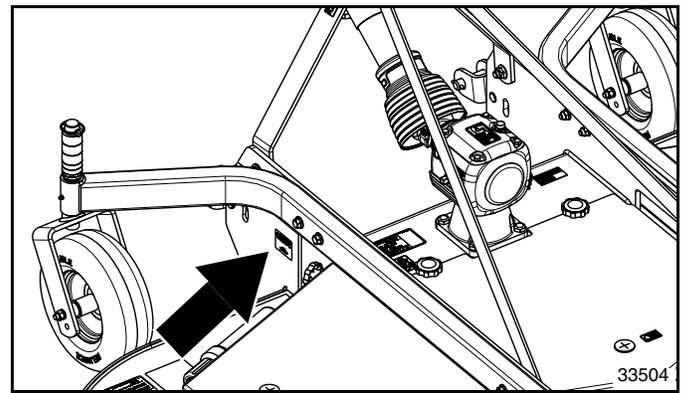
The Online Warranty Registration should be completed by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

The parts on your Grooming Mower 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 29. 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 Grooming Mower. 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  
[lp servicedept@landpride.com](mailto:lp servicedept@landpride.com)

FDR36 Series mowers are covered under Patent Numbers: US D445,432 S and US D424,071 S

Section 1: Assembly & Set-Up

### Tractor Requirements

Tractor horsepower rating should be between 30 and 60 horsepower. Tractors outside this horsepower range must not be used.

The rear power take-off (PTO) speed must be capable 540 RPM and have a 1 3/8"-6 spline.

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

### WARNING

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

The tractor **MUST** be equipped with protective equipment designed to shield the operator from thrown objects and from tractor roll over. An enclosed tractor cab with a Roll Over Protective Structure (ROPS) may qualify. See tractor's manual for type of protection your tractor has.

### Torque Requirements

Refer to "Torque Values Chart" on page 28 to determine correct torque values for common bolts.

### Dealer Preparations

This Grooming Mower has been partially assembled at the factory. Some assembly and preparation are still required before the mower is ready for operation and can be attached to the customer's tractor.

Make sure that the intended tractor conforms to the Tractor Requirements stated above. Also, read and understand the Operator's Manual for this Grooming Mower. An understanding of how it works will aid in its assembly and setup.

Go through the **Pre-Assembly Checklist** before assembling the mower. To speed up your assembly task and make the job safer, have all needed parts and equipment readily at hand.

### Assembly Checklist

	Check	Referenc
<input type="checkbox"/>	Make sure miscellaneous assembly tools are on hand: Hammer, tape measure, hacksaw, assortment of wrenches & sockets, 3/8" drill, drill bits, and spirit level.	
<input type="checkbox"/>	Have a forklift or hoist with properly sized chains and safety stands on hand capable of lifting 2500 lbs.	
<input type="checkbox"/>	Have a minimum of two people available during assembly.	
<input type="checkbox"/>	Check to see if auxiliary tractor weights are needed. See Specifications on page 25 for mower weight.	
<input type="checkbox"/>	Make sure all major components and loose parts are shipped with the machine.	Operator's Manual
<input type="checkbox"/>	Double check to make sure all fasteners & pins are installed in the correct location. Refer to the Parts Manual if unsure.  <b>NOTE:</b> All assembled hardware from the factory has been installed in the correct location. Remember location of a part or fastener if removed. Keep parts separated.	Operator's Manual & Parts Manual
<input type="checkbox"/>	Make sure working parts move freely, bolts are tight & cotter pins are spread.	Operator's Manual
<input type="checkbox"/>	Make sure all grease fittings are in place and lubricated.	Section 4 Page 23
<input type="checkbox"/>	Make sure all safety labels are correctly located and legible. Replace if damaged.	Important Safety Information
<input type="checkbox"/>	Make sure all red reflectors are correctly located and visible when machine is in transport position.	Page 4

### Upper Hitch Assembly

**Refer to Figure 1-1 on page 9:**

Rear brace bars (#5) are shipped bolted together with bolts (#7A) and banded to the crate. The A-frame (#4) is shipped bolted to rear hitch plates (#6) with bolts (#7B).

1. Remove bolts (#7B), hex flange lock nuts (#8B), and A-frame hitch (#4) from hitch plate (#6).
2. Reattach A-frame hitch (#4) to the front hitch plates with existing 5/8"-11 x 1 3/4" GR5 hex flange serrated bolt (#7B) and hex flange lock nut (#8B). Draw lock nuts up snug, do not tighten at this time.
3. Cut banding securing rear hitch braces (#5) and separate the two brace bars apart.
4. Attach rear hitch braces (#5) to rear hitch holes "AA" with existing 5/8"-11 x 1 3/4" GR8 hex flange screws (#7A) and hex flange lock nuts (#8A). Draw lock nuts up snug, do not tighten at this time.
5. Remove bolt (#12) from upper pivot hitch (#10). Be careful not to loose spacer (#11) and hex lock nut (#8).
6. Rotate A-frame (#4) up and rear hitch braces (#5) up until A-frame holes align with holes in rear hitch brace bars. Bolt A-frame, rear hitch bars, upper pivot hitch (#10), and spacer tube (#11) together as shown with existing 5/8"-11 x 5 1/2" GR5 cap screw (#12) and hex flange lock nut (#8).
7. Tighten all hex flange lock nuts (#8, #8A & #8B) to the correct torque.

## Section 1: Assembly & Set-Up

### Lower 3-Point Clevis Assembly

**Refer to Figure 1-1:**

The lower 3-Point clevises (#1) are shipped pinned together with clevis pins (#13) and banded to the shipping crate. Linchpins (#9A) are shipped with one of the lower 3-Point clevises (#1).

1. Cut banding securing 3-Point clevis (#1) to shipping crate and separate clevis apart. **Do not** remove linchpins (#9A) from 3-Point clevis until step #1 under "Gauge Wheel Assembly".
2. Using hole "A", attach lower 3-Point clevises (#1) to front hitch plates with clevis pins (#13). Secure clevis pins with hair pin cotters (#14).

**NOTE:** The 3-Point hitch system on this mower is designed for front to back flotation when mowing on uneven terrain. Additional field flotation and/or tractor clearance can be obtained by mounting 3-Point clevises with hole "B" or "C".

If clevises are mounted using hole "B" or "C", rear brace bars (#5) may be moved to holes "BC".

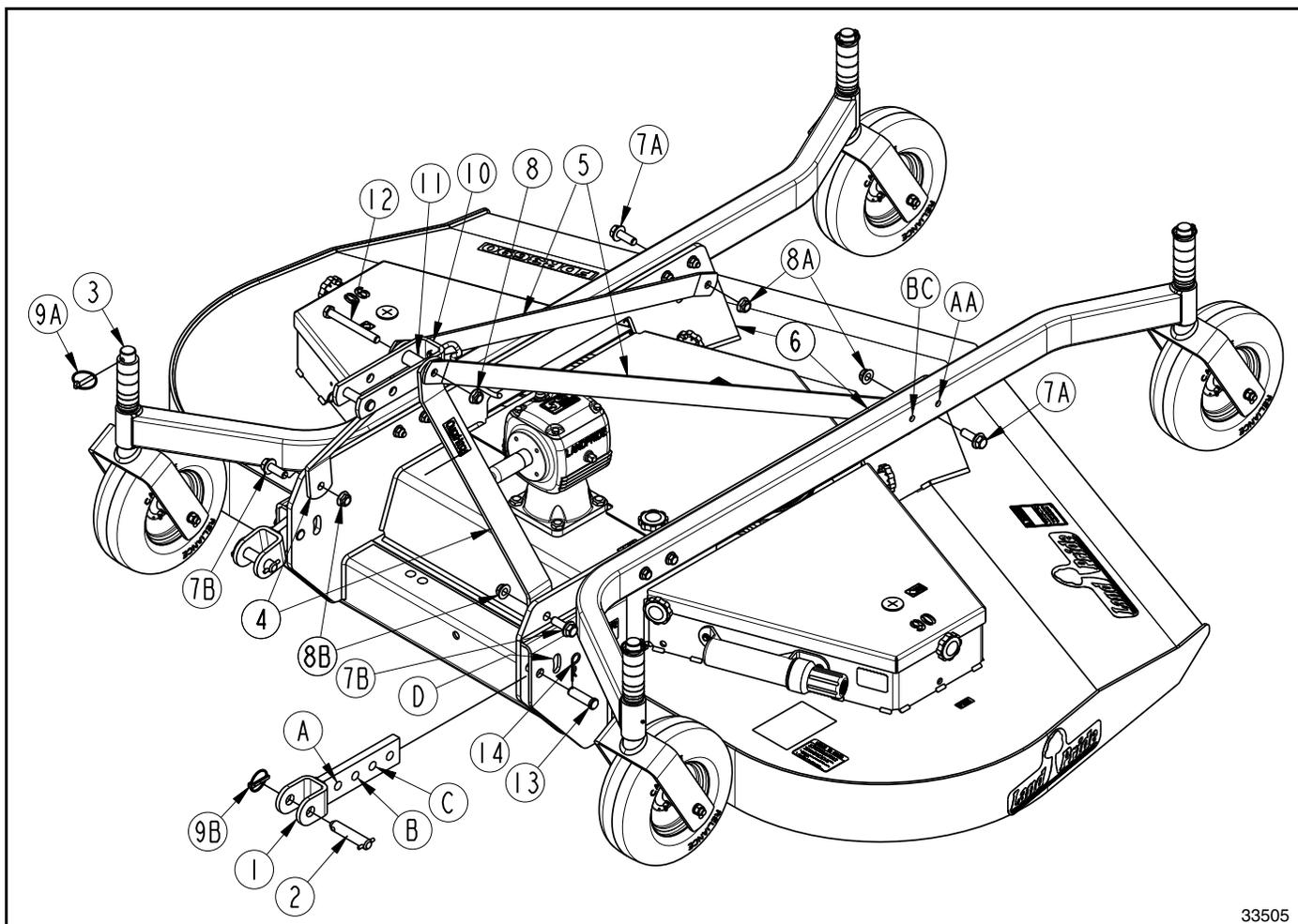
3. If operator prefers to limit lower 3-Point clevis pivot movement, then insert a 7/8" diameter hitch pin or 3/4" bolt into slots "D". (7/8" Hitch pins or 3/4" bolts are supplied by customer.) Make sure 7/8" hitch pins are secured with a locking device or 3/4" bolts with flat washers and lock nuts. Draw lock nuts up snug and then back off 1/4" turn.

### Gauge Wheel Assembly

**Refer to Figure 1-1:**

Gauge wheels are shipped from the factory attached to the gauge wheel arms with factory installed bolts for shipping purposes. Replace factory bolts with linchpins.

1. Remove linchpins (#9A) from clevis hitch (#1).
2. Remove factory bolts from top of gauge wheel spindles (#3) and install linchpins (#9A) in their place.



33505

**Hitch Braces Assembly**  
Figure 1-1

## Section 1: Assembly & Set-Up

### Tractor Hook-up

#### **DANGER**

A Crushing Hazard exists when hooking-up equipment to a tractor. Do not allow anyone to stand between tractor and implement while backing-up to implement. Do not operate hydraulic 3-Point lift controls while someone is directly behind the tractor or near the implement.

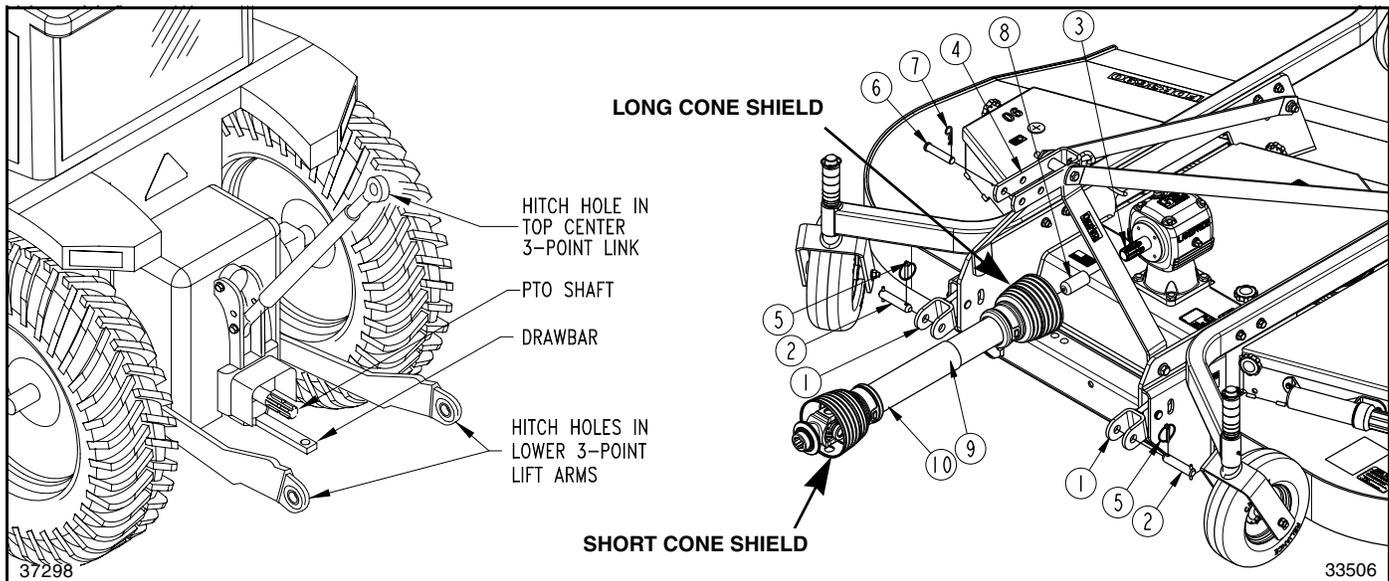
#### **DANGER**

Always set tractor transmission in park, engage park brake, shut tractor engine off and remove switch key before allowing anyone including the operator to hook-up and unhook the Grooming Mower from the tractor.

**NOTE:** Land Pride's Quick Hitch can be attached to the tractor to provide quick and easy 3-point hook-up and detachment. See your nearest Land Pride dealer to purchase a Quick-Hitch.

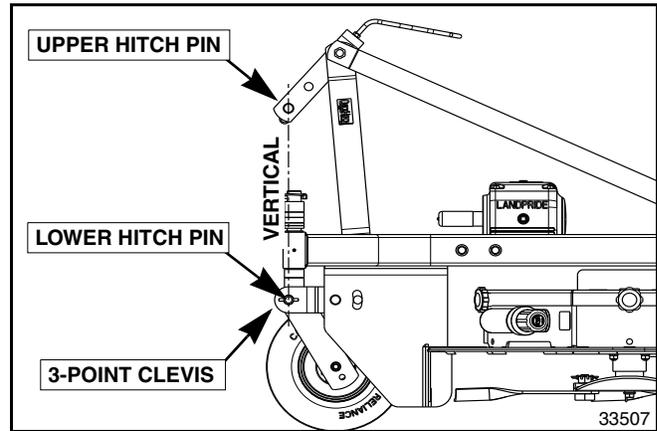
#### Refer to Figure 1-2:

1. Ensure lower arms are stabilized to prevent excessive side movement.
2. Be certain tractor draw bar will not interfere. Move draw bar ahead or remove if required. Draw bar should also be checked for clearance when unit is being raised for the first time with driveline installed.
3. Slowly back tractor up to the Grooming Mower while using 3-Point hydraulic control to align hitch holes in lower 3-Point lift arms with hitch clevis holes (#1).
4. Engage tractor park brake, shut engine off, and remove key before dismounting from tractor.
5. Insert lower hitch pins (#2) through hitch clevis holes and lower lift arm holes. Secure hitch pins with linchpins (#5).



Tractor 3-Point Hitch  
Figure 1-2

6. Attach the tractor's top center link to the mower's upper floating hitch (#4) with hitch pin (#6). Secure hitch pin with hairpin cotter (#7).



Tractor Hook-up  
Figure 1-3

### Top Center Link Adjustment

#### Refer to Figure 1-3:

1. Adjust lower clevises in or out if additional flotation is needed or if tractor interferes with mower frame. See "Lower 3-Point Clevis Assembly" on page 9 for special adjustment instructions.
2. Start tractor and raise mower until gauge wheels are off the ground. Slowly lower the mower until the gauge wheels start to touch the ground. Continue to lower the mower until the 3-Point clevises are level with the ground. Set tractor 3-Point stop at this height to hold the clevises level.
3. Lower lift arms should be an equal distance off the ground. If they are not, adjust one of the arms until they are both an equal distance off the ground and lower 3-Point clevis are both level with the ground.

## Section 1: Assembly & Set-Up

- To allow for mower flotation, adjust tractor top center link in or out until upper hitch pin is vertically above lower hitch pins as shown in Figure 1-3.

### Driveline Installation

#### **! DANGER**

Do not engage tractor PTO while hooking-up and unhooking driveline or while someone is standing near the driveline. A person's body and/or clothing can become entangled in the driveline resulting in serious injury or death.

#### **! DANGER**

All guards and shields must be installed and in good working condition at all times during mower operation!

#### **! WARNING**

Do not use a PTO adapter. A PTO adapter will increase strain on the tractor's PTO shaft resulting in possible damage to shaft and driveline. It will also defeat the purpose of the tractor's master shield and could cause bodily injury or death.

#### **! WARNING**

Always disengage PTO, place tractor in park or set park brake, shut tractor engine off, remove switch key, and wait for blades to come to a complete stop before dismantling from tractor to make adjustments.

#### **! WARNING**

Do not over speed PTO or mower damage may result. Some tractors are equipped with multispeed PTO ranges. Be certain your tractor's PTO is set for 540 rpm.

**IMPORTANT:** An additional driveline may be required if mower is to be used on more than one tractor, especially if a Quick Hitch is used.

**IMPORTANT:** The driveline must be lubricated before putting it into service. Refer to "**Lubrication**" on page 23.

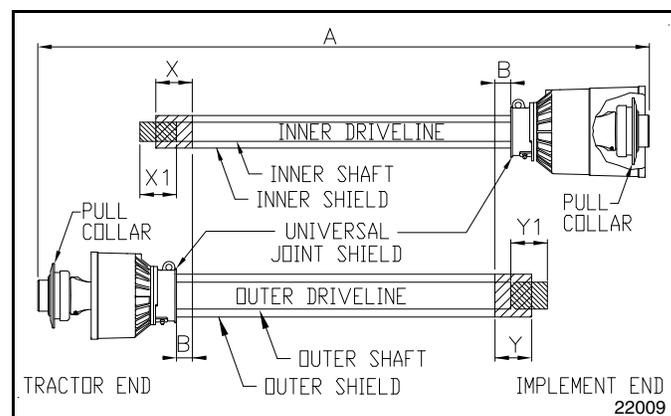
**IMPORTANT:** The tractor's PTO shaft and mower gearbox shaft must be aligned and level with each other during installation of driveline. This alignment is the shortest distance between the two shafts.

- Park tractor and mower on a level surface. Slowly engage tractor 3-Point lift lever to raise mower until gearbox shaft is in line (level) with tractor PTO shaft.
- Support mower deck at this height with support jacks or blocks to keep mower from drifting down.
- Place gear selector in park, set park brake, shut tractor engine off and remove switch key.

#### Refer to Figure 1-2 on page 10 & Figure 1-4:

- Remove gearbox shaft protector (#8) from gearbox input shaft (#3).
- Slide inner driveline universal joint with long cone shield (#9) over mower gearbox shaft. Secure driveline with yoke locking device.
- Slide outer driveline universal joint with short cone shield (#10) over tractor PTO shaft. Secure driveline with yoke locking device.
- Move driveline yokes back and forth to ensure both ends are secured to the shafts. Reattach any yoke that is loose.

**NOTE:** If driveline is too long to fit between tractor and mower, skip to "**Shorten Driveline**" on page 12.



**Check Collapsible Length**  
Figure 1-4

### Check Driveline Collapsible Length

#### Refer to Figure 1-4:

**IMPORTANT:** A driveline that is too long can bottom out causing structural damage to tractor and mower. Always check driveline collapsed 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.

- Make sure driveline is installed properly before checking driveline collapsed length (Refer to "**Driveline Installation**" instructions on page 11).
- With driveline level, measure 1" ("B" dimension) back from universal joint shield to end of outer driveline shield as shown in Figure 1-4.
  - If measurement is less than 1", shorten driveline.
  - If measurement is 1" or more, skip to "**Check Driveline Maximum Length**" on page 12.

## Section 1: Assembly & Set-Up

### Shorten Driveline

Refer to Figure 1-4 on page 11:

Be sure to first check driveline collapsed length as instructed above. If required, shorten driveline as follows:

1. Unhook driveline from tractor PTO shaft and pull outer and inner drivelines apart.
2. Reattach outer driveline to tractor PTO shaft. Pull on inner and outer drivelines to be sure universal joints are properly secured.
3. Hold inner and outer drivelines parallel to each other:
  - a. Measure 1" ("B" dimension) back from outer driveline universal joint shield and make a mark at this location on the inner driveline shield.
  - b. Measure 1" ("B" dimension) back from the inner driveline universal joint shield and make a mark at this location on the outer driveline shield.
4. Remove driveline from tractor and gearbox.
5. Measure from end of inner shield to scribed mark ("X" dimension). Cut off inner shield at the mark. Cut same amount off the inner shaft ("X1" dimension).
6. Measure from end of outer shield to scribed mark ("Y" dimension). Cut off outer shield at the mark. Cut same amount off the outer shaft ("Y1" dimension).
7. Remove all burrs and cuttings.
8. Continue with "Check Driveline Maximum Length".

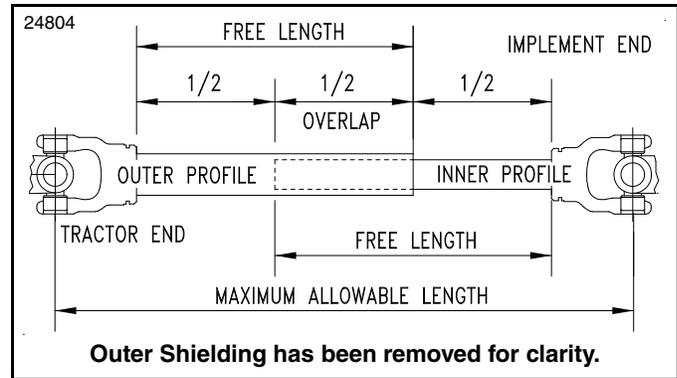
### Check Driveline Maximum Length

Refer to Figure 1-5:

Make sure driveline collapsible length is checked first. See "Check Driveline Collapsible Length" on page 11.

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

1. If not already completed, apply multi-purpose grease to inside of outer profile and reassemble driveline.
2. Assemble the two driveline profiles together with just 1/2 overlapping of the profile tubes as shown in Figure 1-5. Once assembled, measure and record the maximum allowable length for future reference. Record Maximum Allowable Length here: \_\_\_\_\_
3. Reattach driveline to tractor and gearbox shaft following "Driveline Installation" steps 1 to 7 on page 11.
4. Continue with "Check Driveline Interference" on page 12.



Driveline Maximum Allowable Length

Figure 1-5

### Check Driveline Interference

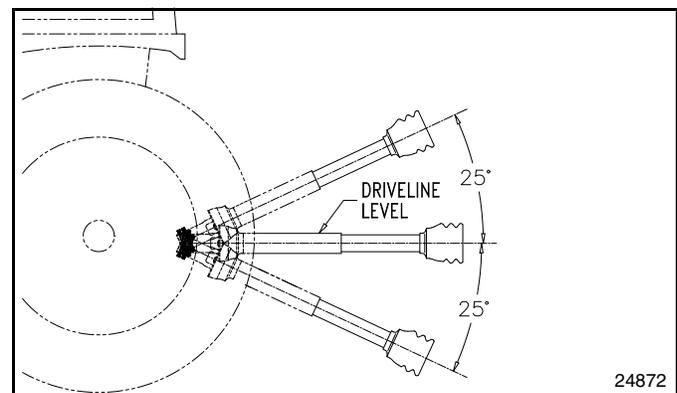
1. Start tractor and raise Grooming Mower just enough to remove support blocks from under mower.
2. Slowly engage tractor hydraulic 3-Point control lever to lower mower while checking for sufficient drawbar clearance. Move drawbar ahead, aside or remove if required.

Refer to Figure 1-6:

### WARNING

The driveline must not exceed an angle of 25 degrees up or down while operating. Exceeding this angle with driveline rotating can break the driveline and cause flying projectiles.

3. With PTO off, raise implement fully up and make the following checks below. If driveline exceeds any of the limits listed, set tractor 3-Point lift limiter at a height that will keep the driveline within its lift limits to avoid premature driveline breakdown.
  - Driveline does not exceed 25° up.
  - Driveline does not exceed maximum allowable length recorded in step 2 under "Check Driveline Maximum Length".



Maximum PTO Driveline Movement During Operation

Figure 1-6

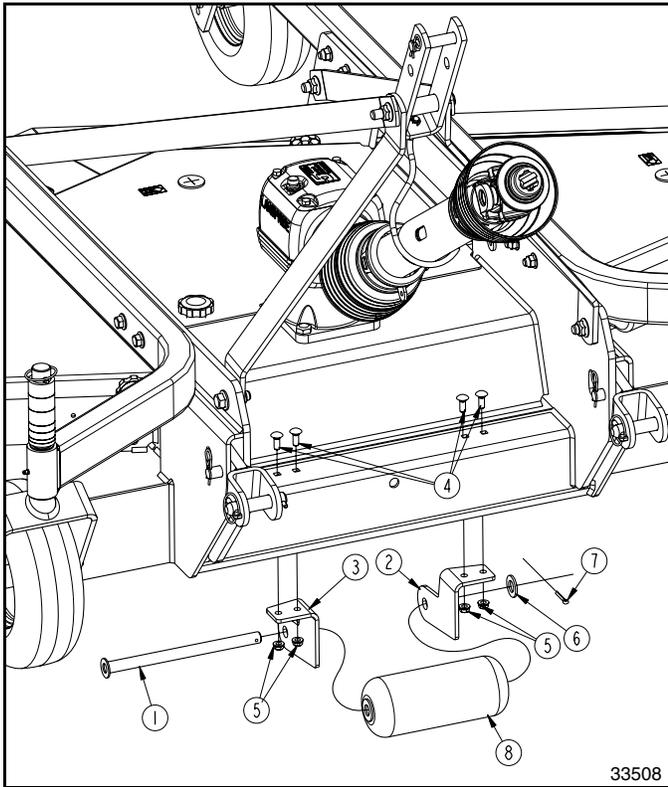
Section 1: Assembly & Set-Up

**Front Roller Assembly (Optional)**

Refer to Figure 1-7:

1. Assemble left-hand and right-hand mounting brackets (#2 & #3) to the deck with 3/8"-16 x 1" GR5 carriage bolts (#4) and hex whiz nuts (#5). Draw nuts up snug. Do not tighten until later.
2. Locate roller (#8) between mounting brackets and insert roller shaft (#1) through brackets and roller.
3. Secure roller shaft with 5/8" flat washer (#6) and 3/16" cotter pin (#7). Bend both legs of cotter pin to keep it from falling out.
4. Tighten hex whiz nuts (#5) to the correct torque.

Land Pride Part Numbers & Descriptions	
Part No.	Part Description
<b>Front Roller Assembly</b>	
310-444S	FDR3690 FRONT ROLLER ASSEMBLY



**Front Roller Assembly**  
Figure 1-7

## Section 2: Adjustments

### Gauge Wheel & Hitch Adjustments

#### **! WARNING**

Always disengage PTO, place tractor in park or set park brake, shut tractor engine off, remove switch key, and wait for blades to come to a complete stop before dismantling from tractor to make adjustments!

#### **! CAUTION**

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

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

- Gauge Wheel Axle Adjustment
- Front Wheel Cutting Height Adjustment
- Rear Wheel Cutting Height Adjustment
- 3-Point Hitch Adjustments

Proper adjustment of each of these items will provide for higher efficiency, improved cutting performance and longer blade life.

#### Gauge Wheel Axle Adjustment

Refer to Figure 2-1 on page 14:

Two gauge wheel axle holes (#1 & #2) are provided in each gauge wheel yoke. If gauge wheels are mounted in the upper axle holes (#1), cutting height ranges from 1" to 5 1/2". If gauge wheels are mounted in the lower axle holes (#2), cutting height ranges from 2" to 6 1/2". Readjust gauge wheel axles as follows:

**NOTE:** Tractor & mower should be on level ground.

1. Align upper hitch with lower clevises as instructed in "Top Center Link Adjustment" on page 10.
2. Using tractor 3-Point control lever, raise mower off the ground and support under it with secure blocking to keep mower from drifting down.

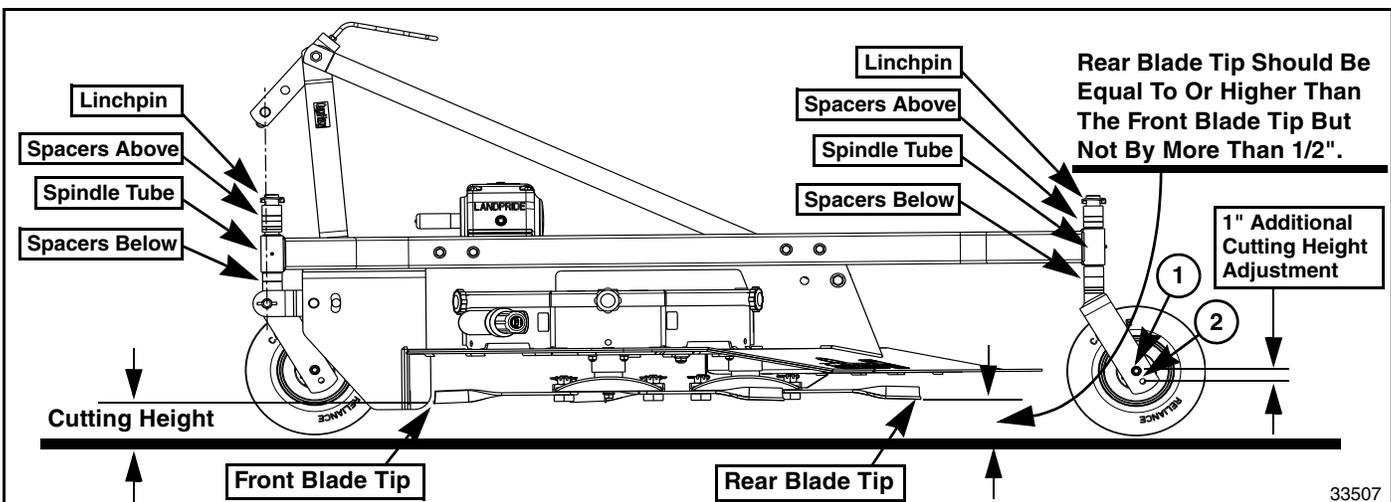
3. While holding the gauge wheel between the yoke plates, remove axle nut, lock washer, and axle bolt.
4. Keep gauge wheel and bushings between yoke plates and move gauge up or down to the preferred axle mounting hole (#1 or #2).
5. Reinsert axle bolt and secure with lock washer and axle nut. Tighten axle nut to the correct torque.
6. Repeat steps 3 thru 5 for the remaining three gauge wheels. Make certain all four gauge wheels are in the same axle mounting hole (#1 or #2).

#### Front Wheel Cutting Height Adjustment

Refer to Figure 2-1

Seven spacers are provided for each gauge wheel. Two spacers are 1/4" thick, two are 1/2" thick, and three are 1" thick. With mower still supported on blocks, reposition spacers on the front gauge wheels as follows:

1. While holding one of the front gauge wheels up, remove linchpin from gauge wheel spindle.
2. Positioning all spacers above the spindle tube allows for a minimum cutting height of 1" with gauge wheels mounted in axle hole (#1) and 2" minimum cutting height when gauge wheels are mounted in axle hole (#2).
3. Determine a cutting height in 1/4" increments and subtract the 1" or 2" minimum cutting height from the determined cutting height.
4. Move enough spacers from above the spindle tube to below the spindle tube to equal the calculated subtracted height in step 3 above.
5. Secure gauge wheel and spacers with linchpin.
6. Repeat steps a thru 5 for the other front gauge wheel.
7. See "Rear Wheel Cutting Height Adjustment" on page 15 to adjust rear gauge wheels.



Gauge Wheel and Hitch Adjustments  
Figure 2-1

## Section 2: Adjustments

### Rear Wheel Cutting Height Adjustment

Refer to Figure 2-1 on page 14:

With mower still supported on blocks, reposition spacers on the rear gauge wheels as follows:

1. While holding one of the rear gauge wheels up, remove linchpin from gauge wheel spindle.
2. Move the same thickness and number of spacers as was moved for the front gauge wheels plus up to one more 1/4" or 1/2" thick spacer from above to below the gauge wheel spindle tube.
3. Repeat steps 1 thru 2 for the other gauge wheel.
4. Slowly lower mower until gauge wheels touch the ground and mower hitch clevises are level with the ground. If not already done, set tractor 3-Point control lever stop at this height and in float position.
5. Set park brake, turn off tractor, and remove key.
6. With a rag or thick padded glove, rotate blades parallel to direction of travel.
7. Measure distances from front blade tip and rear blade tip to ground. The rear blade tip should be equal to or slightly higher than the front blade tip but not by more than 1/2". Never should the rear blade tip be lower than the front blade tip.
8. Adjust rear gauge wheels up or down an equal amount to change height of rear blade.

### 3-Point Hitch Adjustments

Refer to Figure 2-1 on page 14:

The 3-Point hitch system on this mower has been designed for front to back flotation when mowing on uneven terrain. This is done by adjusting the length of the tractor's top center link until the upper hitch pin is vertically above the lower hitch pin. See "Top Center Link Adjustment" on page 10 for detailed instructions.

### Belt Tension

Refer to Figure 2-2:

#### **WARNING**

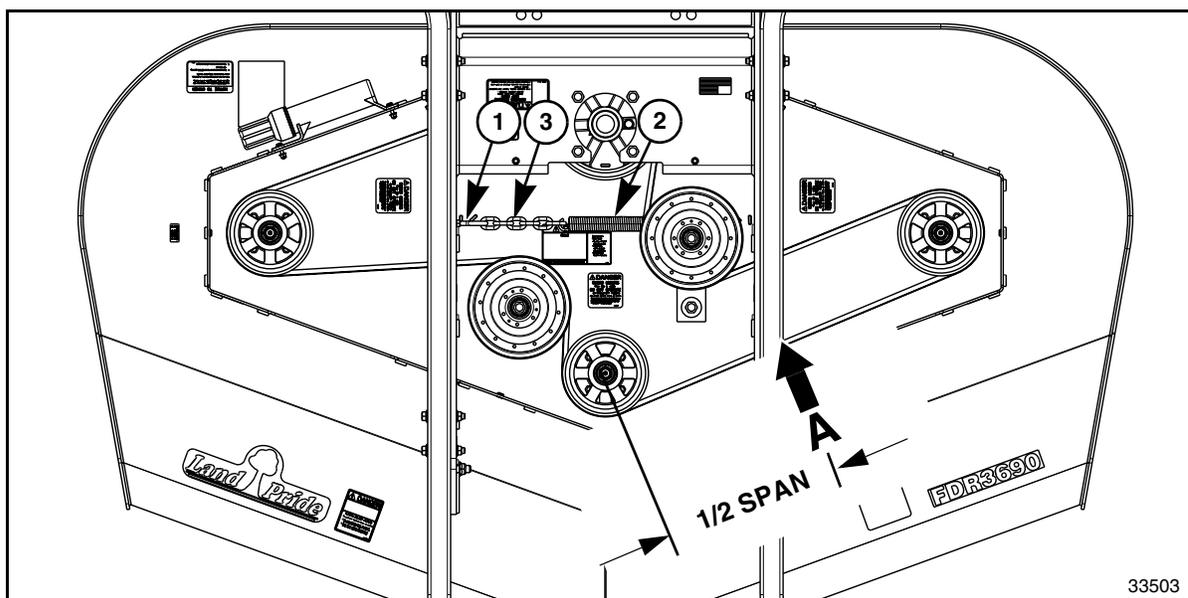
Excessive belt tension can lead to premature damage/breakage of belt and drive component and is a safety hazard to operator and bystanders.

#### **CAUTION**

Belt drive system is under spring tension; use care to avoid bodily harm while making adjustments to the belt!

**IMPORTANT:** Excessive belt tension can damage the belt and drive components prematurely and is a safety hazard to the operator and bystanders. Not enough tension can result in excessive belt slippage causing premature belt damage.

1. To check belt tension, apply force at arrow **A** with a tension tester until the belt has deflected 1/4 of an inch. This force should range from 7 to 10 lbs. on the tension tester.
2. To increase or decrease belt tension, adjust eyebolt (#1) as needed until belt tension is from 7 to 10 lbs.
3. If more belt tension is required than the eyebolt can adjust, then loosen the eye bolt until all tension on spring (#2) is removed and reattach spring (#2) in the next chain link (#3) closer to the eyebolt.
4. Retighten the eyebolt as needed until the belt is properly tensioned.



**Belt Tension (Top View)**  
Figure 2-2

Section 3: Operating Instructions

**Operating Check**

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training involved in the storage, operation, transport, and maintenance of the Grooming Mower. Therefore, it is absolutely essential that no one operates the mower 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: Adjustments**, page 14
- **Section 3: Operating Instructions**, page 16
- **Section 4: Maintenance & Lubrication**, page 20

**Tractor Shut Down Procedure**

It is essential that the tractor be shut down as noted below before making any inspections, maintenance and/or repairs to the tractor and/or mower.

1. Park tractor on a level surface. **Don't work under or around an implement parked on a steep incline.**
2. Place tractor in park and set park brake.
3. Disengage PTO if operating.
4. Shut engine off and remove switch key.
5. Wait for PTO to come to a complete stop before dismounting from tractor.
6. Wear safety glasses to inspect, make adjustments, and to preform maintenance.

**Pre-Start Checklist**

Make sure operator has completed the Operating Checklist below.

**Operating Checklist**

✓	Check	Page No.
	Read and follow all Safety Information carefully. Refer to "Important Safety Information".	Page 1
	Read and follow hook-up & preparation instructions. Refer to "Assembly & Set-up".	Page 8
	Make sure all guards and shields are in place and in good working condition.	
	Make all necessary adjustments. Refer to section on "Adjustments".	Page 14
	Read and follow all Maintenance Instructions. Refer to "Maintenance & Lubrication".	Page 20
	Lubricate mower as required. Refer to "Lubrication".	Page 23
	Check oil level in gearbox. Make certain all oil plugs are properly replaced. Refer to "Gearbox".	Page 24
	Check mower initially and periodically for loose bolts and pins. Be sure all nuts and bolts are tight. Especially make sure mower blade bolts are tight. Refer to "Torque Values Chart for Common Bolt Sizes".	Page 28

**Inspection Procedures**

**DANGER**

*Do not engage tractor PTO while hooking-up and unhooking driveline or while someone is standing near the driveline. A person's body and/or clothing can become entangled in the driveline resulting in serious injury or death.*

**WARNING**

*Always disengage PTO, place tractor in park or set park brake, shut tractor engine off, remove switch key, and wait for blades to stop rotating before dismounting from tractor!*

1. Park tractor and mower on a level surface.
2. Make sure tractor PTO is disengaged and mower blades have come to a complete stop.
3. Inspect tractor safety equipment to make sure it is in good working condition.
4. Carefully raise and lower implement to ensure drawbar, tires, and other equipment on the tractor do not contact the mower or driveline.
5. With PTO disengaged and driveline completely stopped, check mower blades for sharpness. See "**Blade Inspection**" on page 20.

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

**DANGER**

*All guards and shields must be installed and in good working condition at all times during mower operation!*

**WARNING**

*Do not over speed PTO or mower damage may result. Some tractors are equipped with multispeed PTO ranges. Be certain your tractor's PTO is set for 540 rpm.*

**IMPORTANT:** Stop PTO rotation immediately if vibration occurs during start-up or thereafter. Follow all tractor shut down procedures before dismounting from tractor. Investigate cause. Make necessary repairs and adjustments before continuing.

6. Start tractor, set throttle to an 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.
7. Once mower is running smoothly, increase tractor PTO speed to the appropriate rpm. Stop PTO rotation immediately if vibration occurs.
8. Investigate the cause of vibration. Make necessary corrections before continuing.

Section 3: Operating Instructions

Transporting

**! WARNING**

When traveling on public roads, use accessory lights, SMV sign, clean reflectors, and other adequate devices to warn operators in other vehicles of your presence. Always comply with all federal, state, and local laws.

**! WARNING**

Do not exceed maximum transport speed of 20 MPH with mower attached. Travel below 20 MPH on rough terrain. The mower can lose a tire or tires can break apart causing the operator to lose control of tractor and/or implement.

**NOTE:** Always disengage PTO before raising mower to transport position.

1. When raising mower to transport position, be sure driveline does not contact tractor or mower. Adjust and set tractor's 3-Point hitch lift height so that the PTO shaft does not contact mower deck in the fully raised position.
2. Be sure to reduce tractor ground speed when turning and leave enough clearance so the mower does not contact obstacles such as buildings, trees, or fences.
3. Select a safe ground speed when transporting from one area to another.
4. When traveling on 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.
5. Shift tractor to a lower gear when traveling over rough or hilly terrain.

Safety Information

**! DANGER**

Keep others away from the mower while it is operating. Grooming Mowers have the ability to discharge objects at high speeds causing serious injury or death. Stop blade rotation if bystanders are nearby!

**! DANGER**

Tractor PTO shield, Gearbox shaft shield and driveline shields must be secured in place when operating mower to avoid injury or death from entanglement in driveline!

**! DANGER**

Do not operate mower with a bent or broken driveline. Such a driveline can break apart while rotating at high speeds causing serious injury or death. Always remove mower from service until damaged driveline is repaired or replaced.

**! DANGER**

Do not engage tractor PTO while hooking-up and unhooking driveline or while someone is standing near the driveline. A person's body and/or clothing can become entangled in the driveline resulting in serious injury or death.

**! DANGER**

Always disconnect main driveline from tractor PTO before servicing underside of mower. PTO can be engaged if tractor is started causing mower damage, bodily injury or death.

**! DANGER**

All V-belt guards must be in good working condition and installed before PTO is engaged. Never allow fingers, hands, or other body extremities to come near a moving V-belt or pulley. Doing so can result in server bodily injury or death.

**! DANGER**

Never place hands or feet under the deck or attempt to make adjustments to the mower with PTO engaged. Mower blades rotating at high speeds cannot be seen and are located close to the deck housing. Body extremities can be cut off instantly.

**! DANGER**

Never allow riders including children on the tractor or mower. They can fall and be ran over, become entangled in rotating components, and/or pinched by moving components causing serious injury or death.

**! DANGER**

Do not operate on or travel across steep inclines where a tractor or mower could roll-over resulting in serious injury or death. Consult your tractor's manual for acceptable inclines the tractor is capable of traveling across.

**! DANGER**

Clear area to be cut of debris and unforeseen removable objects before mowing. Mark any potential hazards that cannot be removed such as dirt mounds, tree stumps, posts, large rocks, holes, and drop-offs with a visible flag.

**! DANGER**

Always disengage PTO before lifting mower up and never operate mower in the raised position. The mower can discharge objects at high speeds resulting in injury or death.

**! DANGER**

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

## Section 3: Operating Instructions

### DANGER

*Do not use mower blades for a fan. Mower blades are not properly designed or guarded for this use. Using mower blades as a fan can result in serious injury and/or death.*

### WARNING

*Use Grooming Mower for its intended purpose only. Do not use mower to lift or carry objects; to pull fence posts, stumps, or other objects; or to tow other equipment. Doing so can damage the mower, cause serious bodily injury, or death.*

### WARNING

*Always disengage PTO, place tractor in park or set park brake, shut tractor engine off, remove switch key, and wait for blades to stop rotating before dismounting from tractor!*

### WARNING

*Do not operate mower with loose pins, bolts and nuts. Loose hardware can cause the mower to not preform properly and may lead to breakage that can cause bodily injury or death.*

### WARNING

*Always make certain driveline yokes are secured to the tractor PTO shaft and mower drive shaft before engaging PTO. A loose driveline can slips off the end of a connected shaft while rotating and cause serious bodily injury or death.*

### WARNING

*Do not use a PTO adapter. A PTO adapter will increase strain on the tractor's PTO shaft resulting in possible damage to shaft and driveline. It will also defeat the purpose of the tractor's master shield and could cause bodily injury or death.*

### WARNING

*Do not over speed PTO or mower damage may result. Some tractors are equipped with multispeed PTO ranges. Be certain your tractor's PTO is set for 540 rpm.*

**IMPORTANT:** Stop PTO rotation immediately if vibration occurs during start-up or thereafter. Follow all tractor shut down procedures before dismounting from tractor. Investigate cause. Make necessary repairs and adjustments before continuing.

1. Clear the area to be mowed of rocks, branches, and other foreign objects that might be picked up and thrown by the mower blades. Mark any potential hazards that can't be cleared.
2. Lower mower to ground. Set tractor throttle at idle. Engage PTO to start blades rotating. Increase throttle to 540 PTO rpm.
3. At first, begin mowing in a low gear and shift up until the desired speed is achieved - always maintain 540 PTO rpm regardless of gear selection. Mower blades will cut better at a faster blade speed than at reduced throttle.
4. After mowing the first 50 feet, stop and check to see that the mower is adjusted properly.
5. **Do not** make sharp turns or attempt to back up while mower is on the ground.
6. **Do not** engage PTO with mower in the fully raised position. **Do not** engage or disengage PTO at full throttle.
7. Grass is best cut when it is dry. Mowing wet grass can cause plugging resulting in grass clumps behind the mower.
8. Grass should be mowed frequently as shorter clippings deteriorate faster.
9. If mowing extremely tall grass, it is best to raise cutting height and mow the area, then lower cutting height and mow a second time at the desired height.
10. Periodically check for foreign objects wrapped around the mower blades. Remove foreign objects only after following "**Tractor Shut Down Procedure**" on page 16.
11. Frequently inspect the mower for loose bolts and nuts. Tighten all loose bolts and nuts as indicated in the "**Torque Values Chart**" on page 28.

## Section 3: Operating Instructions

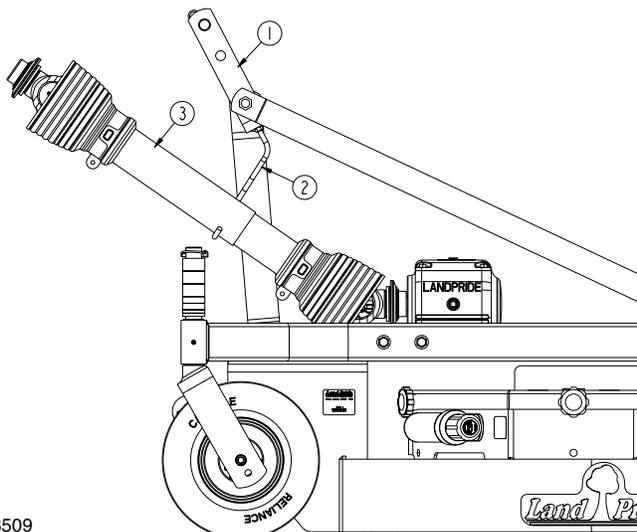
### Unhooking the Mower

The following steps should be done when unhooking the Grooming Mower from the tractor.

1. Park on a level solid surface.
2. Shut tractor engine off and engage parking brake.
3. Lower mower to the ground and chock front and back side of wheels to keep mower from moving.
4. Follow all tractor shut down procedures outlined on page 16 before dismounting from the tractor.
5. Unhook 3-Point hitch from tractor. Reinstall hitch pins, linchpins, and hairpin cotters in cutter hitch.

#### Refer to Figure 3-1:

6. Rotate upper hitch (#1) up and store driveline (#3) in driveline hanger (#2) to keep dirt out of its u-joints.
7. See “**Long Term Storage Instructions**” on page 22 if mower is to be stored for a long time.



Driveline Storage  
Figure 3-1

33509

### General Operating Instructions

By now you should have thoroughly read your Grooming Mower Operator's Manual, properly attached your Land Pride FDR3690 to your tractor, and reviewed the operating checklist. You should have also inspected the area where you intend to mow and cleared it of safety hazards and foreign objects. If you have not yet completed all of these functions, it is an absolute must that you do so now before proceeding.

Now that you are properly briefed and prepared, it's time to start the tractor and move to your starting point. When transporting to your mowing site, select a safe ground transport speed. When traveling on roadways, transport in such a manner that faster moving vehicles can easily see you and pass you safely. When travelling over rough and hilly terrain, reduce your speed and avoid quick or sharp steering corrections. Take extra care to ensure that the mower doesn't come into contact with obstacles such as trees, buildings, or fences.

When you have arrived at the mowing site, start the tractor, raise the deck to make sure that everything is properly attached and that the driveline is not in a bind or in contact with the mounting frame. Also make sure the tractor tires aren't in contact with the deck. With the deck still in the raised position, proceed to your starting point and lower your deck to the ground in mowing position. Reduce your tractor engine rpm to idle and engage PTO. Gradually raise tractor engine rpm to achieve the 540-rpm PTO speed. Now begin mowing at a ground speed of approximately 4-5 mph.

The proper mowing speed will ultimately be determined by ground conditions, desired finish, common sense, and good safe mowing practices by the operator.

Grass is best cut when it is dry. Mowing in wet grass can cause plugging resulting in grass clumps behind the mower. Grass should be mowed frequently as shorter clippings deteriorate faster. When mowing in tall grass it is best to raise the cutting height, mow the area, then lower the cutting height, and mow a second time.

After mowing approximately 50 ft., stop the tractor, disengage the PTO, set the brake, turn off the engine, remove the key, and dismount the tractor to see if the mower is adjusted properly. If you need to dismount the tractor on a hill or incline to inspect, adjust, or park the mower for any reason, place wheel chocks under the rear tires for added safety. Once you have made necessary adjustments, you may continue mowing. Do not engage the PTO at high engine rpm and avoid making sharp turns if at all possible. If anyone approaches while you are mowing, disengage the PTO and stop the tractor.

With a little practice and experience you will become very good at operating your Land Pride FDR3690 Rear Discharge Grooming Mower. Always remember that there is no substitute for proper maintenance and good safe operating practices. See “**Features and Benefits**” section or “**Product Specifications**” for additional information and performance enhancing options.

## Section 4: Maintenance & Lubrication

### Maintenance

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

Check all bolts and pins after using the unit for several hours and on a regular basis thereafter to ensure they are tight and secured. Lubricate components on schedule. Replace worn, damaged or illegible safety labels by obtaining new labels from your Land Pride dealer.

#### **! DANGER**

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

#### **! DANGER**

*Perform maintenance only on a mower that is not running. Disengage PTO, place tractor in park or set park brake, shut tractor engine off, remove switch key, and wait for blades to come to a complete stop before dismounting from tractor to perform maintenance!*

#### **! DANGER**

*All V-belt guards must be in good working condition and installed before PTO is engaged. Never allow fingers, hands, or other body extremities to come near a moving V-belt or pulley. Doing so can result in server bodily injury or death.*

#### **! WARNING**

*Frequently check all hardware to make certain it is tight and not broken or missing. Such hardware can cause the mower to not preform properly and may lead to breakage that can cause bodily injury or death.*

#### **! WARNING**

*Replace worn, damaged, or missing parts only with genuine Land Pride Parts. Replacing parts with other brands can cause the equipment to not perform properly and may lead to breakage that can cause bodily injury or death.*

#### **! CAUTION**

*Do not alter Land Pride equipment or replace parts with other brands. Doing so can cause equipment to perform improperly and may lead to breakage that can cause bodily injury. Replace parts only with genuine Land Pride parts.*

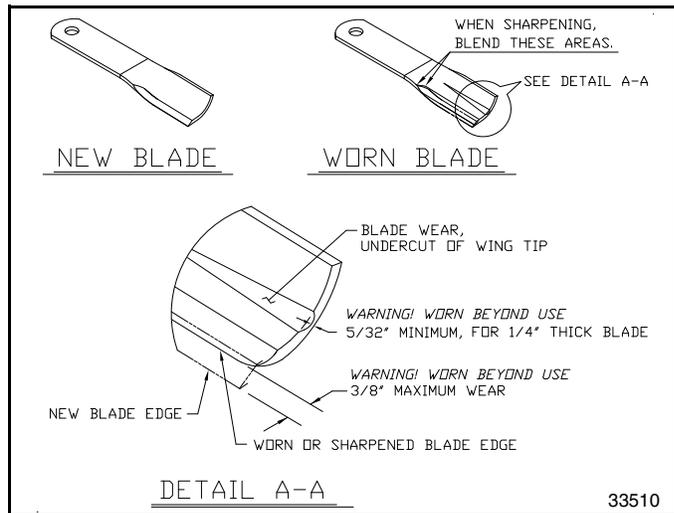
#### **! CAUTION**

*ALWAYS wear eye protection and gloves while inspecting, removing, sharpening, and replacing mower blades.*

### Blade Inspection

**Refer to Figure 4-1:**

Always inspect cutting blades before each use. Make certain they are properly installed and in good working condition. Replace any blade that is damaged, worn, bent, or excessively nicked. Never try to straighten a bent blade! Small nicks can be ground out when sharpening.



**Inspection of Blades & Sharpening  
Figure 4-1**

#### **! DANGER**

*Bent, Deformed or Split Blades should be removed from unit and discarded. Never weld a broken or cracked blade. DO NOT attempt to straighten to reuse such blades. ALWAYS replace with a new Land Pride blade to assure safety.*

#### **! WARNING**

*DO NOT attempt to modify a blade, such as hard surfacing, heat or cold treating, or by any other method.*

1. Check blades for wear. Blade performance will be reduced as blades wear and are resharpened.
2. Check blades to see if they are bent, deformed, or split. **DO NOT** attempt to straighten or weld blades for reuse. They should be removed and discarded.
3. If the blade cutting edge is dull or nicked, it should be sharpened or replaced if worn out.

### Blade Removal

**Refer to Figure 4-2 on page 21:**

Remove cutting blades to sharpen or replace as follows:

1. Place tractor gear selector in park, set park brake, disengage PTO if operating, shut engine off, remove switch key and wait for blades to come to a complete stop before dismounting from tractor.
2. Disconnect main driveline from tractor PTO and secure cutter deck in the up position with solid supports before servicing underside of mower.

## Section 4: Maintenance & Lubrication

- Remove blades by grasping the end of blade using a rag or a thick padded glove, while loosening and removing cotter pin (#4), hex slotted nut (#3), blade bolt (#2), and mower blade (#5).

### Blade Sharpening or Replacement

Refer to Figure 4-3:

#### Land Pride Part Numbers & Descriptions

Part No.	Part Description
<b>High Lift Blade</b> (2 blades required per spindle)	
891-257C	1/4" x 2 1/2" x 14" CW BLADE

**IMPORTANT:** Replace mower blades in pairs with genuine Land Pride blades only. Not replacing both blades will result in an out-of-balance condition.

Sharpen blades in pairs. Do not remove any more material than necessary. Paired blades should weigh within 1 1/2 oz. of each other.

Out-of-balance blades will contribute to bearing damage and structural cracks in the mower housing.

- Clean blade and mounting surface of all debris before sharpening or replacing the blades.
- See Figure 4-3: Grind cutting edge at the same bevel as the original and sharpen only the top of the cutting edge to maintain sharpness.
- Check blade balance by weighing both blades individually. They should weigh the same with not more than 1 1/2 oz. difference between the two blades that make up a pair.
- Make an identifying mark on both blades to make certain they are kept together as a matching pair.

### Blade Installation

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

**IMPORTANT:** Always install blade with cutting edge facing direction of rotation and wing tips pointing up.

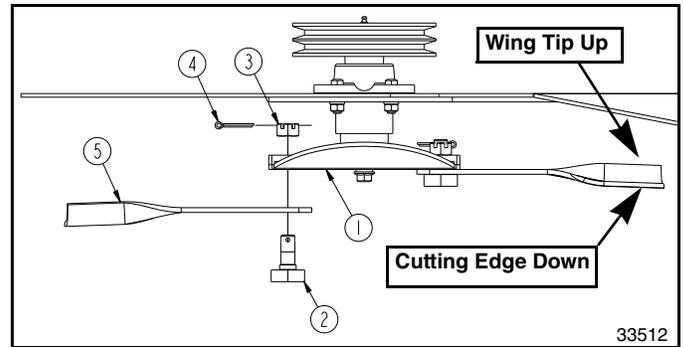
- Mount blade with wing tips pointing up towards bottom of deck.
- Reinstall blade (#5) to blade carrier (#1) with blade bolt (#2) and hex slotted nut (#3). Do not tighten hex slotted nut.
- Draw hex slotted nut up snug and then back nut up until first available slot in nut aligns with hole in blade bolt. Insert cotter pin (#4) and bend both legs back around the nut to keep cotter pin from falling out.

### V-Belt Installation

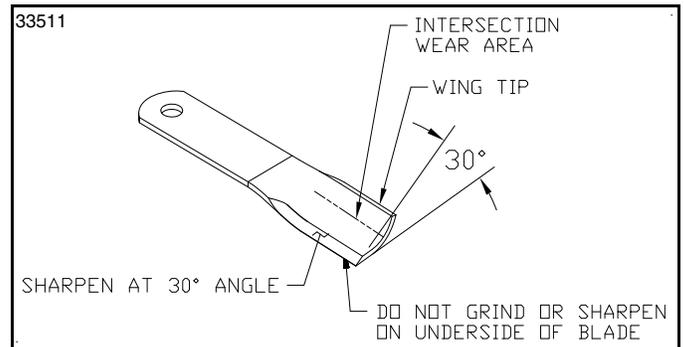
Refer to Figure 4-4:

An illustration similar to Figure 4-4 is also illustrated on a decal located on the deck under the center belt guard.

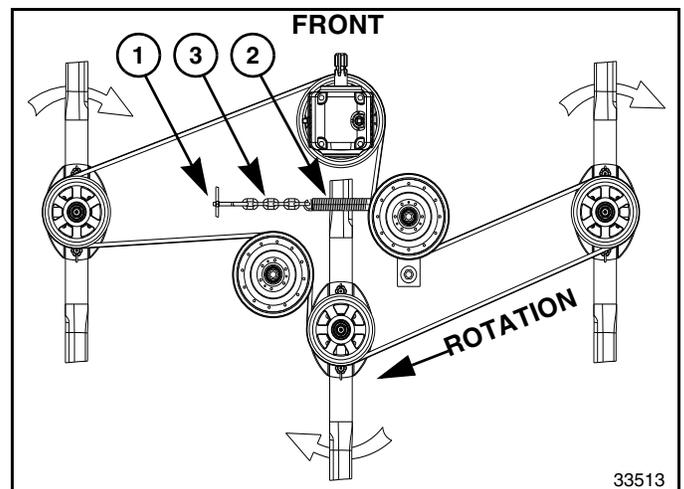
- Remove right, center, and left-hand belt covers.



**Mower Blade Assembly**  
Figure 4-2



**Blade Sharpening**  
Figure 4-3



**V-Belt Installation (Top View)**  
Figure 4-4

- Disengage belt tension by loosening eyebolt (#1) and removing spring (#2) from tension-chain (#3).
- Remove old belt from pulleys and install new belt around all six pulleys. Check to make certain belt is properly positioned in all the pulley grooves.
- Engage belt tension by hooking the tension spring back onto the chain and tightening the eyebolt to the proper tension. See **"Belt Tension"** on page 15 for detailed tensioning instructions.
- Reinstall belt covers and secure with knobs.

Section 4: Maintenance & Lubrication

**Long Term Storage Instructions**

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

 **WARNING**

*Perform maintenance only on a mower that is not running. Disengage PTO, place tractor in park or set park brake, shut tractor engine off, remove switch key, and wait for blades to come to a complete stop before dismounting from tractor to perform maintenance!*

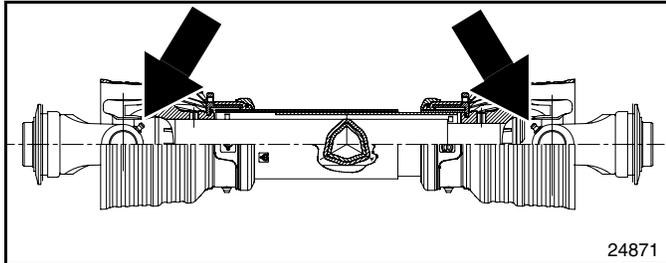
1. Clean off any dirt or grease that may have accumulated on the deck and moving parts. Scrape off compacted dirt from the bottom of the deck and then wash the surface thoroughly with a garden hose. A coating of oil may also be applied to the lower deck area to minimize oxidation.
2. Check blades and blade bolts for wear and replace if necessary. See “**Blade Inspection**” on page 20.
3. Inspect mower for loose, damaged, or worn parts and adjust or replace as needed.
4. Repaint parts where paint is worn or scratched to prevent rust. Ask your Land Pride dealer for aerosol 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 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 the “**Lubrication**” portion of this section starting on page 23.
7. Store mower on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer mower life.
8. Follow all unhooking instructions on page 19 when disconnecting tractor from mower.

Lubrication

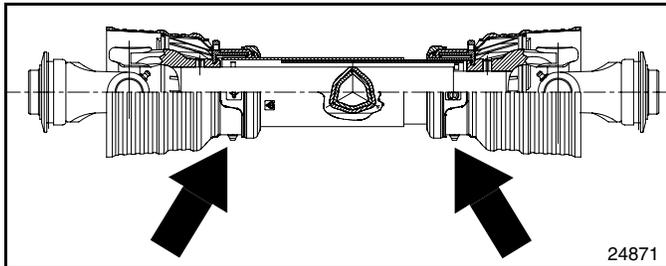
<b>Lubrication Legend</b>	Multi-purpose spray lube	Multi-purpose grease lube	Multi-purpose oil lube	<b>50 Hrs</b> Intervals in hours at which lubrication is required



	<b>25 Hours</b>
--	-----------------

**Driveline Shaft U-Joints**

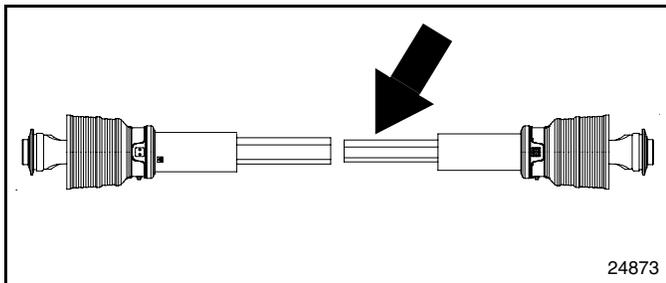
Type of Lubrication: Multi-purpose Grease  
Quantity - 4 to 8 Pumps



	<b>20 Hours</b>
--	-----------------

**Inner Tube Bearings**

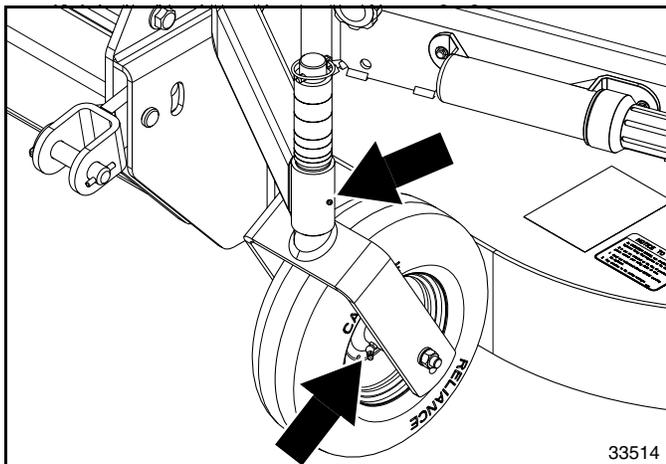
Type of Lubrication: Multi-purpose Grease  
Quantity - As Required



	<b>20 Hours</b>
--	-----------------

**Driveline Profiles**

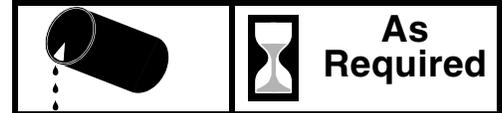
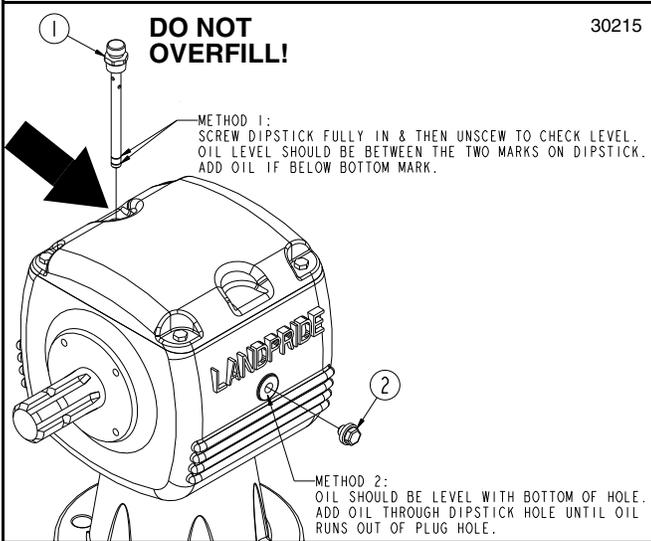
Type of Lubrication: Multi-purpose Grease  
Quantity - Clean & coat inner profile tube of driveline with a light film of grease and then reassemble.



	<b>25 Hours</b>
--	-----------------

**Wheel Support Bushings & Wheel Bearings**

4 - Zerks: (Wheel Support Bushing)  
4 - Zerks (Wheel Bearing)  
Type of Lubrication: Multi-purpose Grease  
Quantity - As Required



### Gearbox

**IMPORTANT:** Do not overfill gearbox with oil! Oil will expand when hot! Make sure mower is level and oil is cool before checking oil level.

**Method 1:** Unscrew top vented dipstick (#1). Wipe oil from dipstick and screw dipstick in without tightening. Unscrew dipstick and check oil on dipstick. If below bottom level mark, add recommended gear lube through dipstick hole until oil reaches top mark on dipstick. Reinstall vented dipstick and tighten.

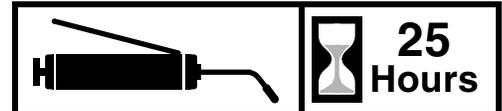
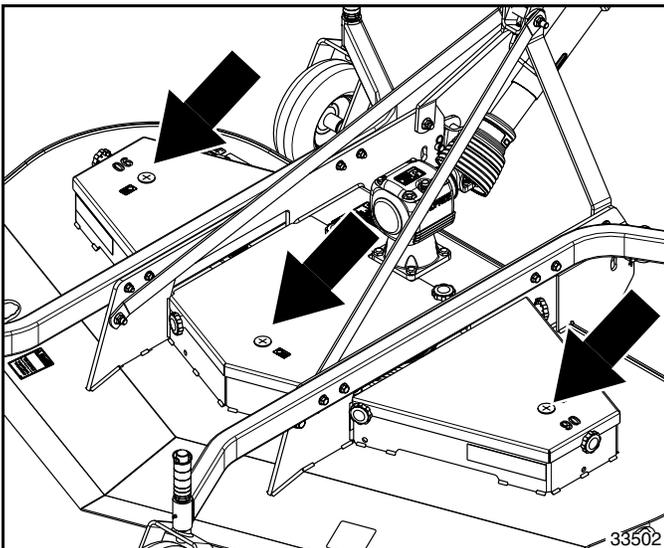
**Method 2:** Remove side oil plug (#2). If oil is below bottom of plug hole, add recommended gear lube through top dipstick hole until oil flows out of side plug hole. Reinstall and tighten side oil plug (#2) and vented dipstick (#1).

Type of Lubrication: 80-90W EP Gear Lube

Quantity = Fill until oil reaches top mark on dipstick or begins to flow out side plug hole in gearbox.

**IMPORTANT:** Your mower is shipped with a vented 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 vented dipstick was not included.

**NOTE:** Use a suction or siphon pump to drain gearbox of oil when there is not an oil drain plug.

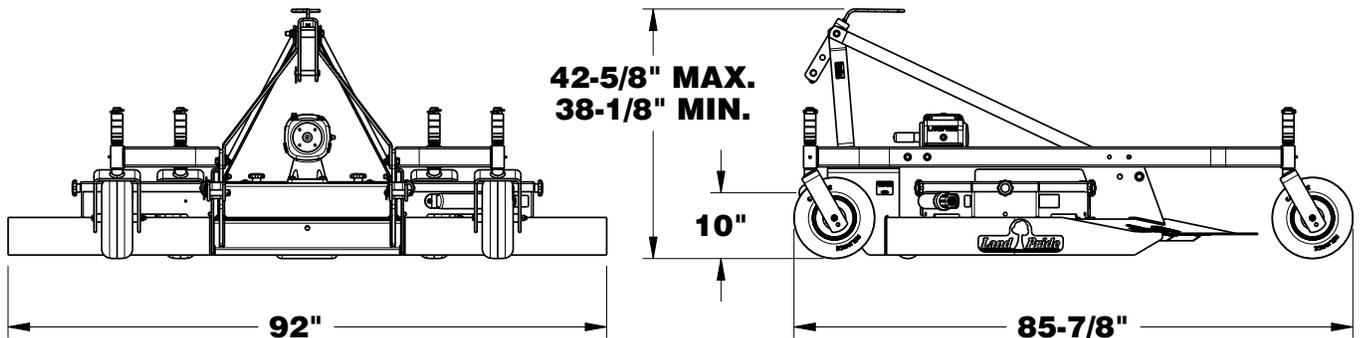


### Bearing in Blade Spindle Hubs

Type of Lubrication: Multi-purpose Grease

### FDR3690 Rear Discharge Mower

	Specifications & Capacities
<b>Model Numbers</b>	<b>FDR3690</b>
<b>Tractor HP.Rating</b>	30-60 HP.
<b>Cutting Width</b>	90"
<b>Overall Width</b>	92"
<b>Overall Height</b>	38 1/8"
<b>Overall Length</b>	85 7/8"
<b>Weight Without Front Roller</b>	930 lbs.
<b>Front Roller</b>	Optional, Weight = 6 lbs.
<b>Cutting Height</b>	1" to 6 1/2" in 1/4" increments with plated spacers
<b>Deck Material Thickness</b>	3/16"
<b>Blade Tip Speed</b>	16,500 FPM
<b>Blades Construction - 6 each</b>	Free swinging, 1/4" x 2 1/2" x 14" Hardened, Medium Lift (2 per blade spindle)
<b>Blade Overlap</b>	2"
<b>Blade Spindles</b>	1 3/8" Stress-Proof Shaft
<b>Deck Spindle Housings</b>	Cast Iron Greasable Hubs
<b>Belt</b>	Double V Powerband Belt
<b>Belt Take-Up</b>	Spring Loaded Idler
<b>Gearbox</b>	540 RPM Cast Iron Housing Gearbox With Beveled Gears, 1:2.75 Ratio
<b>Gearbox Oil Capacity &amp; Type</b>	3.5 Pints of 80-90W EP Gear Lube
<b>Discharge</b>	Rear
<b>Hitch</b>	Category I
<b>Quick Hitch Compatible</b>	Fits Land Pride Quick Hitch
<b>Lower Hitch</b>	Floating Clevis with Plated Pins
<b>Top Link</b>	Floating Clevis
<b>Castered Gauge Wheels</b>	5" x 13" Semi-Solid Tire with Bearings
<b>Caster Wheel Spindle</b>	1 1/4" Diameter with Greasable Bushing
<b>Driveline</b>	Heavy-Duty Cat. 4 W/Quick Coupler



33515



### FDR3690 Rear Discharge Mower

Features	Benefits
<b>Gearbox HP rating</b>	30 - 60 HP
<b>Rear discharge</b>	The wide, even dispersal of grass leaves a fine thin layer directly behind the mower, vs. a possible windrow to the side. Keeps grass from blowing in unwanted areas. Easier to mow around objects.
<b>Deflectors</b>	Built-in to direct material and debris down.
<b>Clevis type lower hitch points</b>	Allows for easy hook-up by being able to remove pins and back into clevises.
<b>Floating 3-Point</b>	Top and bottom hitch points float up and down which allows the mower to float over uneven terrain.
<b>1/4" Rolled front on deck</b>	Roll formed front deck edging designed to take heavy abuse.
<b>Frame-over-deck design</b>	Frames takes stress out of deck by supporting it.
<b>3/16" Deck thickness</b>	Heavy deck material to aid in overall strength and longevity. Reinforced spindle mounts.
<b>Lower hitch points adjust in and out</b>	Accommodates many tractor configurations by adjusting in and out.
<b>Semi-solid tires with roller bearings</b>	Semi-solid tires offer premium flotation. Roller bearings allow for a long life. Semi-solid tires offer shock absorption.
<b>Heavy-duty Gauge wheel arms</b>	Rectangular tubing increases strength.
<b>Non-aligned gauge wheels</b>	Rear wheels don't track behind the front wheels to reduce laying grass over.
<b>High blade tip speed</b>	16,500 FPM For cleaner cutting and better dispersion of clippings.
<b>Blade overlap</b>	Blade overlap of 2" assures no skipping in tight turns.
<b>1 3/8" Machined blade spindle with ball bearings and cast iron housing.</b>	Machined spindle for balanced performance and accuracy, ball bearings for smooth and quiet running, cast iron housing for added protection and durability.
<b>Top greasing blade spindles</b>	Makes greasing blade spindles easy. No shields to remove.
<b>Double V Kevlar belt</b>	Kevlar material adds additional strength.
<b>Spring loaded adjustable idler</b>	Allows for constant and proper tension on belt. Better than adjusting gearbox for belt tension.
<b>Top Hitch</b>	Top hitch has two hook-up points which allows greater lifting leverage for smaller tractors.
<b>5 Year Limited Gearbox warranty</b>	Shows our confidence in the gearbox integrity. 5 Years Parts & Labor
<b>Driveline hanger</b>	For ease in hookup and storage of driveline. Keeps driveline off ground.
<b>Quick Hitch Compatible</b>	Compatible with Land Pride Quick Hitch for easy attachment and removal. Increases productivity.

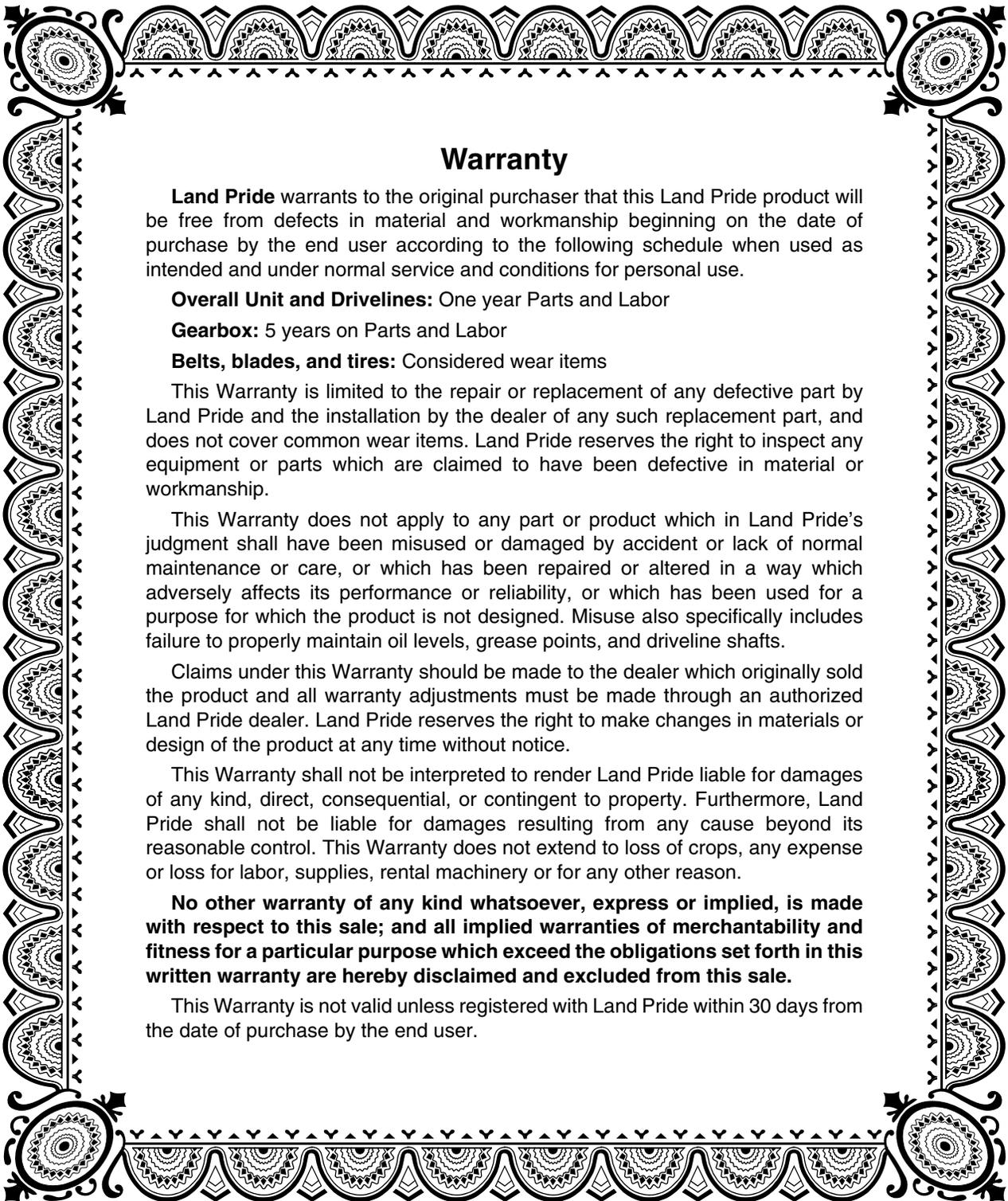
### Troubleshooting Chart

Problem	Solution
<b>Rear discharge area plugged</b>	Check installation of belt.
	Wait until grass dries.
	Raise cutting height of mower and cut grass twice.
	Mow at full throttle (540 PTO rpm), check PTO speed and tractor engine.
	Shift transmission to a lower gear.
 <b>CAUTION</b> <i>Do not try to clean rear discharge area when mower is running. Bodily harm may occur!</i>	
<b>Belt slipping</b>	Unplug and clean mower deck.
	Remove belt guard shields and clean sheaves.
	Tighten spring take-up eyebolt.
	Replace belt.
<b>Patches of uncut grass</b>	Mow at full throttle (540 PTO rpm), check PTO speed and tractor engine.
	Shift transmission to a lower gear.
	Tighten spring take-up eyebolt.
	Sharpen and balance or replace blade.
<b>Excessive vibration</b>	Replace blades.
	Replace drive belt.
	Replace pulleys or align.
	Remove belt guard shields & clean debris from belt area & sheaves.
<b>Gearbox noisy</b>	Check lubricant level.
<b>Blades scalping grass</b>	Raise cutting height by adjusting wheels.
	Change mowing pattern.
	Reduce speed turns.
<b>Uneven cut</b>	Shift to a lower gear.
	Level mower.
	Sharpen blades & balance or replace.
<b>Tractor loaded down by mower</b>	Mow at full throttle (540 PTO rpm).
	Shift to a lower gear.
	Clean mower.



Torque Values Chart for Common Bolt Sizes													
Bolt Size (inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi <sup>1</sup>	N · m <sup>2</sup>	ft-lb <sup>3</sup>	N · m	ft-lb	N · m	ft-lb	mm x pitch <sup>4</sup>	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	<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						
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.



## 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 Drivelines:** One year Parts and Labor

**Gearbox:** 5 years on Parts and Labor

**Belts, blades, and tires:** Considered wear items

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

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

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

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

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

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

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

**Model Number** \_\_\_\_\_

**Serial Number** \_\_\_\_\_



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