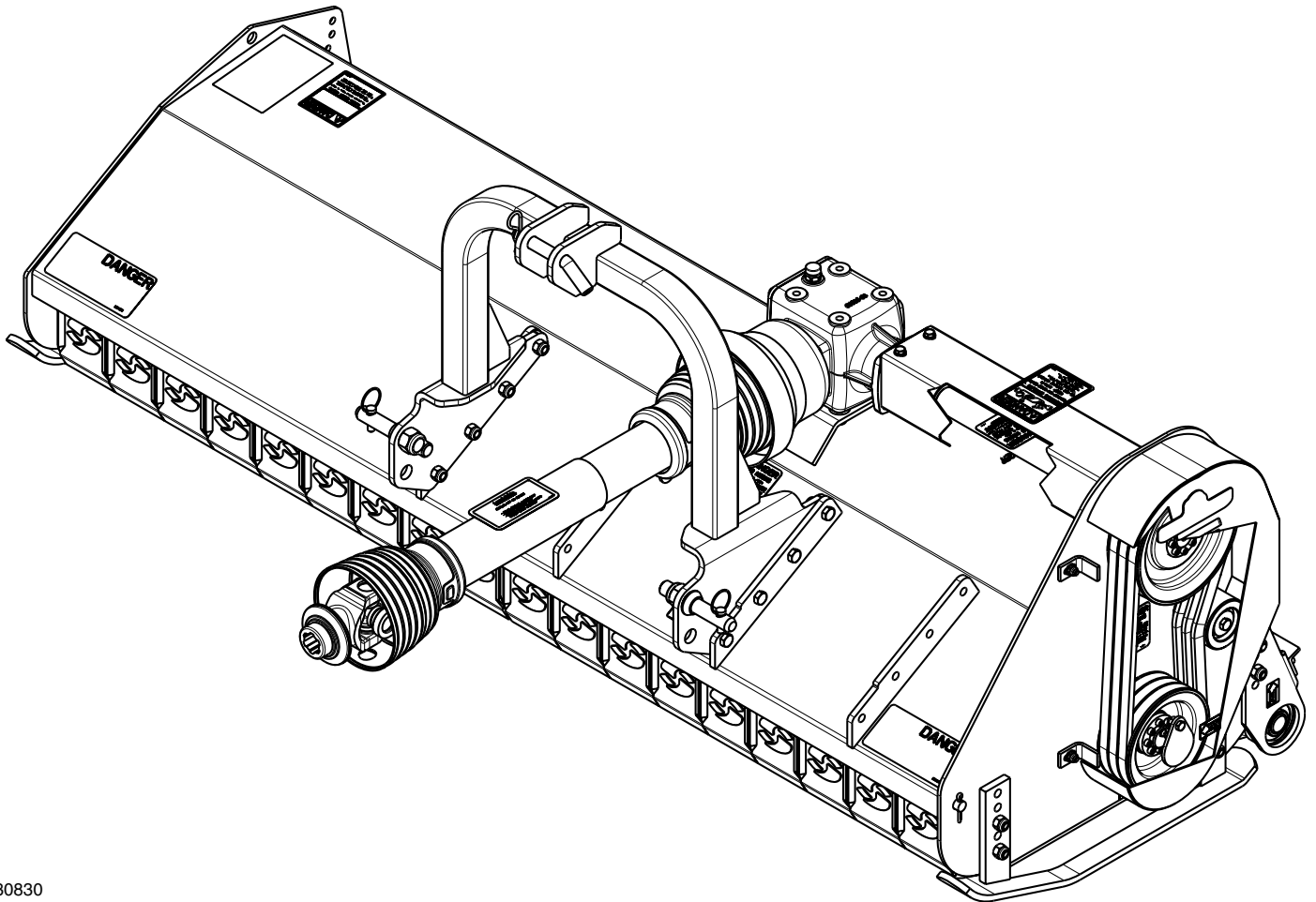


Flail Mowers

FM2160 & FM2172



30830

309-069M
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	1	Section 4: Maintenance & Lubrication	18
Safety at All Times	1	Maintenance	18
Look For The Safety Alert Symbol	1	Trash Removal & Rotor Knife Access	18
Safety Labels	4	Rotor Knife Replacement	18
Introduction	7	V-Belt Installation	19
Application	7	Long Term Storage	19
Using This Manual	7	Lubrication	20
Terminology	7	Driveline Shaft U-Joints	20
Definitions	7	Driveline Profiles	20
Owner Assistance	7	Inner Tube Bearings	20
Serial Number	7	Gearbox	21
Further Assistance	7	Extension Shaft Bearing	21
Section 1: Assembly & Set-up	8	Belt Take-up Pivot Arm	21
Tractor Requirements	8	Roller Bearing (Both Ends)	22
Torque Requirements	8	Cutter Rotor Bearing (Both Ends)	22
Hitch Assembly	8	Section 5: Specifications & Capacities	23
Tractor Hook-Up	9	Section 6: Features & Benefits	24
Driveline Installation	9	Section 7: Troubleshooting	25
Check Driveline Collapsible Length	10	Section 8: Torque Values Chart	26
Shorten Driveline Length	10	Section 9: Warranty	27
Check Driveline Extended Length	11		
Check Driveline Interference	11		
Section 2: Operating Instructions	12		
Startup Checklist	12		
Tractor Shut Down Procedure	12		
Transporting	12		
Safety Information	12		
Mowing Instructions	13		
Unhooking The Flail Mower	14		
General Operating Instructions	14		
Section 3: Adjustments	16		
Leveling Mower	16		
Hitch Adjustments	16		
Cutting Height Adjustment	16		
Belt Tension	17		



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Printed in the United States of America.

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

Safety at All Times

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

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

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

Look For The Safety Alert Symbol



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

Be Aware of Signal Words

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

⚠ DANGER

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

⚠ WARNING

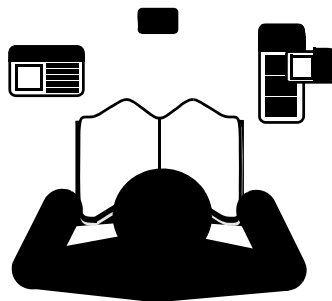
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

⚠ CAUTION

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

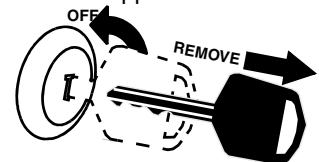
For Your Protection

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



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



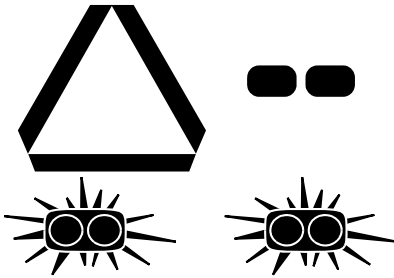
Dealer QR Locator

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

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

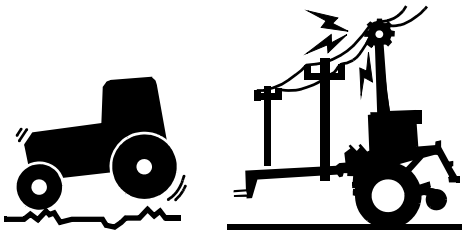
Use Safety Lights and Devices

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



Transport Machinery Safely

- ▲ Comply with state and local laws.
- ▲ Use towing vehicle and trailer of adequate size and capacity.
- ▲ Secure equipment towed on a trailer with tie downs and chains.
- ▲ Sudden braking can cause a trailer to swerve and upset. Reduce speed if trailer is not equipped with brakes.
- ▲ Avoid contact with any over head utility lines or electrically charged conductors.
- ▲ Engage parking brake when stopped on an incline.

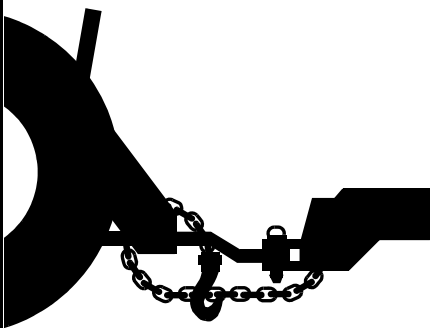


- ▲ Maximum transport speed for an attached implement is 20 mph. DO NOT EXCEED. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrains require a slower speed.
- ▲ As a guideline, use the following maximum speed weight ratios for an attached implement:
 - 20 mph** when weight of attached implement is less than or equal to the weight of machine towing the implement.
 - 10 mph** when weight of attached implement exceeds weight of machine towing implement but not more than double the weight.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of the machine towing the load.



Use A Safety Chain

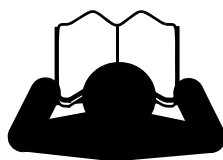
- ▲ A safety chain will help control drawn machinery should it separate from the tractor drawbar.
- ▲ Use a chain with the strength rating equal to or greater than the gross weight of the towed machinery.
- ▲ Attach the chain to the tractor drawbar support or other specified anchor location. Allow only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



Practice Safe Maintenance

- ▲ Understand procedure before doing work. Use proper tools and equipment, refer to Operator's Manual for additional information.
- ▲ Work in a clean dry area.
- ▲ Lower attached implement to the ground, put tractor in park, turn off engine, and remove key before performing maintenance.
- ▲ Allow implement to cool before working on it.
- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on implement.

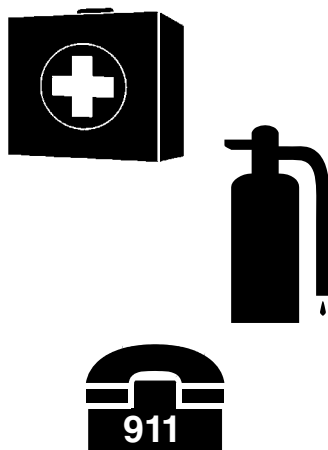
- ▲ Do not grease or oil implement while it is in operation.
- ▲ Inspect all parts. Make certain parts are in good condition & installed properly.
- ▲ Replace parts on this machine with genuine Land Pride parts only. Do not alter this machine in a way which will adversely affect its performance.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Remove all tools and unused parts from implement before operation.



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 familiar with this type of injury immediately. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene may result.



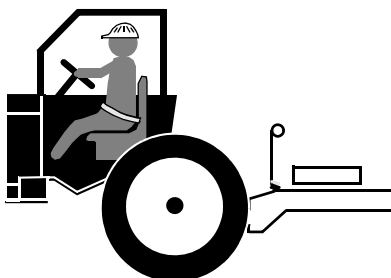
Tire Safety

- ▲ Tire changing can be dangerous and should be 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.



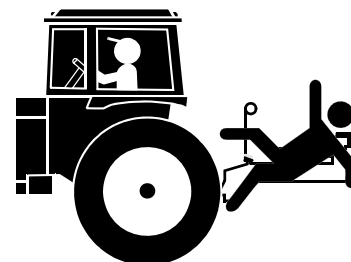
Use Seat Belt and ROPS

- ▲ 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.



Safety Labels

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

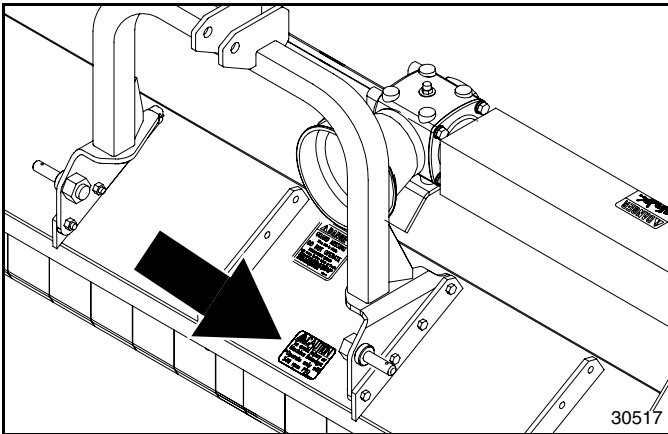
1. Keep all safety labels clean and legible.
2. Refer to this section for proper label placement. Replace all damaged or missing labels. Order new labels from your nearest Land Pride dealer. To find your nearest dealer, visit our dealer locator at www.landpride.com.
3. Some new equipment installed during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

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

4. Refer to this section for proper label placement.

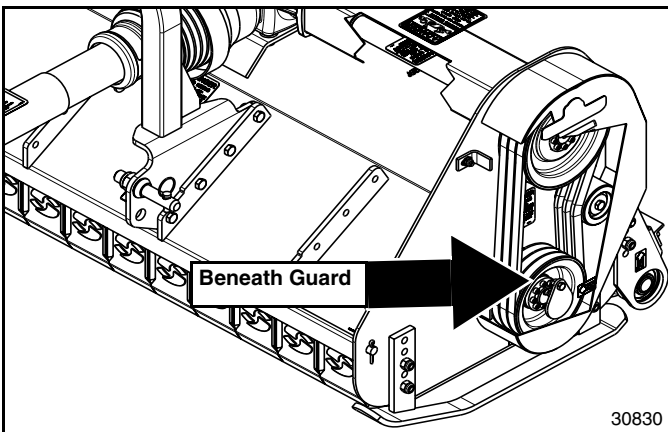
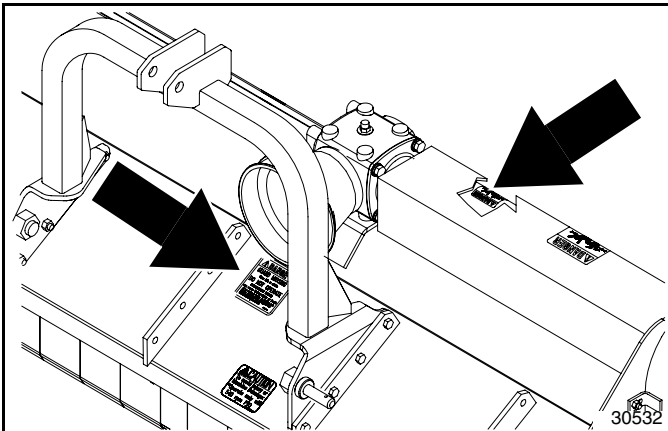
To install new labels:

- a. Clean surface area where label is to be placed.
- b. Spray soapy water onto the cleaned area.
- c. Peel backing from label and press label firmly onto the surface.
- d. Squeeze out air bubbles with edge of a credit card or with a similar type of straight edge.



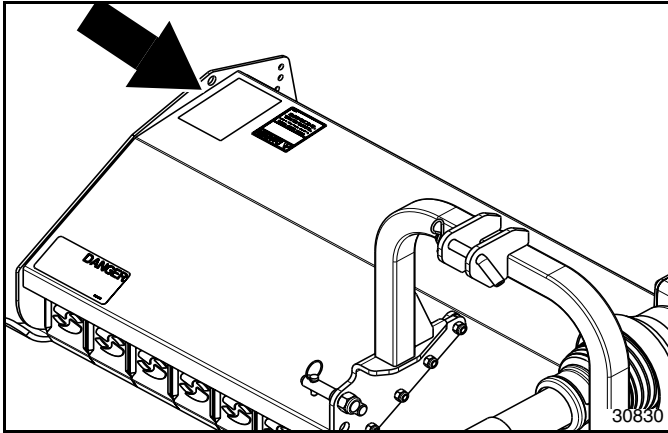
818-130C

Caution: To avoid injury



818-543C

Danger: Guard Missing



! WARNING

To prevent serious injury or death:

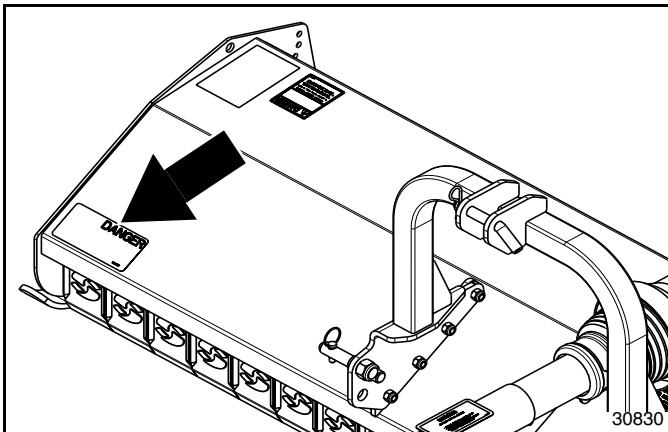
- Read and understand Operator's manual before using.
- Do not permit riders on the tractor or mower. Never carry child on tractor seat.
- Operate with guards installed and in good condition.
- Operate only with tractor equipped with ROPS and seatbelts.
- Keep away from moving parts.
- Stop engine, set brake and wait for all moving parts to stop before dismounting.
- Be sure lights and reflectors required by law are clean and in good working order before transporting.
- Do not allow children to operate mower.
- Travel with SMV and lights that follow local codes.
- Clean debris from mowing area.
- Do not operate in the raised position.
- Support securely before working beneath unit.
- Review safety instructions annually.


Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

818-558C

818-558C

Warning: General





! DANGER

ROTATING KNIVES HAZARD

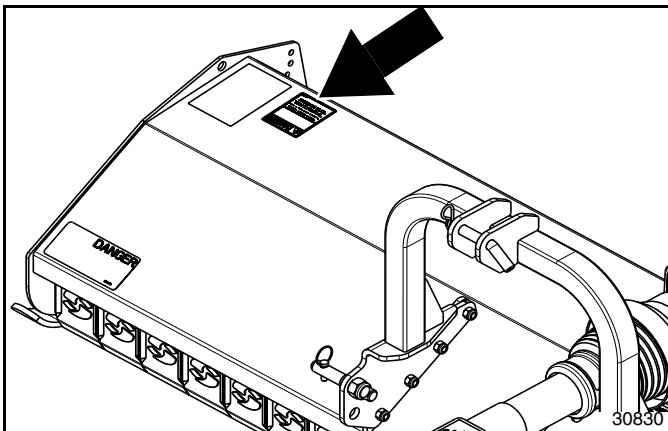
To prevent serious injury or death from rotating knives:

- DO NOT go under frame when rotor is turning or engine is running. Keep others away.
- Disconnect & lockout power source BEFORE adjusting or servicing.
- Keep hands, feet, hair, and clothing away from moving parts.

838-079C

838-079C

Danger: Rotating Knives
Both sides



! DANGER



THROWN OBJECT HAZARD

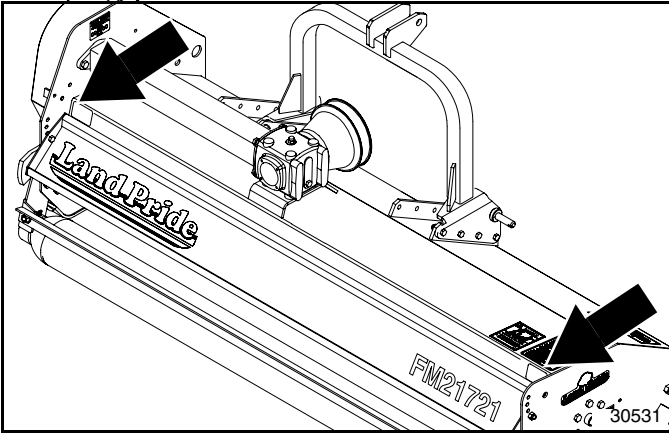
To prevent serious injury or death:

- * Do not operate unless all guards are installed and in good condition.
- * Stop blade rotation if bystanders come within several hundred feet.

818-556C

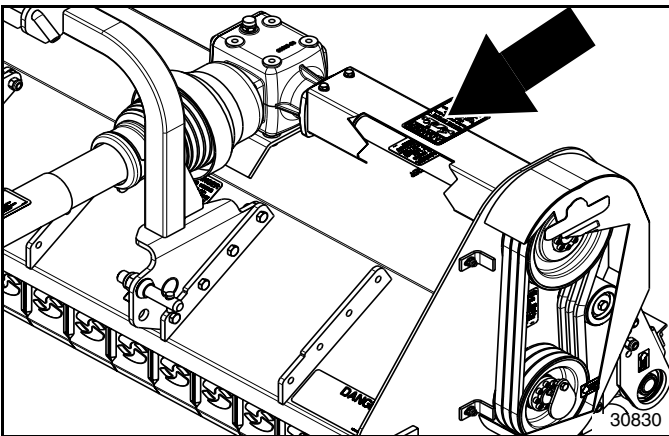
818-556C

Danger: Thrown Object



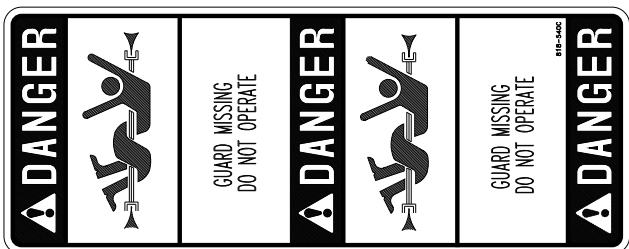
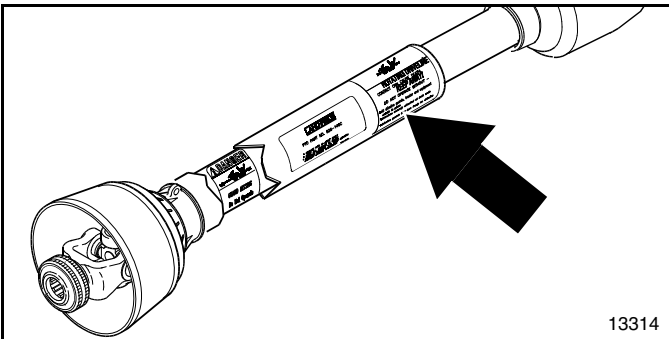
818-230C

Red Reflector (Both ends)



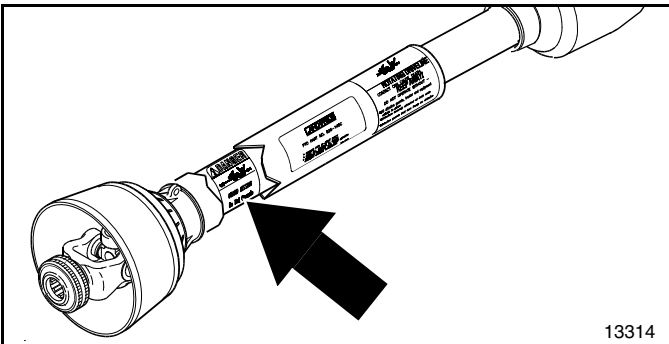
818-552C

Danger: Rotating Driveline



818-540C

Danger: Guard Missing



Land Pride welcomes you to the growing family of new product owners. This Flail 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 medium duty FM2160 and FM2172 Flail Mowers are designed & built to provide excellent cutting performance on gently sloping or slightly contoured grassy right-of-ways, roadsides, ditches, pastures, nurseries, and smaller fields of light row crop debris, stalks, and residual agricultural trash. The 60" and 72" mowing widths, 3/4" to 4" cutting heights and ability to cut weeds and brush up to 1" in diameter makes these Flail Mowers well suited for nursery, city, and agricultural applications where grass and brush are present. Either model equipped with duckfoot style knives perform extremely well at providing a very respectable quality of cut for grooming yards, municipal parks, medians, and right-of-ways.

Both models offer a Cat. 1 3-point hitch for tractors not to exceed 55 PTO HP. The 3-point hitch offers offset capability up to 6 1/2" to the right with FM2160 mower and 17 1/2" to the right with FM2172 mower making them desirable for cutting in and around trees with low hanging branches. Both models also offer a Cat. 4 and 540 RPM shielded driveline. The FM2160 and FM2172 mower, with their horizontal cutting rotor design, provide for greatly reduced potential of launching projectiles out from under the mower making them an excellent choice for state and municipal mowing applications.

See “**Specifications & Capacities**” on page 23 and “**Features & Benefits**” on page 24 for additional information and performance enhancing options.

Using This Manual

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

Terminology

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

Definitions

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

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

Owner Assistance

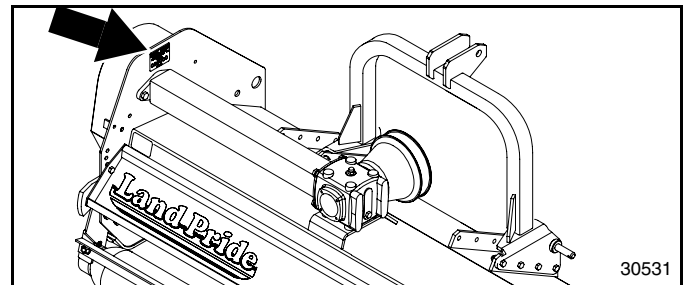
The Online Warranty Registration should be completed by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

The parts on your Flail 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 27. Always provide model number and serial number when ordering parts and in all correspondences with your Land Pride dealer. Refer to Figure 1 for location of your serial number plate.



Serial Number Plate Location
Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new 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

Tractor Requirements

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

Horsepower Rating 25-55 HP
Hitch Type 3-Point Cat. I
Rear PTO Speed 540 RPM
Tractor Weight See Important Note Below

IMPORTANT: Your tractor may require additional ballast to maintain steering control. Refer to your tractor Operator's Manual and machine weights on page 23 to make this determination.

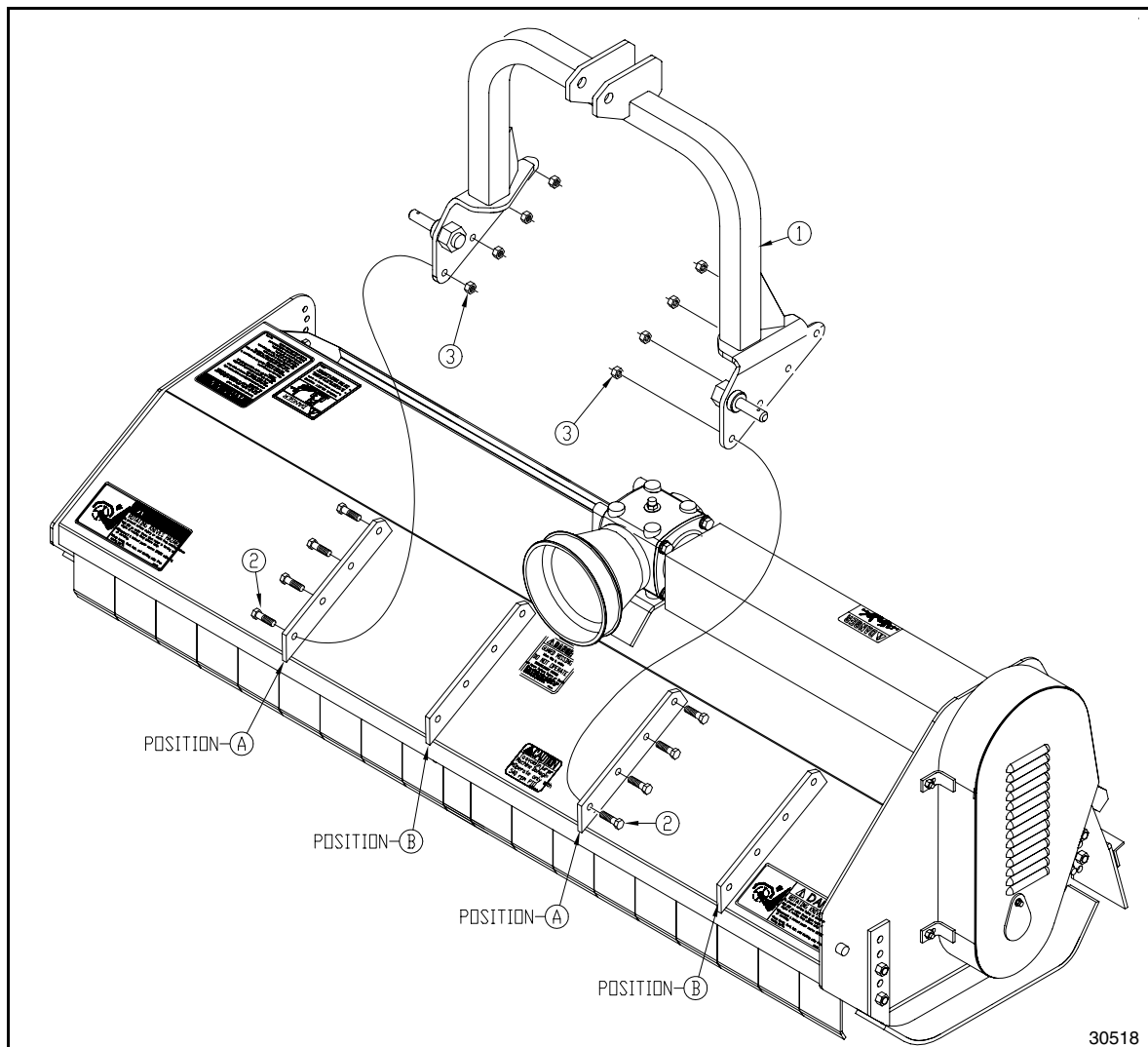
Torque Requirements

Refer to "Torque Values Chart" on page 26 to determine correct torque values when tightening hardware.

Hitch Assembly

Refer to Figure 1-1:

1. The hitch is disassembled for ease in shipping.
2. The hitch can be assembled in two different positions.
 - Position A:
FM2160Offsets mower 1/2" to the right
FM2172Offsets mower 6 1/2" to the right
 - Position B:
FM2160Offsets mower 11 1/2" to the right
FM2172Offsets mower 17 1/2" to the right
3. Assemble hitch (#1) to the Flail Mower in the position preferred and secure with hex head cap screws (#2), and nylock nuts (#3) as shown.
4. Tighten all hardware to the correct torque.



**Hitch Assembly
Figure 1-1**

Tractor Hook-Up

1. Be certain tractor drawbar will not interfere. Move draw bar ahead or remove if required. Draw bar should also be checked for clearance when unit is raised for the first time.
2. Remove linchpins from the mower's lower 3-point hitch pins.
3. Align ball swivels in the tractor's lower 3-point arms with hitch pins on mower. Slide lower ball swivels onto lower hitch pins and insert linchpins. Rotate snap rings down on linchpins to secure them.
4. Align top center 3-point link with mower's center hitch clevis. Insert supplied bent hitch pin and secure with hairpin cotter.
5. Level mower by adjusting lower 3-point arms and upper center link. Refer to "**Leveling Mower**" on page 16.

WARNING

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

CAUTION

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

CAUTION

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

An additional driveline may be required if the Flail Mower will be attached to more than one tractor.

Driveline Installation

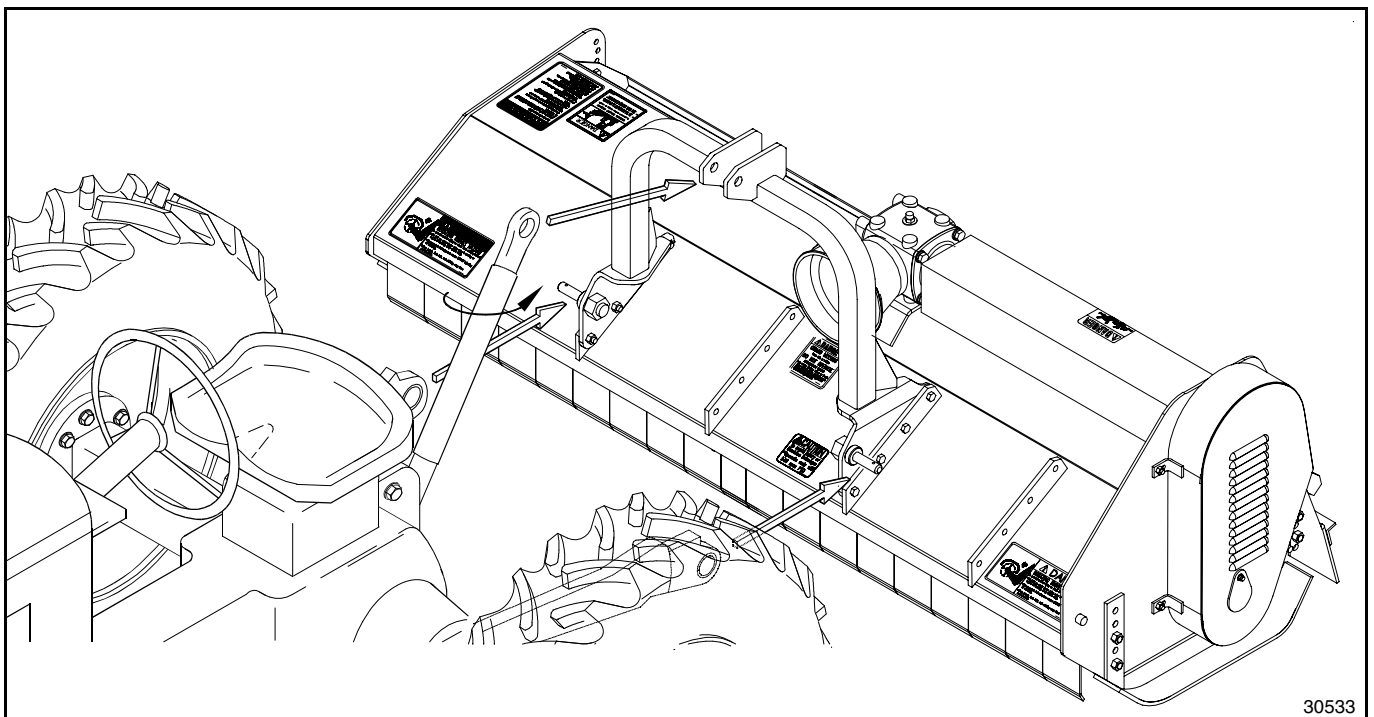
DANGER

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

IMPORTANT: The driveline must be lubricated before putting it into service. Refer to "**Lubrication**" on page 20.

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

IMPORTANT: The tractor's PTO shaft and mower gearbox shaft must be level with each other during installation of driveline.



30533

Tractor Hook-Up
Figure 1-2

Section 1: Assembly & Set-up

Refer to Figure 1-3:

1. Park tractor 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.
2. Support mower deck at this height with support jacks or blocks to keep mower from drifting down.
3. Place gear selector in park, set park brake, shut tractor off, and remove switch key.
4. Pull back on inner yoke pull collar (implement end of driveline) and push inner driveline yoke onto the mower gearbox shaft. Release pull collar and continue to push driveline yoke forward until pull collar locks in place.
5. Pull back on outer yoke pull collar (tractor end of driveline) and push outer driveline yoke onto the tractor PTO shaft. Release pull collar and continue to push driveline yoke forward until pull collar locks in place.
6. The driveline should now be moved back and forth at both ends to ensure yokes are secured to the tractor and mower shafts. Reattach any end that is loose.
7. If driveline does not fit between tractor and gearbox, skip to **“Shorten Driveline Length”** instructions on the right side of this page.
8. The driveline should now be moved back and forth to ensure both ends are secured to the tractor and mower gearbox shaft. Reattach any end that is loose.

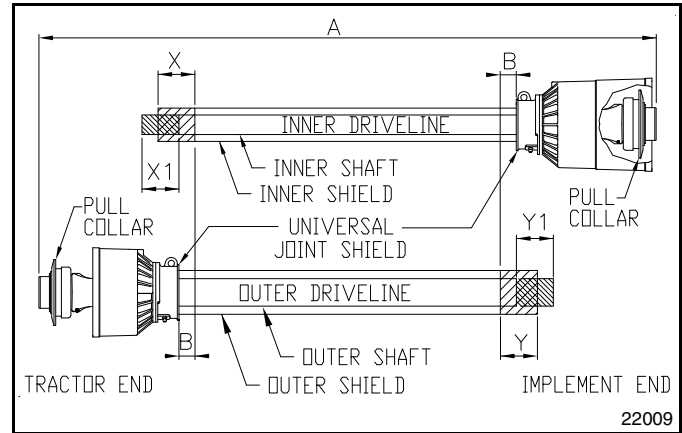
Check Driveline Collapsible Length

IMPORTANT: A driveline that is too long will bottom out causing structural damage to the tractor and mower. Always check driveline collapsible length during initial setup and when connecting to a different tractor. More than one driveline may be required to fit all applications.

1. Make sure driveline is properly installed and level before checking driveline collapsible length. (Refer to **“Driveline Installation”** instructions if needed.)

Refer to Figure 1-3:

2. With driveline level, measure 1" (**“B”** dimension) back from universal joint shield to end of outer driveline shield. If measurement is less than 1", then shorten driveline using instructions provided on the right side of this page. If measurement is 1" or more, skip to **“Check Driveline Extended Length”** instructions on page 11.



**Driveline Shortening
Figure 1-3**

Shorten Driveline Length

Refer to Figure 1-3:

1. Un-hook 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 shafts.
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. Check drive line extended length next.

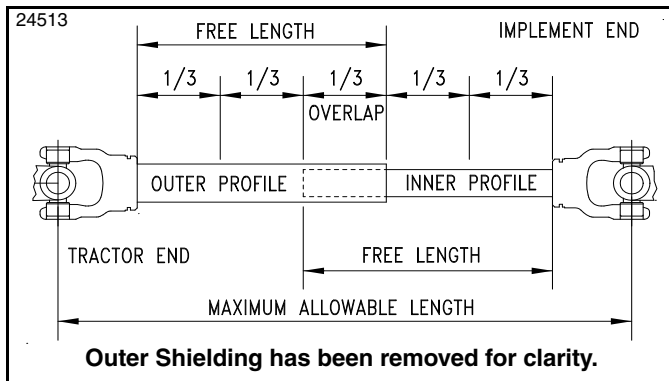
Check Driveline Extended Length

Refer to Figure 1-4:

Make sure driveline collapsible length is acceptable. If needed, refer to “**Check Driveline Collapsible Length**” instructions on page 10.

The driveline maximum allowable length must, when fully extended, have a minimum overlap of the profile tubes by not less than 1/3 the free length with both inner and outer profile tubes being of equal length.

1. Apply multi-purpose grease to the inside of the outer shaft and reassemble the driveline.
2. Assemble driveline profiles together with 1/3 overlapping of inner and outer profile tubes. Once assembled, measure and record the maximum allowable length shown below for future reference.



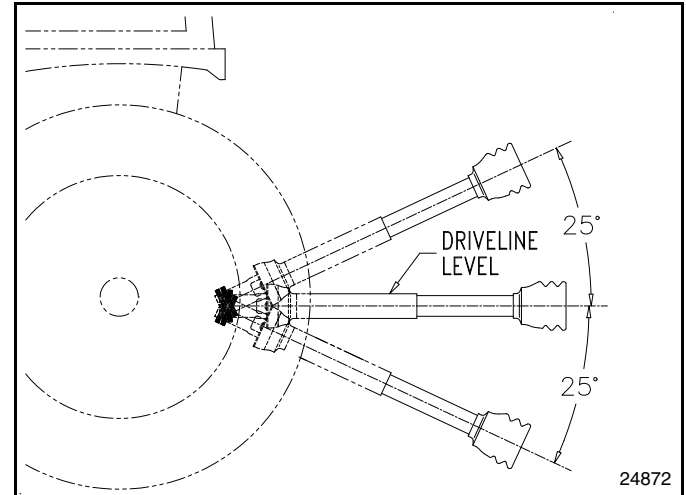
Driveline Maximum Extended Length
Figure 1-4

3. Attach inner driveline yoke to the mower gearbox shaft. Attach outer driveline yoke to the tractor's PTO shaft.
4. Move yoke ends of driveline back and forth to ensure they are secured to the tractor and mower shafts. Reattach any end that is loose.
5. Start tractor and raise Flail Mower just enough to remove blocks.
6. Slowly engage tractor hydraulic 3-point control lever to lower Flail Mower. Check for sufficient drawbar clearance. Move drawbar ahead, aside, or remove if required.
7. Raise and lower implement to find maximum extended driveline length. Check to make certain that the driveline overall length does not exceed the maximum recorded length in step 2.
8. If needed, set tractor 3-point lift height to keep driveline from exceeding maximum allowable length.

Check Driveline Interference

Refer to Figure 1-5:

IMPORTANT: Avoid premature driveline breakdown. A driveline that is operating **must not exceed** an angle of 25 degrees up or down while operating 3-point lift. If needed, set tractor 3-point lift height so that the driveline does not exceed 25° up.



Maximum PTO Driveline Movement During Operation
Figure 1-5

1. 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.
2. Raise and lower implement to find maximum extended driveline length. Check to make certain the driveline does not exceed the maximum allowable length and 25° up or down.
3. If needed, set tractor 3-point lift height to keep driveline from exceeding the maximum allowable length and 25° up.

Section 2: Operating Instructions

Pre-Start Checklist

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 Flail 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 read and paid particular attention to:

- **Important Safety Information**, page 1
- **Section 1: Assembly & Set-up**, page 8
- **Section 2: Operating Instructions**, page 12
- **Section 3: Adjustments**, page 16
- **Section 4: Maintenance & Lubrication**, page 18

Make sure the 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
	Make sure all guards and shields are in place.	
	Read and follow hook-up & preparation instructions. Refer to "Tractor Hook-Up".	Page 9
	Read and follow all operating procedures. Refer to "Section 2: Operating Instructions".	Page 12
	Read and made all required adjustments. Refer to "Section 3: Adjustments".	Page 16
	Read and follow all maintenance instructions. Refer to "Section 4: Maintenance & Lubrication".	Page 18
	Read and follow all lubrication instructions. Refer to "Lubrication".	Page 20
	Make sure all gearboxes are properly lubricated. Refer to Gearbox lubrication.	Page 21
	Check mower initially and periodically for loose bolts and pins. Be sure all nuts and bolts are tight. Make sure blade bolts are tight. Refer to "Torque Values Chart".	Page 26

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 an 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 tractor.
6. Wear safety glasses.

Transporting



WARNING

Always disengage PTO before raising mower to transport position. A mower in the raised position has more potential to throw objects causing serious injury or death.



CAUTION

Always use accessory lights and devices for adequate warning to operator's of other vehicles when traveling on public roads, night or day. Comply with all federal, state and local laws.

1. When raising mower to transport position, be sure driveline does not contact tractor or mower. Adjust and set tractor's 3-point lift height so that the driveline does not contact mower in the fully raised position.
2. Be sure to reduce tractor ground speed when turning, leaving enough clearance so that the mower does not contact obstacles such as buildings, trees, or fences.
3. Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass safely.
4. When traveling over rough or hilly terrain, shift tractor to a lower gear.

Safety Information



DANGER

Do not engage tractor PTO while hooking-up and unhooking the 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

Flail Mowers have the ability to discharge objects at high speeds if guards and safety shields are not in place and closed.



DANGER

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



DANGER

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



DANGER

Never carry a person on the mower. A rider can fall or become entangled in the machine causing serious injury or death.

Section 2: Operating Instructions

DANGER

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

DANGER

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

WARNING

Always disengage PTO before raising mower to transport position. A mower in the raised position has more potential to throw objects causing serious injury or death.

WARNING

Always disengage PTO, engage parking brake, shut tractor engine off, remove switch key, and wait for blades to come to a complete stop before dismounting from tractor. Be aware that the mower gearbox is equipped with an over-running clutch and that the blades will continue to freely rotate after the PTO has stopped rotating.

WARNING

The FM21 Series Flail Mowers are designed to cut grass and brush up to 1" diameter. Using this mower for another type of work can damage the cutting components, drive components, mower frame, and tractor.

WARNING

Tractor PTO shield and mower guards, shields, and rear cover must be in place and secured at all times during operation!

WARNING

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

WARNING

Do not operate mower with loose hardware. Loose hardware can result in a breakdown causing bodily injury or death.

WARNING

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.

CAUTION

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

CAUTION

When mowing in sandy soil areas, wear may occur to the mower knives from sand erosion. Frequent inspection should be made and knives replaced if damaged.

CAUTION

Operator must use caution as objects can be thrown forward. Always make sure the area in front of mower and tractor is clear of people and animals to prevent injury from thrown objects.

Mowing Instructions

1. Clear area to be mowed of objects and debris that might be picked up and thrown by the mower knives.
2. Make the following machine checks before operating the mower.
 - Make sure all hook-up pins are secured.
 - Make sure all shields, guards, and rear cover are in place and secured.
 - Make sure all bolts and nuts are present and tight.
 - Make sure the mounting slots in the duckfoot knives and their mounting bolts are not worn or broken and the nylock nuts are drawn up snug against the mounting lugs. Replace duckfoot knives and mounting hardware if they are showing high wear.
 - Check duckfoot knives for cracks, breakage, and deformation. Replace any knife that is cracked, broken, or deformed before putting cutter into service.
 - Check duckfoot knives for sharpness, Sharpen dull knives or replace them.
 - Check oil level in gearbox. Refer to “**Gearbox**” lubrication instructions on page 21. Make sure all plugs have been replaced and properly tightened.
 - Make sure driveline and all other greasable components have been properly lubricated. See “**Lubrication**” instructions on page 20.
3. Operate mower with a 540 RPM PTO tractor. Lower mower to the ground. Set tractor throttle at approximately 1/4 open. Engage PTO to start blades rotating and then increase throttle speed to 540 PTO speed. The rotor knives will cut better at full blade speed than at reduced throttle speed. **Do not** exceed 540 PTO speed.

Section 2: Operating Instructions

4. At first begin mowing at a slow forward speed and shift up until the desired ground speed is achieved at 540 PTO throttle speed.
5. After mowing the first 50 feet, stop and check to see that the mower is adjusted properly.
6. **Do not** make sharp turns or attempt to back up while mower is on the ground.
7. **Never** work close to or on steep slopes.
8. **Do not** engage PTO with mower in the fully raised position. **Do not** engage PTO at full throttle. **Do not** lift mower with PTO engage.
9. **Do not** allow anyone including yourself near the mower when it is operating.
10. Periodically check for and remove foreign objects wrapped around the rotor shaft and knives. Be sure to disengage PTO, turn off tractor, remove ignition key, and wait for knives to come to a complete stop before opening rear cover. Refer to “**Trash Removal & Rotor Knife Access**” on page 18 for instructions to open rear cover.

Unhooking The Flail Mower

1. See “**Long Term Storage**” on page 19 when parking mower for long periods and at the end of the season.
2. Disengage PTO, park mower and tractor on a level solid hard surface. Place gear selector in park and set park brake.

IMPORTANT: Make sure mower is fully on the ground before unhooking mower from the tractor.

3. Slowly lower mower until mower is resting fully on its skid shoes and rear roller.
4. With tractor gear selector in park and park brake set, shut tractor engine off, remove switch key, and wait for rotor knives to come to a complete stop before dismounting from tractor.
5. At the tractor's PTO shaft, pull back on driveline pull collar and hold while removing driveline yoke from tractor PTO shaft.
6. Store yoke end of driveline off the ground to keep dirt out of the universal joint and pull collar.
7. Remove hairpin cotter and bent hitch pin connecting center 3-point link to the mower. Rotate center 3-point link up into its storage position.
8. Reinsert bent hitch pin in the mower's center hitch clevis and secure with removed hairpin cotter.
9. Remove linchpins from lower 3-point hitch pins and slide lower 3-point tractor arms off the hitch pins.
10. Reinsert linchpins in mower hitch pins and rotate wire snap rings down to secure linchpins.
11. Slowly and carefully drive tractor away from mower while making sure lower 3-point arms do not catch and pull on the Flail Mower.

General Operating Instructions

Now that you have familiarized yourself with the Operator's Manual, completed the Operators Checklist, properly attached your Flail Mower to your tractor, make the right offset or center adjustments, and preset your cutting height, you're almost ready to begin using your Land Pride FM2160 or FM2172 mower.

It's now time to do a running operational safety check. If at any time during this safety check you detect a malfunction in either the mower or tractor shut the tractor off immediately, remove the key, and make necessary repairs or adjustments before continuing on.

Make sure the tractor's park brake is engaged, the tractor's PTO is disengaged, and the mower is resting on the ground. Start the tractor and then back the tractor throttle off till the engine is at low idle. With the tractor's rear hydraulic lift control lever, raise the mower to transport position making sure that the PTO shaft is not in a bind and does not come in contact with the mower frame. Lower the unit to mowing position and, with the tractor still at low idle, engage the PTO. If everything is running smoothly at this point increase the engine RPM until the tractors engine reaches full PTO operating speed which will be 540 RPM. Slowly raise the mower to transport height to make sure the driveline does not bind or chatter. Then return the engine to low idle, disengage PTO, and position the adjustable stops on the tractor's hydraulic lift lever control console so the mower can be consistently returned to the same mowing and transport height.

You should now be ready to move to the mowing site to begin mowing. You should have inspected and should only be mowing in an area you are familiar with which is relatively free of debris and unseen objects. Never assume an area is clear and extremely tall grass or brush should be checked twice to detect potential hazards. In the event you do strike an object, stop the tractor and mower immediately to inspect the rotor and make any necessary repairs before resuming operation. It pays to inspect a new area and to develop a plan before you cut.

Normal mowing speed will be between 2-5 mph and you will need to maintain tractor PTO speed to produce a clean cut so make a tractor gear and range selection that will maintain this combination. Generally the quality of cut or degree of debris pulverization will be better at lower ground speeds and mowing denser ground cover or heavier brush may create the need to slow down. 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 mower. Slow down in turns and avoid sharp turns if at all possible. Remember to look back often. Always be aware and extremely cautious when there are people, pets, livestock, and valuable property in your immediate operating vicinity.

Now you're prepared and well briefed so lets begin mowing. Reduce the tractor's engine RPM, make sure the mower is on the ground and in mowing position,

Section 2: Operating Instructions

engage the PTO, raise the engine RPM to the appropriate PTO speed, and begin mowing. Operators must plan ahead and choose a mowing route that allows safe turns. 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 Flail Mower can do.

Dense growth will require more horsepower and will cause you to slow down especially if you are encountering material up to 1" in diameter. The duckfoot knives are much better suited for a finer quality of cut in grass cutting applications and in no case should duckfoot knives be used for cutting material greater than 1' in diameter.

When you are done mowing, need to take a break, or just need to make a few adjustments to the mower, 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. Land Pride Flail Mowers are very user friendly and easy to operate. With a little practice you should be operating your Land Pride mower like an expert in no time at all.

Section 3: Adjustments

CAUTION

Engage parking brake, shut off tractor, remove key, and disengage PTO before making any adjustments!

CAUTION

Secure mower with special supports if it is necessary to support mower off the ground while making adjustments! If not supported, the mower could fall causing serious injury to those present.

Leveling Mower

Level adjustments are made at the tractor's 3-point lower arms and top center link.

1. Park tractor and Flail Mower on a flat level surface.
2. Slowly raise mower with the tractor's hydraulic 3-point lift until the unit is about 1" to 2" above the ground.
3. Ensure that the lower arms are stabilized to prevent excessive side movement.
4. Place a spirit level on the top cover running from left to right and adjust one of the lower 3-point arms up or down until mower is level from left to right.
5. Shorten or lengthen tractor's top center link until the upper hitch pin is vertically above or slightly behind the lower hitch pins.
6. Slowly operate the tractor's 3-point hydraulic control up and down to check for clearance between the tires, frame, drawbar etc.

Hitch Adjustments

Make certain the top center link is adjusted as outlined in Step 5 under "Leveling Mower".

There is also two different positions for right offset. Refer to "Hitch Assembly" on page 8.

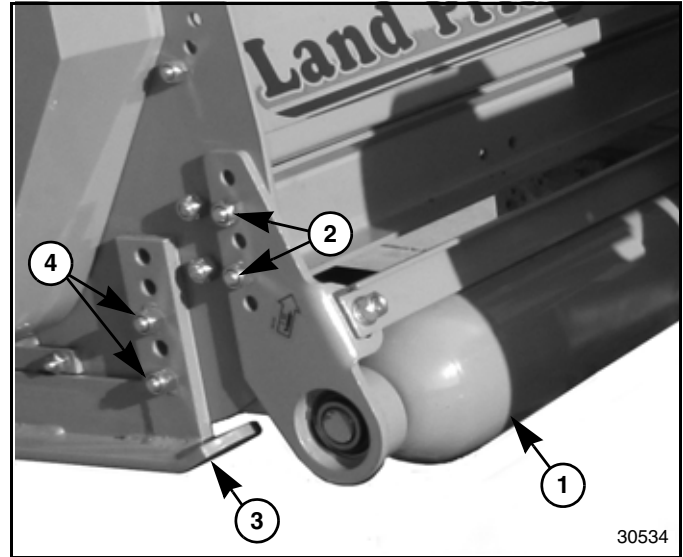
Cutting Height Adjustment

Refer to Figure 3-1:

WARNING

Do not operate Flail Mower with rear roller removed.

Removing rear roller will expose cutting knives and can cause serious injury or death.



Cutting Height
Figure 3-1

Cutting height depends upon the position of the rear roller (#1).

1. Remove nuts and bolts (#2) on both ends of roller.
2. Lift or lower both sides of roller an equal amount.
3. Replace bolts and nuts. Re-tighten nuts to the correct torque.
4. Inspect knives to make sure they do not touch the ground. Knives that come in contact with the ground will wear quickly. If necessary, readjust rear roller height to keep knives from touching the ground.
5. Adjust skid shoes (#3) on both ends of the mower up or down an amount equal to the distance the roller was adjusted up or down. Replace removed hardware (#4) and tighten nuts to the correct torque.
6. Fine tune cutting height by adjusting top center link on tractor.

Section 3: Adjustments

Belt Tension



WARNING

Excessive tension on the belt may lead to premature failure of belt and drive components and create a safety hazard to the operator or bystanders.



CAUTION

Belt drive system under spring tension; use care to avoid bodily harm!

NOTICE

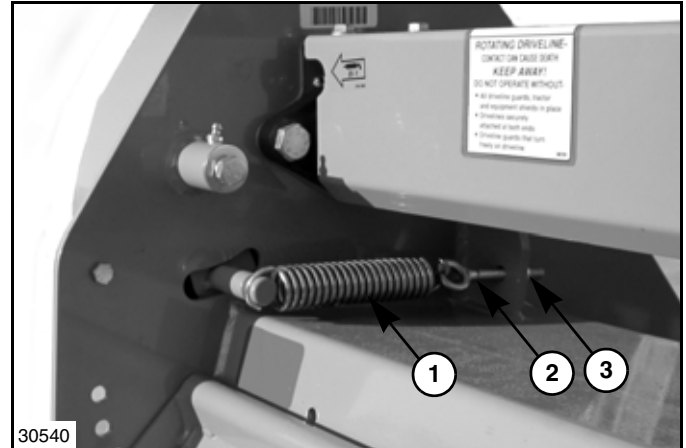
Not enough belt tension may lead to premature belt damage due to excessive belt slippage.

IMPORTANT: Always check belt tension after belts have cooled down. A good practice is to check belt tension just before putting the mower into operation. Never check belt tension with rotor turning.

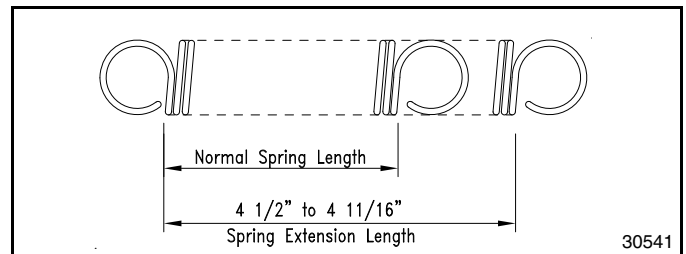
Belt tension should be checked after the first 20 hours of use and then every 40 hours thereafter.

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

Check spring length to verify if belt is tensioned correctly. Spring length should be 4 1/2" to 4 11/16" from end of coil to end of coil. Change spring (#1) length by adjusting length of eye bolt (#2). Turn locknut (#3) counterclockwise to decrease spring length and clockwise to increase spring length.



Belt Tension Adjustment
Figure 3-2



Spring Operating Length
Figure 3-3

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.



DANGER

For safety reasons, each maintenance operation must be performed with tractor PTO disengaged, mower lowered completely to ground and tractor engine shut off with ignition key removed.



DANGER

Always disconnect driveline from tractor PTO, secure mower in the up position with solid supports, shut tractor engine off, and remove switch key before servicing underside of mower.



WARNING

Frequently check all mower components and hardware to make certain they are tight and not broken or missing. Not doing this can cause the mower 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.

IMPORTANT: The parts on your Flail Mower have been specially designed and should only be replaced with genuine Land Pride parts. Do not alter the mower in a way which will adversely affect its performance.

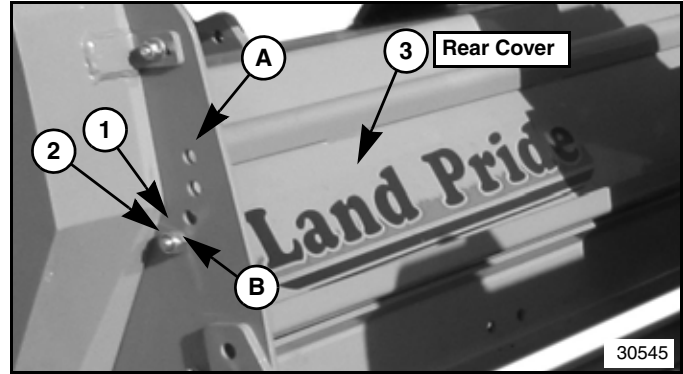
- Check drive belt tension after using unit for several hours and on a regular basis thereafter to ensure belts are tensioned properly. Refer to “**Belt Tension**” on page 17.
- Lubricate components as listed under “**Lubrication**” on page 20.
- Replace any worn, damaged, or illegible safety labels by obtaining new labels from your Land Pride dealer. Information about labels is located under “**Safety Labels**” on page 4.

Trash Removal & Rotor Knife Access

Refer to Figure 4-1:

Rotor knives and trash around the knives and rotor is accessed by opening the rear cover (#3).

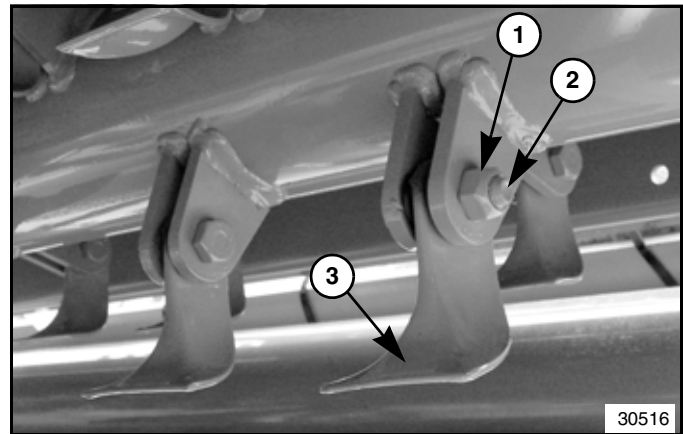
1. Remove nylock nuts (#1) and bolts (#2) located on both ends of the mower.
2. Raise rear cover fully up to hole “A” Secure cover in the raised position with removed hardware.
3. Service rotor and knives through rear cover opening.



Rear Cover

Figure 4-1

4. Remove nuts (#1) and bolts (#2) from both ends of the mower and lower rear cover down to hole “B”.
5. Replace bolts (#2) and nylock nuts (#1) in hole “B”. Tighten nuts to the correct torque.



Duckfoot Knives

Figure 4-2

Rotor Knife Replacement

Refer to Figure 4-2:

Frequently check rotor knives to make sure they are in good working condition and properly secured to the rotor. Replace worn or damaged knives with new knives.

IMPORTANT: Make sure replacement knife is the same length as the others on the mower. This will help keep rotor rotation in balance.

IMPORTANT: Replace cutting knives with Land Pride duckfoot knives only. Always replace self locking nut to ensure it will not come loose.

Replacement knives should be the same length as existing knives to maintain rotor balance.

1. Access duckfoot knives through the rear cover. Refer to “**Trash Removal & Rotor Knife Access**” on left side of this page for instructions to open and close cover.
2. Remove nylock nut (#1) and bolt (#2).

3. Remove old duckfoot knife (#3) and install new knife with bolt (#2) and nylock nut #1).
4. Draw locknuts up snug. **Do not over-tighten and bend mounting tabs.**

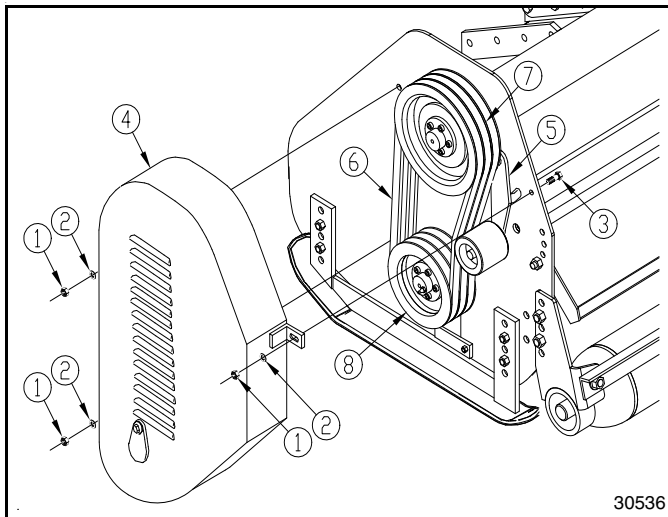
V-Belt Installation

Refer to Figure 4-3:

CAUTION

Belt drive system under spring tension; use care to avoid bodily harm!

1. Remove nylock nuts (#1), flat washers (#2), cap screws (#3), and belt guard (#4).
2. Pull back on spring take-up arm (#5) and remove old belts (#6) from pulleys (#7 & #8).
3. Pull back on spring take-up arm (#5) and install new belts (#6) to pulleys (#7 & #8).
4. Retention belt take-up idler arm (#5). Refer to “**Belt Tension**” on page 17 for detailed instructions.
5. Reinstall belt guard (#4), with cap screws (#3), flat washers (#2), and nuts (#1). Tighten nuts to the correct torque.



Belt Installation
Figure 4-3

Long Term Storage

It is good practice to clean off any dirt and grease that may have accumulated on the mower and to inspect and make necessary repairs before parking the unit at the end of the working season and for long periods. This will help ensure that the mower will be ready for field use the next time you hook-up to it.

DANGER

Always disconnect driveline from tractor PTO, secure mower in the up position with solid supports, shut tractor engine off, and remove switch key before servicing underside of mower.

1. Clean off any dirt and grease that may have accumulated on the mower and moving parts. Scrape off compacted dirt from under the hood and then wash the surface thoroughly with a garden hose.
2. Check rotor knives and knife bolts for wear and replace if necessary. See “**Rotor Knife Replacement**” on page 18.
3. Inspect mower for loose, damaged, or worn parts and adjust or replace as needed.
4. Lubricate as noted in the “**Lubrication**” portion of this manual starting on page 20.
5. Repaint parts where paint is worn or scratched to prevent rust. Ask your dealer for Land Pride aerosol touch-up paint #821-011C. Paint is also available in touch-up bottles with brush, quarts, and gallon sizes by adding TU, QT, or GL to the end of the aerosol part number.
6. Replace all damaged or missing decals.
7. A light coat of oil or grease may also be applied to areas where paint has worn off to minimize oxidation.
8. Store mower on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer mower life.
9. Store driveline end off the ground.

Lubrication

Lubrication Legend



Multi-purpose
spray lube



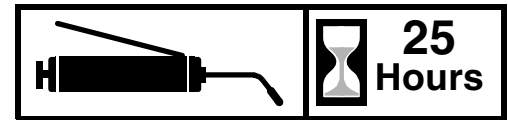
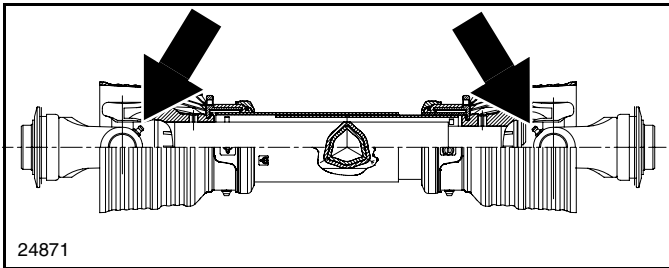
Multi-purpose
grease lube



Multi-purpose
oil lube



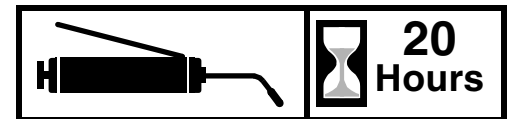
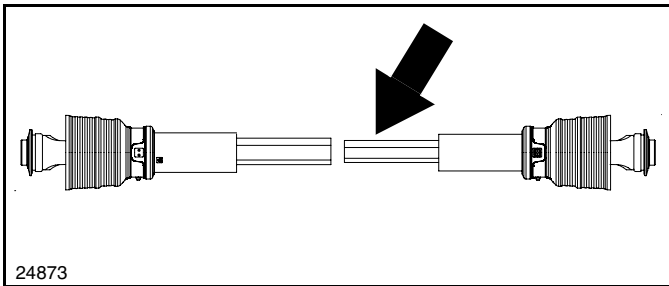
Intervals in hours at which
lubrication is required



Driveline Shaft U-Joints

Type of Lubrication: Multi-purpose Grease

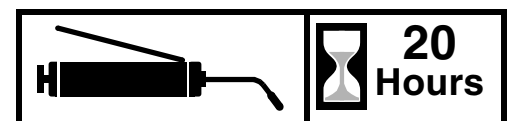
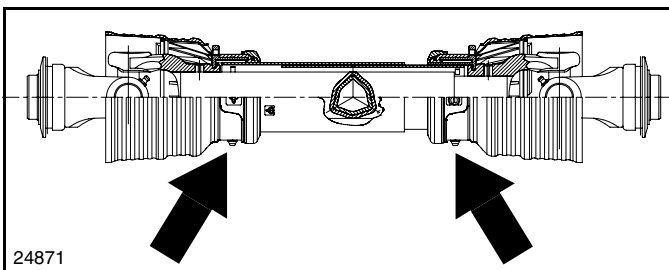
Quantity - 4 to 8 Pumps



Driveline Profiles

Type of Lubrication: Multi-purpose Grease

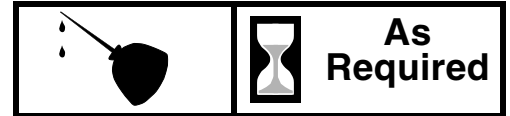
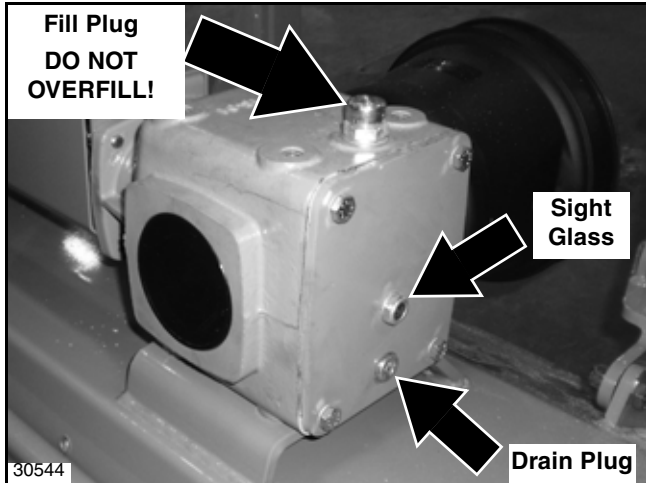
Quantity - Clean & coat inner profile tube of driveline with a light film of grease and then reassemble.



Inner Tube Bearings

Type of Lubrication: Multi-purpose Grease

Quantity - As Required



Gearbox

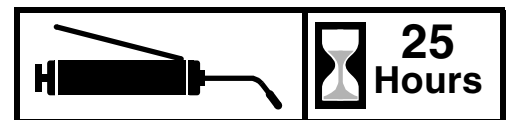
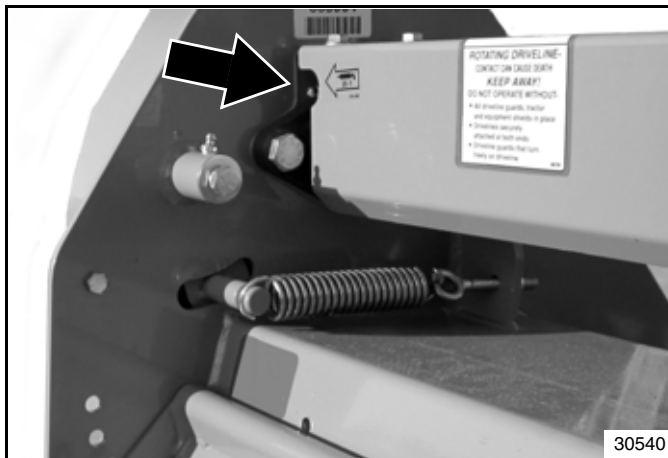
IMPORTANT: The mower should be level when checking oil in gearbox!

Check oil level in gearbox by viewing oil through sight glass located on the right side. Oil should be visible in the glass but not above the sight glass. Add recommended oil until oil is visible in the sight glass. Replace fill plug and tighten.

Do not overfill!

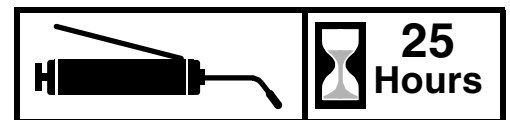
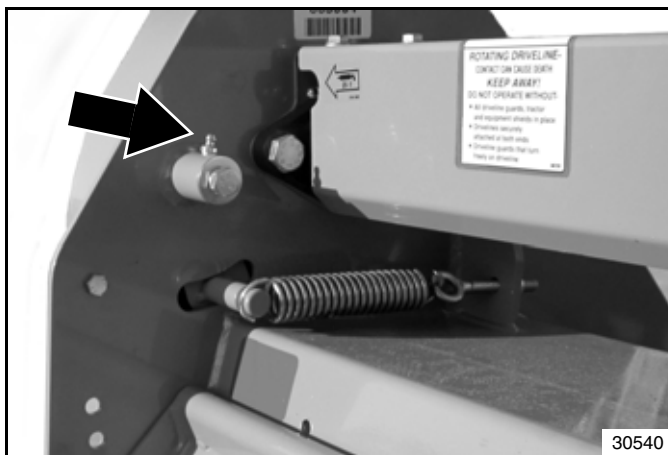
Should your gearbox require service, take it to your nearest LAND PRIDE dealer.

Type of Lubrication: SAE EP 90W Gear Lube



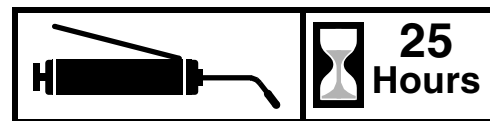
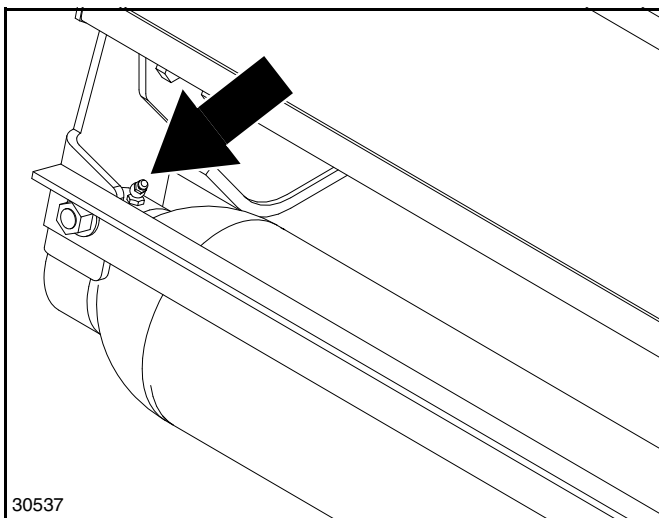
Extension Shaft Bearing

Type of Lubrication: Multi-purpose Grease



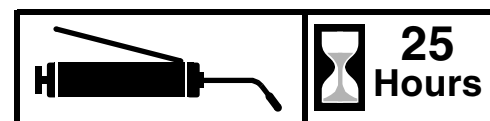
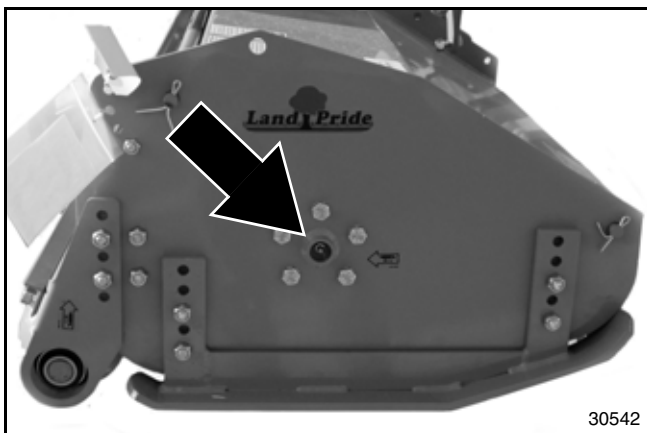
Belt Take-up Pivot Arm

Type of Lubrication: Multi-purpose Grease



Roller Bearing (Both Ends)

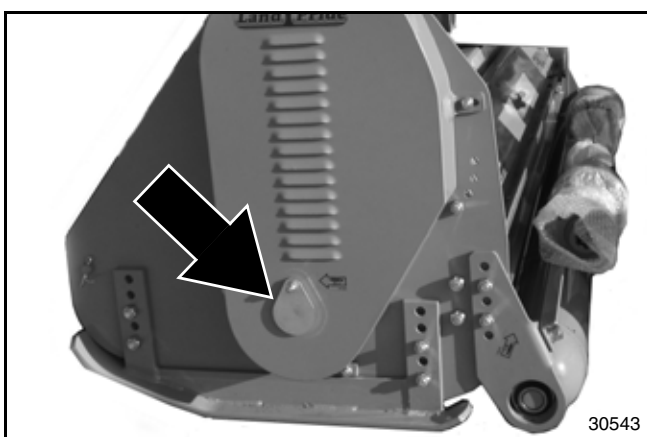
Type of Lubrication: Multi-purpose Grease



Cutter Rotor Bearing (Both Ends)

Location:
Middle of right-hand side plate
Behind zerk cover on belt guard

Type of Lubrication: Multi-purpose Grease




FM21 Series







Description	Specifications & Capacities	
Model Numbers	FM2160	FM2172
Cutting Width	60"	72"
Overall Width	68"	80"
Height	37"	
Depth	30 1/4"	
Weight	695 lbs.	772 lbs.
Cutting Capacity	1"	
Cutting Height	3/4" - 4"	
Deck Material Thickness	11 gauge	
Knives	Duckfoot type	
Rotor Shaft Speed	2,025 RPM	
Rotor Diameter	5"	
Rotor Rotation	Reverse	
Knife Tip Speed	7,385 fpm	
Number of Knives	30	36
Hitch Type	Category I	
Offset Hitch	2-Position Bolt on style Offsets mower 1/2" or 11 1/2" to the right	2-Position Bolt on style Offsets mower 6 1/2" or 17 1/2" to the right
PTO Speed	540 RPM	
Driveline	Cat 4	
Belt Type	(3) - "B" Section belts	
Gearbox Type	540 RPM with internal over-running Clutch	
Gearbox Rating	55 HP	
Gearbox Lubrication	SAE EP 90W	
Gearbox Oil Capacity	2 pints	
Rear Roller Diameter	5 1/2"	

FM21 Series

Features	Benefits
60" & 72" Cutting widths	Good cutting widths for applications in this HP range.
25-55 HP gearbox rating	Fits a large array of consumer, municipality, and landscape of tractors.
3-Point hitch offsets mower to the right: FM2160 Offsets mower 1/2" or 6 1/2" FM2172 offsets mower 6 1/2" or 17 1/2"	The two position hitch mounting allows the mower to be offset to the right for a closer cut alongside buildings, fences, and roadsides.
One year gearbox warranty	The gearbox is designed tough to withstand the rigors of flail mowing.
3/4" – 4" Cutting height	Variable cutting heights for many uses.
1" Cutting capacity	Can cut small saplings.
Duckfoot style knives	Heavy enough to cut 1" material.
5" Rotor diameter	Large rotor diameter protects against obstructions.
Reverse rotor rotation	Brings the cut material up and over which allows it to be dispersed more evenly.
High knife tip speed	Knife tip speed of 7,385 fpm provides for a clean cut.
Cat. 4 driveline with over-running clutch in gearbox	Upon disengaging the PTO, the over-running clutch allows the driveline to quit turning, while the clutch yoke, gearbox, and rotor shaft slow down under their own inertia.
3 - "B" Section belts	"B" Section belts fit snug in the sheaves, and the multiple belts ensure positive transfer of power.
Baffles on the top inside of the deck	Keeps the cut material from clumping together, ensuring an even distribution of clippings.
Height adjusting roller	Rear height adjusting roller with greaseable bearings and tapered ends to prevent gouging during turns.
Standard scrapers on rear height adjusting roller	Keeps the roller clean for consistent cutting height.
Adjustable rear panel	Adjusts to allow strong discharge of material and aids in cleaning underside of deck.

Troubleshooting Chart

Problem	Solution
 CAUTION Do not try to clean rear discharge area when mower is running. Bodily harm may occur!	
Belt slipping	Unplug and clean mower deck.
	Remove belt guard shields and clean sheaves.
	Replace belts
Patches of uncut grass	Mow at full throttle (540 PTO rpm), check PTO speed and tractor engine.
	Shift transmission to a lower gear.
	Tighten belts.
	Replace missing knives.
Excessive vibration	Replace knives
	Replace drive belt.
	Replace pulleys or align.
	Remove belt guard shields & clean debris from belt area & sheaves.
Gearbox noisy	Check lubricant level.
Knives scalping ground	Raise cutting height by adjusting roller.
	Change mowing pattern.
	Reduce tractor speed while making turns.
Uneven cut	Shift to a lower gear.
	Level mower.
	Replace missing knives.
Tractor loaded down by mower	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		
in-tpi ¹	N · m ²	ft-lb ³	N · m	ft-lb	N · m	ft-lb	mm x pitch ⁴	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	<div>¹ in-tpi = nominal thread diameter in inches-threads per inch</div> <div>² N · m = newton-meters</div> <div>³ ft-lb= foot pounds</div> <div>⁴ mm x pitch = nominal thread diameter in millimeters x thread pitch</div>										
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 Driveline: One year Parts and Labor

Gearbox: One year on all components.

Belts and Blades: 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 _____



Corporate Office: P.O. Box 5060
Salina, Kansas 67402-5060 USA

www.landpride.com
