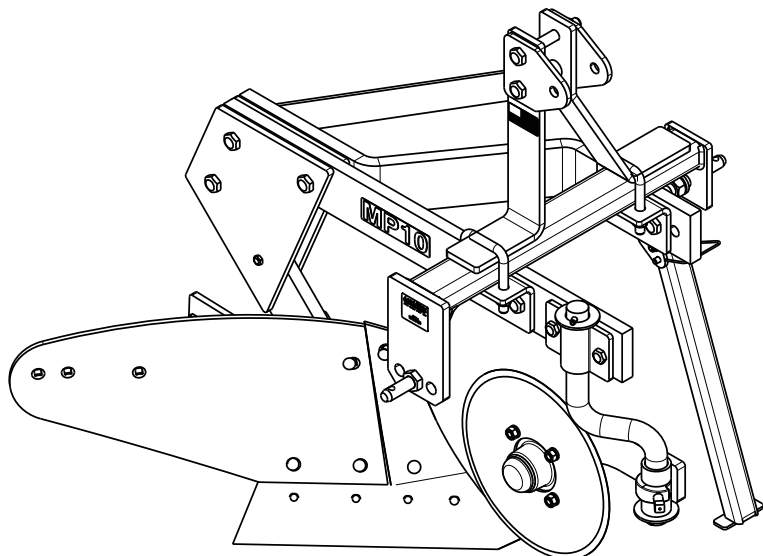
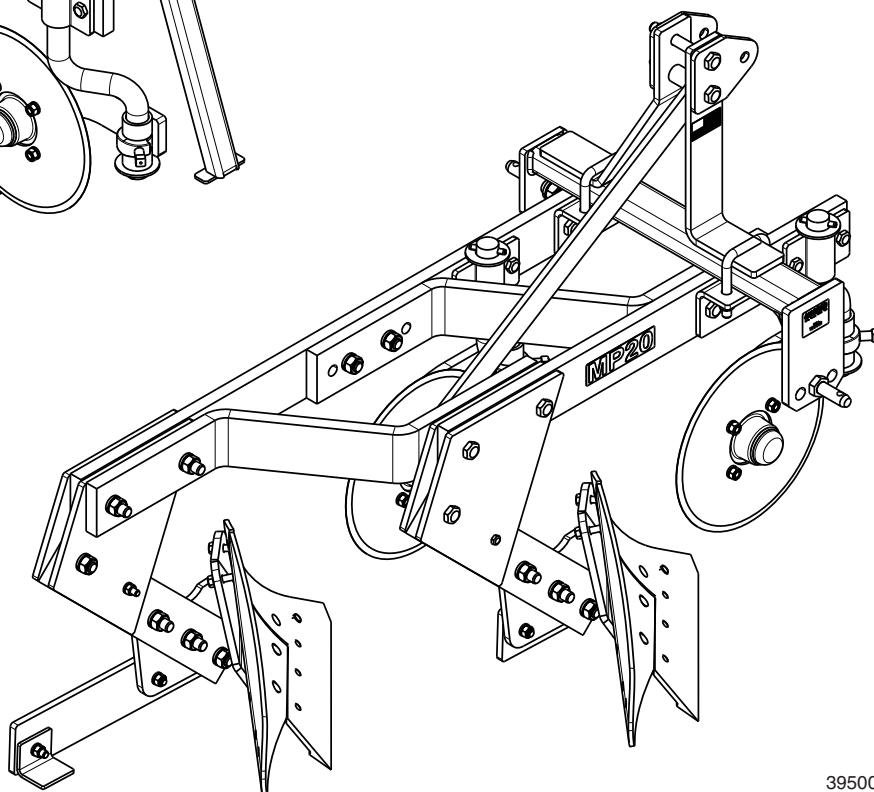


Moldboard Plows

MP10 & MP20



MP10



MP20

39500

307-244M Operator's Manual



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

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

For an Operator's Manual and Decal Kit in French or Spanish Language, please see your Land Pride dealer.



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 provided in the Specifications & Capacities Section of this manual with the Option(s) weight and measurements.

Model Number	
Serial Number	
Machine Height	
Machine Length	
Machine Width	
Machine Weight	
Delivery Date	
First Operation	
Accessories	

Dealer Contact Information

Name: _____

Street: _____

City/State: _____

Telephone: _____

Email: _____



California Proposition 65

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.

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

Safety at All Times

Careful operation is your best assurance against an accident.

All operators, no matter how much experience they may have, should carefully read this manual and other related manuals, or have the manuals read to them, before operating the power machine and this implement.

- ▲ Thoroughly read and understand the "Safety Label" section. Read all instructions noted on them.
- ▲ Do not operate the equipment while under the influence of drugs or alcohol as they impair the ability to safely and properly operate the equipment.
- ▲ The operator should be familiar with all functions of the tractor and attached implement and be able to handle emergencies quickly.
- ▲ Make sure all guards and shields appropriate for the operation are in place and secured before operating implement.
- ▲ Keep all bystanders away from equipment and work area.
- ▲ Start tractor from the driver's seat with hydraulic controls in neutral.
- ▲ Operate tractor and controls from the driver's seat only.
- ▲ Never dismount from a moving tractor or leave tractor unattended with engine running.
- ▲ 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.
- ▲ While transporting and operating equipment, watch out for objects overhead and along side such as fences, trees, buildings, wires, etc.
- ▲ Do not turn tractor so tight as to cause hitched implement to ride up on the tractor's rear wheel.
- ▲ Store implement in an area where children normally do not play. When needed, secure attachment against falling with support blocks.



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 a hazardous situation that, if not avoided, will result in death or serious injury.

WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION

Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.

Safety Precautions for Children

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to implements and their work.

- ▲ Never assume children will remain where you last saw them.
- ▲ Keep children out of the work area and under the watchful eye of a responsible adult.
- ▲ Be alert and shut the implement and tractor down if children enter the work area.
- ▲ Never carry children on the tractor or implement. There is not a safe place for them to ride. They may fall off and be run over or interfere with the control of the power machine.
- ▲ Never allow children to operate the power machine, even under adult supervision.
- ▲ Never allow children to play on the power machine or implement.
- ▲ Use extra caution when backing up. Before the tractor starts to move, look down and behind to make sure the area is clear.

Tractor Shutdown & Storage

- ▲ If engaged, disengage power take-off.
- ▲ Park on solid, level ground and lower implement to ground or onto support blocks.
- ▲ Put tractor in park or set park brake, turn off engine, and remove switch key to prevent unauthorized starting.
- ▲ Relieve all hydraulic pressure to auxiliary hydraulic lines.
- ▲ Wait for all components to stop before leaving operator's seat.
- ▲ Use steps, grab-handles and anti-slip surfaces when stepping on and off the tractor.
- ▲ Detach and store implement in an area where children normally do not play. Secure implement using blocks and supports.



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

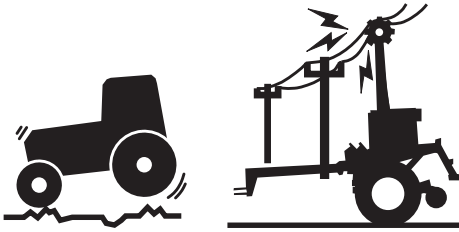
Tire Safety

- ▲ Tire changing can be dangerous and must be performed by trained personnel using the correct tools and equipment.
- ▲ Always maintain correct tire pressure. Do not inflate tires above recommended pressures shown in the Operator's Manual.
- ▲ 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.
- ▲ Securely support the implement when changing a wheel.
- ▲ When removing and installing wheels, use wheel handling equipment adequate for the weight involved.
- ▲ Make sure wheel bolts have been tightened to the specified torque.



Transport Safely

- ▲ Comply with federal, 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 towed trailer to swerve and upset. Reduce speed if towed trailer is not equipped with brakes.
- ▲ Avoid contact with any overhead utility lines or electrically charged conductors.
- ▲ Always drive with load on end of loader arms low to the ground.
- ▲ Always drive straight up and down steep inclines with heavy end of a tractor with loader attachment on the "uphill" side.
- ▲ Engage park brake when stopped on an incline.
- ▲ Maximum transport speed for an attached equipment 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 attached equipment:
 - 20 mph** when weight of attached equipment is less than or equal to the weight of machine towing the equipment.
 - 10 mph** when weight of attached equipment exceeds weight of machine towing equipment but not more than double the weight.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of the vehicle 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 implement.
- ▲ Attach the chain to the tractor drawbar support or other specified anchor location. Allow only enough slack in the chain to permit turning.
- ▲ Always hitch the implement to the machine towing it. Do not use the safety chain tow the implement.



Practice Safe Maintenance

- ▲ Understand procedure before doing work. Refer to the Operator's Manual for additional information.
- ▲ Work on a level surface in a clean dry area that is well-lit.
- ▲ Lower implement to the ground and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- ▲ Do not work under any hydraulic supported equipment. It can settle, suddenly leak down, or be lowered accidentally. If it is necessary to work under the equipment, securely support it with stands or suitable blocking beforehand.
- ▲ Use properly grounded electrical outlets and tools.
- ▲ Use correct tools and equipment for the job that are in good condition.
- ▲ Allow equipment to cool before working on it.
- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on implement.
- ▲ Inspect all parts. Make certain parts are in good condition & installed properly.
- ▲ Replace parts on this implement with genuine Land Pride parts only. Do not alter this implement in a way which will adversely affect its performance.
- ▲ Do not grease or oil implement while it is in operation.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Always make sure any material and waste products from the repair and maintenance of the implement are properly collected and disposed.
- ▲ Remove all tools and unused parts before operation.
- ▲ Do not weld or torch on galvanized metal as it will release toxic fumes.



Listed below 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.



Use Safety Lights and Devices

- ▲ Slow moving tractors, skid steers, self-propelled machines, and towed equipment can create a hazard when driven on public roads. They are difficult to see, especially at night. Use the Slow Moving Vehicle sign (SMV) when on public roads.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads.



Avoid Underground Utilities

- ▲ **Dig Safe, Call 811 (USA).** Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before digging so that they may mark the location of any underground services in the area.
- ▲ Be sure to ask how close you can work to the marks they positioned.



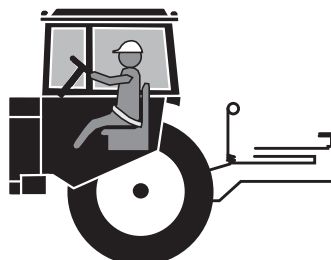
Wear Personal Protective Equipment (PPE)

- ▲ 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 headphones while operating equipment.



Use Seat Belt and ROPS

- ▲ Land Pride recommends the use of a CAB or roll-over-protective-structures (ROPS) and seat belt in almost all power machines. Combination of a CAB or ROPS and seat belt will reduce the risk of serious injury or death if the power machine should be upset.
- ▲ If ROPS is in the locked-up position, fasten seat belt snugly and securely to help protect against serious injury or death from falling and machine overturn.



Avoid High Pressure Fluids Hazard

- ▲ Escaping fluid under pressure can penetrate the skin causing serious injury.
- ▲ Before disconnecting hydraulic lines or performing work on the hydraulic system, be sure to release all residual pressure.
- ▲ 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.



Keep Riders Off Machinery

- ▲ Never carry riders on tractor or implement.
- ▲ Riders obstruct operator's view and interfere with the control of the power machine.
- ▲ Riders can be struck by objects or thrown from the equipment.
- ▲ Never use tractor or implement to lift or transport riders.



Safety Labels

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

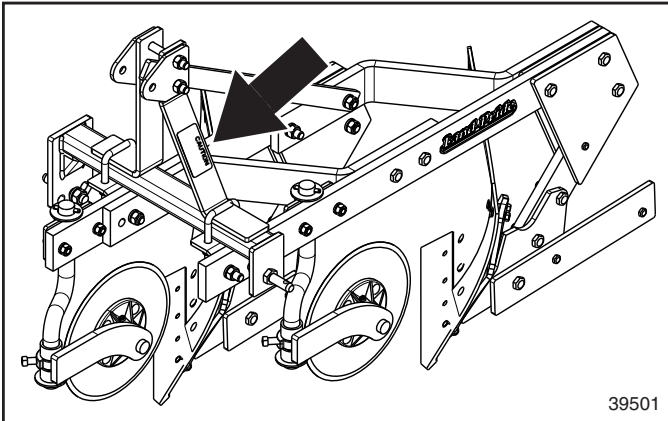
1. Keep all safety labels clean and legible.
2. Refer to this section for proper label placement. Replace all damaged or missing labels. Order new labels from your nearest Land Pride dealer. To find your nearest dealer, visit our dealer locator at www.landpride.com.
3. Some new equipment installed during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

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

4. Refer to this section for proper label placement.

To install new labels:

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



818-719C

Caution: General Information

Land Pride welcomes you to the growing family of new product owners. This Moldboard Plow 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 MP10 & MP20 Moldboard Plows are designed and built by Land Pride for the avid gardener and other food plot operators. It is designed to cut, lift, fracture, and invert furrow slices out of the soil for the purpose of pulverizing soil, burying trash, and burying plant residue in preparation of producing a seedbed and providing nutrients for your garden or crop.

These moldboard plows are adapted for Category I three-point hitch mounting on tractors in the 20-60 hp range. The optional coulter can be added to either model for the purpose of cutting through surface vegetation and plant roots to help prevent plugging the plow from trash and dirt buildup on the plow shanks and moldboards. They also help reduce required tractor horsepower.

These Land Pride plows have applications and uses in homeowner landscaping, small nurseries, gardens, small hobby farms, and food plots.

See “**Specifications & Capacities**” on page 22 and “**Features & Benefits**” on page 23 for additional information and performance enhancing options.

Using This Manual

- This Operator’s Manual is designed to help familiarize the operator 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 forward in the direction the machine will operate while in use unless otherwise stated.

Definitions

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

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

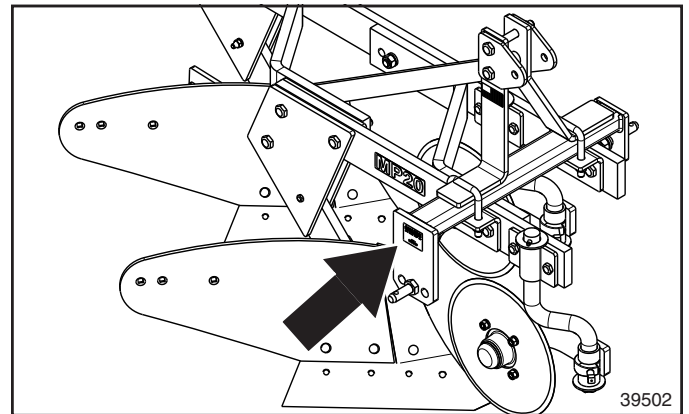
Owner Assistance

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

The parts on your Moldboard Plow 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

For quick reference and prompt service, record model and serial number on the inside cover page and again on the warranty page. Always provide model number and serial number when ordering parts and in all correspondences with your Land Pride dealer. For location of your serial number plate, see Figure 1.



Serial Number Plate Location
Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new Moldboard Plow. 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 any problems you have with your implement with your dealership service personnel so they can address the problem.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the question/problem, and request assistance.
3. For further assistance write to:

Land Pride Service Department
1525 East North Street
P.O. Box 5060
Salina, Ks. 67402-5060

E-mail address
lp servicedept@landpride.com

Tractor Requirements

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

Horsepower rating

2 Wheel drive, MP10	20 to 60 hp
2 Wheel drive, MP20	30 to 60 hp
4 Wheel drive, MP10	20 to 50 hp
4 Wheel drive, MP20	30 to 50 hp

Hitch type 3-Point Cat. I

Quick hitch Do not use

Tractor weight See Warning Below

WARNING

To avoid serious injury or death:

As a minimum, 20% of the combined weight of tractor and attached implement must be on the tractor's front wheels. Without this weight distribution, the tractor could tip up, causing loss of steering control, serious bodily injury, or death. Do not guess at the minimum weight. Weigh tractor with 3-point implement attached. Front weight may be increased with a front end loader, ballast in front tires, front wheel weights, or front tractor weights.

Before You Start

WARNING

To avoid serious injury or death:

Allow only persons to operate this implement who have fully read and comprehended this manual, who have been properly trained in the safe operation of this implement, and who are age 16 or older. Serious injury or death can result from the inability to read, understand, and follow instructions provided in this manual.

Read and understand the operator's manual for this plow. An understanding of how it works will aid in the assembly and setup of your plow.

It is best to go through the **Assembly Checklist** before assembling the plow. Speed up your assembly task and make the job safer by having all needed parts and equipment readily at hand.

Torque Requirements

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

Remove Upper Hitch Frame

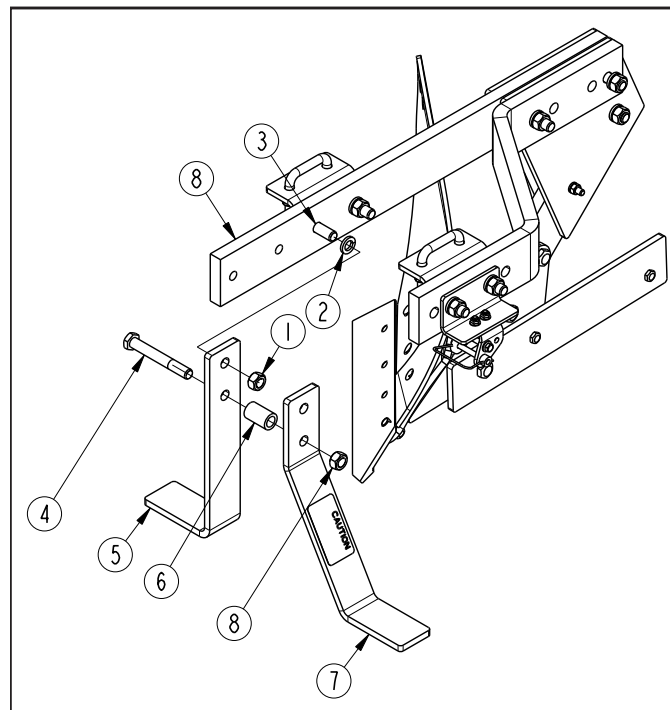
Refer to Figure 1-1:

The upper hitch frame assembly is attached to the plow beam for shipping purposes. It should be removed and disassembled it into its individual components to prepare it for reattachment to the plow.

1. Remove hex nut (#1) and upper hitch frame assembly (#4-#7) from beam (#8).

Assembly Checklist

✓	Check	Reference
☐	Have a fork lift or loader with properly sized chains and safety stands capable of lifting and supporting the equipment on hand.	
☐	Have a minimum of two people available during assembly.	
☐	Make sure all major components and loose parts are shipped with the machine.	Operator's Manual
☐	Double check to make sure all parts, fasteners and pins are installed in the correct location to lessen the chance of using a bolt incorrectly. Refer to the Parts Manual if unsure. NOTE: All assembled hardware from the factory has been installed in the correct location. Remember location of a part or fastener if removed. Keep parts separated.	Operator's Manual 307-244M Parts Manual 307-244P
☐	Make sure working parts move freely, bolts are tight, & cotter pins are spread.	Operator's Manual
☐	Make sure grease fittings are in place and lubricated.	Page 21
☐	Make sure all safety labels are correctly located and legible. Replace if damaged.	Page 4



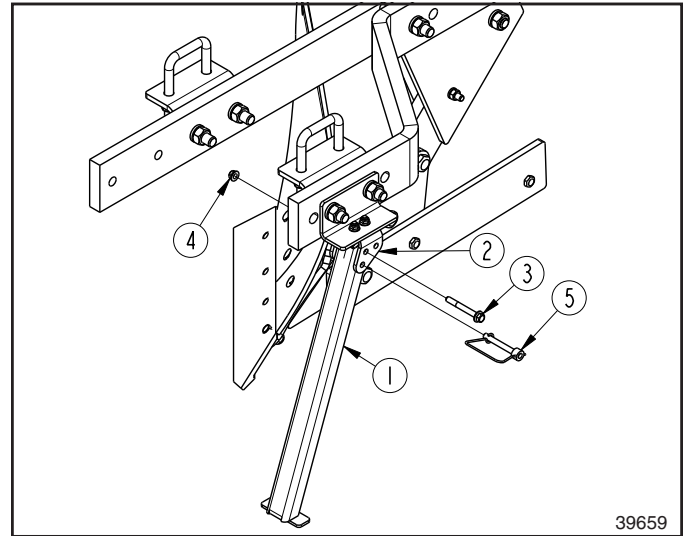
Remove Upper Hitch Frame (MP10 Shown)
Figure 1-1

2. Secure bolt (#3) with existing lock washer (#2) and removed 3/4"-10 hex nut (#1). Tighten hex nut to the correct torque for a GR 5 bolt.
3. Remove bolt (#4), bushing (#6), and locknut (#8) from right-hand adjustable top link (#5) and left-hand adjustable top link (#7).
4. Keep all removed parts for assembly and set-up of the plow.

Support Stand Assembly

Refer to Figure 1-2 on page 7:

1. Remove nut (#4), bolt (#3), and wire pin (#5) from mount (#2). Keep removed hardware for reuse.
2. Attach support stand (#1) to mount (#2) with removed 3/8"-16 x 3" GR5 bolt (#3) and hex flange locknut (#4). Draw locknut up snug, do not tighten.
3. Rotate support stand (#2) down as shown to support plow frame and insert wire snap lock pin (#5) as shown. Make sure wire retainer is caught over end of pin to keep it from falling out.

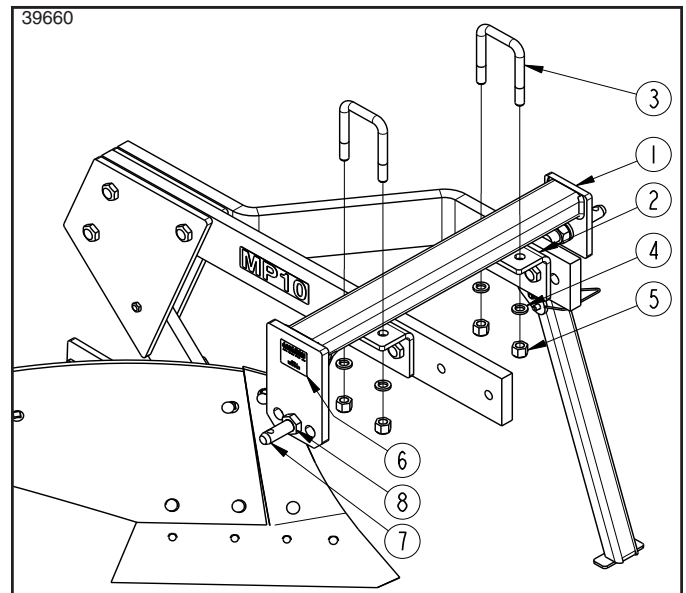


Attach Support Stand
Figure 1-2

Lower Hitch Frame Assembly

Refer to Figure 1-3:

1. Place lower hitch frame (#1) on hitch mounts (#2) with serial name plate (#6) located on the right-hand side as shown.
2. Secure lower hitch frame with u-bolts (#3), lock washers (#4), and nylock hex nuts (#5). Draw nuts up until one or two threads extend past the nuts. Do not tighten nuts at this time.

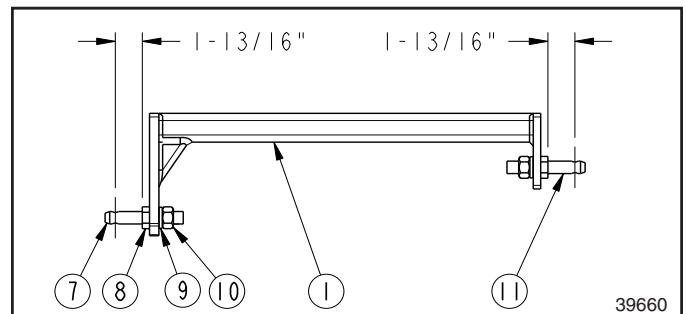


Lower Hitch Frame Assembly
Figure 1-3

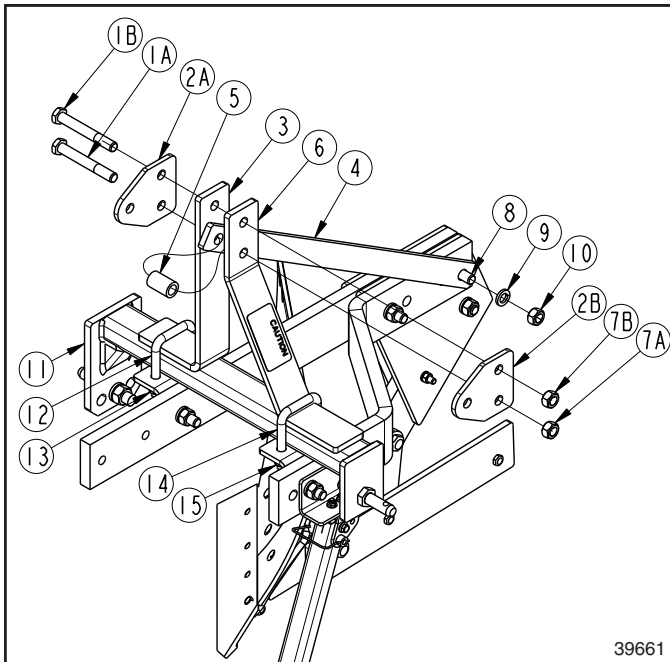
Adjust Cat I Draw Pins to Length

Refer to Figure 1-4:

1. Adjust jam nuts (#8) on hitch pins (#7 & #11) until center of linchpin holes are 1 13/16" from face of jam nuts (#8).
2. Tighten hitch pin (#7) by Inserting a drive punch in its linchpin hole and rotating the hitch pin until the linchpin hole is vertical.
3. Hold linchpin hole vertical and tighten 7/16"-14 hex nut (#10) to the correct torque for a GR5 bolt.
4. Repeat steps 2 & 3 for hitch pin (#11).



Adjust Draw Pins
Figure 1-4

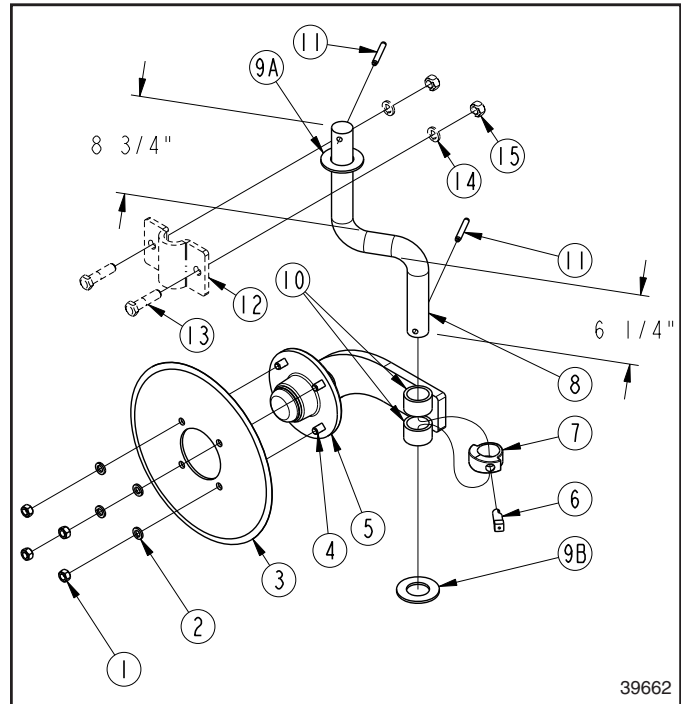


Upper Hitch Frame Assembly
Figure 1-4

Upper Hitch Frame Assembly

Refer to Figure 1-4:

1. Insert right-hand adjustable top link frame under u-bolt (#12) as shown.
2. Insert left-hand adjustable top link frame under u-bolt (#13) as shown.
3. Remove existing hex nut (#10) and lock washer (#9) from bolt (#8). Keep for reuse.
4. Attach back strap (#4) to bolt (#8) and secure with removed lock washer (#9) and hex nut (#10). Draw hex nut up snug, do not tighten at this time.
5. Insert 3/4"-10 x 5 1/2" GR5 bolt (#1A) through bottom hole in top link extension plate (#2A), bottom hole in right-hand top link frame (#3), hole in back strap (#4), 2" long spacer (#5), bottom hole in left-hand top link frame (#6), and bottom hole in top link extension plate (#2B). Secure bolt with locknut (#7A). Draw locknut (#7A) up snug, do not tighten at this time.
6. Insert 3/4"-10 x 5 1/2" GR5 bolt (#1B) through top hole in top link extension plate (#2A), top hole in right-hand top link frame (#3), top hole in left-hand top link frame (#6), and top hole in top link extension plate (#2B). Secure bolt with locknut (#7B). Draw locknut (#7B) up snug, do not torque tight.
7. Adjust right-hand and left-hand adjustable top link frames (#3 & #6) to be straight and in-line with top of lower hitch frame (#11). Tighten hex nylock nuts (#13 & #15) to the correct torque.
8. Tighten 3/4"-10 hex locknut (#7A) to the correct torque for GR5 bolt.
9. Tighten hex nut (#10) to the correct torque for GR5 bolt.



Coulter Component Assembly
Figure 1-5

Coulter Components (Optional)

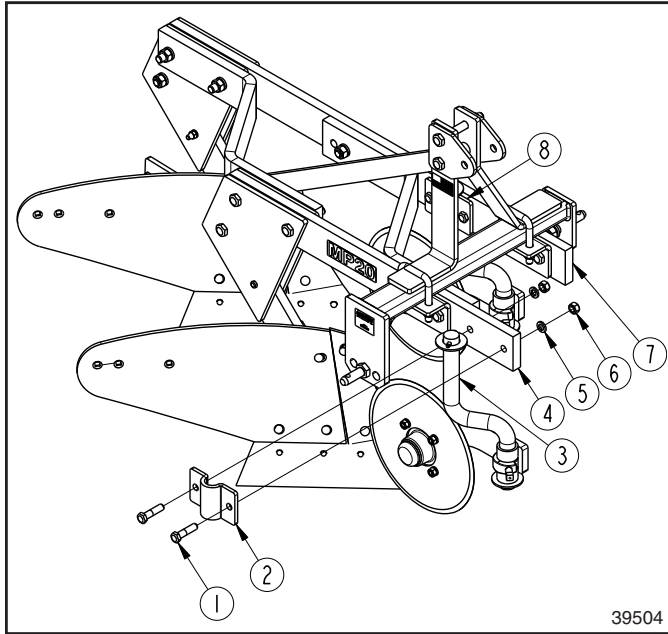
Refer to Figure 1-5:

CAUTION

To avoid minor or moderate injury:

Coulter blades are sharp and can cause deep cuts. To prevent serious bodily injury, wear gloves when working with coulters and keep bodily extremities out from under the coulters.

1. Attach coulter blade (#3) to hub (#5) with four lock washers (#2) and 1/2"-13 hex nuts (#1). Tighten hex nuts to the correct torque for GR5 bolts (#4).
2. Screw 5/8"-11 set screw part-way into coulter stop (#7).
3. Insert upper flat washer (#9A) over 8 3/4" end of offset shank (#8) and secure with drive pin (#11). Make sure drive pin extends equal distance out on both side of the shank.
4. Locate coulter stop (#7) between coulter swing arm pivot guides (#10) as shown.
5. Insert 6 1/4" end of offset shank (#8) through pivot guides (#9) and coulter stop (#7).
6. Insert flat washer (#9B) over 6 1/4" end of offset shank (#8) and secure with drive pin (#11). Make sure drive pin extends equal distance out on both side of the shank.
7. Continue with "**Coulter Assembly (Optional)**" on page 9.



Optional Coulters Assembly (MP20 Shown)
Figure 1-6

Coulters Assembly (Optional)

307-241A COULTERS ASSEMBLY

Refer to Figure 1-6:

CAUTION

To avoid minor or moderate injury:

Coulters blades are sharp and can cause deep cuts. To prevent serious bodily injury, wear gloves when working with coulters and keep bodily extremities out from under the coulters.

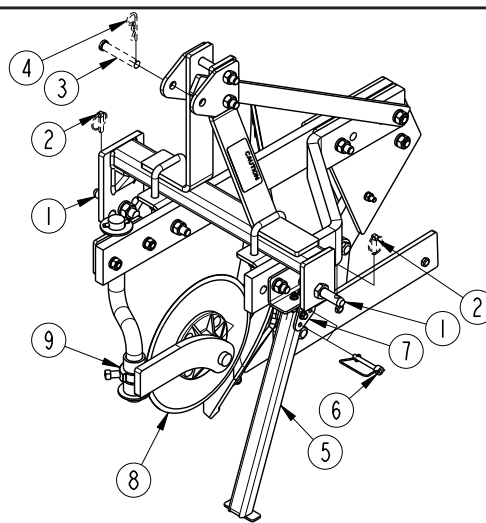
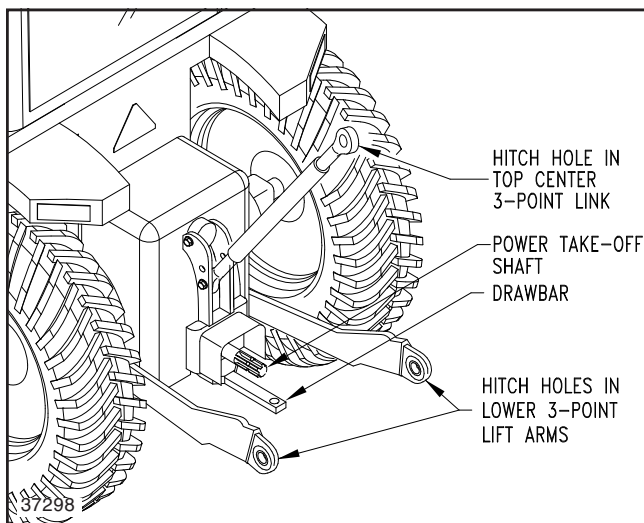
Trash build-up in the plow will eventually plug the plow and require manual cleaning. Coulters cut through the trash making it easier for the trash to pass through the plow. They also help reduce pulling forces and create a smooth furrow wall.

1. Attach coulters and offset shank assembly (#3) to beam (#4) as shown with coulters clamp (#2), 5/8"-11 x 2 1/2" GR5 hex head bolts (#1), lock washers (#5), and hex nuts (#6).
2. Rotate shank (#3) until coulters are in line with the share point.
3. Tighten hex nuts (#6) to the correct torque.
4. Repeat steps 1-3 to attach MP20 rear coulters (#8) to beam (#7).
 - a. Secure bolts with hex locknuts (#1A & #1B). Tighten hex locknut (#1A) to the correct torque. Tighten hex locknut (#1B). Do not bend top link frames (#6 & #9) while tightening locknut (#1B).

Tractor Shutdown Procedure

The following are basic tractor shutdown procedures. Follow these procedures and any additional shutdown procedures provided in your tractor Operator's Manual before leaving the operator's seat.

1. Reduce engine speed and disengage power take-off if engaged.
2. Park tractor and implement on level, solid ground.
3. Lower implement to ground or onto non-concrete support blocks.
4. Put tractor in park or set park brake, turn off engine, and remove switch key to prevent unauthorized starting.
5. Relieve all hydraulic pressure to auxiliary hydraulic lines.
6. Wait for all components to come to a complete stop before leaving the operator's seat.
7. Use steps, grab-handles and anti-slip surfaces when stepping on and off the tractor.



39503

3-Point Hook-up (MP10 Shown)
Figure 1-4

Hook-up 3-Point Plow

Refer to Figure 1-4:

DANGER

To avoid serious injury or death:

- A crushing hazard exists while hooking-up and unhooking implement. Keep people and animals away while backing-up to implement or pulling away from implement. Do not operate hydraulic controls while a person or animal is directly behind the power machine or near the implement.
- Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to hydraulics is off.

IMPORTANT: Tractor drawbar must be removed to avoid damage caused by the plow & drawbar.

NOTE: Linchpin (#2), upper center hitch pin (#3), and hairpin cotter (#4) are customer supplied.

A 3-point Category I hitch is required. The lower 3-point arms of the 3-point hitch must be stabilized to prevent side-to-side movement. Most tractors have sway blocks or adjustable chains for this purpose. Consult your tractor Operator's Manual for detailed instructions on how to stabilize your tractor's lower 3-point lift arms.

1. Ensure lower 3-point lift arms are blocked to prevent excessive side-to-side movement.
2. Remove drawbar. See tractor Operator's Manual for removal instructions.
3. Slowly back tractor up to the Moldboard Plow while using tractor's 3-point control lever to align hitch holes in lower 3-point arms with hitch pins (#1).

4. Shut tractor down according to "Tractor Shutdown Procedure" on page 9.
5. Attach lower 3-point arms to hitch pins (#1) with customer supplied linchpins (#2). Snap linchpin keepers down. One of the lower 3-point arms may need to be adjusted vertically to attach hitch pins.
6. Attach top center 3-point link to the upper clevis hitch with customer supplied clevis pin (#3) and hairpin cotter (#4).
7. One of the lower 3-point arms may need to be adjusted vertically to attach hitch pins.
8. Skip to step 12 if hooking-up MP20 plow. Otherwise, continue with steps 9-11 below.
9. Return to the tractor and slowly operate tractor 3-point hydraulic control lever to slowly raise the plow until park jack (#5) is off the ground approximately 2".
10. With tractor still in park or park brake set, turn off engine and remove switch key before dismounting.

IMPORTANT: Park jack (#5) must be secured in the up position before transporting with plow attached to the tractor. The jack will be damaged if left down.

11. Keep all body extremities out from under the plow while stowing park jack for traveling.
 - a. Remove wire retaining pin (#6) from front holes in park jack mount (#7).
 - b. Rotate park jack (#5) back until jack is horizontal.
 - c. Insert wire retaining pin (#6) in rear holes of park jack mount (#7) and secure pin by making sure wire retainer is caught over end of pin.
12. Rotate couler (#8) clockwise and counterclockwise by hand until it is against stop (#9) in both directions. If needed, readjust couler stop to keep couler from coming in contact with tractor and/or tractor tires. For detailed instructions, see "Couler Alignment (Option)" on page 13.

Section 1: Assembly & Set-up

13. Return to the tractor. Slowly operate 3-point hydraulic control lever to raise and lower the plow while checking for clearance between tractor tires, and plow. Tractor drawbar should have already been removed in step 2.
14. Shut tractor down according to **"Tractor Shutdown Procedure"** on page 9.
15. If needed, make any additional adjustments to the tractor and plow before continuing.
16. Leveling the plow must be done in the field. See **"Level The Plow"** on page 12.

Unhook 3-Point Plow

Refer to Figure 1-4 on page 10:

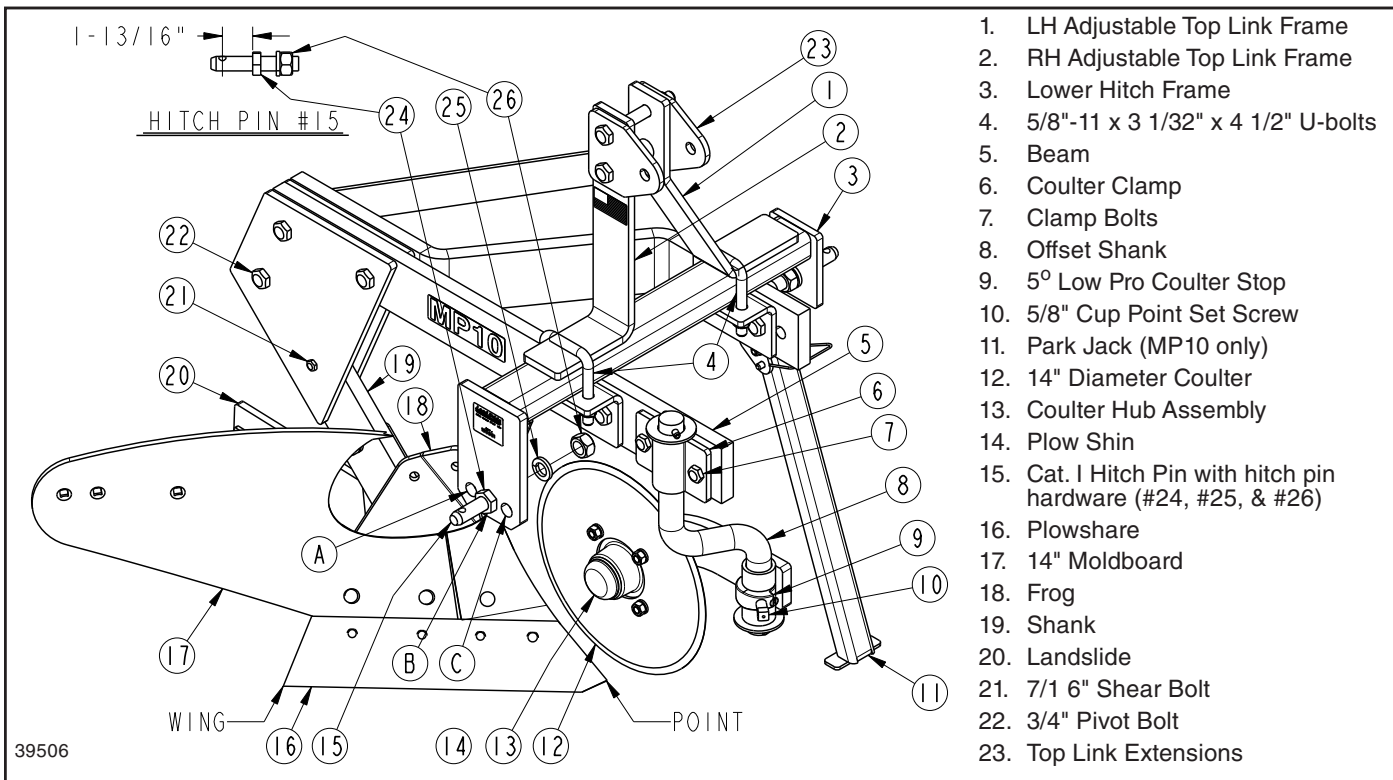


DANGER

To avoid serious injury or death:

Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to hydraulics is off.

1. See **"Long-term Storage"** on page 20 if parking plow for long periods and at the end of the season.
2. Park tractor with plow on a flat, level, solid surface.
3. Lower plow down until plow shears are a couple inches off the ground.
4. Shut tractor down according to **"Tractor Shutdown Procedure"** on page 9.
5. Skip to step 8 if unhooking the MP20 plow. Otherwise, continue with step 6 below.
6. Remove wire retaining pin (#6) from park jack mount (#7) and rotate park jack (#5) down.
7. Secure park jack (#5) by inserting wire retaining pin (#6) in front holes of park jack mount (#7). Make sure wire retainer is caught over end of pin.
8. Shut tractor down according to **"Tractor Shutdown Procedure"** on page 9.
9. Remove customer supplied hairpin cotter (#4) and clevis pin (#3).
10. Store top center 3-point link in tractor holder.
11. Reinstall clevis pin (#3) and hairpin cotter (#4) in upper clevis hitch for safe keeping.
12. Remove customer supplied linchpins (#2) and slide lower 3-point arms off of hitch pins (#1).
13. Replace linchpins (#2) in hitch pins (#1) for safe keeping.
14. Return to the tractor and drive slowly away making sure the tractor and 3-point arms are clear while pulling away.



Major Moldboard Plow Features (MP10 Model Shown)

Figure 2-1

Moldboard Plow Features

Refer to Figure 2-1:

Above is a list of major features reviewed in this section. Knowing the location and how these features work will make handling your plow easier. Not all features listed are covered in this section.

Set Plow Depth

The plowing depth can be determined by measuring the height of the vertical wall in the furrow. This depth should not exceed 7". Set the depth by adjusting the position of the tractor 3-point control lever. Refer to tractor Operator's Manual for detailed description.

Level The Plow

Refer to Figure 2-1:

The plow is leveled left to right and front to back with it in the ground and the tractor's right front tire and right rear tire in the furrow. The furrow must be at the proper plowing depth.

1. Level plow left to right.
 - a. Stop the tractor on level ground with the plow in the ground at operating depth and tires on the right side of the tractor in the plowed furrow.
 - b. Without changing the plowing depth, shut the tractor down properly before dismounting. Refer to "**Tractor Shutdown Procedure**" on page 9.
 - c. Adjust one of the lower 3-point lift arms up or down to level the plow frame from left to right.

2. Level plow front to back.
 - a. Adjust 3-point center link to level the plow frame from front to back as follows:
 - Shorten 3-point center link to raise the back of the plow.
 - Lengthen 3-point center link to lower the back of the plow.
3. Recheck plow levelness.
 - a. Return to the tractor to begin plowing.
 - b. Travel forward several feet with plow in the ground at plowing depth.
 - c. Stop plowing and recheck levelness of the plow. If needed, repeat steps 1-2.

Align Lower Hitch Frame

Refer to Figure 2-1:

The leading plow share (#16) must have its wing tip aligned to cut slightly into the previously plowed furrow. If needed, make the following adjustment:

1. With plow in the ground and the tractor's right tires in the previously plowed furrow, measure distance the wing tip of plow share (#16) must be moved left or right to be slightly into the previously plowed furrow. Record this dimension and direction of movement.
2. Raise plow out of the ground and park tractor with plow lowered on level, hard ground.
3. Unhook plow from tractor. See "**Unhook 3-Point Plow**" on page 11.

4. Loosen u-bolts (#4) and move hitch frame (#3):
 - If plow needs to be moved to the right, move hitch frame (#3) to the left the measured distance recorded in step 1.
 - If plow needs to be move to the left, move hitch frame (#3) to the right the measured distance recorded in step 1.
5. Re-tighten nuts on the 5/8"-11 u-bolts (#4) to the correct torque.
6. Hook-up plow to tractor. Refer to “**Hook-up 3-Point Plow**” on page 10.
7. Recheck alignment of the wing tip to furrow.

Align Plow to Trail Straight

Refer to Figure 2-1 on page 12:

The plow should pull straight. If it is not, make sure the lower 3-point arms have been stabilized. If stabilizers have too much slack, the lower 3-point arms may still want to sway to one side. Review your tractor Operator's Manual to see if there is a way to hold the lower arms from swaying, especially on the side that needs to hold against the plow's side forces.

If the lower 3-point arms cannot be properly stabilized, reposition the right-hand lower 3-point hitch pin (#15) in the lower hitch frame as follows:

1. Raise plow out of the ground and park tractor with plow on level, hard ground.
2. Unhook plow from tractor. See “**Unhook 3-Point Plow**” on page 11.
3. Remove hex nut (#26), lock washer (#25), and hitch pin (#15).
4. Hitch pin (#15) is shipped from the factory mounted in hole “B”. Move hitch pin forward or rearward one hole:
 - If back of plow is angling to the left, move hitch pin (#15) back to hole “A”.
 - If back of plow is angling to the right, move hitch pin (#15) forward to hole “C”.
5. Secure hitch pin (#15) with lock washer (#25) and hex nut (#26). Do not tighten hex nut at this time.
6. Insert a drive punch in linchpin hole and rotate hitch pin with drive punch until linchpin hole is vertical.
7. **Refer to Hitch Pin Detail:** Verify center of linchpin hole is 1 13/16" from face of jam nut (#24).
8. Tighten 7/8"-14 hex nut (#25) to the correct torque for a GR5 bolt.

Coulter Alignment (Option)

Refer to Figure 2-1 on page 12:



CAUTION

To avoid minor or moderate injury:

Coulter blades are sharp and can cause deep cuts. To prevent serious bodily injury, wear gloves when working with coulters and keep bodily extremities out from under the coulters.

Coulters cut through surface trash and plant roots to help form a clean, smooth furrow wall. They also help the plow cover trash and reduce pulling forces.

1. Lower plow until it is resting on the ground.
2. Shut tractor down properly. Refer to “**Tractor Shutdown Procedure**” on page 9.
3. **Align Coulter Left to Right:** The coulter shank should be rotated until the blade is in line with the share point. This arrangement requires the least horsepower to pull the plow and helps keep excess trash from building-up on the plow shank (#19).
 - a. Loosen hex nuts securing bolts (#7) and rotate offset shank (#8) until coulter (#12) is in line with the share point.
 - b. Tighten 3/4"-10 hex nuts for GR5 bolts (#7) to the proper torque.
 - c. Loosen set screw (#10) and rotate stop (#9) until coulter has equal swinging arc on both sides of normal operating position (straight back).
 - d. Tighten set screw (#10) to the correct torque.
 - e. Recheck coulter swing to make sure it does not contact tractor, tractor tires, or plow components. If needed readjust coulter stop (#9).
 - f. **MP20 Model only:** Repeat steps a-e above for the rear coulter (rear coulter not shown).
4. **Align Coulter Vertically:** The coulter (#12) should be set 3" to 4" deep into the ground to cut through trash and plant roots. If it is set too deep, it will push trash. Never set the coulter so deep as to cause the hub (#13) to run in the dirt.
 - a. Loosen hex nuts securing clamp bolts (#7) and raise or lower front coulter (#12) until the coulter blade is set 3" to 4" deep into the ground. (ie. If you are plowing 6" deep, the bottom of the coulter should be set 2" to 3" above ground with plow shares resting on the ground surface.
 - b. Make sure coulter (#12) is in line with the share point and tighten 3/4"-10 hex nuts to the proper torque for GR5 bolts (#7).
 - c. **MP20 Model only:** Repeat steps a-b above for the rear coulter (rear coulter not shown).

Section 3: Operating Procedures

Startup Checklist

Hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training involved in the operation, transport, storage, and maintenance of the Moldboard Plow. Therefore, it is absolutely essential that no one operates the plow unless they are age 16 or older and have read, fully understood, and are totally familiar with the Operator's Manual. Make sure the operator has paid particular attention to:

- **Important Safety Information**, page 1
- **Section 1: Assembly & Set-up**, page 6
- **Section 2: Adjustments**, page 12
- **Section 3: Operating Procedures**, page 14
- **Section 4: Maintenance & Lubrication**, page 17

Perform the following inspections before using your Moldboard Plow.

Operating Checklist

✓	Check	Page
	Read hook-up & driveline installation instructions. Refer to "Section 1: Assembly & Set-up".	6
	All adjustments have been made and secured. Refer to "Section 2: Adjustments".	12
	Operator has read and understands how to operate the Moldboard Plow. Refer to "Section 3: Operating Procedures".	14
	Required maintenance has been completed. Refer to "Section 4: Maintenance & Lubrication".	17
	The Moldboard Plow has been properly lubricated. Refer to "Lubrication Points".	21
	Check plow initially and periodically for loose bolts and pins. Refer to "Torque Values Chart".	26

Operator's Responsibilities

DANGER

To avoid serious injury or death:

- Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to hydraulics is off.
- Do not allow anyone near the tractor or implement while operating. Stop operation if bystanders are too close. They can be hit by flying projectiles, become entangled in the equipment, or ran over.

WARNING

To avoid serious injury or death:

- Allow only persons to operate this implement who have fully read and comprehended this manual, who have been properly trained in the safe operation of this implement, and who are age 16 or older. Serious injury or death can result from the inability to read, understand, and follow instructions provided in this manual.

- Never carry riders on the implement or tractor. Riders can obstruct the operator's view, interfere with control of the equipment, be pinched by moving components, become entangled in rotating components, be struck by objects, be thrown or fall from the equipment, etc.
- Do not use implement to lift objects; to pull objects such as fence posts, stumps, etc; or to push objects. The unit is not designed or guarded for these uses.
- Make sure safety labels are in their proper location and are in good condition before operating the attached implement. Read and obey all instructions on the labels.
- Perform scheduled maintenance. Check for loose hardware, missing parts, broken parts, structural cracks, and excessive wear. Make repairs before putting implement back into service. Serious breakdowns can result in injury or death.
- Do not alter implement or replace parts on the implement with other brands. Other brands may not fit properly or meet OEM (Original Equipment Manufacturer) specifications. They can weaken the integrity and impair the safety, function, performance, and life of the implement. Replace parts only with genuine OEM parts.
- Lightweight tractors with rear attached implements may need weights added to the front to maintain steering control. Consult your tractor Operator's Manual to determine proper weight requirements and maximum weight limitations.
- Never make contact with underground utilities such as electrical power lines, gas lines, phone lines, etc. They can cause serious injury or death from electrocution, explosion, or fire. If in doubt, call 811 (USA) before digging so that they can mark the location of underground services in the area. For contact information, see Dig Safe in the "Important Safety Information" starting on page 1.

CAUTION

To avoid minor or moderate injury:

Always wear gloves when handling plow shares, coulters, shims, and moldboards. Improper or careless handling can result in a serious injury.

IMPORTANT: Do not use a quick hitch with the plow. The plow and/or tractor can be damaged.

Section 3: Operating Procedures

Operating Hints

Polish plow bottoms to remove rust with a sander before going to the field to plow. Operate the sander in the direction dirt flows over the bottom. A plow bottom can also be polished by operating the plow in sandy soil.

When turning, leave enough space to allow for easy turning. Avoid traveling over plowed soil as much as possible. Never travel straight up or down plowed soil. Rain water will run in tractor tracks creating newly cut ditches in a freshly plowed field.

Avoid plowing square corners as much as possible. The tractor tires will pack soil while making square turns. Instead, shape square corners into wide rounding corners. When a rounding corner become too tight for the plow to throw dirt properly, reshape the corner.

Avoid deep plowing that brings clay subsoil to the surface and mixes it with the top soil.

Adjust tractor draft control lever to hold the plow in the ground except when loss of horsepower dictates that the plow be raised a little. Shift to a lower gear if draft control lever can not be adjusted properly. Refer to your tractor Operator's Manual for detailed instructions.

To help cover trash, try attaching 10 to 12 foot lengths of #9 or #7 gauge wire just above the lower bend of the coulter shank and slightly to the right of the coulter blade.

Weight may need to be added to the plow when plowing in very hard ground. Do not add more than 75 lbs.

Transporting

WARNING

To avoid serious injury or death:

- *Select a safe ground speed when transporting. Never travel at a speed which does not allow adequate control of steering and stopping, and never exceed 20 mph (32.2 km/h) with attached equipment. Rough terrain requires a slower speed.*
 - *When traveling on roadways, travel in such a way that other vehicles may pass you safely. Use LED lights, clean reflectors, and a slow moving vehicle sign that is visible from the back to warn operators in other vehicles of your presence. Always comply with all federal, state, and local laws.*
 - *When traveling on public roadways, travel in such a way that faster moving vehicles may pass safely. Use accessory lights, clean reflectors, and a slow moving vehicle sign that is visible from the back to warn operators in other vehicles of your presence. Always comply with all federal, state, and local laws.*
1. Raise the plow to the highest position for transport.
 2. Select a safe ground speed when transporting from one area to another. Maximum transport speed for the Moldboard Plow is 20 mph. **DO NOT EXCEED.**
 3. Be sure to reduce tractor ground speed when turning and leave enough clearance so the plow does not contact obstacles such as buildings, trees, or fences.

4. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
5. Shift tractor to a lower gear when traveling over rough or hilly terrain.

How the Plow Works

Refer to Figure 2-1 on page 12:

Moldboard Plows are designed to cut, lift, fracture, and invert furrow slices out of the soil for the purpose of pulverizing the soil and burying trash and plant residue upside down in the ground.

The heart of a plow is the plow bottom. The principle parts of the plow bottom are the share (#16), shin (#14), moldboard (#17), landslide (#20), and frog (#18). The share point is tilted downward to cause the plow to dig into the ground. The cutting edge of the share cuts the furrow bottom and the shin cuts the furrow wall. The moldboard is concaved to break up and pulverize the furrow slice with shearing stress induced into the soil as it passes over the concave surface.

Optional coulters (#12) can be added to the plow to cut through surface trash and plant roots thereby helping the plow cover trash. They also help form a clean, smooth furrow wall and reduce pulling forces on the plow bottom. If they are set too deep, they will push trash instead of cut through trash.

The landslide helps stabilize the plow horizontally as it runs along side the furrow wall. The frog is an irregular shaped piece upon which the shear, shin, moldboard, and landslide are attached. The frog is supported by the shank (#19) and the shank is attached to the beam (#5).

Furrow slices made by the plow bottom should be turned over to lay upside down at an angle of 30 to 40 degrees to the furrow bottom. This angle allows for good trash coverage and transfer of moisture in the soil.

The 30 to 40 degree furrow angle is influenced by speed, curvature of the moldboard, levelness of the plow, and plowing depth. If plowing speed is too slow, the furrow slice will only make a partial flip and may fall back into the dead furrow. If plowing speed is too fast, the furrow slice will be thrown too far from the dead furrow and will lay too flat. Plowing too shallow will result in the furrow slices turning over too far. Plowing too deep will produce a large furrow slice that cannot lay down at the proper angle.

General Operating Instructions

By now you should have read the Operator's Manual, completed the Operator's Checklist, set your tractor wheel width, and properly attached your MP10 or MP20 Moldboard Plow to your tractor. If you have not done so, you should check your work site for buried utility cables, pipelines, sprinkler heads, and other obstacles that you would not want to damage or encounter.

It is now time to determine the lay of the land you will be plowing and how you plan to plow the field. Always plow with terrace throwing furrow slices toward top of terrace.

Do not throw furrow slices toward the edge of a field year after year as this will create a bank along that edge. Instead, alternate throwing the furrow in one year and out the next year.

Do not end your plowing in the middle of a plot cutting deep dead furrows. This will create a ditch for water to run in. Instead, always end in the middle of a plot with the plow raised up to where the rear plow bottom is making a shallow cut.

Now that you have determined how you plan to plow the field, it is time to get your plow adjusted to run level and straight in the field. Make sure you have lowered the plow to ground and have shut the tractor down properly before making any adjustments. Refer to **"Tractor Shutdown Procedure"** on page 9.

If you have not already done so, adjust the coulters to be in line with the share point and to penetrate the soil 3" to 4" deep. Refer to **"Coulters Alignment (Option)"** on page 13. If not completed during 3-point hook-up, adjust hitch hole of the right lower 3-point arm 3 1/2" lower than the left lower 3-point arm hitch hole.

You can now lower the plow and start plowing. Adjust the 3-point control lever on your tractor to your preferred plowing depth and draft control lever to hold the plow in the ground. Consult your tractor Operator's Manual for detailed instructions. You may need to stop the tractor and dismount to measure the actual furrow depth. Choose a plowing depth, gear selection, and engine speed that will best turn the furrow slice so that it will lay upside down at a 30 to 40 degree angle to the furrow bottom. See **"How the Plow Works"** on page 15 for additional information.

Continue plowing at the preferred depth until you are ready to start plowing with the tractor wheels on the right side in the dead furrow. You will find that you will need to make final leveling and alignment adjustments to the tractor and plow once you are plowing with the wheels on the right side in the dead furrow. For detailed instructions, see **"Level The Plow"** on page 12, **"Align Lower Hitch Frame"** on page 12, **"Align Plow to Trail Straight"** on page 13, and **"Coulters Alignment (Option)"** on page 13.

With a little practice and a few adjustments, you will soon be achieving the results you want with your Land Pride MP10 or MP20 plow.

Whether you are done plowing for the day or just stopping to get off the tractor, make sure you use proper tractor shut down procedures before getting off. If you are detaching your plow, make sure you park it on a dry, level surface. Clean the plow of accumulated dirt. When you park your plow for the season, make sure you prep the plow for storage. See **"Long-term Storage"** on page 20.

See **"Specifications and Capacities"** on page 22 and **"Features & Benefits"** on page 23 for additional information and performance enhancing options.

General Maintenance Information

Proper servicing and adjustments are key to the long life of any implement. With careful inspection and routine maintenance, you can avoid costly downtime and repair. Check all bolts and pins after using the plow for several hours and on a regular basis thereafter to ensure they are tight and secured. Replace worn, damaged, or illegible safety labels with new labels from your Land Pride dealer.

DANGER

To avoid serious injury or death:

Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to hydraulics is off.

WARNING

To avoid serious injury or death:

- Allow only persons to perform maintenance on this implement who have been properly trained in its safe operation.
- Always shut tractor down using “Tractor Shutdown Procedure” provided in this manual before servicing, adjusting, cleaning, or maintaining this implement.
- Perform scheduled maintenance. Check for loose hardware, missing parts, broken parts, structural cracks, and excessive wear. Make repairs before putting implement back into service. Serious breakdowns can result in injury or death.
- Do not alter implement or replace parts on the implement with other brands. Other brands may not fit properly or meet OEM (Original Equipment Manufacturer) specifications. They can weaken the integrity and impair the safety, function, performance, and life of the implement. Replace parts only with genuine OEM parts.

CAUTION

To avoid minor or moderate injury:

Always wear gloves when handling plow shares, coulters, shims, and moldboards. Improper or careless handling can result in a serious injury.

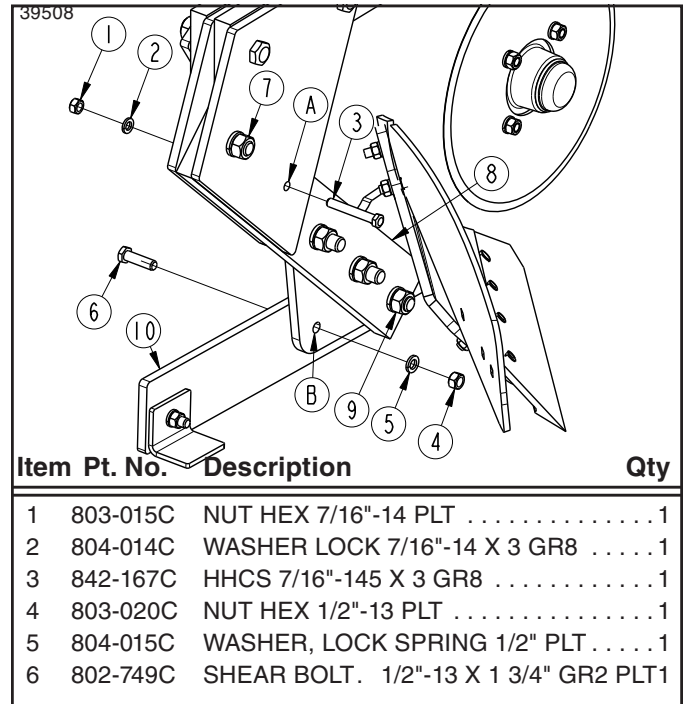
Replace Shear Bolts

Refer to Figure 4-1:

DANGER

To avoid serious injury or death:

Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to hydraulics is off.



**Replace shear Bolt
Figure 4-1**

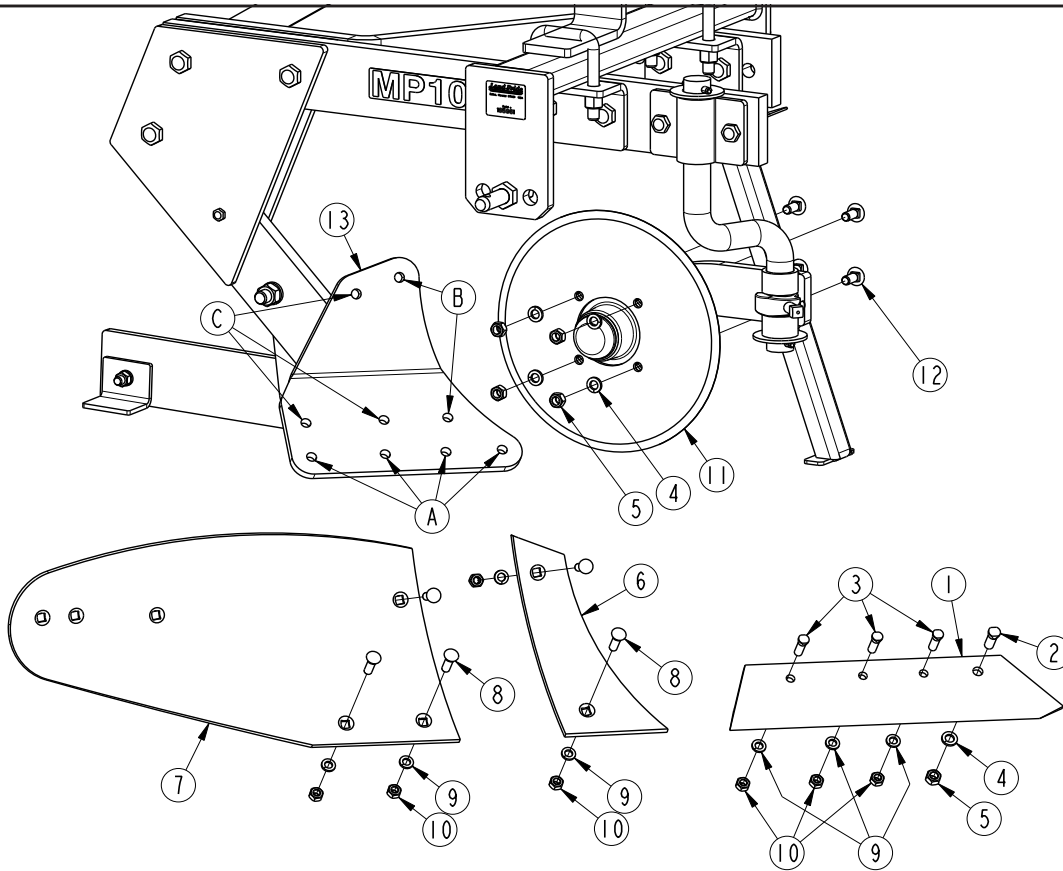
WARNING

To avoid serious injury or death:

Replace shear bolts (#3 & #6) with plow attached to the tractor's 3-point arms and lower hitch frame supported with blocks. Serious injury or death could result while aligning plow shank (#8) or land slide (#10).

1. Park tractor and plow on solid, level, hard ground.
2. Lower plow down until nose of plow share is just above ground.
3. Place tractor in park or set park brake,
4. For safety, place a support block under the lower hitch frame.
5. Replace shank shear bolt (#3) as follows:
 - a. Loosen nut (#7) and rotate plow bottom until bolt hole in shank (#8) aligns with hole "A".
 - b. Insert new 7/16"-14 GR8 shear bolt (#3) in hole "A" and secure with lock washer (#2) and hex nut (#1). Tighten hex nut to the correct torque.
 - c. Tighten 3/4"-10 hex nut (#7) to the proper torque for a GR5 bolt.
6. Replace rear landslide shear bolt (#6) as follows:
 - a. Loosen nut (#9) and rotate landslide (#10) until bolt hole in landslide (#10) aligns with hole "B".
 - b. Insert new 1/2"-13 x 1 3/4" GR2 shear bolt (#6) in hole "B" and secure with lock washer (#5) and hex nut (#4). Tighten hex nut to the correct torque.
 - c. Tighten 3/4"-10 hex nut (#9) to the proper torque for a GR5 bolt.

39214



Item Pt. No. Description

1	820-619C	FORGED ROCK SHARE	8	842-349C	PLOW 7/16"-14 X 1 1/2" GR5
2	842-357C	CLIPPED PLOW 1/2"-13 X 1 1/2" GR5	9	804-014C	WASHER, LOCK 7/16"
3	842-357C	CLIPPED PLOW 7/16"-14 X 1 1/2" GR5	10	803-015C	NUT, HEX 7/16"-14 PLT
4	804-015C	WASHER, LOCK SPRING 1/2" PLT	11	820-259c	COULTER BLADE, 14" DIA. STRAIGHT
5	803-020C	NUT, HEX 1/2"-13 PLT	12	802-214C	RHSNB 1/2"-13 X 1 1/4" GR5
6	820-620C	PLOW SHIN	13	307-239H	FROG
7	820-621C	14" MOLDBOARD			

Installation of Share, Shin, Moldboard, & Coulters (MP10 Model Shown)

Figure 4-2

Plow Shares

Refer to Figure 4-2:

Plow shares (#1) do the most difficult work and demand the most horsepower to do the work. They cut the furrow slice loose and start lifting it up over the share. They should be kept pointed, sharp, and have the right amount of down draft or they won't do their work. Inspect plow shares and mounting hardware frequently for wear and replace as needed.

1. Remove hex nuts (#5 & #10), lock washers (#4 & #9), plow bolts (#2 & #3) and plow share (#1).
2. Using holes "A" in frog (#13), attach new plow share (#1) with plow bolts (#2 & #3), lock washers (#4 & #9), and hex nuts (#5 & #10).
3. Tighten hex nuts (#5 & #10) to the correct torque.

Shins

Refer to Figure 4-2:

Shins (#6) receive high wear as they cut the furrow wall and should be inspected annually for wear. Replace shims and mounting hardware as needed.

1. Remove hex nuts (#10), lock washers (#9), plow bolts (#8) and plow share (#6).
2. Using holes "B" in frog (#13), attach new plow shin (#6) with plow bolts (#8), lock washers (#9), and hex nuts (#10).
3. Tighten hex nuts (#10) to the correct torque.

Moldboards

Refer to Figure 4-2 on page 18:

Moldboards (#7) should be inspected annually for wear. Replace moldboards and mounting hardware as needed.

1. Remove hex nuts (#10), lock washers (#9), plow bolts (#8) and moldboard (#7).
2. Using holes "C" in frog (#13), reattach new moldboard (#7) with plow bolts (#8), lock washers (#9), and hex nuts (#10).
3. Tighten hex nuts (#10) to the correct torque.

Coulter Blades

Refer to Figure 4-2 on page 18:

Inspect coulter blades (#11) for horizontal alignment and cutting depth. If necessary, readjust coulters. Refer to "**Coulter Alignment (Option)**" on page 13.

Check coulter blades (#11) to make sure they run vertical. If a blade does not run vertical, the bent parts must be replaced or the coulter will not operate properly.

Keep coulter bearings greased. Refer to "**Lubrication Points**" on page 21.

Replace coulter blades (#11) and mounting hardware (#12, #4, & #5) as needed:

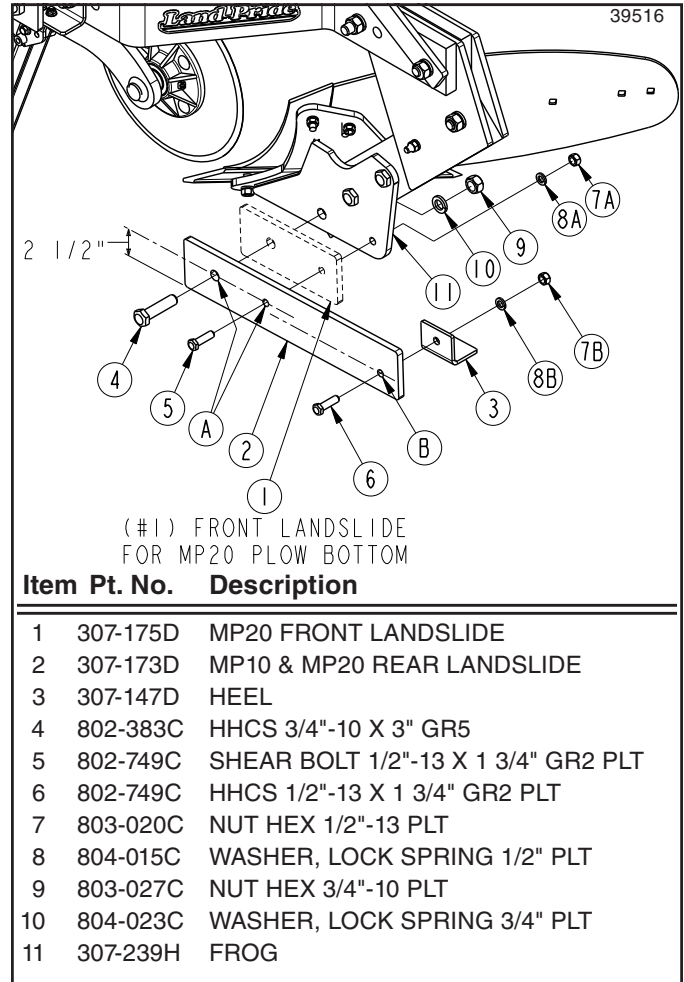
1. Remove hex nuts (#5), lock washers (#4), carriage bolts (#12) and coulter blade (#11).
2. Reattach new coulter blade (#11) with carriage bolts (#12), lock washers (#4), and hex nuts (#5).
3. Tighten hex nuts (#5) to the correct torque.

Landslides

Refer to Figure 4-3:

The landslides (#1 & #2) and heel (#3) should be inspected for wear frequently. Replace landslides and mounting hardware as needed.

1. Remove nuts (#7A & #9), lock washers (#8A & #10), hex head bolts (#4 & #5), and landslide (#1 or #2).
2. Position new landslide (#1 or #2) with holes "A" 2 1/2" up from bottom and hole "B" on landslide (#2) below holes "A" as shown.
3. Attach new landslide (#1 or #2) to frog (#11) with 3/4" hex head bolt (#4), lock washer (#10), and hex nut (#9).
4. Insert 1/2" shear bolt (#5) in landslide (#1 or #2), frog (#11), and secure with lock washer (#8A) and hex nut (#7A).
5. Tighten hex nuts (#7A & #9) to the correct torque.
6. Attach heel (#3) to landslide (#2) with 1/2" hex bolt (#6), lock washer (#8B) and hex nut (#7B).
7. Rotate bottom of heel angle brace (#3) to be parallel with bottom of landslide (#2) and tighten nut (#7B) to the correct torque.



Landslide Assembly (MP10 Shown)

Figure 4-3

Long-term Storage

CAUTION

To avoid minor or moderate injury:

Keep children and bystanders away from the storage area. People can accidentally fall into the plow causing serious bodily injuries.

Clean, inspect, service, and make necessary repairs to the implement when storing it for long periods and at the end of the season. This will help to ensure the unit is ready for field use the next time you hook-up to it.

1. Clean off any dirt and grease that may have accumulated on the plow and moving parts. Scrape off compacted dirt and then wash the surfaces thoroughly with a garden hose. Be sure to dry the land polished surfaces immediately after washing to minimize oxidation.
2. Inspect for loose, damaged, or worn components and bolts. Especially check plow shares, shins, moldboards, landslide, and coulter blades for wear. Adjust or replace components as needed.
3. Apply a coat of heavy grease or spray on enamel paint to the land-polished surfaces of the plow to minimize oxidation and to save time scouring the plow the next time the plow is put into service.
4. Repaint parts where paint is worn or scratched to prevent rust. Ask your Land Pride dealer for aerosol touch-up paint. They are also available in touch-up bottles with brush, quarts, and gallon sizes by adding TU, QT, or GL to the end of the aerosol part number.

Land Pride Touch-up Paint

Part No.	Part Description
821-066C	PAINT ORANGE SPRAY CAN
821-070C	PAINT GP GLOSS BLACK SPRAY CAN

5. Replace all damaged or missing guarding & decals.
6. Lubricate as noted in “**Lubrication Points**” starting on page 21.
7. Store plow on a level surface in a clean, dry place. Inside storage will reduce oxidation, maintenance and make for a longer plow life.
8. Follow all unhooking instructions on page 11 when disconnecting tractor from plow.

Ordering Replacement Parts

Land Pride offers equipment in factory standard Orange with black highlights.

When ordering replacement parts, the suffix number corresponding to the color must be added at the end of the part number.

82 Orange

85 Black

For example, if you are ordering a replacement part with part number 555-555C and the existing part is orange, then add the suffix 82 to the end of the number to make the part number read 555-555C82.

Lubrication Points

Lubrication Legend



Multi-purpose
spray lube



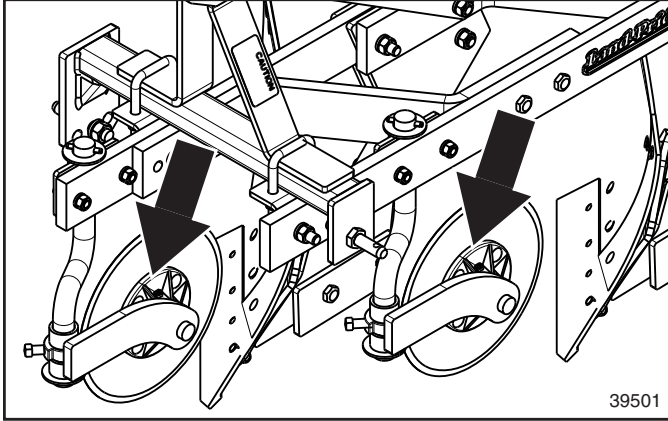
Multi-purpose
grease lube



Multi-purpose
oil lube



Intervals in hours at which
lubrication is required



MP20 Shown



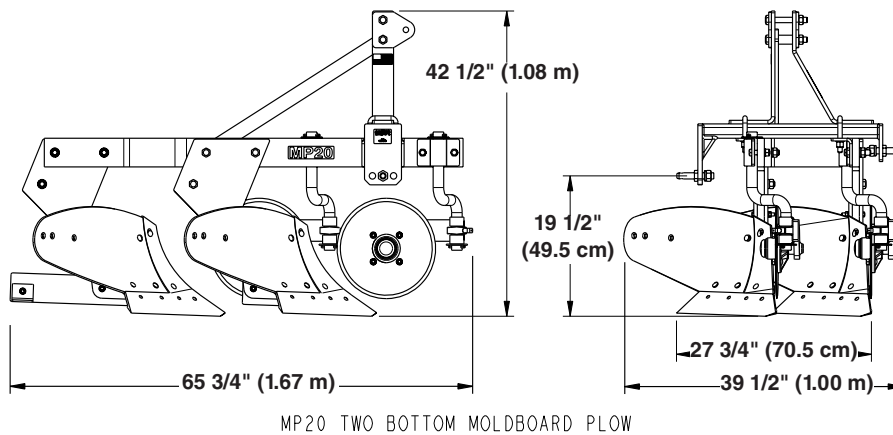
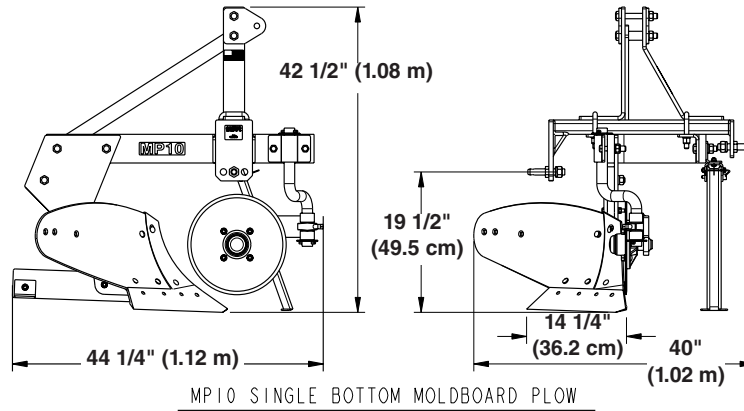
Optional Coulters

- 1 - Zerk on MP10
- 2 - Zerks on MP20

Type of Lubrication: Multi-purpose Grease
Quantity = 2 to 3 pumps

MP10 & MP20

Specifications & Capacities		
Model Numbers	MP10	MP20
Horsepower	2 Wheel drive: 20 to 60 hp (14.9-44.7 kw) 4 Wheel drive: 20 to 50 hp (14.9-37.3 kw)	2 Wheel drive: 30 to 60 hp (22.4-44.7 kw) 4 Wheel drive: 30 to 50 hp (22.4-37.3 kw)
Weight with coulters without coulters	342 lbs (155.1 kg) 300 lbs (136.1 kg)	582 lbs (264.0 kg) 498 lbs (225.9 kg)
Hitch type	3-point Cat. I	3-point Cat. I
Construction	1" x 4" (2.5 cm x 10.2 cm) Bolted steel frame	1" x 4" (2.5 cm x 10.2 cm) Bolted steel frame
Park Jack	Yes	No
Number of bottoms	(1) - 14" (35.6 cm) Bottom	(2) - 14" (35.6 cm) Bottoms
Cutting width	14" (35.6 cm)	27 1/2" (69.9 cm)
Working depth	Max. 7" (17.8 cm) (depending on soil conditions)	Max. 7" (17.8 cm) (depending on soil conditions)
Plow shank shear bolt	7/16"-14 x 3" GR8 share bolt	7/16"-14 x 3" GR8 share bolt
Plow share material	Forged steel	Forged steel
Moldboard & Shin Thickness	5/16" (8 mm)	5/16" (8 mm)
Frog & Landslide Thickness	1/2" (13 mm)	1/2" (13 mm)
Replaceable wear components	1 ea. - Share, moldboard, shin, landslide, and optional coulters	2 ea. - Share, shin, moldboard, landslide, and optional coulters
Optional - Coulters	14" (35.6 cm) Diameter coulters with greasable 1 1/4" (3.2 cm) roller bearings	14" (35.6 cm) Diameter coulters with greasable 1 1/4" (3.2 cm) roller bearings
Accessory - MP Top Link Extension	Yes	Yes



39507

MP10 & MP20

Features	Benefits
Bolted steel frame	Easy to replace individual components.
Adjustable 3-point Cat. I hitch	Can adjust leading plow share to operate next to the furrow on many different tractors.
Replaceable wear components	High wear components (plow share, shim, moldboard, landslide, and optional coulter can be individually replaced as they wear to help keep maintenance cost down.
Shearbolt protected plow bottoms	Protects structural integrity of each plow bottom.
Park jack with MP10 model	Single bottom plow won't fall over.
14" coulters (Optional)	Breaks ground ahead of the moldboard so that the plow can pull easier and cuts trash to help keep trash from wrapping around and building-up on the plow shank.
MP top link extension (accessory)	Allows greater range of adjustment for tractors with short top links.

Troubleshooting Chart

Problem	Cause	Solution
Plow won't go into the ground or comes out of the ground.	Soil is too hard or too dry.	Increase plowing depth when starting to plow.
	Plow share is worn.	Replace plow share.
	Not plowing deep enough.	Shorten tractor's top 3-point center link.
	Tractor 3-point control lever is not set correctly.	See Tractor Operator's Manual for instructions on setting 3-point control lever.
	Tractor's draft control lever is lifting the plow out of the ground.	See Tractor Operator's Manual to set tractor draft control lever.
Plow is making ridges.	The front bottom is plowing too deep.	Adjust tractor's right lower 3-point arm up or lengthen center 3-point link.
	The front bottom is plowing too shallow.	Adjust tractor's right lower 3-point arm down or shorten center 3-point link.
	The front bottom is making too wide of a cut or too narrow of a cut.	Adjust lower hitch frame horizontally. Adjust tractor wheel width if needed.
Hitch frame on the plow does not have enough horizontal adjustment.	Tractor wheels are set at the wrong width.	Adjust wheel width to a width that will work with the plow.
Plow frame and/or coulter shank is bent.	Plow has hit a hidden solid objects.	Replace bent components. Travel slowly and always be ready to stop when it is unknown what lies beneath the soil.
	Using too large of a tractor, too heavy of a tractor, or a four wheel drive tractor.	Replace bent components and change plow to a tractor that is sized right.
Rear tractor tires slip excessively.	Rear tractor tires don't have enough weight on them.	Add weights to rear tractor tires.
	Rear tractor tires are overinflated.	Reduce air pressure in rear tractor tires.
	Tractor 3-point depth control lever is not set correctly.	See Tractor Operator's Manual for instructions on setting 3-point control lever.
	Plow pulls too hard.	See "Plow pulls too hard" in this chart.
Plow pulls too hard.	Plow is running on its nose.	Lengthen tractor's center 3-point link.
	Landslide is pressing against the furrow wall.	1. Check adjustment of lower hitch frame. 2. Check adjust of tractor wheel width. 3. Move right-hand hitch pin back one hole if the first two checks are OK.
	Plow frame or beam is bent.	Replace bent components.
	Soil is too hard or too dry.	Use a higher horsepower tractor.
	Plow bottom has not scoured.	See "Plow bottoms won't scour" below.
Dirt and trash does not flow freely over the plow bottom.	Plow bottoms have not scoured.	See "Plow bottoms won't scour" below.
Plow bottoms won't scour.	Plow bottoms are new or rusty. (Not land polished)	Polish bottoms with a sander in the direction dirt flows over the bottom, run plow in sandy soil until scoured, or clean bottoms frequently until scoured.
	Plow is running on its nose.	Lengthen tractor's center 3-point link.
	Plow is not trailing straight.	See "Plow is not trailing straight" on next page.
Furrow slice falls back.	Plowing too deep of a furrow.	Reduce plowing depth.
Furrow slice is throwing too far.	Plow is being pulled too fast.	Reduce tractor traveling speed.

Troubleshooting Chart

Problem	Cause	Solution
Furrow wall is ragged.	Rear coulter is not adjusted properly.	Adjust coulter farther to the left. If in loose soil, set coulter to cut deeper.
	Rear coulter does not swing freely.	Clean and adjust coulter stop.
	Plow is not trailing straight.	See "Plow bottoms won't scour" in this chart.
Furrow wall is broken.	Coulter is set too close to the plow bottom.	Adjust coulter away from the plow bottom.
Furrow wall has a step in it.	Coulter is set too far from the plow bottom.	Adjust coulter toward the plow bottom.
Furrow slice is broken or misplaced.	Plowing too fast.	Reduce tractor speed.
Front of tractor pulls to the right.	Tractor too light on the front.	Add front weights to the tractor.
Plow is not trailing straight.	Plow is running on its nose.	Lengthen tractor's center 3-point link.
	Right side of plow is set too deep causing the plow to pull to the left.	Adjust tractor's right lower 3-point arm up.
	Right side of plow is set too shallow causing the plow to pull to the right.	Adjust tractor's right lower 3-point arm down.
	Plow is going into the ground too deep.	Lengthen tractor's center 3-point link.
	Plow will not stay in the ground.	Shorten tractor's center 3-point link.
	The front bottom is making too wide of a cut or too narrow of a cut.	Adjust lower hitch frame horizontally. If hitch frame does not have enough adjustment, adjust tractor wheel width.
	Lower 3-point arms are not properly stabilized to hold the plow straight.	1. Stabilize lower 3-point arms. 2. Adjust stabilization to hold lower 3-point arms straight. 3. Adjust hitch pin on the right-hand side of the plow to align plow straight.
	Plow share(s) are worn.	Replace plow share(s).
Plow bottoms are plugging with trash and dirt.	The field is too heavy with trash for the plow to operate without optional coulters.	Add optional coulters to your plow.
	Coulters are set too deep. Trash goes over the top of the coulter.	Raise coulters enough to allow trash to be cut as it goes under the coulters.
	Coulters are set too shallow. Not enough earth friction on the coulters to cause them to turn as they cut through the trash.	Lower coulters enough to cause the coulters to turn and cut through the trash.
	Trash is wet with moisture making the trash tough for the coulters to cut through.	Allow trash time to dry before plowing.
Poor trash coverage.	Plow bottoms are not scouring.	See Plow bottoms won't scour.
	Coulters are not adjusted properly.	Adjust coulters deep enough to cut through surface trash but not so deep that they push trash.
	Coulter blades are dull.	Sharpen or replace coulter blades.
	Coulter bearings are not rotating.	Replace coulter bearings.
Shear bolt shears easily.	Ground is too hard or frozen.	Wait for the soil to have some moisture or for the ground to thaw.
	Plowing speed is too fast.	Plow at a slower speed.
	Plowing too deep.	Plow at a shallower depth.
	Tractor horsepower is too high or using 4WD to pull the plow.	Use a smaller tractor. If using 4WD, switch to 2WD.

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

Warranty

Land Pride warrants to the original purchaser that this Land Pride product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit: One year Parts and Labor

Shares, Shims, Moldboards, Landslide, & Mounting Hardware:
Considered wear items.

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

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

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

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

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

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

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

Model Number _____

Serial Number _____



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