



ROTO-KING

ROUND BALE PROCESSOR



RK-500

OWNER/OPERATOR'S MANUAL



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QUICK REFERENCE GUIDE

*READ YOUR OWNERS MANUAL
READ YOUR POWER UNIT MANUAL*

FOR BASIC OPERATOR TIPS SEE PAGE 15 IN OWNERS MANUAL

Q: How does the ROTO-KING process a bale?

A: The 3rd rotor back is a counter rotation rotor that shreds and feeds out the material.

Q: How big of a power unit (i.e. tractor or skid steer loader) do I need to operate the Roto King?

A: A tractor of 75 + H.P. and a skid steer of 75+ H.P. with a minimum hydraulic capacity of 12 GPM and 1500 PSI and 2800 lb lift capacity. Keep in mind, these H.P. recommendation are based on a 1500# bale.

Q: How much lift capacity should the power unit provide?

A: 2800 lbs plus is recommended. Remember, your Roto King weighs 1100 lbs. If you have a lift capacity of 2800 lbs, this only leaves you with a working capacity of 1700 lbs.

Q: Are rear weight packages recommended?

A: Yes. The more rear weight you have, the more stable and safe your operating platform will be.

Q: What is minimum and maximum hydraulic input flow and pressure?

A: Minimum input flow is 12 GPM and pressure is 1500 PSI.
Maximum input flow is 20 GPM and pressure is 3000 PSI

Q: How fast do I need to run my power unit?

A: Operator needs to keep in mind that the unit needs 12 GPM of oil flow and 1500 PSI. Typically full throttle is required for optimal performance.

Q: **What kind of bales can the Roto King handle?**

A: Almost any large round bale. Corn Stalk, bean stalk, straw, alfalfa, grass etc. twine tie or net wrap. The shorter, the dryer the product the better. Avoid long stem, high moisture products.

Q: **Can I use the 4 stabber tines to move my stacked bales?**

A: Yes, the tines are rugged enough to position bales for loading.

Q: **What is operating height?**

A: Whatever height is comfortable for you the operator. Many operators like to have the Roto King high enough so they can clearly see the discharge flow.

Q: **Can I reverse the turning direction to facilitate the processing of the bale?**

A: Yes. It is recommended to “reverse” the bale rotation, as needed to remove the twine or net wrap. Reversing the bale may also be necessary if rotation of the bale stops for any reason.

Q: **What do I do if the bale “plugs” the Roto King?**

A: By reversing the hydraulic flow back and forth, you can usually clear the plug and return to bale processing. Under worst case scenario, it might be necessary to dump out the bale and reload it to continue.

Q: **What kind of drive chain is used on the Roto King?**

A: The drive chain is Diamond brand #60 HS or Drives brand #60 HZ chain and should be replaced only with properly rated chain.

Q: **How large of a bale can the Roto King handle?**

A: Size should be limited to 6’ bales or smaller.

Q: **How much time does it take to process bales?**

A: It depends on the material being handled. Corn stalks are faster than straw bales which are faster than hay bales.

Q: **Do I need to remove the net wrap or twine from the bale before processing?**

A: It is the operator’s personal preference. You either cut the twine or net wrap off your bales before processing or remove from rotors later.

Q: **How often do I need to clean the rotors?**

A: The cleaner you keep the rotors, the better it works; however, you can usually process up to 20 – 25 bales before you need to clean them.

INTRODUCTION & GENERAL INFORMATION

Thank you for purchasing your new Roto-King Round Bale Processor (RK-500). Your RK-500 was designed to load and process large round bales such as hay, straw, cornstalks, etc... The RK-500 attaches to the front end of most tractor loaders, skid steers, telehandlers, and wheel loaders. These front-end loader mounting kits are available through your local dealer from MDS Manufacturing Co., Inc.

The purpose of this manual is to assist you in safely assembling, operating, and maintaining your Roto-King Bale Processor. With proper usage and service as outlined in this manual, the RK-500 will provide you many years of dependable operation. Any person who will be assembling, operating, maintaining, or working with this product is required to read and completely understand the information and instructions contained in this manual. If anyone does not understand something that is contained in this manual, please contact your dealer or MDS Manufacturing Co., Inc. to obtain further assistance.

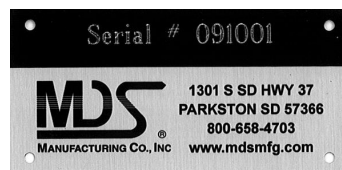
The illustrations and data used in this manual were current at the time of printing, but due to possible engineering and/or production changes, this product may vary slightly in detail. MDS Manufacturing, Co., Inc. reserves the right to make modifications to this product without notification.

Throughout this manual, reference may be made to:

- Power Unit – the engine-driven machine to which this product must be attached
- Right, Left, Front, or Rear – Directions that are determined with relation to the operator of the equipment seated in the operator's seat
- IMPORTANT -- Precautions that must be followed to prevent damage to equipment
- NOTICE – Precautions that must be followed to prevent substandard performance

SERIAL NUMBER

The serial number plate is located at the top center of the back of the frame of the Roto-King. Please refer to the serial number when ordering parts or requesting additional information.




PRODUCT WEIGHT

THE BASE WEIGHT OF THE RK-500 IS 1,035 LBS. This weight does not include the options such as mounting kit, hose kit, etc.

SAFETY

SAFETY TERMS

Throughout this manual, the terms **DANGER**, **WARNING** and **CAUTION** are used to indicate the degree of hazard to personnel if proper safety procedures are not followed. These words will be used in conjunction with the Safety Alert Symbol: a dark triangle containing a white exclamation mark.

| | | | |
|--|--|------------------------|-----------------------------------|
|  | The Safety Alert Symbol means: | | |
| | - ATTENTION! | - BECOME ALERT! | - YOUR SAFETY IS INVOLVED! |
| DANGER | Indicates an imminently hazardous situation, which, if not avoided, WILL result in death or serious injury. | | |
| WARNING | Indicates a potentially hazardous situation, which, if not avoided COULD result in death or serious injury. | | |
| CAUTION | Indicates a potentially hazardous situation, which, if not avoided, MAY result in minor or moderate injury; OR | | |
| May also be used to alert against unsafe practices, which may result in damage to property. | | | |

The safety information given in this manual does not replace any safety codes, insurance needs, federal, state and local laws.

YOU CAN PREVENT ACCIDENTS!

The best safety device is a careful operator. MDS Manufacturing Co., Inc. and your dealer ask that **YOU** be that careful, responsible equipment operator.

Pay attention to the job at hand. Do not let your mind lose concentration on what you are doing. No accident prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the equipment.

If accidents are to be prevented (*and accidents can be prevented*), that will come from equipment operators who accept complete responsibility and anticipate the results of their actions.

The designer, the manufacture, and the safety engineer all help create a safe product, but their combined efforts can be wiped out with a single careless act by the operator of that product.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

YOU are responsible for the SAFE operation and maintenance of **YOUR** RK-500 Bale Processor.

YOU are responsible to familiarize yourself, and anyone else who will assemble, operate, maintain, or work around this product, with the safety information contained in this manual.

YOU are responsible to read ALL information contained in this manual to any operators or maintenance personnel who are not fully able to read the written English language. Whether

YOU read the manual as written or translate it into another language **YOU** must make certain that all operators and maintenance personnel have complete understanding of the full and exact contents of this manual.

YOU can reduce the risk of injury or death by following all safety precautions and by using good safety practices.

SAFETY INSTRUCTIONS



WARNING

Obey all safety instructions listed in this section and throughout this manual. Failure to obey instructions in this section could result in death or serious injury.

| |
|--|
| BEFORE ATTEMPTING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE OR OTHER WORK ON OR NEAR THIS PRODUCT: |
|--|

- READ AND COMPLETELY UNDERSTAND THIS MANUAL.
- READ AND COMPLETELY UNDERSTAND THE MANUALS PROVIDED WITH YOUR POWER UNIT, LOADER AND QUICK-ATTACH.
- Read and understand all safety signs on this product and on your power unit, loader and quick-attach.
- Know all your controls and know how to quickly stop all power unit movements, the processor movement, and the engine in case of emergency.
- Know and obey all applicable government rules, O.S.H.A. regulations, local laws and other professional guidelines for your operation.
- Make sure that anyone who will be assembling, mounting, maintaining, repairing, removing and/or storing this product:
 - Has been instructed in the safe operation of this product and of the power unit and the quick-attach to which this product is attached.
 - Is physically and mentally capable of the safe operation of this type of equipment.
 - Is not under the influence of drugs or alcohol.
 - Is carefully supervised from a safe distance, especially if such person is inexperienced.
 - Wears personal protective equipment (i.e. hardhat, safety glasses, work gloves, protective shoes, respirator, ear protection, etc.)
 - Does not wear loose fitting clothes, loose or uncovered hair or any accessories (jewelry, necktie, scarf, wrist watch, etc.) that can catch and entangle on moving parts.
 - Has annually reviewed all safety instructions.
- Know and follow good work practices when assembling, mounting, maintaining, repairing, removing and storing this product:
 - Work on a level surface in a well lit area.
 - Keep the area clean and dry.

- Use properly grounded electrical outlets and tools.
- Use the right tool for the job.
- Make sure that your tools are in good condition for performing the desired function.
- When using tools, wear the protective equipment specified by the tool manufacturer (i.e. hardhat, safety glasses, work gloves, protective shoes, etc.)

WHEN YOUR POWER UNIT IS USED DURING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE OR OTHER WORK ON OR NEAR THIS PRODUCT:

- Before leaving the operator's station or before beginning any type of work on this product, lower this product to the ground, apply your power unit's parking brake, stop the engine, remove the starter key, wait for all moving parts to stop and then relieve all pressure in the hydraulic lines. *Refer to your power unit's operator's manual for instructions on how to relieve hydraulic pressure in lines.*
- Know your loader's safe lifting and operating capacity and the weight of this product. See the specifications in this manual for the weight of this product and refer to your power unit's and loader's operator's manuals for safe operating limits. Lift capacity may be reduced if using a quick-attach.
- Never allow anyone, except the operator, to be around the power unit or this product when either is in motion.
- Do not start up unless others are clear of the work area.
- Do not allow riders on this product or the power unit.
- Do not stand or climb on this product when raised.
- Never operate controls from the ground. Operate the controls only from the operator's station.
- Never leave the equipment unattended with the engine running or with this product raised on the loader.
- Be aware of the added weight and width of this product. Reduce travel speeds accordingly, especially when traveling over rough ground.
- Keep this product close to the ground and under control when transporting.
- When transporting, be sure processor does not block view of vehicle lights or road.

WHEN DEALING WITH HYDRAULICS DURING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE OR OTHER WORK ON OR NEAR THIS PRODUCT:

- Hydraulic fluid under pressure can penetrate skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible!
- If any fluid penetrates the skin, GET IMMEDIATE MEDICAL ATTENTION!!
- Wear safety glasses, protective clothing and use a sound piece of cardboard or wood when searching for hydraulic leaks. DO NOT USE YOUR HANDS!
- Before connecting or disconnecting hydraulic hoses, read your tractor or power unit's operator's manual for detailed instructions on connecting and disconnecting hydraulic attachments.
- Make certain that all parts meet the specifications for this product when installing or replacing hydraulic hoses or fittings.
- After connecting hydraulic lines:

- Slowly and carefully raise the loader and cycle the rollback/dump cylinders to check hose clearances and to check for any interference.
- Operate the hydraulics on this product to check hose clearances and to check for any interference.
- Make certain that the hoses cannot interfere with or actuate the quick-attach mechanism.
- Make certain that hoses will not be pinched, or get tangled, in any equipment.
- Do not lock the auxiliary hydraulics of your power unit in the "ON" position.
- Refer to your power unit's operator's manual and this manual for procedures and intervals, then inspect and maintain the entire hydraulic system to insure that the fluid remains clean, that all devices function properly and that there are no fluid leaks.

WHEN MOUNTING THIS PRODUCT TO YOUR POWER UNIT:

- Refer to the operator's manuals of your power unit, your loader and your quick-attach for special or detailed mounting instructions.
- This product should fit onto the quick-attach or loader arms of your power unit the same as the original products that were designed by your loader/quick-attach manufacturer.
- If this product does not fit properly, contact your dealer or MDS Manufacturing Co., Inc. before operating.
- Never place your finger into the mounting plate or 3-point hitch or loader holes. A slight movement of the power unit or this product could cause serious injury.

BEFORE EACH USE, THOROUGHLY INSPECT THIS PRODUCT AND:

- Replace all damaged or excessively worn parts and hardware only with genuine MDS Manufacturing Co., Inc. parts or with properly rated fasteners, hydraulic hoses or fittings.
- Make certain that all locking pins, latches and connection devices are properly installed and secured.
- Make certain that all shields are in place and secure.
- Remove all foreign objects from processor.

WHEN OPERATING THIS PRODUCT IN ACCORDANCE WITH DESIGN INTENTIONS:

- Make sure bales are free from foreign objects.
- Drive slowly through gates and doors.
- Know you loader's safe operating weight limit and the weight of your loader attachment.

WHEN ADJUSTING, SERVICING OR REPAIRING THIS PRODUCT:

- Make no modifications to your processor.
- When making repairs, use only genuine MDS Manufacturing Co., Inc. parts or, for fasteners, hydraulic hoses or hydraulic fittings, use only properly rated parts.
- Replacement parts, for parts with safety signs attached, must also have safety sign attached.

**THINK SAFETY!
WORK SAFELY!**

SAFETY SIGN LOCATIONS

INSTRUCTIONS:

- Keep all safety signs clean and legible.
- Replace all missing, illegible or damaged safety signs.
- Replacement parts for parts with safety signs attached must also have safety signs attached.
- Safety signs are available free of charge from MDS Manufacturing Co., Inc.

PLACEMENT OR REPLACEMENT OF SAFETY SIGNS:

- Clean the area of application with non-flammable solvent; then, wash the same area with soap and water.
- Allow the surface to fully dry.
- Remove the backing from the safety sign, exposing the adhesive surface.
- Apply the safety sign to the position shown in the diagram and smooth out any bubbles.

| No. | Part Number | Description | Quantity |
|-----|-------------|---|----------|
| 1 | 190-0191 | Chain Wrap Diagram | 1 |
| 2 | 190-0192 | Danger - Turn Engine Off Before Cleaning Rotors | 1 |
| 3 | 190-0193 | Danger - Moving Machinery Keep Hands & Feet Clear | 2 |
| 4 | 190-0194 | Caution - Do Not Operate Without Guards In Place | 2 |
| 5 | 190-0195 | Caution - Pinch Points | 2 |

1



2



3



4

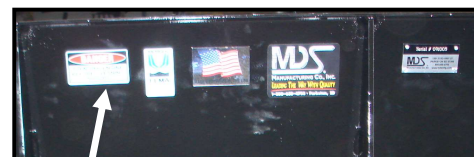


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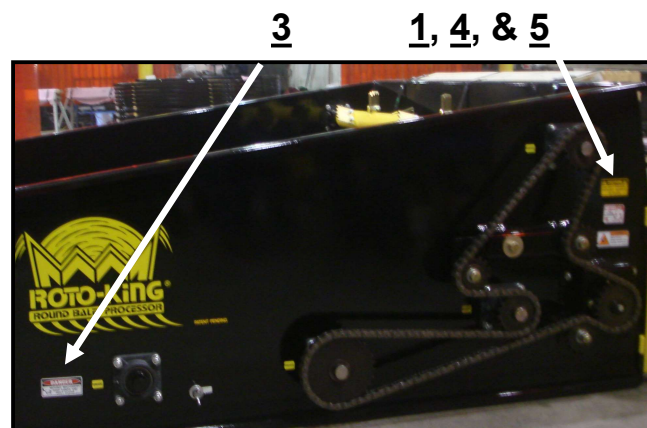


3

4 & 5



2 (back of machine)



3

1, 4, & 5

POWER UNIT SPECIFICATIONS

For optimum performance of the Roto-King Round Bale Processor (RK-500), the following operating range of your power unit's hydraulic system should be followed:

| MINIMUM | MAXIMUM |
|--------------------|--------------------|
| 12 GPM at 1500 PSI | 30 GPM at 3500 PSI |

- The hydraulic motor on your RK-500 unit is preset at 20 GPM and 1800 PSI.
- This unit will run at slower hydraulic oil flow, but the time to process the bale will increase.
- For oil flow above 20GPM, there is a flow control valve that bypasses any excess flow. However, any flow above 30GPM will cause the oil to heat up and potentially cause damage to the valve and motor. The power unit needs to be idled down into the recommended operating range. NOTE: Most tractors running at 1,400 – 1,600 RPM will supply approximately 20GPM of flow.

IMPORTANT: Exceeding any of the recommended power unit specifications

- **CAN** result in damage to your power unit and/or this product and
- **WILL** void all MDS Manufacturing Co., Inc. warranties.

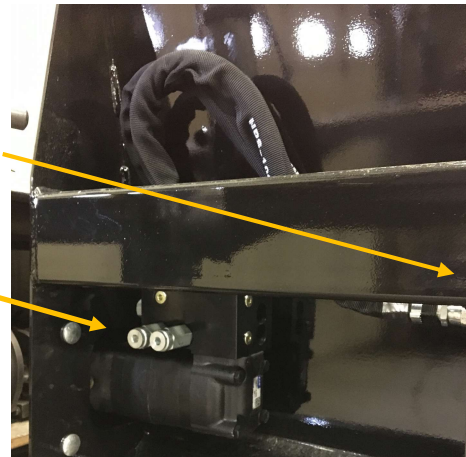
****NOTICE****

The Roto-King comes standard with two 6' long hoses to connect with the power unit's hydraulics. You need to supply whichever quick coupler matches the unit's couplers. The hoses have a dash 8 (-8) male o-ring end fitting. These hoses are long enough to reach the quick disconnects on most skid steers. They may also be long enough to reach the remote couplers on most tractor loaders....**BUT**....most remote couplers are restricted to 7 gpm of oil flow. This is not enough oil flow to run your Roto-King. You **must** run your processor from the remote ports at the rear of the tractor. MDS Mfg. offers a hose kit (2 of 3/4" x 25' long hoses with adapters) designed specifically for this application. Most customers prefer to leave these 3/4" hoses attached to their tractor and disconnect the Roto-King where the 25' and the 6' long hoses couple. *See the sketches on the following page.*

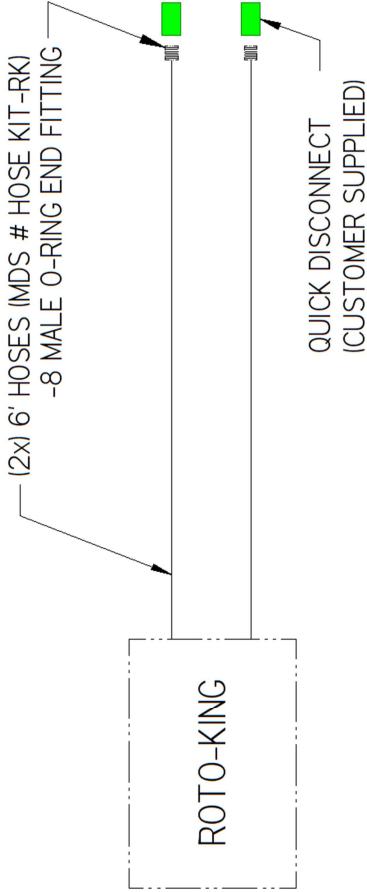


CONNECT HERE

NOT HERE



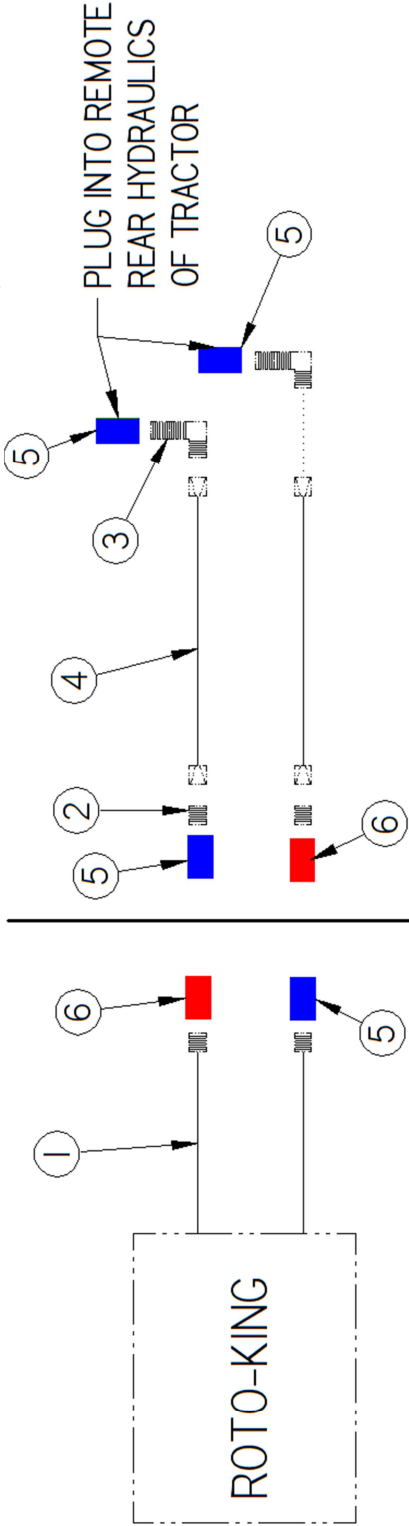
REFERENCE THIS SKETCH IF ROTO-KING IS PURCHASED FOR A SKID STEER:



REFERENCE THIS SKETCH IF ROTO-KING IS PURCHASED FOR A TRACTOR LOADER:

| No. | Part Number | Description | Quantity |
|-----|-------------|---|----------|
| 1 | 190-0181 | HOSE; HYDRAULIC, 73" (1/2" X -10FJIC X -8MORING) (SLEEVE) | 2 |
| 2 | 190-0188 | ADAPTER, -10M JIC X -8M ORING | 2 |
| 3 | 190-0189 | ELBO, 90°, X-LONG, -10M JIC X -8M ORING | 2 |
| 4 | 190-0190 | HOSE, 3/4" X 25' LONG W/ -10F JIC ENDS | 2 |
| 5 | 190-0207 | PIONEER END FITTING, MALE W/ -8F ORING | 4 |
| 6 | 190-0208 | PIONEER END FITTING, FEMALE W/ -8F ORNG | 2 |

**** ALL PARTS INCLUDED WITH RK-252 HOSE KIT ****

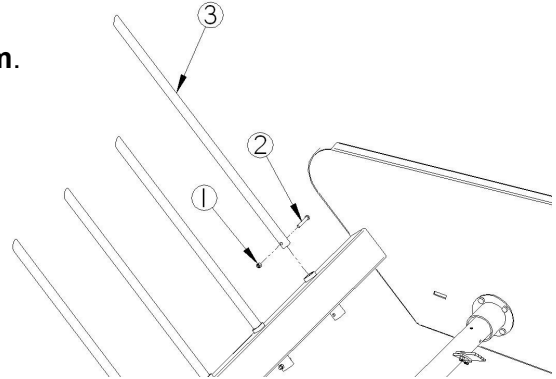


RK-500 ASSEMBLY INSTRUCTIONS

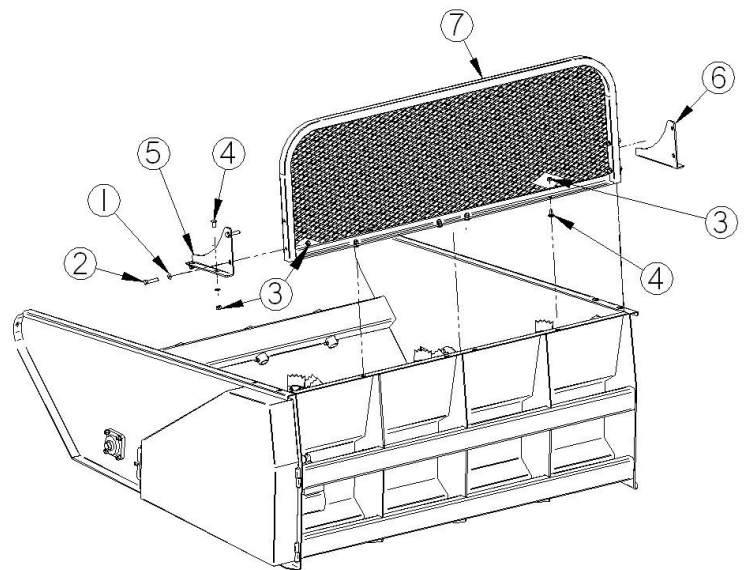
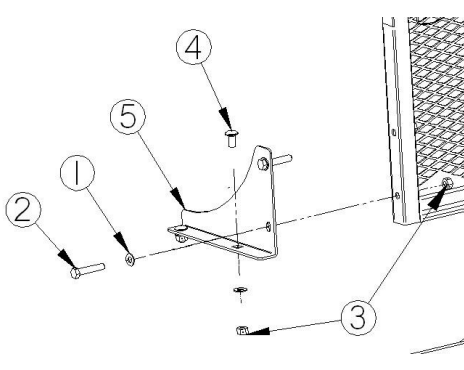
ASSEMBLY

1. Bolt in bale loading spears. **Bevel edge to bottom.**

| No. | Part Number | Description | Quantity |
|-----|-------------|----------------------|----------|
| 1 | 100-0017 | Nut, nylon, 3/8" NC | 4 |
| 2 | 100-0059 | Bolt, 3/8" x 2.5" NC | 4 |
| 3 | 230-0147 | Spear | 4 |

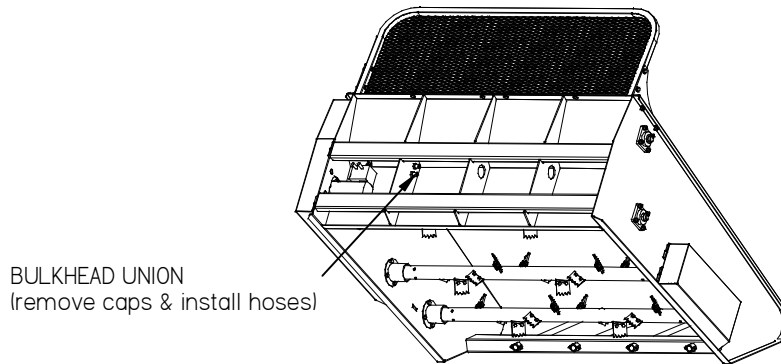


2. Bolt on screen guard and support brackets.



| No. | Part Number | Description | Quantity |
|-----|-------------|---|----------|
| 1 | 100-0033 | Washer, flat, 1/2" | 8 |
| 2 | 100-0107 | Bolt, 1/2" x 2.5" NC | 4 |
| 3 | 100-0145 | Nut, punchlock, 1/2" NC | 12 |
| 4 | 100-0149 | Bolt, carriage (short shoulder), 1/2" x 1" NC | 8 |
| 5 | 120-0544 | Roll guard bracket - LH | 1 |
| 6 | 120-0555 | Roll guard bracket - RH | 1 |
| 7 | 300-0797 | Roll guard frame | 1 |

3. Remove steel caps from the hydraulic bulkhead union fittings and install the supplied hydraulic hoses (1/2" hose X 72" long with protective sleeving). A quick disconnect needs to be installed on the end of the hoses. (this is not supplied due to the multitude of quick disconnects available) The end fitting on the hydraulic hose is a dash 8 (-8) male o-ring.



PROCESSOR INSTALLATION INSTRUCTIONS



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 4-8 of this manual) BEFORE BEGINNING ANY PROCESSOR MOUNTING.

1. Place this product on a firm, level surface that is large enough to safely accommodate this product, your power unit and all workers involved in the mounting process.
2. Be sure all connection points are properly secured.
3. Refer to the operator's manual(s) for your power unit, loader and quick-attach and follow the mounting instructions contained therein.
4. Carefully raise the loader arms and cycle the tilt cylinders to check clearances and to verify that all mounting procedures have been successfully completed.

PROCESSOR HYDRAULIC CONNECTION



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 4-8 of this manual) BEFORE BEGINNING ANY HYDRAULIC CONNECTION.

1. Attach the quick couplers to your power unit as per the instructions in your power unit's operator's manual.
2. Carefully raise the loader arm and cycle the tilt cylinders to check hose clearances and to check any interference.
3. Engage hydraulics & cycle machine forward and reverse for 2-3 minutes to ensure machine is operating properly.

PROCESSOR OPERATION



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 4-8 of this manual) BEFORE BEGINNING ANY PROCESSOR OPERATION.



DANGER

FAILURE TO OBEY THE FOLLOWING PROCEDURE WILL RESULT IN DEATH OR SERIOUS INJURY.

- AVOID CONTACTING OVERHEAD WIRES
- USE CAUTION WHEN RAISING LOADED PROCESSOR. OBJECTS COULD FALL FROM PROCESSOR TOWARD BYSTANDERS OR OPERATOR.
- REMOVE ALL FOREIGN OBJECTS FROM BALES.

NOTICE: Refer to your power unit's operator's manual for safe **operating limit** and use of **counterweights**. **SKIDSTEERS REQUIRE A 2,700 LB. LIFT CAPACITY MINIMUM.**

1. Load one bale at a time. If possible, use other bales as a 'backstop' to assist in loading the bale into the Roto-King.
2. Using the spears at the front of your RK-500, position the bale so that when it is loaded, it will 'roll' into the bed of the processor.
3. Tilt the bucket forward until the spears are parallel to and slightly touching the ground. Center the bale on the tines. Move toward the bale until the bale loading spears are fully under the bale, then roll the bucket back to load the bale.
4. Once the bale is loaded, engage the hydraulics and the bale will start to rotate. Having the bottom of the bucket at eye level is suggested. Reversing the rotation of the bale may be necessary in order to break through the twine or net wrap. The bale should then unroll/disassemble and discharge through the bottom of the bucket. If a hay 'plug' occurs, the reversing action may again be necessary to clear the plug & complete the processing of the bale. Typically, the bale will unroll the easiest in the direction that it was rolled.
 - ☞ **TIP 1:** If the bale is rolling toward the operator, the bucket should be tilted about 15° - 20° forward. Likewise, if the bale is rolling away from the operator, then the bucket should be tilted about 15° - 20° back.
 - ☞ **TIP 2:** If the bale has been reduced to about an 18" – 24" core, and it has been reversed 4-5 times; it may be necessary to simply dump the bale out of the bucket. This core may want to continually 'plug' the processor and therefore stall out the machine causing unnecessary bypassing (heating) of oil through the valves and also undue strain on your sprocket/chain system.
 - ☞ **TIP 3:** On products such as cornstalks or straw, it may be necessary to roll the opposite direction or slow down the operation if a 'windrow' is desired because these items tend to discharge quickly.
5. It is the operator's personal preference whether to remove the bale binding from the bale before processing or to remove the bindings from the rotors after bale processing. You can usually process up to 20 – 25 bales before you need to clean the rotors.
6. Always lower the processor to the ground; set the parking brake; stop the engine; remove ignition key & wait for all moving parts to stop before leaving the operator's seat.



LOADING BALE



BALE IN LOADED POSITION



SHREDDING BALE



WINDROW OF HAY

MAINTENANCE & SERVICE

PROCESSOR MAINTENANCE

Regular maintenance is the key to long equipment life and safe operation. It is very important that these maintenance functions be performed as described below.

BEFORE FIRST USE

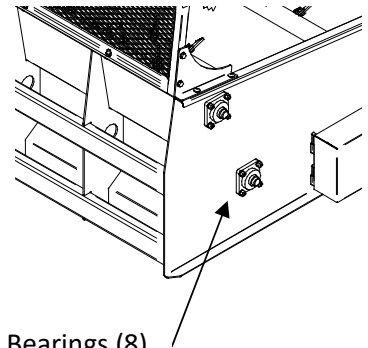
- Inspect the attachment for shipping damage. If damage does exist, do not operate until the damaged parts have been replaced or repaired.

BEFORE EACH USE

- Check for loose or badly worn parts.
- Make sure that all hydraulic fittings are tightened and that there are no leaks in any fittings or hoses.
- Inspect rotors and all rotating parts for twine or net wrap build-up.
- Make sure that all safety signs are in place, are clean and are legible.
- Check to make sure processor is properly mounted and locked down to the power unit.

AFTER EVERY 10 HOURS OF OPERATION

- Grease all flange bearings. (*refer to drawing below*)
- Inspect and tighten Allen screws on bearings and sprockets.
- Inspect and lubricate drive chains. If chain is loose, it must be tightened to ensure proper wear on sprockets and to prevent slipping when processing bale.

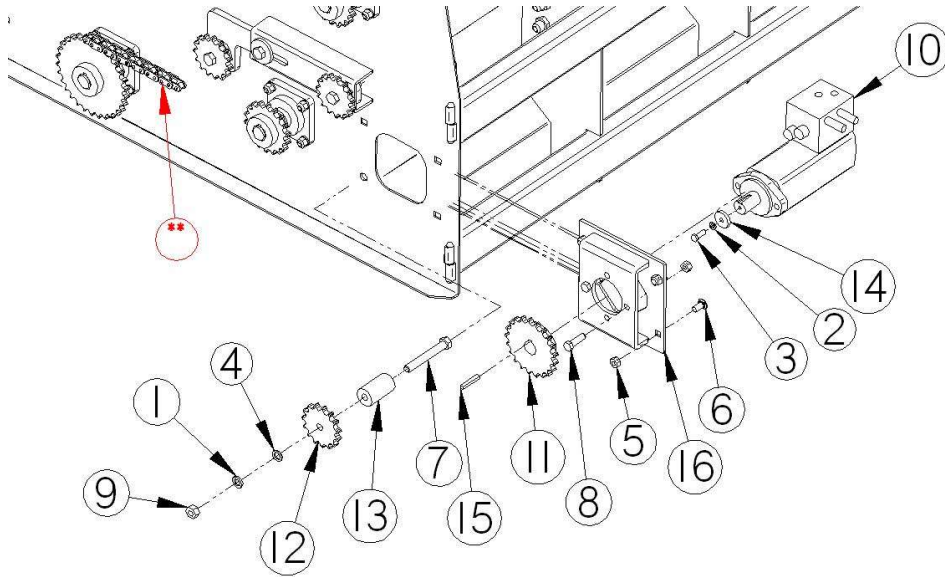


PROCESSOR SERVICE

- Shut off engine, set parking brake and relieve hydraulic pressure before connecting or disconnecting hydraulic lines. Refer to your power unit's manual for instruction on how to relieve hydraulic pressure in lines.
- Before applying pressure to the system, be sure that all connections are tight and be sure there are no damaged hoses, lines or fittings.
- Wear safety glasses and use metal or wood when searching for leaks. Do not use your hands.

PART ASSEMBLY

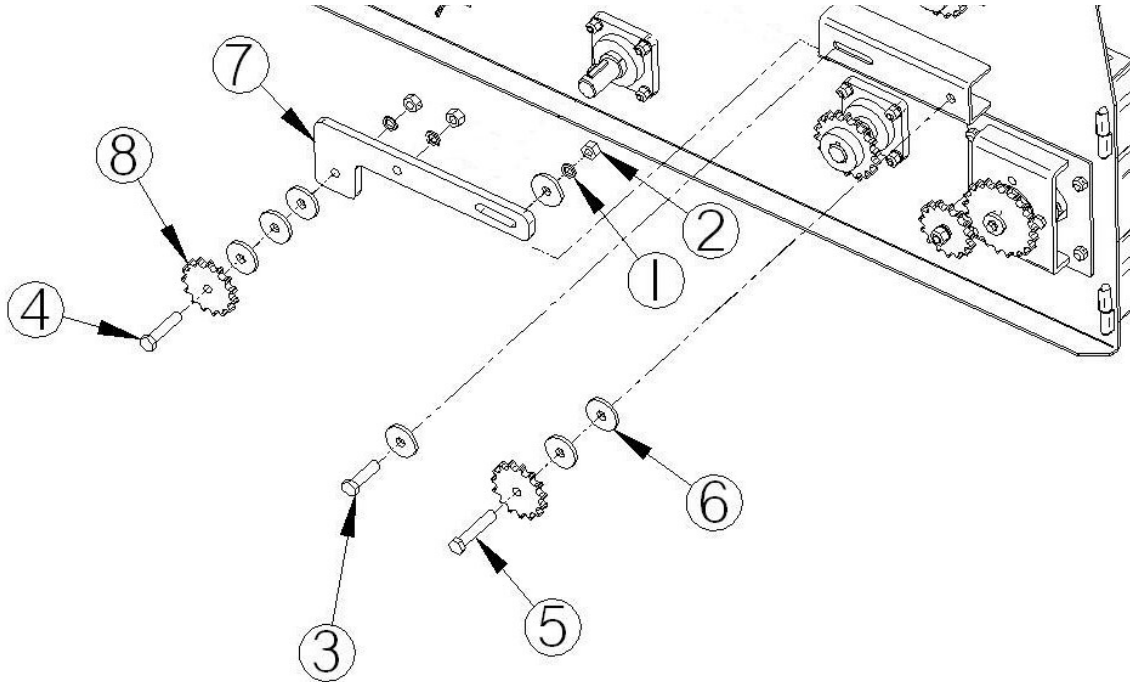
MOTOR MOUNTING PARTS LIST



| No. | Part Number | Description | Quantity |
|-----|-------------|---|----------|
| 1 | 100-0005 | Washer, lock, 5/8" | 1 |
| 2 | 100-0011 | Washer, lock, 3/8" | 1 |
| 3 | 100-0122 | Bolt, 3/8" x 1" NC | 1 |
| 4 | 100-0144 | Washer, machinery, 5/8" | 1 |
| 5 | 100-0145 | Nut, punchlock, 1/2" | 5 |
| 6 | 100-0149 | Bolt, carriage (short shoulder), 1/2" x 1" NC | 3 |
| 7 | 100-0150 | Bolt, 5/8" x 5" NC GR8 | 1 |
| 8 | 100-0151 | Bolt, 1/2" x 1.75" NC GR8 | 2 |
| 9 | 100-0153 | Nut, 5/8" NC GR8 | 1 |
| ** | 190-0170 | Chain - #60HZ - 125" ** | 1 |
| 10 | 190-0172 | Motor w/ valve | 1 |
| 11 | 190-0173 | Sprocket, #60 x 21 teeth | 1 |
| 12 | 190-0175 | Sprocket, Idler, #60 x 15 teeth | 1 |
| ** | 190-0184 | Connecting Link - #60HZ ** | 1 |
| 13 | 220-0120 | Idler spacer | 1 |
| 14 | 230-0162 | Washer, 1.5" OD x 3/8" ID x 1/4" TH | 1 |
| 15 | 240-0003 | Key, 5/16" | 1 |
| 16 | 300-0801 | Motor mount assembly | 1 |

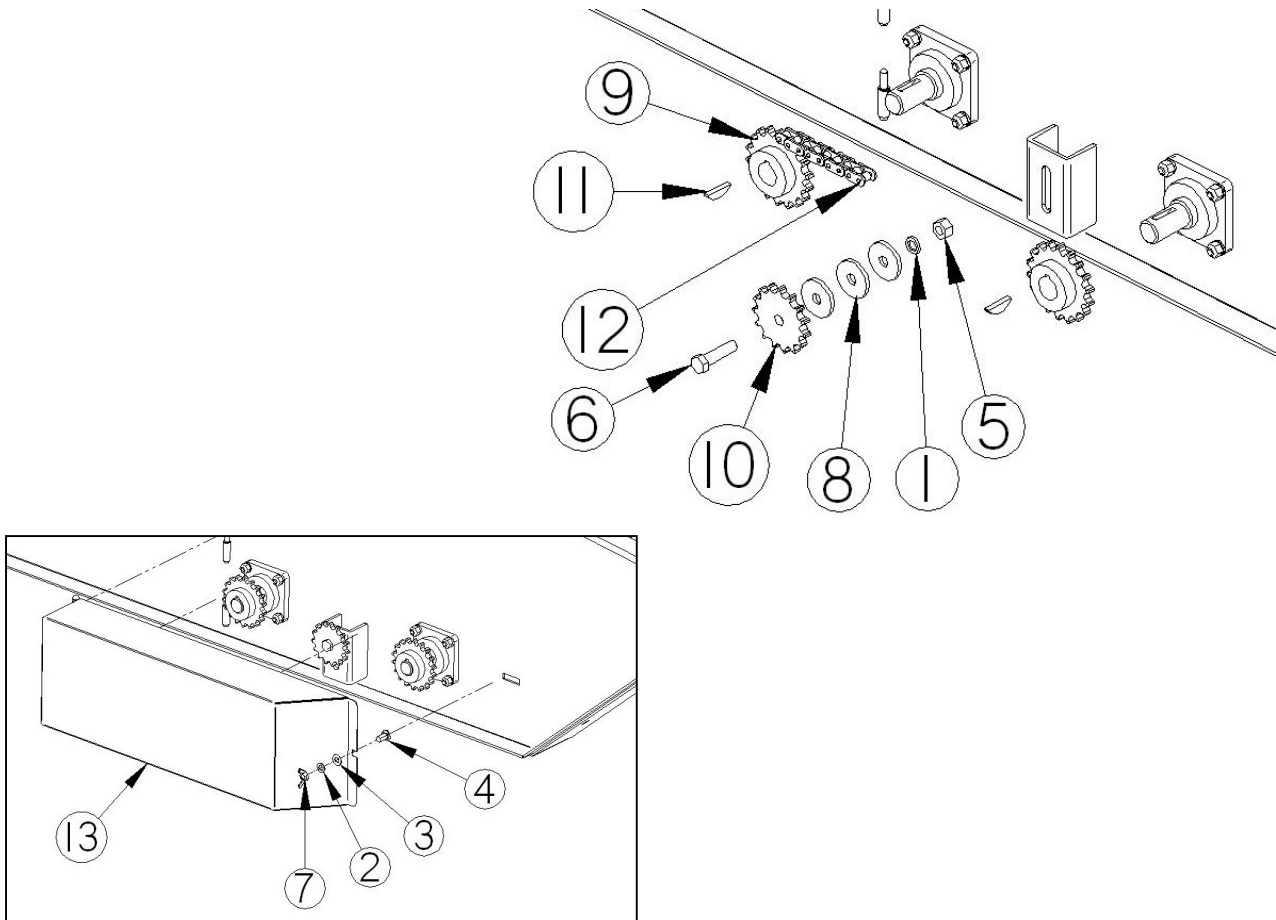
** THIS CHAIN IS NOT STANDARD & CAN BE PURCHASED FROM YOUR DEALER THRU MDS MFG.

IDLER TENSIONER PARTS LIST



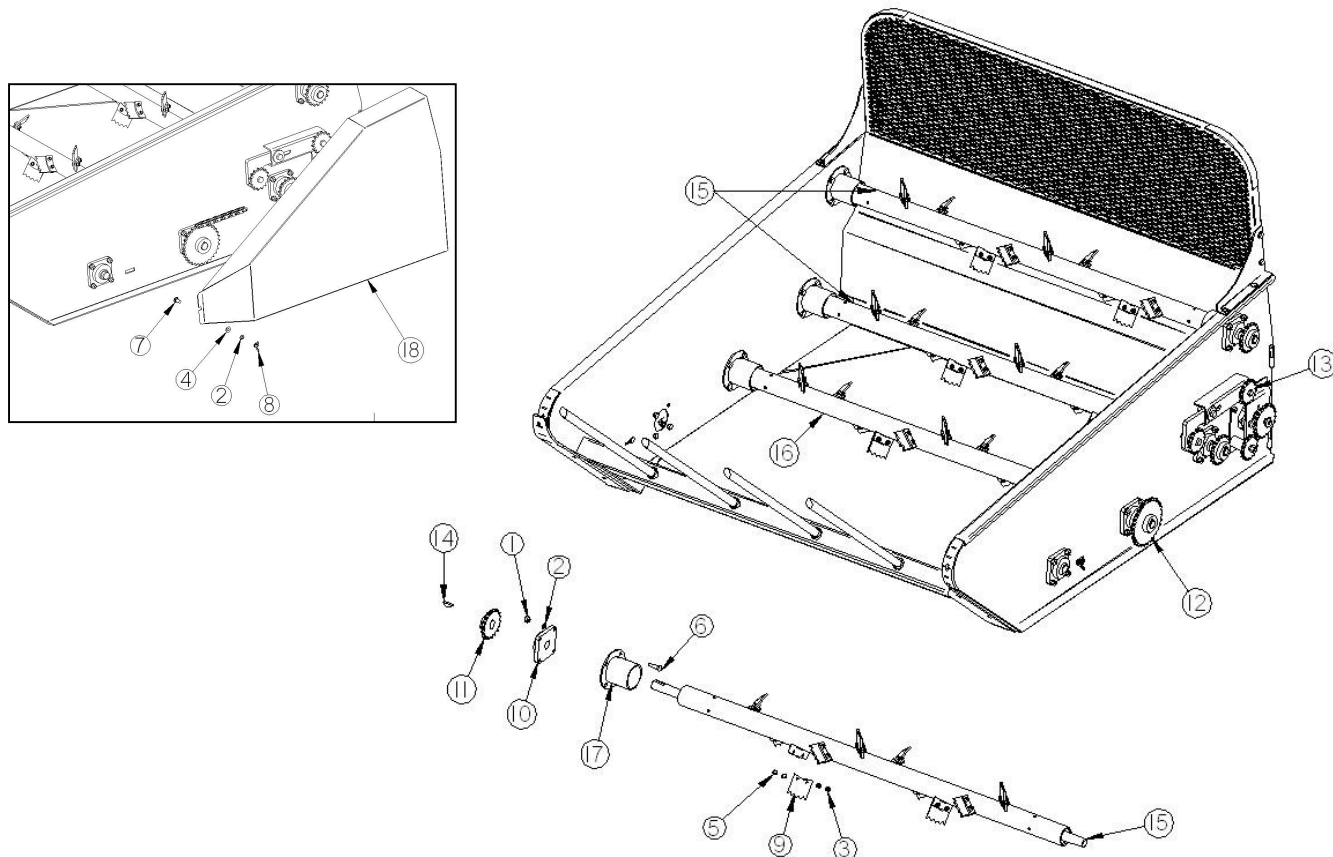
| No. | Part Number | Description | Quantity |
|-----|-------------|---------------------------------|----------|
| 1 | 100-0005 | Washer, lock, 5/8" | 3 |
| 2 | 100-0153 | Nut, 5/8" NC GR8 | 3 |
| 3 | 100-0154 | Bolt, 5/8" x 2.5" NC GR8 | 1 |
| 4 | 100-0156 | Bolt, 5/8" x 3" NC GR8 | 1 |
| 5 | 100-0157 | Bolt, 5/8" x 3.5" NC GR8 | 1 |
| 6 | 120-0054 | PF Washer | 7 |
| 7 | 120-0596 | Idler tensioner | 1 |
| 8 | 190-0175 | Sprocket, Idler, #60 x 15 teeth | 2 |

RIGHT SIDE PARTS LIST



| No. | Part Number | Description | Quantity |
|-----|-------------|--|----------|
| 1 | 100-0005 | Washer, lock, 5/8" | 1 |
| 2 | 100-0008 | Washer, lock, 1/2" | 1 |
| 3 | 100-0033 | Washer, flat, SAE, 1/2" | 1 |
| 4 | 100-0149 | Bolt, carriage, short shoulder, 1/2" x 1" NC | 1 |
| 5 | 100-0153 | Nut, 5/8" NC GR8 | 1 |
| 6 | 100-0154 | Bolt, 5/8" x 2.5" NC GR8 | 1 |
| 7 | 100-0155 | Nut, wing, 1/2" NC | 1 |
| 8 | 120-0054 | PF Washer | 3 |
| 9 | 190-0167 | Sprocket, #60 x 18 tooth | 2 |
| 10 | 190-0175 | Sprocket, Idler, #60 x 15 teeth | 1 |
| 11 | 190-0197 | Key, woodruff, 5/16" | 2 |
| 12 | 190-0206 | Chain, #60 heavy chain - 51" | 1 |
| 13 | 300-0830 | Small shield | 1 |

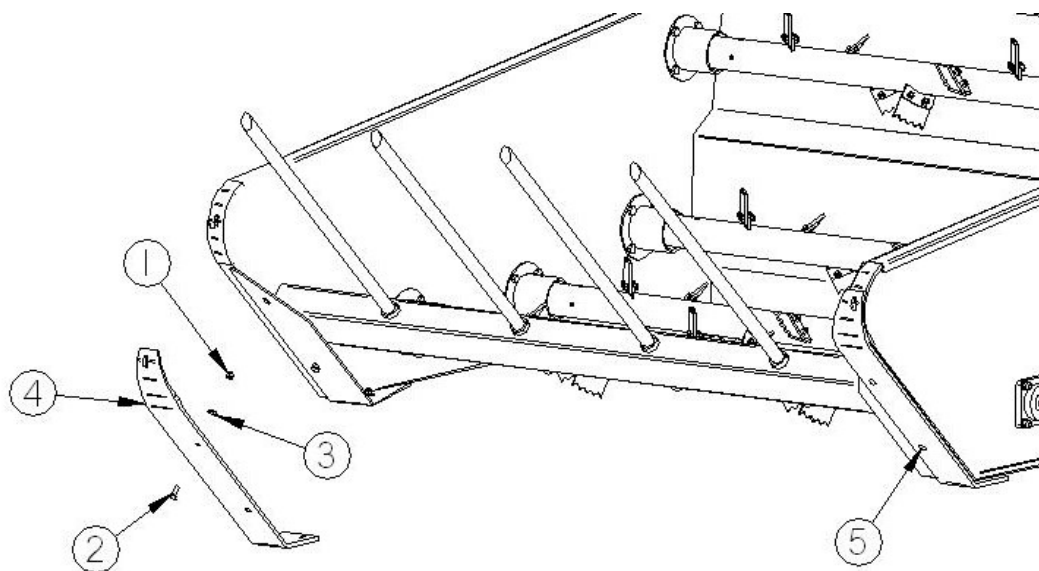
ROTOR PARTS LIST



| No. | Part Number | Description | Quantity |
|-----|-------------|--|----------|
| 1 | 100-0007 | Nut, 1/2" NC | 28 |
| 2 | 100-0008 | Washer, lock, 1/2" | 29 |
| 3 | 100-0017 | Nut, nylon, 3/8" NC | 40 |
| 4 | 100-0033 | Washer, flat, SAE, 1/2" | 1 |
| 5 | 100-0122 | Bolt, 3/8" x 1" NC | 40 |
| 6 | 100-0146 | Bolt, 1/2" x 1.75" NC | 28 |
| 7 | 100-0149 | Bolt, carriage, short shoulder, 1/2" x 1" NC | 1 |
| 8 | 100-0155 | Nut, wing, 1/2" NC | 1 |
| 9 | 120-0543 | Serrated tooth | 40 |
| 10 | 190-0166 | Bearing, 4-bolt flange | 8 |
| 11 | 190-0167 | Sprocket, #60 x 18 teeth | 4 |
| 12 | 190-0174 | Sprocket, #60 x 30 teeth | 1 |
| 13 | 190-0175 | Sprocket, Idler, #60 x 15 teeth | 3 |
| 14 | 240-0003 | Key, 5/16" | 5 |
| 15 | 300-0798 | Rotor - 1 keyed shaft | 3 |
| 16 | 300-0799 | Rotor - 2 keyed shafts | 1 |
| 17 | 300-0827 | Rotor guard | 8 |
| 18 | 300-0831 | Large shield | 1 |

SKID PACKAGE OPTION

****IF YOU ARE RUNNING YOUR ROTO-KING ON CONCRETE FOR THE MAJORITY OF THE TIME, WE SUGGEST PURCHASING THE SKID PACKAGE OPTION TO REDUCE WEAR ON THE FRAME AND RETAIN THE INTEGRITY OF THIS PRODUCT.**



| No. | Part Number | Description | Quantity |
|-----|-------------|---------------------------------|----------|
| 1 | 100-0017 | Nut, nylon, 3/8" | 8 |
| 2 | 100-0045 | Bolt, carriage, 3/8" x 1.25" NC | 8 |
| 3 | 100-0125 | Washer, flat, 3/8" | 8 |
| 4 | 120-0583 | Skid, bolt-on, LH | 1 |
| 5 | 120-0584 | Skid, bolt-on, RH | 1 |

WARRANTY

MDS Manufacturing Company, Inc (MDS) warrants to the original purchaser that only the items manufactured by MDS are free from defects in material and workmanship under normal use and service, when properly installed one (1) year from the date of purchase.

Any claimed defective part or component must be returned to the factory at the purchaser's expense for inspection by MDS. The obligation of MDS is limited to repairing or replacing at the factory any part or component determined to it's satisfaction to be defective. MDS shall not be liable for incidental or consequential damages. All transportation charges shall be paid by the purchaser. Purchaser must notify MDS of a claim by registered or certified mail, return receipt requested within thirty (30) days after discovery or the claim shall be deemed waived. All returns MUST have RGA # before MDS will accept the return. NO EXCEPTIONS!

This Warranty is expressly in lieu of all other warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. No warranty is given by MDS for parts, components or trade accessories furnished by MDS but not manufactured by it. These items are covered by the warranty of their manufacture, if any. No person, firm or corporation including the selling dealer is authorized to assume for MDS any other liability in connection with the sale of these goods.