



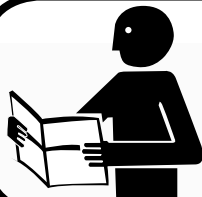
# RSM5, RSM6

## FLAIL MOWER

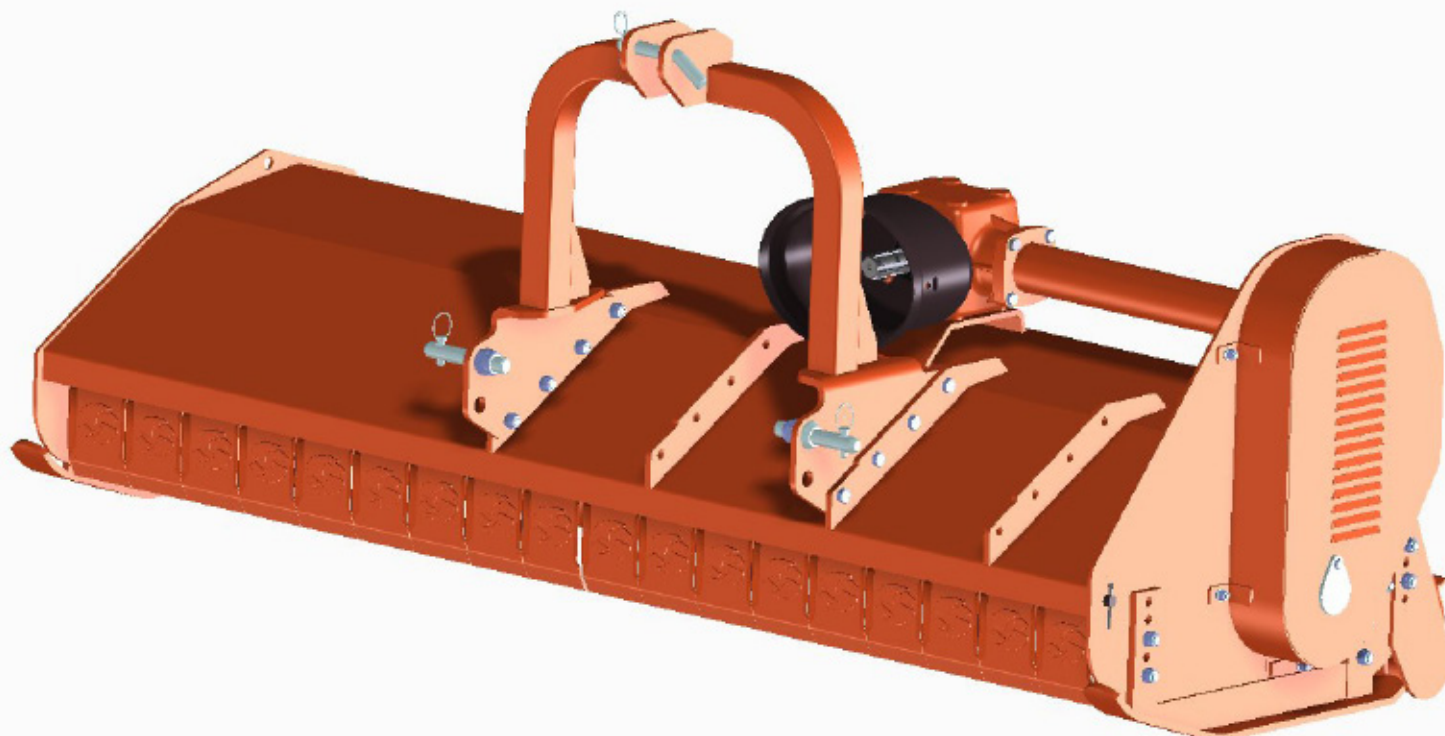
PUBLISHED 05/13

PART NO. 00788944

## OPERATOR'S/PARTS MANUAL



This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. READ, UNDERSTAND, and FOLLOW the Safety and Operation Instructions contained in this manual before operating the equipment. C01-Cover



**RHINO®**

1020 S. Sangamon Ave.

Gibson City, IL 60936

800-446-5158

Email: [parts@servis-rhino.com](mailto:parts@servis-rhino.com)



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<p>Si no puede leer inglés: antes de poner en funcionamiento este equipo, solicite que alguien le traduzca los mensajes de seguridad o vaya al sitio web para consultar los mensajes de seguridad y las etiquetas ya traducidos.</p>	<p>Si vous ne savez pas lire le français: avant d'utiliser l'équipement, demandez à une personne de vous traduire les messages de sécurité ou allez sur le site Internet pour voir la traduction des autocollants et des messages de sécurité.</p>
<p><b>El Manual del Operador    Seguridad vídeo</b></p> <div style="display: flex; justify-content: space-around;">    </div> <div style="display: flex; justify-content: space-around;"> <a href="http://www.algqr.com/rfs">www.algqr.com/rfs</a> <a href="http://www.algqr.com/avs">www.algqr.com/avs</a> </div>	<p><b>Manuel de l'Opérateur</b></p> <div style="display: flex; justify-content: space-around;">   </div> <div style="text-align: center;"> <a href="http://www.algqr.com/rff">www.algqr.com/rff</a> </div>

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<p><b>Manual do Operador</b></p> <div style="display: flex; justify-content: space-around;">   </div> <div style="text-align: center;"> <a href="http://www.algqr.com/rfp">www.algqr.com/rfp</a> </div>	<p><b>Benutzerhandbuch</b></p> <div style="display: flex; justify-content: space-around;">   </div> <div style="text-align: center;"> <a href="http://www.algqr.com/rfg">www.algqr.com/rfg</a> </div>

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Safety Video



[www.algqr.com/rve](http://www.algqr.com/rve)

Operator's & Parts Manuals

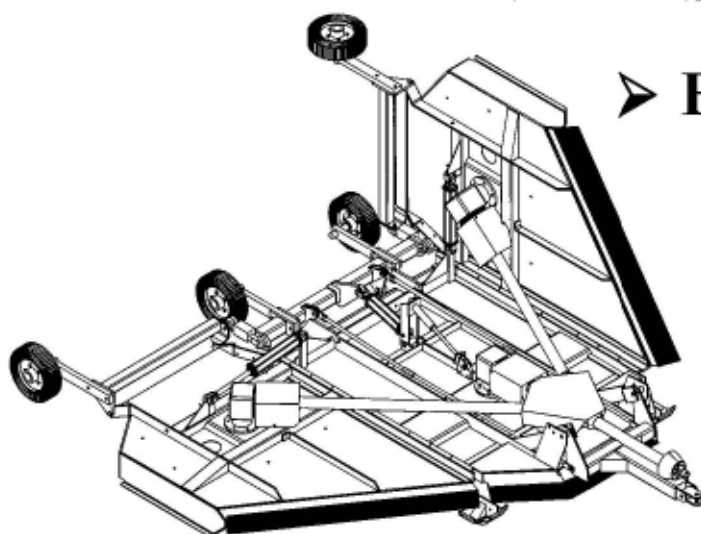


[www.algqr.com/rpm](http://www.algqr.com/rpm)

General Safety



[www.algqr.com/rme](http://www.algqr.com/rme)



➤ **BE SAFE!**

➤ **BE ALERT!**

➤ **BE ALIVE!**

➤ **BE TRAINED**  
**before operating**  
**the Mower!**



[www.algqr.com/rve](http://www.algqr.com/rve)



***Safety Training***  
***Makes the Difference***

In order to reduce accidents and enhance the safe operation of mowers, Alamo Group Ag Division, in cooperation with other industry manufacturers has developed the AEM/FEMA Industrial and Agricultural Mower Safety Practices video and guide book.

The video will familiarize and instruct mower-tractor operators in safe practices when using industrial and agricultural mowing equipment. It is important that Every Mower Operator be educated in the operation of their mowing equipment and be able to recognize the potential hazards that can occur while operating a mower. This video, along with the mower operator's manual and the warning messages on the mower, will significantly assist in this important education.

Your Authorized Rhino Dealer may have shown this video and presented you a DVD Video when you purchased your mower. If you or any mower operator have not seen this video, Watch the Video, Read this Operator's Manual, and Complete the Video Guidebook before operating your new mower. If you do not understand any of the instructions included in the video or operator's manual or if you have any questions concerning safety of operation, contact your supervisor, dealer or Alamo Group Ag.

If you would like a VHS video tape of the video, please email [AEMVideo@alamo-group.com](mailto:AEMVideo@alamo-group.com) or Fax AEM VHS Video at (830) 372-9529 or mail in a completed copy of the form on the back of this page to AEM VHS Video 1502 E Walnut Street, Seguin, TX 78155. and request the VHS video version. Please include your name, mailing address, mower model and serial number.

Every operator should be trained for each piece of equipment (Tractor and Mower), understand the intended use and the potential hazards before operating the equipment.

The information and material listed above along with this Operator's Manual can assist you in meeting the OSHA requirement for Operator annual training.

#### **OSHA TRAINING REQUIREMENTS**

**The following training requirements have been taken from Title 29, Code of Federal Regulations Part 1928.57 (a)(6). [www.osha.gov](http://www.osha.gov)**

Operator Instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor or implement in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment



**Alamo Group Ag. Division will provide  
one (1) AEM Mower Safety Practices Video**

Please Send Me: ☐ VHS Format – AEM/FEMA Mower Operator Safety Video  
☐ DVD Format – AEM/FEMA Mower Operator Safety Video  
☐ Mower Operator's Manual  
☐ AEM Mower Operator's Safety Manual

Requester Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Requester Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Mower Model: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Date Purchased: \_\_\_\_\_ Dealer Salesperson: \_\_\_\_\_

Dealership Name: \_\_\_\_\_ Dealership Location: \_\_\_\_\_

Mail to:

AEM Video Services  
1502 E. Walnut Street  
Seguin, TX 78155

Or Fax to:

(830) 372-9529

Or Email to:

AEMVideo@alamo-group.com

## To the Owner/Operator/Dealer

This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the implement at all times. A Manual canister is provided on the implement where this manual can be properly stored. If you lose or damage this manual a free replacement manual can be obtained from an authorized Rhino dealer or by downloading the manual from the Rhino website [www.servis-rhino.com](http://www.servis-rhino.com)

**BEFORE YOU START! READ, UNDERSTAND, and FOLLOW** the information provided in this manual, the AEM Mower Safety manual and the tractor operator's manual carefully to learn how to operate and service your machine properly. Failure to do so could result in personal injury to you and bystanders. All implements with moving parts are potentially hazardous. Every effort has been made to ensure that this machine is safe, but operators must avoid engaging in unsafe practices and follow the written instructions provided. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

**SAFETY FIRST.** Completely read and understand the safety section of this manual before operating this equipment. Do not allow anyone to operate this equipment who has not fully read and understood this manual. Contact your Dealer to explain any instructions that you do not fully understand.

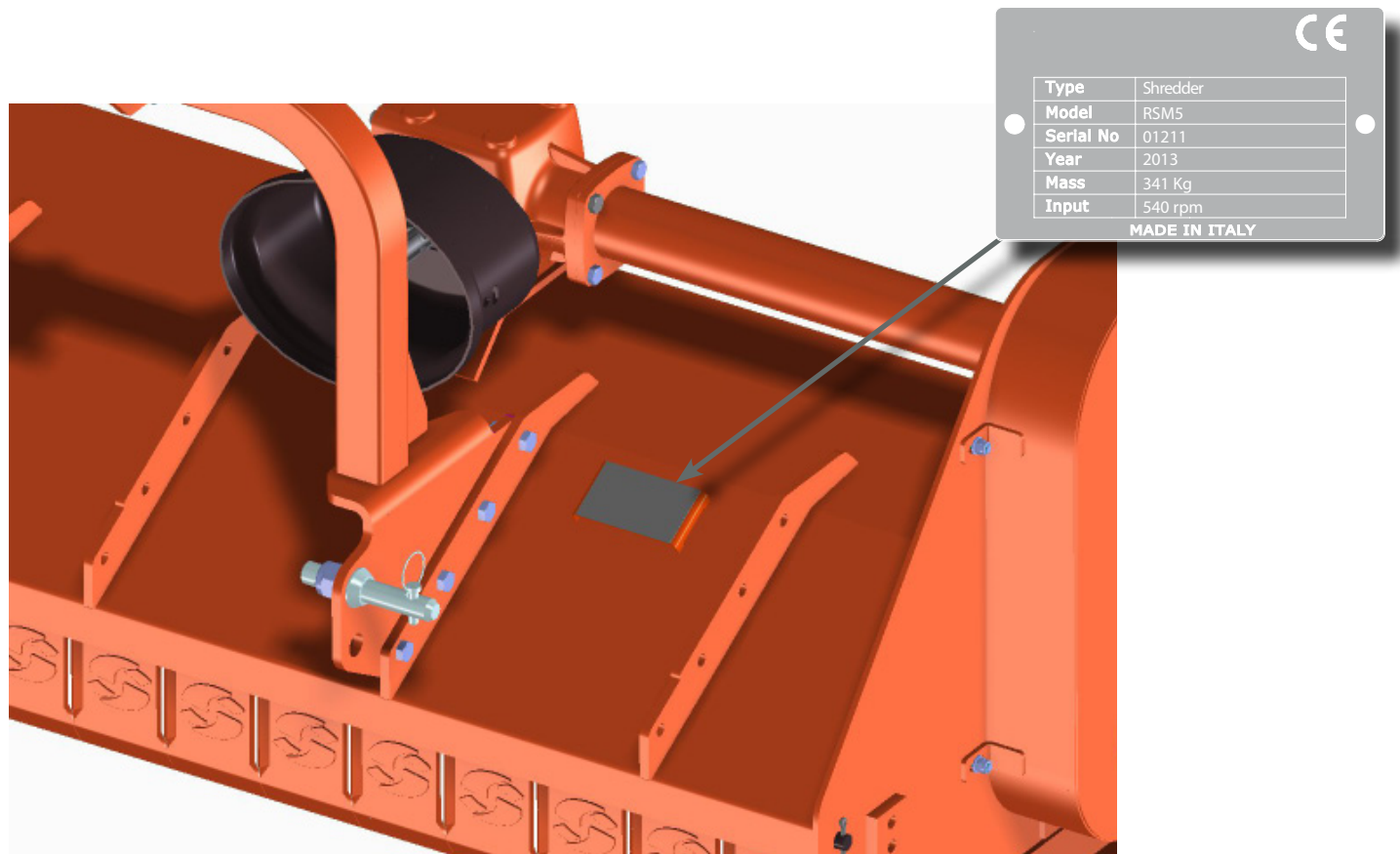
The care you give your Rhino Implement will greatly determine your satisfaction with its performance and its service life. Carefully read and follow the instructions in this manual to provide you with a thorough understanding of your new implement and its intended use and service requirements.

All references made in this manual to right, left, front, rear, top or bottom are as viewed facing the direction of forward travel with the implement properly attached to the tractor.

Replacement Parts information is located in a separate Parts Manual. Rhino mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drivetrain components, and bearings. These parts are made and tested to Rhino specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce mower performance, void warranties, and present a safety hazard. Use genuine Rhino mower parts for economy and safety.

For future reference, record your Rhino product model number and serial number.

<b>Dealer</b>		<b>Telephone</b>		<b>Model Number</b>	
<b>Owner</b>		<b>Purchase Date</b>		<b>Serial Number</b>	



# DEALER to CUSTOMER Pre-Delivery / Operation Instructions

Dealer should inform the Purchaser of this product of Warranty terms, provisions, and procedures that are applicable. Dealer should also inform the Purchaser to review the contents of the Operator's Manual including safety equipment, safe operation and maintenance, to review the Safety Signs on the implement (and tractor if possible) and of Purchaser's responsibility to train his/her operators in safe operation procedures.

- **IMPLEMENTS:** I have explained that Deflectors, Chain Guards, or Solid Skirts must be installed and maintained in good repair.
- **DRIVELINES:** I have made certain that all driveline, gearbox, and other shields are in good repair and fastened securely in place to prevent injuries from entanglement or thrown objects.
- **HYDRAULIC MACHINES:** I have explained the necessity of using clean hydraulic oil, changing filters as instructed, stopping leaks, damage caused by operating with over-heated oil, caring for hoses, using hoses of proper rating, maintaining the specified operating pressure and the potential hazard of oil's penetrating the skin.
- **FOLDING-TYPE IMPLEMENTS:** I have explained that it is not possible to guard against thrown objects when the head is lifted off ground and that operator is responsible to watch out for persons in the area. I have explained that the lifted mower head or boom can contact overhead obstructions with damage to cables and telephone lines and possible injury. I have explained that the extended head or boom or retracted boom can contact power lines with resulting electrocution, injury or death and that operator is responsible for keeping clear of such hazards.

## PRE-DELIVERY SERVICE CHECK AND ADJUST OR LUBRICATE AS REQUIRED

See Operator's Manual for Details

### Inspection Performed - Warranty and Safety Procedures Explained - Installation Complete

#### LUBRICATION & HYDRAULICS

- ☐ Gearbox (Oil Levels)
- ☐ Hydraulic Oil Level (External Tank)
- ☐ Tractor Hydraulic Oil Level
- ☐ Hydraulic Hoses (Not Kinked Tighten Connections)
- ☐ Front Pump Drive (Assembly Is Tight And Shaft Properly Aligned)

#### MOWER

- ☐ Spindle And Motor Bolts Properly Torqued
- ☐ Spindle Oil Level
- ☐ Blade Carrier Bolts Properly Torqued/Retaining Pin In Place
- ☐ Mower Cutting Height And Level Adjusted
- ☐ Cutting Shaft Bearings Lubricated
- ☐ All Hardware Properly Torqued
- ☐ Tire and Air Pressure/Lug Nuts (Correct Torque)
- ☐ Wheel Bearings (Check, Grease, and Preload)

#### ATTACHMENTS & INSTALLATION

- ☐ Deflectors Front And Rear
- ☐ Shredding Attachments
- ☐ Correct Blade Rotation Direction
- ☐ Axle Arms And Beams
- ☐ Tongue And Control Rods (Installed And Adjusted)
- ☐ All Bolts - Pins And Nuts (Proper Torque)

#### MOWER TO TRACTOR CONNECTIONS

- ☐ Draw Bar Length (Check And Set)
- ☐ A-Frame Pivot & Links
- ☐ Control Rods (Adjusted Equal)
- ☐ Axle Height (Adjusted)
- ☐ Cutting Height (Adjust)
- ☐ Mount Kit-Pre-Operation Check Complete
- ☐ Mower Wing (Adjust Level With The Center)
- ☐ Mower Wing (Check For Proper Raising Operation)
- ☐ C.V. Drivelines (Check Max Turn Radius)
- ☐ Pull Type Hitch (Height Adjustment)
- ☐ Mounting Hardware Properly Torqued

#### SAFETY ITEMS

- ☐ Protective Shields (Operation And Installation)
- ☐ Driveline Clutch (Torque Limiter) (Adjust And Run In)
- ☐ Safety Decals (Installed)
- ☐ Operator's Manual (Supplied)
- ☐ Tractor PTO Shield (Installed)
- ☐ S.M.V. Emblem (Installed If Needed)
- ☐ Tongue Jack (Installation and Operation)
- ☐ Safety Tow Chain (Installed)
- ☐ ADMA Driveline Safety Manual Supplied
- ☐ AEM Mower Safety Manual (Supplied in Canister)
- ☐ AEM Mower Safety Video has been shown to Purchaser

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# **SAFETY SECTION**

## General Safety Instructions And Practices

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all--- remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.



Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

**NOTE:** Identifies points of particular interest for more efficient and convenient operation or repair.

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in this Manual and in the Safety Messages on the implement. Always follow the instruction in this manual and use good common sense to avoid hazards.



NOTE: If you want a translation of this safety section in one of the following Languages, please contact: Translations at 1502 E. Walnut Street Seguin, TX 78155; Fax: (830) 372-9529; Safety Section Translations are available in Spanish, Portuguese, French, German, Russian. PN GS01

## SAFETY SECTION

### Operator Safety

				
Read and understand Operator's Manual	Always wear Safety Glasses	Wear Hard Hat Safety Shoes	Never use Drugs or Alcohol when operating equipment	Wear Safety Vest when operating on or near roads

**⚠ WARNING** TO AVOID SERIOUS INJURY OR DEATH DO THE FOLLOWING:

- READ, UNDERSTAND and FOLLOW Operator's Manual instructions, Warnings and Safety Messages.
- WEAR SAFETY GLASSES, safety shoes, hard hat, hearing protection and gloves when operating or repairing equipment.
- WEAR appropriate breathing respirator when operating in dusty conditions to avoid respiratory diseases.
- DO NOT WEAR loose clothing or jewelry to avoid rotating parts entanglement injury.
- DO NOT USE DRUGS or ALCOHOL before or while operating equipment.
- DO NOT ALLOW anyone to operate equipment under the influence of drug or alcohol.
- CONSULT medical professional for medication impairment side effects.
- STAY ALERT, prolonged operation can cause fatigue, STOP and REST.

### General Operating Safety

#### VISIBILITY CONDITIONS WHEN MOWING:

- OPERATE IN DAYLIGHT or with lights that gives at least 100 yards clear visibility.
- BE ABLE TO SEE and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects.

#### GROUND SPEED WHEN MOWING:

- NORMAL SPEED range is between 2 to 5mph.
- ADJUST MOWING SPEED for terrain conditions and grass type, density and cut height.
- REDUCE MOWING SPEED when near steep slopes, ditches, drop-offs, overhead obstructions, power lines and to avoid debris and foreign objects.

#### INSECT INFESTATION

- Do Not operate in areas where bees or insects may attack unless you WEAR PROTECTIVE CLOTHING or use enclosed tractor cab.

#### PTO SPEED:

- DO NOT EXCEED IMPLEMENT RATED PTO SPEED
- AVOID exceeding rated PTO speeds that may result in broken drivelines or blade failures.


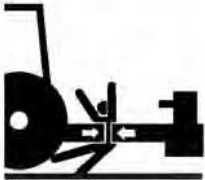

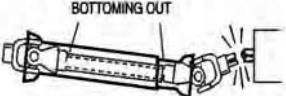
#### SAFETY SIGNS:

- REPLACE missing, damaged or unreadable safety signs immediately. PN OS01



## SAFETY SECTION

### Connection Or Disconnecting Implement Safety

			
<p>Stop Tractor Remove Key Read Manual</p>	<p>Crushing injury between tractor and implement</p>	<p>Make sure PTO shaft is securely attached to tractor</p>	<p>Make sure PTO shaft are proper length</p>

**⚠ DANGER** TO AVOID SERIOUS INJURY OR DEATH FROM BEING CRUSHED BY TRACTOR OR IMPLEMENT:

WHEN BACKING tractor to implement hitch:

- DO NOT ALLOW BYSTANDERS between tractor and implement

BEFORE connecting and disconnecting implement hitch:

- STOP TRACTOR ENGINE, place transmission into park, engage parking brake and remove key.

WHEN connecting and disconnecting implement hitch:

- DO NOT crawl or walk under raised mower

WHEN CONNECTING IMPLEMENT DRIVELINE:

TO AVOID implement driveline coming loose during operation:

- LUBRICATE yoke spring locking collar to ensure it freely slides on PTO shaft
- SECURELY seat yoke locking balls in PTO shaft groove.
- PUSH and PULL DRIVELINE on both the tractor and implement PTO SHAFTS to ensure it is SECURELY ATTACHED

TO AVOID broken driveline during operations:

- CHECK driveline for proper length between PTO shaft and implement gearbox shaft.
- Drivelines too short can pull apart or disengage.
- Drivelines too long can bottom out.
- Bottoming driveline telescoping assembly will stop sliding and become solid.
- Driveline bottoming can push through support bearings and break off PTO shaft.

CONTACT DEALER if implement driveline does not match Tractor PTO shaft:

- DO NOT USE PTO ADAPTER.




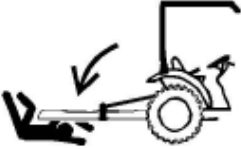
Using a PTO adapter can cause:

- Excessive vibration, thrown objects, blade and implement failures by doubling operating speed.
- Increased working length exposing unshielded driveline areas and entanglement hazards.

DO NOT connect the Mower to a tractor with the PTO directly connected to the Tractor transmission. PN CDFM-01

## SAFETY SECTION

### Crushing Hazards

			
Crushing injury from roll over	Lock ROPS in up position	Always wear seatbelt	Crushing injury implement falling

**⚠ DANGER** TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF TRACTOR, EQUIPMENT RUN OVER, ROLLOVER AND CRUSHING BY FALLING WING OR IMPLEMENT:

- USE ROPS and SEAT BELT equipped tractors for mowing operations.
- KEEP ROPS lock in up position.
- ALWAYS BUCKLE UP seat belt when operating tractor and equipment.
- ONLY OPERATE tractor and equipment while seated in tractor seat.

WHEN RAISING OR LOWERING IMPLEMENT:

- Raise or lower ONLY WHILE SEATED in tractor seat with seat belt buckled.
- Raise or lower ONLY when implement tongue is securely attached to tractor drawbar TO AVOID implement tip over.
- KEEP BYSTANDERS CLEAR of area TO AVOID crushing.

LIFTED Equipment can fall from mechanical or hydraulic failure or inadvertent Control Lever movement.

**⚠ WARNING** TO AVOID EQUIPMENT FALLING while working near or under lifted wings, components and implements raised by 3-Pointed tractor hitch:

- SECURELY SUPPORT or block up raised equipment and components.
- BLOCK UP and securely support equipment before putting hands, feet or body under raised equipment or lifted components.

WHEN PARKING Implement and Tractor:

- LOWER implement, LOCK or BLOCK lifted parts before leaving equipment.
- NEVER leave implement unattended in a raised position.

TO AVOID CHILDREN FALLING OFF OR BEING CRUSHED BY EQUIPMENT:


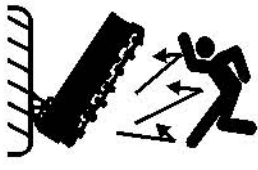

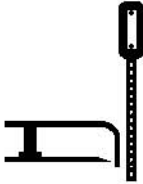
- NEVER ALLOW children to play on or around Tractor or Implement.

WHEN UNHITCHING IMPLEMENT:

- LOWER implement, LOCK or BLOCK lifted parts before leaving equipment. PN CHFM-01

## SAFETY SECTION

### Thrown Object Hazards

			
Mower Thrown Objects Hazard	Raised Mower Thrown Objects	Inspect Area remove foreign objects	Do not let blades contact solid objects

**⚠ DANGER** ROTARY MOWERS CAN THROW OBJECTS 300 FEET OR MORE UNDER ADVERSE CONDITIONS.

TO AVOID SERIOUS INJURY OR DEATH TO OPERATOR OR BYSTANDERS FROM THROWN OBJECTS:

- KEEP bystanders 300 feet away

STOP MOWING IF PASSERSBY ARE WITHIN 300 FEET UNLESS:

- All THROWN OBJECT SHIELDING including, Front and Rear Deflectors, Steel Guards, Bands, Side Skirts and Skid Shoes in place and in good condition when mowing.
- Mower sections or wing are adjusted to be close and parallel to ground without exposing blades.
- MOWING AREA has been inspected and foreign materials and debris have been removed.
- PASSERSBY are inside enclosed vehicle.

INSPECT AREA FOR POTENTIAL THROWN OBJECTS BEFORE MOWING:

- REMOVE debris, rocks, wire, cable, metal objects and other foreign material from area.

Wire, cable, rope, chains and metal objects can be thrown or swing outside deck with great velocity:

1. MARK objects that cannot removed.
2. AVOID these objects when mowing.

HIGH GRASS and WEED AREA INSPECTION:

- INSPECT for and REMOVE any hidden large debris.
- MOW at Intermediate height
- INSPECT and remove remaining debris
- MOW at final height.

MOWER THROWN OBJECT SHIELDING:

- KEEP all thrown object shielding including, Front and Rear Deflectors, Steel Guards, Bands, Side Skirts and Skid Shoes in place and in good condition when mowing.
- DO NOT OPERATE with any thrown object shielding missing, damaged or removed.


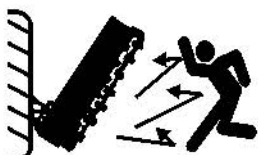

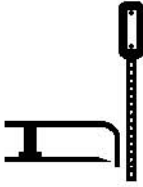
RIGHT OF WAY (Highway) MOWING

- No shielding is 100% effective in preventing thrown objects. To Reduce Possibility of Injury:
1. MAINTAIN MOWER SHIELDING, side skirts, skid shoes, and blades in good operational condition,
  2. RAISE CUTTING HEIGHT to 6 INCHES minimum,
  3. INSPECT AREA thoroughly before mowing to REMOVE potential THROWN OBJECT HAZARDS,
  4. NEVER ALLOW BLADES to CONTACT SOLID OBJECTS like wire, rocks, post, curbs, guardrails, or ground while mowing.

PN TOFM-01

## SAFETY SECTION

### Thrown Objects Hazards (Continued)

			
Mower Thrown Objects Hazard	Raised Mower Thrown Objects	Inspect Area remove foreign objects	Do not let blades contact solid objects

#### MOWER OPERATION:

- DO NOT exceed mower's rated Cutting Capacity or cut non-vegetative material.
- USE ENCLOSED TRACTOR CABS when two or more mowers are operating in mowing area.
- ADJUST mower sections or wing close and parallel to ground without exposing blades
- ADJUST cutting HEIGHT to AVOID BLADE CONTACT with solid objects like wire, rocks, posts, curbs, guard rails and fixed obstructions.
- DO NOT operate mower when mower is raised or in transport position
- STOP MOWING immediately if blades strike heavy objects, fixed structures, metal guard rails and concrete structures:
  1. BLADES CAN FAIL from impact and objects can be thrown with great velocity.
  2. INSPECT and REPLACE any damaged blades.
  3. CHECK blade carrier balance and REPLACE if damaged.
- DO NOT mow in standing water TO AVOID possible BLADE FAILURE.
- AVOID MOWING in reverse:
  1. STOP PTO and back up mower.
  2. LOWER mower, engage PTO and mow forward.
- STOP PTO and BLADES when raising the mower to transport position.
- DO NOT ENGAGE PTO with mower in transport position.
- STOP mowing when EXCESSIVE VIBRATION occurs:
  1. STOP PTO and tractor ENGINE.
  2. INSPECT mower for vibration source
  3. REPLACE any damage parts and bent or damaged BLADES. PN TOFM-02

### Run Over Hazards

		
Operator run over hazard	Rider fall off run over hazard	Rider fall off run over hazard

#### TO AVOID SERIOUS INJURY OR DEATH FROM FALLING OFF TRACTOR OR EQUIPMENT RUN OVER:



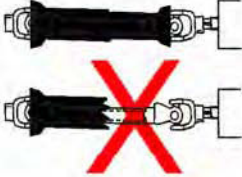
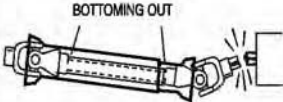
- USE ROPS and SEAT BELT equipped tractors for mowing operations.
- KEEP ROPS locked in UP position.
- ONLY start tractor while seated in tractor seat.
- ALWAYS BUCKLE UP seat belt when operating tractor and equipment.
- ONLY OPERATE tractor and equipment while seated in tractor seat.
- NEVER ALLOW RIDERS on tractor or implement.

#### WHEN MOUNTING AND DISMOUNTING TRACTOR:

- ONLY mount or dismount when tractor and moving parts are stopped.
- STOP ENGINE AND PTO, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from tractor. PN RO01

## SAFETY SECTION

### PTO Entanglement Hazards

			
Entanglement hazard Do Not approach or touch a rotating PTO driveshaft	Make sure PTO shaft is securely attached Do Not Use PTO Adapter	DO NOT Operate if PTO shields are damaged or missing	Make sure PTO shafts are proper length



**KEEP AWAY FROM ROTATING DRIVELINES AND ELEMENTS TO AVOID SERIOUS INJURY OR DEATH:**

STAY AWAY and KEEP hands, feet and body AWAY from rotating blades, drivelines and parts until all moving elements have stopped.

- STOP, LOOK and LISTEN before approaching the mower to make sure all rotating motion has stopped.
- ROTATING COMPONENTS CONTINUE to ROTATE after the PTO is shut off.

#### PTO SHIELDING:

TO AVOID SERIOUS INJURY OR DEATH FROM ENTANGLEMENT WHEN OPERATING IMPLEMENT:

- KEEP PTO shields, integral driveline shields and input shields installed
- DO NOT OPERATE mower without shields and guards in place or missing
- REPAIR OR REPLACE if damage, broken or missing
- ALWAYS REPLACE GUARDS that have been removed for service or maintenance.
- Do Not use PTO or PTO guard as a step.

TO AVOID broken driveline during operations:

- CHECK driveline for proper length between PTO shaft and implement gearbox shaft.(Refer to Instructions in Operation Section)
- Drivelines too short can pull apart or disengage.
- Drivelines too long can bottom out.

Bottoming driveline telescoping assembly will stop sliding and become solid.

- Driveline bottoming can push through support bearings and break off PTO shaft
- AVOID sharp turns or lift mower to heights to cause driveline “knocking”.
- Lubricate driveshaft-telescoping components weekly.




CONTACT DEALER if implement driveline does not match Tractor PTO shaft:

- DO NOT USE PTO ADAPTER.

Using a PTO adapter can cause excessive vibration, thrown objects, blade and implement failures by doubling operating speed. Increased working length exposing unshielded driveline areas. PN PE01

## SAFETY SECTION

### Mower Blade Contact Hazards

		
Do not put fingers underneath mower	Do not put foot underneath mower	Stop Tractor Remove Key Read Manual

**⚠ DANGER** KEEP AWAY FROM ROTATING BLADES TO AVOID SERIOUS INJURY OR DEATH FROM BLADE CONTACT:

- STAY AWAY and KEEP HANDS, FEET and BODY AWAY from rotating blades, drivelines and parts until all moving elements have stopped.
- DO NOT put hands or feet under mower decks
- STOP rotating BLADES disengage PTO and wait for blade to stop rotating before raising mower deck or wings
- STOP LOOK and LISTEN before approaching the mower to make sure all rotating motion has stopped. PN MBFM-01

### HIGH PRESSURE OIL LEAK HAZARDS

		
High pressure oil penetrating skin	High pressure oil eroding skin	Using cardboard to check for oil leaks

**⚠ DANGER** TO AVOID SERIOUS INJURY OR DEATH FROM HIGH PRESSURE HYDRAULIC OIL LEAKS PENERATING SKIN:

- DO NOT OPERATE equipment with oil or fuel leaks.
- KEEP all hydraulic hoses, lines and connections in GOOD CONDITION and TIGHT before applying system pressure.
- RELIEVE HYDRAULIC PRESSURE before disconnecting lines or working on the system.
- REMOVE and replace hose if you suspect it leaks. Have dealer test it for leaks.

HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE.



WHEN CHECKING FOR HYDRAULIC LEAKS AND WORKING AROUND HYDRAULIC SYSTEMS:

- ALWAYS WEAR safety glasses and impenetrable gloves.
- USE paper or cardboard to search for leaks.
- DO NOT USE hands or body parts to search for leak.
- KEEP hands and body AWAY from pin holes and nozzles ejecting hydraulic fluid.
- Hydraulic fluid may cause gangrene if not surgically removed immediately by a doctor familiar with this form of injury.

PN HP01

## SAFETY SECTION

### Electrical & Fire Hazards

	
Strike and explosion Hazard Blades Contacting Utility or Gas Lines	Do not operate near fires. Keep mower deck clear of debris

**⚠ DANGER** TO AVOID SERIOUS INJURY OR DEATH FROM ELECTRICAL CONTACT WHEN WORKING AROUND ELECTRICAL POWER LINES, GAS LINES AND UTILITY LINES:

- INSPECT mowing area for overhead or underground electrical power lines, obstructions, gas lines, cables and Utility, Municipal, or other type structure.
- DO NOT allow mower to contact with any Utility, Municipal, or type of structures and obstructions.
- CALL 811 and 1-800-258-0808 for identify buried utility lines.




FIRE PREVENTION GUIDELINES while Operating, Servicing, and Repairing Mower and Tractor to reduce equipment and grass fire Risk:

- EQUIP Tractor with a FIRE EXTINGUISHER
- DO NOT OPERATE mower on a tractor equipped with under frame exhaust
- DO NOT SMOKE or have open flame near Mower or Tractor
- DO NOT DRIVE into burning debris or freshly burnt area
- AVOID FIRE IGNITION by not allowing mower blade to contact solid objects like metal or rock.
- ADJUST SLIP CLUTCHES to avoid excessive slippage and clutch plate heating.
- CLEAR any grass clippings or debris buildup around mower drivelines, slip clutches, and gearboxes.
- SHUT OFF ENGINE while refueling. PN EF02



## SAFETY SECTION

### Transporting Hazards

				
Use SMV signs and Flashing Lights	Loss of Control Stopping Hazard	Loss of Control Speeding Hazard	Use Safety Tow Chain - Tractor to Implement	Engage Transport Locks

**⚠ WARNING** TO AVOID SERIOUS INJURY AND DEATH WHEN TOWING OR TRANSPORTING EQUIPMENT:

- KEEP transport speed BELOW 20 mph to maintain control of equipment.
- REDUCE SPEED on inclines, on turns and in poor towing conditions.
- DO NOT TOW with trucks or other vehicles
- USE only properly sized and equipped tractor for towing equipment.
- FOLLOW all local traffic regulations.

#### TRACTOR REQUIREMENTS FOR TOWING OR TRANSPORTING IMPLEMENTS:

- ONLY TRANSPORT with tractor with ROPS in the raised position.
- USE properly sized and equipped tractor that exceeds implement weight by at least 20%
- KEEP 20% of tractor weight on front wheels to maintain safe steering.

#### BEFORE TRANSPORTING OR TOWING IMPLEMENT:

##### TRACTOR INSPECTION:

- CHECK steering and braking for proper operation and in good condition.
- CHECK SMV sign, reflectors and warning lights for proper operation and visibility behind unit.
- CHECK that your driving vision is not impaired by tractor, cab, or implement while seated in tractor seat.
- ADJUST your operating position, mirrors, and implement transport for clear vision for traveling and traffic conditions.

#### PREPARE IMPLEMENT FOR TRANSPORTING OR TOWING:

- DISENGAGE PTO
- RAISE MOWER
- REMOVE any cut material collected on mower deck.

#### TOWED MOWERS - ENGAGE TRANSPORT LOCKS AND SAFETY CHAINS:

- INSTALL center axle cylinder transport stops or pins
- ATTACH implement SAFETY CHAIN to tractor

#### DETERMINE STOPPING CHARACTERISTICS OF TRACTOR AND IMPLEMENT FOR TRANSPORTING OR TOWING:

##### BRAKING TESTS:

- APPLY brakes at increasing speeds
- Observe STOPPING distances increases with increased speeds.
- DETERMINE the maximum safe transport speed that does not exceed 20 mph

#### DETERMINE MAXIMUM TURNING SPEED BEFORE OPERATING ON ROADS OR UNEVEN GROUND:



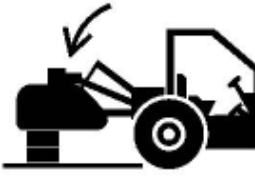


- TEST equipment in slowly increasing speed in turns to determine it can be operated at higher speeds.
- USE REDUCED turning speeds in sharp turns to avoid equipment turning over.

#### WHEN TOWING OR TRANSPORTING EQUIPMENT:

- Always WEAR SEAT BELT when operating or transporting mower.
- USE low speeds to avoid overturn with raised wings.
- USE low speeds and gradual steering on curves, hills, rough or uneven surfaces and on wet roads
- TURN ON tractor FLASHING WARNING LIGHTS.
- ALLOW clearance for implement swing while turning. PN TH02

## SAFETY SECTION

### Hazards With Maintenance Of Implement

				
Periodically inspect all moving parts, lubricate drivelines, and tighten all fasteners	Stop engine remove key before conducting maintenance	Block up implement before servicing Use large blocks on soft or wet soil	Engage cylinder transport locks	Inspect Blades for damage or cracks

**⚠ WARNING** AVOID SERIOUS INJURY OR DEATH FROM COMPONENT FAILURE BY KEEPING IMPLEMENT IN GOOD OPERATING CONDITION IN PERFORMING PROPER SERVICE, REPAIRS AND MAINTENANCE.

#### BEFORE PERFORMING SERVICE, REPAIRS AND MAINTENANCE ON THE IMPLEMENT:

- STOP ENGINE AND PTO, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from tractor.
- PLACE implement on ground or securely block up raised equipment. Use large blocks on soft or wet soil.
- PUSH and PULL Remote Hydraulic Cylinder lever to relieve hydraulic pressure.
- DISCONNECT IMPLEMENT driveline from tractor PTO SHAFT.

#### WEAR SAFETY GLASSES, PROTECTIVE GLOVES and follow SAFETY PROCEDURES when performing service, repairs and maintenance on the implement:

- Always WEAR protective GLOVES when handling blades, knives, cutting edges or worn component with sharp edges.
- Always WEAR GLOVES and SAFETY GLASSES when servicing hot components
- AVOID CONTACT with hot hydraulic oil tanks, pumps, motors, valves and hose connection surfaces.
- SECURELY support or BLOCK UP raised implement, framework and lifted components before working underneath equipment.
- STOP any implement movements and SHUT-OFF TRACTOR engine before doing any work procedures.
- USE ladder or raised stands to reach high equipment areas inaccessible from ground.
- ENSURE good footing by standing on solid flat surfaces when getting on implement to perform work.
- FOLLOW manufacturer's instructions in handling oils, solvents, cleansers, and other chemical agents.
- DO NOT change any factory-set hydraulic calibrations to avoid component or equipment failures.
- DO NOT modify or alter implement, functions or components.
- DO NOT WELD or repair rotating mower components. These may cause vibrations and component failures being thrown from mower.

#### PERFORM SERVICE, REPAIRS, LUBRICATION AND MAINTENANCE OUTLINED IN IMPLEMENT MAINTENANCE SECTION:

- INSPECT for loose fasteners, worn or broken parts, leaky or loose fittings, missing or broken cotter keys and washers on pins, and all moving parts for wear.
- REPLACE any worn or broken parts with authorized service parts.
- LUBRICATE unit as specified by lubrication schedule
- NEVER lubricate, adjust or remove material while it is running or in motion.
- TORQUE all bolts and nuts as specified.

#### BLADE INSPECTION:

- REPLACE bent, damage, cracked or broken blades immediately with new blades.
- AVOID blade failures and thrown broken blades. DO NOT straighten, weld, or weld hard-facing blades.

#### SAFETY SHIELDS, GUARDS AND SAFETY DEVICES INSPECTION:

- KEEP all Deflectors, Steel Guards, Gearbox Shields, and PTO integral shields, Bands, Side Skirts and Skid Shoes in place and in good condition.
- REPLACE any missing, broken or worn safety shields, guards and safety devices.
- Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.
- Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. PN HMFM-01

### Parts Information

#### PARTS INFORMATION

Rhino mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drivetrain components, and bearings. These parts are made and tested to Rhino specifications. Non-genuine “will fit” parts do not consistently meet these specifications. The use of “will fit” parts may reduce mower performance, void warranties, and present a safety hazard. Use genuine Rhino mower parts for economy and safety. (SPRM-1)

SEE YOUR RHINO DEALER

Operator's & Parts Manuals

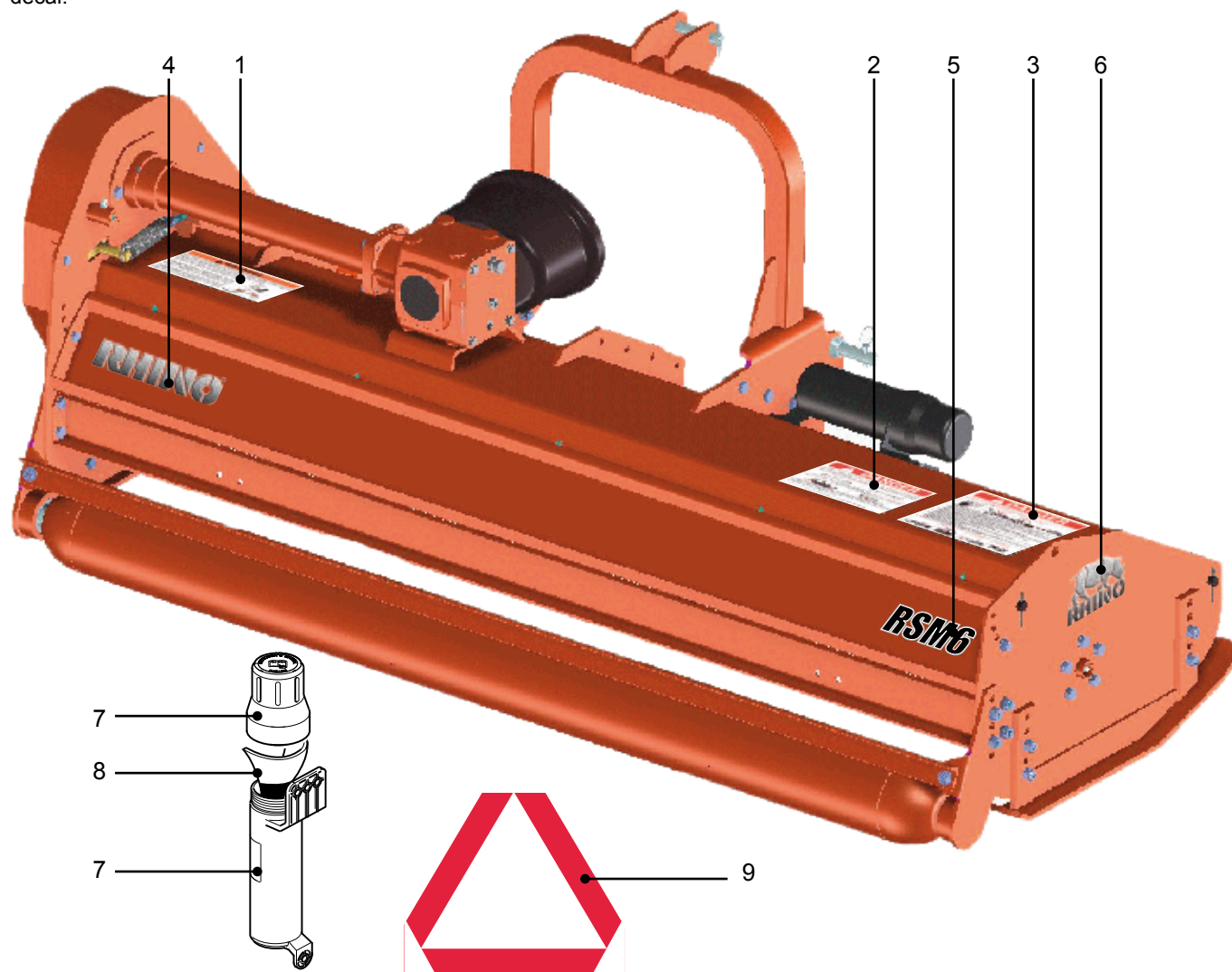


[www.algqr.com/rpm](http://www.algqr.com/rpm)

## SAFETY SECTION

### Decal Location

NOTE: Rhino supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. Rhino cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your Rhino dealer to order replacement decal.



ITEM	PART NO.	QTY	LEVEL	DESCRIPTION
1.	00725739	1	WARNING.	Shields and deflector Rhino
2.	00756494	1	DANGER	Driveline shield missing Serial
3.	00762257	1	DANGER	manual inside Maintain
4.	54691	1	LOGO	RHINO
5.	00788652	1	LOGO	RSM5
5.	00788653	1	LOGO	RSM6
5.	00788654	1	LOGO	RSM6H
5.	00788655	1	LOGO	RSM7H
6.	55723	1	LOGO	RHINO
7.	00776031	1	-	Canister, Operator's Manual
8.	-	1	-	Operator's Manual
9.	03200347	1	REFLECT	SMV

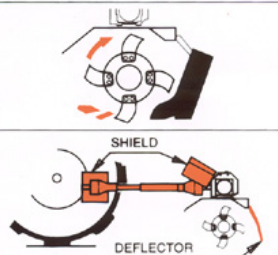
## Decal description

### ⚠ WARNING

SHIELDS AND DEFLECTORS MAINTAINED IN BAD CONDITION MAY CAUSE INJURY OR DEATH FROM ENTANGLEMENT WITH ROTATING PARTS, BEING HIT BY OBJECTS THROWN WITH GREAT FORCE BY BLADES, OR BY BLADE CONTACT.

- Always replace Guards which have been removed for maintenance. Never operate with guard missing or broken.
- Chain Guards, Gearbox, Drivelines Shields, eventual Rubber-fabric Deflectors, and solid band enclosures are subject to wear and lost or broken parts must be replaced or repaired as soon as damage is found.
- Safety shielding must be installed and in good condition to avoid the possibility of thrown objects when the machine is operated in any area where thrown objects could cause injury.

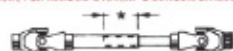
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### DANGER

1 MAKE SURE DRIVELINES ARE OF THE CORRECT LENGTH AND PROPERLY CONNECTED. DRIVELINE SEPARATION AND/OR PTO STUB SHAFT FAILURE CAN CAUSE INJURY OR DEATH. (See Operator's Manual for procedure)

SEE MANUAL FOR MINIMUM OVERLAP & MINIMUM MAXIMUM LENGTHS



2 MAKE SURE THAT DRIVELINE SHIELDS ARE INSTALLED CORRECTLY AND TURN FREELY TO AVOID INJURY OR DEATH FROM ENTANGLEMENT.



3 MAKE SURE THAT DRIVELINE IS INSTALLED CORRECTLY ON TRACTOR PTO SHAFT. MOVE YOKE BACK AND FORTH UNTIL LOCKING COLLAR CLICKS FORWARD AND LOCKS YOKE IN PLACE.

4 540 PTO RPM UNLESS SPECIFICALLY MARKED OTHERWISE.

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### DANGER

FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.



1. READ OPERATOR'S MANUAL CAREFULLY AND PAY ATTENTION TO SAFETY DECALS FOR TRACTOR AND TILLER THOROUGHLY TO AVOID MISUSE, ABUSE, AND ACCIDENTS. PRACTICE BEFORE OPERATING.
2. OPERATE ONLY WITH ROPS AND FASTEN SEAT BELT TO AVOID INJURY AND POSSIBLE CRUSHING DEATH FROM OVERTURN. ALLOW NO RIDERS ON TRACTOR OR TILLER. FALLING OFF CAN CAUSE SERIOUS INJURY OR DEATH BY BEING RUN OVER BY TRACTOR OR TILLER OR BY BEING CUT BY THE ROTATING TILLER BLADES. ALLOW NO CHILDREN ON OR NEAR TILLER OR TRACTOR.
3. TO AVOID INJURY FROM FALLING OBJECTS WEAR HARD HAT, SAFETY GLASSES AND SHOES.
4. BLOCK UP OR SUPPORT MACHINE SEVERELY BEFORE PUTTING HANDS OR FEET UNDER, OR WORKING UNDERNEATH LIFTED PARTS TO AVOID CRUSHING INJURY OR EVEN DEATH FROM SUDDEN, INADVERTENT DROPPING. MAKING SURE AREA IS CLEAR BEFORE LOWERING.
5. BEFORE TRANSPORTING, PUT LIFT LEVER IN LIFT (DETENT) POSITION AND FOLLOW TRAFFIC CODES. SLOW DOWN AT NIGHT, IN TURNS, & ON HILLSIDES.
6. MAKE SURE THAT SMV SIGN, WARNING LIGHTS, AND REFLECTORS ARE CLEARLY VISIBLE.
7. NEVER OPERATE WITH TILLER RAISED OF GROUND TO REDUCE POSSIBILITY OF INJURY FROM OBJECTS THROWN UNDER TILLER STRUCTURE.
8. BEFORE DISMOUNTING, SECURE TILLER IN TRANSPORT POSITION OR LOWER TO GROUND, STOP PTO, PUT TRACTOR IN PARK OR SET BRAKE, STOP ENGINE, AND REMOVE KEY. NEVER MOUNT OR DISMOUNT MOVING VEHICLE TO PREVENT POSSIBLE CRUSHING INJURY OR DEATH.



4781003

## Federal Laws and Regulations

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

### Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

#### **This Act Seeks:**

"...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..."

#### **DUTIES**

Sec. 5 (a) Each employer-

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

### OSHA Training Requirements

Title 29, Code of Federal Regulations Part 1928.57(a)(6). [www.osha.gov](http://www.osha.gov)

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

Keep all guards in place when the machine is in operation;

Permit no riders on equipment

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

### Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operation if bystanders or passersby come within 300 feet.

### Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

# **INTRODUCTION SECTION**



## Introduction

We are pleased to have you as a Rhino customer. Your Flail Cutter has been carefully designed with care and built with quality materials by skilled workers to give maximum service with minimum down time. This manual is provided to give you the necessary operating and maintenance instructions for keeping your flail cutter in top operation condition. Careful use and timely service saves extensive repairs and costly downtime losses. Please read this manual thoroughly. Understand what each control is for and how to use it.

Rhino offers shielding to protect the operator, passerby, livestock, and property from thrown objects such as defectors. No shielding is 100% effective in preventing thrown objects. The possibility of injury and property damage from this hazard can be substantially reduced by selecting proper shielding, maintaining the mower and shielding in good operational condition, inspecting the area for foreign debris before mowing, operating the mower at a minimum cutting height of 2", and keeping unprotected persons at a minimum distance of 300 feet from the mower at all times during operation.

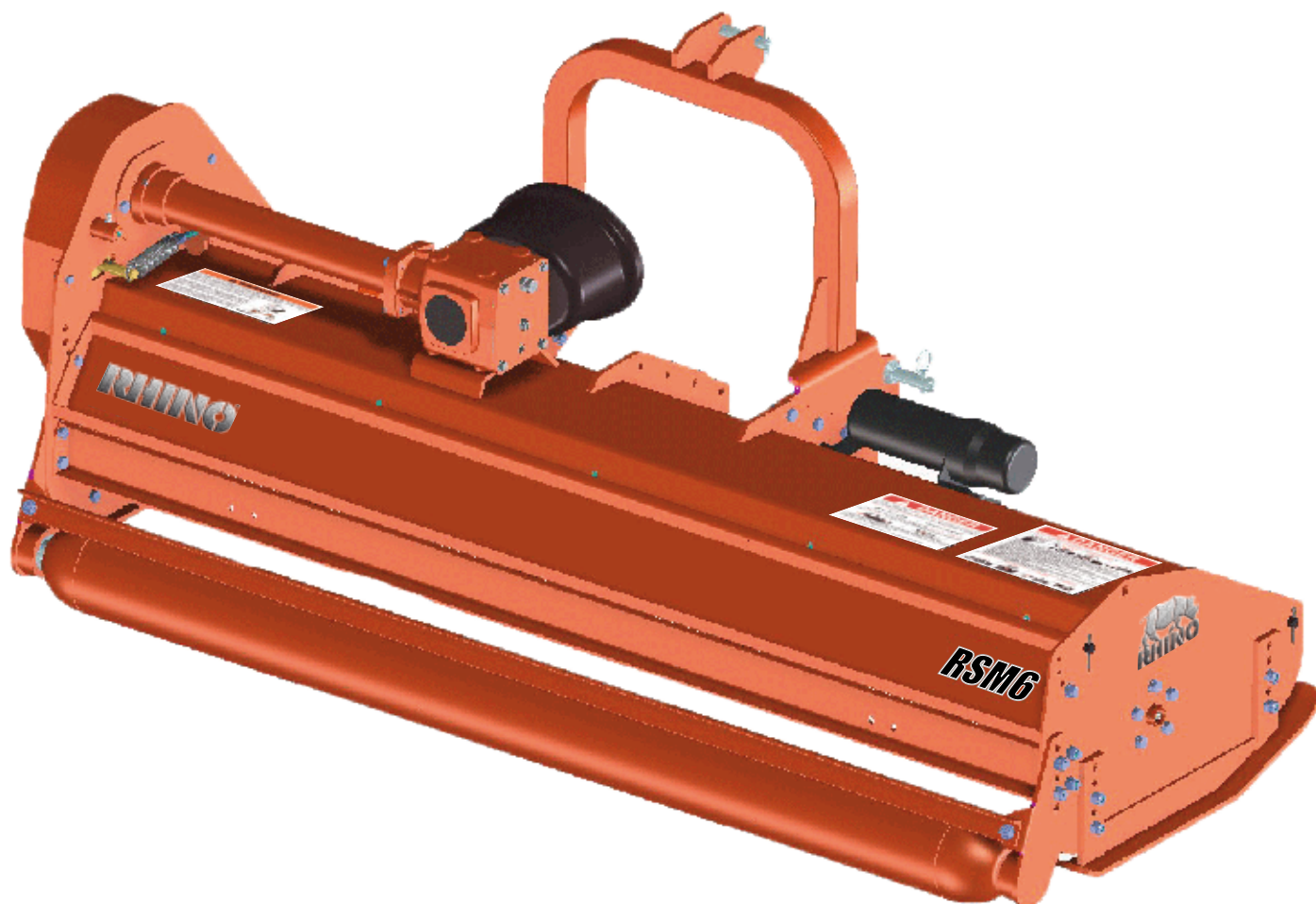
Safety is of primary importance to the owner/operator and to the manufacturer. The first section of this manual includes a list of Safety Messages, that, if followed, will help protect the operator and bystanders from injury or death. Many of the Safety Messages will be repeated throughout the manual. The owner/operator/dealer should know these Safety Messages before assembly and be aware of the hazards of operating this mower during assembly, use, and maintenance. The Safety Alert Symbol combined with a Signal Word, as seen below, is intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this machine.

**⚠ DANGER** Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.

**⚠ WARNING** Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.

**⚠ CAUTION** Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.

**Important** Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.



## INTRODUCTION SECTION

### Attention Owner/Operator

#### BEFORE OPERATING THIS MACHINE:

1. Carefully read the Operator's Manual, completely understand the Safety Messages and instructions, and know how to operate correctly both the tractor and implement.
2. Fill out the Warranty Card in full. Be sure to answer all questions, including the Serial Number of the implement. Mail within 30 days of delivery date of this implement.

NOTE: Warranties are honored only if completed "Owner Registration and Warranty" forms are received by Rhino within thirty days of delivery of the implement.

3. Record the Model and Serial Numbers on the Warranty page at the front of the Operator's Manual. Keep this as part of the permanent maintenance file for the implement.



FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.



1. READ OPERATOR'S MANUAL CAREFULLY AND PAY ATTENTION TO SAFETY DECALS FOR TRACTOR AND TILLER THOROUGHLY TO AVOID MISUSE, ABUSE, AND ACCIDENTS. PRATICE BEFORE OPERATING.
2. OPERATE ONLY WITH ROPS AND FASTEND SEAT BELT TO AVOID INJURY AND POSSIBLE CRUSHING DEATH FROM OVERTURN. ALLOW NO RIDERS ON TRACTOR OR TILLER. FALLING OFF CAN CAUSE SERIOUS INJURY OR DEATH BY BEING RUN OVER BY TRACTOR OR TILLER OR BY BEING CUT BY THE ROTATING TILLER BLADES. ALLOW NO CHILDREN ON OR NEAR TILLER OR TRACTOR.
3. TO AVOID INJURY FROM FALLING OBJECTS WEAR HARD HAT, SAFETY GLASSES AND SHOES.
4. BLOK UP OR SUPPORT MACHINE SEVURELY BEFORE PUTTINGHANDS OR FEET UNDER, OR WORKING UNDERNEATH LIFTED PARTS TO AVOID CRUSHING INJURY OR EVEN DEATH FROM SUDDEN, INADVERTENT DROPPING. MAKING SURE AREA IS CLEAR BEFORE LOWERING.
5. BEFORE TRANSPORTING, PUT LIFT LEVER IN LIFT (DETENT) POSITION AND FOLLOW TRAFFIC CODES. SLOW DOWN AT NIGHT, IN TURNS, & ON HILLSIDES.
6. MAKE SURE THAT SMV SIGN, WARNING LIGHTS, AND REFLECTORS ARE CLEARLY VISIBLE.
7. NEVER OPERATE WITH TILLER RAISED OF GROUND TO REDUCE POSSIBILITY OF INJURY FROM OBJECTS THROWN UNDER TILLER STRUCTURE.
8. BEFORE DISMOUNTING, SECURE TILLER IN TRANSPORT POSITION OR LOWER TO GROUND, STOP PTO, PUT TRACTOR IN PARK OR SET BRAKE, STOP ENGINE, AND REMOVE KEY. NEVER MOUNT OR DISMOUNT MOVING VEHICLE TO PREVENT POSSIBLE CRUSHING INJURY OR DEATH.



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## INTRODUCTION SECTION

### RHINO LIMITED WARRANTY

#### 1. LIMITED WARRANTIES

- 1.01. Rhino warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for six months to the original commercial or industrial purchaser ("Purchaser") that the goods purchased are free from defects in material or workmanship.
- 1.02. Manufacturer will replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.
- 1.03. This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This limited warranty does not apply to any part of any internal combustion engine, or expendable items such as blades, shields, guards, or pneumatic tires except as specifically found in your Operator's Manual.
- 1.04. Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

#### 2. REMEDIES AND PROCEDURES.

- 2.01. This limited warranty is not effective unless the Purchaser returns the Registration and Warranty Form to Manufacturer within 30 days of purchase.
- 2.02. Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based.
- 2.03. Purchaser is responsible for returning the goods in question to the Dealer.
- 2.04. If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:
  - (a) Repair or replace the defective goods or part(s) or
  - (b) Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer.

The choice of remedy shall belong to Manufacturer.

- 2.05. Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the goods or part(s) from the Dealer to the designated factory.

#### 3. LIMITATION OF LIABILITY.

- 3.01. MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 3.02. MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.
- 3.03. EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOT WITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.
- 3.04. NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

#### 4. MISCELLANEOUS.

- 4.01. Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Guadalupe County, Texas.
- 4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.03. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.04. Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

#### KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

Rhino Implement Model \_\_\_\_\_ Serial Number \_\_\_\_\_

Date Purchased \_\_\_\_\_ Dealer \_\_\_\_\_

ATTENTION:

READ YOUR OPERATOR'S MANUAL

**RHINO®**

1020 S Sangamon Ave.  
Gibson City, IL 60936  
800-446-5158  
Email: parts@servis-rhino.com



# **OPERATION SECTION**

### RHINO RSM5 & RSM6 super-heavy-duty flail mower operation instructions

Rhino RSM flail mowers are manufactured with quality material by skilled workers. These mowers are designed for cutting grass and small weeds up to 1". The mower is equipped with protective deflectors to prevent objects being thrown from the mower by the blades, however, no shielding is 100% effective. All shields, guards, and deflectors equipped on the mower must be maintained in good operational condition.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the mower, tractor, or a thrown object. Do not operate the mower if passersby, pets, livestock, or property are within 300 feet of the unit unless:

- All THROWN OBJECT SHIELDING including, Front and Rear Deflectors, Side Skirts and Skid Shoes in place and in good condition when mowing.
- Mower section adjusted to be close and parallel to ground without exposing blades.
- MOWING AREA has been inspected and foreign materials and debris have been removed.
- PASSERSBY are inside enclosed vehicle.

This section of the Operator's Manual is designed to familiarize, instruct, and educate safe and proper mower use to the operator. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a SHD flail mower and are not specific to any model. Some pictures may show shields removed for picture clarity. NEVER operate implement without all shields in place and in good operational condition. The operator must be familiar with the mower and tractor and all associated safety practices before operating the mower and tractor. Proper operation of the mower, as detailed in this manual, will help ensure years of safe and satisfactory use of the mower.

**IMPORTANT:** To avoid mower damage, retorque all bolts after the first 10 hours of operation. Refer to the Torque Chart at the end of the Maintenance Section to ensure bolts are properly tightened.

**READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL AND THE TRACTOR MANUAL BEFORE ATTEMPTING TO USE THE TRACTOR AND**

**IMPLEMENT.** If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the implement and tractor. OPS-U- 0001

**READ, UNDERSTAND, and FOLLOW** the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)



**PELIGRO**

Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)



**¡ LEA EL INSTRUCTIVO!**



## Standard Equipment and Specifications

	RSM5	RSM6
Horsepower Required (Min.)	25HP	25HP
Tractor PTO 540 RPM	540 RPM	540 RPM
Cutting Capacity	1"	1"
Cutting Height	1.4" - 3.4"	1.4" - 3.4"
Cutting Width	61"	73"
Overall Width	68"	80"
Overall Length	43"	43"
Weight (Approximate)	750 lbs	800 lbs
Hitch	CAT I	CAT I
Blades	Fine Cut	Fine Cut
Number of Knives	Fine Cut 30 pair	Fine Cut 36 pair
Blade Rotation	Forward	Forward
Cuttershaft Diameter	5,5"	5,5"
Gearbox Rating	60HP	60HP
Knife Tip Speed (RPM)	2150	2150
Driveline Size	CAT 5	CAT 5
Drive Belt	"B" Size	"B" Size
Rear Roller Diameter	5,5"	5,5"



### **DANGER**

The Mower is designed for certain mowing applications and is rated to cut up to a specific size vegetation (see Mower Standard Equipment and Specifications). DO NOT use this mower to cut vegetation above the Mower's rated capacity or to cut any type of nonvegetative material. Only operate this Mower on a properly sized and equipped Tractor. Operating this Mower in an application for which it is not designed and/or operating the Mower with the wrong size Tractor can cause Mower component damage and equipment failure resulting in possible serious injury or death. (SGM-14)

## Operator Requirements

Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and tractor. If any part of the operation and safe use of this equipment is not completely understood, consult an authorized dealer for a complete explanation.

If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

- Always Wear Safety Glasses
- Hard Hat
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Respirator or Filter Mask (depends on operating conditions) OPS-U- 0002



## OPERATION SECTION

### **⚠ DANGER**

DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



### **Tractor Requirements**

The tractor used to operate the mower must have the power, capacity and required equipment to safely operate the mower at a ground speed between 2 and 5 MPH. Operating the mower with a tractor that does not meet the following requirements may cause tractor or mower damage and could be a potential danger to the operator and passersby.

#### **Tractor Requirements and Capabilities**

- ASABE approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Tractor Safety Devices ..... Slow Moving Vehicle (SMV) emblem, lighting, PTO master shield
- Tractor Horsepower-Minimum.....RSM5 - min. 25 HP, RSM6 - min. 25HP
- 3-Point Hitch:
  - Lifting Capacity ..... RSM5-750 lbs., RSM6-800 lbs.
  - Category ..... RSM5-CAT I; RSM6-CAT I.
  - Front End Weights.....As needed to maintain 20% weight on tractor front axle
- Power Take Off.....540 RPM - 6 spline

#### **ROPS and Seat Belt**

The tractor must be equipped with a Roll-Over-Protective-Structure (ROPS) (tractor cab or roll-bar) and seat belt to protect the operator from falling off the tractor, especially during a roll over where the driver could be crushed and killed. Only operate the tractor with the ROPS in the raised position and seat belt fastened. Tractor models not equipped with a ROPS and seat belt should have these life saving features installed by an authorized dealer. OPS-U- 0003

### **⚠ WARNING**

Operate this Equipment only with a Tractor equipped with an approved rollover- protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor- particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)





## OPERATION SECTION

### Tractor Safety Devices

If transporting or operating the tractor and implement near a public roadway, the tractor must be equipped with proper warning lighting and a Slow Moving Vehicle (SMV) emblem which are clearly visible from the rear of the unit. Lights and a SMV emblem must be equipped directly on implements if the visibility of the tractor warning signals are obscured.

Maintain all manufacturer equipped safety shields and guards. Always replace shields and guards that were removed for access to connect, service, or repair the tractor or implement. Never operate the tractor PTO with the PTO master shield missing or in the raised position. OPS-U- 0004

### Tractor Horsepower

The horsepower required to operate the mower depends on many factors including the vegetation to be cut, terrain condition, operator experience, and condition of the mower and tractor. For most mowing condition, the RSM mower requires a tractor with at least 25HP. Operating the mower with a tractor that does not have adequate power may damage the tractor engine.

### Point Hitch

The tractor 3-point hitch must be rated to lift at least 900 lbs.

RSM mowers can attach to tractor's with either a CAT I hitch. Refer to the tractor operator's manual for the category of the tractor used. If the hitch does not conform to ASABE CAT I dimensions, the mower may not fit or raise properly. Consult an authorized dealer for possible modification procedures to mount nonconforming hitches.

Use the correct hitch pins for the hitch category being used. For a CAT I hitch, 7/8" lower can 3/4" upper diameter hitch pins are used.

Before attaching mower to tractor, it will be necessary that each tractor lower hitch arms have freedom of movement that the mower is completely independent of tractor movement. This will allow the mower to pivot sideways as well as move vertically.

Some tractors provide the "float" by means of an optional slot in the lower end of each lift link, others by lift check chains which can be made telescopic by changing the position of the pins in the links.

Failure to provide "float" may result in failure of the cutterhousing and bearings in the roller, thus voiding the mower warranty. Should your tractor not have a built "float" option, a flexible check chain assembly (optional equipment) will be required.

On all centered mowers, two flexible check chain assemblies will be necessary to provide "float" to each lift link. On all offset mowers, one flexible check chain assembly will be necessary to provide "float" to the lift link on the same side that the mower is offset. The other lift link should be the adjustable stiff link furnished with the tractor.

### Front End Weight

Maintain a minimum of 20% total tractor weight on the tractor front end at all times. Front end weight is critical to maintain steering ability and to prevent the front end from rearing up. Consult your authorized tractor dealer for front weights and carriers.

### Power Take Off (PTO)

Only operate the mower on a tractor equipped to operate at 540 rpm PTO speed. Tractors operating at 540 rpm will have a 1-3/8" diameter 6-spline PTO shaft stub. Refer to the tractor operator's manual for operating the PTO at the proper speed.

If operating an older model tractor where the tractor's transmission and PTO utilize one master clutch, an overrunning clutch must be used between the PTO output shaft and the driveline of the mower. Consult an authorized tractor dealer to purchase and install an over-running clutch if needed.



**DANGER** DO NOT use a PTO adapter to attach a non-matching Implement driveline to a Tractor PTO. Use of an adapter can double the operating speed of the Implement resulting in excessive vibration, thrown objects, and blade and implement failure. Adapter use will also change the working length of the driveline exposing unshielded driveline areas. Serious bodily injury and/or equipment failure can result from using a PTO adapter. Consult an authorized dealer for assistance if the Implement driveline does not match the Tractor PTO. (S3PT-14)



**WARNING** Never operate the Tractor and Mower if the Implement input driveline is directly connected to the Tractor transmission. Tractor braking distances can be substantially increased by the momentum of the rotating Mower blades driving the Tractor transmission even though the Tractor clutch has been disengaged. Install an over running clutch between the Tractor PTO and the Mower driveline to prevent this potentially dangerous situation. (S3PT-16)

## Connecting The Mower To The Tractor

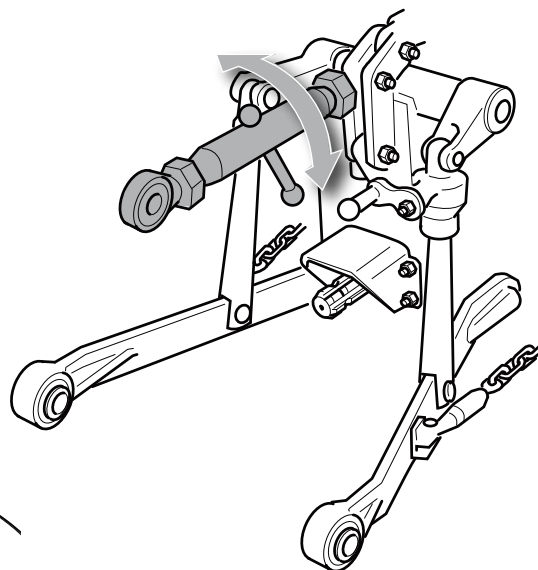
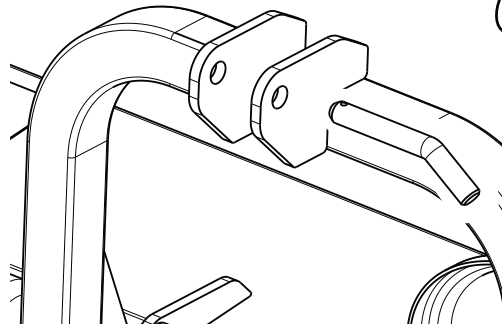
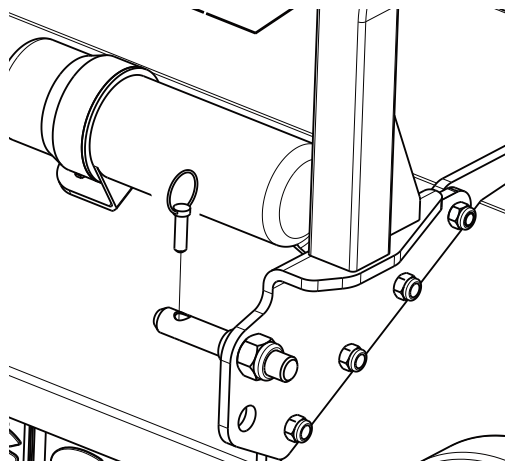
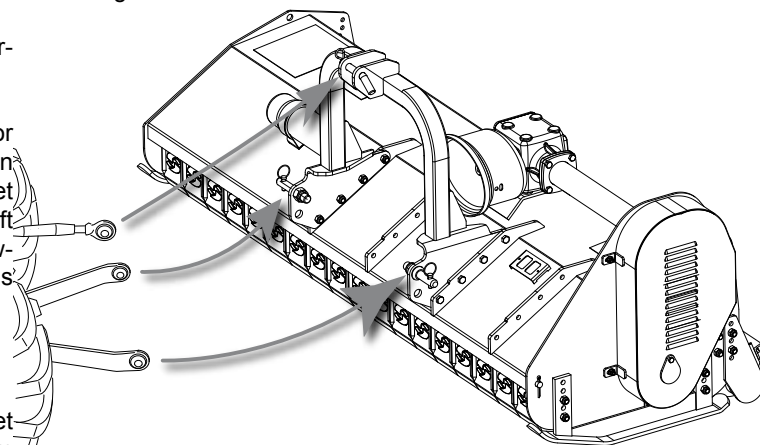
Use extreme caution when connecting the mower to the tractor. The mower should be securely resting at ground level or setting on blocks. Keep hands and feet from under the mower deck and clear of pinch points between the tractor hitch arms and mower pins. OPS-R-0001



**DANGER** Always shut the Tractor completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement and Tractor hitches. (S3PT-15)

### Connecting the Mower A-Frame to the Tractor

1. Make sure the tractor is equipped with the correct PTO shaft. Change shafts if needed.
2. Shorten or remove the tractor drawbar to avoid interference when raising and lowering the mower.
3. Board the tractor and start the engine. Position the tractor to the mower with the 3-point lift arms positioned between the respective set of mower A-frame lift lugs. Note: Set the 3-point lift control to "Position Control" so that the lift arms maintain a constant height when attaching the mower. See the tractor Operator's Manual for correct settings when attaching 3-point equipment.
4. Turn off the tractor engine and dismount.
5. One lift arm at a time, align arm end hole between the set of A-frame lift lugs. Insert hitch pin through the lug and arm holes and insert retaining pin into hitch pin.
6. Walk around to opposite side and repeat procedure for remaining lift arm and hitch pin.
7. Extend or retract 3-point top link to align its end hole with the holes of the mower's top link. Insert the top link hitch pin and insert retaining pin into hitch pin.
8. Adjust any lower link check chains, guide blocks, or sway blocks to prevent the mower from swaying side to side and possible contact with tractor rear tires.



## Setting The Mower

After the mower is attached to the tractor's 3-point hitch, but before the universal slip joint is installed, and with the mower on the ground, adjust the top link of the hitch to make the mower gearbox input shaft parallel to the tractor PTO shaft. This relationship provides optimum operation of the universal joints in the driveline. A driveline that is not parallel to the PTO will result in vibration due to the characteristic of a universal joint that results in the output end speeding up and slowing down twice each revolution of the universal jointed shaft. Adjust the top link whenever the cutting height is changed.

Properly setting the cutting height is essential for efficient and safe operation. A properly set mower will make a more uniform cut, distribute clippings more evenly, require minimal tractor work, and follow the contour of uneven terrain.

**NOTE:** Avoid very low cutting heights, striking the ground with the blades gives the most damaging shock loads and will cause damage to the mower and drive. Blades contacting the ground may cause objects to be thrown out from under the mower deck. Always avoid operating the mower at a height which causes the blades to contact the ground. OPS-F-0071



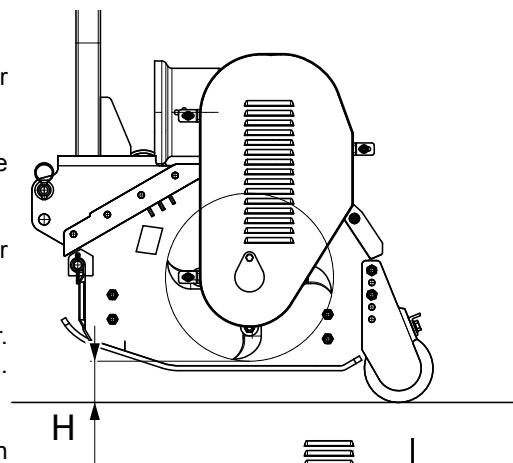
**DANGER** Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)



### Roller Height Adjustment

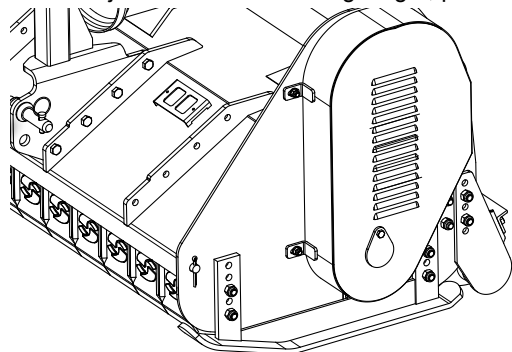
The mower's cutting height is set by positioning the roller assembly for each mower section. Each section must be set at the same height to ensure an even cut across the entire width of the mower.

1. Place the tractor and mower on a level surface and completely lower the mower to the ground.
2. Shut down the tractor, place the transmission in park, and set the parking brake before dismounting.
3. One section at a time, place lifting device (scissors jack or hydraulic jack) under center of cutter housing.
4. Remove hex nuts, washers and carriage bolts from bracket at each end of roller. Make certain that roller bracket is free to move once the fasteners are removed. A stuck roller could drop unexpectedly and cause injury.
5. Use lifting device to reposition cutter housing to desired cutting height. Align bracket holes with cutter housing, then reinstall hardware.
6. Lower the cutting unit to the ground (see table below) and remove the lifting device.

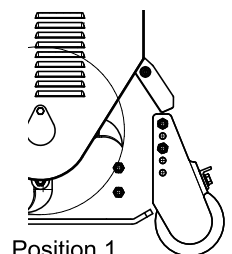


Position	H (cutting height)	
	mm	Inc
1	85	3.4
2	60	2.4
3	35	1.4

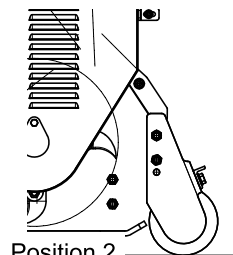
After the adjustment of the working height, place the side rails to just touch the ground.



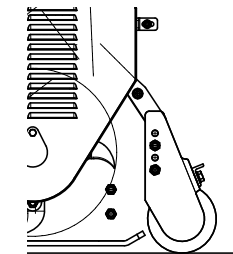
Unscrew the 4 bolts that secure the slides, place the slides correctly, re-insert and tighten the 4 bolts.



Position 1



Position 2



Position 3

## Driveline Attachment

The driveline yoke and tractor PTO shaft must be dirt free and greased for attachment. To connect the mower driveline to the tractor PTO output shaft, pull the driveline yoke collar back and align the grooves and splines of the yoke with those of the PTO shaft. Push the driveline yoke onto the PTO shaft, release the locking collar, and position the yoke until the locking collar balls are seated onto the PTO shaft. Push and pull the driveline back and forth several times to ensure a secure attachment. After the driveline is securely attached, place the tractor PTO master shield back in the operating position. OPS-R-0003 When attaching the Implement input driveline to the Tractor PTO, it is important that the connecting yoke spring activated locking collar slides freely and the locking balls are seated securely in the groove on the Tractor PTO shaft. Push and pull the driveline back and forth several times to ensure it is securely attached. A driveline not attached correctly to the Tractor PTO shaft could come loose and result in personal injury and damage to the Implement. (S3PT-17)

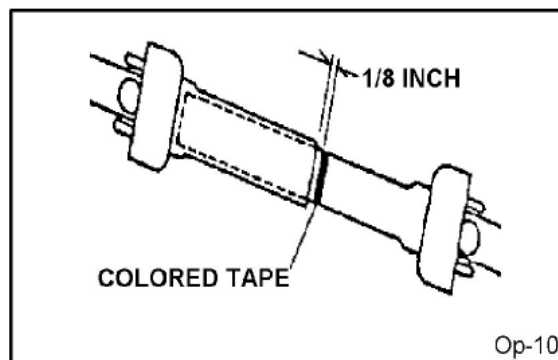
### Driveline Length Check

**⚠ WARNING** Before operating the Implement, check to make sure the Implement input driveline will not bottom out or become disengaged. Bottoming out occurs when the inner shaft penetrates the outer housing until the assembly becomes solid-it can shorten no more. Bottoming out can cause serious damage to the Tractor PTO by pushing the PTO into the Tractor and through the support bearings or downward onto the PTO shaft, breaking it off. A broken driveline can cause personal injury. (S3PT-18)

When fitting the mower to the tractor, the telescoping driveline must be inspected to ensure that at its most compressed position, the profiles do not "bottom out", and when at its farthest extended position, there is sufficient engagement between the profiles to operate safely. At its shortest length, there must be at least a 1" clearance between each profile end and opposite profile universal joint. At its farthest operating extension, a minimum profile engagement of 12" must be maintained.

#### "Bottoming Out" Check Procedure

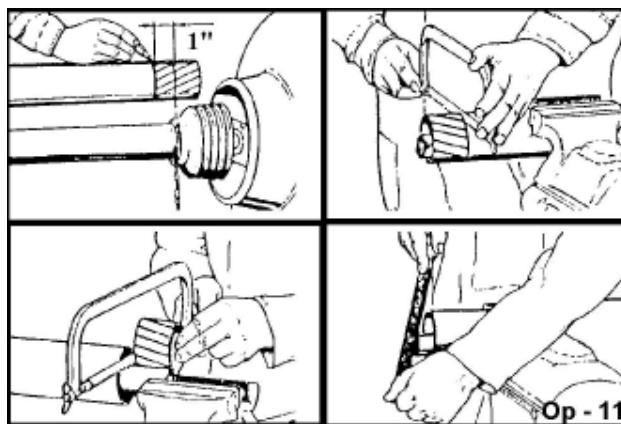
- Disconnect driveline from the tractor and slide the profiles together until fully compressed.
- Place a mark on the inner shield 1/8" from the end of the outer shield and reattach the driveline to the PTO Shaft.
- With the PTO NOT TURNING, slowly drive the tractor with mower attached through the sharpest turn possible and watch shaft movement. With the PTO NOT TURNING, slowly drive the tractor with the mower attached through the most severe terrain conditions expected and watch shaft movement.
- If the distance between the mark and the outer shield becomes less than 2" at any point there is a potential problem bottoming out the driveline and the driveline should be shortened. OPS-F-0001



Driveline in maximum compressed position

Shorten the driveline profiles as follows:

- Remove the driveline from the tractor.
- Position the mower to the point with the shortest distance between the tractor PTO shaft and cutter gearbox. Shut down the tractor and securely block the mower in this position.
- Pull driveline apart and reattach yoke to PTO shaft.
- Hold driveline sections parallel to one another and measure back 1" from yoke of each shaft and place mark on opposite section. Cut this length off with a saw.
- Round off all sharp edges and debur.
- Thoroughly grease then reinstall the driveline.
- Recheck for proper operation.



#### Engagement Check Procedure

- With the driveline attached, position the mower to the point where the telescoping driveline is at its maximum extension. Completely shut down the tractor and secure in position.
- Mark the inner driveline shield 1/8" from the end of the outer shield.
- Disconnect the driveline from the tractor and separate the two driveline halves.
- Measure the distance from the mark to the end of the inner profile. This length is the amount the driveline profiles were engaged.
- If the engaged length is less than 12" the shaft is considered too short and should be replaced with a longer shaft. Consult an authorized dealer to purchase the required driveline length.

NOTE: If the driveline cannot be shortened and still maintain the required profile engagement, the operator must be made aware of terrain conditions and avoid situations which pose a potential problem to avoid damaging the driveline. OPS-F-0002

### Pre-Operation Inspection And Service

Before each use, a pre-operation inspection and service of the implement and tractor must be performed. This includes routine maintenance and scheduled lubrication, inspecting that all safety devices are equipped and functional, and performing needed repairs. DO NOT operate the unit if the pre-operation inspection reveals any condition affecting safe operation. Perform repairs and replacement of damaged and missing parts as soon as noticed. By performing a thorough pre-operation inspection and service, valuable down time and repair cost can be avoided. OPS-U-0029

#### **⚠ DANGER**

Always disconnect the main PTO Driveline from the Tractor before performing service on the Implement. Never work on the Implement with the tractor PTO driveline connected and running. Rotating Parts, Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death. (S3PT-11)

#### **⚠ DANGER**

DO NOT allow any person under a folded wing unless wing is securely locked up or supported. DO NOT approach the Implement unless the Tractor is turned off and all motion has ceased. Never work under the frame work, or any lifted component unless the implement is securely supported or blocked up. A sudden or inadvertent fall by any of these components could cause serious injury or even death. (STI-03)



#### **⚠ WARNING**

Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)



## Transporting

NOTE: Always disengage PTO before raising mower to transport position.

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

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

## Mowing Instructions

**DANGER** Gearbox shields must be secured in place when operating to avoid injury or death from entanglement in rotating drive-lines.

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

**WARNING** The RSM is designed to cut grass and brush up to 1" diameter. Using this mower for another type of work can damage the cutting components, drive components, mower frame and tractor.

1. Clear area to be mowed of objects and debris that might be picked up and thrown by the mower blades. Do not use mower on stony ground.
2. Make the following machine checks before operating the mower.
  - All hook-up pins should be secured.
  - All shields should be in place and secured.
  - All bolts and nuts should be present and tight.
  - Make sure the knives are not be broken or loose.
1. Grass is best cut when it is dry. Mowing wet grass can cause plugging resulting in grass clumps behind the mower.
2. Grass should be mowed frequently as shorter clippings deteriorate faster.
3. If mowing extremely tall grass, it is best to raise cutting height and mow the area, then lower cutting height and mow a second time at the desired height.

## Operating Instructions

Proper servicing and adjustments are the key to the long life of any machine. With careful and systematic inspection of the mower, costly maintenance, time and repair can be avoided.

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

Before beginning to mow, the following inspection and checks should be performed:

1. Check oil level in gearbox. Refer to "Section 4: Maintenance and Lubrication" on page 16.
2. Check that all plugs in gearbox have been replaced and tightened properly.
3. Be sure all mower knives, bolts and nuts are tight.
4. Be certain all guards and shields are in place and secure.
5. Grease driveline shaft and all other grease fittings.
6. Clear area to be mowed of rocks, branches and other foreign objects. Do not use mower on stony ground.
7. Lower mower to ground. Set tractor throttle at approximately 1/4 open. Engage PTO to start blades rotating.
8. Operate with 540 rpm PTO tractor.
9. At first begin mowing at a slow forward speed and shift up until the desired speed is achieved - maintaining 540 PTO rpm.
10. The rotor knives will cut better at a faster blade speed than at reduced throttle.
11. After mowing the first 50 feet, stop and check to see that the mower is adjusted properly.
12. Do not make sharp turns or attempt to back up while mower is on the ground.
13. Never work close to or on steep slopes.
14. Do not engage PTO with mower in the fully raised position. Do not engage PTO at full throttle. Do not lift mower with PTO engage.
15. Do not allow anyone including yourself near the mower when it is operating.
16. Periodically check for foreign objects wrapped around the rotor shaft and remove them after disengaging PTO, turning off tractor, and removing ignition key.

### General Operating Instructions

Now that you have familiarized yourself with the Operator's Manual, completed the Operators Checklist, properly attached your Flail Mower to your tractor, made the right offset or center adjustments, and preset your cutting height, you're almost ready to begin using your Land Pride RSM5 Flail Mower.

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

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

You should now be ready to move to the cutting site to begin mowing. You should have inspected and should only be cutting in an area you are familiar with which is relatively free of debris and unseen objects. Never assume an area is clear. Extremely tall grass or brush should be cut twice to detect potential hazards. In the event you do strike an object, stop the tractor and mower immediately to inspect the rotor and make any necessary repairs before resuming operation. It pays to inspect a new area and to develop a plan before you cut. Normal mowing speed will be between 2-5 mph and you will need to maintain tractor PTO speed to produce a clean cut so make a tractor gear and range selection that will maintain this combination. Generally the quality of cut or degree of debris pulverization will be better at lower ground speeds and cutting denser ground cover or heavier brush may create the need to slow down. Always cut downward on slopes and avoid crossing the face of steep slopes. Avoid sharp drops and cross diagonally through dips to prevent hanging up the tractor and mower. Slow down in turns and avoid sharp turns if at all possible. Remember to look back often.

Now you're prepared and well briefed so let's begin cutting. Reduce the tractor's engine rpm, make sure the mower is on the ground and in cutting position, engage the PTO, raise the engine rpm to the appropriate PTO speed, and begin mowing. Operators must plan ahead and choose a cutting route that allows safe turns. Try increasing or decreasing ground speed to determine the effect on quality of cut. With a little practice you will be pleased with what you and your Land Pride Flail Mower can do.

If you are cutting with an RSM and using the hammer knives and the standard brush rake teeth you will accumulate and force more material into the rotor for pulverization. This will require more horsepower and will cause you to slow down especially if you are encountering material up to 2" in diameter. The fine cutting knives on the RSM are much better suited for a finer quality of cut in grass cutting applications and in no case should fine cut blades be used for cutting material greater than 1" in diameter.

When you are done mowing, need to take a break, or just need to make a few adjustments to the mower, remember to always do the following. Reduce the tractor's engine rpm, disengage the PTO, stop on level ground, set the park brake, turn off the engine, and remove the key.

## Troubleshooting Guide






Problem	Possible Cause	Remedy
Excessive Vibrations	Check gearbox bolts. Check for missing knives on cutter shaft. Check to see if knives are free swinging. Blade broken or bent. Cuttershaft bent. Drivelines not phased correctly. Implement & Tractor yokes must be in line. Cuttershaft bearing worn	Tighten if loose Replace missing knives  Free knives so they swing.  Replace blades. Replace cuttershaft. Replace driveline.  Replace bearings
Gearbox Overheating	Low on lubricant. Improper type lubricant. Excessive trash build-up around gearbox. Bearing or gears set up improperly.	Fill to level plug. Replace with proper lubricant. Remove trash.  Consult your Dealer.
Gearbox Noisy	Rough Gears. Worn Bearing.	Run in or change gears. Replace bearing.
Noise	Damaged Belt Shield (Rubbing on pulleys or belt). Worn Bearing or Gear.	Straighten or replace Shields.  Replace Bearing or Gear.
Gearbox Leaking	Damaged oil seal Bent shaft. Shaft rough in oil seal area. Oil seal installed wrong. Oil seal not sealing in the housing.  Oil level too high. Sand hole in casting. Gasket damaged. Bolts loose.	Replace seal. Replace oil seal and shaft. Replace or repair shaft. Replace seal. Replace seal or use a sealant on OD of Seal.  Drain oil to proper level. Replace castings or gearbox. Replace gasket. Tighten bolts.



# **MAINTENANCE SECTION**

## MAINTENANCE SECTION

### Hazards With Maintenance Of Implement

				
Periodically inspect all moving parts, lubricate drivelines, and tighten all fasteners	Stop engine remove key before conducting maintenance	Block up implement before servicing Use large blocks on soft or wet soil	Engage cylinder transport locks	Inspect Blades for damage or cracks

**⚠ WARNING** AVOID SERIOUS INJURY OR DEATH FROM COMPONENT FAILURE BY KEEPING IMPLEMENT IN GOOD OPERATING CONDITION IN PERFORMING PROPER SERVICE, REPAIRS AND MAINTENANCE.

#### BEFORE PERFORMING SERVICE, REPAIRS AND MAINTENANCE ON THE IMPLEMENT:

- STOP ENGINE AND PTO, engage parking brake, lower implement, allow all moving parts to stop and remove key before dismounting from tractor.
- PLACE implement on ground or securely block up raised equipment. Use large blocks on soft or wet soil.
- PUSH and PULL Remote Hydraulic Cylinder lever to relieve hydraulic pressure.
- DISCONNECT IMPLEMENT driveline from tractor PTO SHAFT.

#### WEAR SAFETY GLASSES, PROTECTIVE GLOVES and follow SAFETY PROCEDURES when performing service, repairs and maintenance on the implement:

- Always WEAR protective GLOVES when handling blades, knives, cutting edges or worn component with sharp edges.
- Always WEAR GLOVES and SAFETY GLASSES when servicing hot components
- AVOID CONTACT with hot hydraulic oil tanks, pumps, motors, valves and hose connection surfaces.
- SECURELY support or BLOCK UP raised implement, framework and lifted components before working underneath equipment.
- STOP any implement movements and SHUT-OFF TRACTOR engine before doing any work procedures.
- USE ladder or raised stands to reach high equipment areas inaccessible from ground.
- ENSURE good footing by standing on solid flat surfaces when getting on implement to perform work.
- FOLLOW manufacturer's instructions in handling oils, solvents, cleansers, and other chemical agents.
- DO NOT change any factory-set hydraulic calibrations to avoid component or equipment failures.
- DO NOT modify or alter implement, functions or components.
- DO NOT WELD or repair rotating mower components. These may cause vibrations and component failures being thrown from mower.

#### PERFORM SERVICE, REPAIRS, LUBRICATION AND MAINTENANCE OUTLINED IN IMPLEMENT MAINTENANCE SECTION:

- INSPECT for loose fasteners, worn or broken parts, leaky or loose fittings, missing or broken cotter keys and washers on pins, and all moving parts for wear.
- REPLACE any worn or broken parts with authorized service parts.
- LUBRICATE unit as specified by lubrication schedule
- NEVER lubricate, adjust or remove material while it is running or in motion.
- TORQUE all bolts and nuts as specified.

#### BLADE INSPECTION:

- REPLACE bent, damage, cracked or broken blades immediately with new blades.
- AVOID blade failures and thrown broken blades. DO NOT straighten, weld, or weld hard-facing blades.

#### SAFETY SHIELDS, GUARDS AND SAFETY DEVICES INSPECTION:

- KEEP all Deflectors, Steel Guards, Gearbox Shields, and PTO integral shields, Bands, Side Skirts and Skid Shoes in place and in good condition.
- REPLACE any missing, broken or worn safety shields, guards and safety devices.
- Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.
- Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. PN HMFM-01

# MAINTENANCE SECTION

## PARTS INFORMATION

Rhino mowers use balanced and matched system components for blade carriers, blades, cuttershafts, knives, knife hangers, rollers, drivetrain components, and bearings. These parts are made and tested to Rhino specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce mower performance, void warranties, and present a safety hazard. Use genuine Rhino mower parts for economy and safety. (SPRM-1)

**SEE YOUR RHINO DEALER**

## Maintenance Instructions

Before operating the mower, make sure it is properly lubricated and thoroughly inspected. Only a minimum of time and effort is required to regularly lubricate and maintain this machine to provide long life and trouble free operation.

Check all bolt tightness BEFORE initial operation of the mower. Retorque all hardware after the first 4 hours of operation. A torque chart is provided at the end of the Maintenance Section.

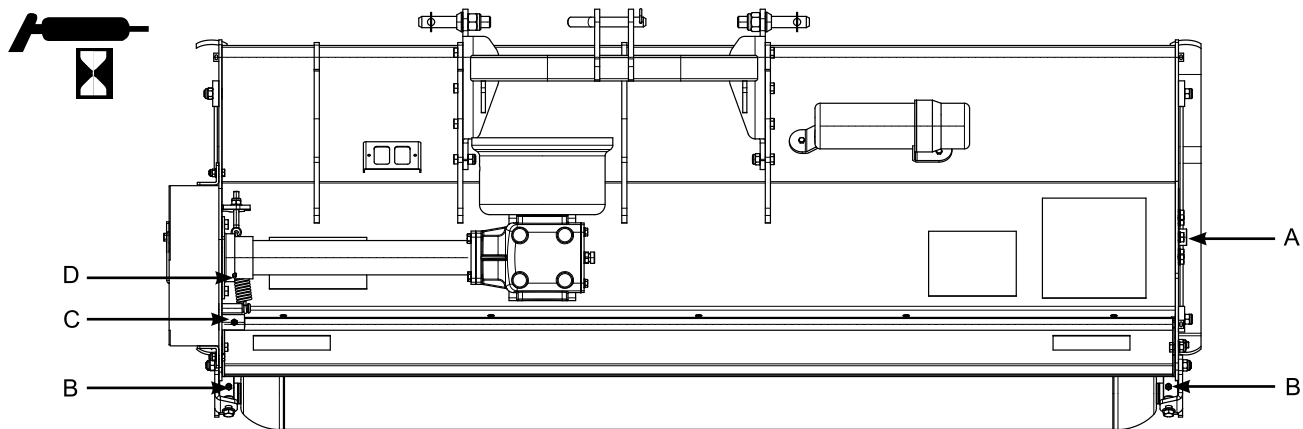
NOTE: Before initial start-up, check outer cuttershaft bearing setscrews.

## Lubrication

Do not let excess grease collect on or around parts, particularly when operating in sandy areas. The accompanying illustration shows lubrication points. The chart gives the frequency of lubrication in hours, based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication.

Use Multi-Purpose Gear Oil P/N 00786250 for all locations shown according to instructions. Be sure to clean the fitting thoroughly before using grease gun. Daily lubrication of the wing driveline slip joint is necessary. Failure to maintain proper lubrication will result in damage to U-joints, gearbox and/or drive shaft.

**WARNING** When attaching QD yoke to tractor PTO or gearbox shaft, it is important that the spring activated locking pin or collar slides freely, and locking balls are seated in groove on splined shaft. A loose yoke could slip off and result in personal injury or damage to cutter.

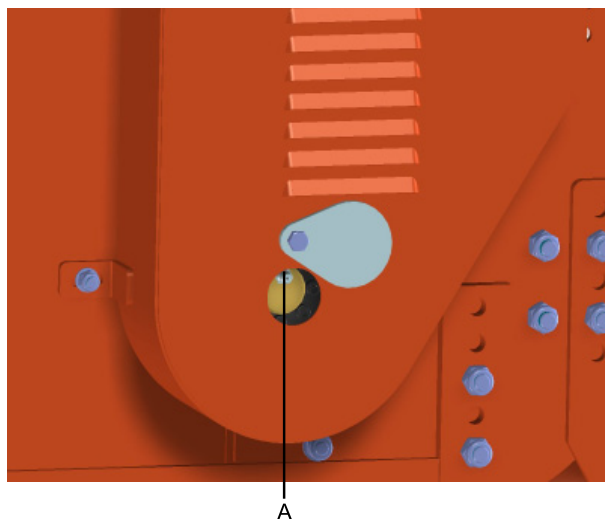
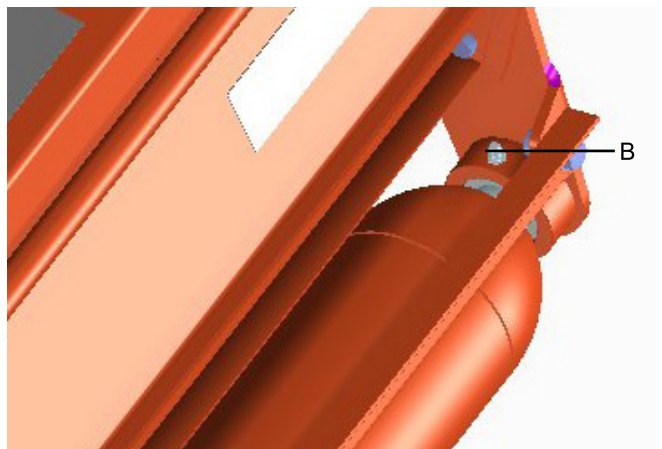
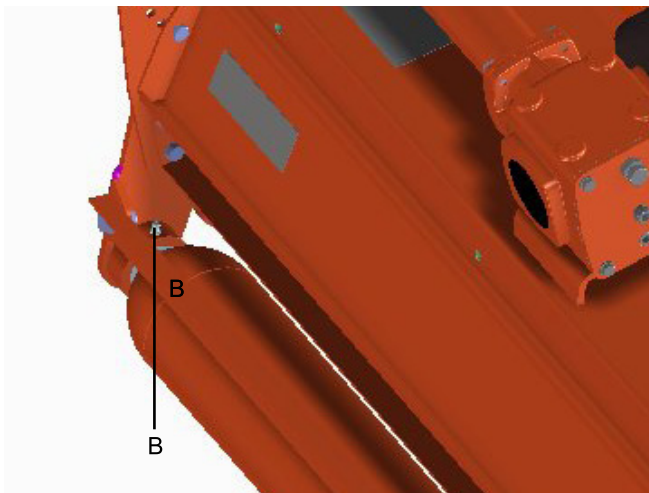
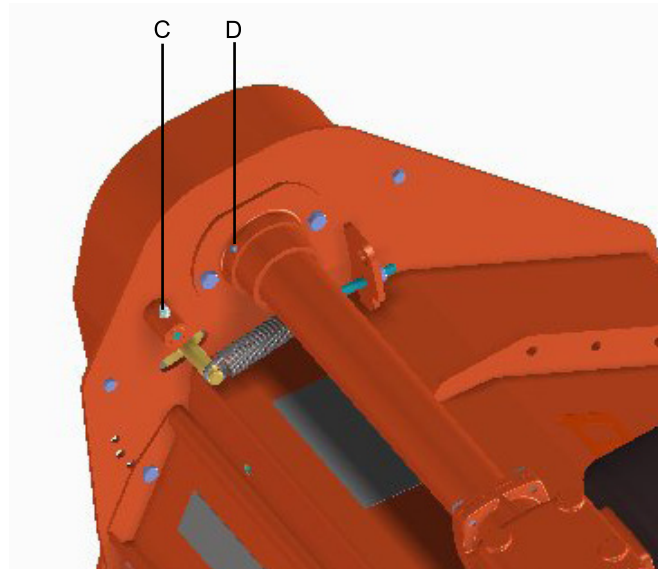
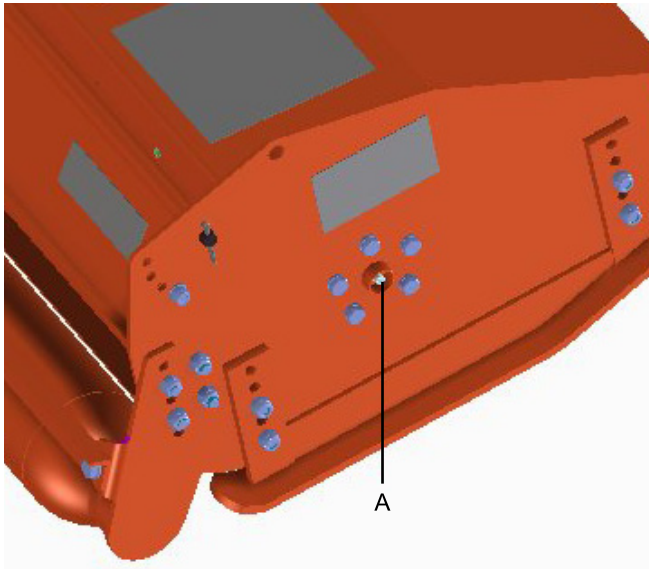


- A Cuttershaft
- B Roller Bearing
- C Rear Mower Idler Arm
- D Bearing

# MAINTENANCE SECTION

LOCATION	LUBE INTERVAL	LEVER ACTION PUMPS
A. Cuttershaft Bearings	8 Hours	4-6
B. Roller Bearings	8 Hours	8-10*
C. Mower Idler Arm	8 Hours	1-2
D. Banjo Bearing	8 Hours	2-3

\*Note: Lubricate roller bearings until lubricant can be seen coming out between roller and bearing housing.



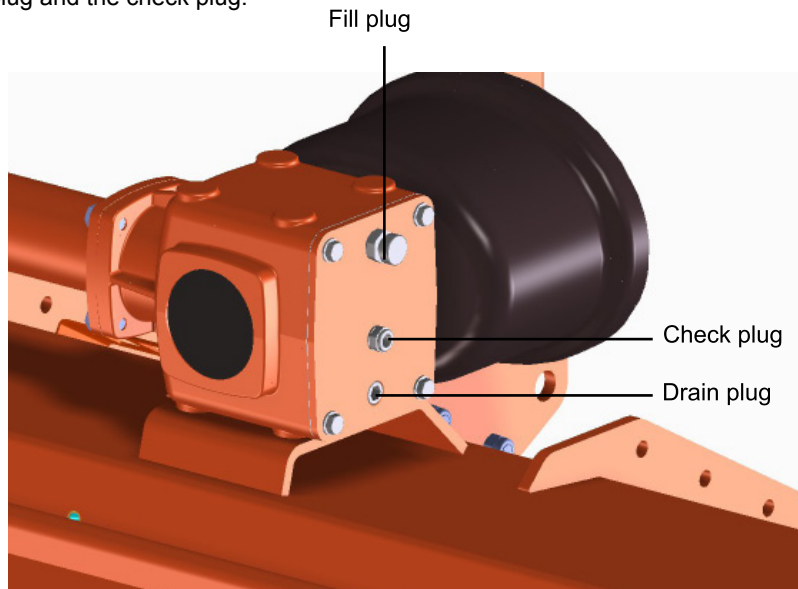
### Gearbox

The gearbox should not require additional lubricant unless the box is cracked or a seal is leaking. It is recommended that the check plug be removed after every 8 to 10 hours of operation and oil added until it shows proper level.

Use Rhino Multi-Purpose gear oil, P/N 00786250.

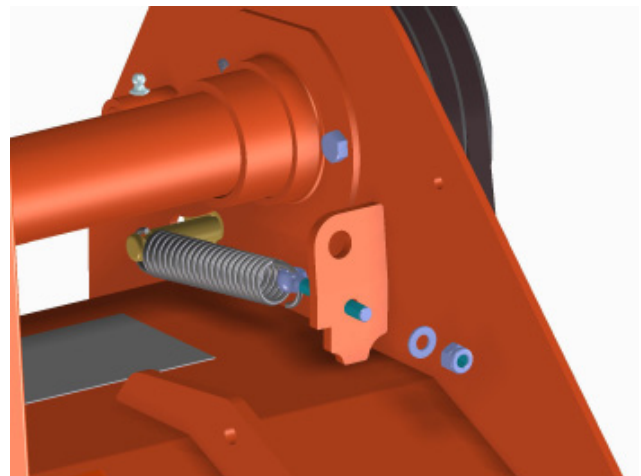
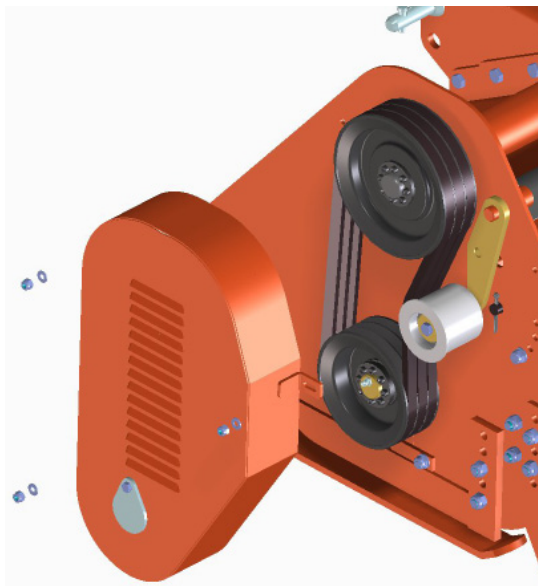
To change the oil:

- position a container under the oil drain plug.
- loosen the oil drain plug (lower part of the sump) and allow the oil to flow out completely.
- dispose of the drained oil in appropriate containers for waste oils.
- screw the previously unscrewed oil drain plug.
- loosen the fill plug and the check plug.
- use a small funnel to top-up with AGIP-ENI BLASIA 150 oil until the level is reached.
- top-up and tighten the fill plug and the check plug.



### Replacing Cutter Unit Drive Belt

1. Place unit on ground or support securely.
2. Remove belt guard.
3. Unscrew the nut that secures the belt tensioner.
4. Remove old belt and install new one.
5. Tighten the nut previously loosened and properly adjust belt tension
6. Reinstall idler arm spring and belt guard.

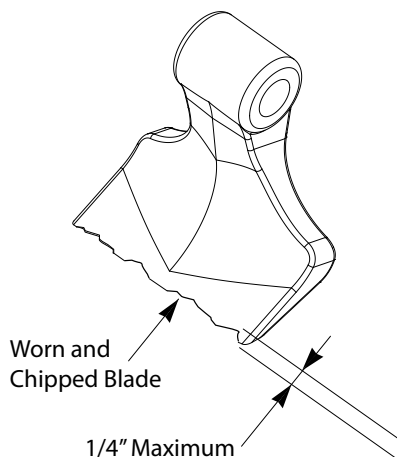


### Flail Blades Inspection

Inspect the Blades daily for abnormal wear. REPLACE ALL BLADES on the carrier IMMEDIATELY if any blades have:

- Become bent or deformed from its original shape, or
- Wear inside the blade bolt hole, or
- Any cracks are visible, or
- Deep gouges in the blade's surface are present, or
- Gouges or chipped areas in the cutting edge are larger than 1/4"(8mm), or
- The material on the leading edge has been worn away by more than 1/4"(8mm)

DO NOT straighten, sharpen, weld or hard-face blades. Failure to replace worn or damaged blades may lead to catastrophic failure of the blades and ejection of the broken part with tremendous force which may cause serious bodily injury or death.



Always replace blades in sets

- Blades that are damaged may indicate severe service or abuse. If one blade is worn or damaged other blades on the same shaft will have been subjected to the same severe service or abuse.
- The Flail rotor turns at speeds exceeding 2000 RPM and is dynamically balanced at the factory.

Differences in blade weight between used blades with loss of material from gouges or wear as compared to new blades can cause severe vibration and damage to the Flail rotor. Always replace blades as complete sets.



Use only genuine Alamo Industrial replacement blades and fasteners. Other blades and fasteners may not meet the Alamo Industrial requirements and could fail during operation resulting in part being thrown out from under the mower.



Never attempt to sharpen blades. OPS-U-0044

### General Information on Flail Mower Vibration

FLAIL MOWERS - INFORMATION BULLETIN NO. 5

#### Excessive Vibration

Vibration is a MONSTER and if allowed to continue unchecked, can cause the complete break-up of a machine in a very short time.

A properly operated Flail Mower will produce very little vibration. If vibration does occur, the mower should be stopped and the trouble corrected, as warranty does not cover failures resulting from continued operation after something happens to cause the mower to vibrate excessively.

Vibration is caused by a rotating part which is out of balance. This could be the cutter shaft or, on those models having a universal slip joint assembly drive shaft, from the drive shaft.

If the two extreme ends of the drive shaft, (the splined yokes which fit on the tractor power take off shaft and on the mower gear box driven shaft), are not parallel, vibration will be evident. This is because of the mechanics of a universal drive wherein the rotational speed thru a universal joint is not uniform. If the ends of a universal drive shaft are parallel, the uneven rotation effect is cancelled out and the machine being driven will be driven at a uniform rate of speed. However, if the ends are not parallel, the uneven rotation effect may be multiplied, resulting in a speeding up and slowing down of the entire mower system (gear box, extension shaft, pulleys, belt, and cutter shaft) each revolution. This effect can be readily noticed if the mower, while running, is raised to an extreme height on the tractor lift.

For smoothest operation, the tilt of the mower should be adjusted (on a 3-point hitch, by adjusting the length of the top link between the tractor and the mower) so that the ends of the drive shaft are parallel when the mower is down in operating position. Raising the mower while running, to extreme heights on the lift should be avoided.

To check where the vibration is originating, first be sure the ends of the universal drive shaft are parallel. Then, if vibration is still present, remove the drive belt and run the mower. If vibration is still present, it most likely is coming from and caused by a bent drive shaft.

## MAINTENANCE SECTION

If so, the shaft should be replaced or straightened. If the vibration is gone - the drive portion of the mower is running smoothly - then the vibration is probably coming from the cutter shaft (it could be a pulley out of balance or a faulty belt with a varying cross section, but this is not likely).

### The cutter shaft will run out of balance if:

1. Wire, rope, string, rags, etc., around the cutter shaft are holding the knives in a folded back position. Remove such foreign objects and be sure all knives are free to swing to the extended position.
2. Knives are missing or broken. Replace missing or broken knives.
3. Knife hanger lugs are broken off shaft. This condition usually results from continued operation in contact with large hard objects where the knife hanger lugs themselves are hitting the hard objects. Lugs should be replaced using arc welding equipment so as not to direct too much heat in one area of the shaft.
4. Cutter shaft ball bearings are worn enough to have radial "play" in them. Replace ball bearing and other worn parts to eliminate "play".
5. Shaft is bent. The shafts are straight within a couple of thousandths of an inch when they are made. It is possible that they will become bent in use, such as if the shaft is hooked on a stump while the tractor is moving forward at good speed.
6. Shafts are operated at improper speed. Rotating shafts have what is known as a natural period of vibration. The same is true of the cutter shafts on the Flail Mowers.

The actual speed at which the harmonic will occur will vary with each mower and each installation. To avoid this harmonic vibration when operating the mower, it may be necessary to adjust the engine speed of the tractor up or down.

Some units have a harmonic which occurs below the nominal operating speed. On these units, it will be noticed that there is always a little vibration at a particular RPM as the mower is being sped up to operating speed. This occurs as the shaft passes through its normal harmonic vibration point. As long as the mower is opened at the proper speed, then harmonic vibration will not be an issue.

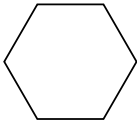
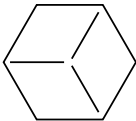

## Proper Torque For Fasteners

The chart lists the correct tightening torque for fasteners. When bolts are to be tightened or replaced, refer to this chart to determine the grade of bolts and the proper torque except when specific torque values are assigned in manual text.

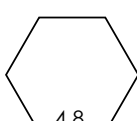
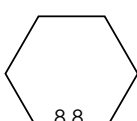
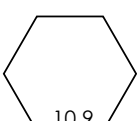

### RECOMMENDED TORQUE IN FOOT POUNDS UNLESS OTHERWISE STATED IN THE MANUAL \*

**NOTE:** These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphited or molydisulphide greases or other extreme pressure lubricants are used. This applies to both UNF fine and UNC coarse threads.

Proper Torque values for bolts that are measured in inches

Bolt diameter	 Head Marking No Marks Grade Two Pound-Foot Value Dry	 Head Marking Three Lines Grade Five Pound-Foot Value Dry	 Head Marking Six Lines Grade Eight Pound-Foot Value Dry
1/4"	5.5	9	12.6
6/16"	11	18	26
3/8"	20	33	46
7/16"	32	52	76
1/2"	60	80	115
9/16"	70	115	100
6/8"	100	160	225
3/4"	175	280	400
7/8"	175	460	660
1"	270	675	975
1-1/8"	376	860	1360
1-1/4"	630	1200	1960
1-3/8"	700	1550	2550
1-1/2"	930	2100	3350

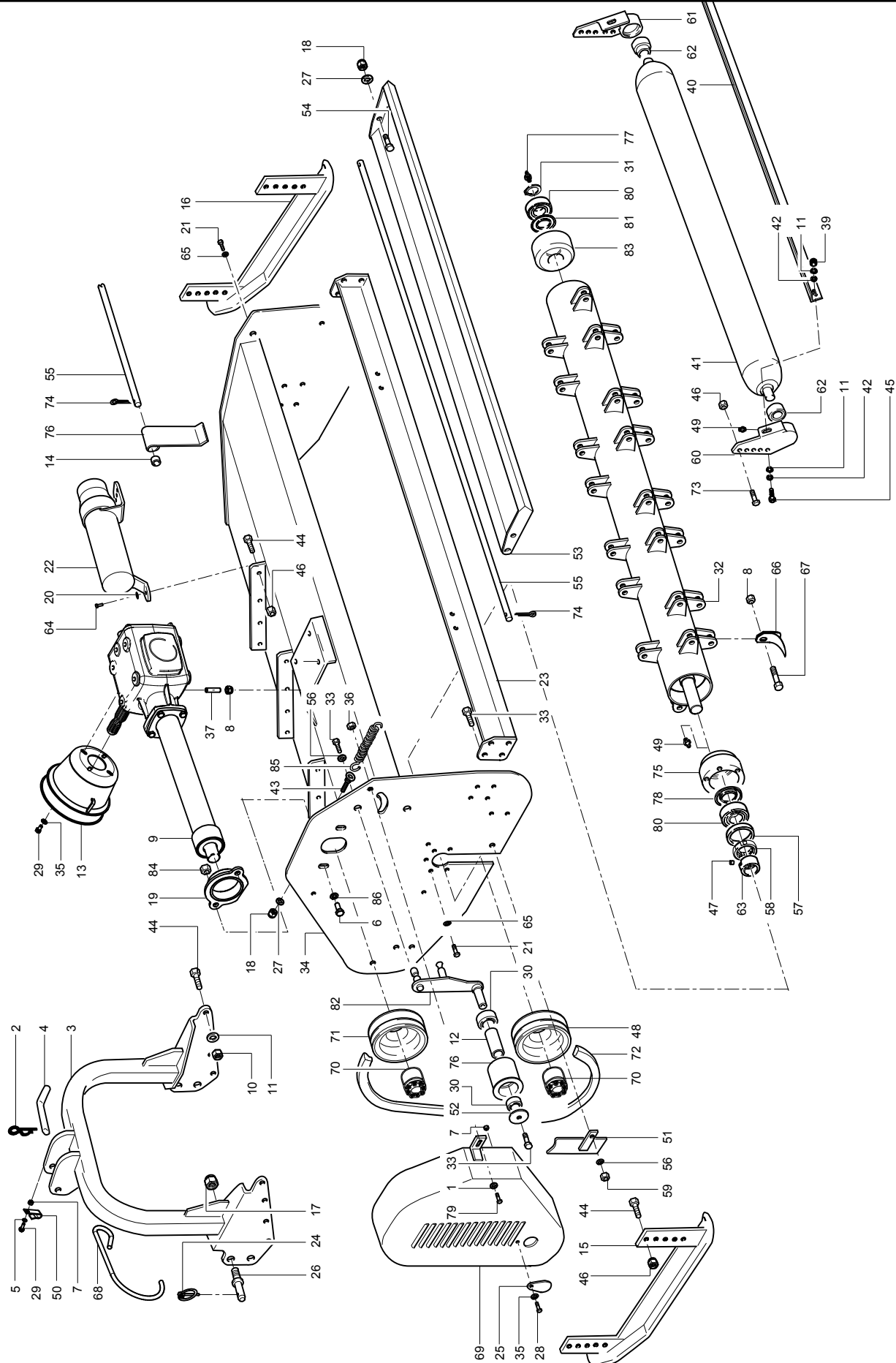
Proper Torque values for metric bolts

Bolt diameter	 Head Marking 4.8 Pound-Foot Value Dry	 Head Marking 8.8 or 9.8 Pound-Foot Value Dry	 Head Marking 10.9 Pound-Foot Value Dry	 Head Marking 12.9 Pound-Foot Value Dry
6mm	4.5	8.5	12	14.5
8mm	11	20	30	35
10mm	21	40	60	70
12mm	37	70	105	120
14mm	80	110	165	190
18mm	92	175	255	300
18mm	125	250	360	410
20mm	180	360	600	580
22mm	250	475	675	800
24mm	310	600	860	1000
27mm	460	875	1260	1600
30mm	625	1200	1700	2000

# **PART LISTING SECTION**



# PART LISTING SECTION



MOWER 04/13

Part listing section 5 - 1

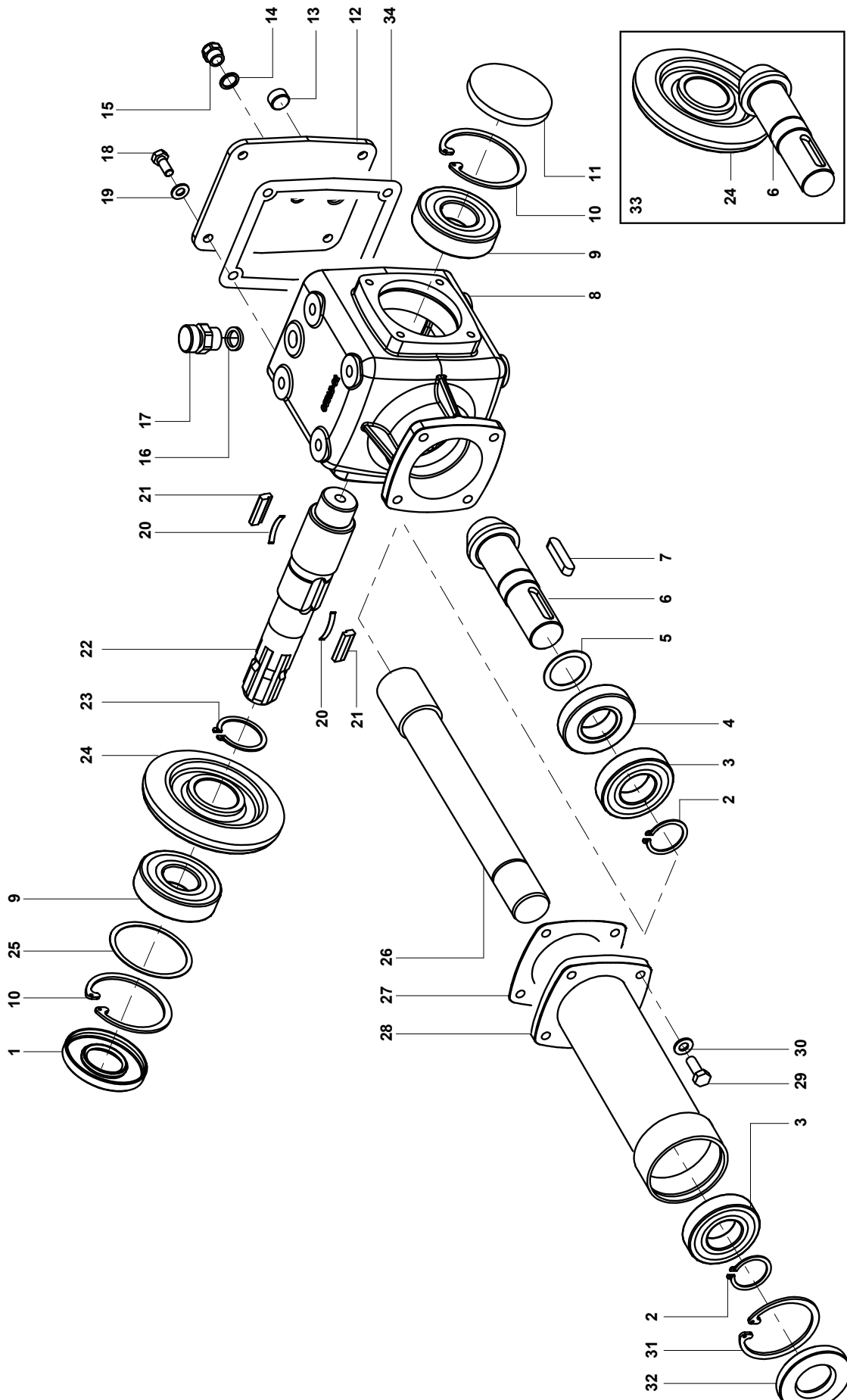
## PART LISTING SECTION

ITEM	PART. NO.	QTY	DESCRIPTION
1	701511C	3	Washer Ø8 UNI 6592
2	37107B13	1	Split pin Ø4
3	00788747	1	3 PT hitch frame
4	00762333	1	Pin, top link
5	701511C	1	Washer Ø8 UNI6592 140HV
6	61387CB	2	Screw TE UNI 5739 M14x40
7	70093C	2	Self locking nut M8 DIN980
8	00772648	34	Self locking nut M12 DIN980 for RSM5
8	00772648	40	Self locking nut M12 DIN980 for RSM6
9	00788748	1	Complete gearbox kit
10	00762372	8	Nut M12 PG UNI 5587
11	9100206	14	Washer Ø12 UNI 1751
12	00788749	1	Bushing
13	00788425	1	Protection
14	00788750	2	Spacer
15	00788751	1	Skid, LH
16	00788752	1	Skid, RH
17	00788753	2	Self locking nut M24 PG UNI 7473
18	00788492	4	Self locking nut M10 PG UNI 7473
19	00788754	1	Support, flange
20	70169C	4	Washer Grower DIN 1751 Ø6
21	00762462	12	Screw M12x1,75x25 UNI 5739
22	00776031	1	Canister, part manual
23	00788755	1	Support - frame - RMS5
23	00788756	1	Support - frame - RSM6
24	00762331	2	Linch pin Ø10
25	00788757	1	Bonnet
26	00788758	2	Pin, lower hitch
27	701512C	3	Washer Ø10 UNI 6592
28	02958784	1	Screw M8x20x1,25 UNI 5739
29	61354C8	5	Screw M8x1,25x16 UNI 5739
30	3676002	2	Bearing 6205 2RS
31	00763207	1	Shaft elastic ring Ø35 DIN 471
32	00788759	1	Shaft RSM5
32	00788760	1	Shaft RSM6
33	61368C8	9	Screw M10x1,5x25 UNI 5739
34	00788760	1	Frame RSM5
34	00788762	1	Frame RSM6
35	00788490	2	Washer Ø8 UNI 6593
36	00788763	3	Self locking nut M8 PG UNI 7473
37	00788764	4	Stud screw M12 L25
38	00788824	15	Protection blade RMS5
38	00788824	18	Protection blade RMS6
39	00762372	2	Nut M12 UNI 5587
40	00788765	1	Scraper RSM5
40	00788766	1	Scraper RSM6
41	00788767	1	Roller RSM5
41	00788768	1	Roller RSM6
42	701513C	6	Washer Ø12 UNI 6592
43	00788769	1	Screw M10 L=105
44	02959661	16	Screw M12x1,75x35 UNI 5739
45	61377C8	4	Screw M12x1,75x30 UNI 5739
46	00787993	12	Self locking nut M12 PG UNI 7473
47	00788770	1	Dowel pin M6x10x1 UNI 5927
48	00788771	1	Driving pulley
49	00762535	3	Grease nipple M8x1,25
50	00788772	1	Clip
51	00788773	1	Protection, bracket
52	00788774	1	Lock, spacer
53	00788775	1	Bonnet RSM5
53	00788776	1	Bonnet RSM6
54	61368C8	2	Screw M10x1,5x25 UNI 5739
55	00788777	1	Pin RSM5, belt adjuster
55	00788778	1	Pin RSM6, belt adjuster
56	00755964	2	Washer Ø10 UNI 1751
57	00788779	1	Metal ring
58	00762375	1	Oil seal Ø45x62x10
59	00756024	1	Nut M10 PG UNI 5587
60	00788780	1	Left roller support

## PART LISTING SECTION

ITEM	PART. NO.	QTY	DESCRIPTION
61	00788781	1	Right roller support
62	00788782	2	Bearing UC-206
63	00788783	1	Spacer Ø45
64	00762399	4	Screw M6x16 UNI 5739
65	9100206	12	Washer Ø12 DIN 1751
66	00788825	30	Duscksfoot blade RMS5
66	00788825	36	Duscksfoot blade RMS6
67	00788784	30	Screw M12x1.25x45 RMS5 - special
67	00788784	36	Screw M12x1.25x45 RMS6 - special
68	00788785	1	Hook
69	00788786	1	Guard, belt
70	00788787	2	Self-locking collar
71	00788788	1	Driving pulley
72	00723992	3	V-type belt B48
73	02959661	4	Screw M12x1,75x35 UNI 5739
74	70497	4	Cotter pin Ø5x50 UNI 1336
75	00788789	1	Support, shaft
76	00788790	1	Belt adjuster bushing
77	00766457	1	Grease nipple M10x1,25
78	00788791	1	Ring, shaft 22207/JV
79	61358C8	3	Screw M8x1,25x25 UNI 5739
80	00788792	2	Bearing 22207 - spherical DBL roller bfarang SKF 35x72x23
81	00788793	1	Nilos ring 22207/AV
82	00788794	1	Lever, belt
83	00788795	1	Support, shaft
84	70096C	2	Self locking nut M14 PG DIN 980
85	00788796	1	Spring, extension
86	00755940	2	Washer Ø14 UNI 6592

# PART LISTING SECTION



## PART LISTING SECTION

ITEM	PART. NO.	QTY	DESCRIPTION
1	00787143	1	Seal (double rim) 35x80x10 pp
2	00763207	2	Shaft elastic ring Ø35 DIN 471
3	00564800	2	Bearing 6207
4	00754757	1	Bearing 30207
5	00788826	1	Shim 35x47x1
6	00788827	1	Bevel pinion z11
7	710845	1	Parallel key 10x8x45 UNI6604
8	N/A	1	Gearbox case
9	00753223	2	Bearing
10	00763210	2	Internal circlip Ø80 DIN 472
11	00788828	1	Seal cap Ø80
12	00788829	1	Back cover
13	00765616	1	Fill plug m18
14	00785981	1	Aluminium washer m14
15	00762419	1	Oil level plug m14
16	00785993	1	Aluminium washer m18
17	00765694	1	Pressure relief plug m18
18	02958784	4	Screw M8x20 UNI5739
19	4701511C	4	Flat washer M8 UNI6592
20	00788830	2	Flat spring
21	00788831	2	Parallel key free wheel
22	00788832	1	Input shaft
23	00788833	1	Ext. circlip Ø42 DIN 471
24	00788834	1	Bevel gear z33
25	00788835	1	Shim 70x80x0.8
26	00788836	1	Shaft, out put
27	00788837	1	Seal GT30
28	00788838	1	Protection tube
29	61368C8	4	Screw TE UNI 5739 M10x25
30	701512C	4	Washer Ø10 UNI 6592
31	00762510	1	Circlip Ø 72 UNI 7437
32	00762506	1	Oil seal DIN 3760
33	00788839	1	Bevel gears kit
34	00788949	1	Gasket

[illegible]



