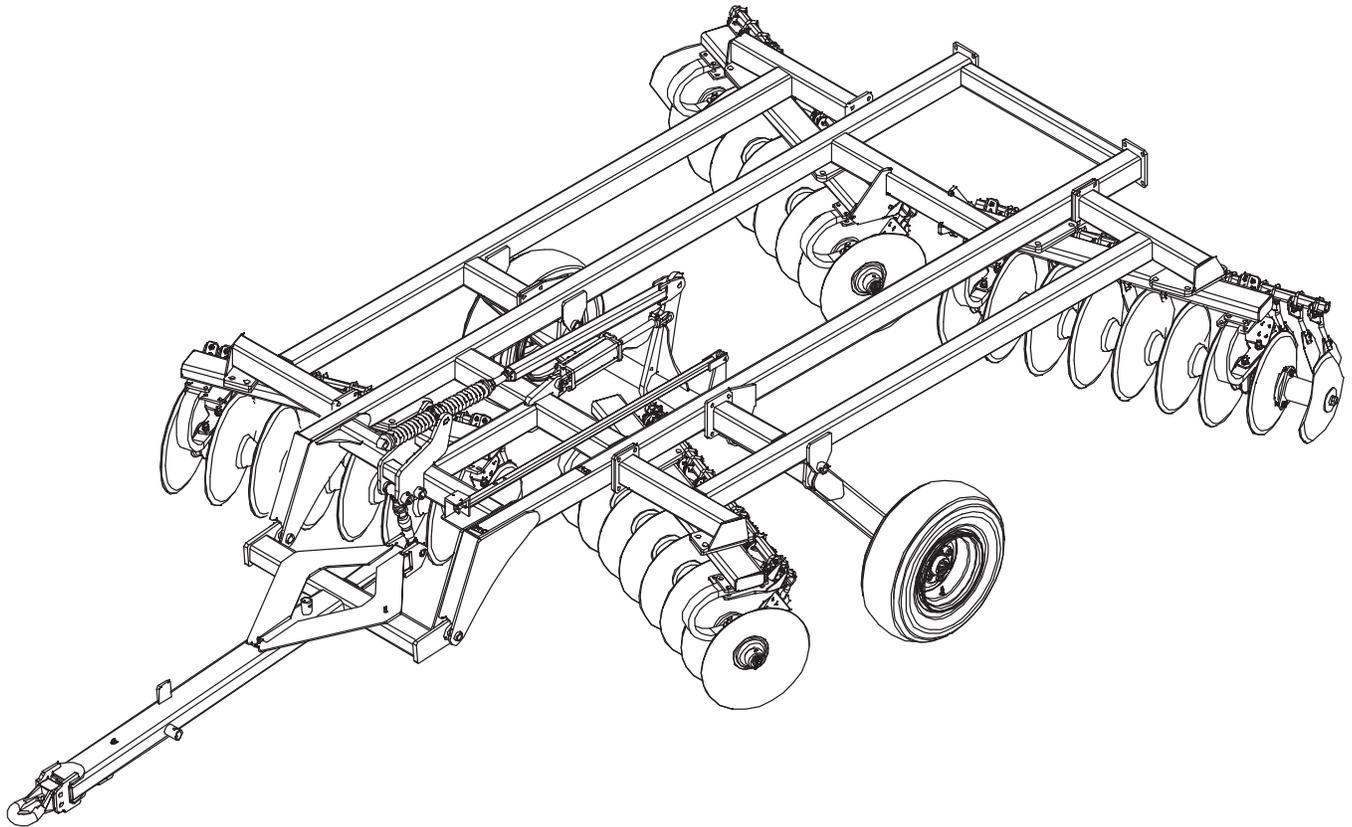


Disc Harrow

7000 Series



TP-69481

556-433M Operator 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.
For an Operator's Manual and Decal Kit in another language, please see your Land Pride dealer.**



Printed 11/26/24

Machine Identification

Record your machine details in the log below. If you replace this manual, be sure to transfer this information to the new manual.

If you or the dealer have added options not originally ordered with the machine, or removed options that were originally ordered, the weights and measurements are no longer accurate for your machine. Update the record by adding the machine weight and measurements with the option(s) weight and measurements.

Model Number	
Serial Number	
Machine Height	
Machine Length	
Machine Width	
Machine Weight	
Year of Construction	
Delivery Date	
First Operation	
Accessories	<hr/> <hr/> <hr/>

Dealer Contact Information

Name: _____

Street: _____

City/State: _____

Telephone: _____

Email: _____

Dealer's Customer No.: _____

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov



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Printed in the United States of America.

See previous page for Table of Contents.



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.

Important Safety Information

Look for Safety 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

Signal words designate a degree or level of hazard seriousness.

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.



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.*



Be Familiar with Safety Decals

- ▲ *Read and understand "Safety Decals" on page 4, thoroughly.*
- ▲ *Read all instructions noted on the decals.*
- ▲ *Keep decals clean. Replace damaged, faded and illegible decals.*



Wear Protective Equipment

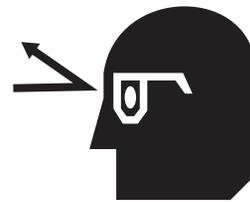
- ▲ *Wear clothing and equipment appropriate for the job.*
- ▲ *Prolonged exposure to loud noise can cause hearing impairment or loss. Wear suitable hearing protection such as earmuffs or earplugs.*
- ▲ *Avoid wearing entertainment headphones while operating machinery. Operating equipment safely requires the full attention of the operator.*



Avoid High Pressure Fluids

Escaping fluid under pressure can penetrate the skin, causing serious injury.

- ▲ *Avoid the hazard by relieving pressure before disconnecting hydraulic lines.*
- ▲ *Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.*
- ▲ *Wear protective gloves and safety glasses or goggles when working with hydraulic systems.*
- ▲ *If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury.*



Use Safety Lights and Devices

Slow-moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.

- ▲ *Use flashing warning lights and turn signals whenever driving on public roads.*

Use lights and devices provided with implement.



Keep Riders Off Machinery

Riders obstruct the operator's view. Riders could be struck by foreign objects or thrown from the machine.

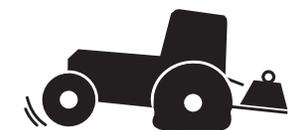
- ▲ *Never allow children to operate equipment.*
- ▲ *Keep all bystanders away from machine during operation.*



Transport Machinery Safely

Maximum transport speed for drill is 20 mph (32 kph). Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

- ▲ *Do not exceed 20 mph (32 km/h). Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.*
- ▲ *Comply with state and local laws.*
- ▲ *Do not tow a drill unless the towing vehicle is rated for, and ballasted for, the weight of the drill.*
- ▲ *Carry reflectors or flags to mark drill in case of breakdown on the road.*
- ▲ *Do not fold or unfold the drill while the tractor is moving.*



Check for Overhead Lines

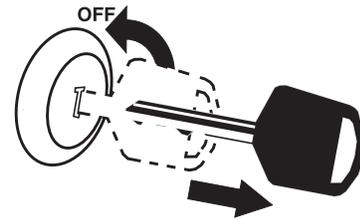
The harrow is a one section tillage tool and does not require more transport height than the tractor it is attached to. Contacting overhead electrical lines can introduce lethal voltage levels on drill and tractor frames. A person touching almost any metal part can complete the circuit to ground, resulting in serious injury or death. At higher voltages, electrocution can occur without direct line or body contact.

- ▲ *Avoid overhead lines during folding, unfolding, transport and parking.*



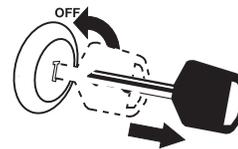
Shutdown and Storage

- ▲ *Lower drill, put tractor in park, turn off engine, and remove the key.*
- ▲ *Secure drill using blocks and supports provided.*
- ▲ *Detach and store drill in an area where children normally do not play.*



Practice Safe Maintenance

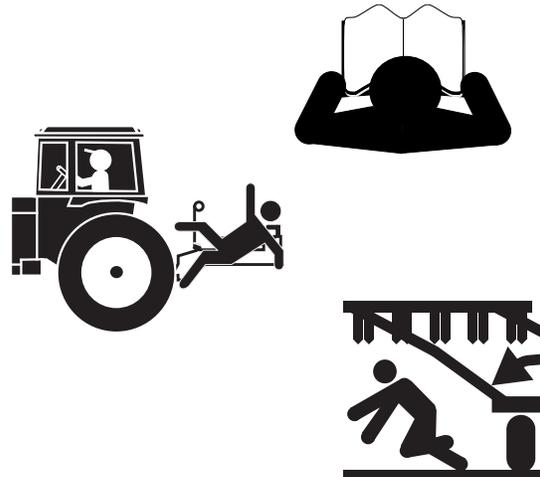
- ▲ *Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.*
- ▲ *Work in a clean, dry area.*
- ▲ *Lower the drill, put tractor in park, turn off engine, and remove key before performing maintenance.*
- ▲ *Make sure all system pressure is relieved.*
- ▲ *Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on drill.*
- ▲ *Inspect all parts. Make sure parts are in good condition and installed properly.*
- ▲ *Remove buildup of grease, oil or debris.*
- ▲ *Remove all tools and unused parts from drill before operation.*



Safety At All Times

Thoroughly read and understand the instructions in this manual before operation. Read all instructions noted on the safety decals.

- ▲ *Be familiar with all drill functions.*
- ▲ *Operate machinery from the driver's seat only.*
- ▲ *Do not leave drill unattended with tractor engine running.*
- ▲ *Do not dismount a moving tractor. Dismounting a moving tractor could cause serious injury or death.*
- ▲ *Do not stand between the tractor and drill during hitching.*
- ▲ *Keep hands, feet and clothing away from moving parts.*
- ▲ *Watch out for wires, trees, etc., when folding and raising drill. Make sure all persons are clear of working area.*



Safety Decals

Safety Reflectors and Decals

Your implement comes equipped with all lights, safety reflectors and decals in place. They were designed to help you safely operate your implement.

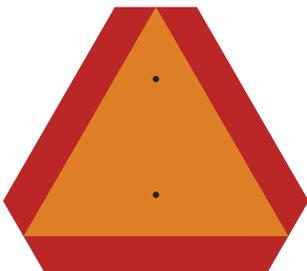
- ▲ *Read and follow decal directions.*
- ▲ *Keep lights in operating condition.*
- ▲ *Keep all safety decals clean and legible.*
- ▲ *Replace all damaged or missing decals. Order new decals from your Land Pride dealer. Refer to this section for proper decal placement.*
- ▲ *When ordering new parts or components, also request corresponding safety decals.*

To install new decals:

1. Clean the area on which the decal is to be placed.
2. Peel backing from decal. Press firmly on surface, being careful not to cause air bubbles under decal.

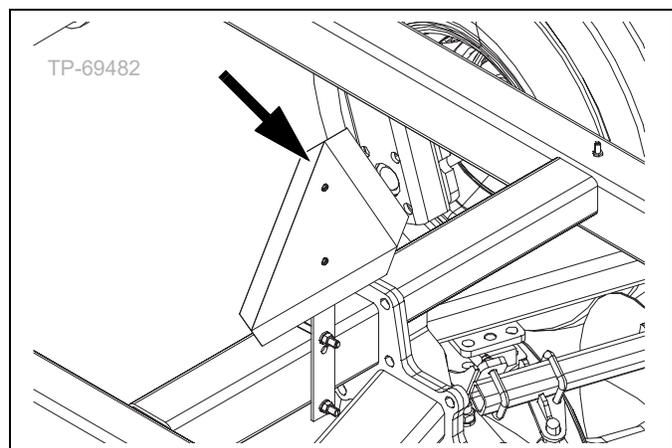
Transport Decals

818-055C



Slow Moving Vehicle Reflector

On rear of wing stop;
1 total

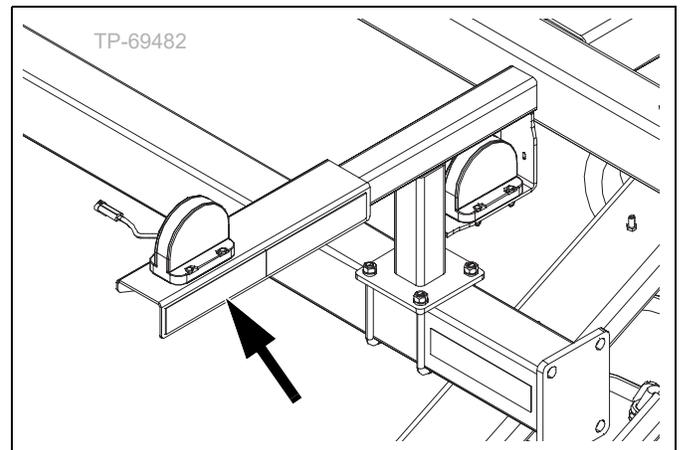


838-614C



Red Reflectors

On rear face of light bracket mount tube (outside);
2 total

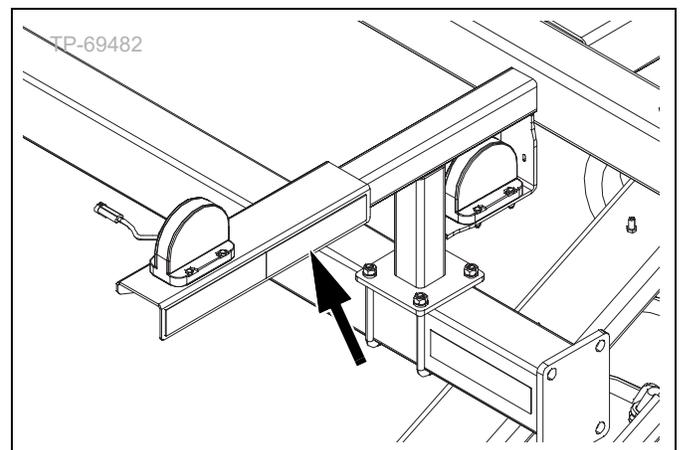


838-603C



Daytime Reflectors

On rear face of light bracket mount tube (inside);
2 total

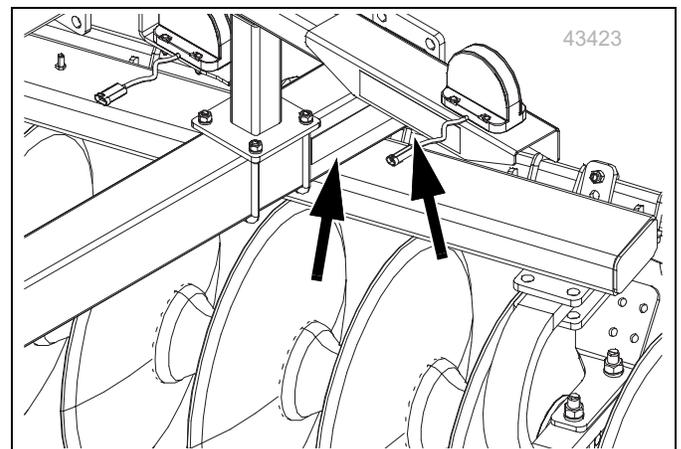


838-615C



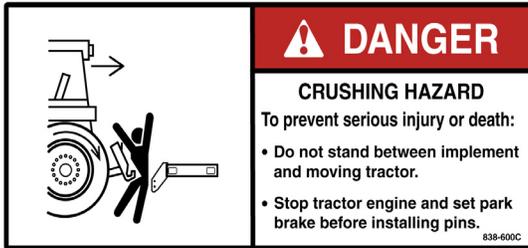
Amber Reflectors

On front of light brackets. On front, outside of center frame (not shown), on outside, rear of center frame, side of finishing attachment (not shown);
8 total

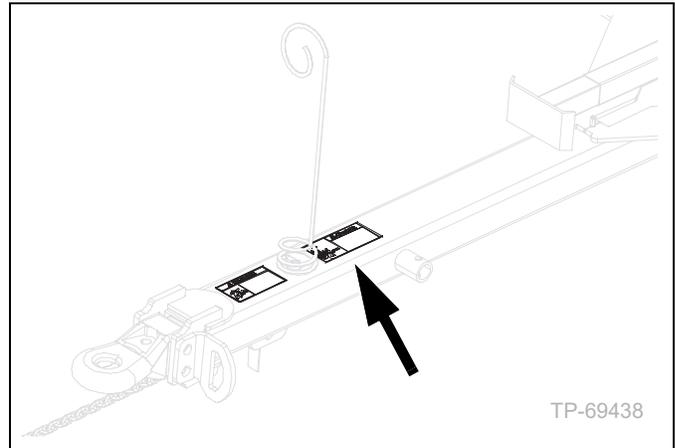


Danger Decals

838-600C



Danger: Crushing Hazard
On front of hitch tube (left, front);
1 total

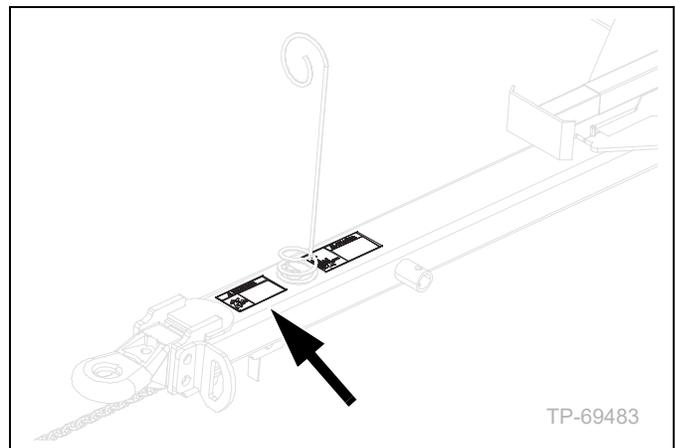


Warning Decals

838-606C



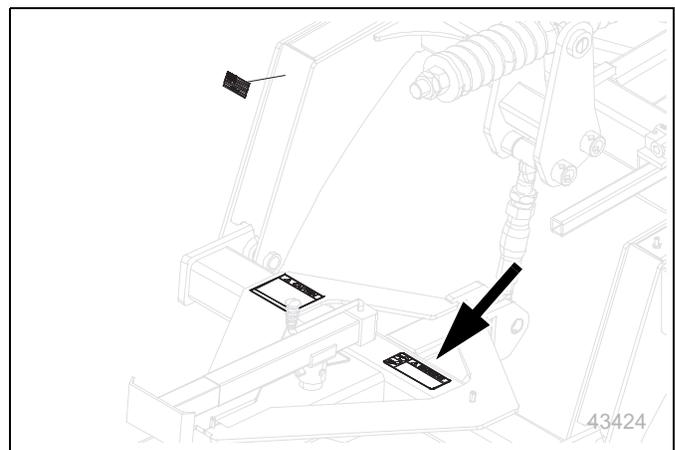
Warning: Tongue Rising
Front of hitch (left, front);
1 total



838-094C

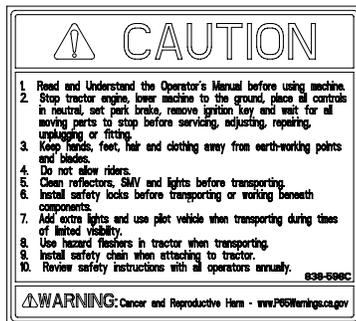


Warning: High Pressure Fluid Hazard
On hitch, left rear;
1 total



Caution Decals

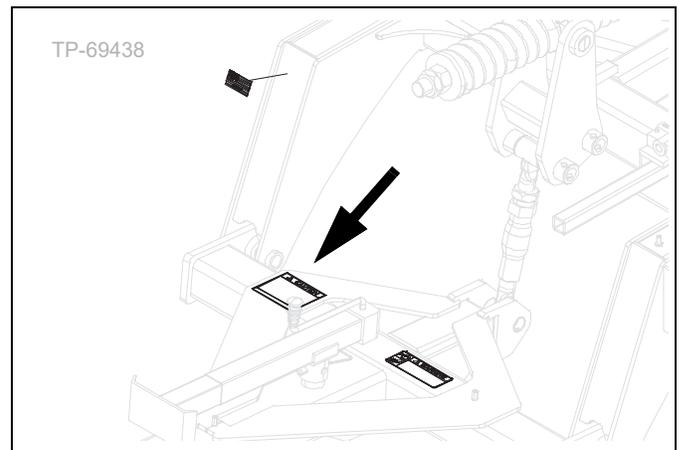
838-598C



Caution: General Instructions

On hitch, left rear;

1 total



Notice Decals

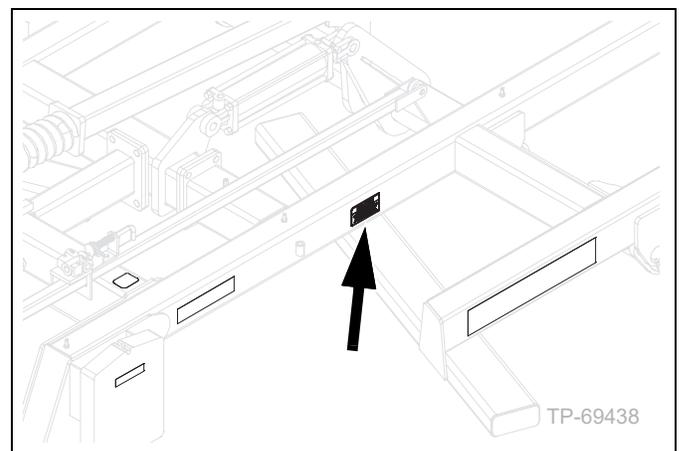
838-613C



Notice: Transport Lock

Outside of center frame (both sides);

2 total

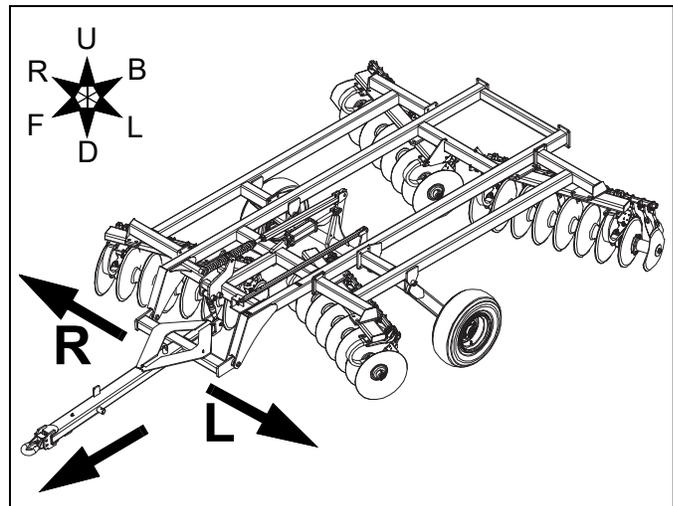


Introduction

Land Pride welcomes you to its growing family of new product owners. The 7000 Series Disc Harrow has been designed with care and built by skilled workers using quality materials. Proper setup, maintenance, and safe operating practices will help you get years of satisfactory use from the machine.

Description of Unit

The 7000 Series Disc Harrow is a one section primary and secondary tillage tool. Working width ranges from 10 to 15 feet. The implement is designed to cut out and bury roots and crop residue. Kill weeds and dry out the soil, level ridges and ruts and for seedbed preparation. Various finishing attachments are also available to further smooth, redistribute residue, kill weeds, and break clods.



Intended Usage

Use the 7000 Series to eliminate weeds, leveling rutted fields, and incorporating crop residue. Do not modify the disk harrow for use with attachments other than Land Pride options and accessories specified for use 7000 Series Disc Harrow.

Models Covered

DH7110	10-Foot, 1-Section
DH7112	12-Foot, 1-Section
DH7115	15-Foot, 1-Section

Document Family

556-433M	Owner's Manual (this document)
556-433P	Parts Manual

Using This Manual

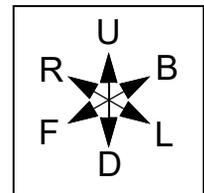
This manual will familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The information in this manual is current at printing. Some parts may change to assure top performance.

Definitions

The following terms are used throughout this manual.

Right-hand and left-hand as used in this manual are determined by facing the direction the machine will travel while in use unless otherwise stated. An orientation rose in some line art illustrations shows the directions of: Up, Back, Left, Down, Front, Right.



NOTICE

A crucial point of information related to the current topic. Read and follow the directions to remain safe, avoid serious damage to equipment and ensure desired field results.

Note: Useful information related to the preceding topic.

Owner Assistance

If you need customer service or repair parts, contact a Land Pride dealer. They have trained personnel, repair parts and equipment specially designed for Land Pride products.

Refer to Figure 1

Your machine's parts were specially designed and should only be replaced with Land Pride parts. Always use the serial and model number when ordering parts from your Land Pride dealer. The serial-number plate is located on front face of the main tool bar truss.

Record your 7000 Series model and serial number here for quick reference:

Model Number: _____

Serial Number: _____

Further Assistance

Your dealer wants you to be satisfied with your new harrow. If for any reason you do not understand any part of this manual or are otherwise dissatisfied with the product please contact:

Land Pride Service Department
1525 E. North St.
PO Box 5060
Salina, KS 67402-5060

Or go to www.landpride.com and follow the contact information at the bottom of your screen for our service department.



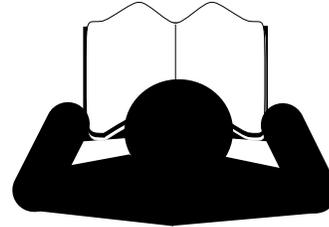
Figure 1
Serial Number Plate

43407

Preparation and Setup

This section helps you prepare your tractor and 7000 Series for use, and covers tasks that need to be done seasonally, or when the tractor/Disc Harrow configuration changes.

Before using the Disc Harrow in the field, you must hitch it to a suitable tractor, inspect systems and level the Disc Harrow. Before using the Disc Harrow for the first time, and periodically thereafter, certain adjustments and calibrations are required.



Prior to Going to the Field Checklist

Complete this checklist before routine setup:

- Read and understand “**Important Safety Information**” on page 1.
- Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
- Make sure your tractor horsepower matches the implement you are pulling. This is important so the implement can do the best possible job.
- Clean all hydraulic couplings and connect to tractor as shown on page 14.
- If machine is folded, make sure the fold stop valve located on the front of the machine at the bulkhead bracket is open. Make sure no one is under the wings and slowly unfold the unit.
- Check again for hydraulic leaks and watch that hoses do not get pinched in hinges, wing stops, etc.
- After the machine is completely unfolded, raise and lower the Disc Harrow several times to purge air from the hydraulic system. Again check for hydraulic leaks and tighten or replace if necessary.
- Check safety chain hookup. Make sure all warning lights are hooked up and functioning correctly.
- Check that all grease fittings are in place and lubricated. See “**Lubrication**” on page 26. The hubs will come pre-greased and will not need greased at this time.
- Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See “**Safety Decals**” on page 4.
- Inflate tires to pressure recommended and tighten wheel bolts as specified. See “**Tire Inflation & Warranty**” on page 29.
- Refold the machine slowly. Turn the fold stop valve to the shut position to lock the fold hydraulics. Put transport locks in place. Always use the transport locks when moving from field to field and while in storage.

- You are now ready to go to the field.

Hitching Disc Harrow to Tractor

Hitch to a tractor for highway transport or field operations. Hitch to a leading implement only for field operations. Do not transport behind another implement.

Before hitching, check the compatibility and capability of the towing tractor or implement.

- The 7000 Series Disc Harrow is a pull-type implement equipped with a standard clevis single tang hitch. It may be converted to a Category III, IV or V hitch using optional accessory parts.

For hillsides and steep slopes, set tractor wheels as wide as possible for maximum stability.

1. Raise tractor three-point arms (if equipped) clear up to clear Disc Harrow.
2. For TWO-WHEEL DRIVE and MFWD tractors, pin draw bar in fixed center position for field and transport. Pin in center position for transport to maintain maximum steering control.

Refer to Figure 2

3. Use jack (1) to raise and lower disc harrow tongue.
4. Back tractor draw bar into alignment with hitch.
5. Secure with a locking hitch pin.

CAUTION

Negative Tongue Weight Hazard:

Make certain the disc harrow is securely hitched to the tractor or leading implement before unfolding. An unhitched disc harrow can tip over backwards during folding and unfolding if the tongue is not secured.

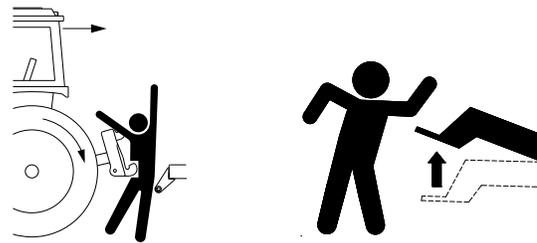
6. Secure safety chain to an anchor on the tractor.

Refer to Figure 3

7. Retract jack foot. Re-orient jack to storage position.
8. After hitching tractor to disc harrow, store jack on storage stop (2) on tongue.

Load Sway Hazard:

9. Lock draw bar swing to center position to minimize any side-to-side sway to assure proper tracking in the field and safe travel. See "Transporting the Disc Harrow" on page 17, for safe transporting.



DANGER

Crushing Hazard:

Do not stand or place any body part between drill and moving tractor. You may be severely injured or killed by being crushed between the tractor and drill. Stop tractor engine and set parking brake before attaching cables and hoses.



Figure 2
Jack & Hitch Clevis

43409

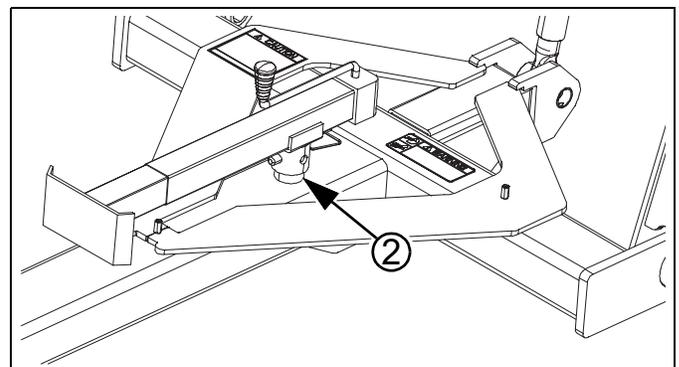


Figure 3
Jack in Storage

TP-69488

Electrical Hookup

Refer to Figure 4

Plug drill electrical lead in tractor seven-pin connector. If your tractor is not equipped with a seven-pin connector, contact your dealer for installation.

Test the lights and signaling prior to highway movement.



Figure 4
Lighting Connector

36051

Hydraulic Hose Hookup

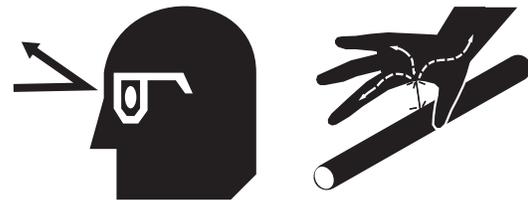
WARNING

High Pressure Fluid Hazard:

Shut down tractor before making hydraulic connections. Only trained personnel should work with system hydraulics.

Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury.

Use a piece of paper or cardboard, NOT BODY PARTS, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. If an accident occurs, seek immediate medical attention from a physician familiar with this type of injury.



Refer to Figure 5

Land Pride hydraulic hoses have color coded handle grips to help you hookup hoses to your tractor outlets. Hoses that go to the same remote valve are marked with the same color.

Color Coded Hose Handles

Color	Hydraulic Function
Black	Lift (2 hoses)

To distinguish hoses on the same hydraulic circuit, refer to the symbol molded into the handle grip.

- Hoses with an extended-cylinder symbol feed cylinder base ends.
- Hoses with a retracted-cylinder symbol feed cylinder rod ends.

Secure hoses and cables so that they have sufficient slack for hitch movements, but cannot get caught between moving parts of tractor, disc harrow or hitch. Failure to safely route and secure hoses and cables could result in damage requiring component repair/replacement, and lost field time.

Clean all hydraulic couplings and hook to tractor.

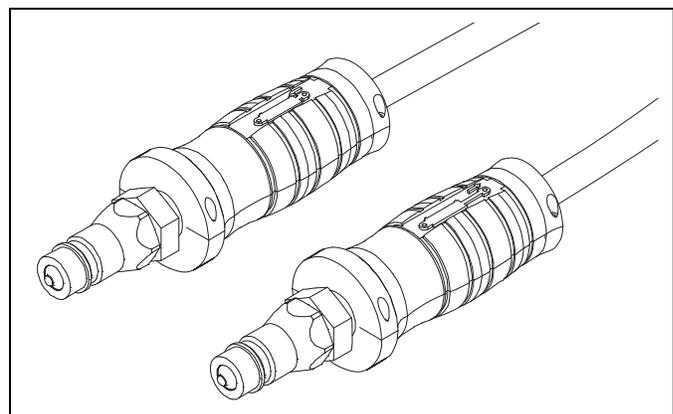


Figure 5
Color Coded Hose Handles

31733

Clevis Hitch

Refer to Figure 6

The base hitch must be upright (with the recessed notch on the bottom) for this configuration. This places the tongue weight on the base hitch, and not the clevis. (13).

10. Select one each:
 - (13) 890-798C HITCH CLEVIS
 - (11) 802-487C HHCS 3/4-10X6 GR8
 - (12) 803-367C NUT HEX TOP LOCK 3/4-10PLT
11. With the square-shouldered end of the clevis (13) up, fully seat the clevis in the upright base hitch (18). Insert the Grade 8 bolt (11) from below. Secure with lock nut (12).

CAUTION

Hitch Failure Hazard:

Install the hitch base and assemble the clevis parts as shown. Incorrect installation or assembly may result in failure of the clevis bolt, leading to hitch failure. This could result in a serious highway accident or severe machine damage.

Category III Hitch

The base hitch (18) must be inverted (with the recessed notch on the top) for this configuration. Set the V-block (14) to allow some vertical articulation of the draw bar pin. Always use at least one cushion (15).

12. Select one of each
 - (16) PPI-302V TOP PLATE - CAT 3
 - (14) PPI-203VR V-BLOCK
 - (10) 802-383C HHCS 3/4-10X3 GR5
 and two:
 - (15) PPI-205H CUSHION
13. Set the cushions inside the hitch recess, just forward of the vertical bolt hole. Position the V-block (14) forward of the cushions and check the size of the resulting pinning hole. Remove a cushion (15) if needed.
14. Add the top plate (16). Secure from below with Grade 5 bolt (10).

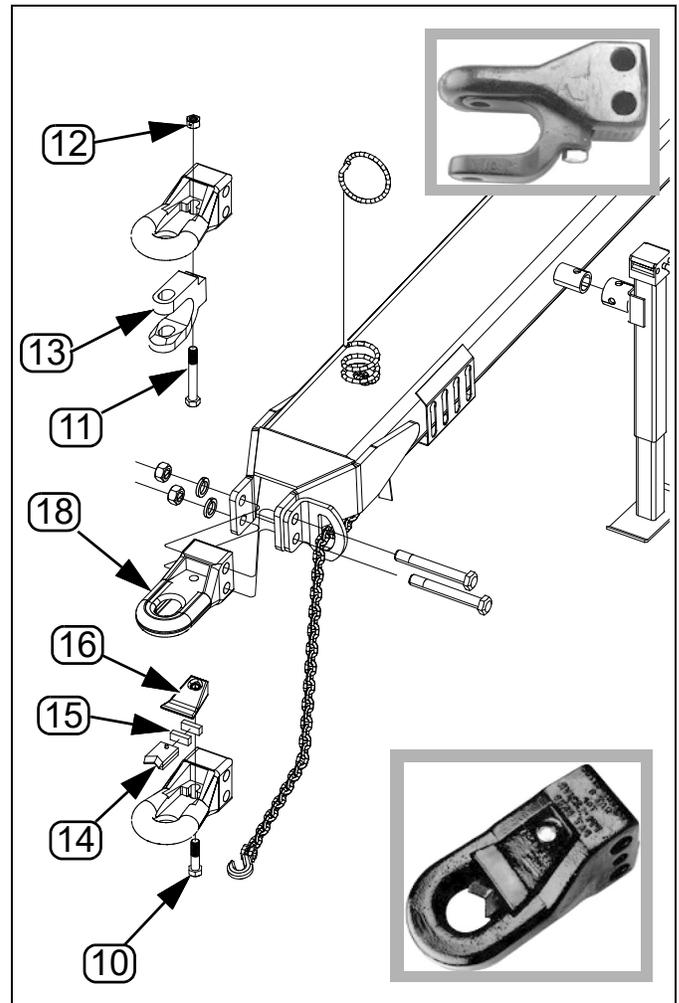
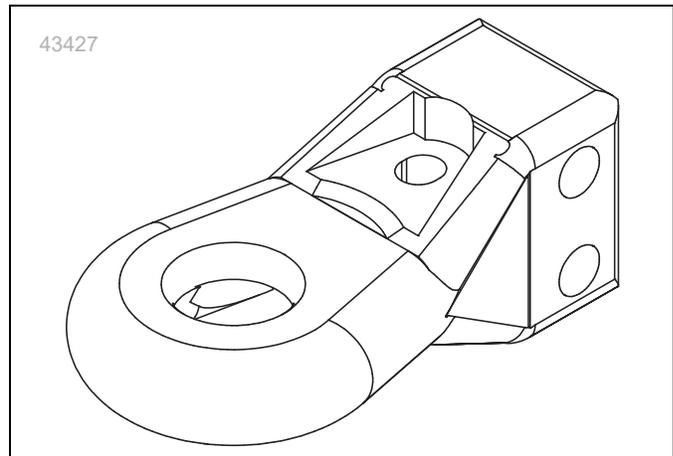


Figure 6
Configure Hitch

31740
43410
31741

Category III & IV Hitch



Transport Locks

Refer to Figure 7

15. Once the cylinders are connected, raised the unit completely. If the transport locks (1) are in place, remove them at this time.

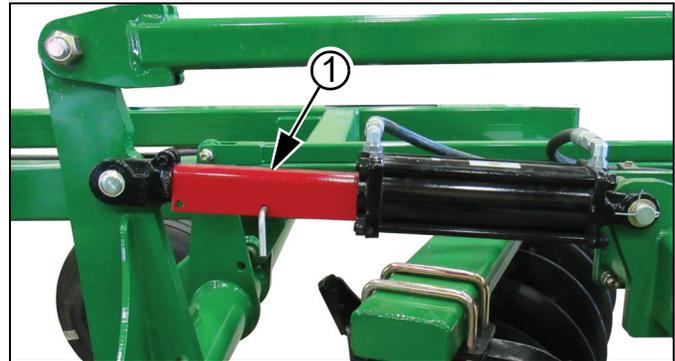


Figure 7
Transport Locks

TP-69485

Refer to Figure 8

16. Store the transport locks on the main frame as shown (2).
 17. Once the locks are removed, unfold the wings.
- Note: Make sure no one is under the wings during the unfolding process. Watch for leaks and make sure hoses do not get pinched during the initial unfolding process.
18. Once the machine is raised and lower the machine several times to purge air from the lift system. Again, watch for any leaks and tighten if necessary.
 19. Check the tire pressure for proper inflation and check the tightness of lug bolts.

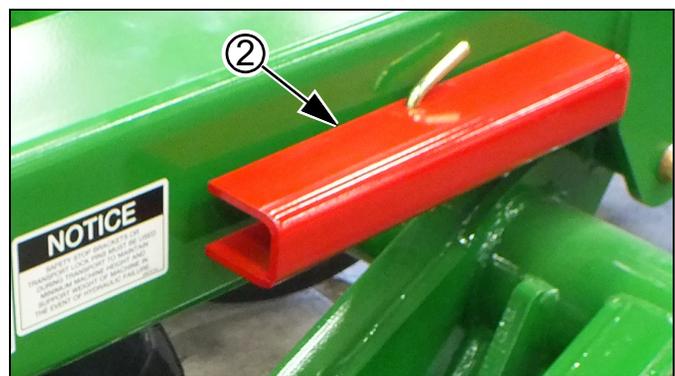


Figure 8
Transport Locks Storage

43411

First time Field Adjustments

Pre-Leveling of Machine

Note: Pre-leveling of machine should be done on a good level surface (preferably concrete). Insure all tire pressure is set to recommended pressure. Raise machine and hold lever to insure that the air has been purged from the lines.

1. Lower machine till blades are just off the ground, adjust the hitch turnbuckle until the front and rear blades are equal distance to the ground.

Scraper Adjustment

Refer to Figure 9

2. To adjust the disc scrapers loosen the u-bolts (1) that hold the disc scraper assembly (2) to the scraper tube (3) and move the scraper until it is about $\frac{1}{8}$ " from the disc blade.

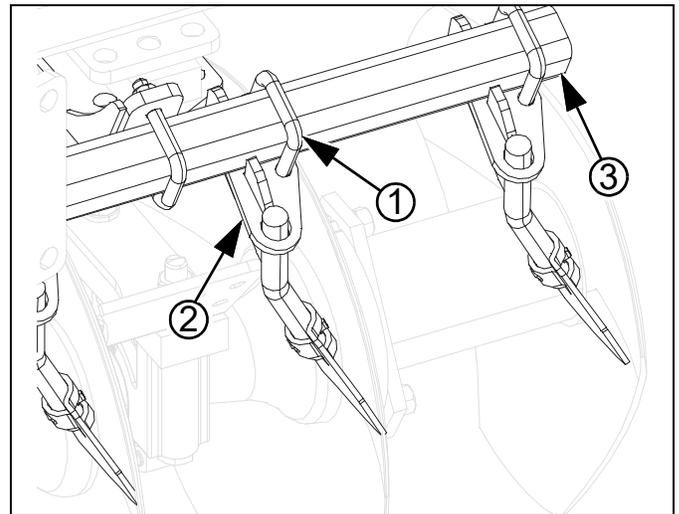


Figure 9
Scraper Adjustment

TP-69483

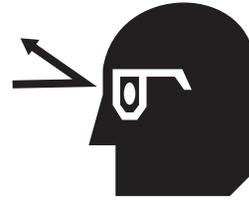
Operating Instructions

This section covers general operating procedures. Experience, machine familiarity, and the following information will lead to efficient operation and good working habits. Always operate farm machinery with safety in mind.

Pre-Start Checklist

Perform the following steps before transporting the Disc Harrow to the field.

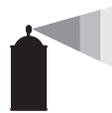
- Carefully read “**Important Safety Information**” on page 1.
- Lubricate drill as indicated under “**Lubrication**” on page 26.
- Check all tires for proper inflation. See “**Tire Inflation & Warranty**” on page 33.
- Check all bolts, pins, and fasteners. Torque as shown in “**Tire Inflation & Warranty**” on page 29.
- Check drill for worn or damaged parts. Repair or replace parts before going to the field.
- Check hydraulic hoses, fittings, and cylinders for leaks. Repair or replace before going to the field.
- Perform all beginning-of-season and daily service items under “**Maintenance**” on page 25.



WARNING

High Pressure Fluid Hazard:

Relieve pressure before disconnecting hydraulic lines. Use a piece of paper or cardboard, **NOT BODY PARTS**, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury. If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury.



Transporting the Disc Harrow

DANGER

Loss of Control Hazard:

Do not tow the disc harrow behind another implement on public roads. Tow the disc harrow to the field with a separate vehicle. The leading implement may not provide sufficient lateral control of a trailing implement at highway speeds. The total weight of the train can also exceed the steering and/or braking capability of the tractor. The resulting accident could cause serious injury or death.

DANGER

Loss of Control Hazard:

Use an adequate towing vehicle. Never tow an implement that weights more than 150% of the towing vehicle (transport vehicle must weight at least 67% of implement). Ensure that the towing vehicle is adequate for the task. Using an inadequate tow vehicle is extremely unsafe, and can result in loss of control, serious injury and death.

Note: See tables on “**Specifications and Capacities**” on page 28 for Disc Harrow transport weights.

CAUTION

Braking and Loss of Control Hazard:

Do not exceed 25/30 mph (40/48 km/h) when driving straight. Slow down on rough roads.

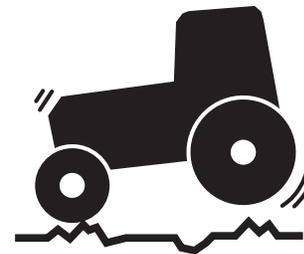
Do not exceed 13 mph (21 km/h) in turns. The weight of the drill can cause under-steer, and the height of the drill is a tipping hazard.

Transport Checklist

Know your implement weight. If tractor capabilities are marginal, check actual weight of implement at a scale.

Before transporting the drill check the following items.

1. Check that implement is securely hitched to a sufficient tractor (page 11).
2. Always use a locking-style hitch pin sized to match holes in hitch and draw-bar, and rated for the load.
3. Attach safety chain to tractor with enough slack to permit turning (page 11).
4. Verify correct operation of lights.
5. Check that tires are properly inflated (page 29).
6. Plan the route. Avoid steep hills.
7. Always have lights on for highway operation.
8. Do not exceed 20 mph (32 kph). Comply with all national, regional and local laws when traveling on public roads.
9. Remember that the implement may be wider than the towing vehicle. Allow safe clearance.



Field Operations

NOTICE

Equipment Damage Risk:
Lift for tight turns and reverse moves. Tight turns can result in a section moving backward. Never back up with the disc harrow on the ground.

Field Set-Up Checklists

Use the following tables to develop a final checklist for your tractor/harrow configuration. Additional or fewer steps may be necessary depending on tractor features, harrow options and planting accessories.

Mechanical Checklist (Tractor Hitching)	Page
<input type="checkbox"/> Disc Harrow hitched	11
<input type="checkbox"/> Hitch pin locked	-
<input type="checkbox"/> Safety chain secured to tractor or leading implement	11
<input type="checkbox"/> Parking jack stowed	11

Electrical Checklist	Page
<input type="checkbox"/> Verify electrical hookups solid, or connector securely stowed if not using lights in field.	12

Hydraulic System Checklist	Page
<input type="checkbox"/> Check tractor hydraulic reservoir full	-
<input type="checkbox"/> Make hydraulic connections	12
<input type="checkbox"/> Inspect connections for leaks	-

Operations Checklists

Hitching

- Match hitch Category to tractor (page 11).
- Hookup hydraulic hoses (page 12).
- Hookup electrical connections (page 12).

Transport

- If the towing vehicle has not been previously used with this drill, check its rated list and towing capacity vs. the drill weight (page 17). Ballast as required.
- Raise rear jack stand if equipped (page 13).
- Check the lights are working.
- Fully raise drill and install transport locks.
- Travel with caution (page 17).

Field Start

- Remove transport locks and store in position on frame (page 14).
- Lower the drill.

Field Turns

- Lift drill.
- Make turn.
- Lower and pull forward.

End Field Work

- Lift drill.
- Remove transport locks from storage position and install on cylinders
- Travel with caution (page 17).

General Operation and In-Field Adjustments

1. Raise the disc completely and unfold the machine. Make sure the fold cylinders are fully extended to allow the wings to fully flex in the field. Proceed into the field and lower the machine to the desired operating depth.
2. If satisfied, set the depth and then proceed through the field, observing the disc for levelness, side to side and fore to aft. Although the disc was preset, See "**First time Field Adjustments**" on page 15, to level machine. Certain field conditions can cause the disc to vary from center to wings and front to rear when being pulled through the ground. A final adjustment may need to be made to the disc harrow.
3. If the center is running deeper because of it following the tractor in soft soil, the wings may need to be set in slightly deeper (with the eyebolts) and then the entire machine set slightly shallower (with depth stop).

Transport Locks

Refer to Figure 10

4. The manual u-shaped locks will only lock the lift and should be used for machine maintenance, transport and long term storage.



Figure 10
Transport Lock

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Thread Protectors

Refer to Figure 11

5. Make sure thread protector bolts (1) are in place and tight. Gang bolt thread damage may occur at hinge point when gangs flex without protector caps. Lost caps with no bolt may allow gang nut to become loose.

Adjusting and Using Tractor Hydraulics Depth Control

Refer to Figure 12

6. When you have machine level and set to the desired working depth, set the depth stop (2) on the depth stop tube (3). This is located at the front of the machine. This will maintain a constant depth each time after raising and lowering machine. One full turn of the handle (4) will change the depth approximately $\frac{1}{4}$ ". Turning the crank clockwise 1 turn is a $\frac{1}{4}$ " shallower working depth. Turn 2 turns counter clockwise is $\frac{1}{2}$ " deeper working depth.

NOTICE

Tires must remain on the ground at all times. Wheels off the ground will induce high loads on level linkage and hitch, causing premature wear and possible frame failure.

Tractor Detents

7. After the depth stop on the tractor is set, in order to preserve the life of the cylinders, it is important to properly set the detent on the tractor. The 7000 series disc harrow is equipped with re-phasing lift cylinders. These cylinders have a re-phasing port at the top of the cylinder (end stroke). If the tractor flow rates and detents are not set properly, extreme oil flow through these ports can destroy cylinder seals causing internal leakage.
8. Tractors with timed detents (electric over hydraulic): The flow on the tractor should be set so the disc will raise from field position to full lift in approximately 3 to 5 seconds which is about 10 gpm. Not 10 on the tractor indicator. More important is the detent. Once the flow has been set, set the timed detent so that it is $\frac{1}{2}$ to 1 second longer than it takes to fully lift the unit. If you set it less than this it will not properly re-phase the cylinders. If you set it more than this, you may be causing damage to the seals.

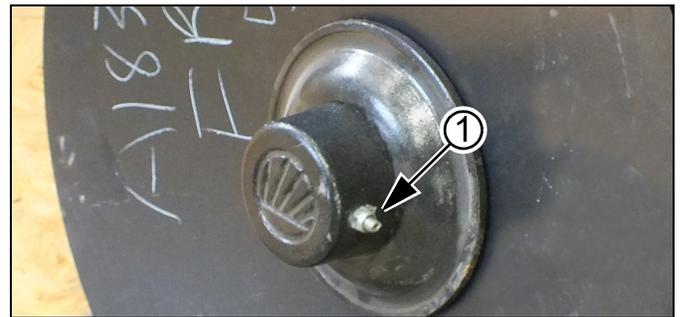


Figure 11
Thread Protectors

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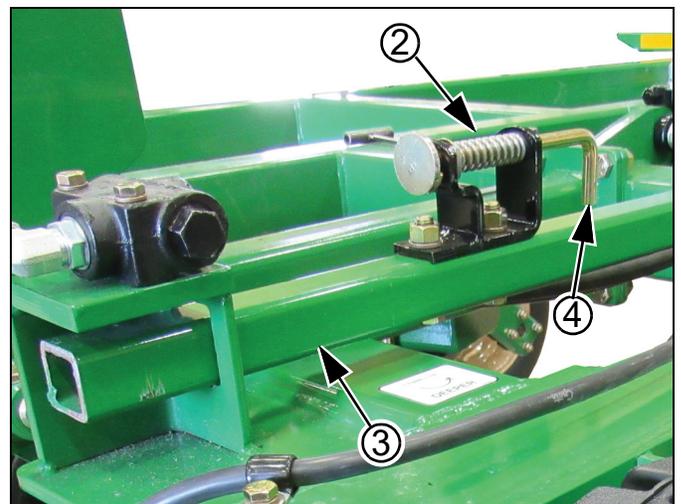


Figure 12
Depth Control

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Transporting the Disc Harrow

9. Tractors with Pressure Detents: Set the flow control so the machine raises completely in approximately 3 to 5 seconds. Detent should kick out automatically at the end of stroke. If detent kicks out prematurely, slow the flow on the tractor. If the flow has to be slowed to the point that the unit does raise in an acceptable time frame, the detent pressure on the tractor may need to be increased. Contact your dealer for information on how to do this. If this problem still persists, contact the factory service representative for other possible adjustments. Do not try to adjust the valves on the disc harrow without first contacting the factory service rep. Tractors with pressure detents do not allow the system to "automatically" re-phase at the top of the lift cycle. This must be done manually. It is recommended that after every couple of trips back and forth across the field that the raise lever be pulled back and held there 1-2 seconds after the machine is fully raised. This will purge any air that has been ingested into the system.

Leveling

Refer to Figure 13

10. To level your machine lower unit till blades are just off the ground, adjust the hitch turnbuckle (1) until the front and rear blades are equal distance to the ground.

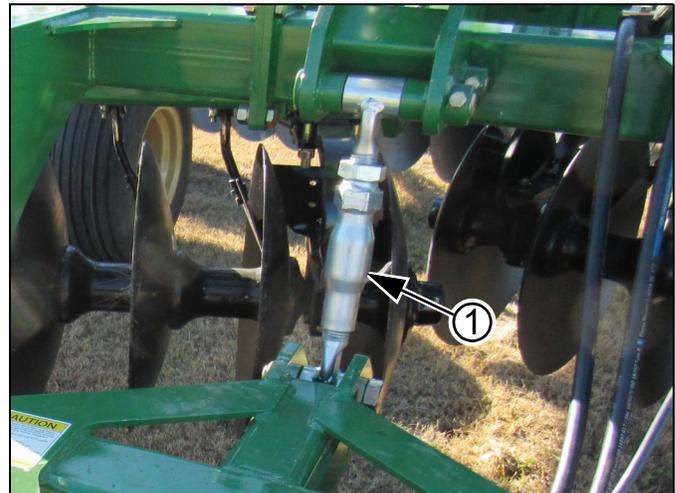


Figure 13
Hitch Turnbuckle

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Rear Attachment Settings

Spike Drag Settings (Option)

Refer to Figure 14

- On the spike drag, start with 5 links hanging from the chain in drag arm bottom slot (1). (This is the starting point for worst conditions). The cleaner the ground, the shorter the pull chain may be pulled up. On the spike drag, one of the links (2) in the first row of angles is turned over. This allows the trash to start flowing through the drag easier by changing the angle of the first row of teeth. Always make sure that the drag is never pulling off of the hang chains. If so, shorten pull chains.

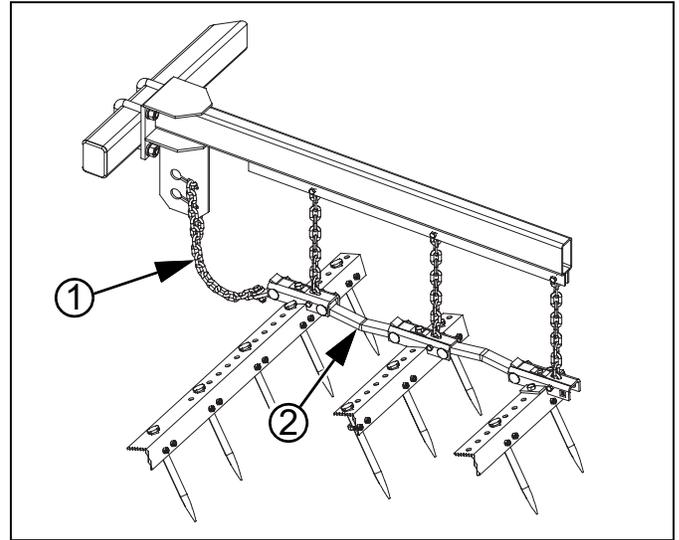


Figure 14
Spike Drag Settings

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Heavy Coil Tine Settings (Option)

Refer to Figure 15

- To adjust down pressure loosen the jam nut (5), and screw the spring bolt (6), in to put more down pressure on the drag, or adjust the bolt out to have less down pressure. Re-tighten the jam nut (5), to secure your adjustments. The spring will be pre-set to 3 - 3 1/2" of bolt left to adjust.
- To change angle of coil tine, rotate the locking pin (3) and move the adjustment lever (4) forward or backwards. Moving the lever forwards towards the front of the machine will allow residue to flow through the drag easier. Moving the lever backwards away from machine makes the drag more aggressive. The adjustment lever has 4 positions and will change the coil tines several degrees.
- Rotate the locking pin (3), back to its engaged position when the desired angle is set.

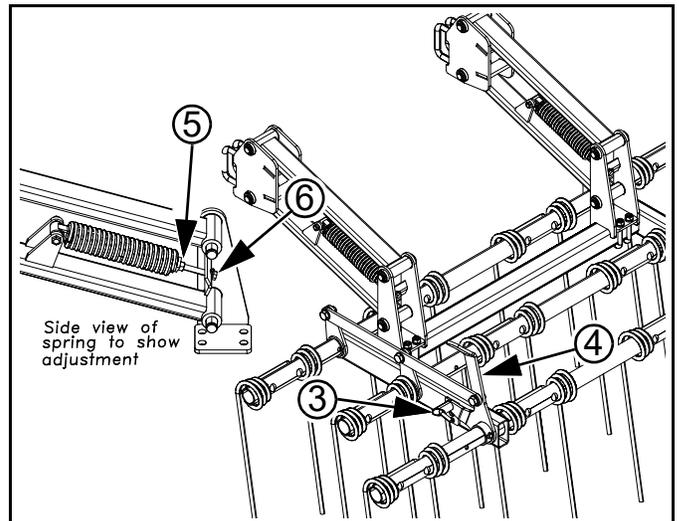


Figure 15
Heavy Coil Tine Adjustment Lever

43422

Rolling Harrow and Reel (Option)

Refer to Figure 16

15. The rolling harrow (1) is a versatile leveling attachment and requires very little adjustment. The reel down pressure may be adjusted by removing the pin (2) and then either pushing the handle (4) forward to increase the spring pressure or by pulling the handle backwards to decrease the spring pressure (3). When the desired amount of spring pressure is set, re-insert the pin (3). Note: It is recommended to run little or no down pressure in wet or sticky field conditions.
16. If your machine is equipped with a hydraulic reel attachment you will need to hook up the hydraulic lines and then you will set the down pressure from the cab of your tractor. There will not be a handle to adjust.

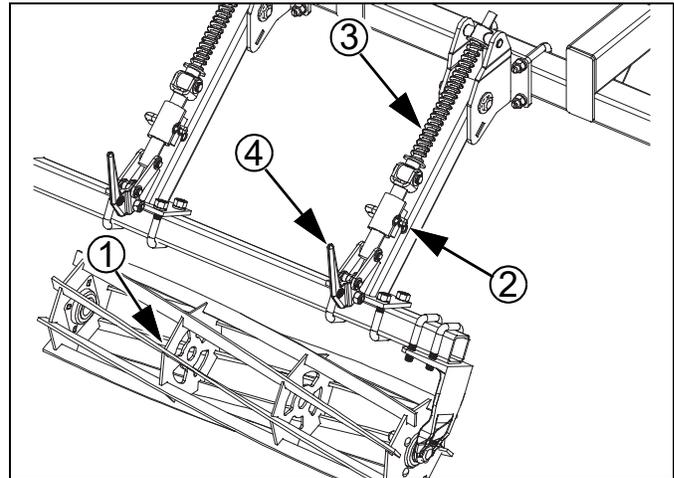


Figure 16
Reel Adjustment

TP-69484

Refer to Figure 17

17. The bars on the reels are angled forward (5) and should be installed as such on the machine. In some conditions in which a firming of the soil is more desirable than breaking up clods then these reels can be mounted in reverse (6). This does however increase the chance of causing damage to the bars in rocky soil.
18. Be sure reels are installed with twisted bars oriented forward (5) as shown. Mounting in reverse (6) can damage reel in rocky soil.

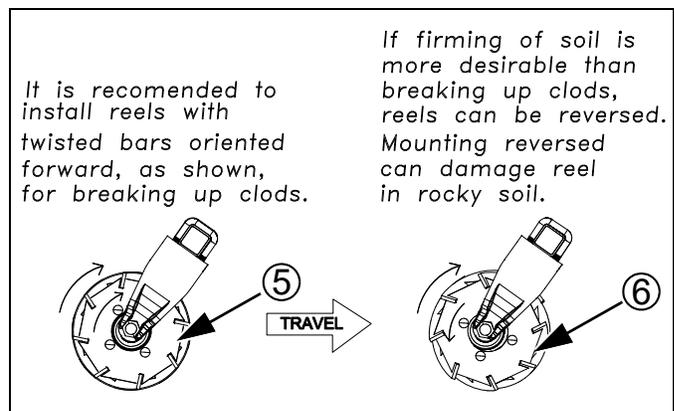


Figure 17
Reel Direction

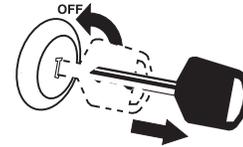
42284

Maintenance and Lubrication

Maintenance

Proper servicing and maintenance is the key to long implement life. With careful and systematic inspection, you can avoid costly maintenance, downtime, and repair.

Always turn off and remove the tractor key before making any adjustments or performing any maintenance.



WARNING

Crushing Hazard:

Always have transport locks in place and frame sufficiently blocked up when working on implement. You may be severely injured or killed by being crushed under the falling implement.



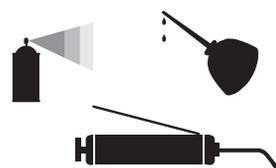
WARNING

High Pressure Fluid Hazard:

Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. Escaping fluid under pressure can have sufficient pressure to penetrate the skin. If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury.



1. After using your drill for several hours, check all bolts to be sure they are tight.
2. Keep disc scrapers properly adjusted.
3. Clean drill on a regular basis. Regular and thorough cleaning will lengthen equipment life and reduce maintenance and repair.
4. Lubricate areas listed under “**Lubrication**” on page 26.
5. Replace any worn, damaged, or illegible safety labels by obtaining new labels from your Land Pride dealer.
6. Always use the manual u-channel transport locks when working on or doing maintenance to the harrow. Read and understand all safety decals on your equipment.
7. During the first season of operation, and periodically after that, check your bolts for tightness. Check disc gang bolts for loose blades. Tighten as needed.
8. Replace or rotate worn parts as needed -- hinge bolts, clevis pins, bearings, blades, etc. Some Boron disc blades cannot be rolled to sharpen, they must be ground. Cracks and breakage will occur if rolled. The heavy blade option is rollable.
9. Check and tighten any hydraulic leaks. Check hoses for any leaks replace any leaking hoses. It is important that there are no leaks on the equipment.



10. Check drag bolts for looseness or excessive wear. Replace broken or bent teeth. Your drag is an important part of the tillage operation. By following and maintaining a routine service and lubrication program, your tillage equipment will give you many years of service.

Lubrication

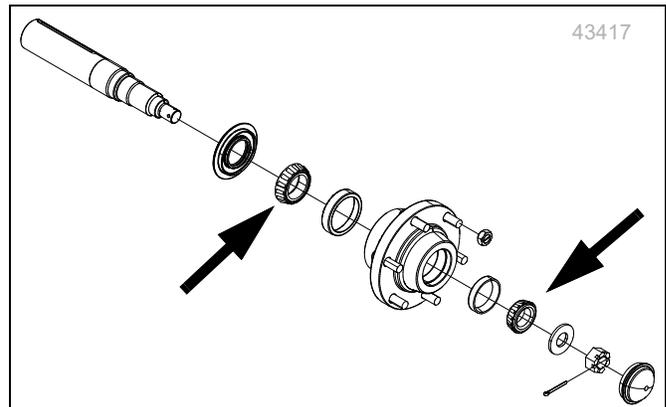
 Multi-purpose spray lubricant	 Multi-purpose grease lubricant	 Multi-purpose oil lubricant	 Inspection	 50 Intervals (operating hours) at which service is required
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Wheel Bearing Hubs

	 Seasonally
---	---

Inspect bearings for end play Annually. If excessive end play exists it is recommended to disassemble, clean and repack the wheel bearings.

For machines stored outdoors or operating in extreme conditions bearings should be checked more often.



All Turnbuckles and Threaded Adjustments

	 Seasonally
--	--

Overall Machine Maintenance;

Type of Lubrication: Multipurpose Lubricant
 Quantity: Coat thoroughly.

End of Season

11. Clean machine as much as possible. Remove all dirt from rust prone parts like disc blades and bolt threads.
12. Check over the machine for damaged or worn parts. Replace or rotate worn parts as needed--hinge bolts, clevis pins, bearings, blades, etc.
13. Check all bolts for tightness. Tighten as needed.
14. Check and tighten or replace any hydraulic leaks.
15. Check hoses for any leaks.
16. The wheel bearings should be cleaned and repacked annually or every 2500 acres.
17. Remove the gang bolt thread protector caps and check gang nut torque (900 to 1100 ft-lbs). Clean out any dirt on castle nut and threads. Use Anti-Seize on the gang bolt threads before tightening castle nut.
18. Grease the Disc Harrow in all locations shown in the lubricating section.
19. If stored outside, place a protective coating of grease or "plow paint" on all earth working parts to prevent rusting.
20. Place boards under the disc gangs and lower the Disc Harrow to the ground retracting the lift cylinders. If disc is folded, remove transport locks before lowering disc.

Beginning of Season

21. Hitch the tractor to the Disc Harrow and connect the hydraulic hoses.
22. Check lift cylinders for leaks that could have caused air to enter cylinders. If leaks are noticed repair cylinders and fully purge air from cylinders by unpinning cylinder, block up and fully cycle cylinders back and forth several times.
23. Slowly raise the machine a couple of times to its full height and hold lever for 10 to 15 seconds to purge air from lift cylinders.
24. If machine was not serviced and greased at end of last season, perform steps 9 thru 14 from End of Season section.
25. Make sure all moving parts move freely and do not bind.
26. Take the time to read the operators manual and refresh yourself with the safety information and operating instructions.
27. It is the owner's responsibility to see that all operators of the Disc Harrow know the safety and operating information found in this manual.



Appendix A - Reference Information

Specifications and Capacities

Models	DH7110	DH7112	DH7115
Number of Blades (7.5")	38	46	54
Number of Blades (9")	34	38	46
Transport Tires	11L X 15 Load F (2)	11L X 15 Load F (2)	11L X 15 Load F (4)
Weight (approx lbs)	5650	6100	7100
PTO H.P Req (Min)	70+	84+	105+
Tillage Width (7.5")	9' 11"	12' 3"	14' 7"
Tillage Width (9")	10' 4"	11' 9"	14' 7"
Width (Transport)	11'	13'	16'

Tire Inflation & Warranty

Tire Inflation Chart		
Wheel	Tire Size	Inflation
Transport	11L X 15 Load F	73 psi (503 kPa)

Tire Warranty Information	
All tires are warranted by the original manufacturer of the tire. Tire warranty information is found in the brochures included with your Operator's and Parts Manuals or online at the manufacturer's web sites listed below. For assistance or information, contact your nearest Authorized Farm Tire Retailer.	
<u>Manufacturer</u>	<u>Web site</u>
Firestone	www.firestoneag.com
Gleason	www.gleasonwheel.com
Titan	www.titan-intl.com
Galaxy	www.atgtire.com
BKT	www.bkt-tire.com

Hydraulic Connectors and Torque

Refer to Figure 18 (a hypothetical fitting)
 Leave any protective caps in place until immediately prior to making a connection.

NPT - National Pipe Thread

Note tapered threads, no cone/flare, and no O-ring.

- 1) Apply liquid pipe sealant for hydraulic applications. Do not use tape sealant, which can clog a filter and/or plug an orifice.

JIC - Joint Industry Conference (SAE J514)

- 2) Note straight threads ④ and the 37° cone ⑤ on "M" fittings (or 37° flare on "F" fittings).
 Use no sealants (tape or liquid) on JIC fittings.

ORB - O-Ring Boss (SAE J514)

Note straight threads ⑤ and elastomer O-Ring ⑦.
 Prior to installation, to prevent abrasion during tightening, lubricate O-Ring with clean hydraulic fluid.

- 3) Use no sealants (tape or liquid) on ORB fittings.
 ORB fittings that need orientation, such as the ell depicted, also have a washer ⑧ and jam nut ⑨ ("adjustable thread port stud"). Back jam nut away from washer. Thread fitting into receptacle until O-Ring contacts seat. Unscrew fitting to desired orientation. Tighten jam nut to torque specification.

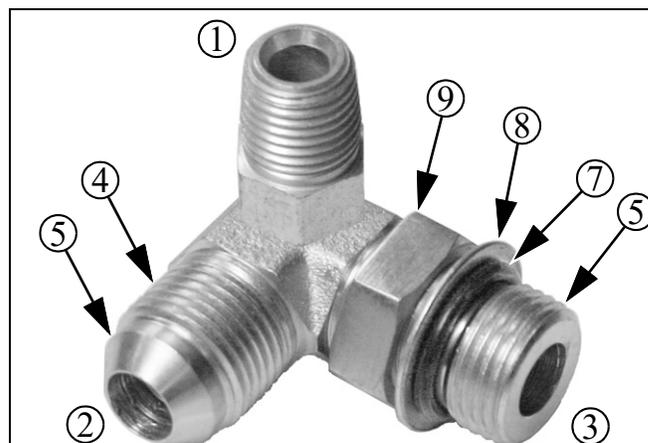


Figure 18
 Hydraulic Connector ID 31282

Fittings Torque Values			
Dash Size	Fitting	N-m	Ft-Lbs
-4	1/4 - 18 NPT	1.5-3.0 turns past finger tight	
-5	1/2 - 20 JIC	19-20	14-15
-5	1/2 - 20 ORB w/jam nut	12-16	9-12
-5	1/2 - 20 ORB straight	19-26	14-19
-6	9/16 - 18 JIC	24-27	18-20
-6	9/16 - 18 ORB w/jam nut	16-22	12-16
-6	9/16 - 18 ORB straight	24-33	18-24
-8	3/4 - 16 JIC	37-53	27-39
-8	3/4 - 16 ORB w/jam nut	27-41	20-30
-8	3/4 - 16 ORB straight	37-58	27-43



Torque Values Chart

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

- a. in-tpi = nominal thread diameter in inches-threads per inch
- b. N·m = newton-meters
- c. mm x pitch = nominal thread diameter in mm x thread pitch
- d. ft-lb = foot pounds

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

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Torque Values Chart	
Disc Gang Torque 1 3/4"-5	900-1100 ft-lbs (170 lbs on 6' Cheater)
Wheel Bolt Torque Values	1/2"-20 (75-85ft-lbs)
Wheel Bolt Torque Values	9/16"-18 (80-90 ft-lbs)
Wheel Bolt Torque Values	5/8"-18 (85-100ft-lbs)

Warranty

Land Pride warrants to the original purchaser that this Land Pride unit will be free from defects in material and workmanship for a period of one year from the first use date when used as intended and under normal service and conditions for personal use; ninety days for custom/commercial or rental use. This Warranty is limited to the replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part. Land Pride reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship.

The following items and/or conditions are not covered under warranty: failures resulting from abuse or misuse of the equipment, failures occurring as a result of accidental damage or acts of God, failures resulting from alterations or modifications, failures caused by lack of normal maintenance as outlined in the operator's manual, repairs made by non-authorized personnel, items replaced or repaired due to normal wear (such as wear items and ground engaging components), repeat repair due to improper diagnosis or repair by the dealer, temporary repairs, service calls and/or mileage to and from customer location, overtime premium, or unit hauling expenses. The warranty may be voided if the unit is towed at speeds in excess of 20 miles per hour (32 kilometers per hour), or is used in soils with rocks, stumps, or other obstructions.

Land Pride reserves the right to make changes in materials or design of the product at any time without notice. The warranty shall not be interpreted to render Land Pride liable for damages of any kind, direct or consequential or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its control. This warranty does not extend to crop loss, losses caused by planting or harvest delays or any expense or loss of 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 the unit is registered with Land Pride within 10 days from the date of the original purchase.

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