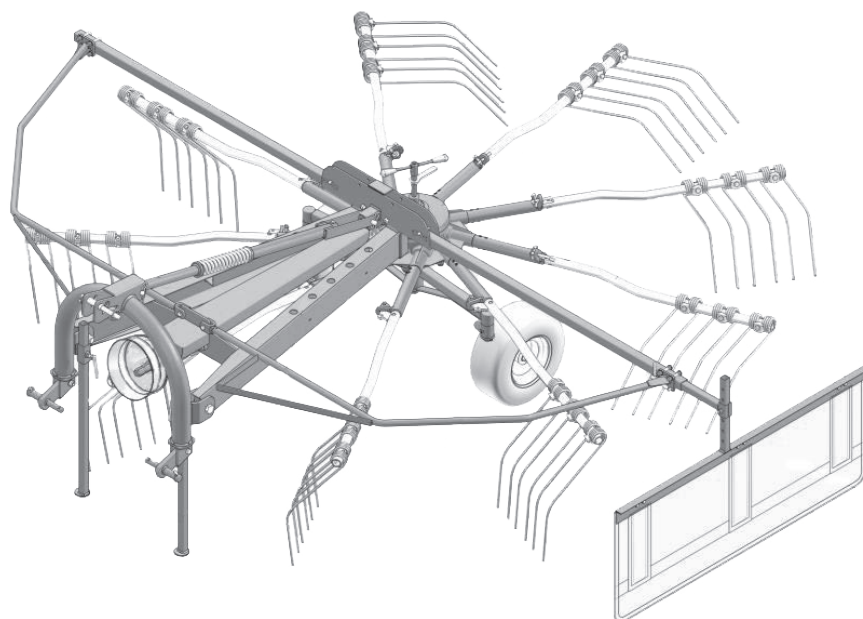


# Farm King

## OPERATOR AND PARTS MANUAL

### Rotary Rake

Model RR320





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**Manufacturer’s Statement:** For technical reasons, Buhler Industries Inc. reserves the right to modify machinery design and specifications provided herein without any preliminary notice. Information provided herein is of descriptive nature. Performance quality may depend on soil fertility, applied agricultural techniques, weather conditions, and other factors.

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## Warranty Registration Form

**This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.**

|                    |               |
|--------------------|---------------|
| Customer Name:     |               |
| Customer Address:  |               |
| City:              | Prov / State: |
| Postal / Zip Code: | Phone:        |

|                    |               |
|--------------------|---------------|
| Dealer Name:       |               |
| Dealer Address:    |               |
| City:              | Prov / State: |
| Postal / Zip Code: | Phone:        |

|                  |                |                |
|------------------|----------------|----------------|
| Equipment Model: | Serial Number: | Delivery Date: |
|------------------|----------------|----------------|

I have thoroughly instructed the buyer on the above described equipment which review included the Operator and Parts Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

**Dealer Inspection Report**

- Rotary group arms move easily
- Height of rotary groups adjusted
- Fasteners tightened
- Grease points lubricated
- Gearbox grease level checked
- Wheel bolt torque and tire pressure checked
- Tines properly oriented

**Safety**

- Safety chain on hitch
- All decals installed
- Guards and shields installed and secure
- Review operating and safety instructions

|       |                        |
|-------|------------------------|
| Date: | Dealer Rep. Signature: |
|-------|------------------------|

The above equipment and Operator And Parts Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

|       |                             |
|-------|-----------------------------|
| Date: | Customer / Owner Signature: |
|-------|-----------------------------|

**Remove this Warranty Registration Form from the Operator And Parts Manual. Make two copies of the form. Send original Warranty Registration Form to Farm King. Give one copy to the customer and the dealer will keep one copy.**

# Farm King



## Introduction

This Operator And Parts Manual was written to give the owner / operator instructions on the safe operation, maintenance and part identification of the Farm King equipment. **READ AND UNDERSTAND THIS OPERATOR AND PARTS MANUAL BEFORE OPERATING YOUR FARM KING EQUIPMENT.** If you have any questions, see your Farm King dealer. This manual may illustrate options and accessories not installed on your Farm King equipment.

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# Farm King





## Owner's Information

Thank you for your decision to purchase a Farm King Rotary Rake. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator And Parts Manual and follow the recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

Operate and maintain this equipment in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and / or laws. Follow all on-product labeling and instructions.

Make sure that all personnel have read this Operator And Parts Manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

Farm King is continually working to improve its products. Farm King reserves the right to make any improvements or changes as deemed practical and possible without incurring any responsibility or obligation to make any changes or additions to equipment sold previously.

Although great care has been taken to ensure the accuracy of this publication, Farm King makes no warranty or guarantee of any kind, written or expressed, implied or otherwise with regard to the information contained within this manual. Farm King assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from the use of this manual.

Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Farm King Dealer if you need assistance, information, or additional copies of the manual.

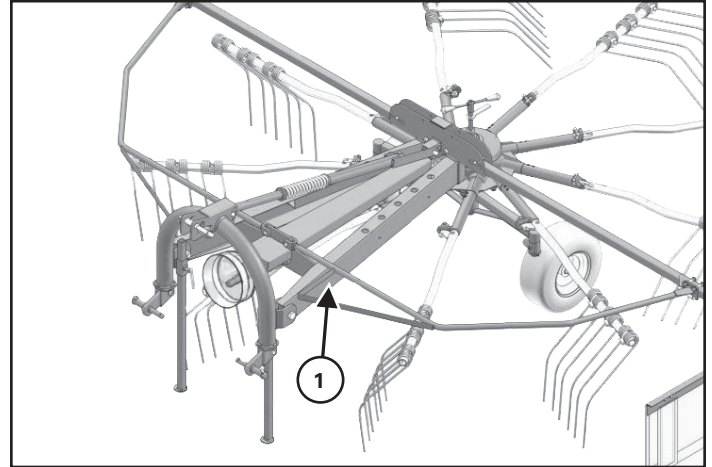
Visit our website at [www.farm-king.com](http://www.farm-king.com) for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as viewed by the operator sitting in the tractor seat while towing the implement.

## Serial Number Location

Please enter the model and serial number in the space provided for easy reference.

**Figure 1**



**Model Number:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

The serial number plate (Item 1) is located on the side of the main frame **[Figure 1]**.

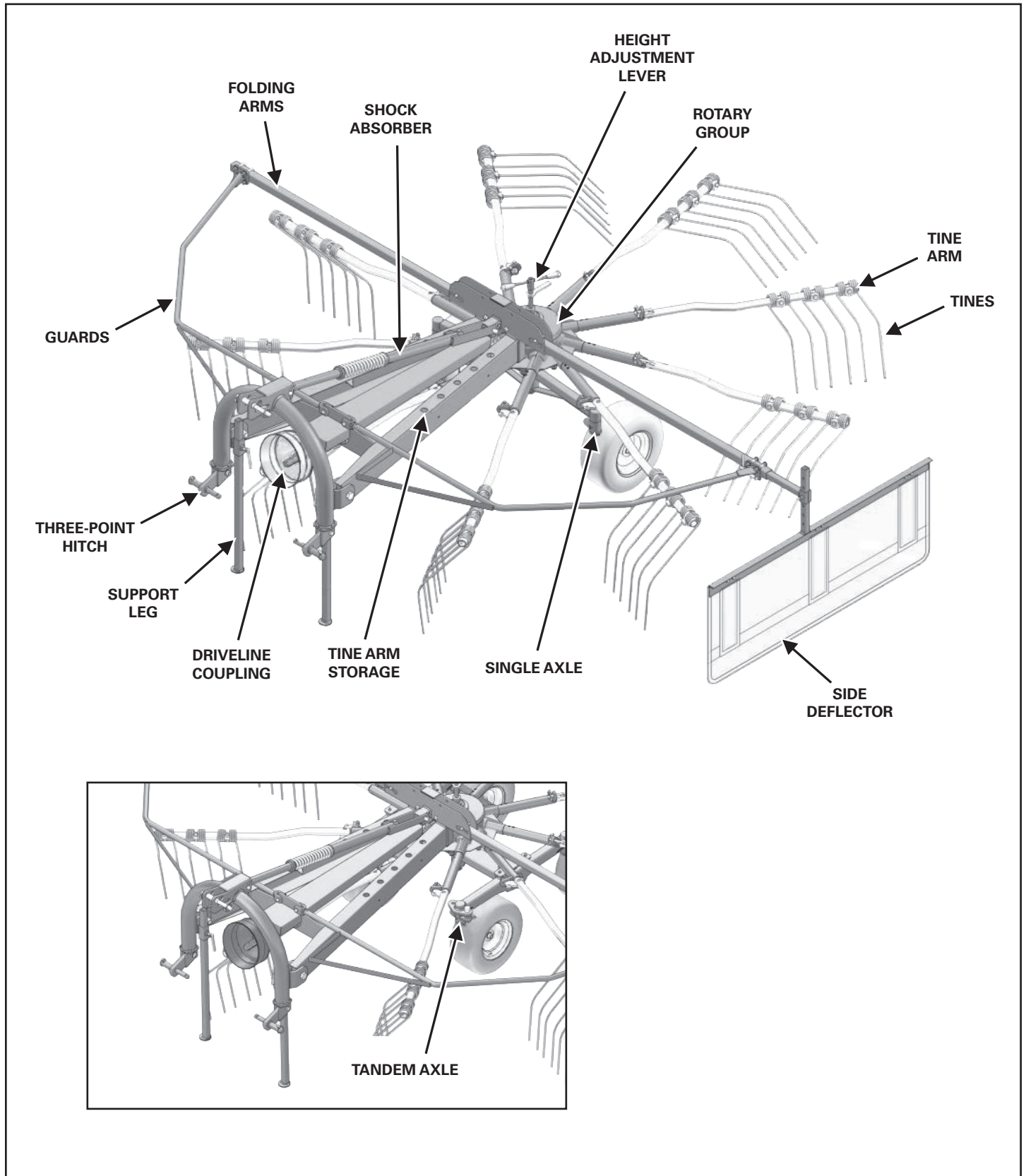
Always use your serial number when requesting information or when ordering parts.

## Operator And Parts Manual Location

The Operator And Parts Manual is located in the cannister on the main frame **[Figure 1]**.

# Equipment Identification

Figure 2



# Safety

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# Farm King





## Safety Instructions

### Safety Symbols

|   |                            |
|---|----------------------------|
|    | <b>Safety Alert Symbol</b> |
| <p>This symbol with a warning statement means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.</p> |                            |

|  |                |
|--|----------------|
|   | <b>CAUTION</b> |
| <p>The signal word CAUTION on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.</p> |                |

|  |               |
|--|---------------|
|   | <b>DANGER</b> |
| <p>The signal word DANGER on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.</p> |               |

|  |                |
|--|----------------|
|   | <b>WARNING</b> |
| <p>The signal word WARNING on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p> |                |

|   |                  |
|---|------------------|
|              | <b>IMPORTANT</b> |
| <p>This notice identifies procedures which must be followed to avoid damage to the machine.</p> |                  |

### Operator Qualifications

For an operator to be qualified, he or she must not use drugs or alcohol which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine and the equipment.

Understand the written instructions, rules and regulations:

- The written instructions from Farm King include the Warranty Registration, Dealer Inspection Report, Operator And Parts Manual and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer’s work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem. Regulations may identify a hazard such as a utility line.

Have Training with Actual Operation:

- Operator training must consist of a demonstration and verbal instruction. This training is given by the machine owner prior to operation.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine safely under all conditions of the work area. Always fasten seat belt before operating.

Know the Work Conditions:

- Clear working area of all bystanders, especially small children and all obstacles that might be hooked or snagged, causing injury or damage.
- Know the location of any overhead or underground power lines. Call local utilities and have all underground power lines marked prior to operation.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service.

## Safety Rules

- Read and follow instructions in this manual and the tractor's Operators Manual before operating.
- Under no circumstances should young children be allowed to work with this equipment. This equipment is dangerous to children and persons unfamiliar with its operation.
- Check for overhead and / or underground lines before operating equipment (if applicable).
- In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.
- Check that the equipment is securely fastened to the tractor / towing vehicle.
- Operate the equipment only from the operator's position.
- When learning to operate the equipment, do it at a slow rate in an area clear of bystanders, especially small children.
- DO NOT permit personnel to be in the work area when operating the equipment.
- The equipment must be used ONLY on approved tractors / transport vehicles.
- DO NOT modify the equipment in any way. Unauthorized modification may impair the function and / or safety and could affect the life of the equipment.
- Stop tractor engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging or filling.
- DO NOT make any adjustments or repairs on the equipment while the machine is running.
- Keep shields and guards in place. Replace if damaged.
- Keep hands, feet, hair and clothing away from all moving parts.

## Safety Rules For Power Take-Off (PTO) Driven Equipment

- Keep PTO shields and all guards in place. Replace damaged or missing shields and guards before operating.
- Follow warnings and instructions on machine signs (decals). Replace damaged or missing decals.
- Do not wear loose or bulky clothing around the PTO or other moving parts.
- Keep bystanders away from PTO driven equipment, and never allow children near machines.
- Read and understand the manuals for the PTO driven equipment and be aware of safe operating procedures and hazards that may not be readily apparent.
- Never operate over 540 rpm.
- Always walk around equipment to avoid coming near a turning PTO driveline. Stepping over, leaning across or crawling under a turning PTO driveline can cause entanglement.
- Position the machine and equipment hitch correctly to prevent driveline stress and separation.
- Use caution when turning. Turning too sharp can cause driveline damage.
- Use caution when raising PTO driven equipment.
- Excessive driveline angle can cause driveline damage. Use stops if needed.

## Machine Requirements And Capabilities

- Fasten seat belt securely. If equipped with a folding Roll-Over Protective Structure (ROPS), only fasten seat belt when ROPS is up and locked. DO NOT wear seat belt if ROPS is down.
- Stop the machine and engage the parking brake. Install blocks in front of and behind the rear tires of the machine. Install blocks underneath and support the equipment securely before working under raised equipment.
- Keep bystanders clear of moving parts and the work area. Keep children away.
- Use increased caution on slopes and near banks and ditches to prevent overturn.
- Make certain that the Slow Moving Vehicle (SMV) emblem is installed so that it is visible and legible. When transporting the equipment, use the flashing warning lights (if equipped) and follow all local regulations.
- Operate this equipment with a machine equipped with an approved Roll-Over Protective Structure (ROPS). Always wear seat belt when the ROPS is up. Serious injury or death could result from falling off the machine.
- Before leaving the operator's position:
  1. Always park on a flat level surface.
  2. Place all controls in neutral.
  3. Engage the parking brake.
  4. Stop engine.
  5. Wait for all moving parts to stop.
- Carry passengers only in designated seating areas. Never allow riders on the machine or equipment. Falling off can result in serious injury or death.
- Start the equipment only when properly seated in the operator's seat. Starting a machine in gear can result in serious injury or death.
- The parking brake must be engaged before leaving the operator's seat. Roll away can occur because the transmission may not prevent machine movement.

## Transport Safety

- Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
- Comply with state and local laws governing highway safety and movement of machinery on public roads.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use.
- Local laws should be checked for all highway lighting and marking requirements.
- Always yield to oncoming traffic in all situations and move to the side of the road so any following traffic may pass.
- Always enter curves or drive up or down hills at a low speed and at a gradual steering angle.
- Never allow riders on either tractor or equipment.
- Keep tractor / towing vehicle in a lower gear at all times when traveling down steep grades.
- Maintain proper brake settings at all times (if equipped).

## Fire Prevention

### Maintenance

- The machine and some equipment have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.
- Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard. The operator's area, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.
- All fuels, most lubricants and some coolant mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

### Operation

- The Farm King machine must be in good operating condition before use.
- Check all of the items listed on the service schedule under the 8 hour column before operation. (See Maintenance section)
- Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.

### Starting

- Do not use ether or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or bystanders.
- Use the procedure in the tractor's operator's manual for connecting the battery and for jump starting.

### Electrical



- Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.
- Battery gas can explode and cause serious injury. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

### Hydraulic System

- Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.
- Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.

### Fueling



- Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.



## Welding And Grinding

- Always clean the machine and equipment, disconnect the battery, and disconnect the wiring from the machine controls before welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the machine when welding.
- Have good ventilation when grinding or welding painted parts. Wear dust mask when grinding painted parts. Toxic dust or gas can be produced.
- Dust generated from repairing nonmetallic parts such as hoods, fenders or covers can be flammable or explosive. Repair such components in a well ventilated area away from open flames or sparks.

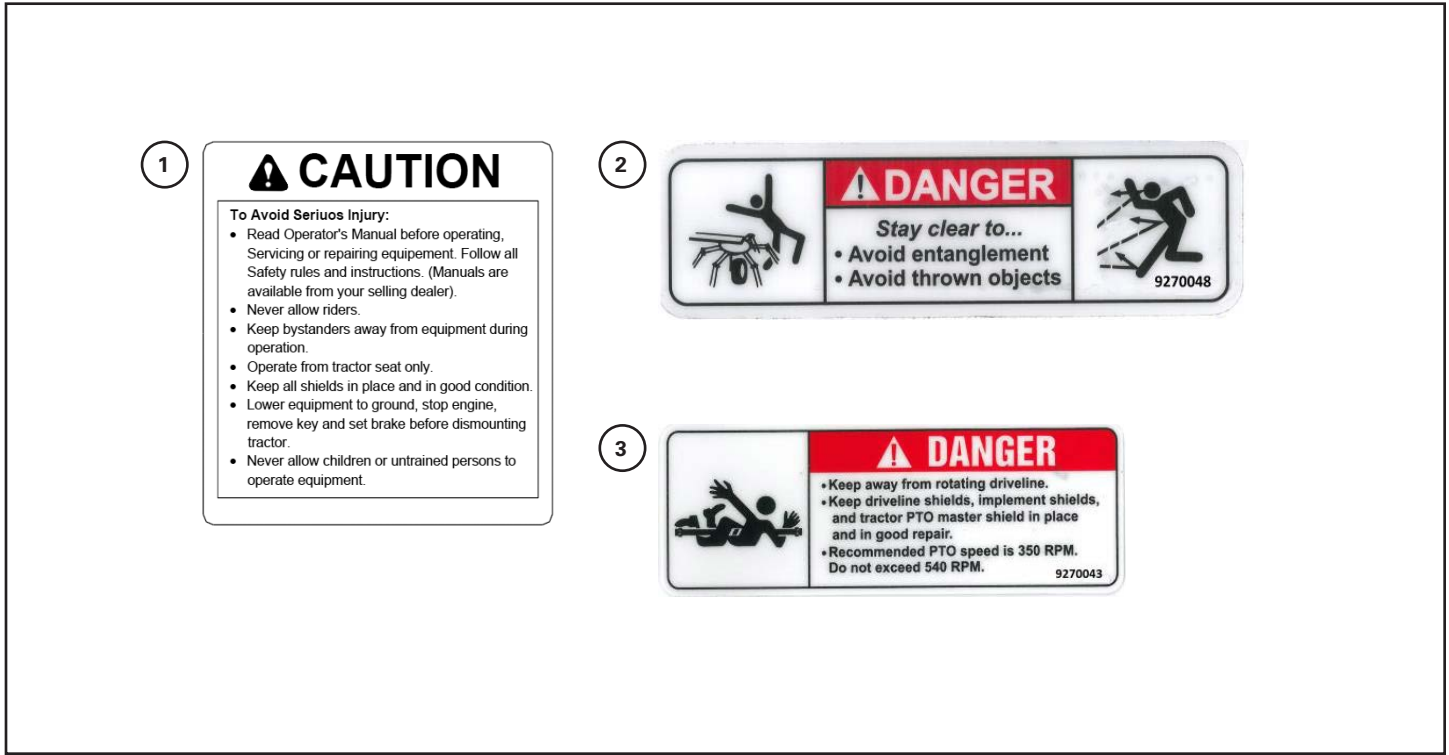
## Fire Extinguishers



- Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.


## Equipment and Safety Decals

Figure 3



| Item [Figure 3] | Description  |
|-----------------|--|
| 1               | Obligation to read the use and Operator’s Manual.                                    |
| 2               | Danger of hooking or entanglement from rotating rake arms. Danger of flying objects. |
| 3               | Danger of hooking or entanglement from rotating driveline. Recommended PTO speed.    |

### Safety Sign-Off Form

|  |         |
|--|---------|
|   | WARNING |
| <p><b>Instructions are necessary before operating or servicing equipment. Read and understand the Operator And Parts Manual and safety signs (decals) on equipment. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.</b></p> |         |

Farm King follows the general Safety Standards specified by the American Society of Agricultural and Biological Engineers (ASABE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and / or maintaining the Rotary Rake must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Annually review this information before the season start-up and make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. An untrained operator is unqualified to operate this machine.

The following sign-off sheet is provided for your record and to show that all personnel who will be working with the equipment have read and understand the information in this Operator And Parts Manual and have been instructed in the operation of the equipment.

| SIGN-OFF SHEET |                      |                      |
|----------------|----------------------|----------------------|
| Date           | Employee’s Signature | Employer’s Signature |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
|                |                      |                      |
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|                |                      |                      |

# Farm King



# Operation

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# Farm King



## Pre - Operation Checklist

Before operating the equipment for the first time and each time thereafter, check the following items:

- Lubricate the equipment per the schedule outline in the Maintenance Section.
- Check the hitch for damaged, loose or missing parts. Repair as needed before operation.
- Check the tines for damaged, loose or missing parts. Repair as needed before operation. Clear out any tangled material.
- Fully clean the equipment.
- Inspect all safety reflective decals, slow moving vehicle decals and lights where applicable.
- Verify that the equipment is properly connected to the tractor with the safety chain.

|   |                |
|---|----------------|
|   | <b>WARNING</b> |
| <b>AVOID INJURY OR DEATH</b>  |                |
| Wear safety glasses to prevent eye injury when any of the following conditions exist:   |                |
| <ul style="list-style-type: none"> <li>• When fluids are under pressure.</li> <li>• Flying debris or loose material is present.</li> <li>• Engine is running.</li> <li>• Tools are being used.</li> </ul> |                |
| To prevent serious injury or death from moving parts:   |                |
| <ul style="list-style-type: none"> <li>• Keep hands, feet, hair and clothing away from moving parts.</li> <li>• Disconnect and lockout power source before adjusting or servicing.</li> </ul>             |                |

## Entering The Operator’s Position

Enter the operator’s position, start the engine, and release the parking brake.

|   |                  |
|---|------------------|
|      | <b>IMPORTANT</b> |
| Follow the instructions in your tractor’s operation manual for the correct procedure. |                  |

## Leaving The Operator’s Position

Always perform the following steps when leaving the operator’s position:

|   |                |
|---|----------------|
|    | <b>WARNING</b> |
| <b>AVOID INJURY OR DEATH</b>  |                |
| Before you leave the operator’s position:   |                |
| <ul style="list-style-type: none"> <li>• Always park on a flat level surface.</li> <li>• Place all controls in NEUTRAL.</li> <li>• Engage the park brake.</li> <li>• Stop the engine and remove the key.</li> <li>• Wait for all moving parts to stop.</li> </ul> |                |

## Tractor Requirements

The tractor must satisfy the following requirements, depending on model.


RR320 rotary rake:

- Recommended 35 HP
- Three-point style hitch
- Category 1 or 2

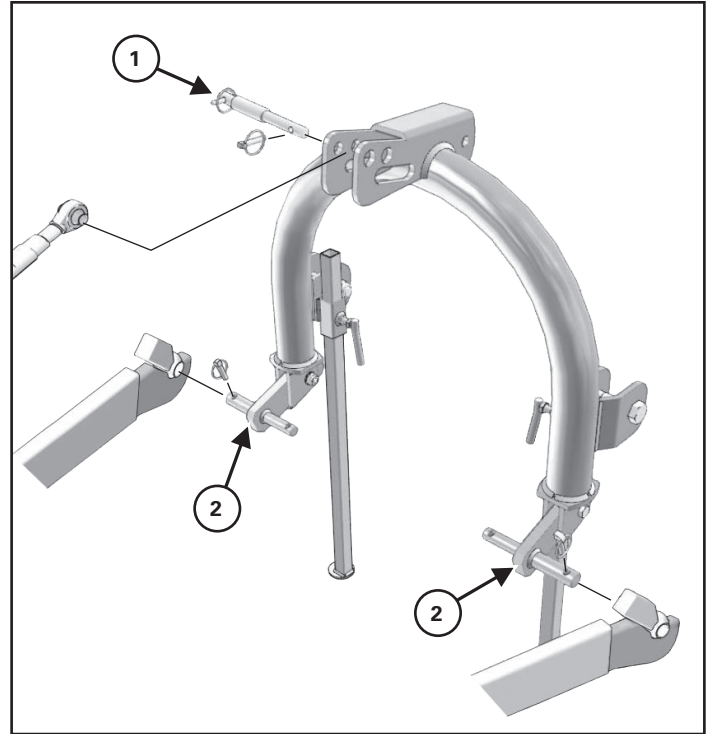
## Connecting To Tractor

Always inspect the tractor's three-point hitch and Rotary Rake's mounts before connecting. See the tractor's owner's manual.

Move the tractor drawbar into the storage position or remove (if necessary) to prevent interference (see the tractor's operator's manual for the correct procedure).

|  |         |
|--|---------|
|   | WARNING |
|   |         |
| AVOID INJURY OR DEATH  |         |
| <p><b>Before moving the tractor, look in all directions and make sure no bystanders, especially small children are in the work area.</b></p> |         |
| <p><b>Do not allow anyone between the tractor and the equipment when backing up to the equipment for connecting.</b></p>                     |         |
| <p><b>Keep fingers and hands out of pinch points when connecting and disconnecting equipment.</b></p>  |         |

**Figure 4**



Remove the top implement mounting pin (Item 1) and retaining pin from the equipment [Figure 4].

Remove the retaining pins from the left and right lower mounts (Item 2) [Figure 4].

Move the tractor backwards, aligning the tractor's three-point hitch and equipment's three-point mounts.

Install the left and right lower three-point mounts of the tractor to the equipment's left and right lower mounting pins.

Reinstall the retaining pins.

Lower the top link of the three-point hitch until it aligns with the equipment's upper mount.

Reinstall the mounting pin and retaining pin.

**Note:** It may be necessary to lengthen or shorten the top link to align it with the equipment's mounting hole (see the tractor's operator's manual for the correct procedure).

The equipment can be leveled front to back by adjusting the top link (see the tractor's operator's manual for the correct procedure).



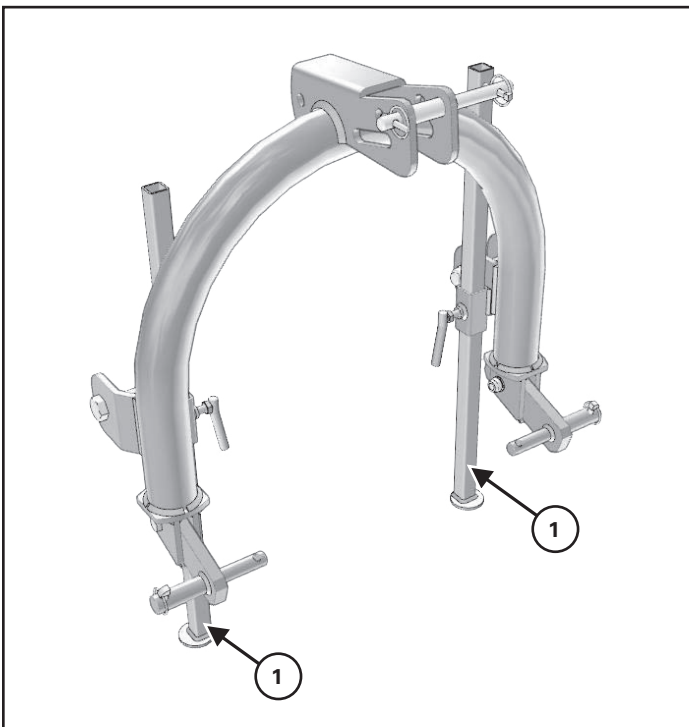
Adjust the lower link sway chains or blocks on the tractor to restrict side movement of the equipment when operating.



## IMPORTANT

Always use a hitch pins of adequate size and strength and a retaining pin with a locking device.


Figure 5




Remove the retaining pin and slide the support legs (Item 1) up into the storage position. Reinstall the retaining pin at the lower hole on the leg [Figure 5].

## Connecting The PTO Driveline

Stop the engine and leave the operator's position.

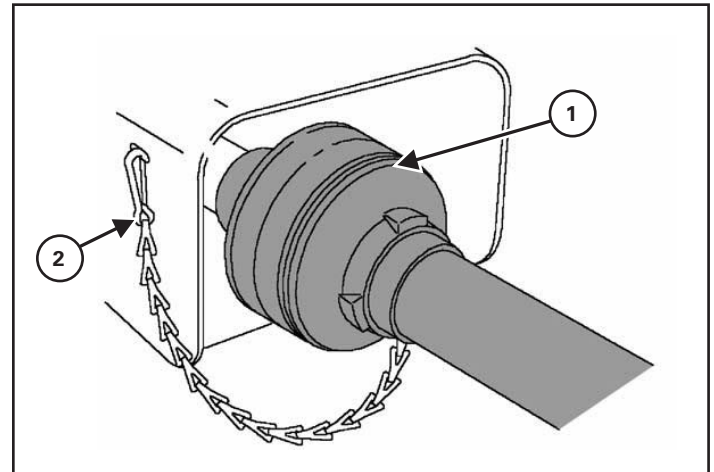
|  |                |
|--|----------------|
|   | <b>WARNING</b> |
| <b>AVOID INJURY OR DEATH</b>   |                |
| <p>Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause serious injury or death.</p> |                |

**Note:** Clean and grease tractor's PTO shaft and PTO driveline coupling each time driveline is connected.

|  |                  |
|--|------------------|
|   | <b>IMPORTANT</b> |
| <p>Improper hitch installation can cause PTO driveline damage.</p> <ul style="list-style-type: none"> <li>• Do not modify the three point hitch.</li> <li>• Make sure the PTO driveline is of adequate length and that u-joints are in the correct phase.</li> </ul> |                  |

Remove the PTO driveline from the storage position (if applicable).


Figure 6



Retract the collar (Item 1) and slide the PTO driveline onto the tractor PTO shaft. Release the collar and the driveline will lock onto the shaft. Push and pull the PTO driveline back and forth several times and make sure it is securely attached to the PTO shaft [Figure 6].

Install PTO driveline safety chain (Item 2) [Figure 6].

**Note:** The PTO driveline must have a means to retain it to the PTO shaft on the tractor.

|   |                |
|---|----------------|
|    | <b>WARNING</b> |
| <ul style="list-style-type: none"> <li>• Do NOT exceed 540 RPM PTO.</li> <li>• Keep PTO shields and all guards in place.</li> <li>• Keep away from moving parts.</li> <li>• Keep bystanders away.</li> <li>• Do NOT connect the PTO at an angle higher than 10° between the two connections.</li> </ul> |                |
|   |                |

### PTO Driveline Length Check

Due to variations in distances between tractor PTO shafts and implement input shafts, drivelines may need to be shortened or a longer shaft may be required.

When fitting the implement to the tractor, the PTO driveline, with telescoping sections, must be inspected. When the sections are at the most compressed operating position, the sections must not "bottom out".

At its shortest length, there must be at least 2 in. (50.8 mm) of clearance between each section end and opposite section end at the most compressed operating position.

When the sections are at the most extended position, there must be sufficient engagement between the sections.

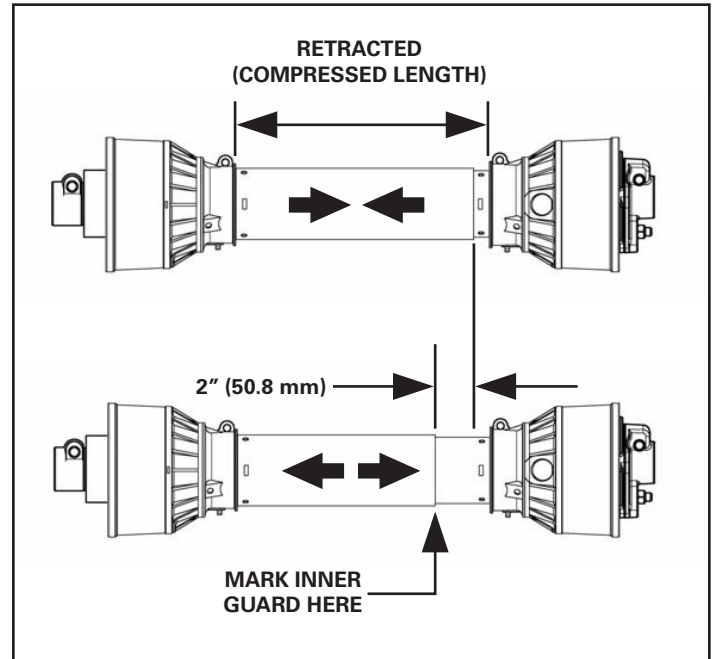
At its farthest operating extension, a minimum section engagement of 33% of shaft length must be maintained.

### PTO Driveline Bottoming Out Check

Stop the engine and leave the operator's position.

Make sure the PTO driveline and all rotating components have come to a complete stop before leaving the operator's position (if applicable).


**Figure 7**



1. Disconnect the PTO driveline from the tractor and slide the PTO driveline together until fully retracted (compressed).
2. Measure the retracted (compressed) length of PTO driveline **[Figure 7]**.
3. Extend the PTO driveline 2 in. (50.8 mm) from the retracted length and place a mark on the inner guard at the end of the outer guard **[Figure 7]**.
4. Reattach the PTO driveline to the tractor PTO shaft.
5. Enter the operator's position. Start the engine.
6. With the rear PTO DISENGAGED, raise and lower the implement and watch the PTO driveline extend and retract.
7. If the outer PTO driveline guard slides in (retracts) over the mark at any point of travel, the PTO driveline needs to be shortened.

### Reducing The PTO Driveline Length

Stop the engine and leave the operator's position. Make sure the PTO driveline and all rotating components have come to a complete stop before leaving the operator's position.

|  |         |
|--|---------|
|   | WARNING |
| AVOID INJURY OR DEATH  |         |
| <ul style="list-style-type: none"> <li>• Do NOT exceed the rated implement PTO speed.</li> <li>• Stay clear of rotating driveline.</li> <li>• Keep bystanders away.</li> <li>• Keep hands, feet, clothing and long hair away.</li> <li>• Keep PTO shields and all guards in place.</li> <li>• Disengage PTO, move the tractor controls to the Neutral position, stop the engine and make sure all rotating components are stopped before leaving the operator's position.</li> <li>• Do NOT service the tractor or implement with the PTO engaged.</li> <li>• Do NOT service the implement in a raised position unless properly blocked and with all rotating components stopped.</li> <li>• Disengage PTO for road travel.</li> </ul> |         |

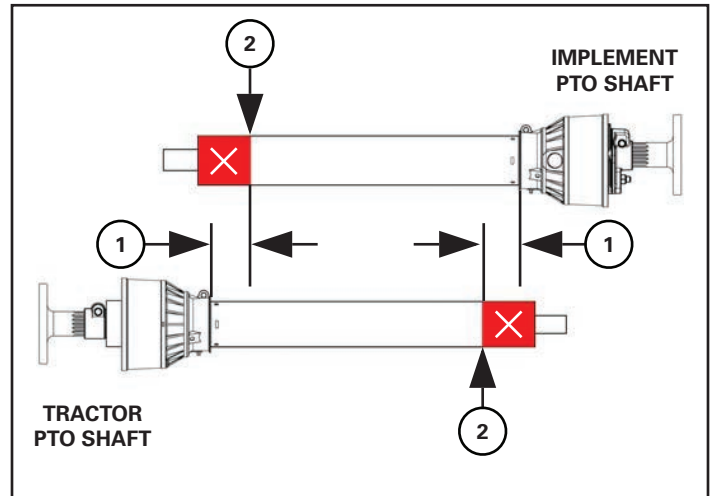
Remove the PTO driveline from the tractor and place in storage position (if equipped).

Enter the operator's position. Start the engine.

Raise or lower the three-point implement to get the shortest distance between the tractor PTO shaft and three-point implement gearbox PTO shaft. Stop the engine and leave the operator's position.

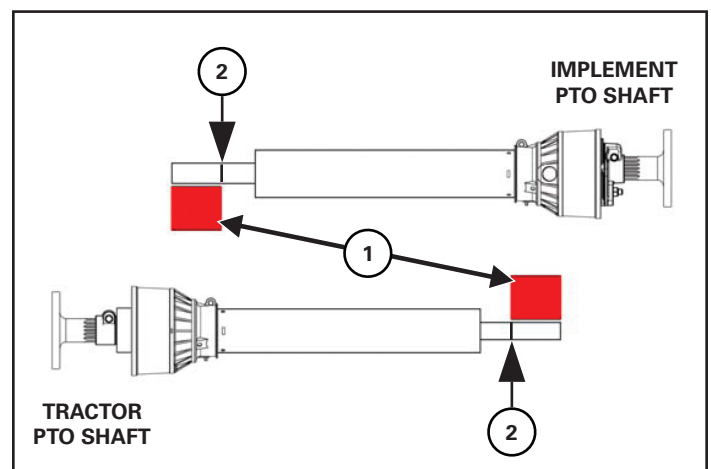
Pull the PTO driveline apart and reinstall each individual section; one half to the tractor PTO shaft and one half to the implement gearbox PTO shaft.

**Figure 8**



1. Hold PTO driveline sections parallel to one another and measure back 2 in. (50.8 mm) (Item 1) from the yoke of each section and place mark on opposite section. Cut the plastic shield at this length (Item 2) [Figure 8].

**Figure 9**



2. Using the plastic guard lengths that were cut off in [Figure 8], align the cut off lengths (Item 1) [Figure 9] with the end of the inner & outer shafts. Place a mark (Item 2) [Figure 9] on the inner & outer shafts and cut the inner & outer shafts off at this length.
3. Round off all sharp edges.
4. Thoroughly grease and install the PTO driveline halves together.
5. Recheck for proper operation.

### PTO Driveline Engagement Check

Stop the engine and leave the operator's position.

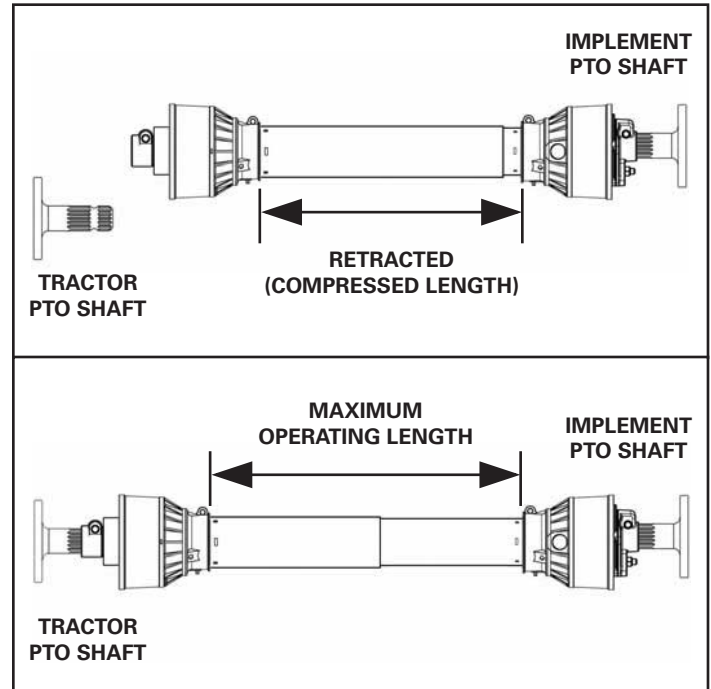
Make sure the PTO driveline and all rotating components have come to a complete stop before exiting the tractor.

1. Disconnect the PTO driveline from the tractor and fully slide the driveline sections together (retracted).
2. Measure the retracted (compressed) length of the PTO driveline between the bases of the plastic guards **[Figure 10]**.
3. Multiply the retracted driveline length by 1.667 to determine the PTO driveline Maximum Operating Length. (i.e.: 25.5 in. (647.7 mm) x 1.667= 42.5 in. (1079.7 mm) Maximum Operating Length).
4. Attach the PTO driveline to the tractor PTO output shaft.
5. Enter the operator's position.
6. With the PTO driveline attached, position the three-point implement to where the telescoping PTO driveline is at its maximum operating extension.
7. Stop the engine and leave the operator's position. Make sure the PTO driveline and all rotating components have come to a complete stop before leaving the operator's position.
8. Measure the length of the PTO driveline between the bases of the plastic shields **[Figure 10]** to determine the maximum operating length.

If the measured maximum operating length is less than the Maximum Operating Length calculation (from Step 3), the PTO driveline has adequate engagement

If the measured maximum operating length is equal to or more than the Maximum Operating Length calculation (from Step 3), the PTO driveline does not have adequate engagement and should be replaced with a longer driveline. See your Farm King dealer for available PTO drivelines.

**Figure 10**



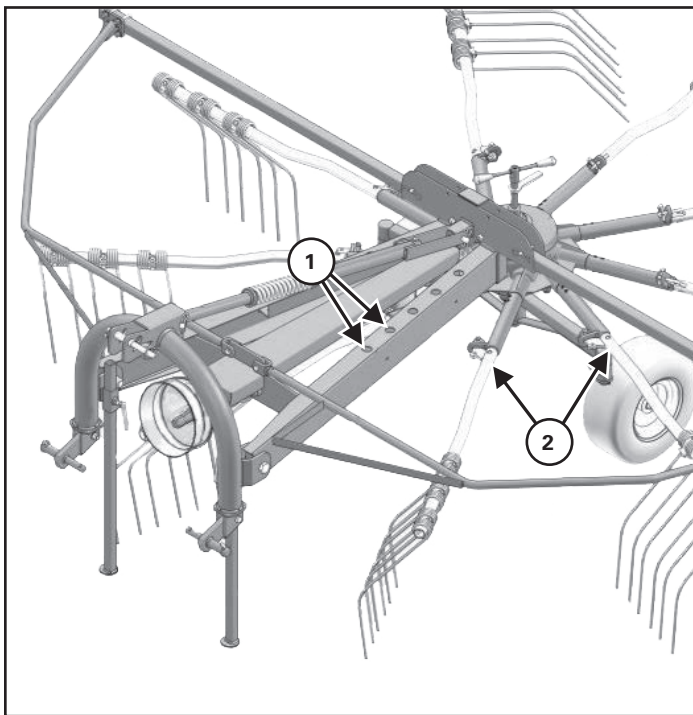
## Working Position

Connect the rotary rake to the tractor and move the equipment to the work area.

Lower the rotary rake so the wheels touch the ground.

|  |                                       |
|--|---------------------------------------|
|   | <h1 style="margin: 0;">IMPORTANT</h1> |
| <p><b>Ensure the PTO is disengaged when moving to the work area.</b></p> <p><b>The PTO must NOT be engaged when the tractor engine is off.</b></p> |                                       |

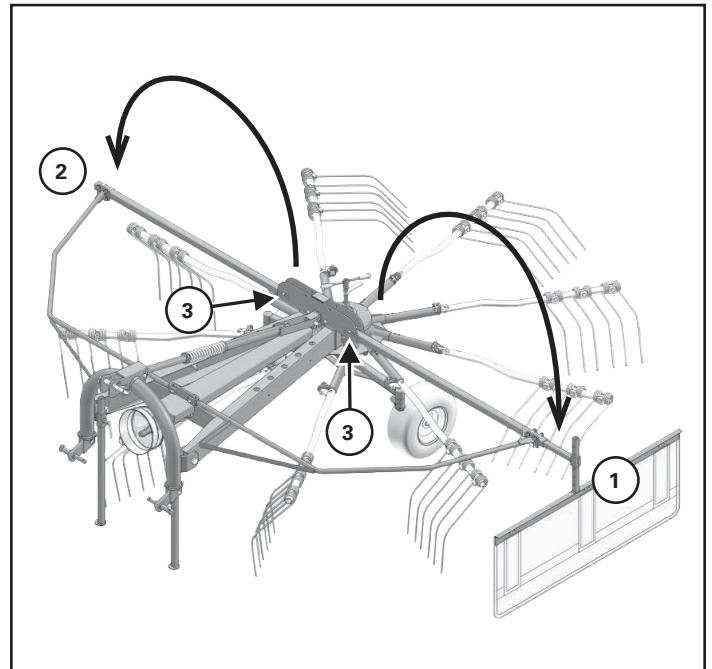
**Figure 11**



Remove the rake arms from the storage mounts (Item 1) on the main frame [Figure 11].

Insert the rake arms (Item 2) into the tube mounts on the rotary unit. Lock the rake arms using a retaining pin [Figure 11].

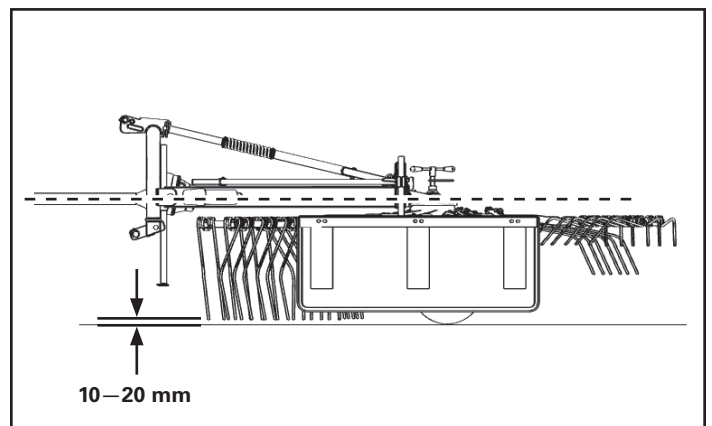
**Figure 12**



Remove the retaining pins and lower the left and right side protection guards (Item 1, 2) [Figure 12].

Lock the protection guards (Item 1, 2) into the lowered position using the retaining pins (Item 3) [Figure 12].

**Figure 13**



Adjust the rotary rake so the main frame is parallel to the ground.

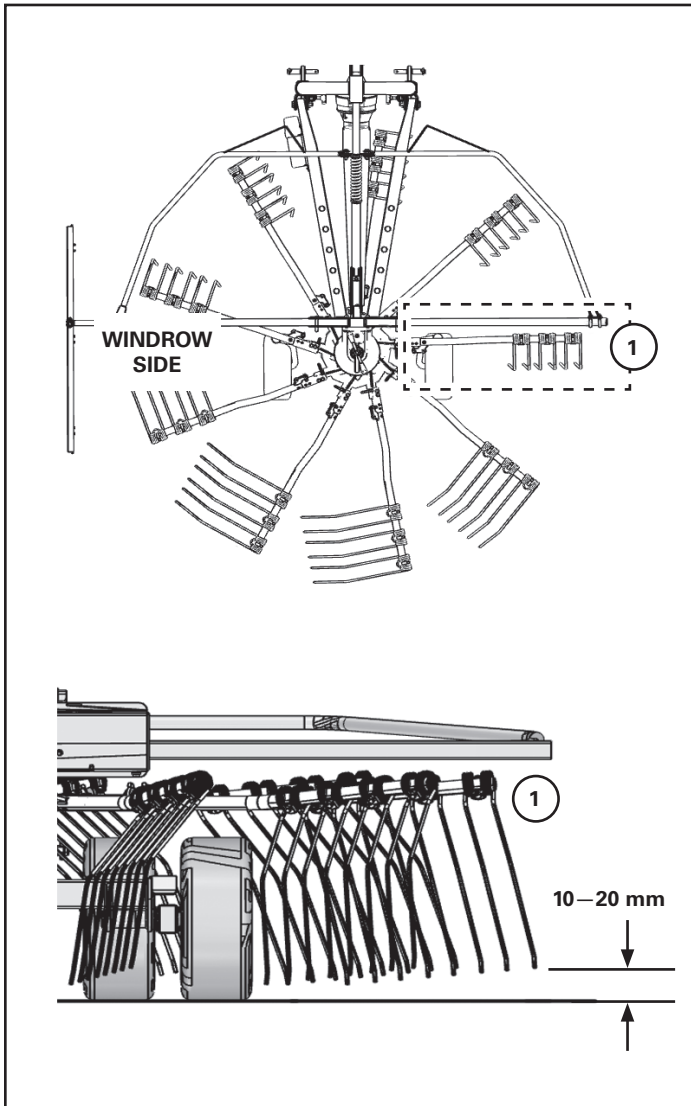
Adjust the lowered tines to 10–20 mm above the ground.

## Adjustments

### Tine Height

Adjust the distance of the tines from ground by raising or lowering the rotary group.

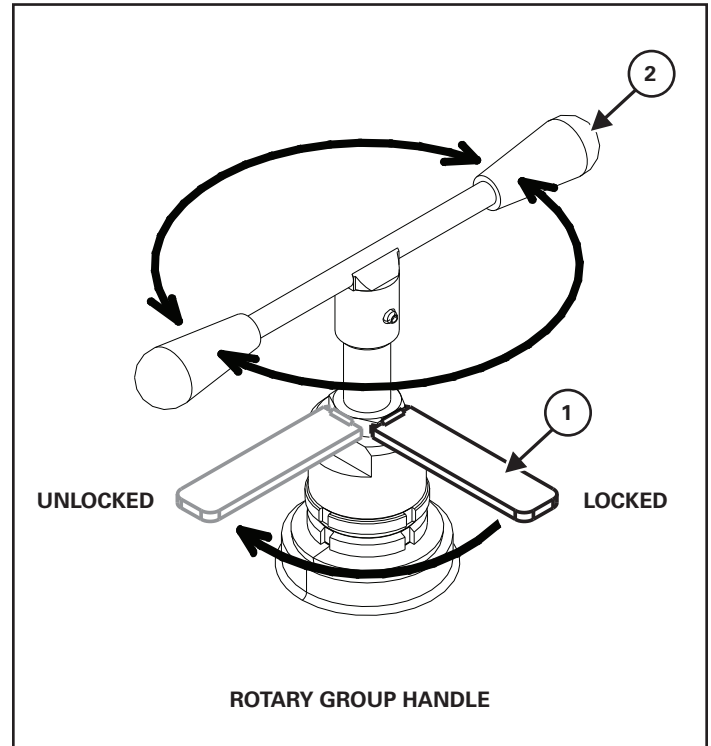
Figure 14



Measure the height of the lowered tine group (Item 1) on the opposite side of the windrow [Figure 14].

The tine group (Item 1) must be 10–20 mm above the ground [Figure 14].

Figure 15



Move the lever (Item 1) (above the rotary group) to the left-side position to unlock the handle [Figure 15].

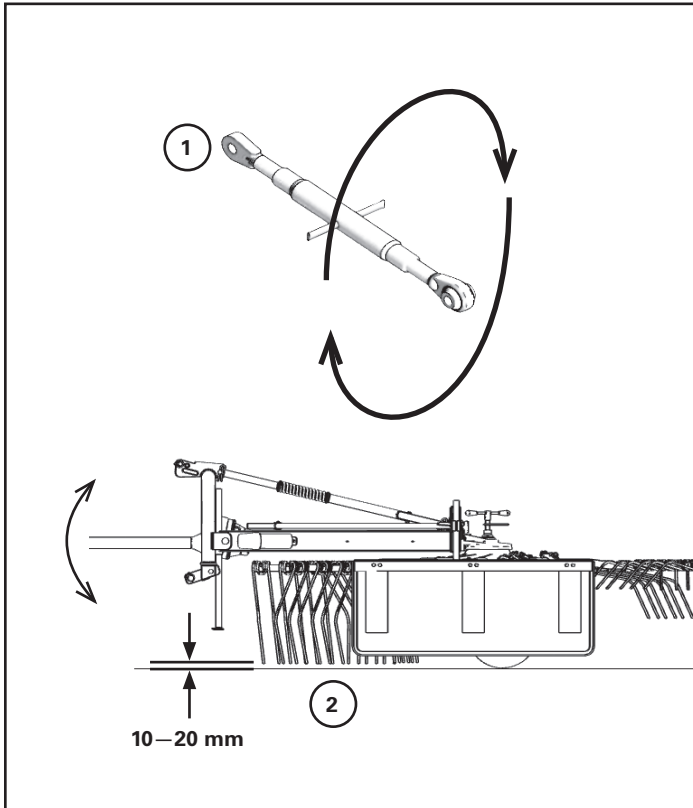
Rotate the handle (Item 2) to raise or lower the tines from the ground [Figure 15]:

- Rotate clockwise to raise tines
- Rotate counter-clockwise to lower tines

Move the lever (Item 1) back to the right-side position to lock the handle [Figure 15].

**Frame Tilt**

**Figure 16**



Adjust the tilt of the rotary rake by extending or retracting the top link (Item 1) of the three-point hitch **[Figure 16]**.

Rotate the top link counter-clockwise to extend, pushing the equipment chassis, and lifting the tines.

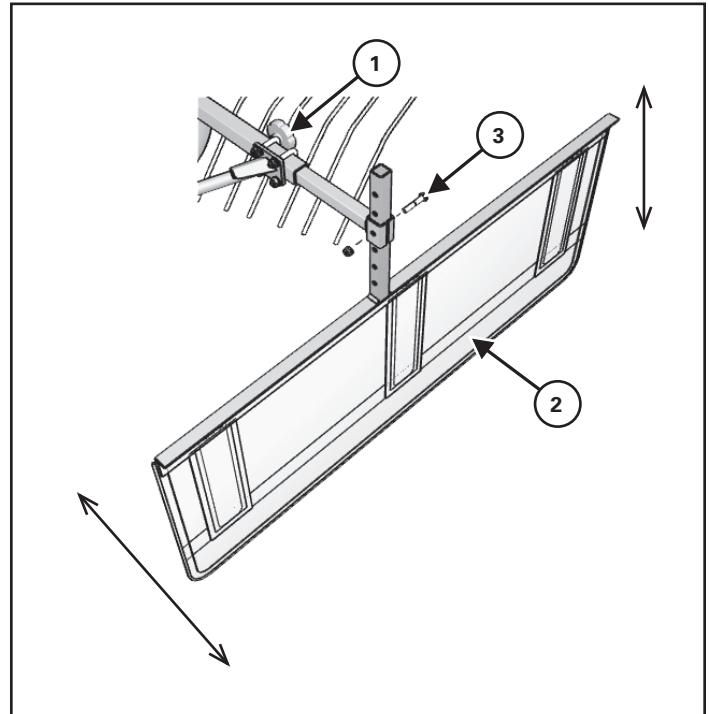
Rotate the top link clockwise to retract, pulling the equipment chassis, and lowering the tines.

The main frame should be parallel to the ground.

The lowered tines (Item 2) should be 10–20 mm above the ground **[Figure 16]**.

**Windrow**

**Figure 17**



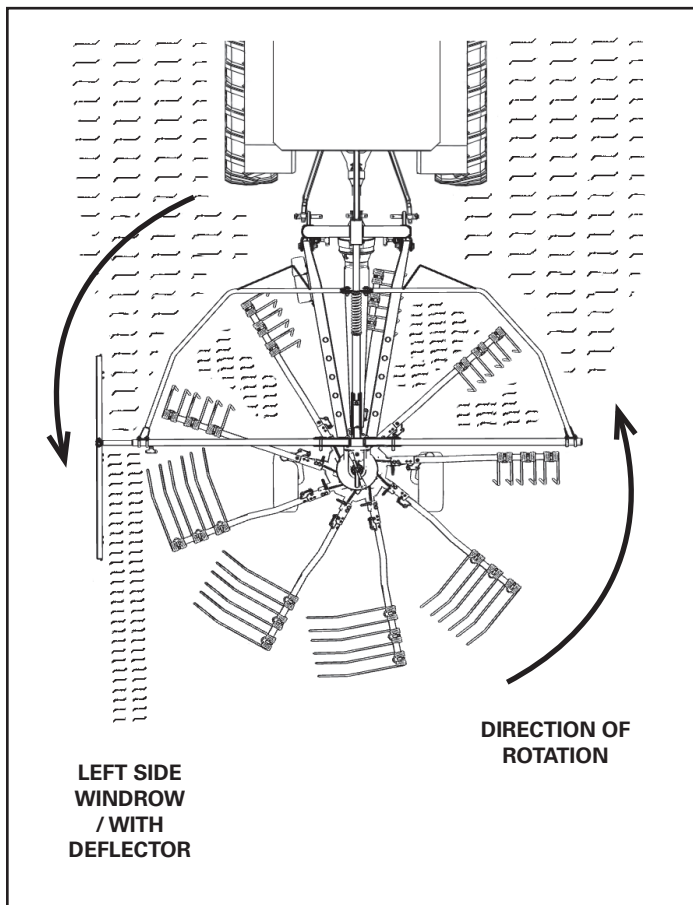
Adjust the width of the windrow by loosening the knob (Item 1) and extending or retracting the deflector (Item 2) **[Figure 17]**.

Raise or lower the deflector (Item 2) by removing the screw (Item 3) and repositioning the deflector mount **[Figure 17]**.



## Field Operation

Figure 18



The raking work process is shown [Figure 18].

The mounted implement operates as installed on a tractor equipped with a three-point universal hitch with hydraulic lifter.

The process begins as the tractor moves forward with the rotation of the rotary unit. The tines skim and scrape the forward ground, harvesting the cut crop. The tines lift towards the rear, moving crop into a single left side windrow. The left side deflector helps form the windrow.

Operate for a short distance and then check the result of the process. Adjust the height of the rake tines to improve performance. Adjust the side deflector to increase or decrease the width of the windrow.

Before each start-up of the tractor, it is important to follow the precautions described in the Safety section.

Remember that the equipment is to be used by a qualified operator, of age and trained for its use and operations. Operators must know the instructions in this manual, equipment decals, and all other regulations.

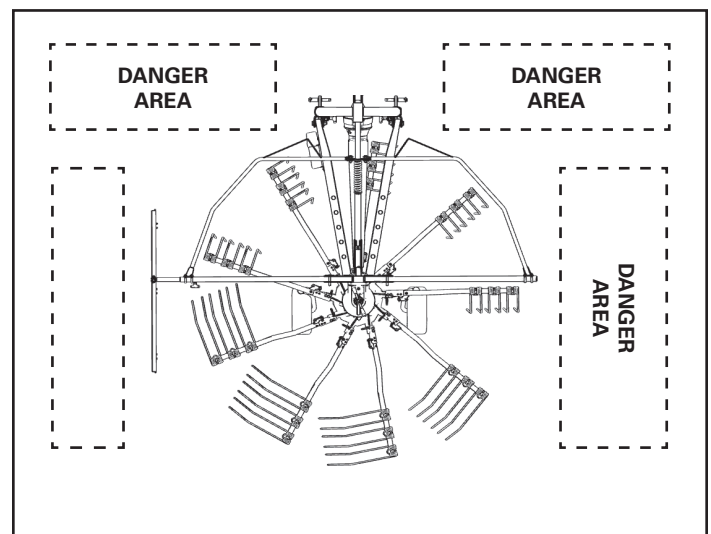
!

IMPORTANT

**During operations, always maintain the tractor speed within 3–6 mph (5–10 km/h).**

**Do not exceed the optimum PTO speed of 540 RPM.**

Figure 19



Make sure that there are no people or animals nearby any of the equipment danger areas [Figure 19].

Make sure all bystanders are aware of possible danger.

Figure 20



At the end of the field when the tractor and implement must change direction or reverse, it is essential that the tines are lifted from the ground.

Act on the tractor hydraulic lift, and raise the equipment (Item 1) about 16–20" (40–50 cm) from the ground [Figure 20].

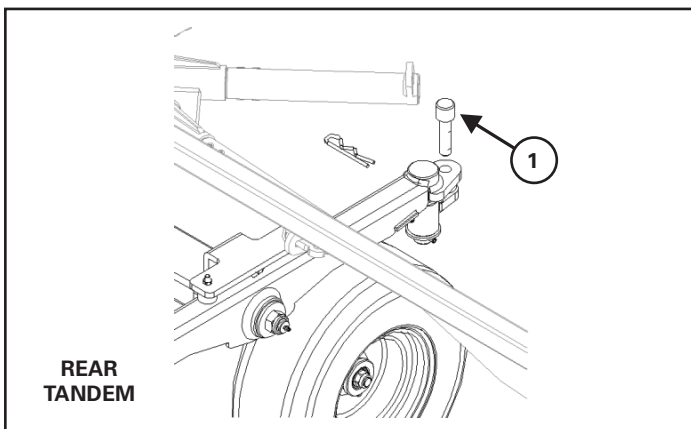
!

IMPORTANT

**Proceed slowly when using the tractor's hydraulic lift to lower the equipment to the ground.**

**Avoid violent impacts that may cause damage to the structure and the components.**

Figure 21



**Tandem Axle Models:** On steep surfaces the equipment tandem axle may have difficulty keeping with the direction of travel. Use the locking pin (Item 1) with retaining pin at the rear wheels to block free rotation [Figure 21].

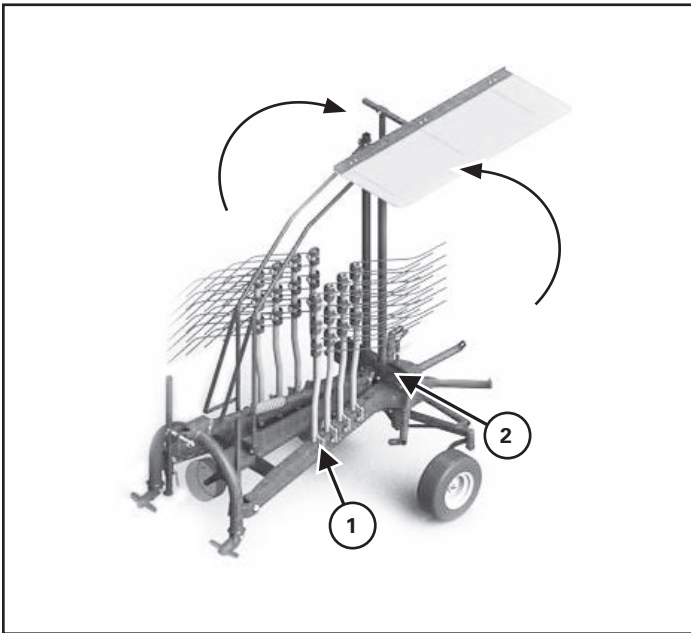
## Finishing Work

Move the equipment to the storage location and perform the following:

- Disengage the PTO.
- Switch off the tractor engine.
- Engage the parking brake.
- Put the gear lever in neutral position.
- Remove the ignition key from the dashboard.
- Lower the equipment support stands and disconnect three-point hitch.

## Transport

Figure 22

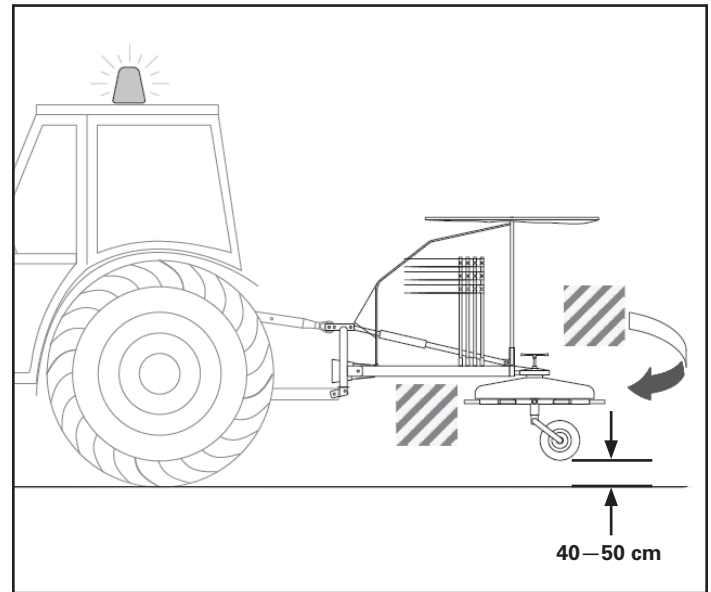


Configure the equipment into the transport position [Figure 22]:

- Disengage the PTO.
- Remove the PTO shaft and place into storage.
- Remove the rake arms (Item 1) and place into the storage mounts on the main frame.
- Fully raise the left and right side protection guards and lock into place using the retaining pins (Item 2).

To limit the overall width of the machinery during road travels, it must always be in the transport configuration (with the outer sections or side shields raised), as shown [Figure 22].

Figure 23



The windrow rotary rake can travel on the road only if lifted, with a hydraulic lift, until the lowest point is at least 40–50 cm from the ground [Figure 23].

Follow transport rules, as required by local highway code:

- The operator must apply specific panels (on the back and side) to the rotary rake to highlight the equipment's dimensions.
- The panels must be reflective and fluorescent with yellow and red stripes.
- The tractor must have the beacon warning light (yellow or orange) always activated.
- The combined total weight of the operating machine and rotary rake must not exceed 30% of the tractor weight.

# Farm King



# Maintenance

Service Schedule Chart.....37

Lubrication.....38

    Recommendations.....38

    Locations.....38

Rake Tine Replacement.....40

Safety Sign (Decal) Installation.....40

Storage And Return To Service.....41


    Storage.....41

    Return To Service.....41

# Farm King



## Service Schedule Chart

|  |                |
|--|----------------|
|   | <b>WARNING</b> |
| <p><b>Instructions are necessary before operating or servicing equipment. Read and understand the Operator And Parts Manual and safety signs (decals) on equipment. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.</b></p> |                |

**Note:** If a problem is encountered that is difficult to solve, even after having read through this troubleshooting section, please call your local distributor, dealer or factory. Before you call, please have this Operator And Parts Manual and the serial number of your machine at hand.

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and early failures. The service schedule is a guide for correct maintenance.


| #  | DESCRIPTION                    | SERVICE PROCEDURES |       |      |        |       |
|--|--------------------------------|--------------------|-------|------|--------|-------|
|  |                                | CHECK              | CLEAN | LUBE | CHANGE | DRAIN |
| <b>Daily Maintenance (or every 8 hours of use)</b> |                                |                    |       |      |        |       |
| 1  | PTO Cross and Bearings         | ✓                  |       | ✓    |        |       |
| <b>Weekly (or every 50 hours of use)</b>           |                                |                    |       |      |        |       |
| 2  | PTO Guard Bushings             | ✓                  |       | ✓    |        |       |
| 3  | PTO Telescoping Tubes          | ✓                  |       | ✓    |        |       |
| 4  | PTO Slip Clutch Connector      | ✓                  |       | ✓    |        |       |
| 5  | PTO Quick Disconnect           | ✓                  |       | ✓    |        |       |
| 6  | Driveline Support Bushing      | ✓                  |       | ✓    |        |       |
| 7  | Axle Center Bushing            | ✓                  |       | ✓    |        |       |
| 8  | Axle Spindles                  | ✓                  |       | ✓    |        |       |
| 9  | Tandem Axle Bushings           | ✓                  |       | ✓    |        |       |
| 10   | Front Wheel Spindle (Optional) | ✓                  |       | ✓    |        |       |
| <b>Monthly (or every 100 hours of use)</b>         |                                |                    |       |      |        |       |
| 11   | Rotary Group Gearbox           | ✓                  |       | ✓    | ✓      |       |
| <b>Annually (or every 500 hours of use)</b>        |                                |                    |       |      |        |       |
| 12   | Machine                        | ✓                  | ✓     |      |        |       |

## Lubrication

### Recommendations

Always use a good quality multi-purpose / lithium base grease when lubricating the equipment.

- Always use a hand-held grease gun.
- Clean fitting before greasing, to avoid injecting dirt and grit.
- Replace and repair broken fittings immediately.
- If fittings will not take grease, remove and clean thoroughly. Replace fitting if necessary.



**WARNING**

AVOID INJURY OR DEATH

**Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.**

**Support the equipment with blocks or safety stands before working beneath it.**

**Follow good shop practices:**

- **Keep service area clean and dry**
- **Be sure electrical outlets and tools are properly grounded**
- **Use adequate light for the job.**

**Use only tools, jacks, and hoists of sufficient capacity for the job.**


**Replace and secure all shields removed during servicing before operating.**

**Use heavy leather gloves to handle sharp objects.**

**Check hydraulics regularly for leaks. Use cardboard to look for leaks, and use hand and eye protection.**

**Relieve pressure on hydraulic system before repairing or adjusting.**

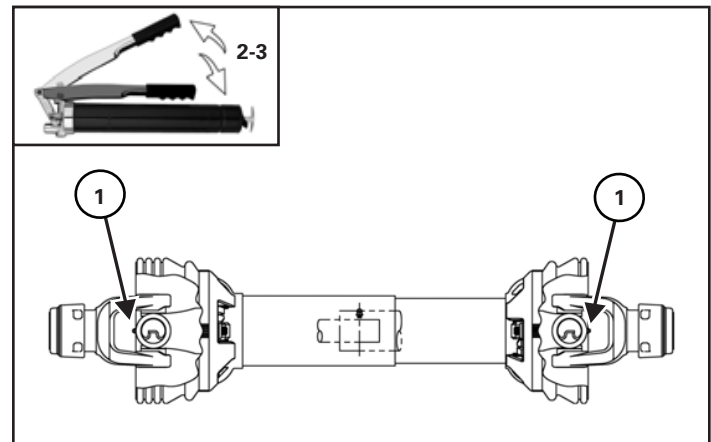
### Locations



**IMPORTANT**

**Fluid such as engine oil, hydraulic fluid, coolants, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.**

**Figure 24**



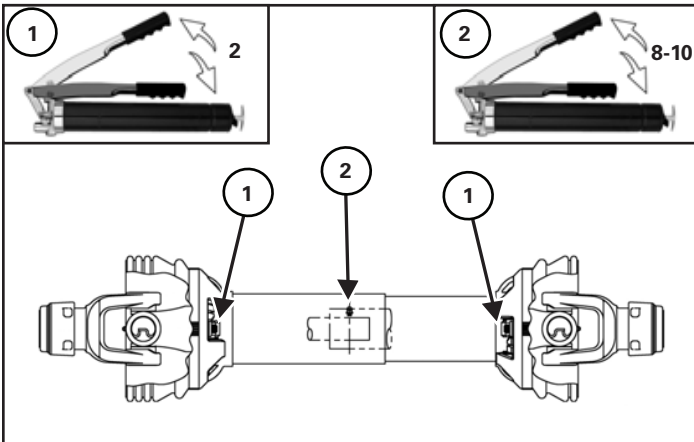
Apply two to three pumps of grease to the cross and bearings (Item 1) on the PTO driveline **[Figure 24]**.

Grease every **8 hours of use**.

**Note:** Images may not show your exact PTO driveline but the procedure is correct.



**Figure 25**

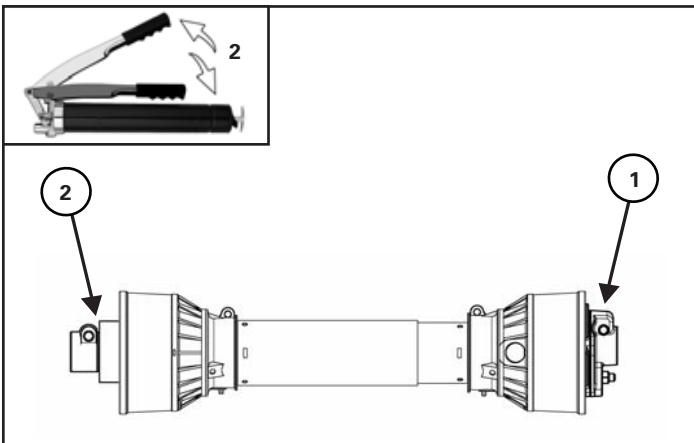


Apply two pumps of grease to the guard bushings (Item 1) [Figure 25].

Apply eight to ten pumps of grease to the telescoping member (Item 2) [Figure 25].

Grease every **50 hours of use**.

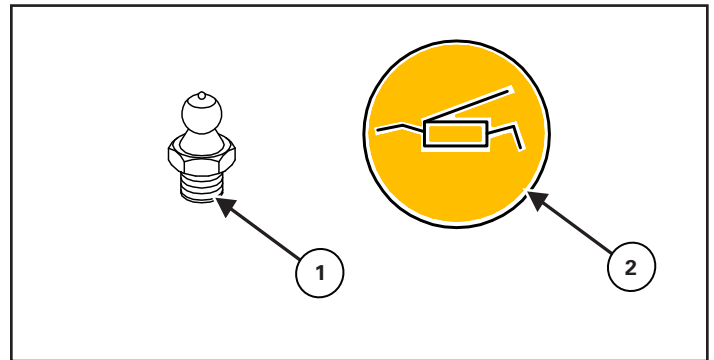
**Figure 26**



Apply two pumps of grease to the slip clutch (Item 1) and PTO quick disconnect (Item 2) [Figure 26].

Grease every **50 hours of use**.

**Figure 27**



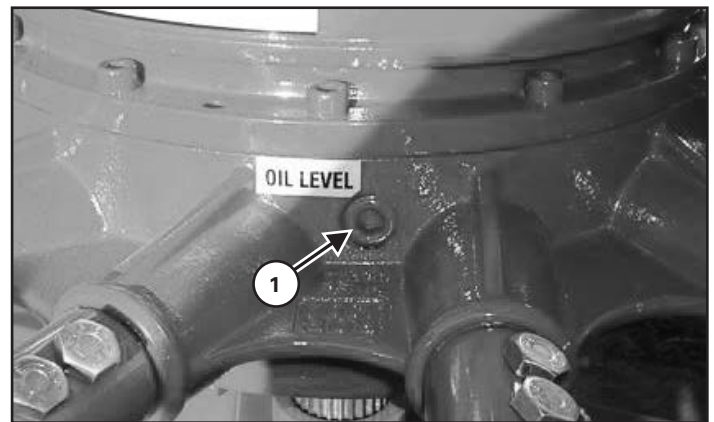
Lubrication point locations (Item 1) are identified with a sticker (Item 2) [Figure 27].

Lubrication points include:

- Driveline support bushing
- Axle center bushing
- Axle spindles
- Tandem axle bushings (if equipped)
- Front wheel spindle (if equipped)

Grease every **50 hours of use**.

**Figure 28**



Check the oil in the gearbox (Item 1). Internal components operate immersed in oil. The oil level must reach the bottom of the hole [Figure 28].

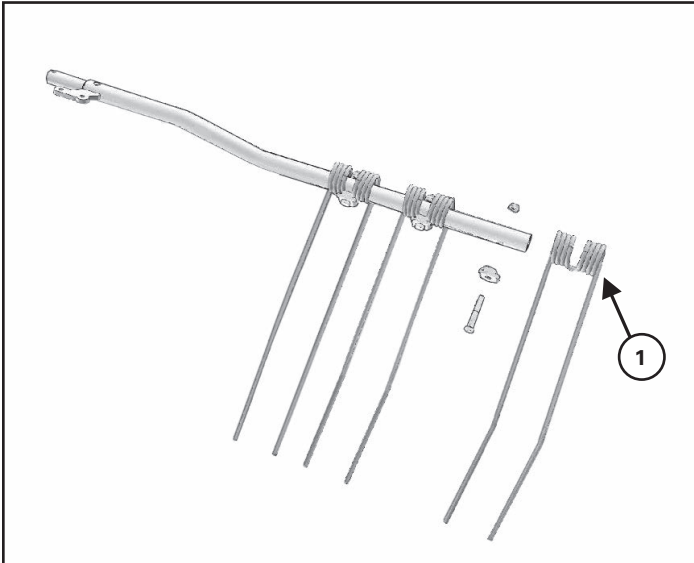
Fill using oil type: ISO VG 350

Check/fill oil in the gearbox every **100 hours of use**.

## Rake Tine Replacement

Periodically check all rake tines for wear or damage.

Figure 29



Replace the rake tines (Item 1) by removing the bolt, nut, and retaining plate [Figure 29].

Slide rake tine off of the rake arm.

Replace tine and reattach with bolt, nut, and retaining plate.

## Safety Sign (Decal) Installation



# IMPORTANT

When replacing safety signs (decals), the temperature must be above 10° C (50° F).

- Remove all portions of the damaged safety sign (decal).
- Thoroughly clean the area with adhesive remover and glass cleaner. Remove all adhesive residue.
- Allow the area to dry completely before installing the new safety sign (decal).
- Position the safety sign (decal) in the correct location.
- Remove a small portion of the backing paper on the safety sign (decal).
- Press on the safety sign (decal) where the backing paper has been removed.
- Slowly remove the remaining backing paper, pressing on the safety sign (decal) as the backing paper is removed.
- Using the backing paper, pressing firmly, move the backing paper over the entire safety sign (decal) area.

**Note:** Small air pockets can be pierced with a pin and smoothed out using the piece of the backing paper.

## Storage And Return To Service

### Storage

Sometimes it may be necessary to store the Rotary Rake for an extended period of time. Below is a list of items to perform before storage.



- Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud, debris or residue.
- Lubricate all bushings to remove any water residue from washing.
- Remove any material that has become entangled around any moving part.
- Place hydraulic hoses or electrical connector (if applicable) in the storage brackets.
- Inspect the hitch and all welds on the equipment for wear and damage.
- Check for loose hardware, missing guards, rake tines, or damaged parts.
- Check for damaged or missing safety signs (decals). Replace if necessary.
- Replace worn or damaged parts.
- Touch up all paint nicks and scratches to prevent rusting.
- Place the equipment in a dry protected shelter.

**Note:** If a dry protected shelter is not available, cover with a waterproof tarp and tie down securely.

- Place the equipment flat on the ground.
- Support the jack / frame with planks if required.

### Return To Service

After the equipment has been in storage, it is necessary to follow a list of items to return the equipment to service.

- Be sure all shields and guards are in place.
- Lubricate the equipment.
- Connect to a tractor and operate equipment, verify all functions operate correctly.
- Repair as needed.

# Farm King



## Parts Identification

|                                |    |
|--------------------------------|----|
| General Parts Information..... | 45 |
| Frame .....                    | 45 |
| Axle Single.....               | 50 |
| Axle Tandem.....               | 52 |
| Rake Arms, Guards.....         | 54 |
| Gearbox, Comer 9 Arm.....      | 56 |
| Gearbox, CMR 9 Arm.....        | 58 |
| Gearbox, Comer 8 Arm.....      | 62 |
| Gearbox, CMR 8 Arm.....        | 64 |
| Front Wheel.....               | 68 |

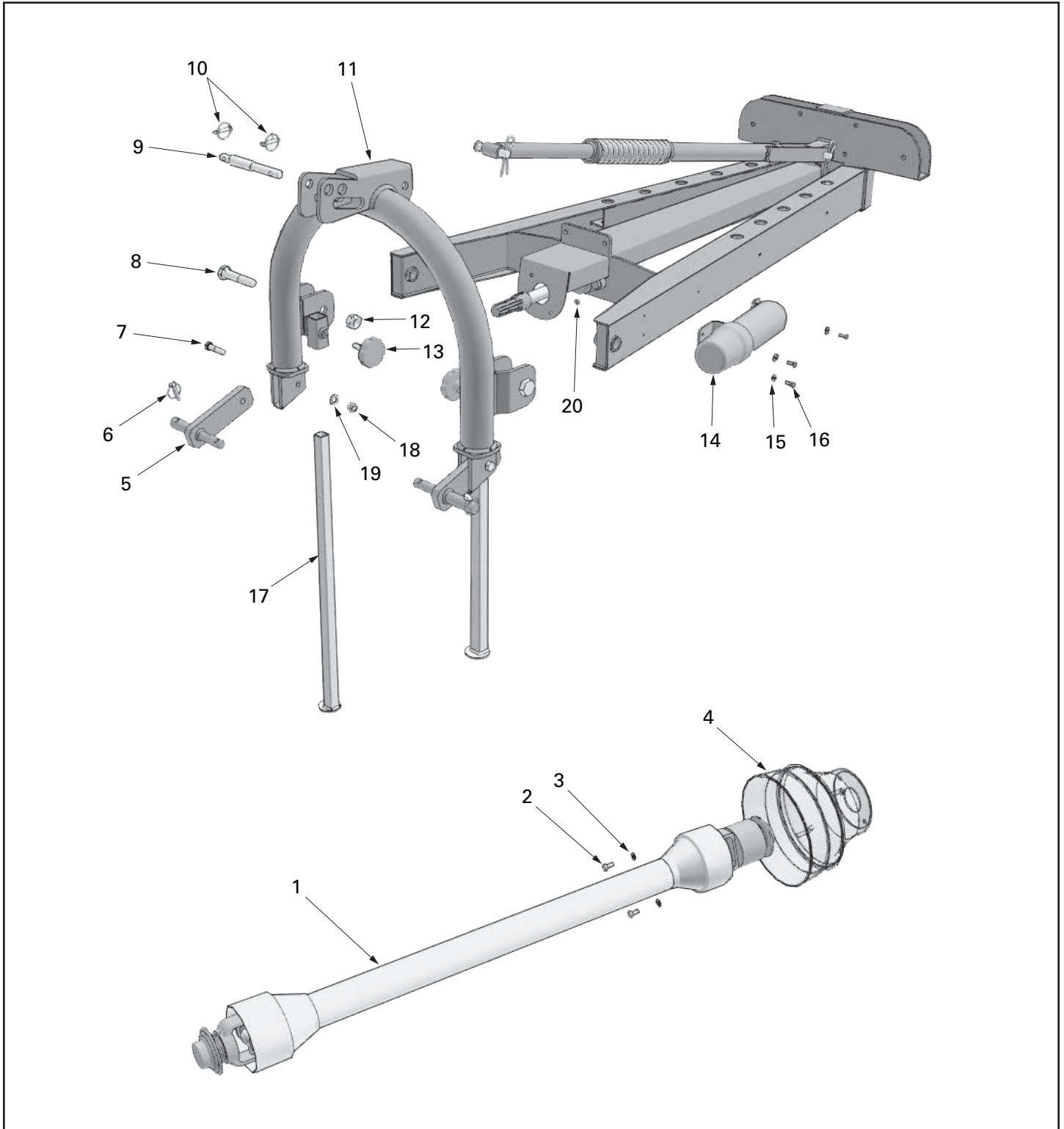
# Farm King

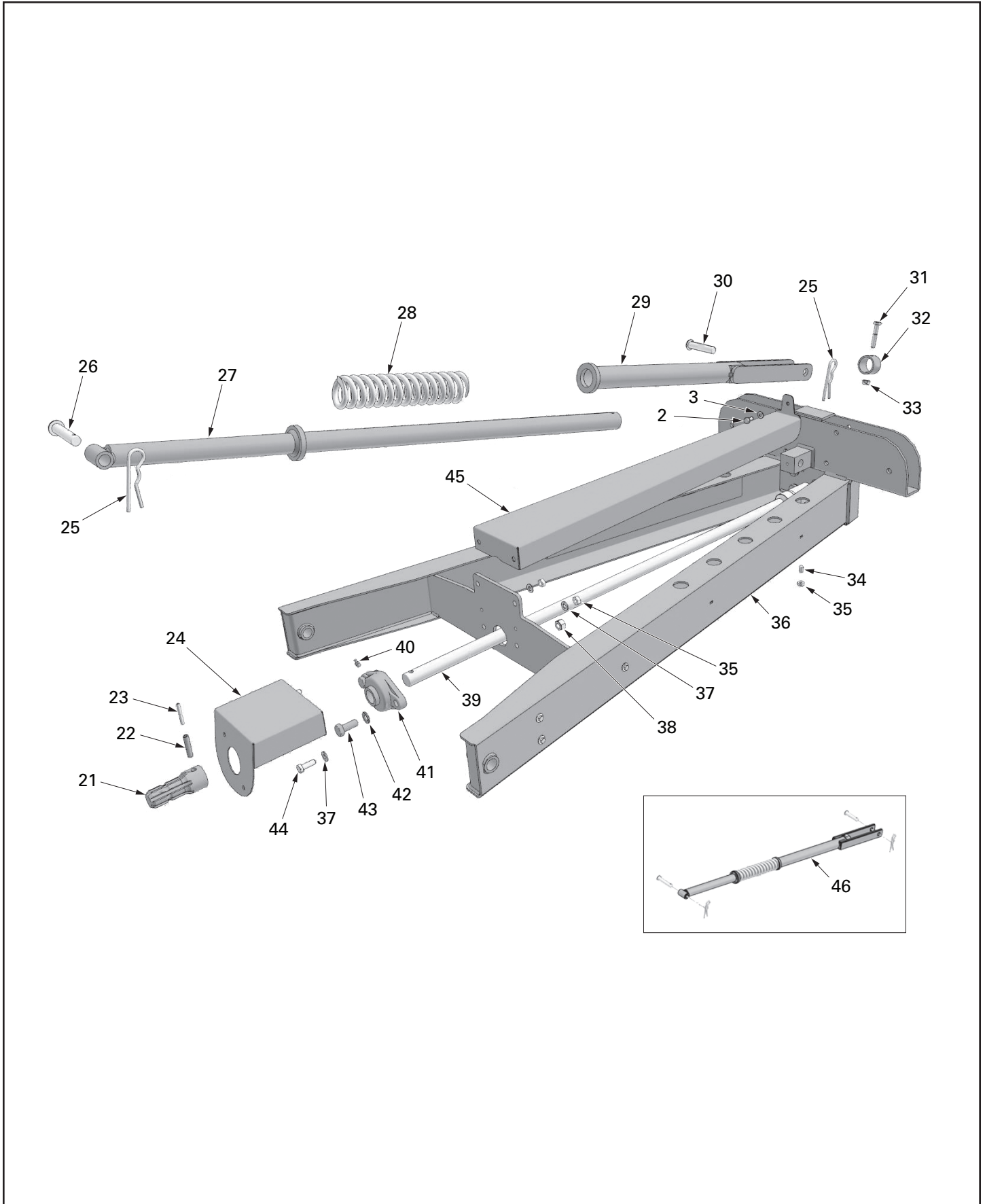


## General Parts Information

The parts identification section lists the descriptions, part numbers, and quantities for all North American base model RR320 Rotary Rake. Contact your Farm King dealer for additional parts information.

### Frame







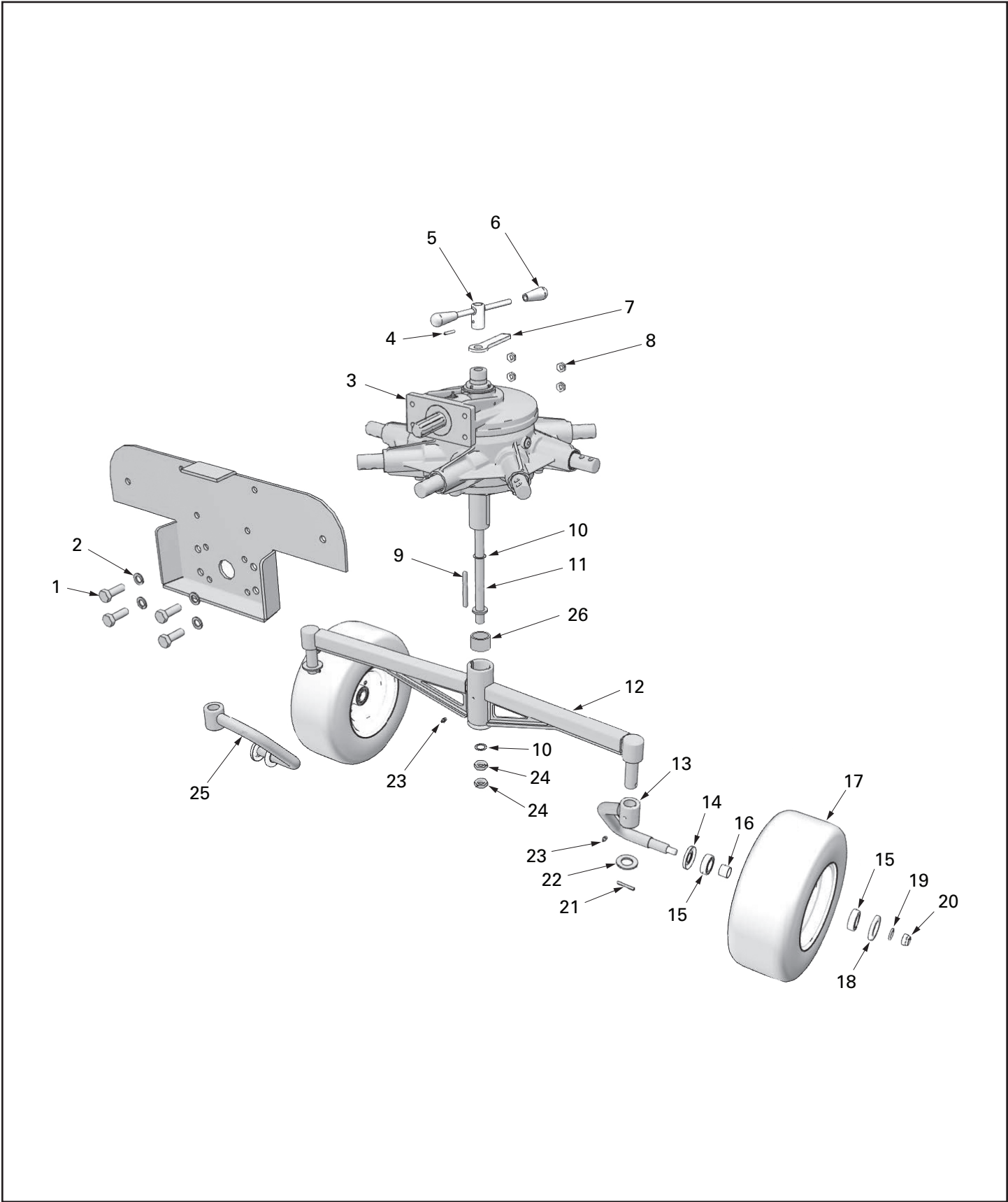
| ITEM | PART NUMBER | DESCRIPTION          |
|------|-------------|----------------------|
| 1    | R8020452    | CARDAN SHAFT         |
| 2    | R3011221    | HH SCREW M8X16       |
| 3    | R3030156    | WASHER M8            |
| 4    | R18033339   | MASTER SHIELD        |
| 5    | R18033097   | ATTACK MOBILE        |
| 6    | R3080202    | PIN Ø10              |
| 7    | R3011202    | SCREWTE M14X60       |
| 8    | R3011633    | SCREWTE M22X110      |
| 9    | R12310115   | PIN 3 POINT          |
| 10   | R12880614   | PIN Ø8               |
| 11   | R18033063   | DRAWBAR ARCH         |
| 12   | R3020222    | SELF LOCKING NUT M22 |
| 13   | R3140023    | KNOB 12MAX40         |
| 14   | R9080022    | MANUAL HOLDER        |
| 15   | R3030160    | WASHER M6            |
| 16   | R3011672    | HH SCREW M6X16       |
| 17   | R18030548   | BEARING FOOT         |
| 18   | R3020203    | SELF LOCKING NUT M14 |
| 19   | R3030161    | WASHER M14           |
| 20   | R3020209    | SELF LOCKING NUT M8  |
| 21   | R12881009   | PTO                  |
| 22   | R3080110    | ELASTIC PIN 10X45    |
| 23   | R3080120    | ELASTIC PIN 6X45     |
| 24   | R18033459   | SUPPORT SHIELD       |
| 25   | R3040202    | R COTTER PIN 5X100   |
| 26   | R18030564   | PIN Ø18X97           |
| 27   | R18033451   | SHOCK ABSORBER INT   |
| 28   | R11010616   | SPRING               |
| 29   | R18033062   | SHOCK ABSORBER EXT   |
| 30   | R18030547   | PIN Ø18X85           |
| 31   | R3011238    | SCREWTE M10X60       |
| 32   | R14013062   | BUSHING              |
| 33   | R3020201    | SELF LOCKING NUT M10 |
| 34   | R3020303    | NUT M10              |
| 35   | R3050110    | SCREWSPEI M10X20     |
| 36   | R18013322   | FRAME                |
| 37   | R3030159    | WASHER M10           |
| 38   | R3020322    | NUT M14 ZN           |
| 39   | R18033456   | TRANSMISSION SHAFT   |
| 40   | R3090101    | GREASE ZERK M8X1     |
| 41   | R12250002   | SUPPORT              |

| ITEM | PART NUMBER | DESCRIPTION             |
|------|-------------|-------------------------|
| 42   | R3030705    | SHNORR WASHER 14/3545   |
| 43   | R3011298    | SCREW TE M14X35         |
| 44   | R3011206    | SCREW TE M10X30         |
| 45   | R18033460   | PROTECTION SHAFT        |
| 46   | R17140173   | COMPLETE SHOCK ABSORBER |

# Farm King

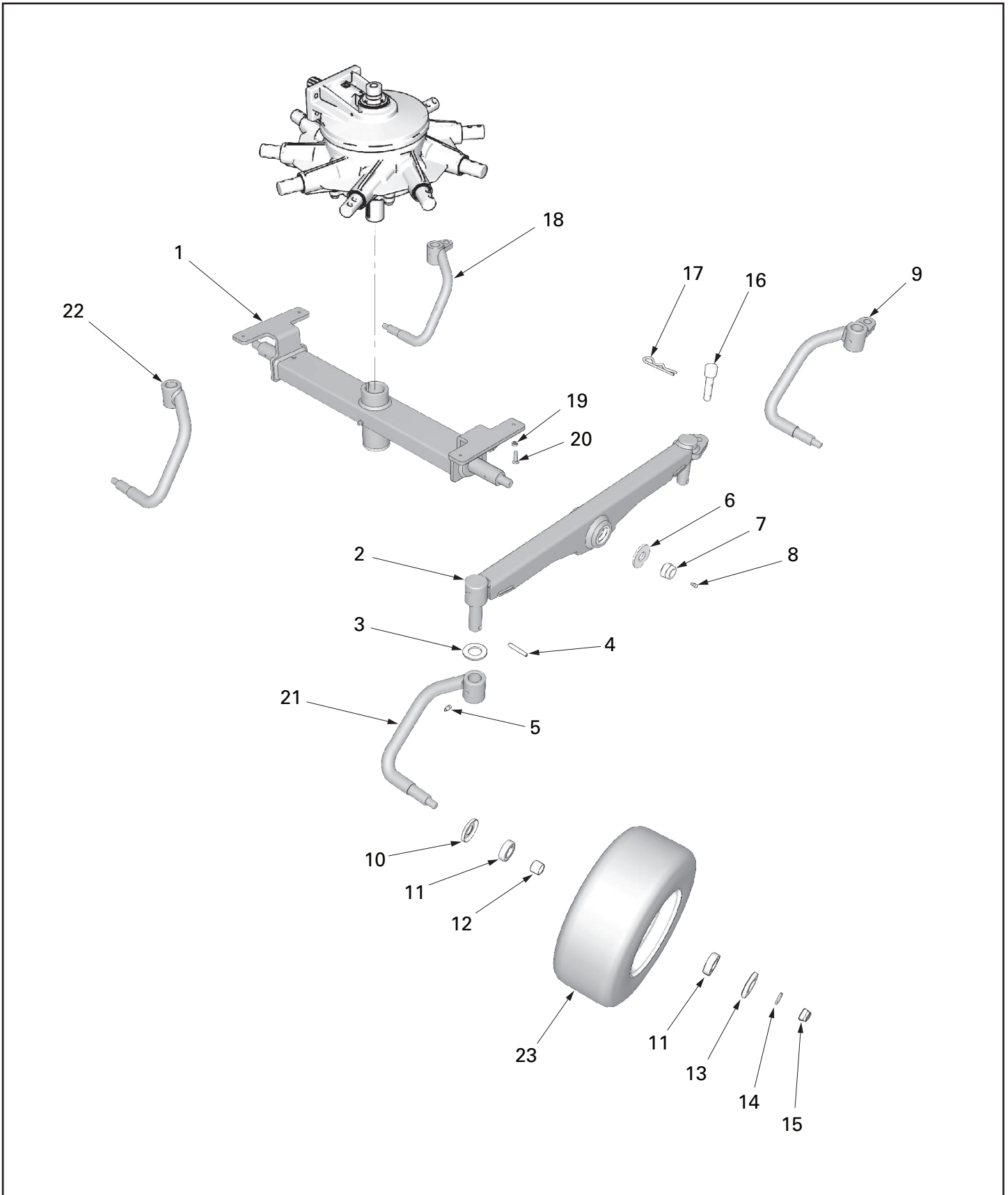


# Axle Single



| ITEM | PART NUMBER | DESCRIPTION             |
|------|-------------|-------------------------|
| 1    | R3010245    | SCREWTE M14X40          |
| 2    | R3030303    | ELASTIC WASHER M14      |
| 3    | R18035795   | GEARBOX 9 ARM           |
|      | R18035794   | GEARBOX 8 ARM           |
| 4    | R3080109    | ELASTIC PIN 6X30        |
| 5    | R18030555   | REGULATION HANDLE       |
| 6    | R3140001    | KNOB                    |
| 7    | R18055149   | SCREW STOP              |
| 8    | R3020363    | SELF LOCKING NUT M14    |
| 9    | R3110016    | TAB 10X8X100            |
| 10   | R12280006   | WASHER PS 22X32X0,5     |
| 11   | R18033411   | LEVER LOCKING           |
| 12   | R18032205   | SUPPORT                 |
| 13   | R18030561   | LEFT AXLE               |
| 14   | R12070314   | INTERNAL SHIELD         |
| 15   | R12240113   | BEARING 6205 2RS        |
| 16   | R12070307   | SPACER Ø25              |
| 17   | R12170106   | COMPLETE WHEEL 16.650.8 |
|      | R12070327   | TIRE 16.650.8           |
|      | R12070326   | AIRTUBE 16.650.8        |
|      | R12070325   | WHEEL RIM 16.650.8      |
| 18   | R12070315   | EXTERNAL SHIELD         |
| 19   | R3030175    | WASHER M16              |
| 20   | R3020204    | SELF LOCKING NUT M16    |
| 21   | R3080105    | ELASTIC PIN 8X50        |
| 22   | R3030165    | WASHER M30              |
| 23   | R3090101    | GREASE ZERK M8X1        |
| 24   | R3020358    | NUT M22X1,5             |
| 25   | R18030563   | RIGHT AXLE              |
| 26   | R18037247   | BUSHING                 |

# Axle Tandem

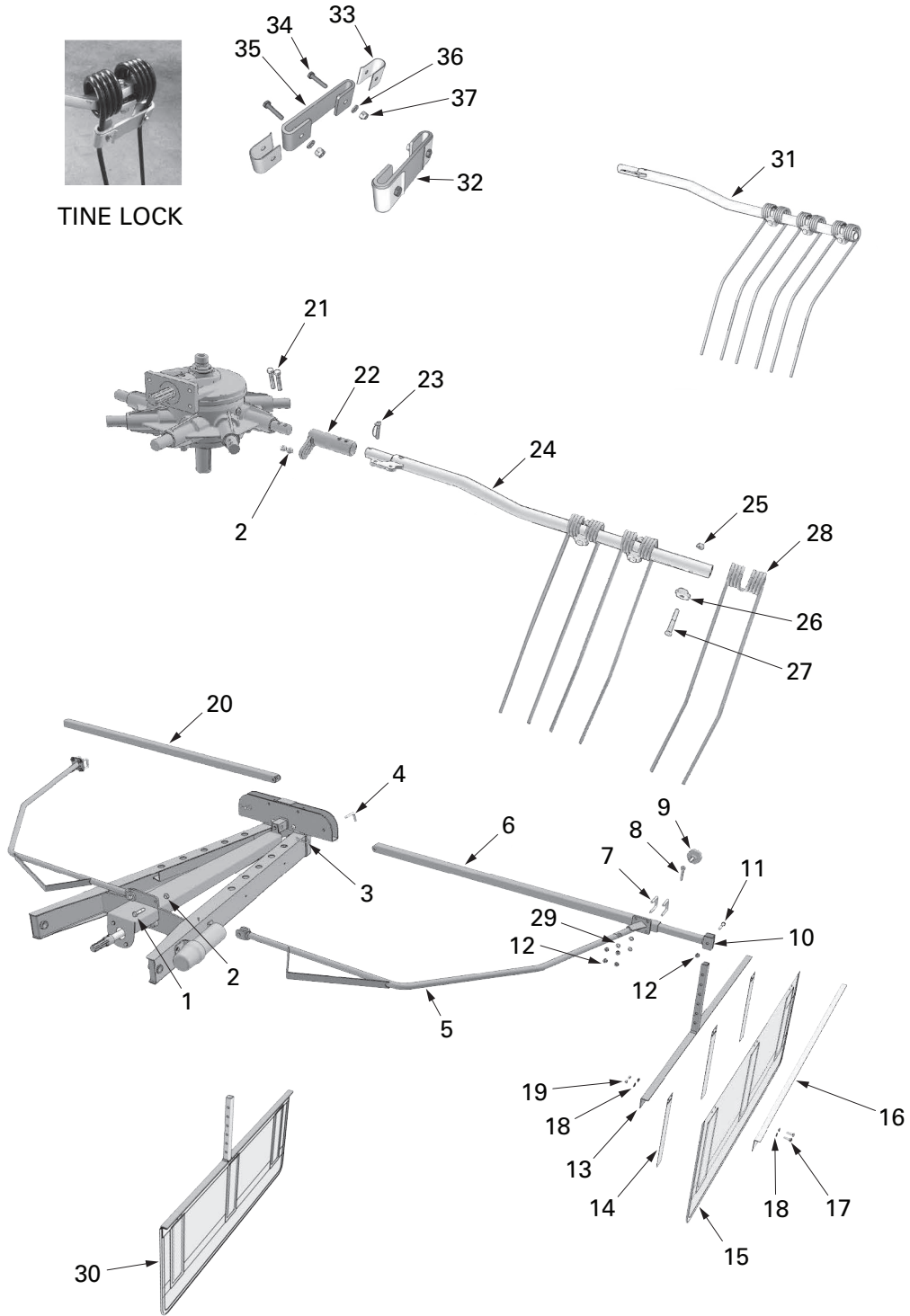


| ITEM | PART NUMBER | DESCRIPTION             |
|------|-------------|-------------------------|
| 1    | R18033610   | FRAME TANDEM            |
| 2    | R18033613   | TANDEM                  |
| 3    | R3030165    | WASHER M30              |
| 4    | R3080105    | ELASTIC PIN 8X50        |
| 5    | R3090101    | GREASE ZERK 8X1         |
| 6    | R18032281   | WASHER Ø60              |
| 7    | R3020222    | SELF LOCKING NUT M22    |
| 8    | R3090102    | GREASE ZERK M6X1        |
| 9    | R18033644   | BLOCKING HUB            |
| 10   | R12360001   | INTERNAL SHIELD         |
| 11   | R12240113   | BEARING 6205 2RS        |
| 12   | R12070307   | SPACER Ø25              |
| 13   | R12070315   | EXTERNAL SHIELD         |
| 14   | R3030175    | WASHER M16              |
| 15   | R3020204    | SELF LOCKING NUT M16    |
| 16   | R18032340   | PIN                     |
| 17   | R3040202    | R COTTER PIN 5X100      |
| 18   | R18033643   | HUB                     |
| 19   | R3020332    | SELF LOCKING NUT M14    |
| 20   | R3011324    | HH SCREW M14X30         |
| 21   | R18030563   | RIGHT AXLE              |
| 22   | R18030561   | LEFT AXLE               |
| 23   | R12170106   | COMPLETE WHEEL 16.650.8 |
|      | R12070327   | TIRE 16.650.8           |
|      | R12070326   | AIR TUBE 16.650.8       |
|      | R12070325   | WHEEL RIM 16.650.8      |

# Rake Arms, Guards



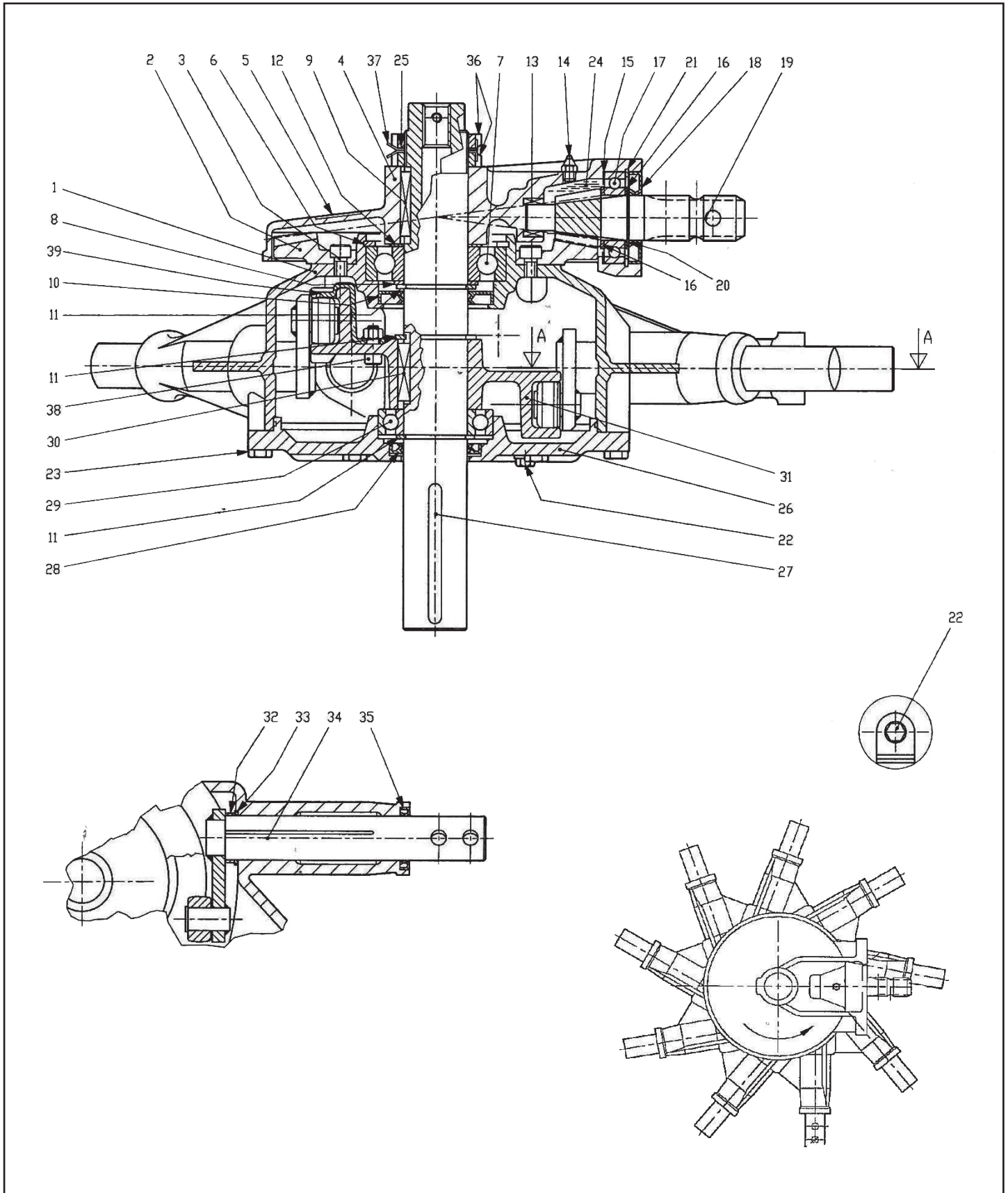
TINE LOCK





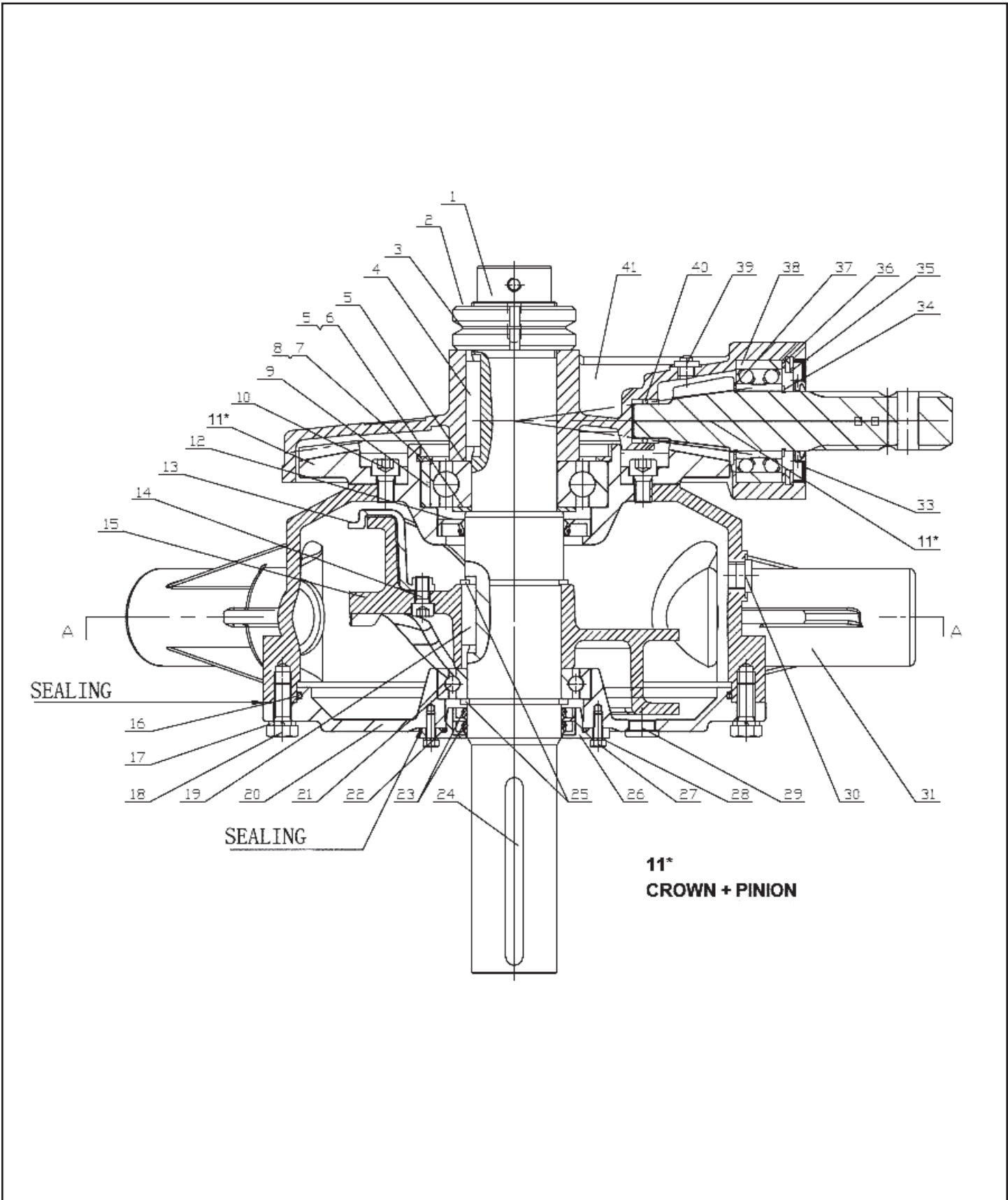
| ITEM | PART NUMBER            | DESCRIPTION             |
|------|------------------------|-------------------------|
| 1    | R3010406               | SCREWTE M12X55          |
| 2    | R3020202               | SELF LOCKING NUT M12    |
| 3    | R3040201               | R COTTER PIN 30X60      |
| 4    | R18033247              | R COTTER PIN Ø12X125    |
| 5    | R18033471              | PROTECTION RR320        |
| 6    | R18033458              | PROTECTION LEFT RR320   |
| 7    | R3170112               | U BOLT M10X40           |
| 8    | R18030525              | LOCKNUT 12MA            |
| 9    | R3140023               | KNOB 12MAX40            |
| 10   | R12880601 OR R18033098 | DEFLECTOR HOLDER        |
| 11   | R3010304               | SCREWTE M10X55          |
| 12   | R3020201               | SELF LOCKING NUT M10    |
| 13   | R12881016 OR R18033096 | DEFLECTOR ARM           |
| 14   | R18032365              | DEFLECTOR SUPPORT       |
| 15   | R12881397              | DEFLECTOR               |
| 16   | R18033406              | DEFLECTOR FRAME         |
| 17   | R3011242               | SCREWTE M8X25           |
| 18   | R3030156               | WASHER M16              |
| 19   | R3020209               | SELF LOCKING NUT M8     |
| 20   | R18032533              | PROTECTION RIGHT RR320  |
| 21   | R3011207               | SCREWTE M12X60          |
| 22   | R18031498              | ARM SUPPORT RR320       |
| 23   | R3080202               | PIN Ø10                 |
| 24   | R18033402              | TINE ARM                |
| 25   | R3020202               | SELF LOCKING NUT M12    |
| 26   | R12881075              | TINE CLAMP              |
| 27   | R3011288               | SCREWTE M12X70          |
| 28   | R11010521              | TINE                    |
| 29   | R3030159               | WASHER M10              |
| 30   | R18033405              | FULL LATERAL PROTECTION |
| 31   | R18033401              | TINE HOLDER ARM UNIT    |
| 32   | R18030644              | COMPLETETINE LOCK       |
| 33   | R18037842              | METALLICTIE             |
| 34   | R3011638               | HH SCREW M6X30 ZN       |
| 35   | R9260001               | PVCTIE                  |
| 36   | R3030158               | WASHER M6 ZN            |
| 37   | R3020213               | SELF LOCKING NUT M6     |

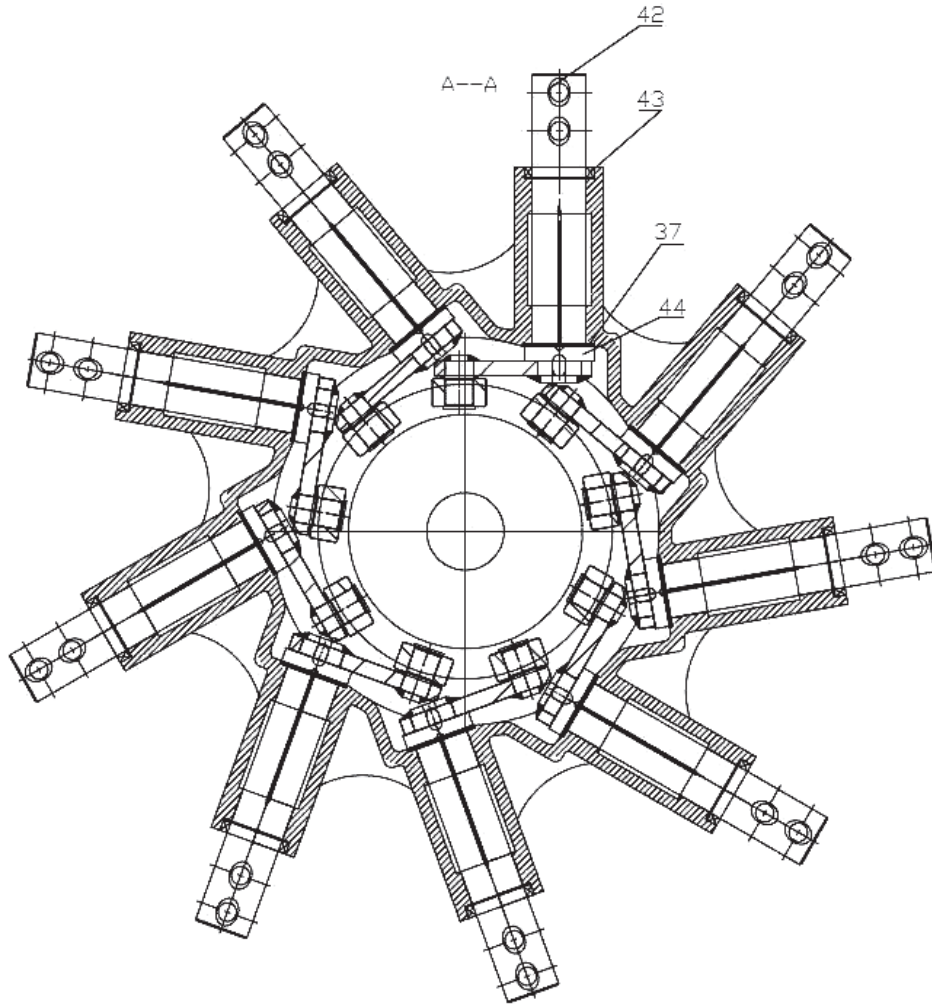
# Gearbox, Comer 9 Arm



| ITEM | PART NUMBER | DESCRIPTION              |
|------|-------------|--------------------------|
| 1    | R18032217   | CASING                   |
| 2    | R18032218   | CROWN-WHEEL              |
| 3    | R3010662    | SCREW TCEI M10X18        |
| 4    | R18032219   | TOP COVER                |
| 5    | -           | COMER PLATE              |
| 6    | R3120135    | SEEGER 65                |
| 7    | R12240238   | BEARING CLB 6310         |
| 8    | R3030237    | SHIM 70.3X50.3X2.5       |
| 9    | R3110019    | TAB 10X8X50              |
| 10   | R10011338   | DOUBLE OIL SEAL 50X90X10 |
| 11   | R3120155    | SNAP RING H3             |
| 12   | R3030238    | SHIM 50.3X70.3           |
| 13   | R12240839   | NEEDLE BEARING 20X26X16  |
| 14   | R3090105    | GREASE ZERK M10X1,5      |
| 15   | R3030239    | SHIM 49X71.7X0.2         |
| 16   | R3030240    | SHIM 35.3X48             |
| 17   | R12240145   | BEARING CLB 6207         |
| 18   | R10011333   | OIL SEAL 35X72X10        |
| 19   | R18032220   | PINION SHAFT Z10 M3.55   |
| 20   | R3120102    | SEEGER 35                |
| 21   | R3120105    | SEEGER 72                |
| 22   | R4010835    | OUTLET PLUG 3/8"         |
| 23   | R3011211    | HH SCREW M10X25          |
| 24   | -           | GREASE                   |
| 25   | R3030241    | SHIM 50.2X57.5X0.5       |
| 26   | R18032221   | BOTTOM COVER             |
| 27   | R18032222   | SHAFT                    |
| 28   | R10011334   | OIL SEAL 50X72X8         |
| 29   | R12240134   | BEARING CLB 6210         |
| 30   | R3110010    | TAB 10X8X35              |
| 31   | R18032223   | CAMME                    |
| 32   | R18032225   | SPACER 35.5X43.5X9       |
| 33   | R18034042   | SHIM 35.2X43.8X1         |
| 34   | R18032224   | CONNECTING ROD           |
| 35   | R10011332   | OIL SEAL 35X45X7         |
| 36   | R3180008    | LOCKNUT M50X1.5          |
| 37   | R3030195    | SPRING WASHER 50X74X1.25 |
| 38   | R3011211    | HH SCREW M8X22           |
| 39   | R18035618   | NUT + SHEET PLATE        |

# Gearbox, CMR 9 Arm

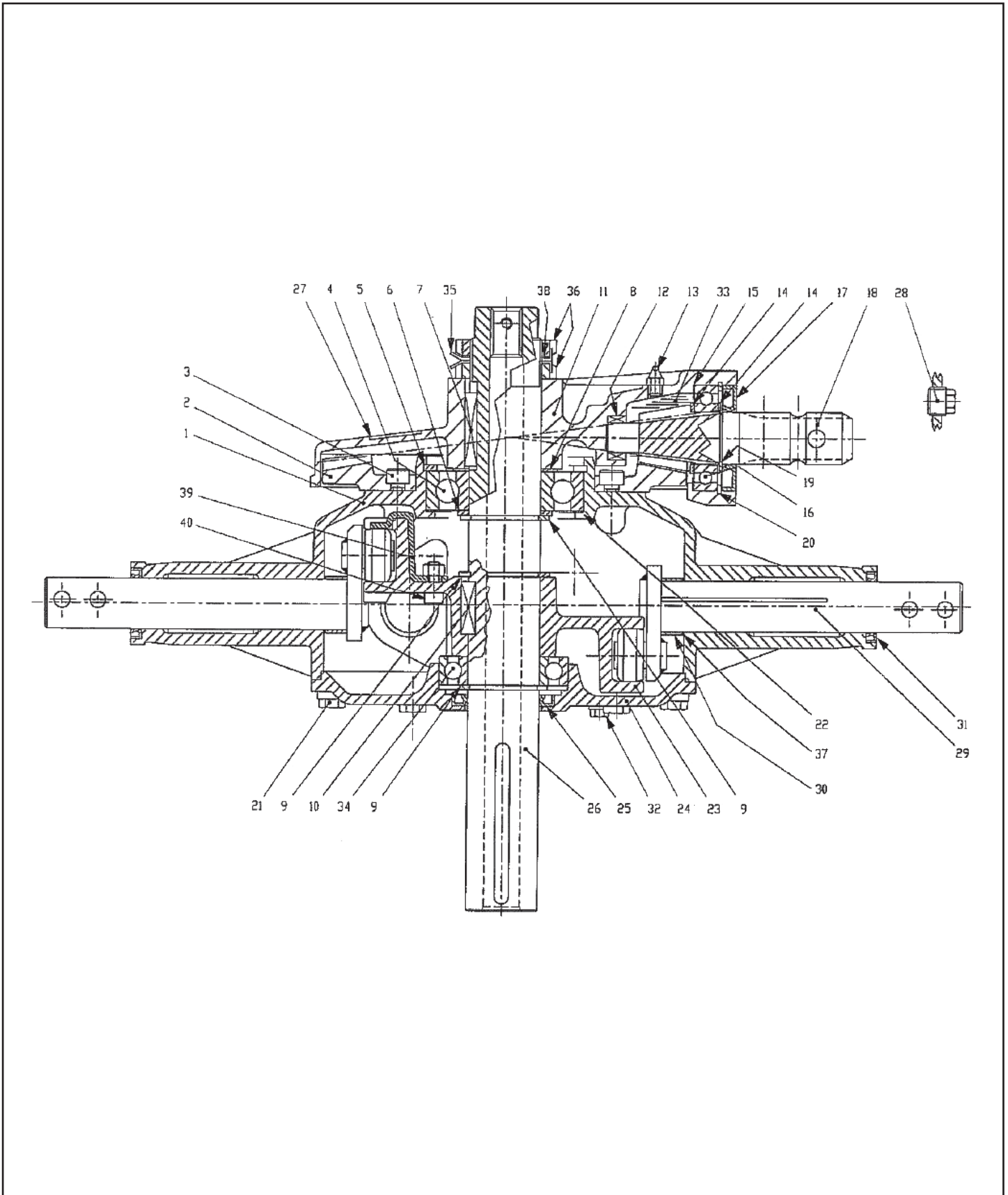




| ITEM | PART NUMBER | DESCRIPTION                     |
|------|-------------|---------------------------------|
| 1    | R18036902   | RIGHT SHAFT S9                  |
|      | R18036903   | LEFT SHAFT S9                   |
| 2    | R18035477   | LOCKNUT M50X1.5                 |
| 3    | R18035478   | SHIM WASHER - 50                |
| 4    | R3110019    | TAB 10X8X50                     |
| 5    | R18036895   | SHIM 51X70X0.1                  |
|      | R18036896   | SHIM 51X70X0.2                  |
|      | R18036897   | SHIM 51X70X0.5                  |
| 6    | R18035953   | SHIM 50X70X3                    |
| 7    | R3120139    | SEEGER 110x4                    |
| 8    | R18036898   | SHIM 95X109X0.1                 |
|      | R18036899   | SHIM 95X109X0.2                 |
| 9    | R12240238   | BEARING CLB 6310-2Z             |
| 10   | R3010673    | HH SCREW M10X16                 |
| 11   | R18036329   | COMPLETE HELIDAL CONICAL TORQUE |
| 12   | R18035496   | OIL SEAL 58X90X10               |
| 13   | R18035480   | CLOSING METAL SHEET             |
| 14   | R3010642    | HH SCREW M8X16                  |
| 15   | R18035481   | CAMME                           |
| 16   | R18035497   | O-RING 245x3.1                  |
| 17   | R3030319    | GROWER WASHER M10               |
| 18   | R3011206    | HH SCREW M10X30 ZN              |
| 19   | R3110010    | TAB B10X8X35                    |
| 20   | R18035482   | BOTTOM COVER                    |
| 21   | R12240265   | BEARING CLB 6011-2Z             |
| 22   | R18035499   | O-RING 73x2.65                  |
| 23   | R12260324   | OIL SEAL Ø72XØ55X8              |
| 24   | R3110025    | TAB A10X110                     |
| 25   | R3120216    | SEEGER 55x3                     |
| 26   | R18035490   | BOTTOM PLUG                     |
| 27   | R3011682    | HH SCREW M5X16                  |
| 28   | R3030613    | WASHER M5                       |
| 29   | R4010811    | OUTLET PLUG 3/8"                |
| 30   | R4010846    | LEVEL PLUG 1/2"                 |
| 31   | R18035504   | R CASING                        |
|      | R18036382   | L CASING                        |
| 32   | -           | -                               |
| 33   | R18036901   | OIL SEAL Ø35XØ72X7              |
| 34   | R3120102    | SEEGER 35x1.8                   |
| 35   | R3120105    | SEEGER 72x2.5                   |
| 36   | R18036900   | SHIM 72X62X2                    |

| ITEM | PART NUMBER | DESCRIPTION              |
|------|-------------|--------------------------|
| 37   | R18035487   | SHIM 35.2X45X1           |
|      | R18036380   | SHIM 35.2X45X0.7         |
|      | R18036381   | SHIM 35.2X45X0.5         |
| 38   | R12240191   | BEARING 3207A-2RS        |
| 39   | R3090105    | GREASE ZERK - H1 M10X1,5 |
| 40   | R12240239   | BEARING HK2016           |
| 41   | R18035489   | TOP COVER                |
| 42   | R18035492   | CONNECTING ROD           |
| 43   | R12260031   | OIL SEAL 35X45X7         |
| 44   | R18035954   | SHIM 35.5X45X9           |

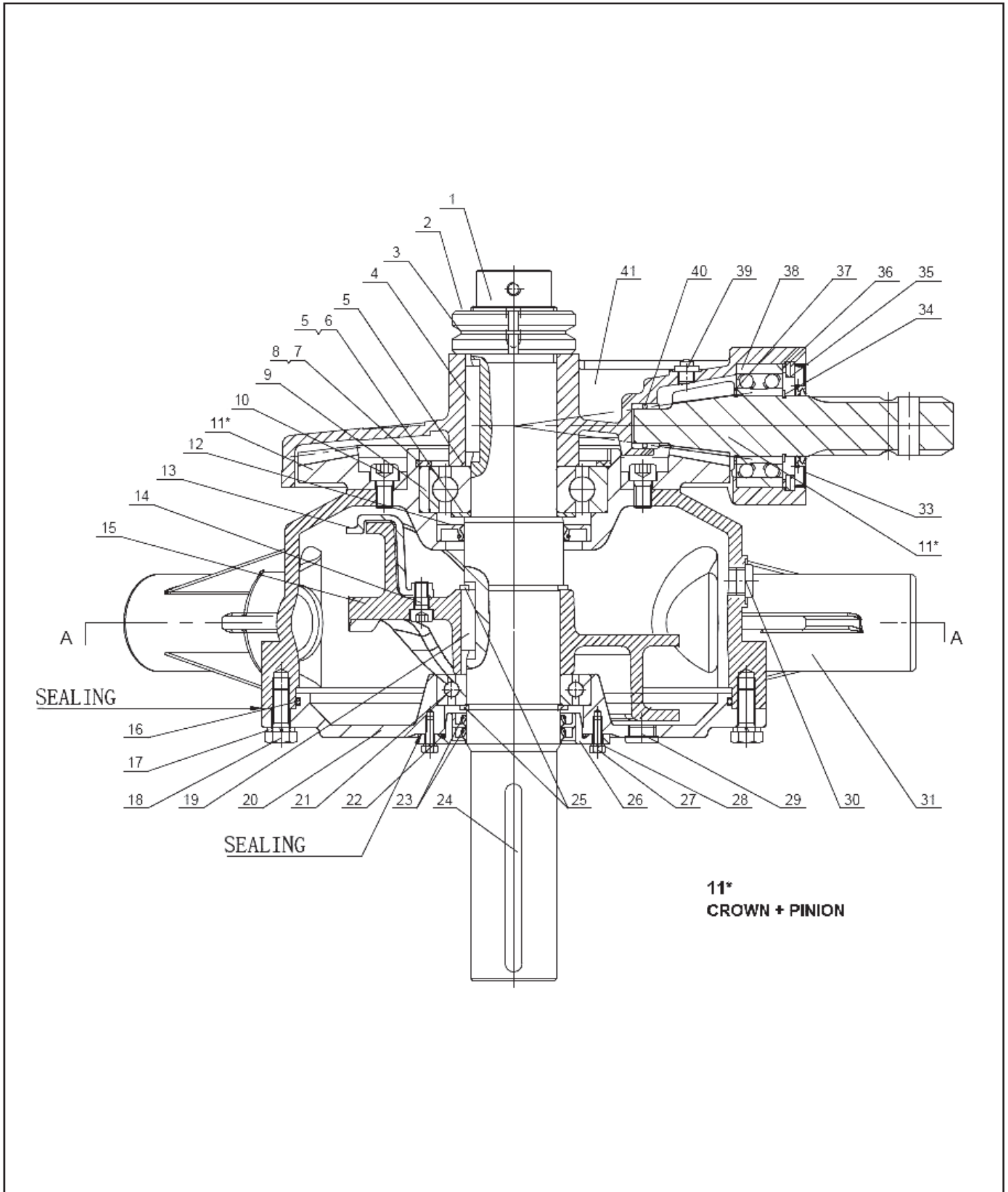
# Gearbox, Comer 8 Arm

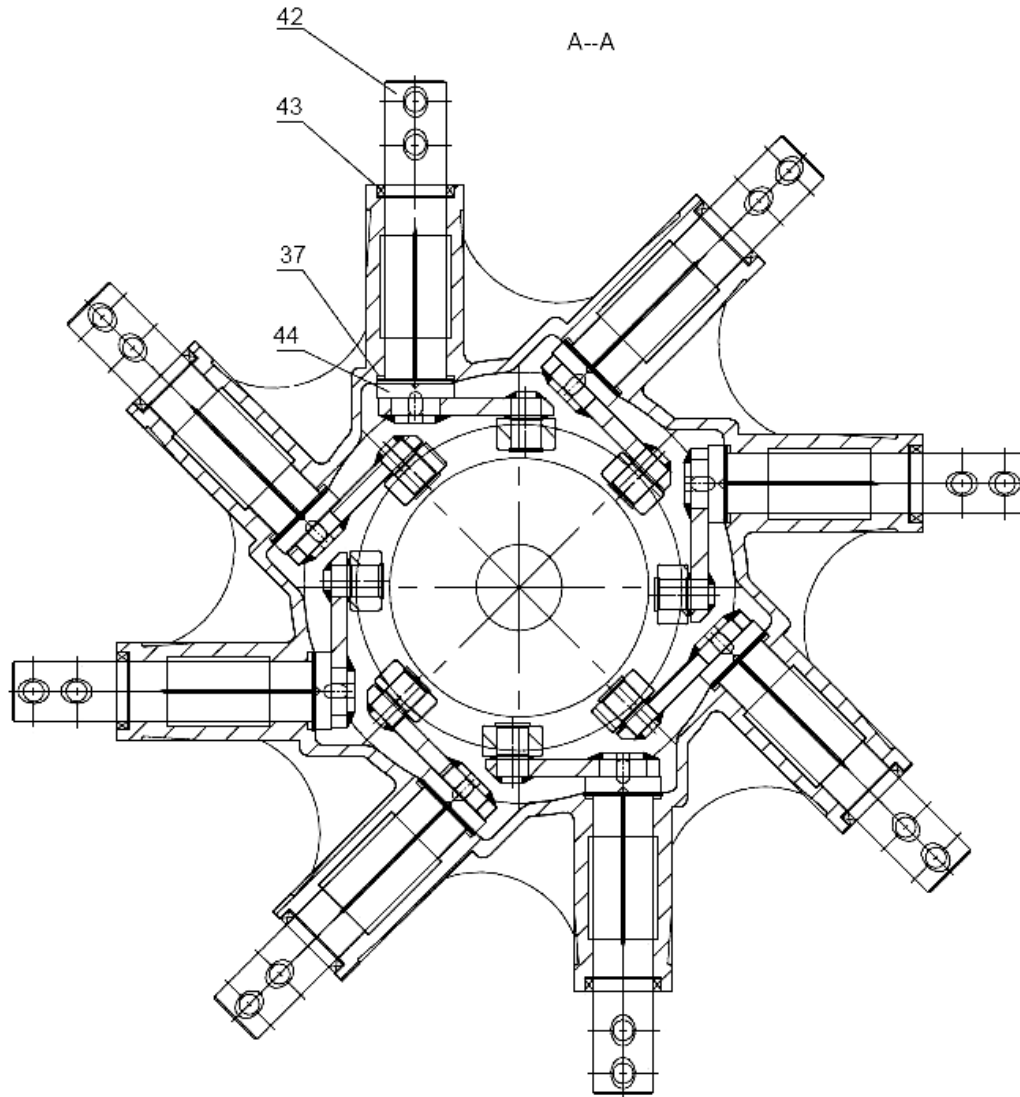




| ITEM | PART NUMBER | DESCRIPTION              |
|------|-------------|--------------------------|
| 1    | R18034921   | CASING                   |
| 2    | R18032218   | CROWN WHEEL              |
| 3    | R3010662    | HH SCREW M10X18          |
| 4    | R12240238   | BEARING CLB 6310         |
| 5    | R3120135    | SEEGER 65                |
| 6    | R3030237    | SHIM 70.3X50.3X2.5       |
| 7    | R3110019    | TAB 10X8X50              |
| 8    | R3030238    | SHIM 50.3X70.3           |
| 9    | R3120155    | SNAP RING H3             |
| 10   | R3110010    | TAB 10X8X35              |
| 11   | R18032219   | TOP COVER                |
| 12   | R12240839   | NEEDLE BEARING 20X26X16  |
| 13   | R3090105    | GREASE ZERK M10X1,5      |
| 14   | R3030240    | SHIM 35.3X48             |
| 15   | R3030239    | SHIM 49X71.7X0.2         |
| 16   | R12240145   | BEARING CLB 6207         |
| 17   | R10011333   | OIL SEAL 35X72X10        |
| 18   | R18032220   | PINION SHAFT Z10 M3.55   |
| 19   | R3120102    | SEEGER 35                |
| 20   | R3120105    | SEEGER 72                |
| 21   | R3011211    | HH SCREW M10X25 ZN       |
| 22   | R18034922   | SHIM 71X109.7X0.2        |
| 23   | R18034923   | CAMME                    |
| 24   | R18034924   | BOTTOM COVER             |
| 25   | R10011334   | OIL SEAL 50X72X8         |
| 26   | R18032222   | SHAFT                    |
| 27   | -           | COMER PLATE              |
| 28   | R18034925   | PLUG 1/2" GAS            |
| 29   | R18032224   | CONNECTING ROD           |
| 30   | R18032225   | SPACER 35.5X43.5X9       |
| 31   | R10011332   | OIL SEAL 35X45X7         |
| 32   | R4010835    | PLUG 3/8" GAS            |
| 33   | -           | GREASE                   |
| 34   | R12240134   | BEARING CLB 6210         |
| 35   | R3030195    | SPRING WASHER 50X74X1.25 |
| 36   | R3180008    | LOCKNUT M50X1.5          |
| 37   | R3030240    | SHIM 35.2X43.8X1         |
| 38   | R3030241    | SHIM 50.2X57.5X0.5       |
| 39   | R18035618   | NUT + SHEET PLATE        |
| 40   | R3011211    | HH SCREW M10X25 ZN       |

# Gearbox, CMR 8 Arm

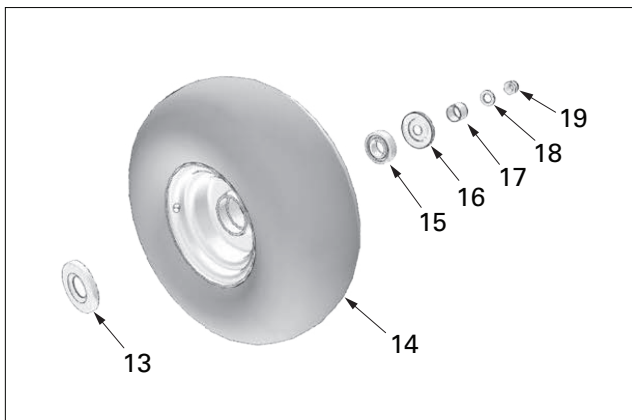
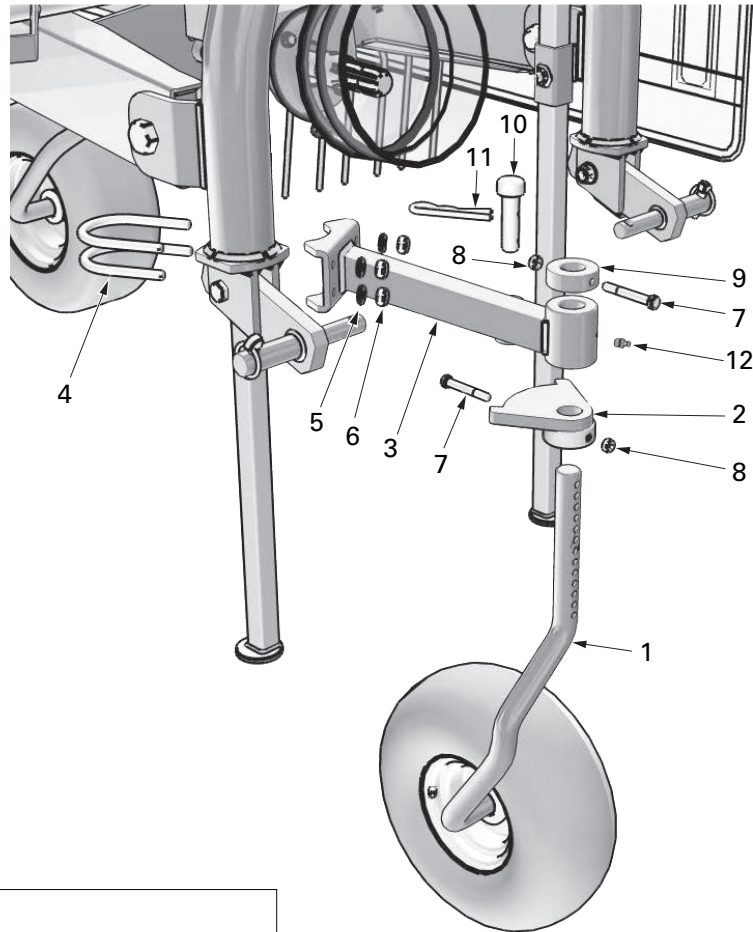




| ITEM | PART NUMBER | DESCRIPTION                     |
|------|-------------|---------------------------------|
| 1    | R18036902   | RIGHT SHAFT S8                  |
|      | R18036903   | LEFT SHAFT S8                   |
| 2    | R18035477   | LOCKNUT M50X1.5                 |
| 3    | R18035478   | SHIM WASHER - 50                |
| 4    | R3110019    | TAB 10X8X50                     |
| 5    | R18036895   | SHIM 51X70X0.1                  |
|      | R18036896   | SHIM 51X70X0.2                  |
|      | R18036897   | SHIM 51X70X0.5                  |
| 6    | R18035953   | SHIM 50X70X3                    |
| 7    | R3120139    | SEEGER 110x4                    |
| 8    | R18036898   | SHIM 95X109X0.1                 |
|      | R18036899   | SHIM 95X109X0.2                 |
| 9    | R12240238   | BEARING CLB 6310-2Z             |
| 10   | R3010673    | HH SCREW M10X16                 |
| 11   | R18036329   | COMPLETE HELIDAL CONICAL TORQUE |
| 12   | R18035496   | OIL SEAL 58X90X10               |
| 13   | R18035480   | CLOSING METAL SHEET             |
| 14   | R3010642    | HH SCREW M8X16                  |
| 15   | R18035481   | CAMME                           |
| 16   | R18035497   | O-RING 245x3.1                  |
| 17   | R3030319    | GROWER WASHER M10               |
| 18   | R3011206    | HH SCREW M10X30 ZN              |
| 19   | R3110010    | TAB B10X8X35                    |
| 20   | R18036383   | BOTTOM COVER                    |
| 21   | R12240265   | BEARING CLB 6011-2Z             |
| 22   | R18035499   | O-RING 73x2.65                  |
| 23   | R12260234   | OIL SEAL Ø55XØ72X8              |
| 24   | R3110025    | TAB A10X110                     |
| 25   | R3120216    | SEEGER 55x3                     |
| 26   | R18035490   | BOTTOM PLUG                     |
| 27   | R3011682    | HH SCREW M5X16                  |
| 28   | R3030613    | WASHER M5                       |
| 29   | R4010811    | OUTLET PLUG 3/8"                |
| 30   | R4010846    | LEVEL PLUG 1/2"                 |
| 31   | R18036385   | R CASING                        |
|      | R18036384   | L CASING                        |
| 32   | -           | -                               |
| 33   | R18036901   | OIL SEAL Ø35XØ72X7              |
| 34   | R3120102    | SEEGER 35x1.8                   |
| 35   | R3120105    | SEEGER 72x2.5                   |
| 36   | R18036900   | SHIM 72X62X2                    |

| ITEM | PART NUMBER | DESCRIPTION              |
|------|-------------|--------------------------|
| 37   | R18035487   | SHIM 35.2X45X1           |
|      | R18036380   | SHIM 35.2X45X0.7         |
|      | R18036381   | SHIM 35.2X45X0.5         |
| 38   | R12240191   | BEARING 3207A-2RS        |
| 39   | R3090105    | GREASE ZERK - H1 M10X1,5 |
| 40   | R12240239   | BEARING HK2016           |
| 41   | R18035489   | TOP COVER                |
| 42   | R18035492   | CONNECTING ROD           |
| 43   | R12260031   | OIL SEAL 35X45X7         |
| 44   | R18035954   | SHIM 35.5X45X9           |

# Front Wheel



| ITEM | PART NUMBER | DESCRIPTION             |
|------|-------------|-------------------------|
| 1    | R18033035   | AXLE                    |
| 2    | R18033034   | SECTOR                  |
| 3    | R18033707   | ARM                     |
| 4    | R3170102    | U BOLT M12              |
| 5    | R3030159    | WASHER M12 ZN           |
| 6    | R3020328    | NUT M12 ZN              |
| 7    | R3011612    | H.H. SCREW M8X70 ZN     |
| 8    | R3020329    | NUT M8 ZN               |
| 9    | R18033534   | BUSH                    |
| 10   | R18032340   | PIN                     |
| 11   | R3040202    | PIN 5X100               |
| 12   | R3090101    | GREASE ZERK M8X1        |
| 13   | R12070314   | INTERNAL SHIELD         |
| 14   | R12170103   | COMPLETE WHEEL 15.600/6 |
|      | R12070313   | TIRE 15.600.6           |
|      | R12070312   | AIR TUBE 15.600.6       |
|      | R12070311   | WHEEL RIM 15.600.6      |
| 15   | R12240313   | BEARING 6205 2RS        |
| 16   | R12070315   | EXTERNAL SHIELD         |
| 17   | R12070307   | SPACER D.25             |
| 18   | R3030175    | WASHER 30X17X3 ZN       |
| 19   | R3020204    | SELF LOCKING NUT M16    |

# Farm King





## Specifications And Shipping Kit Numbers

|                                      |    |
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# Farm King



## Specifications

| MODEL                    | RR320                           |
|--------------------------|---------------------------------|
| Working Width            | 10.5 Ft. (320 cm)               |
| Windrow Delivery         | Left Side                       |
| Average Windrow Width    | 2 Ft. (60 cm)                   |
| Rotary Group             | Single Rotor (Oil Bath Gearbox) |
| Rotor Diameter           | 9.5 Ft. (280 cm)                |
| Tine Arms                | 9                               |
| Tines                    | 27 (Double Tines)               |
| Depth Control            | Mechanical                      |
| Transport Width Arms On  | 9.2 Ft. (280 cm)                |
| Transport Width Arms Off | 5.2 Ft. (160 cm)                |
| Transport Length         | 7.8 Ft. (245 cm)                |
| Tires                    | 2 x 16/6.5 x 8                  |
| Required HP              | 35 HP                           |
| Weight                   | 782 lbs. (355 kg)               |

**Note:** Dimensions are approximate measurements.

## Shipping Kit And Bundle Numbers

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

| Qty.   | Bundle  | Description   |
|--|---------|---------------|
| Rotary Rake, Three-Point Hitch, 10 Ft. Width |         |               |
| 1  | RR320FK | Body Assembly |

# Hardware Torque Values

## Metric Chart

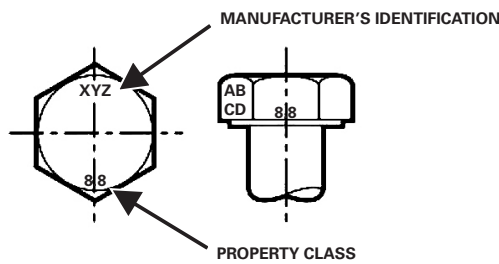
**NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.**

Use the following charts to determine the correct torque when checking, adjusting or replacing hardware. **Torque values are listed in newton-meters (inch\* or foot pounds) for normal assembly applications.**

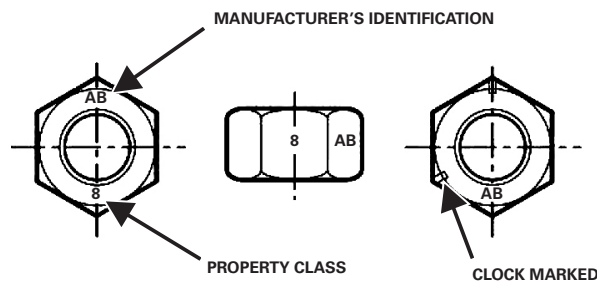
| Nominal Size | Class 5.8 |                 | Class 8.8 |                 | Class 10.9 |                 | Lock nuts            |
|--------------|-----------|-----------------|-----------|-----------------|------------|-----------------|----------------------|
|              | Unplated  | Plated W / ZnCr | Unplated  | Plated W / ZnCr | Unplated   | Plated W / ZnCr | CL.8 W/ CL. 8.8 Bolt |
| M4           | 1.7 (15*) | 2.2 (19*)       | 2.6 (23*) | 3.4 (30*)       | 3.7 (33*)  | 4.8 (42*)       | 1.8 (16*)            |
| M6           | 5.8 (51*) | 7.6 (67*)       | 8.9 (79*) | 12 (102*)       | 13 (115*)  | 17 (150*)       | 6.3 (56*)            |
| M8           | 14 (124*) | 18 (159*)       | 22 (195*) | 28 (248*)       | 31 (274*)  | 40 (354*)       | 15 (133*)            |
| M10          | 28 (21)   | 36 (27)         | 43 (32)   | 56 (41)         | 61 (45)    | 79 (58)         | 30 (22)              |
| M12          | 49 (36)   | 63 (46)         | 75 (55)   | 97 (72)         | 107 (79)   | 138 (102)       | 53 (39)              |
| M16          | 121 (89)  | 158 (117)       | 186 (137) | 240 (177)       | 266 (196)  | 344 (254)       | 131 (97)             |
| M20          | 237 (175) | 307 (226)       | 375 (277) | 485 (358)       | 519 (383)  | 671 (495)       | 265 (195)            |
| M24          | 411 (303) | 531 (392)       | 648 (478) | 839 (619)       | 897 (662)  | 1160 (855)      | 458 (338)            |

**NOTE: Torque values shown with \* are inch pounds.**

## Identification of Hex Cap Screws and Carriage Bolts - Classes 5 and up



## Identification of Hex Nuts and Lock Nuts - Classes 5 and up



## Hardware Torque Values (Cont'd)

### Imperial Chart

**NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.**

Use the following charts to determine the correct torque when checking, adjusting or replacing hardware. Torque values are listed in newton-meters (inch\* or foot pounds) for normal assembly applications.

| Nominal Size | SAE Grade 5               |                       | SAE Grade 8               |                       | LOCK NUTS                 |                       |                      |                      |
|--------------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-----------------------|----------------------|----------------------|
|              | Unplated or Plated Silver | Plated W / ZnCr Gold" | Unplated or Plated Silver | Plated W / ZnCr Gold" | Unplated or Plated Silver | Plated W / ZnCr Gold" | Grade W / Gr. 5 Bolt | Grade W / Gr. 8 Bolt |
| 1/4          | 6.2 (55*)                 | 8.1 (72*)             | 9.7 (86*)                 | 12.6 (112*)           | 13.6 (121*)               | 17.7 (157*)           | 6.9 (61*)            | 9.8 (86*)            |
| 5/16         | 13 (115*)                 | 17 (149*)             | 20 (178*)                 | 26 (229*)             | 28 (250*)                 | 37 (324*)             | 14 (125*)            | 20 (176*)            |
| 3/8          | 23 (17)                   | 30 (22)               | 35 (26)                   | 46 (34)               | 50 (37)                   | 65 (48)               | 26 (19)              | 35 (26)              |
| 7/16         | 37 (27)                   | 47 (35)               | 57 (42)                   | 73 (54)               | 80 (59)                   | 104 (77)              | 41 (30)              | 57 (42)              |
| 1/2          | 57 (42)                   | 73 (54)               | 87 (64)                   | 113 (83)              | 123 (91)                  | 159 (117)             | 61 (45)              | 88 (64)              |
| 9/16         | 81 (60)                   | 104 (77)              | 125 (92)                  | 163 (120)             | 176 (130)                 | 229 (169)             | 88 (65)              | 125 (92)             |
| 5/8          | 112 (83)                  | 145 (107)             | 174 (128)                 | 224 (165)             | 244 (180)                 | 316 (233)             | 122 (90)             | 172 (127)            |
| 3/4          | 198 (146)                 | 256 (189)             | 306 (226)                 | 397 (293)             | 432 (319)                 | 560 (413)             | 217 (160)            | 306 (226)            |
| 7/8          | 193 (142)                 | 248 (183)             | 495 (365)                 | 641 (473)             | 698 (515)                 | 904 (667)             | 350 (258)            | 494 (364)            |
| 1            | 289 (213)                 | 373 (275)             | 742 (547)                 | 960 (708)             | 1048 (773)                | 1356 (1000)           | 523 (386)            | 739 (545)            |

**NOTE: Torque values shown with \* are inch pounds.**

### Identification of Hex Cap Screws and Carriage Bolts



GRADE 2 SAE BOLT



GRADE 5 SAE BOLTS



GRADE 8 SAE BOLTS



GRADE 2 SAE NUTS

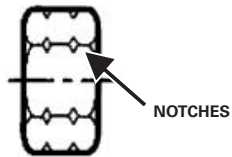


GRADE 5 SAE HEX NUTS



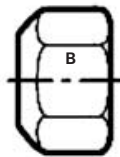
GRADE 8 SAE HEX NUTS

### Identification of Hex Nuts and Lock Nuts

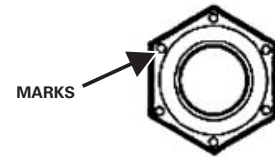


NOTCHES

GRADE IDENTIFICATION  
GRADE A: NO NOTCHES  
GRADE B: ONE CIRCUMFERENTIAL NOTCH  
GRADE C: TWO CIRCUMFERENTIAL NOTCHES



GRADE IDENTIFICATION  
GRADE A: NO MARK  
GRADE B: LETTER B  
GRADE C: LETTER C



MARKS

GRADE IDENTIFICATION  
GRADE A: NO MARKS  
GRADE B: THREE MARKS  
GRADE C: SIX MARKS  
MARKS NEED NOT BE LOCATED AT CORNERS

# Farm King



## Warranty

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# Farm King





## **Farm King Base Limited Warranty**

Farm King provides this warranty only to original retail purchasers of its products. Farm King warrants to such purchasers that all Farm King manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of one (1) year. This limited warranty applies only to those parts and components manufactured by Farm King. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Farm King will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Farm King. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance.

### **Repair Parts Limited Warranty**

Farm King warrants genuine Farm King replacement parts purchased after the expiration of the Farm King Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to the Farm King factory at the purchaser's expense.

### **What Is Not Covered**

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Farm King; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/or repairs that have been made with parts other than those manufactured, supplied, and or authorized by Farm King.

### **Authorized Dealer And Labor Costs**

Repairs eligible for labor under this limited warranty must be made by Farm King or an authorized Farm King dealer. Farm King retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Farm King determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Farm King will not approve or pay invoices sent for repairs that Farm King has not previously approved. Warranty service does not extend the original term of this limited warranty.

## **Warranty Requirements**

To be covered by warranty, each new product must be registered with Farm King within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Farm King will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

## **EXCLUSIVE EFFECT OF WARRANTY AND LIMITATION OF LIABILITY**

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON FARM KING'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON FARM KING'S PRODUCTS ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL FARM KING BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT. (Note that some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

Farm King neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Farm King to the purchaser, and Farm King shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Farm King's ability to obtain materials or manufacturer replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.



[www.farm-king.com](http://www.farm-king.com)

# Farm King

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