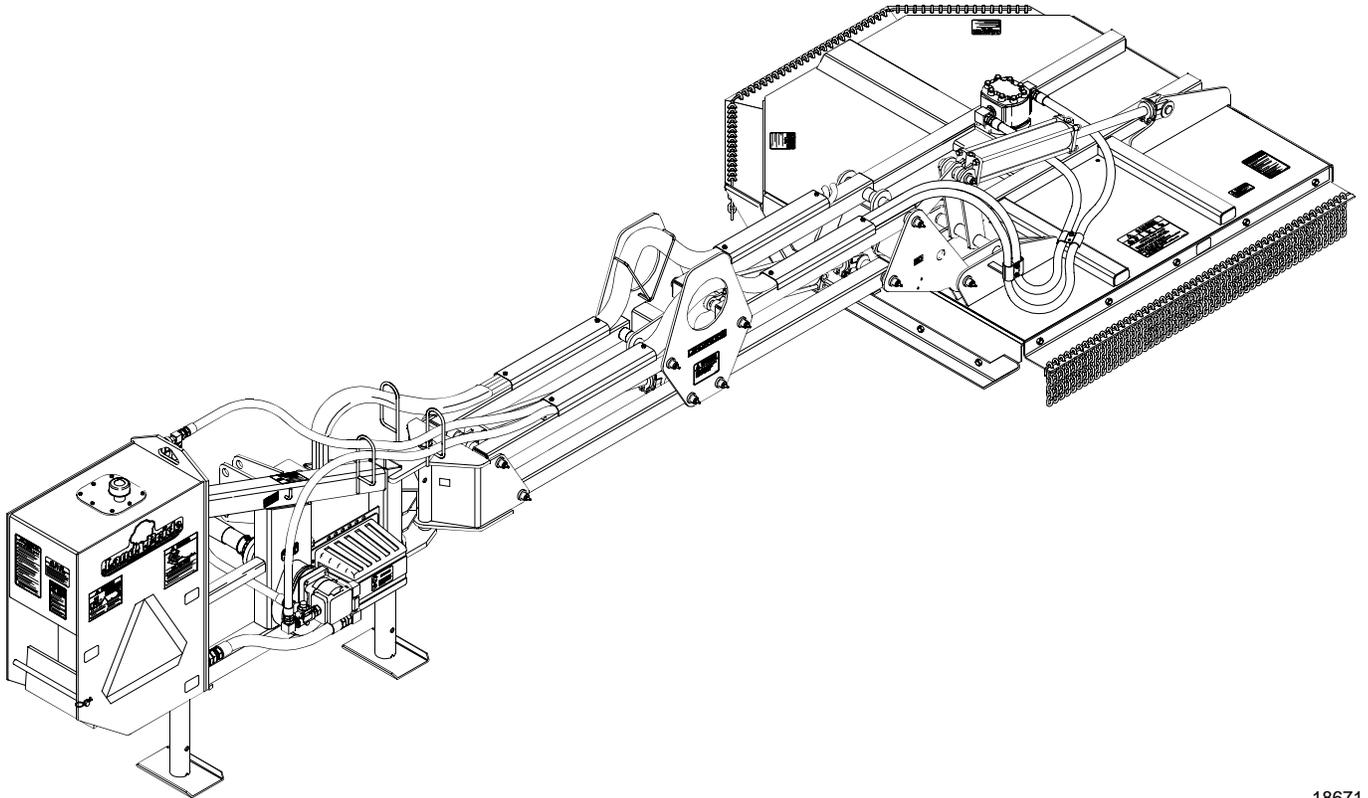


Parallel Arm Rotary Cutter

RCP2560 & RCPM2560 Series



18671

316-057M 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!

© Copyright 2008 Printed 4/28/08

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



Important Safety Information	1	Section 7: Maintenance & Lubrication	27
Safety at All Times	1	Lubrication Points	27
Look For The Safety Alert Symbol	1	Parallel Arm Cutter Zerks	27
Safety Labels	4	PTO Zerks	27
Section 1: Introduction	8	Driveline Profiles	27
Application	8	Blade Servicing (Replacement)	28
Using This Manual	8	Tractor Maintenance	29
Terminology	8	Storage	29
Definitions	8	Section 8: Specifications & Capacities	31
Owner Assistance	8	Section 9: Troubleshooting	33
Serial Number Plate	8	Section 10: Appendix	34
Further Assistance	8	Torque Values Chart	34
Section 2: Assembly & Set-up	9	Warranty	35
Tractor Requirements	9		
Preparation Checklist	10		
Dealer Preparations	10		
3-Point Hookup	10		
PTO Hookup	12		
Hydraulic Hookup	13		
Electrical Hookup	14		
Functional Check	15		
Operator Protective Shield	16		
Setting Flow Control Valve	17		
Section 3: Hydraulics	18		
Hydraulic Cylinder Plumbing	18		
Marking Hydraulic Line Lengths	19		
Section 4: Adjustments	22		
Deck Level Adjustments	22		
Section 5: Transporting	23		
Section 6: Operating Procedures	24		
Breakaway Operations	24		
Tension Bolt	24		
Breakaway Cylinder	25		
General Operating Instructions	26		

© Copyright 2008 All rights Reserved

Land Pride provides this publication "as is" without warranty of any kind, either expressed or implied. While every precaution has been taken in the preparation of this manual, Land Pride assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. Land Pride reserves the right to revise and improve its products as it sees fit. This publication describes the state of this product at the time of its publication, and may not reflect the product in the future.

Land Pride is a registered trademark.

All other brands and product names are trademarks or registered trademarks of their respective holders.

Printed in the United States of America.

Important Safety Information

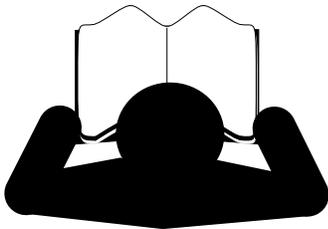
These are common practices that may or may not be applicable to the products described in this manual.

Safety at All Times

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

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

- ▲ Operator should be familiar with all functions of the unit.
- ▲ Operate implement from the driver's seat only.
- ▲ Make sure all guards and shields are in place and secured before operating the implement.
- ▲ Do not leave tractor or implement unattended with engine running.
- ▲ Dismounting from a moving tractor could cause serious injury or death.
- ▲ Do not stand between the tractor and implement during hitching.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ Wear snug fitting clothing to avoid entanglement with moving parts.
- ▲ Watch out for wires, trees, etc., when raising implement. Make sure all persons are clear of working area.
- ▲ Turning tractor too tight may cause implement to ride up on wheels. This could result in injury or equipment damage.



Look For The Safety Alert Symbol

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

Be Aware of Signal Words

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

DANGER

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

WARNING

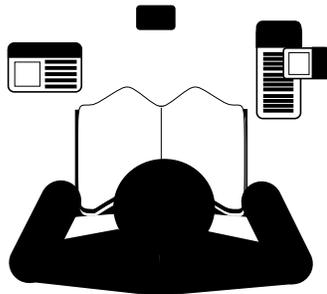
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION

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

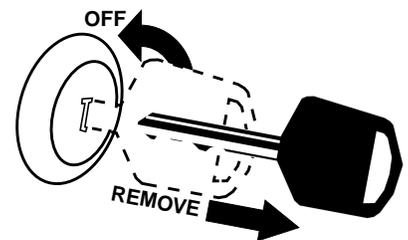
For Your Protection

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



Shutdown and Storage

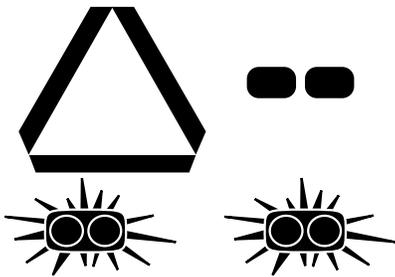
- ▲ Lower machine to ground, put tractor in park, turn off engine, and remove the key.
- ▲ Detach and store implements in a area where children normally do not play. Secure implement by using blocks and supports.



Important Safety Information

Use Safety Lights and Devices

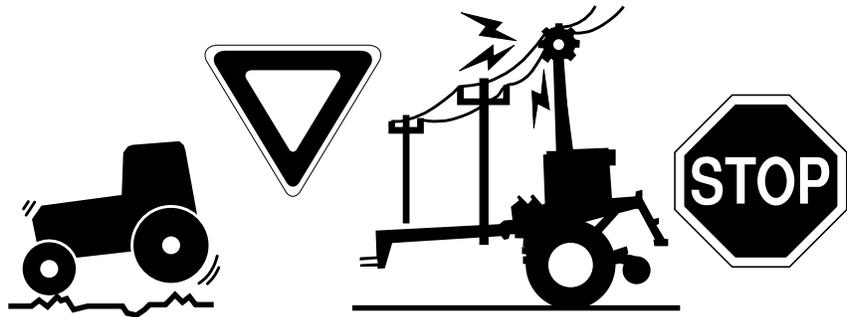
- ▲ Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads. Use lights and devices provided with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



Transport Machinery Safely

- ▲ Comply with state and local laws.
- ▲ Maximum transport speed for implement is 20 mph. **DO NOT EXCEED.** Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrain require a slower speed.
- ▲ Sudden braking can cause a towed load to swerve and upset. Reduce speed if towed load is not equipped with brakes.

- ▲ Use the following maximum speed - tow load weight ratios as a guideline:
20 mph when weight is less than or equal to the weight of tractor.
10 mph when weight is double the weight of tractor.
IMPORTANT: Do not tow a load that is more than double the weight of tractor.



Use A Safety Chain

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



Practice Safe Maintenance

- ▲ Understand procedure before doing work. Use proper tools and equipment, refer to Operator's Manual for additional information.
- ▲ Work in a clean dry area.
- ▲ Lower the implement to the ground, put tractor in park, turn off engine, and remove key before performing maintenance.

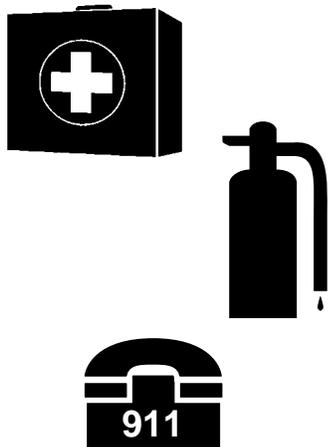
- ▲ Allow implement to cool completely.
- ▲ Do not grease or oil implement while it is in operation.
- ▲ Inspect all parts. Make sure parts are in good condition & installed properly.
- ▲ Remove buildup of grease, oil or debris.
- ▲ Remove all tools and unused parts from implement before



Important Safety Information

Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.



Wear Protective Equipment

- ▲ Protective clothing and equipment should be worn.
- ▲ Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- ▲ 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 full attention of the operator. Avoid wearing radio headphones while operating machinery.



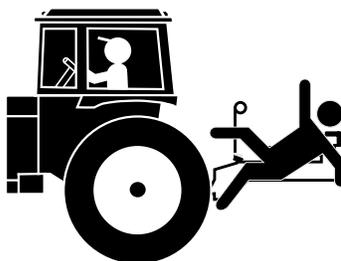
Avoid High Pressure Fluids Hazard

- ▲ Escaping fluid under pressure can penetrate the skin causing serious injury.
- ▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing work on the system.
- ▲ Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- ▲ Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- ▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be treated within a few hours or gangrene may result.



Keep Riders Off Machinery

- ▲ Riders obstruct the operator's view, they could be struck by foreign objects or thrown from the machine.
- ▲ Never allow children to operate equipment.



Important Safety Information

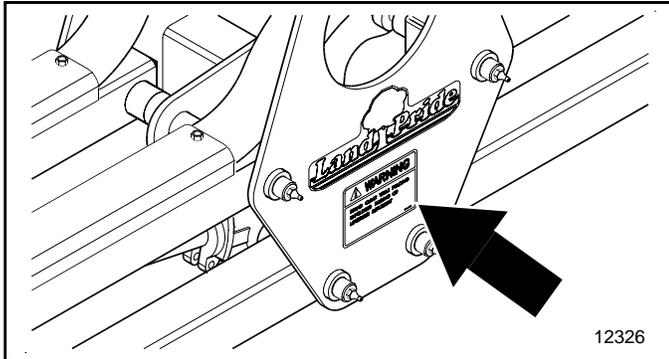
Safety Labels

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

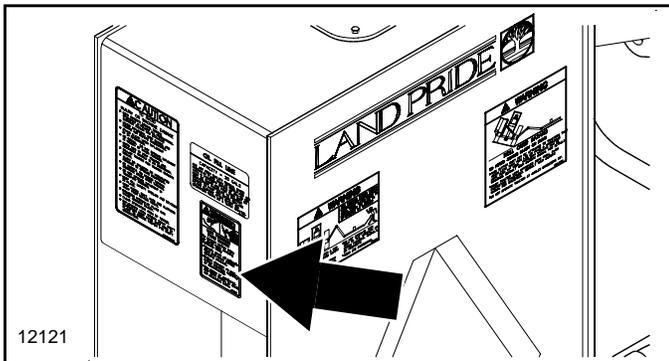
1. Keep all safety labels clean and legible.
2. Replace all damaged or missing labels. To order new labels go to your nearest Land Pride dealer.
3. Some new equipment installed during repair requires safety labels to be affixed to the replaced component as specified by Land Pride. When ordering new components

make sure the correct safety labels are included in the request.

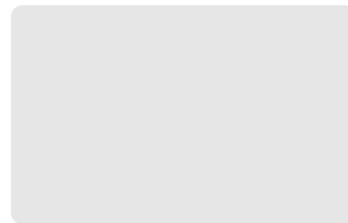
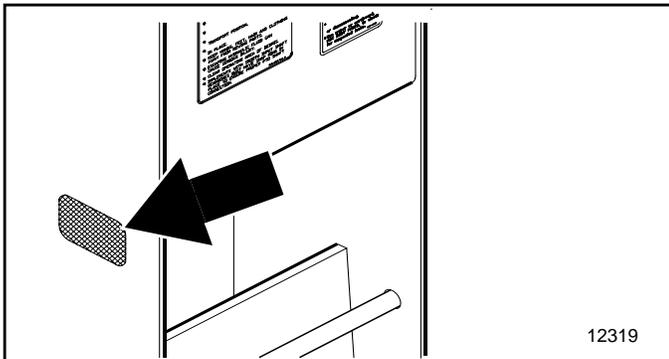
4. Refer to this section for proper label placement. To install new labels:
 - a. Clean the area the label is to be placed.
 - b. Spray soapy water on the surface where the label is to be placed.
 - c. Peel backing from label. Press firmly onto the surface.
 - d. Squeeze out air bubbles with the edge of a credit card.



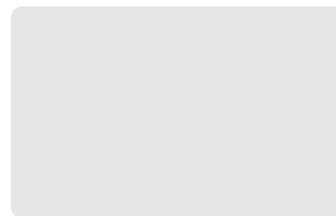
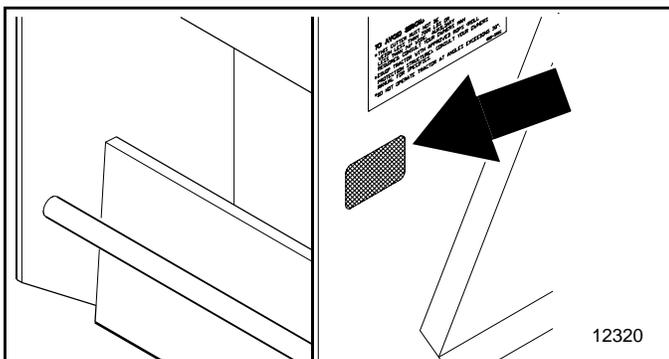
818-045C
Warning - Pinch Point Hazard



818-339C
Warning - High Pressure Fluid Hazard

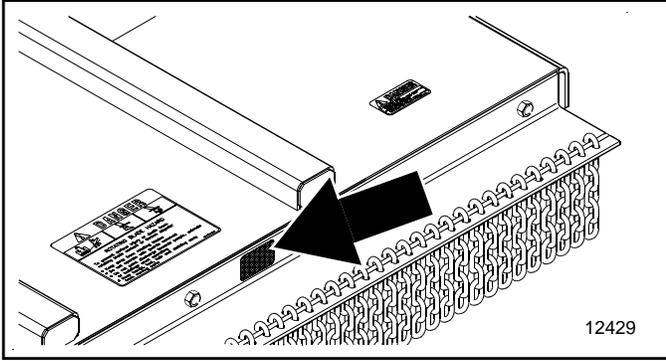


818-229C
Amber Reflectors

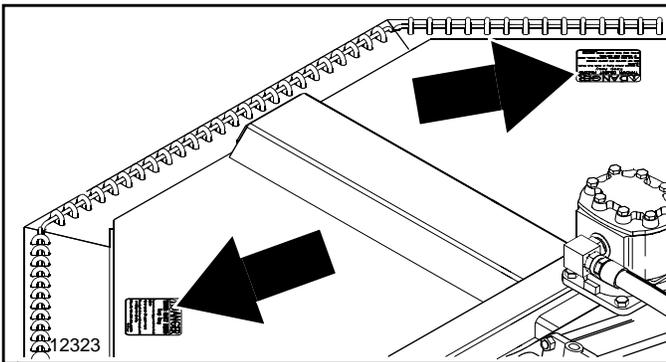


818-230C
Red Reflector

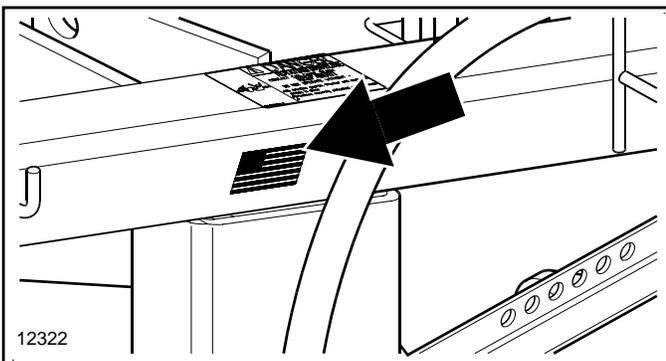
Important Safety Information



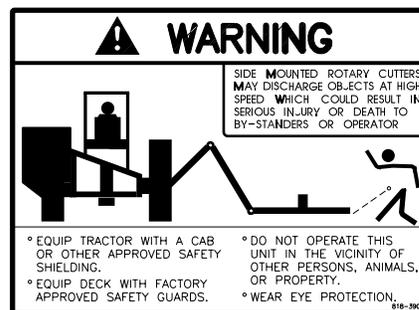
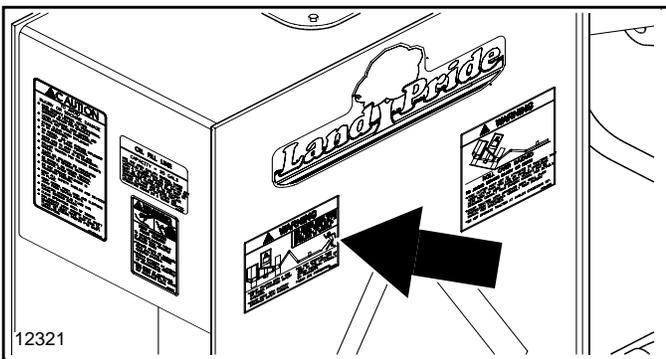
818-230C
Red Reflector



818-180C
Danger -
Thrown Object
Hazard Keep
Away!

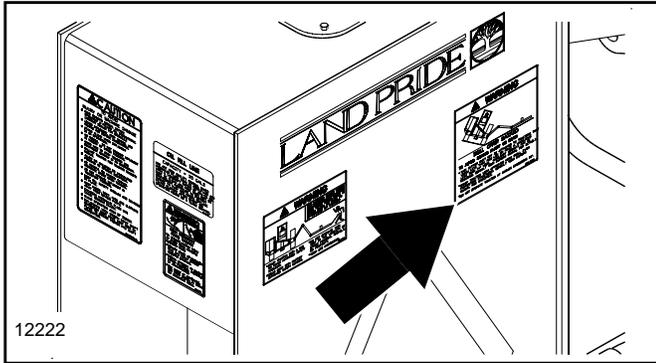


818-142C
Danger - Rotating Driveline Hazard



818-390C
Warning -
Thrown Object
Hazard

Important Safety Information

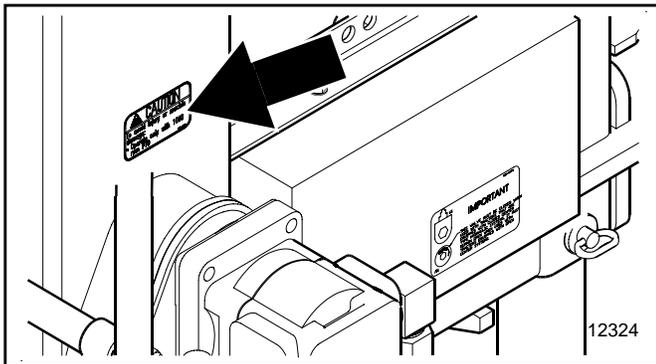


12222



818-391C

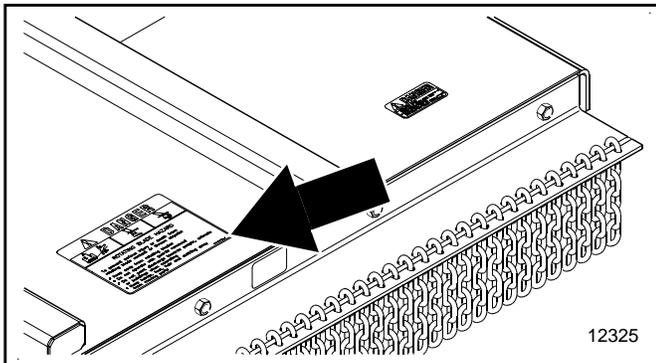
Warning - Tractor Roll Over Hazard



12324



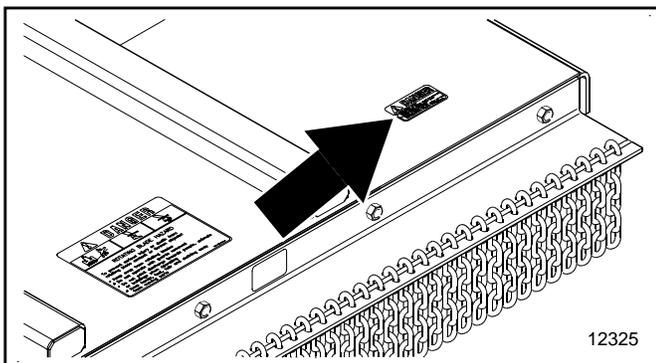
818-403C
(Used on 540 rpm PTO only)
 Caution - 540 RPM PTO



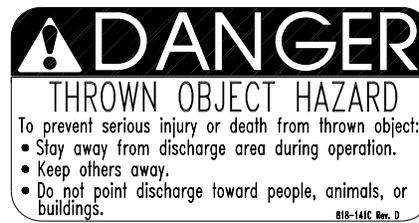
12325



818-186C
 Danger - Keep Away Rotating Blade Hazard

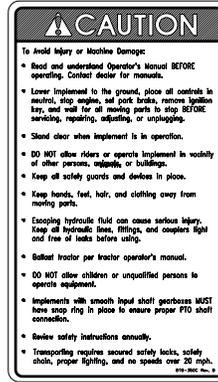
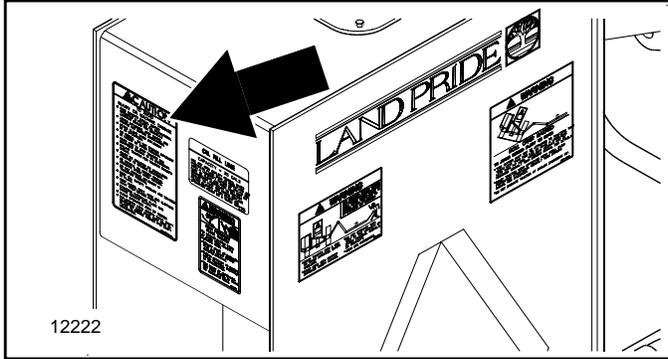


12325

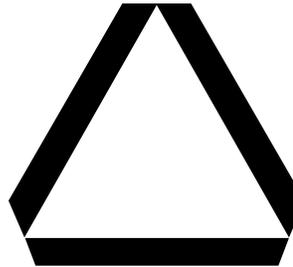
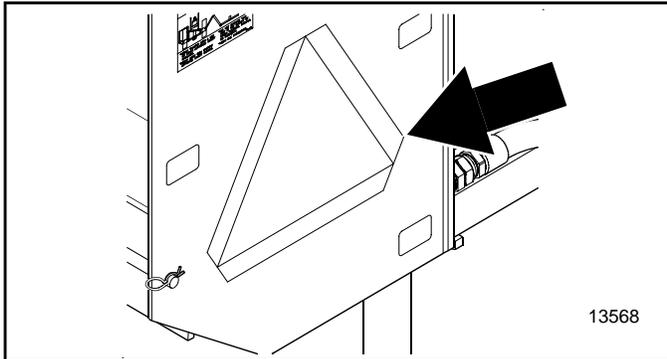


818-141C
 Danger - Thrown Object Hazard

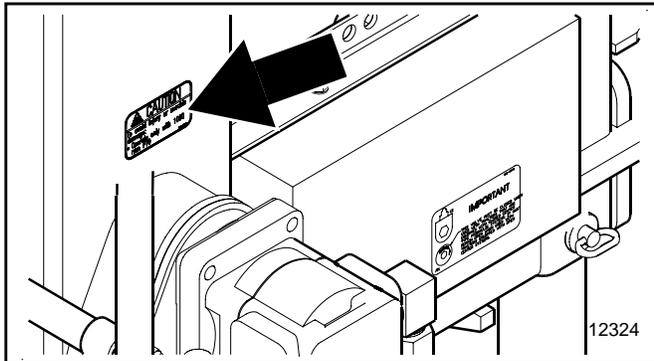
Important Safety Information



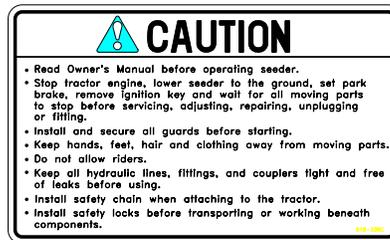
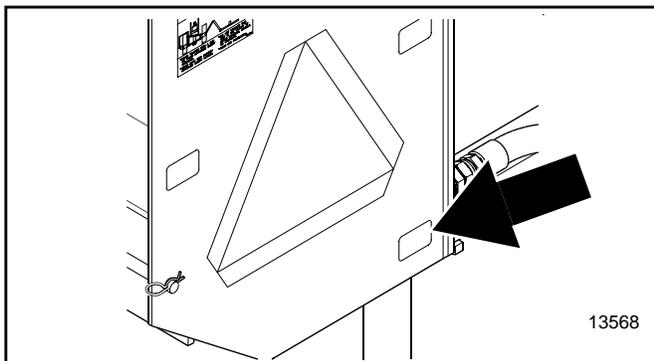
818-350C
Caution - General Safety Information



818-003C
Slow Moving Vehicle Emblem



818-484C
(Used on 1000 rpm PTO only)
Important - 1000 rpm PTO



818-338C
Caution! General Safety Information

Section 1: Introduction

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

This Cutter 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 the machine.

Application

The RCP2560 Series Hydraulic Parallel Arm Rotary Cutters are designed and built by Land Pride to provide excellent cutting performance on ditch banks and sloping areas adjacent to right-of-ways, lakes, ponds and streams. They are designed to work equally as well in and around areas of restricted access such as over or under fences, guardrails, low overhanging branches, tree limbs, and hedges. These units perform extremely well in tall grass cutting applications and will easily cut through standing brush up to two inches in diameter.

The RCP2560 series is adapted for Category 2 or 3 three-point hitch mounting on 75 to 150 hp. tractors weighing 7000 lbs. or more. Pump and reservoir system require either 540 or 1000 input rpm. Cutter drive and tractor will need to be equipped with, depending upon operator configuration, one to four hydraulic outlets to operate the cutters lift/extension/rotation arm.

See Section 8: Specifications & Capacities on page 31 for additional information and performance enhancing options.

Using This Manual

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

Terminology

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

Definitions

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

IMPORTANT: A special point of information related to its preceding topic. Land Pride's intention is that this information should be read and noted before continuing.

Owner Assistance

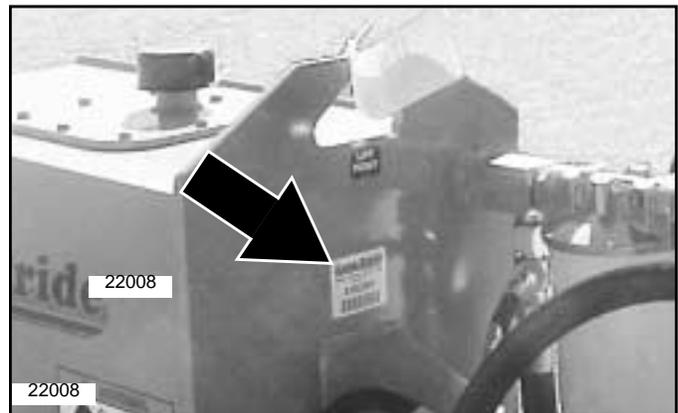
The Warranty Registration card should be filled out by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

If customer service or repair parts are required contact a Land Pride dealer. A dealer has trained personnel, repair parts and equipment needed to service the cutter.

The parts on your cutter have been specially designed and should only be replaced with genuine Land Pride parts. Therefore, should your cutter require replacement parts go to your Land Pride Dealer.

Serial Number Plate

For prompt service always use the serial number and model number when ordering parts from your Land Pride dealer. Be sure to include your serial and model numbers in correspondence also. Refer to Figure 1 for the location of your serial number plate.



Serial Number Plate Location
Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new cutter. If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your dealership service manager making sure he is aware of any problems you may have and that he has had the opportunity to assist you.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the problem and request assistance.
3. For further assistance write to:

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

E-mail address
lp servicedept@landpride.com

Section 2: Assembly & Set-up

Tractor Requirements

The Parallel Arm Cutter, by design, must be used only on tractors that are capable of controlling the cutter under all operating conditions. When the arms are fully extended, a right-hand torque load on the tractor is present which will try to tip the tractor over! The tractor **MUST** have a minimum weight of 7000 lbs. A 3-Point Category II or Category III hitch with hydraulic lift control is required.

As shown in Figure 2-1, the rear wheel base must be not less than 74" wide as measured from the outside of each tire. If the right-hand tractor tire is more than 47" from the center of the tractor, it may interfere with the hydraulic motor on the deck when it is in the transport position. If the tractor is equipped with dual wheels, the right-hand dual may have to be removed.

A single, tractor duplex hydraulic outlet is required if the cutter is equipped with the optional Electric Cylinder Control. Three duplex hydraulic outlets will be needed for parallel arm and deck control if the cutter is NOT equipped with the optional Electric Cylinder Control.

An additional tractor, duplex hydraulic outlet is required if the cutter is equipped with the optional hydraulic breakaway cylinder.

A tractor Power Take-Off (PTO) is required for pump/motor operation. This cutter is available with either 540 rpm or 1000 rpm rated PTO speed increasers. For best fuel economy, it is recommended that the 540 rpm unit be used on 1000 rpm tractors. However, PTO output RPM must be carefully controlled (by engine RPM) such that the PTO speed does not exceed 540 RPM. The actual horsepower required for pump/motor operation is approximately 30 HP.

If the tractor weight is less than 8500 lbs, auxiliary counterbalance weights will be required. These weights can be added to the weight bracket of the hydraulic reservoir or (preferably) to the left-hand tractor wheel.

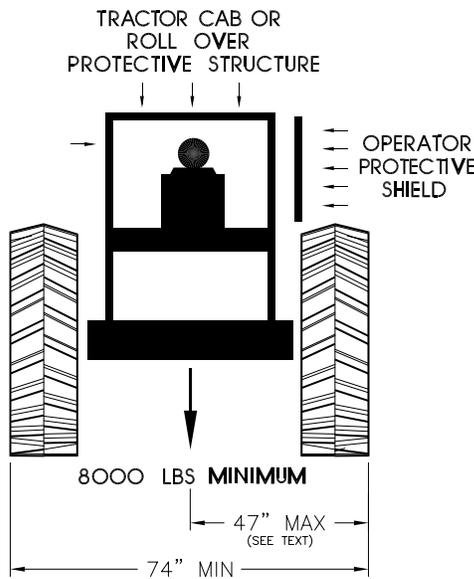
The reservoir weight bracket is designed to be used with conventional John Deere type suitcase weights - each weight being 100 lbs. A total of 8 weights can be added to the bracket.

The tractor **MUST** be equipped with operator protective equipment in the form of shielding from thrown objects and Roll Over Protective Structure (ROPS) as shown in Figure 2-1.

A universal operator protective shield is available from Great Plains Mfg. Refer to page 16 for more information and installation.

It is also recommended that protective shielding or screen be added to the right hand side of the tractor engine cowling and radiator. This will help protect the tractor finish and radiator against thrown objects.

The lower 3-Point links 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.



12250

**Minimum Tractor Requirements
Figure 2-1**

Section 2: Assembly & Set-up

Dealer Preparations

This cutter has been assembled at the factory. Some preparation will be necessary to attach the cutter to the customer's tractor. Ensure that the intended tractor conforms to the requirements stated under the heading "Tractor Requirements" on page 9.

IMPORTANT: Hydraulic fluid must be added to the hydraulic reservoir before this unit is placed into operation. Do not attempt to run the pump without fluid or damage to the pump will occur.

3-Point Hookup

Prepare the cutter as follows:

1. Locate the cutter on a flat and level concrete surface.
2. For proper hitch configuration determine the hitch category for the tractor being used. (Refer to Figure 2-2 on page 11)

3. Back the tractor into position and connect the 3-Point hitch arms and top link. Start the tractor, then slowly raise the 3-Point hitch about 1-2". Stow the jack stands in the raised position.

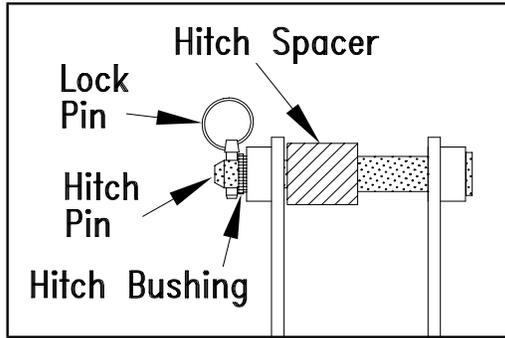
Check to be sure that the deck safety chain is in place.

Slowly operate the tractor's 3-Point hydraulic control up and down and check for clearance between the tires, reservoir, frame, drawbar etc.

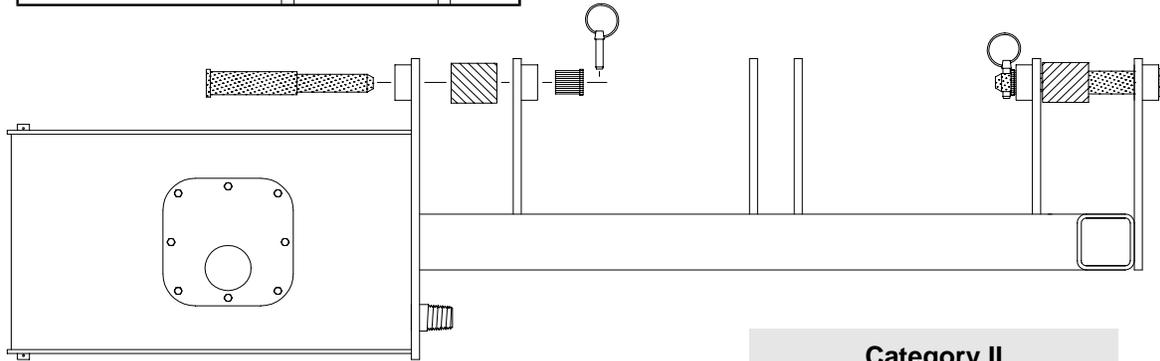
Ensure that the lower arms are blocked to prevent excessive side movement. Adjust the tractor's Lower lift arms to level the cutter from left to right. Adjust the top-link so that the cutter is approximately level from front to rear. A final adjustment will be made later.

Preparation Checklist	
<input type="checkbox"/>	Before operating this unit, 80-90 EP Gear Lube must be added to the gearbox & motor as indicated in the maintenance lubrication section (page 27) of this manual.
<input type="checkbox"/>	35 Gallons of Hydraulic Fluid for the hydraulic reservoir. Use any high quality mineral based hydraulic fluid such as Mobil Fluid 424 with a viscosity rating of 10W-30.
<input type="checkbox"/>	Additional hydraulic fluid (approx 2 gallons) for the tractor reservoir.
<input type="checkbox"/>	Miscellaneous assembly tools: hammer, tape measure, hacksaw, assortment of wrenches and sockets, 1/4" drill/drill bits, spirit level.
<input type="checkbox"/>	Quick disconnect adaptors to match your tractors duplex outlets. Quantities required depend on options selected: (2) If equipped with Electric Cylinder Control Option (6) If not equipped with Electric Switching Option (2) If equipped with hydraulic Breakaway Cylinder Option
<input type="checkbox"/>	Possible need for forklift or hoist capable of lifting 2500 lbs.
<input type="checkbox"/>	Auxiliary tractor weights (depending on tractor size).
<input type="checkbox"/>	A minimum of two people available during assembly.
<input type="checkbox"/>	If a pin, bolt or other part has been removed, and you are unsure where it is used, use the parts section of this manual to identify it. Be sure the part gets used in the correct location. By double checking while you assemble, you will lessen the chance of using a bolt incorrectly that may be needed later.
<input type="checkbox"/>	Safety decals are legible and undamaged from shipment.
<input type="checkbox"/>	PTO shaft and loose parts bag/box shipped with the cutter.

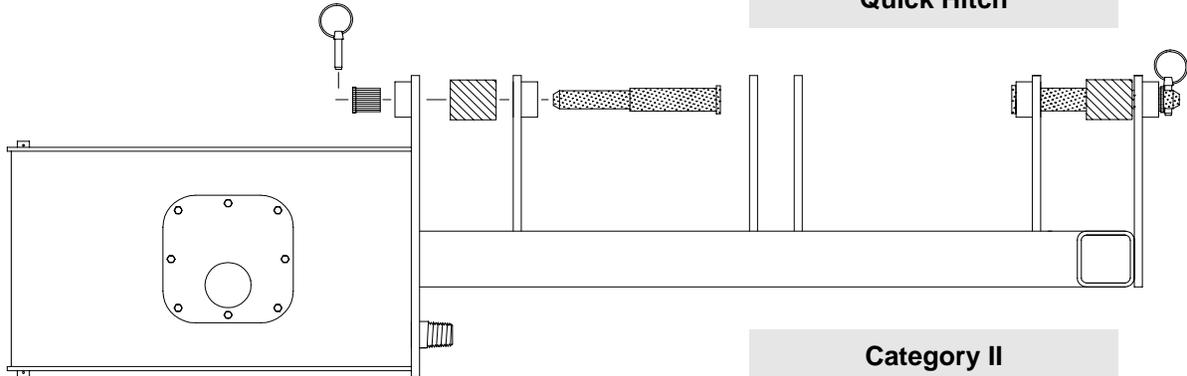
Section 2: Assembly & Set-up



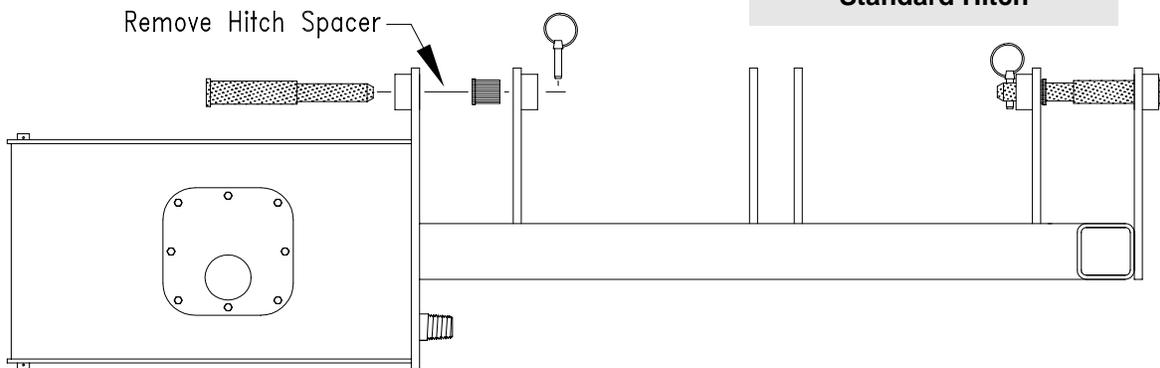
**Category III
Standard & Quick Hitch**



**Category II
Quick Hitch**



**Category II
Standard Hitch**



12251

**Hitch Category
Figure 2-2**

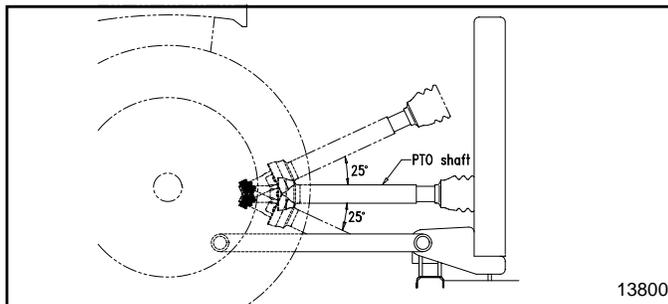
Section 2: Assembly & Set-up

PTO Hookup

IMPORTANT: Do not engage tractor PTO until driveline is fully connected and hydraulic fluid has been added to the cutter reservoir.

IMPORTANT: A quick hitch may be used, but is not recommended because it moves the cutter deck back about 5" and impedes operator visibility.

IMPORTANT: See Figure 1-4 below. Avoid premature PTO driveline breakdown. PTO driveline **must not exceed** an angle of 25 degrees up or down while operating cutter.



Maximum PTO driveline Movement
Figure 1-4

IMPORTANT: Always check driveline minimum length during initial setup, when connecting to a different tractor and when alternating between using a quick hitch and a standard 3-point hitch. More than one driveline may be required to fit all applications.

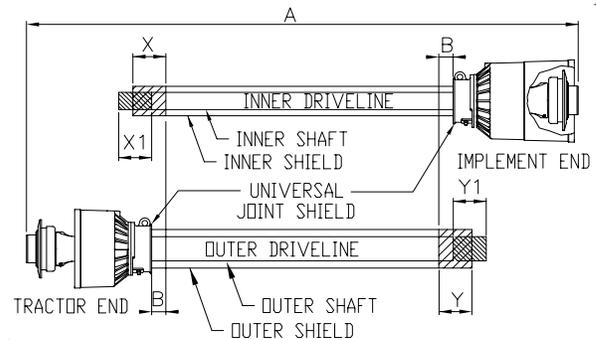
IMPORTANT: It is necessary to aligning the tractor's PTO shaft level with the Rotary Cutter's gearbox shaft when checking driveline minimum length. Too long a driveline can damage tractor, gearbox and driveline.

Check Driveline Minimum Length

Refer to Figure 1-5

1. Start tractor and slowly engage 3-point controls to move lower arms until the Rotary Cutter's gearbox shaft is approximately level with tractor's PTO shaft.
2. Slide inner yoke of the driveline over the cutter's gearbox shaft and secure with locking collar.
3. Slide outer yoke end of driveline over tractor PTO shaft and secure with locking collar. Skip to step 5 on page 12 if driveline fits between tractor and Rotary Cutter.
4. The driveline will require shortening if it is too long to fit between tractor and Rotary Cutter. Shorten driveline as follows:
 - a. Raise/lower 3-point lower arms until Rotary Cutter and tractor PTO shafts are approximately level with each other. Securely support cutter frame in this position with blocking.

- b. Set tractor in park, shut tractor engine off, set park brake and remove switch key.
- c. Pull driveline apart into two sections as shown in Figure 1-5. Attach outer driveline universal joint to the tractor PTO shaft. Attach inner driveline universal joint to the Rotary Cutter gearbox shaft. Pull on each driveline section to be sure universal joints are secured to the shafts.
- d. Hold driveline sections parallel to each other to determine if they are too long. The inner and outer shields on each section should end approximately 1" short of reaching the universal joint shield on the adjacent section (see "B" dimension). If they are too long, measure 1" ("B" dimension) back from the universal joint shield and make a mark at this location on the inner and outer driveline shields.
- e. Cut off inner shield at mark ("X" dimension). Cut same amount off inner shaft ("X1" dimension). Repeat cut off procedure ("Y" & "Y1" dimensions) to outer driveline half.
- f. Remove all burrs and cuttings.



Shortening PTO Driveline Shields and Shafts
Figure 1-5

5. Apply multi-purpose grease to the inside of the outer driveline shaft and reassemble the two shafts.
6. Attach inner driveline yoke to the cutter gearbox input shaft.
7. Attach outer driveline yoke to the tractor's PTO shaft.
8. The driveline should now be moved back and forth to insure that both ends are secured to the tractor and Rotary Cutter PTO shafts. Reattach any end that is loose.

IMPORTANT: Two small chains supplied with the driveline must be attached to restrict driveline shield rotation.

9. Hook one of the driveline safety chains in a hole on the outer yoke shield and the opposite end to the tractor to restrict outer shield rotation.
10. Hook second driveline safety chain in a hole on the inner yoke shield and opposite end to the Rotary Cutter frame to restrict inner shield rotation.

Section 2: Assembly & Set-up

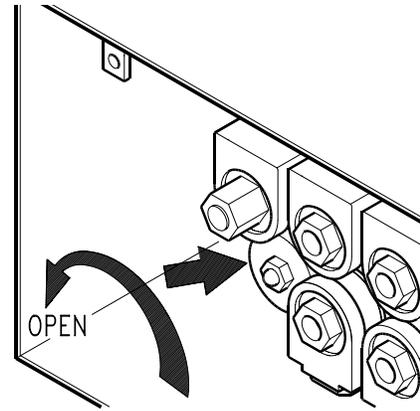
11. Start tractor and raise cutter just enough to remove support blocks used in step 4a on page 12.
12. Slowly engage tractor's hydraulic 3-point controls to raise and lower the cutter. Check drawbar clearance. Move or remove drawbar as needed.

Hydraulic Hookup

1. Connect the hydraulic hoses to the tractor duplex outlet(s). "Pioneer" quick disconnect hose couplings are supplied with each hose. Some tractors use other types of quick couplers.
 - a. See Figure 2-4: If the cutter is equipped with the optional electric cylinder control, two hoses from the solenoid valve control box will be attached to a single duplex outlet on the tractor.

See Figure 2-5: You must determine if the tractor being used is configured for "OPEN" or "CLOSED" center hydraulic flow. Consult the tractor operator's manual if unsure. Remove the access cover located at the rear of the solenoid valve control box to adjust the flow control valve. If the tractor is OPEN center, the valve must be open (turn knob counterclockwise). If the tractor is CLOSED center, the valve must be closed (turn knob clockwise).

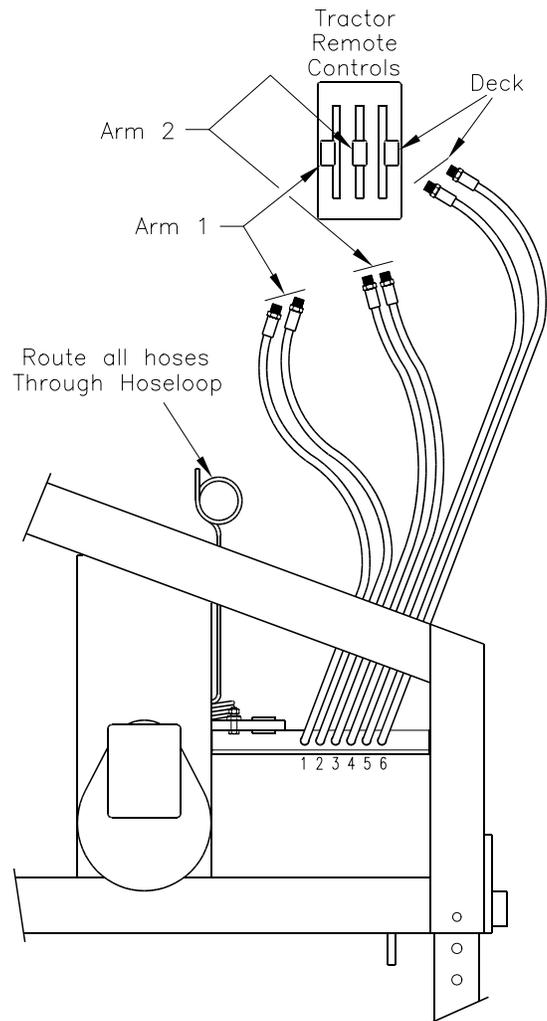
- b. See Figure 2-6: If the cutter is NOT equipped with the optional Electric Cylinder Control, six hoses (2 per cylinder) will be connected to 3 duplex outlets on your tractor. Each tractor duplex outlet must be capable of infinite, variable flow control by the operator and should have center detent (off) levers. A typical tractor setup is shown in Figure 2-6. The hoses on each outlet should be connected such that when the control lever is pushed "forward", the arm (or deck) extends. If the levers operate in reverse, simply reverse the hoses at the duplex receptacle.



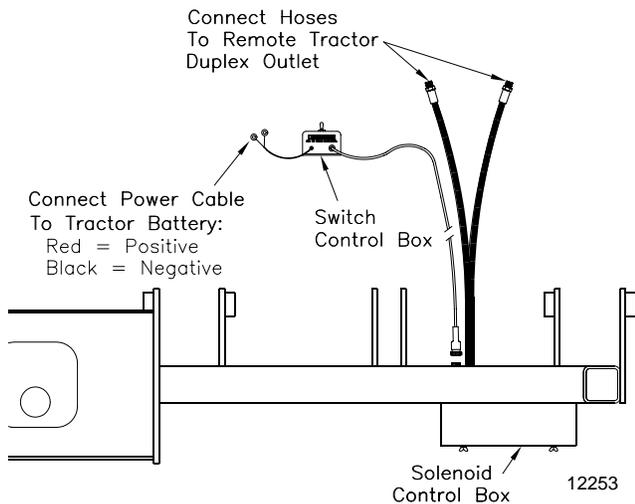
**Flow Control Valve Knob
Figure 2-5**

12374

12255



**Hose Hookup Without Electric Cylinder Control Option
Figure 2-6**



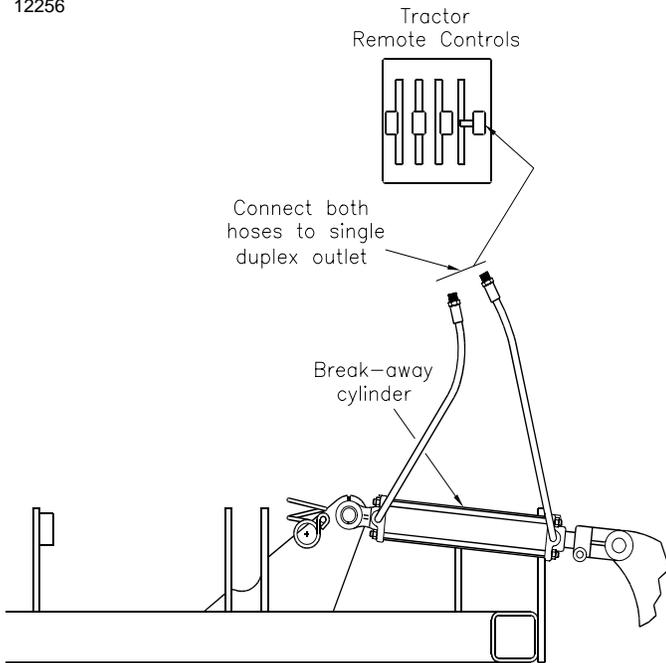
**Optional Electrical Control Hook-Up (S/N 163695-)
Figure 2-4**

12253

Section 2: Assembly & Set-up

- c. See Figure 2-7: If the cutter is equipped with the optional breakaway cylinder, two additional hoses will be connected to a single duplex outlet on your tractor.

12256



Breakaway Cylinder Hose Connections
Figure 2-7

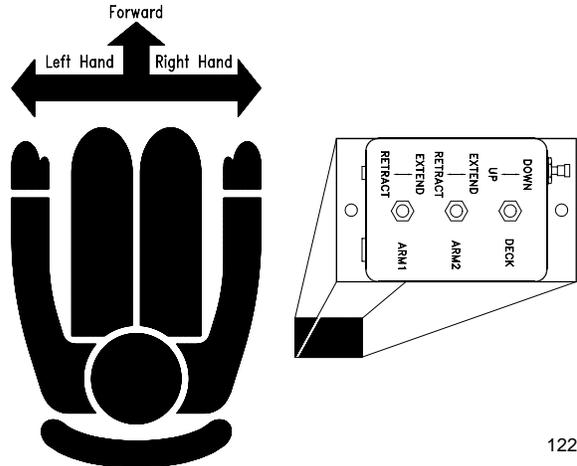
2. Add 35 gallons of hydraulic fluid to the hydraulic reservoir. Use any high quality mineral based hydraulic fluid such as Mobil fluid 424 with a viscosity rating of 10W-30. Use care to ensure that dust or other foreign particles do not contaminate the fluid or reservoir. Check the fluid level by inserting the dipstick and cap all the way into the filler tube.

Electrical Hookup

NOTE: If the tractor has dual 6 volt batteries, see the tractors owners manual for proper 12 volt hook-up.

IMPORTANT: All dual 6 volt batteries are not hooked up correctly cylinders may not function properly due to solenoid valves not being fully charged. Arm and deck functions will be slow.

See Figure 2-8: Find a suitable location for the Switch Control Box. Based on our experience, the location should be close to the right hand side of the operator - most generally on the tractor fender or fender console. Exact location should be convenient to the specific operator. Orient the Control Box such that the switches are relative to the movement of the deck and parallel arms. I.e., when the switch is toggled, the arms or deck should move in the same relative direction as the handle of the switch.



Electric Switch Control Box
Figure 2-8

Mount the Switch Control Box using either sheet metal screws (for plastic type consoles) or machine screws, nuts and washer. Route the control cable to the Solenoid Control Box and connect the circular plastic connector to the mating connector on the box.

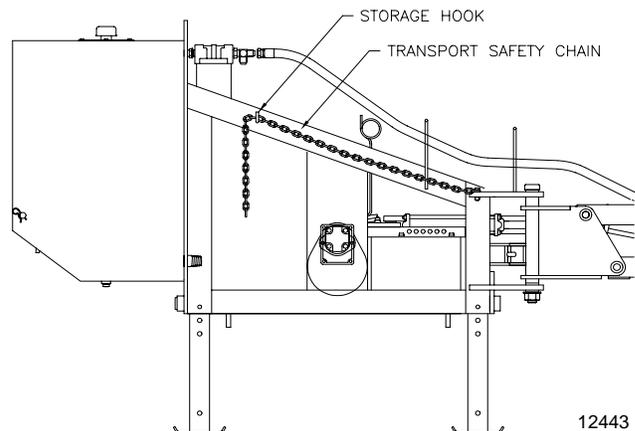
See Figure 2-4 on page 13. Route the power cable to the tractor battery or circuit breaker panel. A 10 Amp or larger fuse/circuit breaker source should be used. Connect the red lead to the positive power source. Connect the black lead to the negative source.

IMPORTANT: Connect leads to 12VDC power source only. Connection to 24VDC or larger will damage electrohydraulic components.

Ensure that the 10 Amp circuit breaker located on the switch control box is pushed in prior to functional check.

IMPORTANT: This section only applies to Units with Solenoid Control Valve Option.

Determine if tractor is "OPEN" or "CLOSED" Center Hydraulic System. If unsure consult your tractors owners manual and/or contact your tractor dealer.



Deck Safety Chain
Figure 2-9

Section 2: Assembly & Set-up

Functional Check

1. Remove the deck safety chain from the latch position and place the loose end on the stowage hook provided. See Figure 2-9. Start the tractor and adjust the 3-point hitch until the PTO shaft is approximately level.
2. Cycle the parallel arm and deck cylinders for proper operation.



DANGER

Hydraulic fluid under pressure can penetrate skin. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for hydraulic leaks. If hydraulic fluid is injected into the skin, it must be treated by a doctor within a few hours or gangrene may result.

NOTE: The following procedure assumes that the cutter is equipped with the optional Electric Cylinder Control. Go to step “c” if your cutter is not equipped with this option.

- a. In Step 1.a. (Hydraulic Hookup), two hoses from the Solenoid Control Valve were connected to a single duplex outlet on the tractor. If the tractor is equipped with more than one remote duplex outlet, you must first determine which console lever is used to control this outlet. The control lever must then be locked into the “Automatic Extend Position” or the “Automatic Retract Position”.

- b. Toggle the switch on the control box labeled “ARM1” by pushing it forward (away from you). The inboard parallel arm should extend outward. If it does not move, or moves in the opposite direction (retracts), you should either change the position of the console lever (from retract to extend or vice-versa) or reverse the hoses at the duplex outlet. Toggle the ARM1 switch by pulling back on it. The inboard parallel arm should retract. See Figure 2-10.

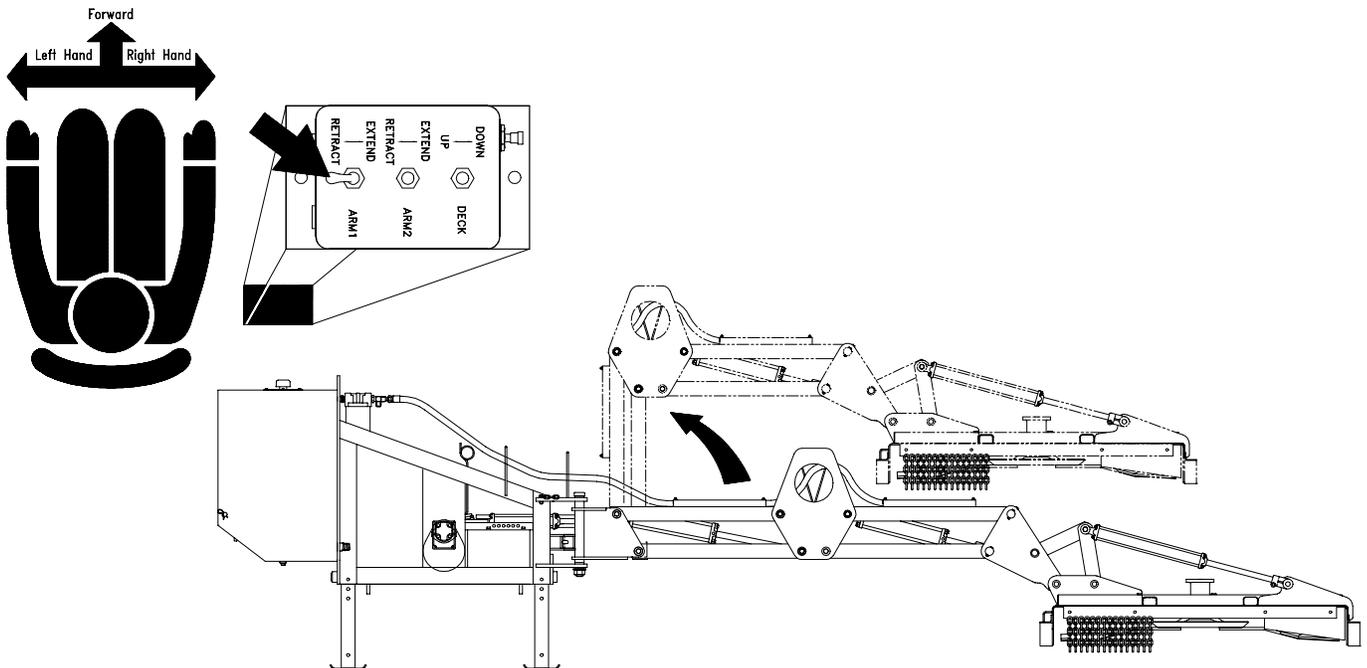
Repeat this procedure for the remaining arm and deck cylinders. Cycle all of the cylinders to full extension and retraction to remove any air that might be trapped in the system.

Check the hydraulic fluid level in your tractor's reservoir. If low, add fluid to the system before proceeding. The cylinders and hoses will require approximately 1 3/4 gallons from the tractor.

NOTE: The following procedure is for those cutters that are not equipped with the Electric Cylinder Control.

- c. Operate the tractor console control lever designated for “ARM1” by pushing it forward. The inboard arm should extend outward. If the arm tries to retract, reverse the hoses at the duplex outlet. See Figure 2-10.

Repeat this procedure for the remaining arm and deck cylinders. Cycle all of the cylinders to full extension and retraction to purge any air that might be trapped in the system.



12254

Parallel Arm Movement
Figure 2-10

Section 2: Assembly & Set-up

Check the hydraulic fluid level in your tractor's reservoir. If low, add fluid to the system before proceeding. The cylinders and hoses will require approximately 1 3/4 gallons from the tractor.

- d. Move the tractor and cutter to a remote location (away from all other persons) to check pump/motor operation. Check to be sure the Hydraulic Reservoir shut-off valve is full OPEN. If this service valve is turned off, damage will occur to the pump.

Position the cutter deck flat on the ground or concrete surface. SLOWLY engage the PTO to start blade rotation. On initial start-up, blade position may cause the deck to "vibrate". After 2-3 revolutions, these vibrations should stop. If the deck continues to vibrate, shut off the PTO, raise the deck and check for locked blades.

Gradually increase engine RPM until PTO output RPM is 540. The deck should not exhibit excessive vibration.

IMPORTANT: If the tractor being used is equipped with a 1000 RPM PTO output, be sure that throttle RPM is reduced to limit PTO output to 540 RPM.

Operator Protective Shield

An optional operator protective shield is available for use on tractors not equipped with cabs or other protective shielding. This shield is a "universal" type and is suitable for attachment to a conventional Roll Over Protective Structure (ROPS) bar that is already attached to the tractor. The shield is constructed of an extruded aluminum frame and is glazed with 1/4" clear, lexan polycarbonate.

Mounting hardware will permit attachment to ROPS having cross-section dimensions of 2" x 4", 2" x 5", and 2" x 6" or 2 1/2" x 4", 2 1/2" x 5 and 2 1/2" x 6. Other sizes may require longer mounting bolts and/or custom flatbars. Installation requires that 4 mounting holes be drilled in the frame of the shield. No modification is made to the ROPS.

Installation

Refer to Figure 2-11:

Measure the width and thickness of the ROPS bar on the tractor to determine that the clamping hardware supplied will be adequate.

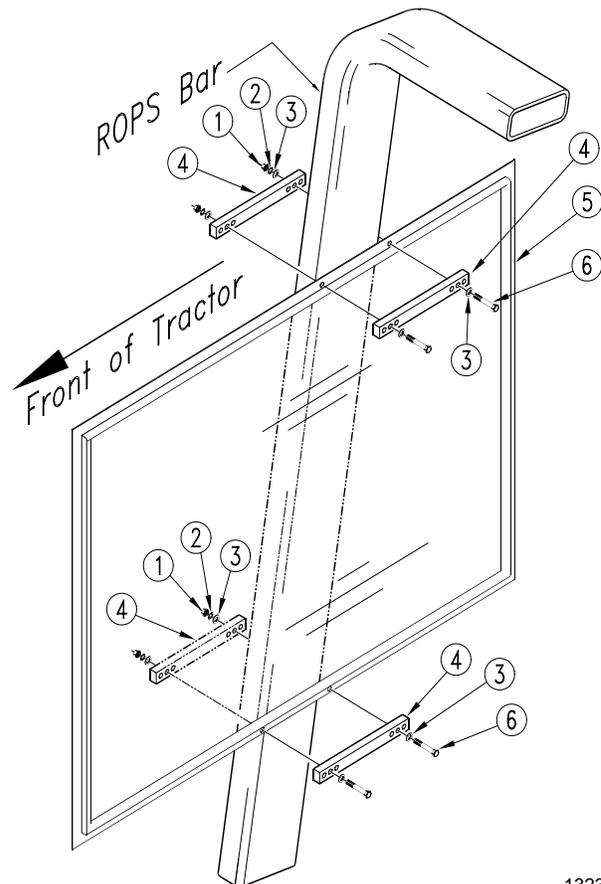
Compare the parts list on and quantities with the parts received. Report any missing or damaged items to your dealer.

To determine the best location for the shield, the cutter should be connected to the tractor. The parallel arms should be fully extended and the deck should be horizontal (or approximately level).

Carefully remove the shield from the shipping carton and temporarily position it on the inside surface of the ROPS bar. Locate the shield forward/back, up/down to provide the best overall coverage for the tractor operator. Use a spirit level to level the shield before marking. Mark the top frame location with a pencil on each side of the ROPS bar, and mark the vertical ROPS location on the frame of the shield.

Position the shield (#5) on a flat work surface. Locate one of the 316-116D (#4) flatbars next to the pencil marks to determine which set of holes will clear the vertical marks for the ROPS location. Mark the hole location and drill two 1/4" diameter holes through the frame of the shield. Similarly mark and drill two additional holes for the lower clamp location.

Attach the shield to the inside surface of the ROPS bar using the mounting hardware provided (#1), (#2), (#3), and (#6).



13239

**Operator Protective Shield
Figure 2-11**

Section 2: Assembly & Set-up

Setting Flow Control Valve

This procedure is for those units with the solenoid valve option, on RCP 2560 and RCPM2560.

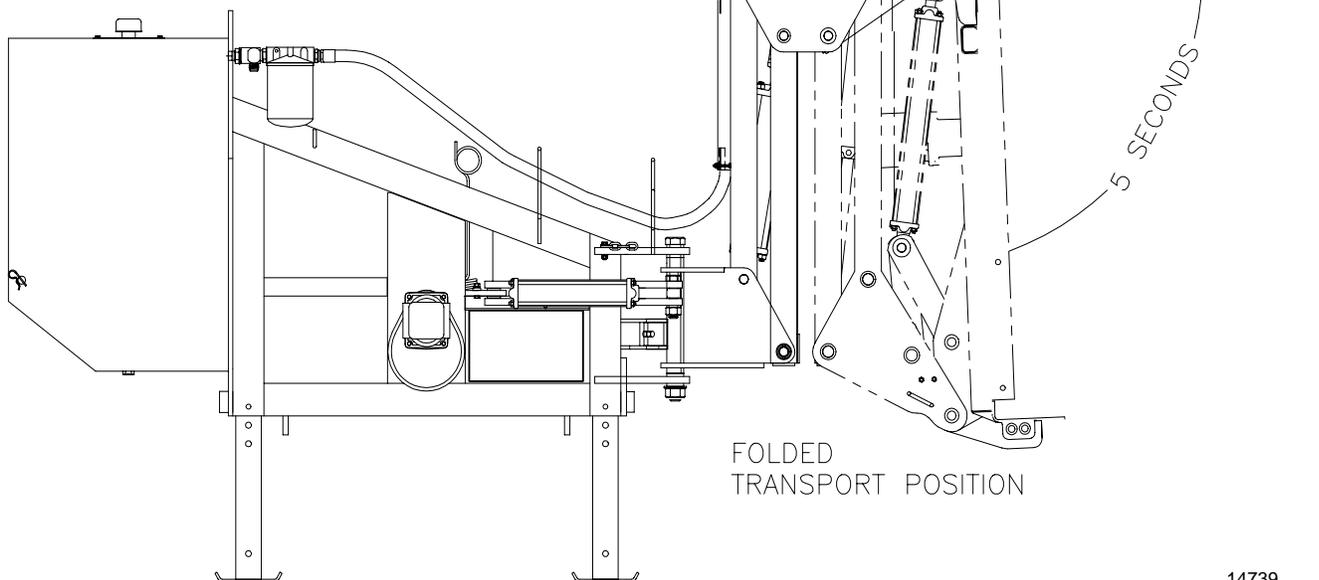
NOTE: Parallel Arm Cutters with (S/N 163695-) will require flow control valve kit #316-068K if your tractor does not have flow control (turtle/rabbit control) or if your tractor uses an open center hydraulic system. Check your tractor's operator's manual to determine your tractor's set-up.

The flow control valve diverts excess oil back to the tractor, which in turn keeps the back pressure down and keeps the oil cooler.

IMPORTANT: Overheating of the oil may occur if the flow control kit is not installed. Damage to the o-ring in the solenoid valve and/or the cylinders may occur if the oil becomes overheated.

1. Time the 2nd arm cylinder (arm furthest from the tractor) from the fully extended position, to the fully retracted position.
2. Set the turtle/rabbit control on the tractor, or the flow control valve (optional), so that the cylinder cycles at 5 seconds.
3. These cylinders require 5 GPM (gallons per minute) for proper arm function. Timing of the cylinder is the easiest way to set the GPM.

CYCLE TIME = 5 SECONDS
FULLY EXTENDED TO FULLY RETRACTED



14739

Timing Procedures
Figure 2-12

Timing Procedures

Refer to Figure 2-12:

1. Set the RCP2560 in the transport position with the arms and deck in the folded position.
2. Retract the 2nd cylinder which will raise the 2nd arms up. Time this sequence. Time should be 5 seconds.
3. Adjust the turtle/rabbit control or the flow control valve until the cycle time is 5 seconds.
4. The unit is now set for proper operation.

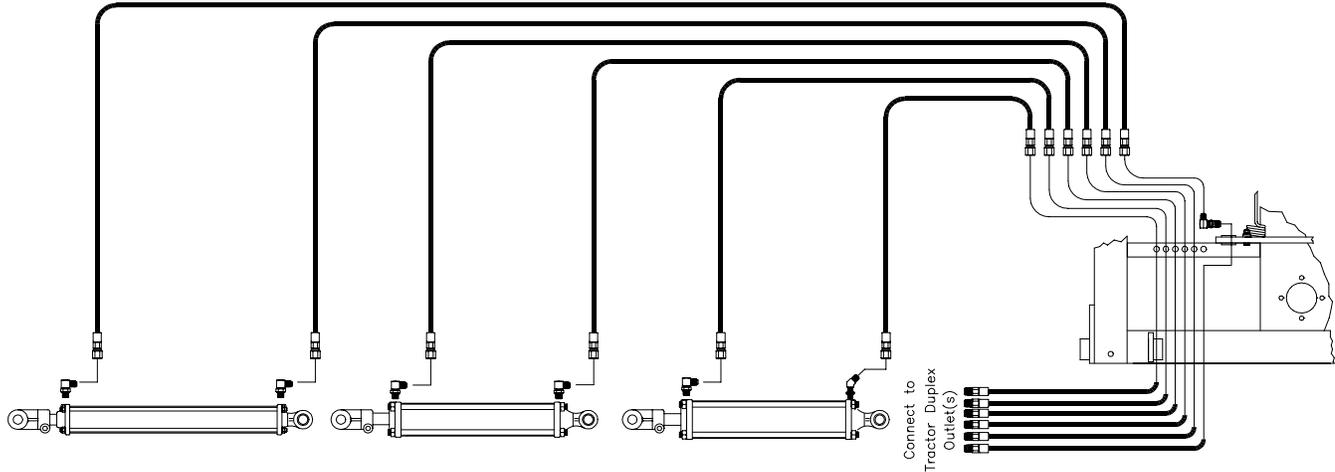
If the unit is having overheating problems through the hydraulics, check the tractor's operator's manual for power beyond hook-up.

Section 3: Hydraulics

Hydraulic Cylinder Plumbing

The standard **Parallel Arm Cutter** is equipped with three (3) remote cylinders to operate the parallel arms and the cutter deck. These cylinders are connected

directly to the tractor's remote duplex outlets and controlled by the tractor operator. Each cylinder requires a single duplex outlet on the tractor. See Figure 3-1.

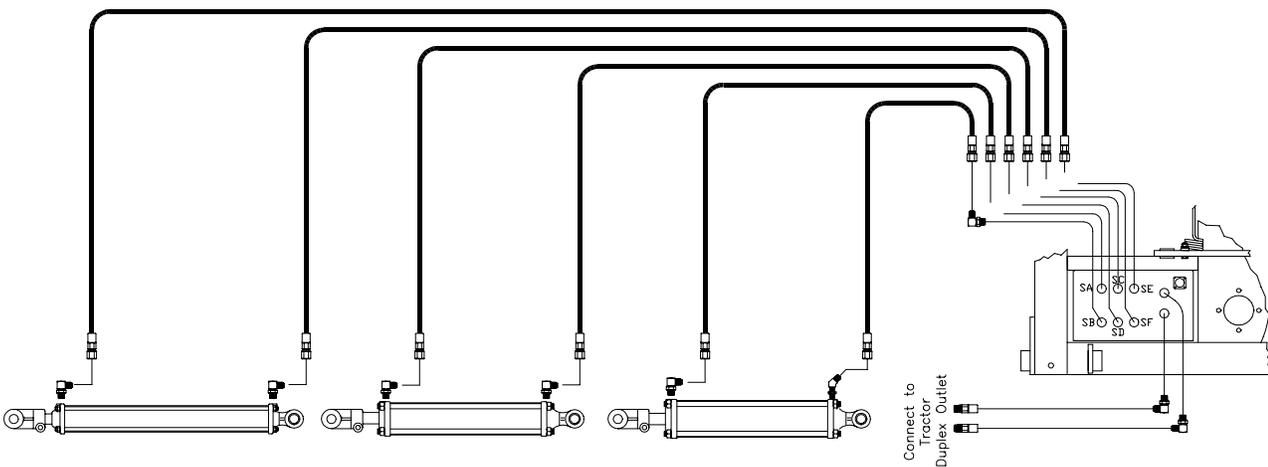


12260

Remote Cylinder Plumbing
Figure 3-1

An optional **electric cylinder control** provides for toggle switch operation of each cylinder. Response time is much faster than with tractor controls and this option is recommended where frequent changes are

necessary because of terrain or cutting conditions. Ditches and embankments are typical examples. The electric cylinder control option can be easily added as a field installation kit. See Figure 3-2.



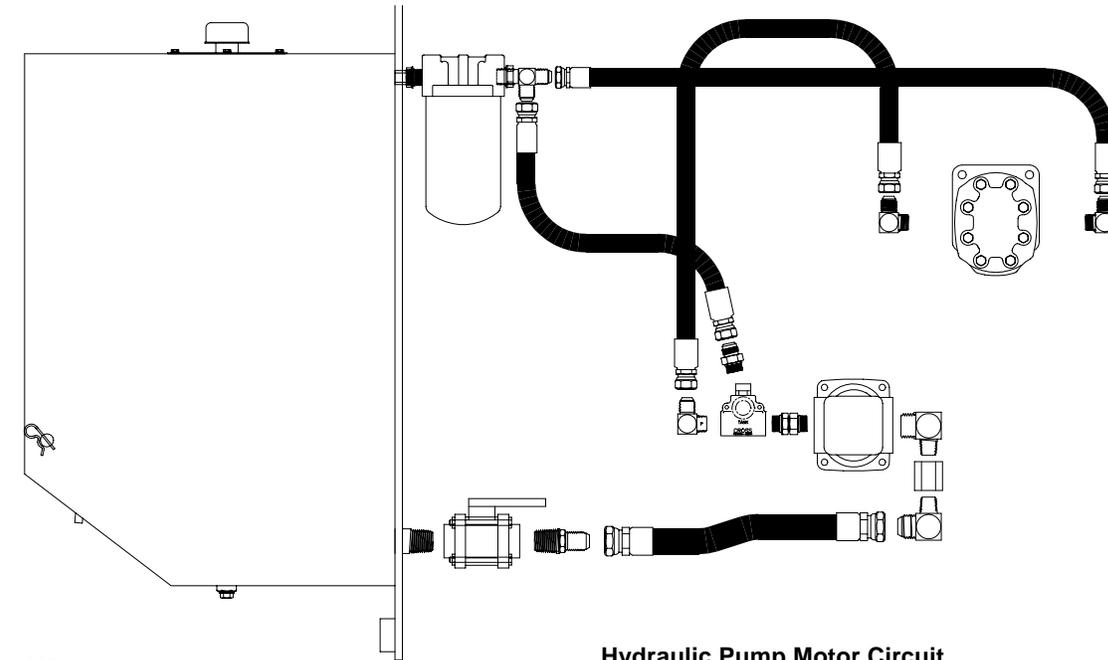
12261

Remote Cylinder Plumbing
(Optional Electric Cylinder Control)
Figure 3-2

Section 3: Hydraulics

The hydraulic pump/motor circuit is shown in Figure 3-3. It operates via a tractor driven PTO and is not connected to tractor hydraulics. The pump receives

fluid from a 35 gallon reservoir. If the cutter blades are stalled, an overpressure relief valve opens to provide a return path to the reservoir.

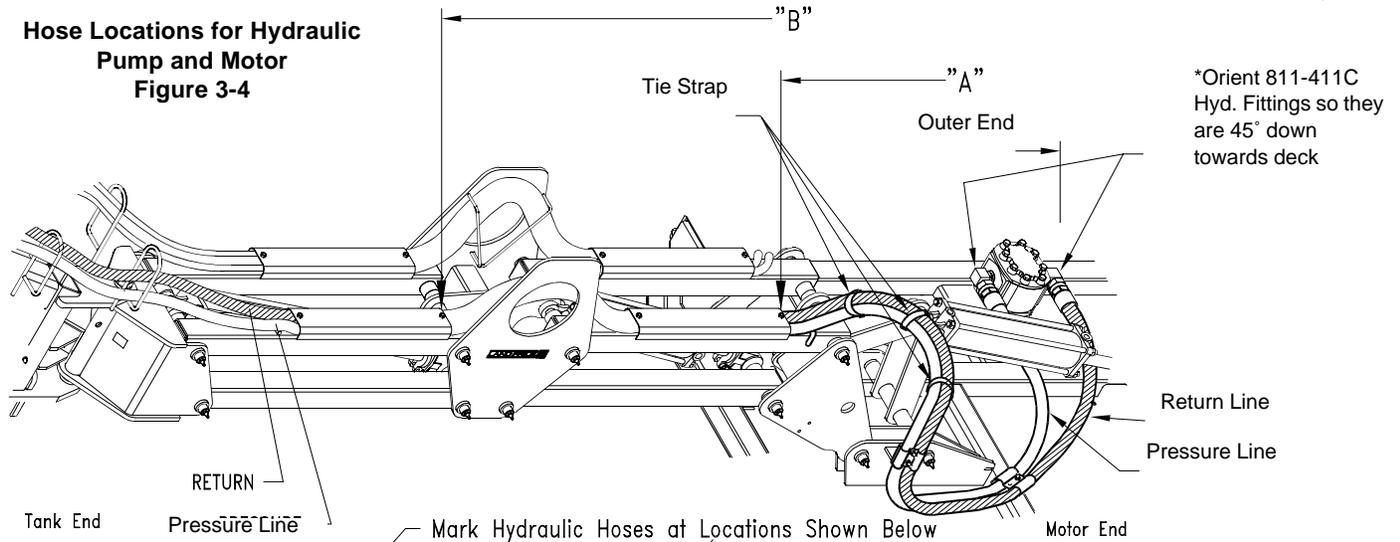


**Hydraulic Pump Motor Circuit
Figure 3-3**

Marking Hydraulic Line Lengths

Hydraulic lines are marked to length from motor to pump and pump to motor as outlined in Figure 3-4 below.

**Hose Locations for Hydraulic
Pump and Motor
Figure 3-4**



**Twist return hose (811-404C) counter-clockwise until it follows the same contour as pressure hose (811-403C).

13776

"A"	RETURN	92 1/2"	From Outer End of Hose To Visible Edge of Hose Clamp
	PRESSURE	84"	
"B"	RETURN	148 1/2"	From Outer End of Hose To Visible Edge of Hose Clamp
	PRESSURE	140"	

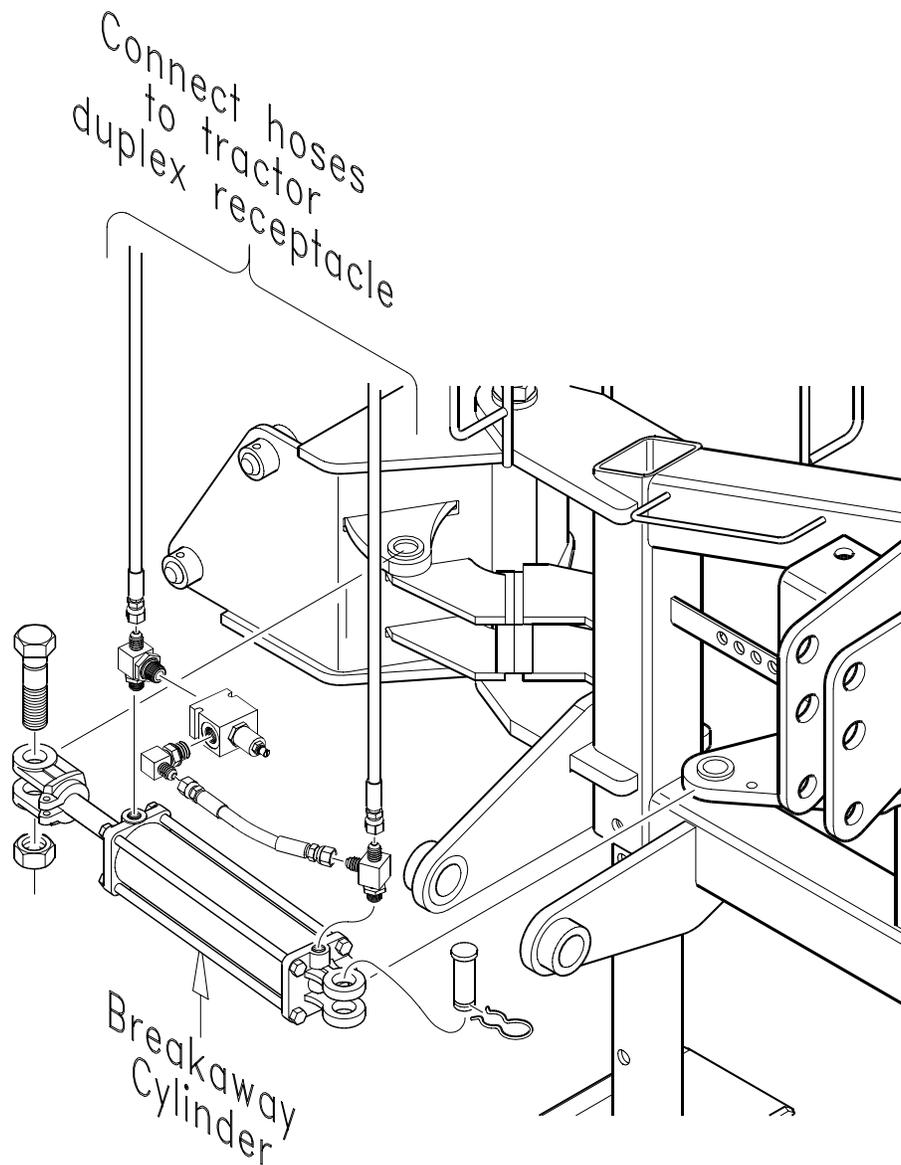
Section 3: Hydraulics

The breakaway cylinder or tension bolt is used to prevent structural damage to the cutter head and parallel arms. If the cutter head strikes an object during forward movement, the breakaway cylinder extends - allowing the cutter head and parallel arms to pivot 90 degrees to the rear. This movement is identical to that of the tension bolt, but the big advantage of the breakaway cylinder is that it can be easily reset using the tractor's remote cylinder control levers.

The breakaway cylinder should be installed on the cutter as shown in Figure 3-5. Be sure that the rod end of the cylinder is located on the pivot lug as shown. Connect both hoses from the cylinder to a remote outlet on the tractor. The tension bolt should never be used in conjunction with the breakaway cylinder.

The breakaway cylinder is designed to bypass hydraulic fluid under high pressure when the cutter head or parallel arms strike an object during forward movement. Do not use any standard hydraulic cylinder for a breakaway cylinder or damage could occur to the unit.

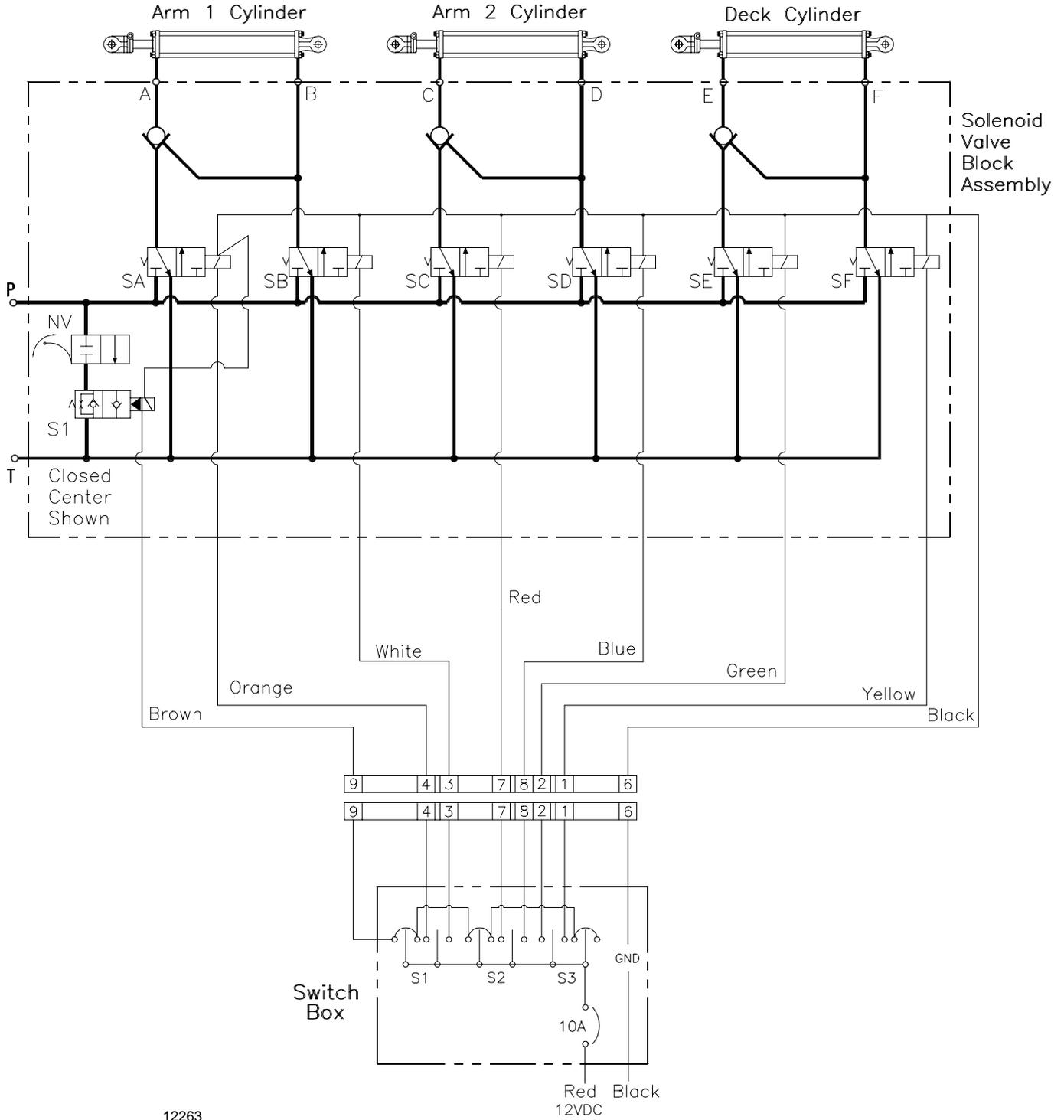
NOTE: All units equipped with the breakaway cylinder also have a 1/2" tension bolt installed on the breakaway plates for shipping purposes. This bolt must be removed after the cutter is hooked up to the tractor.



12231

Breakaway Cylinder Installation
Figure 3-5

Section 3: Hydraulics



Electric Cylinder Control Schematic (Optional)
Figure 3-6

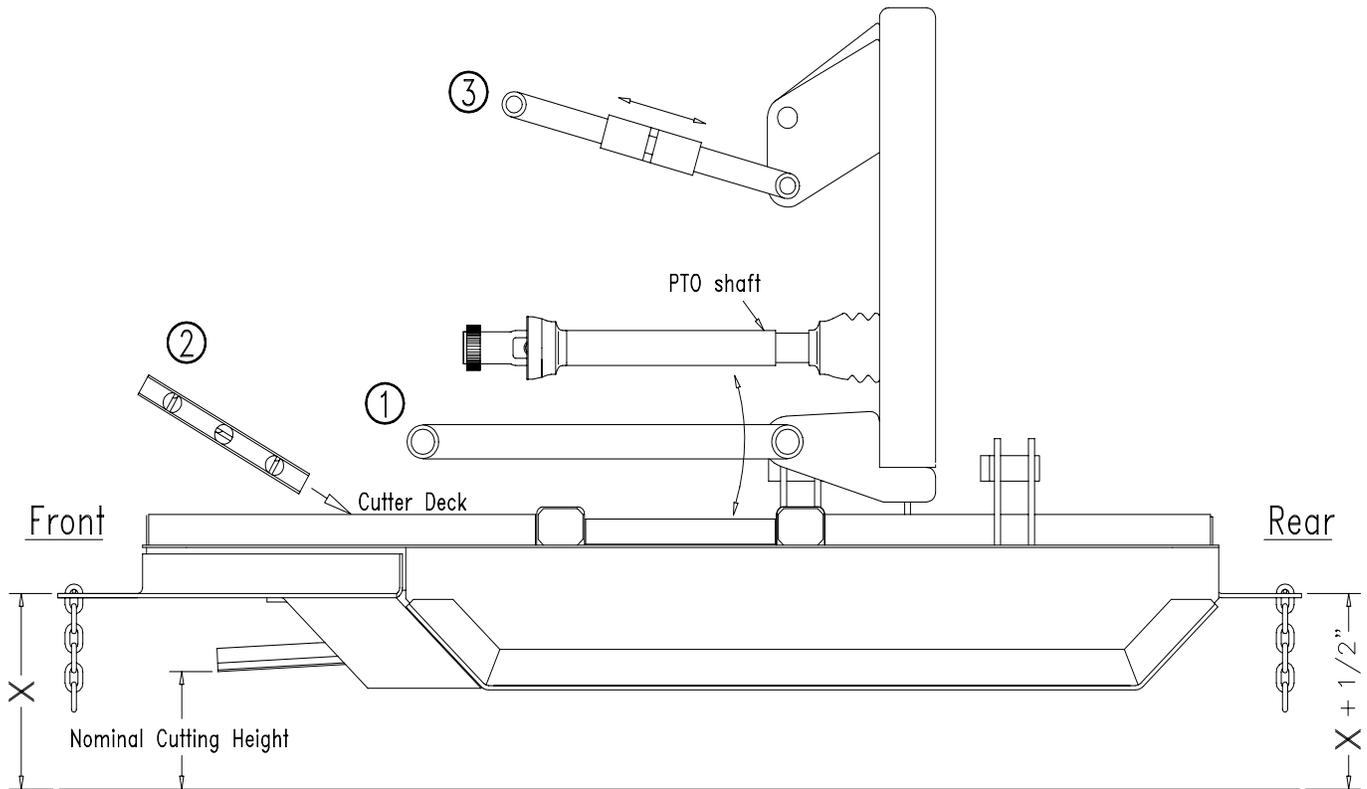
Section 4: Adjustments

Deck Level Adjustments

The cutter deck should be adjusted for level attitude. Adjust the cutter head deck cylinder (using the tractor or optional electric cylinder control) so that the deck is approximately level from left to right.

5. Raise the 3-Point hitch until the PTO shaft is approximately level. Extend the parallel arms to full length.

6. Place a level on the cutter deck to read forward/aft attitude.
7. Adjust the 3-Point top link so that the front of the cutter deck is slightly lower than the rear (approximately 1/2"). See Figure 4-1



Deck level Adjustments
Figure 4-1

12264

Section 5: Transporting

CAUTION

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

CAUTION

Always disengage tractor PTO before transporting cutter to avoid injury from thrown objects or blade contact.

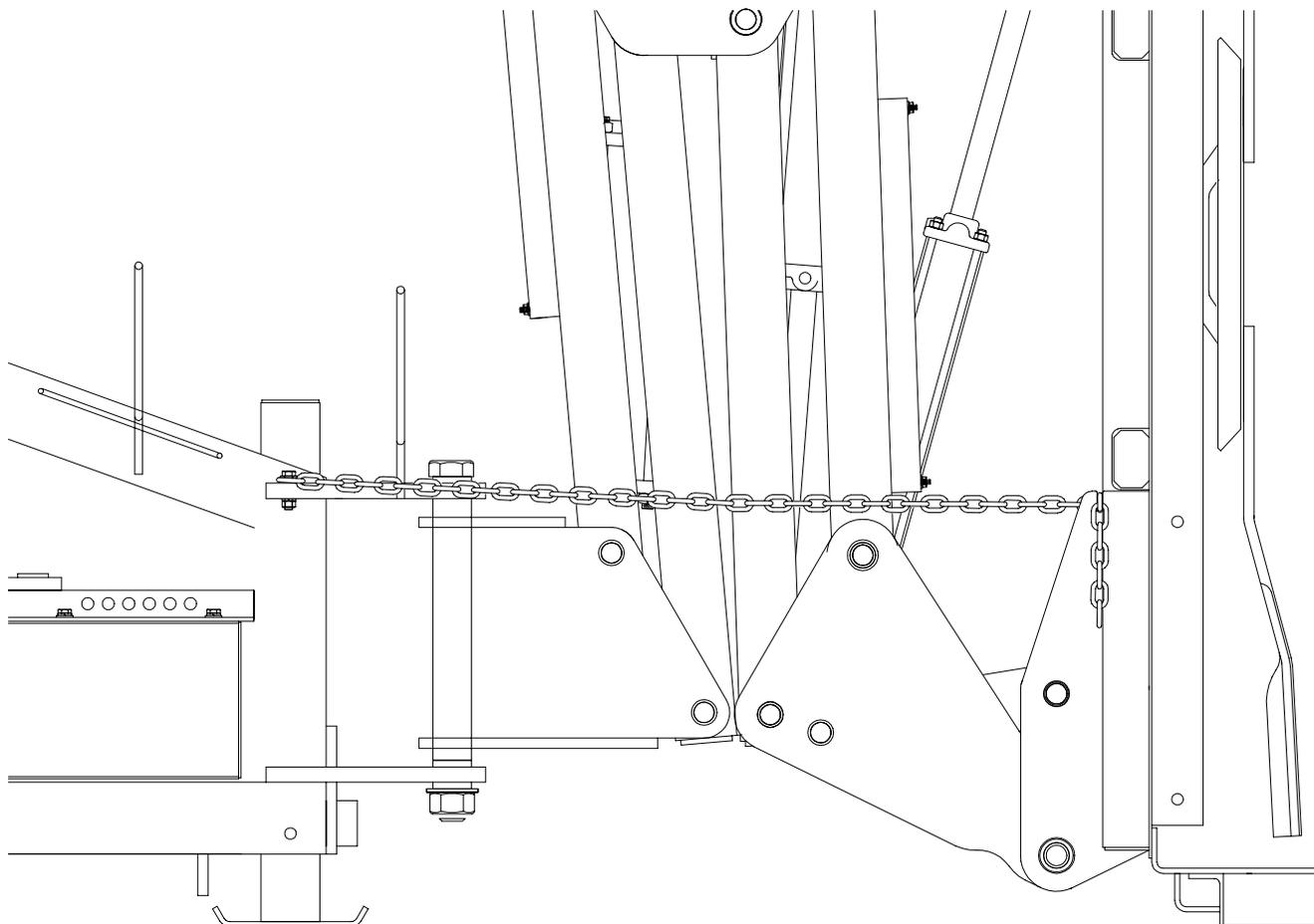
- 8. Retract both parallel arms and position the deck to vertical with the blades facing outboard (away from the tractor).

- 9. Engage the transport safety chain to the deck hook (Figure 5-1).

- 10. Raise the 3-Point hitch up to provide 8-12" of clearance for the deck.

CAUTION

The cutter is 10'-6" wide and care should be taken when encountering oncoming traffic and roadside obstructions. If in doubt about safe clearance, reduce speed and/or stop until it is safe to proceed.



Transport Safety Chain
Figure 5-1

12265

Section 6: Operating Procedures

WARNING

The following operating procedures must be carefully read and fully understood. You are the tractor operator and are therefore responsible for the safe operation of this unit. All other persons must be cleared of the area. Cutter operation must be stopped when in the vicinity of other persons.

11. After attachment to the tractor, carefully raise and lower the cutter to ensure that the drawbar, tires, and other equipment on the tractor do not contact the cutter frame or PTO shaft.
12. Check all hoses and wires to be sure that they will not contact the PTO shaft. PTO guards must be in good condition and in place.
13. When the deck is in the transport position, and the PTO disengaged, check to be sure the blades are not locked (overlapped) together. The deck safety chain must be engaged in the deck hook provided.
14. Check blades for sharpness and ensure that both blade bolts as well as the center blade carrier hub nut are tight. Check tractor safety equipment - particularly the ROPS (Roll Over Protective Structure) and the operator safety screen to be sure both are in good working condition. Wear your safety glasses.
15. Remove and stow the deck safety chain just prior to cutting. Adjust lower 3-point links such that the PTO shaft is approximately level. Extend the cutters parallel arms out and position the deck flat on the ground.
16. Increase tractor throttle to approximately 500 RPM and slowly engage the PTO. Initial start-up vibration is normal, but should stop after a few revolutions of the blade carrier. If vibration continues, stop PTO rotation. Wait for the blade carrier to come to a complete stop before dismounting from the tractor, then check the blades to be sure they are not locked together.
17. Once the cutter is running smooth increase tractor throttle to provide for 540 PTO RPM.

IMPORTANT: If a 1000 RPM tractor PTO is being used, engine RPM MUST be reduced to limit PTO RPM to 540. Excessive engine speed will cause damage to the speed increaser and other power train components.

18. Position the cutter deck for best operator visibility. This is normally with the arms extended to approximately 3/4 of full extension. Adjust deck attitude and height. Optimum ground speed will depend on the density of the material being cut, operator awareness, and (in some cases) terrain. If in doubt, reduce tractor ground speed to a comfortable level.

WARNING

Do not operate this cutter under any terrain conditions that would place the tractor at an angle exceeding 30 degrees either front-to-rear or left-to-right. Ensure that adequate ballast weights are provided on both the front of the tractor and left of the tractor and left hand side of cutter to assure tractor stability. See Figure 6-1.



Maximum Tractor Angle
Figure 6-1

Breakaway Operations

This cutter is designed for breakaway of the cutter head and parallel arms in the event the cutter head contacts an immovable object or irregular terrain during forward tractor movement. The “breakaway” will prevent structural damage to the cutter head, parallel arms, and mainframe in the event of such contact. See Figure 6-2.

Upon breakaway, the cutter head must be reset to the original “home” position before normal cutting operations can be resumed. Reset to the home position is accomplished somewhat differently depending on whether the cutter is equipped with the standard tension bolt or the optional breakaway (hydraulic) cylinder.

Tension Bolt

1. Raise the arms and deck upward to clear any obstacles located behind the cutter deck.
2. Slowly back the tractor and cutter away from those obstacles that would interfere with rotating the deck and arms back to the “home” position.

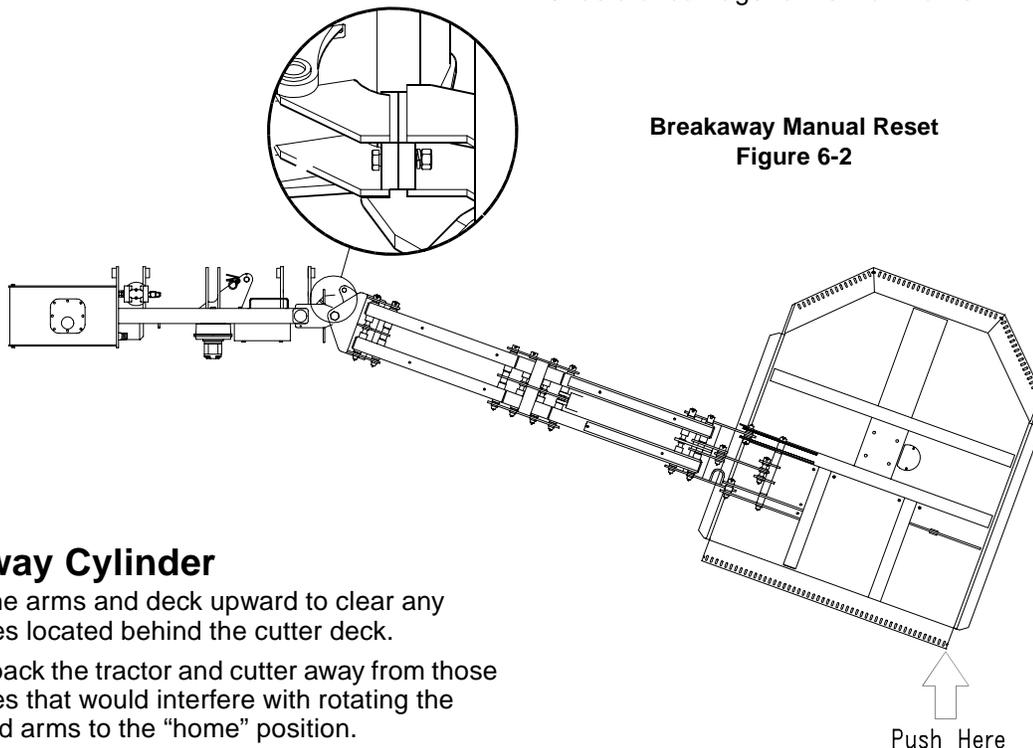
WARNING

Shut off PTO power, put the tractor in park and wait for the blades to stop rotating before dismounting from the tractor.

Section 6: Operating Procedures

3. Push the deck forward until the breakaway plate reaches the stop plate. See Figure 6-2. Replace the tension bolt.

IMPORTANT: Do not back the tractor to reset the deck to "home" position. Doing so may cause severe structural damage to the mainframe.



Breakaway Manual Reset
Figure 6-2

Breakaway Cylinder

1. Raise the arms and deck upward to clear any obstacles located behind the cutter deck.
2. Slowly back the tractor and cutter away from those obstacles that would interfere with rotating the deck and arms to the "home" position.
3. Use the tractor's remote (cylinder) control to rotate the deck/arms back to the "home" position.

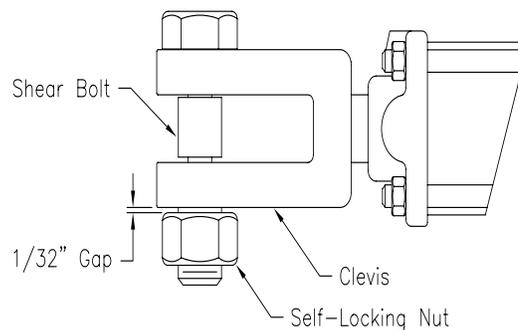
IMPORTANT: Do not attempt to operate the cutter in reverse. The breakaway mechanism will function ONLY when the tractor is moving in a forward direction. Cutter operation with the tractor in reverse gear may cause structural damage to the parallel arms if the cutter head strikes a solid or immovable object.

In the event of shear bolt failure, the shear bolt MUST be replaced with the correct replacement part (316-118D). The use of a substitute part may result in damage to the parallel arms or main frame. A single replacement part is included with each cutter and is located on a bracket adjacent to the upper 3-point hitch.

A shear bolt is located at the rod end of the (optional) breakaway cylinder. This bolt may shear under the following conditions:

1. After breakaway, the operator backs the tractor away from the obstruction, but encounters an additional obstruction or immovable object while operating the tractor in reverse. Specifically, the operator failed to raise the deck high enough to clear the object before operating the tractor in reverse.
2. The operator tried to reset the deck/arms by backing the tractor into an obstruction rather than using the tractor's remote cylinder control.
3. The shear bolt has become fatigued after repeated breakaway cycles and resets.
4. The self-locking nut used to hold the shear bolt in place has been torqued to the point of contacting the rod end of the cylinder and, because of preloading causes the shear bolt to shear with reduced effort.

IMPORTANT: Torque the self-locking nut onto the shear bolt, but do not turn it so far as to make contact with the clevis of the hydraulic cylinder. In other words, the nut should be threaded onto the shear bolt to within approximately 1/32" of contact with the clevis. See Figure 6-3.



Shear Bolt Space
Figure 6-3

Section 6: Operating Procedures

General Operating Instructions

The RCP2560 Series Parallel Arm Hydraulic Rotary Cutter is uniquely versatile and a powerfully productive cutting implement in the hands of a skilled, knowledgeable, and responsible operator. This unit is frequently operated on inclines in populated areas and near high traffic. Therefore, it is absolutely essential that no one operates this cutter without first becoming totally familiar with the Operator's Manual. Make sure you pay particular attention to Section 1 on Safety Rules, Section 2 on Assembly Instructions and Set-up, Section 5 on Transporting, Section 6 on Operating Procedures, and Section 7 on Maintenance and Lubrication.

You may put the Rotary Cutter to work once you have carefully read and fully understood this Operator's manual. Transport to the work site at a safe speed and in a manner that allows faster moving vehicles to pass safely. A slow moving vehicle sign should always be properly displayed when using public roads or right-of ways. Upon arriving at the work site, shut-off the tractor, set the brakes, remove ignition key, and dismount to perform the following checks:

- Remove and safely store away deck safety chain.
- Verify that the PTO shaft is approximately level. Adjust 3-point link if PTO shaft is not level.
- Visually inspect cutter blades. Make certain they are not overlapped and locked together.

Return to the tractor, after performing the above checks, to start the engine. Extend the cutter's parallel arm out and position the deck flat on the ground. Adjust height of the parallel arm and cutting deck for good visibility and unobstructed performance. Set engine RPM at idle or slightly above and engage PTO. Initial start-up vibration is normal and should smooth out after a few revolutions of the cutter blades unless the blades are locked together. Increase tractor throttle PTO speed to 540 RPM. Proceed forward at a mowing speed that is comfortable and will produce a quality cut for ground conditions and material density.

The RCP2560 Rotary Cutter is designed with an automatic breakaway cutter head and parallel arm that releases when the unit contacts immovable objects or irregular terrain. The cutter head must be reset to "home position" after each breakaway before cutting operations can resume. See Section 6, page 24, "Breakaway Operations" for additional information on resetting the cutter head to "home position".

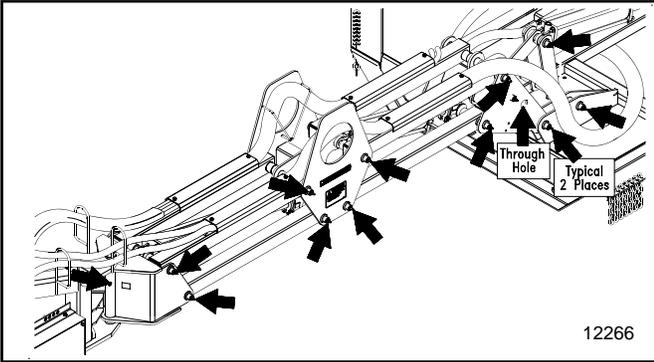
See "Section 8: Specifications & Capacities" on page 31. for additional information on performance enhancing options.

It requires patience, practice, and attention to detail to become an expert operator on your Land Pride RCP2560 Series Cutter, but the end result is well worth the effort.

Section 7: Maintenance & Lubrication

Lubrication Points

Lubrication Legend	 Multi-purpose spray lube	 Multi-purpose grease lube	 Multi-purpose oil lube	 50 Intervals in hours at which lubrication is required

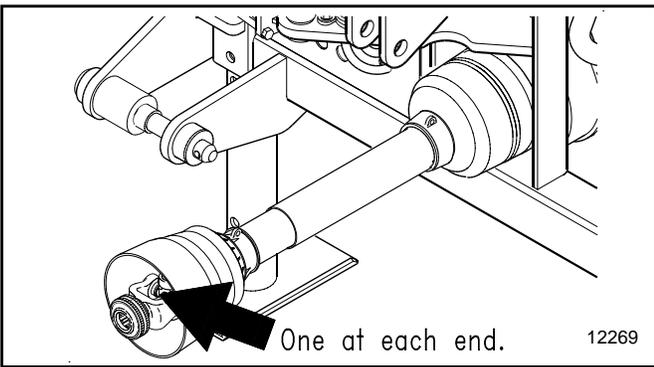


	 50 Hours
--	--

Parallel Arm Cutter Zerks

14Zerks

Type of Lubrication: Grease

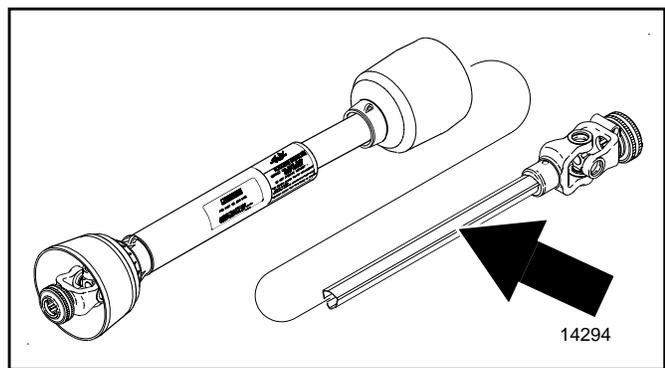


	 8 Hours
---	--

PTO Zerks

2 Zerks

Type of Lubrication: Grease



	 20 Hours
--	--

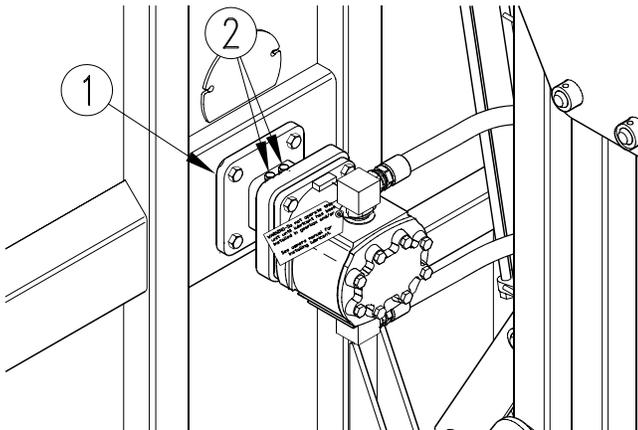
Driveline Profiles

Type of Lubrication: Multi-purpose Grease

Quantity = Disconnect driveline from the tractor and slide apart. Clean and coat the inner tube of the driveline with a light film of grease, then reassemble.

Section 7: Maintenance & Lubrication

The motor spindle hub housing (1), Figure 7-1 has two cavity plugs located on one side of the housing just below the motor mounting flange. Position the cutter deck in the transport position and remove either plug to check fluid level. Fluid level should be within 1/2" of the top of the port. Add 80-90 weight gearlube as required. The capacity of the cavity is approximately 1/3 pint.

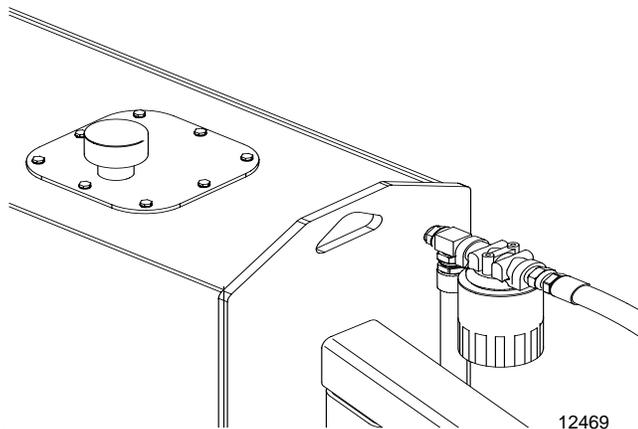


13994

Motor/Spindle Hub
Figure 7-1

The hydraulic reservoir has an effective capacity of 35 gallons. A dipstick located on the filler cap indicates the correct reservoir fluid level.

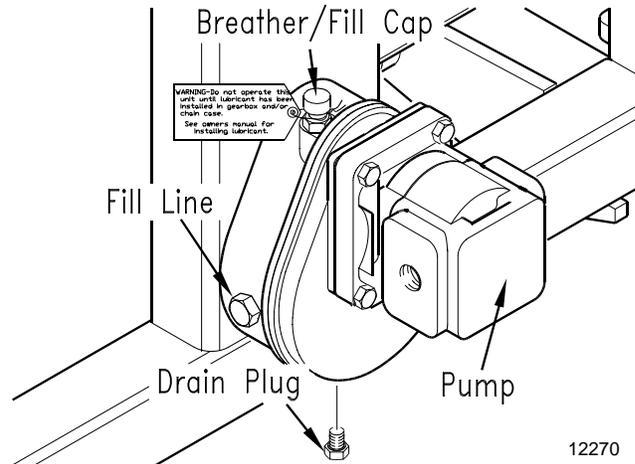
A filter mounted on the hydraulic reservoir is used to clean the pump and motor system fluid. It should be replaced after 2 years of service. A conventional 10 micron filter element should be used See Figure 7-2.



12469

Filter Removal
Figure 7-2

The speed increaser gearbox is mounted between the PTO shaft and the hydraulic pump. It increases the standard 540 RPM PTO speed to 2000 RPM at the pump. The oil should be changed after the first 100 working hours. Successive changes should be made after every 1500 hours or once a year. Use 80-90 weight gearlube. Check the oil level by removing the level plug located on the side of the case. Oil may be added by removing the breather located at the top of the case. A drain plug is located at the bottom of the case. See Figure 7-3.



12270

Speed Increaser
Figure 7-3

Blade Servicing (Replacement)

The cutter blades should be inspected on a daily basis. They must be kept sharp and should be replaced if they are worn excessively.

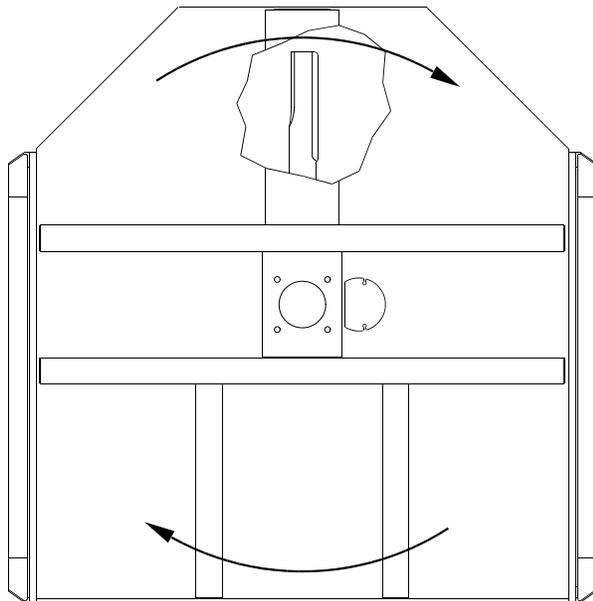
Both blades should be sharpened at the same angle as the original cutting edge and must be replaced or reground at the same time to maintain proper balance during rotation. Do not remove any more material than necessary when sharpening blades.

IMPORTANT: Replace blades with genuine Land Pride blades only. If one blade is to be replaced, the mating blade must also be replaced. Failure to do so will result in an out-of-balance condition that will contribute to premature bearing failure on the spindle hub. Factory blades are 4" wide and 25"

When replacing or sharpening the cutter blades, examine the blade bolts, shims and blade bolt nut. Replace if necessary. Be sure that the blades are installed properly. The airfoil (lift) must be oriented towards the top of the deck. The blade bolt nuts must be torqued to 450 ft-lbs.

Section 7: Maintenance & Lubrication

BLADE ROTATION



Blade Rotation
Figure 7-4
12271

Blade Rotation is clockwise. See Figure 7-4.

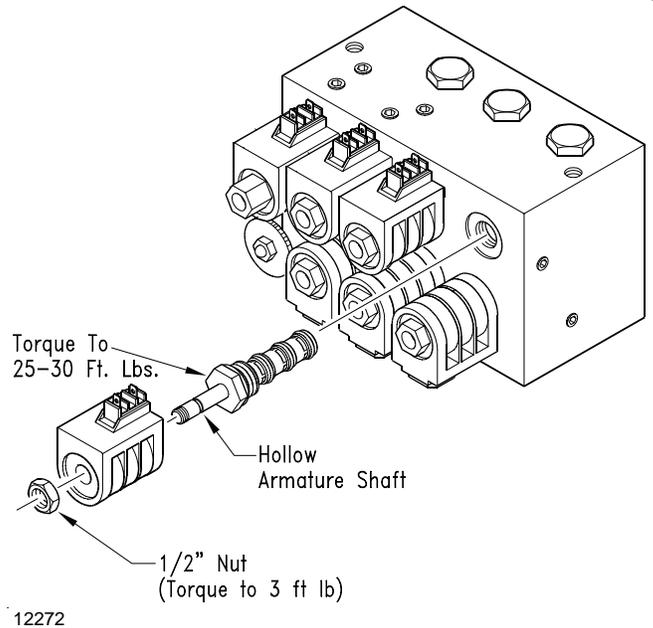
The Skid Shoes should be inspected at the beginning of each cutting season. Original material thickness is 1/4". They should be replaced when the material thickness is less than 1/8" at any point. The skid shoes are interchangeable from left to right.

Tractor Maintenance

IMPORTANT: One of the most important things you can do to prevent hydraulic system problems is to ensure that your tractor's reservoir remain free of dirt and contamination. Use a clean cloth to wipe the hose ends before attachment to your tractor.

Replace the filter element for your tractors hydraulic system at the prescribed intervals. Doing so will go a long way to prevent the occurrence of cartridge valve and hydraulic cylinder problems on the Parallel Arm Cutter.

NOTE: Removal of the solenoid valves from the valve block requires the removal of a 1/2" hex nut on the end of the solenoid armature. Use care when removing/replacing this nut. Use Loctite or other thread locking compound when replacing and DO NOT exert more than 3 ft lbs of torque on this hex nut. Remember that 3 ft lbs is slightly higher than finger tight! See Figure 7-5. Overtightening this nut will distort the hollow armature shaft and may result in valve failure. See Solenoid Valve Block



Solenoid Valve Block
Figure 7-5

Storage

At the end of the working season or when the cutter will not be used for a long period, it is good practice to clean off any dirt or grease that may have accumulated on the cutter and any of the moving parts. It may be necessary to scrape off compacted dirt from the bottom of the deck, then use a garden hose to thoroughly clean the surface. A coating of oil may also be applied to the lower deck area to minimize oxidation.

Check the blades and blade bolts for wear and replace if necessary. See "Section 7: Maintenance & Lubrication" on page 27.

Inspect the cutter for loose, damaged or worn parts and adjust or replace if needed.

Lubricate as noted in "Section 7: Maintenance & Lubrication" on page 27.

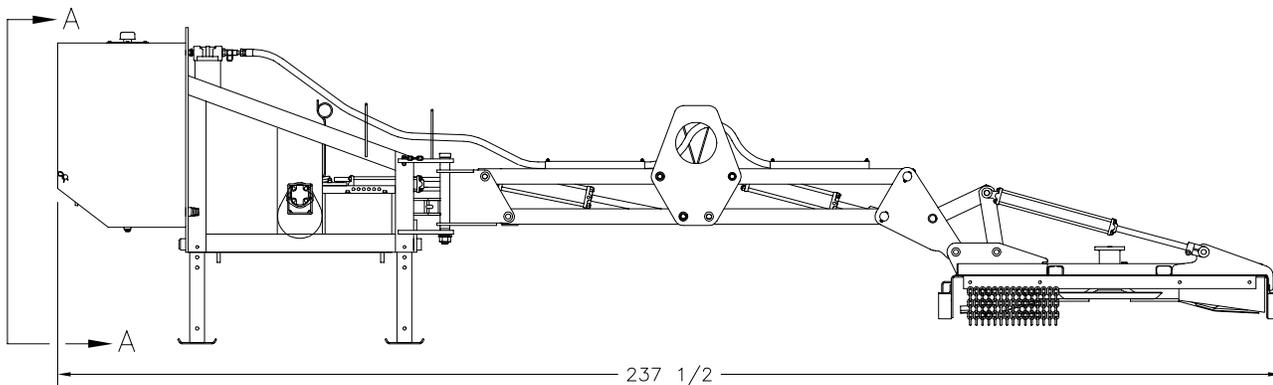
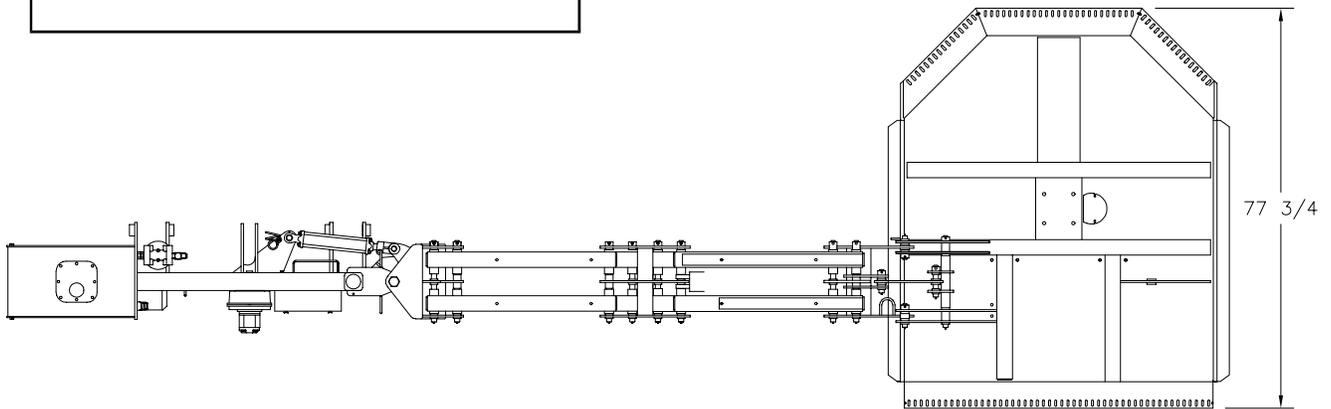
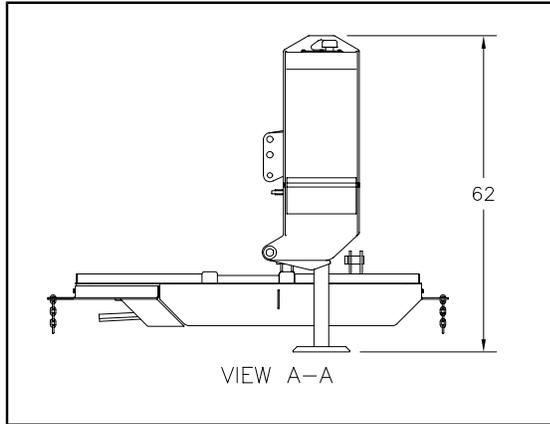
Repaint parts where paint is worn or scratched to prevent rust. Aerosol Buckskin touch-up paint is available from your Land Pride Dealer. Order Land Pride part #821-011C.

Store the cutter in a clean, dry place. The deck should be positioned on a flat surface with the arms retracted and the jack stands lowered to suitable 3-Point height. Ensure that the main frame is stable. Use auxiliary supports or posts if necessary to prevent the possibility of the unit tipping over.

Section 8: Specifications & Capacities

RCP 2560 Parallel Arm Series	
	RCP2560
Cutting Width	58"
Overall Width (Fully Extended)	19'-8"
Transport Width	10'
Minimum Cutting Height (deck level)	2"
Maximum Horizontal Reach from Center of Tractor	186"
Maximum Vertical Reach (above horizontal)	137"
Maximum Vertical Reach (below horizontal)	109"
Deck Rotating Arc	180 degrees
PTO Input Speed	540 RPM
Rotor (motor) RPM (@ 540 PTO)	1000 RPM
Blade Tip Speed	15,000 FPM
Blade Size	1/2" x 4"
Blade Rotation	Clockwise
Blade Bolt	1 1/2" with keyway; nut
Dishpan	3/16" X 21" Round, Dish Shaped
Cutting Capacity	2"
Deck Thickness	10 GA
Hydraulic Fluid	Mobil 424
Hydraulic Reservoir Capacity	35 Gallons
Hydraulic Fluid Flow Rate	15 GPM (approx.)
Overload Protection	Hydraulic Relief Valve
Driveline	ASAE Category 2
Hitch	3-Point Cat. 2 & 3 with clevis style lower hitch, Quick hitch,
Minimum Tractor Weight	7000 Lbs.
Minimum Tractor Horsepower	75 HP
Skid Shoes	1/4" Reversible
Shipping Weight	1,930 Lbs (no fluid)
Options:	Elect Cylinder Control
	Breakaway Cylinder
	Operator Safety Shield
	1000 rpm Increaser / PTO

Section 8: Specifications & Capacities



10703

Overall Dimensions
Figure 9-1

Section 9: Troubleshooting

Problem	Cause	Solution
Motor Oil Seal Leaking	Return line from motor has been pinched or is collapsed	Replace lower seal of motor. Check motor return hose for kinks.
Spindle Hub Seal Leaking	Return line from motor has been pinched or is collapsed	Replace lower seal of motor and Spindle Hub output shaft seal. Check motor return hose for kinks.
PTO Shaft is bent. (NOTE: PTO tractor hitch shaft should be repaired or replaced if bent)	Contacting drawbar or Bottoming out	Reposition drawbar/Replace PTO tubes and cut to correct length.
Blades wearing excessively	Cutting on sandy ground	Raise cutting height.
	Contacting ground frequently	Raise cutting height.
Blades coming loose	Insufficient shimming	Add shimming. See text.
	Blade bolts not tightened properly	Torque blade bolt nuts to 450 ft lbs.
Blades breaking	Hitting solid objects	Thoroughly check the cutting area BEFORE beginning to cut. Be alert during cutting.
Loose Blade Carrier	Worn Spindle Hub bearings.	Replace Spindle Hub bearings and/or shaft.
	Shaft nut loose	Tighten Spindle Hub shaft nut to 450 ft lbs. minimum.
Blade Carrier bent	Hitting solid objects	Avoid solid objects/Be alert.
Excessive skid shoe wear	Cutting height not level or blade missing	Adjust deck height or replace
	Soil abrasive	Raise cutting height.
	Cutting too low	Raise cutting height.
Excessive vibration	Locked blades	Inspect and unlock blades.
	Blades have unequal weight	Replace blades as a PAIR.
	PTO shaft bent	Straighten or replace PTO shaft.
	Blade carrier bent	Replace/straighten blade carrier.
	PTO cross not centered with yoke	Disassemble and inspect for incorrectly located needles or damaged bearing cap.
Deck Cylinder will not extend and/or retract	Orifice elbow on rod end is plugged	Clean orifice fitting.
	Broken/disconnected wire on solenoid	Check wiring on cartridge valve solenoids.
Deck Cylinder will not retract	Cylinder rod is bent	Replace cylinder.
Arm/Deck Cylinder(s) will not extend and/or retract	Electric solenoid valve is sticking/dirty.	Remove solenoid valve and clean or replace.
Optional Electrical control switch does not work	Circuit Breaker tripped	Reset Breaker
	Circular Plastic connector is not connected to receptacle.	Connect remote cable to Solenoid Control valve.
	No power to switchbox connections.	Check battery or power
	Tractor spool valve not engaged (open).	Lock tractor control valve open.
	Flow Control Valve not adjusted properly for open/closed center tractor	Adjust flow control valve
	Hoses not connected to proper duplex outlet on tractor	Connect hoses to proper tractor outlet.
	Defective solenoid on cartridge valve assy.	Replace solenoid.
	Solenoid Valves sticking.	Remove/clean/replace solenoid valve.
	Tractor hydraulic fluid level is too low.	Add fluid to tractor reservoir.

Torque Values Chart													
Bolt Size (Inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi ¹	N · m	ft-lb ³	N · m	ft-lb	N · m	ft-lb	mm x pitch	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							

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

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

Additional Torque Values	
Blade Bolt Lock Nut	450 ft-lbs.
Blade Carrier Hub Nut	450 ft-lbs. minimum

Warranty

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

Overall Unit and Driveline: One year Parts and Labor

Hydraulic Cylinder: One year Parts and Labor.
Hoses and seals are considered wear items.

Hydraulic Motor: Two years Parts and Labor.

Solenoid Control Valves: One year Parts and Labor.

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, and does not cover common wear items such as blades, belts, tines, etc. 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 must be made to the dealer which originally sold the product and all warranty adjustments must be made through such 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.



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