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.
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.
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 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.

---

**CAUTION**

To avoid Injury or Machine Damage:

*Operate only with 540 rpm PTO*

818-130C
Caution: To avoid injury

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**DANGER**

GUARD MISSING

When this is visible
DO NOT OPERATE
ENTANGLEMENT HAZARD
can cause Serious Injury or Death
Si no existe este aletón, no profírese que ignora o ignore las instrucciones para usted.

818-543C
Danger: Guard Missing
Important Safety Information

Table of Contents

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 and move 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 operating.
- Do not allow children to operate mower.
- Operate with SW and lights that follow local codes.
- Clean debris from moving area.
- Do not operate in the raised position.
- Support securely before working beneath unit.
- Keep right front wheel raised.

818-558C
Warning: General

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 & lock out power source before adjusting or servicing.
- Keep hands, feet, hair, and clothing away from moving parts.

838-079C
Danger: Rotating Knives
Both sides

DANGER

THROWN OBJECT HAZARD

To prevent serious injury or death:
- Do not operate until all guards are in place. Do not lift guard in front, and operate unit with guard up.
- Stop engine and move and wait for all moving parts to stop before cleaning, greasing, or servicing unit.

818-556C
Danger: Thrown Object

Note: See illustrations, parts listings, and assembly diagrams in the appropriate section for important information before operating equipment.
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**

<table>
<thead>
<tr>
<th>NOTE: A special point of information that the operator should be aware of before continuing.</th>
<th>IMPORTANT: A special point of information related to the following topic. Land Pride’s intention is this information must be read &amp; noted before continuing.</th>
</tr>
</thead>
</table>

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.

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
   
   lpservicedept@landpride.com
Section 1: Assembly & Set-up

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:
     FM2160 Offsets mower 1/2" to the right
     FM2172 Offsets mower 6 1/2" to the right
   • Position B:
     FM2160 Offsets mower 11 1/2" to the right
     FM2172 Offsets 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.
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.

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.

⚠️ WARNING

Always make certain driveline yokes are secured to the tractor PTO shaft and gearbox input 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.

⚠️ 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.

**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.
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.

Refer to Figure 1-3:

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

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.
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 mower while checking 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 the driveline does not exceed the maximum allowable length and 25° up.
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.

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.
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

<table>
<thead>
<tr>
<th>Check</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ Read and follow all safety information carefully. Refer to “Important Safety Information”.</td>
<td>Page 1</td>
</tr>
<tr>
<td>✔ Make sure all guards and shields are in place.</td>
<td></td>
</tr>
<tr>
<td>✔ Read and follow hook-up &amp; preparation instructions. Refer to “Tractor Hook-Up”.</td>
<td>Page 9</td>
</tr>
<tr>
<td>✔ Read and follow all operating procedures. Refer to “Section 2: Operating Instructions”.</td>
<td>Page 12</td>
</tr>
<tr>
<td>✔ Read and made all required adjustments. Refer to “Section 3: Adjustments”.</td>
<td>Page 16</td>
</tr>
<tr>
<td>✔ Read and follow all maintenance instructions. Refer to “Section 4: Maintenance &amp; Lubrication”.</td>
<td>Page 18</td>
</tr>
<tr>
<td>✔ Read and follow all lubrication Instructions. Refer to “Lubrication”.</td>
<td>Page 20</td>
</tr>
<tr>
<td>✔ Make sure all gearboxes are properly lubricated. Refer to Gearbox lubrication.</td>
<td>Page 21</td>
</tr>
<tr>
<td>✔ 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”.</td>
<td>Page 26</td>
</tr>
</tbody>
</table>

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.
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
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 slips 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

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,
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.
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 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.
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.
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.

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.

**Rear Cover**

**Duckfoot Knives**

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).
Section 4: Maintenance & Lubrication

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.

---

**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.

---

**Belt Installation**
*Figure 4-3*
Section 4: Maintenance & Lubrication

Lubrication

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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
Section 4: Maintenance & Lubrication

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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
Section 4: Maintenance & Lubrication

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications &amp; Capacities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model Numbers</strong></td>
<td><strong>FM2160</strong></td>
</tr>
<tr>
<td>Cutting Width</td>
<td>60&quot;</td>
</tr>
<tr>
<td>Overall Width</td>
<td>68&quot;</td>
</tr>
<tr>
<td>Height</td>
<td>37&quot;</td>
</tr>
<tr>
<td>Depth</td>
<td>30 1/4&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>695 lbs.</td>
</tr>
<tr>
<td>Cutting Capacity</td>
<td>1&quot;</td>
</tr>
<tr>
<td>Cutting Height</td>
<td>3/4&quot; - 4&quot;</td>
</tr>
<tr>
<td>Deck Material Thickness</td>
<td>11 gauge</td>
</tr>
<tr>
<td>Knives</td>
<td>Duckfoot type</td>
</tr>
<tr>
<td>Rotor Shaft Speed</td>
<td>2,025 RPM</td>
</tr>
<tr>
<td>Rotor Diameter</td>
<td>5&quot;</td>
</tr>
<tr>
<td>Rotor Rotation</td>
<td>Reverse</td>
</tr>
<tr>
<td>Knife Tip Speed</td>
<td>7,385 fpm</td>
</tr>
<tr>
<td>Number of Knives</td>
<td>30</td>
</tr>
<tr>
<td>Hitch Type</td>
<td>Category I</td>
</tr>
<tr>
<td>Offset Hitch</td>
<td>2-Position Bolt on style</td>
</tr>
<tr>
<td></td>
<td>Offsets mower 1/2&quot; or 11 1/2&quot; to the right</td>
</tr>
<tr>
<td>PTO Speed</td>
<td>540 RPM</td>
</tr>
<tr>
<td>Driveline</td>
<td>Cat 4</td>
</tr>
<tr>
<td>Belt Type</td>
<td>(3) - “B” Section belts</td>
</tr>
<tr>
<td>Gearbox Type</td>
<td>540 RPM with internal over-running Clutch</td>
</tr>
<tr>
<td>Gearbox Rating</td>
<td>55 HP</td>
</tr>
<tr>
<td>Gearbox Lubrication</td>
<td>SAE EP 90W</td>
</tr>
<tr>
<td>Gearbox Oil Capacity</td>
<td>2 pints</td>
</tr>
<tr>
<td>Rear Roller Diameter</td>
<td>5 1/2&quot;</td>
</tr>
</tbody>
</table>
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**Section 6: Features & Benefits**

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

### Troubleshooting Chart

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUTION</td>
<td>Do not try to clean rear discharge area when mower is running. Bodily harm may occur!</td>
</tr>
<tr>
<td>Belt slipping</td>
<td>Unplug and clean mower deck.</td>
</tr>
<tr>
<td></td>
<td>Remove belt guard shields and clean sheaves.</td>
</tr>
<tr>
<td></td>
<td>Replace belts</td>
</tr>
<tr>
<td>Patches of uncut grass</td>
<td>Mow at full throttle (540 PTO rpm), check PTO speed and tractor engine.</td>
</tr>
<tr>
<td></td>
<td>Shift transmission to a lower gear.</td>
</tr>
<tr>
<td></td>
<td>Tighten belts.</td>
</tr>
<tr>
<td></td>
<td>Replace missing knives.</td>
</tr>
<tr>
<td>Excessive vibration</td>
<td>Replace knives</td>
</tr>
<tr>
<td></td>
<td>Replace drive belt.</td>
</tr>
<tr>
<td></td>
<td>Replace pulleys or align.</td>
</tr>
<tr>
<td></td>
<td>Remove belt guard shields &amp; clean debris from belt area &amp; sheaves.</td>
</tr>
<tr>
<td>Gearbox noisy</td>
<td>Check lubricant level.</td>
</tr>
<tr>
<td>Knives scalping ground</td>
<td>Raise cutting height by adjusting roller.</td>
</tr>
<tr>
<td></td>
<td>Change mowing pattern.</td>
</tr>
<tr>
<td></td>
<td>Reduce tractor speed while making turns.</td>
</tr>
<tr>
<td>Uneven cut</td>
<td>Shift to a lower gear.</td>
</tr>
<tr>
<td></td>
<td>Level mower.</td>
</tr>
<tr>
<td></td>
<td>Replace missing knives.</td>
</tr>
<tr>
<td>Tractor loaded down by mower</td>
<td>Mow at full throttle (540 PTO rpm).</td>
</tr>
<tr>
<td></td>
<td>Shift to a lower gear.</td>
</tr>
<tr>
<td></td>
<td>Clean mower.</td>
</tr>
</tbody>
</table>
# Torque Values Chart for Common Bolt Sizes

<table>
<thead>
<tr>
<th>Bolt Size (inches)</th>
<th>Bolt Head Identification</th>
<th>Bolt Size (Metric)</th>
<th>Class 5.8</th>
<th>Class 8.8</th>
<th>Class 10.9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grade 2</td>
<td>Grade 5</td>
<td>Grade 8</td>
<td>5.8</td>
<td>8.8</td>
</tr>
<tr>
<td>in-tpi 1</td>
<td>N·m 2</td>
<td>ft-lb 3</td>
<td>N·m 2</td>
<td>ft-lb</td>
<td>N·m 2</td>
</tr>
<tr>
<td>1/4&quot; - 20</td>
<td>7.4</td>
<td>5.6</td>
<td>11</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>1/4&quot; - 28</td>
<td>8.5</td>
<td>6</td>
<td>13</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>5/16&quot; - 18</td>
<td>15</td>
<td>11</td>
<td>24</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>5/16&quot; - 24</td>
<td>17</td>
<td>13</td>
<td>26</td>
<td>19</td>
<td>37</td>
</tr>
<tr>
<td>3/8&quot; - 16</td>
<td>27</td>
<td>20</td>
<td>42</td>
<td>31</td>
<td>59</td>
</tr>
<tr>
<td>3/8&quot; - 24</td>
<td>31</td>
<td>22</td>
<td>47</td>
<td>35</td>
<td>67</td>
</tr>
<tr>
<td>7/16&quot; - 14</td>
<td>43</td>
<td>32</td>
<td>67</td>
<td>49</td>
<td>95</td>
</tr>
<tr>
<td>7/16&quot; - 20</td>
<td>49</td>
<td>36</td>
<td>75</td>
<td>55</td>
<td>105</td>
</tr>
<tr>
<td>1/2&quot; - 13</td>
<td>66</td>
<td>49</td>
<td>105</td>
<td>76</td>
<td>145</td>
</tr>
<tr>
<td>1/2&quot; - 20</td>
<td>75</td>
<td>55</td>
<td>115</td>
<td>85</td>
<td>165</td>
</tr>
<tr>
<td>9/16&quot; - 12</td>
<td>95</td>
<td>70</td>
<td>150</td>
<td>110</td>
<td>210</td>
</tr>
<tr>
<td>9/16&quot; - 18</td>
<td>105</td>
<td>79</td>
<td>165</td>
<td>120</td>
<td>235</td>
</tr>
<tr>
<td>5/8&quot; - 11</td>
<td>130</td>
<td>97</td>
<td>205</td>
<td>150</td>
<td>285</td>
</tr>
<tr>
<td>5/8&quot; - 18</td>
<td>150</td>
<td>110</td>
<td>230</td>
<td>170</td>
<td>325</td>
</tr>
<tr>
<td>3/4&quot; - 10</td>
<td>235</td>
<td>170</td>
<td>360</td>
<td>265</td>
<td>510</td>
</tr>
<tr>
<td>3/4&quot; - 16</td>
<td>260</td>
<td>190</td>
<td>405</td>
<td>295</td>
<td>570</td>
</tr>
<tr>
<td>7/8&quot; - 9</td>
<td>225</td>
<td>165</td>
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<td>7/8&quot; - 14</td>
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<td>640</td>
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<td>1&quot; - 8</td>
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<td>250</td>
<td>875</td>
<td>645</td>
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<td>1&quot; - 12</td>
<td>370</td>
<td>275</td>
<td>955</td>
<td>705</td>
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<tr>
<td>1-1/8&quot; - 7</td>
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<td>355</td>
<td>1080</td>
<td>795</td>
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<tr>
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<td>540</td>
<td>395</td>
<td>1210</td>
<td>890</td>
<td>1960</td>
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<td>500</td>
<td>1520</td>
<td>1120</td>
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<td>750</td>
<td>555</td>
<td>1680</td>
<td>1240</td>
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<td>1990</td>
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<tr>
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<td>745</td>
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<td>1670</td>
<td>3680</td>
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<td>2640</td>
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<td>2970</td>
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<td>4820</td>
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</table>

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

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.
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.

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**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 ____________________