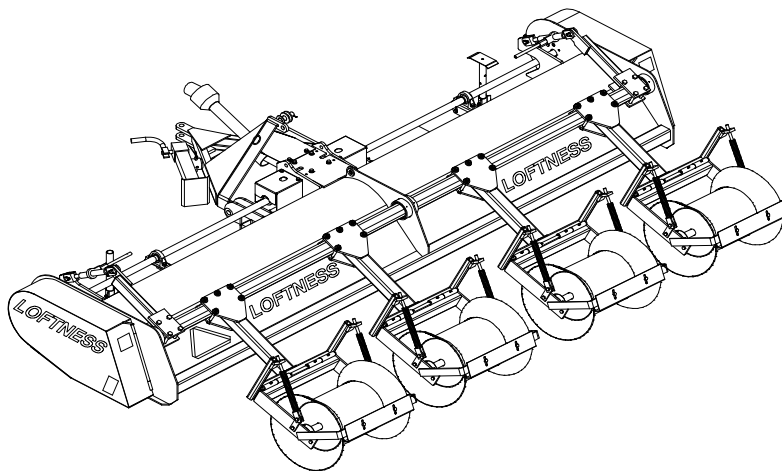




# Vegetable/Potato Shredder

12' Thru 18' & 24' Models

## Operator's Manual & Parts Book (Originating w/Serial Number 03-255)



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

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

Date of Purchase: \_\_\_\_\_



**LOFTNESS**

Specialized  
Equipment, Inc.

650 So. Main Street - PO Box 337 - Hector, MN 55342

Business Phone: 320-848-6266 \* Fax: 320-848-6269 \* Toll Free: 1-800-828-7624

# LOFTNESS SPECIALIZED EQUIPMENT, INC.

## LIMITED WARRANTY POLICY

The limited warranty policy begins upon delivery of the unit to the original customers.

The following Loftness products have a two (2) year limited warranty;

XLB10 Grain Bag Loader, Battle Ax L-series Skid Steer, Battle Ax S-series Skid Steer, Battle Ax H-series Skid Steer, Battle Ax Excavator 20-series, Battle Ax Excavator 30-series, Battle Ax Excavator 40-series, Battle Ax Excavator 50-series, Battle Ax Extreme, Bad Ax Skid Steer, Timber Ax Skid Steer.

All other Loftness products have a one (1) year limited warranty.

If any Loftness product is used as rental or leased equipment the limited warranty period is for only 30 days from the delivery date to the original customers.

Loftness Specialized Equipment, hereinafter referred to as LOFTNESS, a manufacturer of quality machinery since 1956, warrants new LOFTNESS machinery and/or attachments at the time of delivery to the original purchaser, to be free from defects in material and workmanship when properly set up and operated in accordance with the recommendations set forth in the LOFTNESS Operator's Manual.

LOFTNESS' liability for any defect with respect to accepted goods shall be limited to repairing the goods at an authorized dealer or other LOFTNESS designated location, or replacing them as LOFTNESS shall elect. The above shall be in accordance with LOFTNESS warranty adjustment policies.

### WARRANTY REQUIREMENTS

**Warranty registration form must be filled out and returned to Loftness Specialized Equipment to validate all warranty claims.**

To receive a warranty claim, a return authorization from LOFTNESS must be obtained. The failed part may then be returned in an untampered status. This warranty does not include freight or delivery charges incurred when returning machinery for servicing. Dealer mileage, service calls and pick-up/delivery charges are the customer's responsibility.

### LIMITATIONS OF WARRANTY

LOFTNESS products are designed to provide years of dependable service when proper use and maintenance is adhered to. The potential for misuse in many applications exists; therefore, a limited warranty is provided as follows.

This warranty shall not apply to any machine or attachment which shall have been repaired or altered outside the LOFTNESS factory or authorized LOFTNESS dealership or in any way so as in LOFTNESS' judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident, nor to any machine or attachment which shall not have been operated in accordance with LOFTNESS' printed instructions or beyond the company recommended machine rated capacity. LOFTNESS may elect to have an area representative evaluate the condition of the machine before warranty is considered.

In addition, this limited warranty provides no coverage for general wear or maintenance items, misuse, environmental conditions and/or contamination for which they were not designed or not intended, including but not limited to the following items;

Use of machine beyond its rated capacity, Conveyors, Improper knife replacement, Auger wear, Missing knives, Saw blades, Striking foreign objects, Brakes and brake pads, Lack of lubrication, Tires, Failures caused by running in an "out-of-balance" condition, Hydraulic hoses damaged by being caught in "pinch points" or by moving parts, and Damage caused by excessive force from the power unit.

### EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, LOFTNESS makes no representation or warranty of any kind, expressed or implied. **The implied warranty of merchantability and fitness for a particular purpose are excluded from this limited warranty.** The remedies set forth in this warranty are the only remedies available to any person under this warranty. LOFTNESS shall have no liability to any person for incidental, consequential or special damages of any description, whether arising out of express or implied warranty or any other contract, negligence, or other tort or otherwise. This exclusion of consequential, incidental and special damages is independent from and shall survive any finding that the exclusive remedy failed of its essential purpose. Upon purchase, the buyer assumes all liability, all personal injury and property damage resulting from the handling, possession or use of the goods by the buyer.

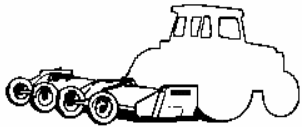
No agent, employee or representative of LOFTNESS has any authority to bind LOFTNESS to any affirmation, representation or warranty concerning its machinery and/or attachments except as specifically set forth herein. (October 2022)



Vegetable/Potato Shredder

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650 So. Main - P.O. Box 337 - Hector, MN 55342

Business Phone: 320-848-6266 \* Fax: 320-848-6269 \* Toll Free: 1-800-828-7624

Dear Customer:

Thank you for your decision to purchase this Vegetable/Potato Shredder from Loftness Specialized Equipment, Inc. It has been designed to provide years of profitable and dependable service. To ensure maximum performance of your shredder, it is mandatory that you thoroughly study the owner's manual and follow its recommendations. Proper operation and maintenance are essential to maintain and maximize the machine life and to prevent injury or damage.

**It is the owner's responsibility to:**

\*Operate and maintain this shredder in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and/or laws; and in compliance with on-product labeling and these instructions.

\*Make sure that all personnel have read this owner's manual and thoroughly understand safe and correct operating, installation, and maintenance procedures.

\*Make sure the shredder is set-up correctly before being placed in service and at regular intervals thereafter serviced in accordance with procedures outlined in this manual.

\*Fulfill all warranty obligations so as not to void the warranties. The warranty section at the beginning of this manual outlines the warranty policy of Loftness Specialized Equipment, Inc.

Loftness Specialized Equipment, Inc. reserves the right to make product improvements to the equipment at any time.

We welcome you to the satisfied family of Loftness equipment owners.

Gloria Nelson, President  
Steve Nelson, Vice-President  
Dave Nelson, Vice-President

January, 2011



**Section**

**1**

**Safety**

# **WARNING**

Because of the potential safety hazard to eyes from hydraulic leaks and/or flying debris, **“USE OF PROTECTIVE EYEWEAR IS ABSOLUTELY MANDATORY”** for operator and others in the work area.

Due to the possible danger of flying debris, it is **“ABSOLUTELY MANDATORY that IMPACT-RESISTANT SHIELDING”** be provided on the power unit to protect the operator. The owner is responsible for providing the operator protection devices on the power unit.

## Safety Instructions

### Safety First

Accidents can be prevented by recognizing the causes or hazards before an accident occurs, and doing something about them. Read this manual carefully and become familiar with the controls and proper use of the machine. Know how to stop the unit by disengagement of the controls. Be sure the operator knows how to exercise the mandatory shut-down procedure.

Regardless of the care used in the design and construction of this equipment, there are some areas that cannot be safeguarded without interfering with accessibility and efficient operation.

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**



**THIS SYMBOL MEANS**

**\*ATTENTION**

**\*BECOME ALERT**

**\*YOUR SAFETY IS INVOLVED**

These safety alert symbols shown, are intended to identify and provide information that must be heeded for proper safe operation of the equipment and to prevent damage or deterioration of the equipment. In this manual and on labels used on this shredder the words "Danger", "Warning", and "Caution" are used to indicate the following:



**DANGER:** (white lettering on red background) Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.



**WARNING:** (black lettering on orange background) Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



**CAUTION:** (black lettering on yellow background) Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

The following safety information is a general overview of precautions that should be adhered to:

1. Never allow children to operate equipment. Never allow adults to operate equipment without proper instructions.
2. Keep the area of operation clear of all unauthorized persons.
3. Remove from area of operation all foreign objects such as sticks, wire, rocks, etc., that might become tangled in rotors, causing damage to the shredder or be thrown from shredder striking other objects.
4. Never attempt to make any adjustments while the engine is running or the key is in the "ON" position of the tractor. Before leaving

## Owner's Manual (12' – 18' Vegetable/Potato Shredder)

### Safety Instructions Continued

#### Safety First Continued:

the operator's position, disengage power to the shredder and remove ignition key.

5. Disengage PTO, clutch and hydraulic valve and shift tractor into neutral or park before starting engine.

#### Safety Instructions for Operation and Maintenance

The following safety warnings are used here and on the shredder. Become familiar with them before operating this machine.



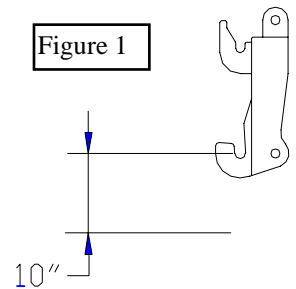
#### CAUTION:

- Do not start, operate, or work on this machine until you have carefully read and thoroughly understand the contents of the operator's manual.
  - Failure to follow safety, operating, and maintenance instructions could result in death or serious injury to the operator or bystanders, poor operation, or costly breakdown.
  - Unless instructed by decal or operator's manual, stop engine before leaving operator's position and wait for all movement to stop before attempting to adjust, lubricate, unclog or inspect. Exercise mandatory shut-down procedure. After the service has been performed, be sure to restore all guards, shields and covers to their original position.
  - Always observe all safety rules shown on decals. Replace any damaged decals immediately. If the unit is repainted, be sure to replace all decals which apply to the machine.
- Become familiar with and know how to use all the safety devices and controls on the shredder before attempting to operate the unit. Know how to stop the unit before starting it.
  - Before working under any hydraulically controlled implement, be sure to securely block implement in position.
  - Keep children and spectators off and away from the machine while it is in operation.
  - Never operate a shredder with a 540 RPM tractor. (Exception: 144 BP540 and Never operate shredder 180 BP540).
  - Never use a steel hammer when connecting or disconnecting a PTO shaft.



#### CAUTION:

Figure 1



- Distance between center of lower pin at lowest operating position and ground clearance must be 10" (see Figure 1). Adjust three-point hitch accordingly. Excessive operating height could result in PTO shaft failure or personal injury.
- Repeated impact of the knives with frozen ground or hard objects can cause excessive wear and damage to tractor or shredder. Be sure to maintain recommended ground clearance as specified in this manual.
- Should excessive vibration occur, disengage the tractor PTO immediately and shut off tractor. Do not continue to operate the machine until the problem has been determined and corrected.
- Be sure the rotor has stopped completely before checking the knives.

## Owner's Manual (12' – 18' Vegetable/Potato Shredder)

### Safety Instructions for Operation and Maintenance Continued:



#### WARNING:

- Keep all guards, shields and decals in place.
- Always repair or replace any front flipper shields that are damaged or missing.
- Be sure PTO outer guard turns freely before operating machine.



#### WARNING:

- Keep hands, feet and clothing away from moving components.
- Do not wear loose or baggy clothing around rotating machinery. Machine must be clear of people, tools, and other objects before engaging PTO.
- Engage the PTO slowly at idle speed to prevent unnecessary stress to drive-line.
- Read and observe all warnings on the machine before attempting to operate the shredder. Do not attempt to operate this machine unless all factory-installed safety devices are in place.
- Never attempt to lubricate the shredder with the engine running. Always be sure to exercise the mandatory shut-down procedure.
- Be extremely careful not to bottom out or extend PTO shaft too far, damage to tractor or shredder could occur. Be careful to avoid lifting shredder too high, which results in excessive PTO shaft wear if machine is operated during turning maneuver. **DO NOT USE PTO ADAPTERS OF ANY KIND.**

•

- Do not operate the shredder without the universal joints locked to the tractor and gearbox shafts.
- Operating the shredder at less than rated RPM will reduce drum speed and cause improper cutting. In difficult conditions, reduce tractor speed by down-shifting gears while maintaining rated engine RPM. Severely difficult conditions may require a delay until conditions improve.
- Do not operate the shredder above the rated RPM.



#### DANGER:

- Escaping fluid under pressure can be invisible and can penetrate the skin. Do not use hands to search for leaks!
- Hydraulic lines or other components can be hot after operation! “DO NOT TOUCH”!
- Keep hands and feet out! Do not step on or over the machine while it is in operation!
- Rotating drive-line. Personal injury or death can result from entanglement.



**Section**

**2**

**Operating**

# **WARNING**

Because of the potential safety hazard to eyes from hydraulic leaks and/or flying debris, **“USE OF PROTECTIVE EYEWEAR IS ABSOLUTELY MANDATORY”** for operator and others in the work area.

Due to the possible danger of flying debris, it is **“ABSOLUTELY MANDATORY that IMPACT-RESISTANT SHIELDING”** be provided on the power unit to protect the operator. The owner is responsible for providing the operator protection devices on the power unit.



## Set-up and Operating Instructions

### Equipment Set-up:

#### Attaching the Pull-Type Shredder:

The shredder can be attached to any tractor with a PTO that conforms to ASAE-SAE standards. Do not use a shredder built for 1000 RPM with a .540 RPM tractor. Serious damage to the shredder could occur. Connect hitch to draw bar. Adjust hitch to permit PTO shaft to run as straight as possible.

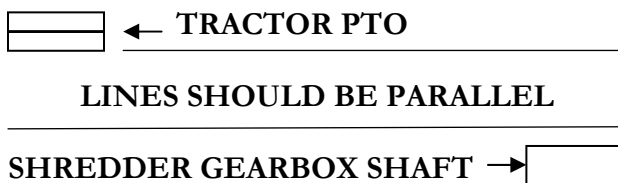


Figure 1



#### WARNING:

- Be extremely careful not to bottom out or extend PTO shaft too far, damage to tractor or shredder could occur. Do NOT use PTO adapters of any kind.
- Do not operate without universal joints locked to the tractor and implement shafts. Re-torque (150 ft lbs.) mounting bolts whenever PTO is removed and reinstalled. Recheck after 10 minutes of operation and again after 1 hour of operation.



#### CAUTION:

- Operate shredder only with a tractor of the same PTO RPM rating as the shredder.
- Never use a steel hammer when connecting or disconnecting a PTO shaft.



#### IMPORTANT:

- Use a safety-locking pin when connecting hitch pins. Failure to do so could result in loss of pin and possible damage to equipment.

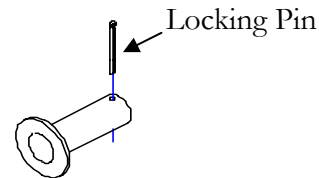


Figure 2

- During operation and transport, the jack stands should be locked in their highest position.

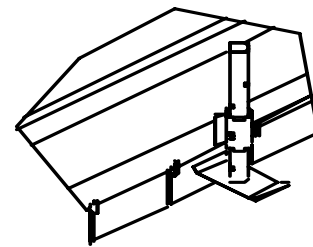


Figure 3

#### Attaching the Semi-Mount Shredder:

The shredder must be connected to the tractor using a CAT II or CAT III quick hitch. Do not attempt to use shredder without a quick hitch or damage to shredder and/or tractor could result. Spacers are not included with the machine. Adjust hitch to permit PTO shaft to run as straight as possible (see figure 1, page 4). After attaching PTO shaft to tractor, make sure that shaft does not telescope apart or bottom out before using shredder. Refer to page 2-9 on PTO sizing and attaching for proper PTO use.

- Do not operate without universal joints locked to the tractor and implement shafts.

### Attaching the Semi-Mount Shredder Continued:

- Re-torque (150 ft. lbs.) mounting bolts whenever PTO is removed and reinstalled. Recheck after 10 minutes of operation and again after 1 hour of operation.



#### CAUTION:

- Operate shredder only with a tractor of the same PTO RPM rating as the shredder.
- Never use a steel hammer when connecting or disconnecting a PTO shaft.



#### IMPORTANT:

- Use a safety-locking pin when connecting hitch pins. Failure to do so could result in loss of pin and possible damage to equipment (figure 2, page 2-1) and become a safety hazard.
- Use hydraulic cylinder stops for field operation. Customer to provide stops as required to maximize cutting height.

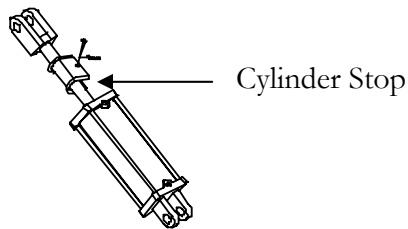


Figure 4



#### IMPORTANT:

- During operation and transport, the jack stands should be locked in their highest position (figure 3, page 2-1).



#### CAUTION:

- Distance between center of lower pin at lowest operating position and ground must be 10". Adjust three-point hitch accordingly. Excessive operating height could result in PTO shaft failure or personal injury (Figure 6, shown below).

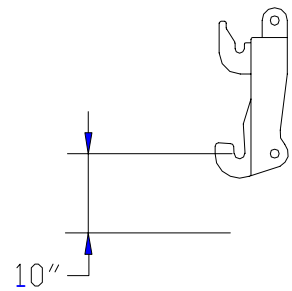


Figure 5

### Attaching the Fully-Mounted Shredder:

The shredder must be connected to the tractor using a CAT II or CAT III quick hitch. Do not attempt to use shredder without a quick hitch or damage to shredder and/or tractor could result. Spacers are not included with the machine. After attaching PTO shaft to tractor, make sure that shaft does not telescope apart or bottom out before using shredder. Select proper pin configuration on shredder hitch for the particular tractor application. The two lower pin hole

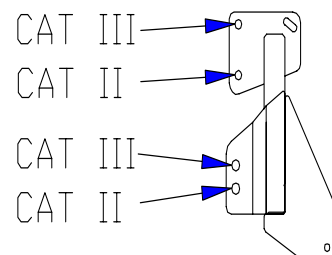


Figure 6

selections of the hitch are for CAT II hitches, and the two upper pin hole selections are for CAT III applications. Adjust hitch to permit PTO shaft to run as straight as possible (figure 1, page 2-1).



#### WARNING:

- Be extremely careful not to bottom out or extend PTO shaft too far apart, damage to tractor or shredder could occur. Do NOT use PTO adapters of any kind.

## Owner's Manual (12' – 18' Vegetable Potato Shredder)

### Attaching the Fully-Mounted Shredder Continued:

- Do not operate without universal joints locked to the tractor and implement shafts. Re-torque (150 ft. lbs.) PTO mounting bolts whenever PTO is removed and reinstalled. Recheck after 10 minutes of operation and again after 1 hour of operation.



#### **CAUTION:**

- Distance between center of lower pin at LOWEST OPERATING POSITION and ground must be 10" (Figure 5, page 2-2). Adjust three-point hitch accordingly. Excessive operating height could result in PTO shaft failure or personal injury.
- Operate shredder only with a tractor of the same PTO RPM rating as the shredder.
- Never use a steel hammer when connecting or disconnecting a PTO shaft.



#### **IMPORTANT:**

- Use a safety locking pin when connecting hitch pins. Failure to do so could result in loss of pin and possible damage to equipment (figure 2, page 2-1) and become a safety hazard.
- During operation and transport, the jack stands should be locked in their highest position (figure 3, page 2-1).

### Operating Instructions:

#### Pre-Start Checklist:

- 1.) Grease the machine See lubrication section (section 3, page 3-1).
- 2.) Adjust air in tires to recommended pressure.

- 3.) Check oil level in gearbox (maintain level to the lower check plug hole on side of gearbox case).
- 4.) Belt tension – refer to section 3, page 3-3 for instructions.
- 5.) Check all bolts, nuts and set screws for tightness.
- 6.) Review operator's manual.

### Operating Speed:

Various shredding conditions require different ground speeds. Under most conditions, the tractor can be driven between 3 and 7 MPH without causing undue wear on the shredder.



#### **WARNING:**

- Operating the shredder below rated RPM speed will reduce rotor speed and cause improper cutting. In difficult conditions, reduce tractor speed by down-shifting gears while maintaining rated engine RPM. Severely difficult conditions may require a delay until conditions improve.
- Do not operate above rated RPM.

### Maintaining Rotor Balance:

The rotors of the shredder are factory balanced and must remain in balance during the life of the machine. Should any knives on the machine need replacing, be sure to also replace the knives directly opposite to avoid vibration and maintain the rotor balance. If a knife is not available, take the opposite one off until two new knife sets can be replaced.



#### **CAUTION:**

- Should excessive vibration occur, disengage the tractor PTO immediately and shut off the tractor. Do not continue operation until the problem has been determined and corrected.

### Maintaining Rotor Balance Continued:

- Be sure the rotors have stopped completely before checking the knives.
- Repeated impact of the knives with frozen ground or other hard objects can cause excessive wear and damage to tractor or shredder. Be sure to maintain recommended ground clearance as specified earlier in this manual.

### Flail or Cupped Knives:



#### CAUTION:

- Be sure the rotors have stopped completely before checking the knives.

The knives will pivot on the D-ring or on knife mounting bolt to avoid damage when striking stones or other obstructions. They will swing back to clear obstacles, and they will return to working position automatically. The flail knives are double-edged and should be reversed when worn. When the knife is worn halfway, it should be reversed to obtain the maximum life.



#### CAUTION:

- Repeated impact to the knives from frozen ground or other hard objects can cause excessive wear and damage to tractor or shredder. Repeated impact to hard objects can cause the metal ring constraining knives to rotor to open up and release the knife from the rotor. Be sure to maintain recommended ground clearance as specified earlier in this manual.
- Should excessive vibration occur, disengage the tractor PTO immediately and shut off the tractor. Do not continue operation until the problem has been determined and corrected.

### Belt Tension:

The rotor drive belts should have 1/2" maximum deflection at the midpoint between the pulleys.



#### IMPORTANT:

- To avoid damage or excessive wear, always engage or disengage PTO with engine at idle speed.

### Cutting Height Adjustment:

The recommended cutting height is 4". Continually cutting below this height increases the likelihood that ground scalping could occur. Frequent scalping greatly reduces shredder component lifetimes. Loftness considers this pattern to be misuse, and subsequently will not be covered under warranty. It is recommended that cutting height be adjusted and controlled with the appropriate hydraulic cylinder and three-point hitch stopping devices. By using a pre-adjusted shredder cutting height, uniform crop shredding will result. It is also easier to begin the new round by eliminating the need to adjust the cutting height every time. The most important advantage is that it eliminates repositioning. Another important consideration is the PTO shaft angle. For the longest PTO shaft life and minimum vibration, the tractor PTO shaft and the stub shaft on the shredder need to be parallel after adjustment into the operating position. It might be necessary to remove the PTO shaft from the shredder when adjusting the cutting height for a better viewpoint to get the shaft angles similar (figure 1, page 2-1).

### Pull Type Models:

Lower the shredder with the hydraulic cylinders or ratchet jack(s) to the recommended cutting height of 4". Using the ratchet jack on the hitch, level the shredder according to the guide lines shown above (figure 1, page 2-1). If necessary, adjust hydraulic cylinder or ratchet jack to return the shredder to the recommended cutting height.

## Owner's Manual (12' – 18' Vegetable Potato Shredder)

### Pull Type Models Continued:

Install hydraulic cylinder stops to allow repeated return to this setting.

### Semi-Mounted Models:

Lower the shredder using the remote hydraulic cylinder and the three-point hitch to the desired cutting height of 4". By adjusting the appropriate lifting mechanisms, level the shredder using the guidelines above for the PTO shaft angle (figure 1, page 2-1). When proper shredder alignment is achieved, adjust tractor three-point hitch stops and install collar stops on the hydraulic cylinders. If the shredder is equipped with gauge wheels,

### Cutting Height Adjustment Continued:

adjust the gauge wheels so that the tractor and assist -wheels carry approximately the same amount of weight.



#### IMPORTANT:

- Do not carry the weight of the shredder on the gauge wheels. Set stop of three-point hitch so tractor hitch and the assist-wheels carry the weight of the shredder. Gauge wheels are designed to prevent the ends of the shredder from scalping the ground.

### Fully Mounted Models:

Lower shredder to the recommended cutting height using the three-point hitch. Level the shredder by adjusting the adjustable top link of your tractors 3 point hitch. to the position shown (figure 1, page 2-1). When the shredder is leveled at the recommended operating height, lower the rear wheels with the ratchet jack(s) so that the wheels carry approximately 50% of the shredder's weight.

### Turning:



#### IMPORTANT:

- All models with constant velocity PTO shaft can be turned with PTO engaged.

### Pull Type Models:



#### IMPORTANT:

- To avoid damage or excessive wear, always engage or disengage PTO with engine at idle speed.



#### WARNING:

- Be extremely careful not to bottom out or extend PTO shaft too far, damage to tractor or shredder could occur. Be careful to avoid lifting shredder too high, which results in excessive PTO shaft wear if machine is operated during turning maneuver. Do NOT use PTO adapters of any kind.

### Semi-Mounted Models:

If equipped with rigid gauge wheels, the front of the shredder must be completely lifted to prevent damage to gauge wheel struts. The following is the recommended procedure for turning:

#### NOTE:

If shredder is equipped with cylinders on the gauge wheels, it is recommended that the front of the shredder be lifted with the three-point hitch to obtain clearance for the gauge wheels instead of using the cylinders to lift the gauge wheels. This method will obtain faster and more consistent cutting height adjustment after completion of the turn.

## Owner's Manual (12' – 18' Vegetable Potato Shredder)

### Semi-Mounted Models Continued:

- 1) Raise rear assist-wheels with hydraulic cylinders, then raise the tractor three-point hitch.
- 2) After the turn is completed, lower the tractor three-point first. Then lower the rear assist-wheels.



#### IMPORTANT:

- Do not carry the weight of the shredder on the gauge wheels. Set stop of three-point hitch so tractor hitch and the assist-wheels carry the weight of the shredder. Gauge wheels are designed to prevent the ends of the shredder from scalping the ground.



#### WARNING:

- Be extremely careful not to bottom out or extend PTO shaft too far, damage to tractor or shredder could occur, refer to PTO set-up instructions (section 2, page 2-9). Be careful to avoid lifting shredder too high, which results in excessive PTO shaft wear if machine is operated during turning maneuver. DO NOT use PTO adapters of any kind.



#### IMPORTANT:

- To avoid damage or excessive wear, always engage or disengage PTO with engine at idle speed.

### Fully Mounted Models:

When turning, the shredder must be lifted completely off the ground to prevent damage to rear wheels.



#### WARNING:

- Be extremely careful not to bottom out or extend PTO shaft too far, damage to tractor or shredder could occur, refer to Pto set-up instructions (section 2, 2-9). Be careful to avoid lifting shredder too high, which results in excessive PTO shaft wear if machine is operated during turning maneuver. DO NOT use PTO adapters of any kind.



#### IMPORTANT:

- To avoid damage or excessive wear, always engage or disengage PTO with engine at idle speed.

### Transporting with Optional Hitches:

To assist in identifying the front, back, left or right of the shredder with regards to these transport instructions, the shredder will be identified from the field operating position.



#### IMPORTANT:

- **DO NOT EXCEED 20 MPH WHEN TRANSPORTING YOUR SHREDDER**

### Semi-Mount Model (With Rigid Front Gauge Wheels):

Changing from field use to transport, follow these procedures:

1. To change the shredder from field use to transport, first back the shredder up until the right rear swivel wheel is turned approximately 90 degrees to the right of field position (figure 7 shown in field position). Remove the

**Transporting with Optional Hitches**  
**Continued:**

**Semi-Mount Model (With Rigid Front Gauge Wheels) Continued:**

locking pin safety clip allowing the pin to drop into the locked position for transport. Check to insure the locking pin is fully engaged in the locked position. Replace the safety clip into the upper hole of the locking pin (install "under" the upper guide plate to prevent pin from disengaging during transport).

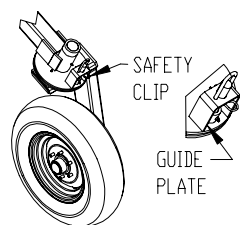


Figure 7

2. Lift machine completely. Remove ratchet jack from right side gauge wheel strut. Remove pins and collar. Slide strut out of receiver and rotate 90° counter-clock wise and insert into transport receiver.
3. Adjust cylinder stops on rear lift assist wheels to match the height of the rigid front gauge wheel set in towing position.
4. Position the ratchet jack for the left side gauge wheel at approximately the midpoint of the cylinder stroke.
5. Lower and disconnect the shredder. Remove tractor PTO half and store in a safe location. Fasten shredder half to three point hitch using a light chain or other appropriate method.

6. Lower the end transport hitch and lock into place with the pin in the upper link Rotate the jack 90 degrees from stored position to assist in connecting the shredder to the tractor.(see figure 8)

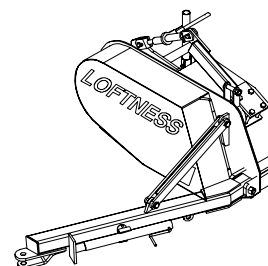


Figure 8

7. Raise the left side front gauge wheel completely during transport.
8. To set up the shredder for field operation, follow the above steps in reverse order.

**Pull-Type and Fully-Mounted Models (With Hydraulic Transport)**

1. Lower the shredder completely. Disconnect the tractor. Remove tractor half of PTO and store in a safe location. Fasten the shredder half of PTO to hitch using a light chain or other appropriate means.
2. Position transport hitch with the bulldog jack and connect to the tractor, connect hydraulic lines. Lift the shredder with the transport wheels. Lock wheels with pin in the transport position and release pressure from hydraulic system. To set up shredder for operation, follow steps in reverse order.

## Owner's Manual (12' – 18' Vegetable Potato Shredder)

### PTO Attaching and Use:

When connecting the PTO to both the shredder and tractor, it is the owner's/operator's responsibility to insure that the PTO length is correct and will not bottom out or become disengaged.

The PTO provided with each Loftness shredder will work on most tractors without modification.

Variations in the PTO and hitch geometry on some tractors may make it necessary to adjust the length of the PTO.



### WARNING:

Check PTO length (6" overlap min.).

Lubricate CV before initial start-up and before connecting to tractor to allow movement of tractor yoke in all directions to help distribute grease through out the moving parts. Lubricate after every 8 hours of use. Tighten PTO clamp bolts (torque to 150 ft. lbs.), then recheck after 10 minutes of operation and again after 1 hour of operation.

The procedures listed below are provided to assist you in obtaining the correct PTO length.

1. Attach shredder to tractor lift arms in centered position.
2. Adjust tractor top link until shredder gearbox input shaft is parallel with tractor input shaft (figure 11).

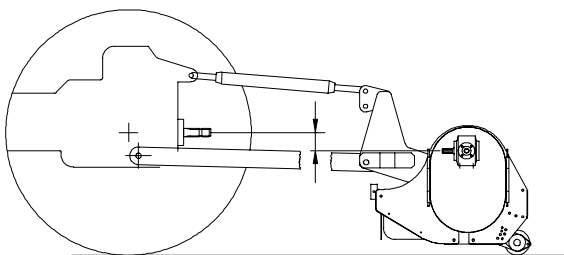


Figure 11

3. Raise shredder until the gearbox input shaft is level with the tractor PTO shaft. Position blocks under the shredder to stabilize (figure 12).

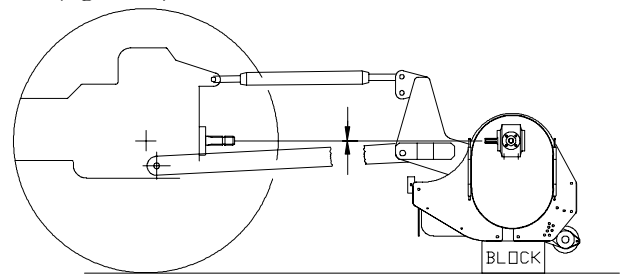


Figure 12

4. Attach PTO implement half onto the shredder gearbox.
5. Position tractor half of the PTO against the tractor's PTO shaft, but do not attach.
6. Line up both halves of the PTO so they are parallel to each other. Measure 1/2" back from the universal joint bell shield and mark on opposite half. Repeat this measuring to other half of the PTO (figure 13).

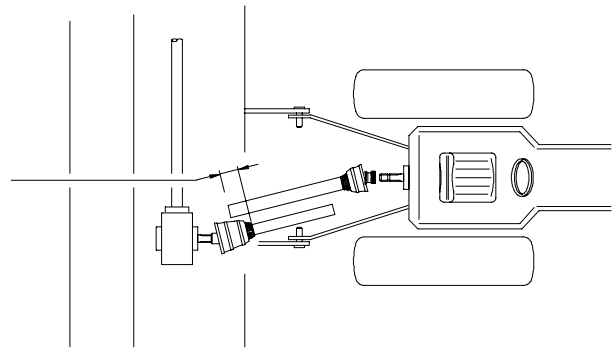


Figure 13

7. Remove the blocks, raise and lower the shredder to determine the position which has the greatest distance between gearbox input shaft and tractor PTO shaft. Replace blocks under the shredder to stabilize when the greatest distance is determined.



## Owner's Manual (12' – 18' Vegetable Potato Shredder)

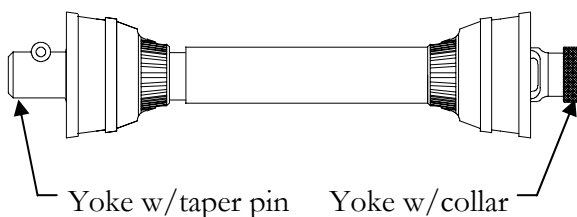
### PTO Attaching and Use Continued:

8. Line up both halves of the PTO parallel to each other and measure the distance between the two marks. This measurement will indicate the overlap of the two halves. A minimum of 6" overlap must be available or the PTO cannot be used.
9. Clamp PTO in padded vise to prevent damage to shield. Cut off the shield where marked (determined in step 6).
10. Use the cut off section of shield as a guide and cut off the same amount of the shaft.
11. Repeat steps 9 and 10 to other half of PTO.
12. Deburr cut ends of PTO sections and remove all chips and filings.
13. Apply grease to male half of PTO. Assemble PTO with shields in place and install on
14. tractor and shredder, insuring the yokes lock into place.

### PTO Attaching and Sizing:

The following diagrams assist in sizing the PTO as outlined above.

Mower End                      Tractor End



**Important:** Before operating shredder, check to make sure the PTO will not bottom out or become disengaged.

Extend the PTO until it is fully extended, but not completely separated. This will determine dimension "A" (figure 14).

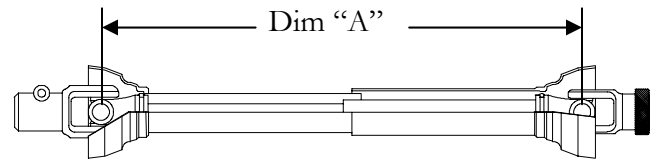


Figure 14

Subtract 5" from dimension "A" to determine dimension "B" (figure 15). This will be your maximum operating length.

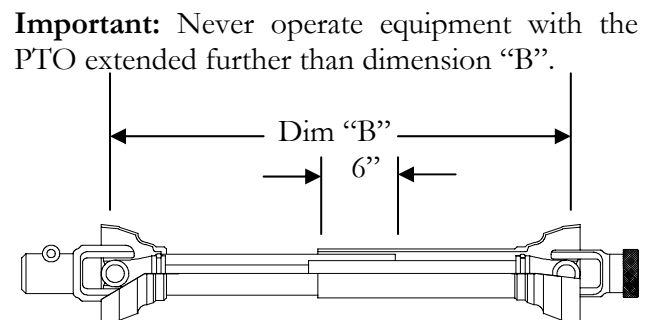


Figure 15

Push PTO halves together, as far as possible, to determine dimension "C" (figure 16). Add 1" to this dimension for dimension "D" which will be the minimum operating length.

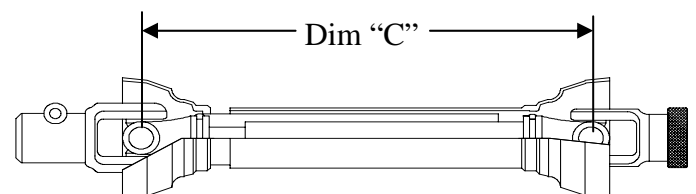


Figure 16

**Important:** Never operate equipment with PTO collapsed to less than dimension "D".



**Section**

**3**

**Maintenance**



## Owner's Manual (12' – 18' Vegetable/Potato Shredder)

### Maintenance:

Maintenance of any type on equipment is dangerous when the machine is running. Always shut-down all equipment prior to cleaning, adjusting, lubricating or performing service of any kind. Review and become familiar with the **"Mandatory Shut-Down Procedure"** as follows before attempting any service work:



#### Mandatory Shut-Down Procedure:

1. Move throttle to idle position.
2. Disengage all power to the shredder.
3. Shut-off engine and remove key.
4. Wait until the rotor has stopped completely before inspecting the unit.

### Lubrication:

The operation and component lifetimes of this machine are very dependent on regular and proper lubrication. The frequency of lubrication recommended is based on normal conditions. Severe or unusual conditions may determine actual service requirements.

Replace any broken or missing grease fittings. Be sure to clean fitting before greasing.



#### Important:

- Rotor bearings cannot be damaged by over-greasing. Grease bearings until a small amount of grease is purged from the bearing.

The following items require lubrication before initial use and every (8) hours of running time:

1. Outer rotor bearings (2) and belt tightener, are serviced by using the greasezerks protruding thru the inside of the end plates (figure 1).

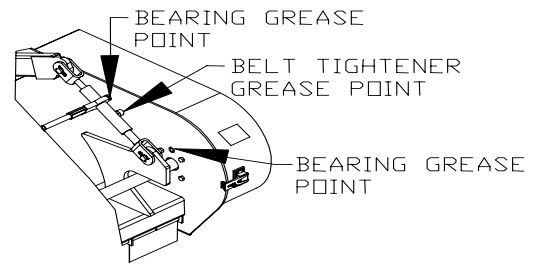


Figure 1

2. Inner rotor bearings (2), located on the center plate of the shredder.
3. Standard PTO CV shaft has (3) U-joints and (2) additional fittings located under the bell housing (section 4, pages 4-54 thru 4-62).
4. Rear and gage wheel pivot points as shown in figure 2.

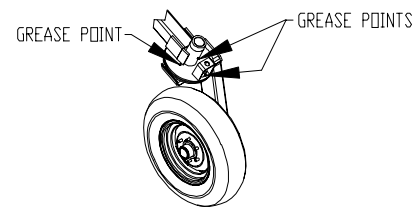


Figure 2

5. Front gage wheel pivot points (figure 3).

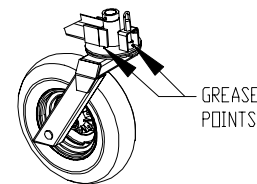


Figure 3

The following items require lubrication every twenty-five (25) hours of running time:

1. Telescoping PTO tube (1), located by lining up the hole in the PTO guard with greasezerk (section 4, pages 4-54 thru 4-62)
2. Line shaft universal joints (2), located on each side of the gearbox.

## Owner's Manual (12' – 18' Vegetable/Potato Shredder)

### Maintenance Continued:

#### Lubrication Continued:

3. Line shaft bearings, located between the gearbox and end plates (figure 4).

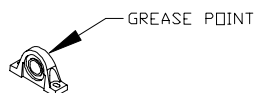


Figure 4

The following items require lubrication every fifty (50 ) hours of running time:

1. PTO overrunning clutch (1), located near U-joint yoke (section 4, pages 4-54 thru 4-57).
2. Pull-type rear wheel lift tube (figure 5).

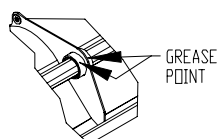


Figure 5

The following items require lubrication every one-hundred (100) hours of running time:

1. Wheel bearings
2. Ratchet jacks.
3. Gearbox (change oil with #90 wt.). Maintain oil level up to the lower plug hole located on side of the gearbox case.

#### General Service:

When reassembling components, always use new lock nuts and a thread-locking compound to insure against vibration loosening. Use an anti-seize compound on all bearing/shaft contacts.

### Wheel Spacing Adjustment:

#### Pull-type and fully mounted models:

To obtain the best results from the shredder, wheel spacing should conform to crop row spacing. To adjust wheel spacing, raise shredder and install blocks under shredder end plates. Raise rear wheels with ratchet jack. Loosen wheel strut clamping bolts and adjust wheels to desired spacing. NOTE: The center plate of shredder should ride in center between crop rows.

#### Belt and Pulley Removal:

1. Unlatch belt shield, remove hinge pin and belt shield. This will expose the belt drive (figure 6).

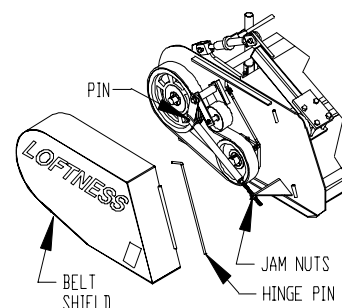


Figure 6

2. Loosen jam nuts on the belt tightener (figure 6) which will release the tension from the belt.
3. Remove the pin connecting the idler arm on the tightener bracket to the belt tightener, then remove the belt.
4. Replace the belt, reverse steps 1-3.
5. Removal of pulleys will require you to skip step 4 and continue with step 6.
6. To remove the pulleys, remove the taper lock bushing set screws as shown (figure 7, page 3-3).

### Belt and Pulley Removal Continued:

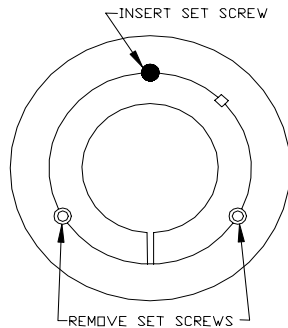


Figure 7

7. Insert set screw (1) into threaded hole.
8. Tighten screw until bushing grip is released. If excessively tight, lightly hammer face of pulley using drift or sleeve.

NOTE: Never hit pulley directly with hammer.



### CAUTION:

- Excessive or uneven pressure on set screws may damage the bushing, making removal difficult or possibly damaging the sheave.
- Excessive screw torque may cause damage to the bushing or sheave. Recommended torque is 430 in/lbs.

### Pulley Assembly:

1. Clean shaft, bore of bushing, outside of bushing and hub bore of all oil, paint and dirt. File away any burrs
2. Insert bushing in hub. Match the hole pattern, not threaded holes (each complete hole will be threaded on one side only).

3. Apply a thread-locking compound to setscrews and thread into the two opposing holes.
4. Position assembly on shaft and alternately torque set screws to 35 ft. lbs.
5. To increase gripping force, hammer face of bushing using drift or sleeve. (Do not hit bushing directly with hammer).
6. Re-torque screws after hammering.
7. Recheck screw torque after initial run-in, and periodically thereafter, repeat steps 5,6 & 7 if loose.
8. Check alignment of the pulleys. Repeat pulley removal and assembly procedures if necessary.
9. Install belt.

### Belt Tensioning:

Refer to page 4-5 or 4-6 in section 4 for parts breakdown and assembly of belt drive components. Check belt idler position to insure it is centered on the belt. Then adjust belt tension as follows:

1. Loosen the jam nut on the inside of the adjustment bracket (welded to shredder body, figure 8).

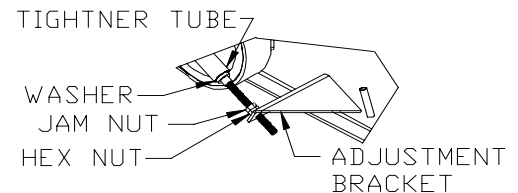


Figure 8

2. Turn the hex nut next to the adjustment bracket clockwise until the washer on the spring base is recessed into the tightener tube. Tighten jam nut to lock.

## Owner's Manual (12' – 18' Vegetable/Potato Shredder)

### Belt Tensioning Continued:

3. Rotate the pulleys manually in the direction of normal machine rotation to check alignment of idler on the belt. Adjust if necessary.

### Rotor Removal: (Reference page 4-11 Two Drum Units, page 4-18 Four Drum Units )

This service section is written as if the shredder is upside down. If procedure is done with machine in operating position, movable jacks will be needed to support and move the rotors. The first rotor removed must be the last rotor installed. The center bearing with the bolts started through it, must be on the last rotor removed (first rotor installed).

1. Apply an appropriate supporting mechanism to both rotors. (Chains and hoist)
2. Loosen the set screws on bearing lock collars.
3. Loosen and remove the outer bearing from the shaft of the first rotor to be removed.
4. Remove the four nuts from the bolts holding the two center bearings to the center plate. (The rotor on the side of the removed nuts is the first to be removed from the machine).
5. Slide the rotor outward away from center plate. (This step might require the removal of the stripper bolts located on the outside balancing ring. Make note of which hole the stripper bolts are removed from and replace in the same holes to insure proper balance.
6. Slide the four inner bearing bolts outward until the center bearing on the first rotor is free. Be careful not to slide

them too far out or the second rotor might fall free prematurely.

7. Remove rotor from the machine by lifting inner end of rotor first to clear center plate and then sliding outer shaft in through end plate.
8. To remove inner rotor bearing, loosen and remove flat head cap screw, star washer and retaining washer. Slide bearing off shaft. Remove collar.
9. Repeat steps 3 to 8 for the second rotor.

### Knife Replacement:

The shredder rotors are factory balanced and must remain in balance during the life of the machine. Should any knives on the machine need replacing, be sure to also replace the knives directly opposite to avoid vibration to maintain the rotor balance.

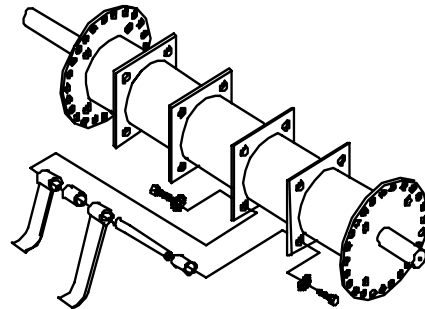


Figure 9

### Rotor Assembly:

1. Slide bearing spacer on shorter shaft of the rotor. (Shaft with 1/2" tapped hole in center).
2. Install roll pin into end of shaft.
3. Insert the four bolts through the bearing housing and then slide it completely on the shaft.



## Owner's Manual (12' – 18' Vegetable/Potato Shredder)

### .Rotor Assembly Continued:

4. Apply thread-locking compound to flat head screw. Slide through washers and install into threaded hole in shaft. Torque to 75 ft lbs.

**NOTE:** To determine left and right rotor, install so that the bolt head on the knife U-clamp faces the front of the machine.

5. Insert (4) outer bearing bolts into end plate with the heads of the bolts inside the rotor cavity (nuts will be inside belt housing).
6. Install rotor by inserting the outer end (long shaft) into the bearing hole of the end plate.
7. Align the four bearing bolts with the center plate holes and insert the bolts so that they protrude about 1/4" through opposite side of plate. To allow for easier future greasing, point the grease fitting toward the rear of the machine.
8. Repeat steps 1-5 (without the four bolts through the bearing) on the second rotor.
9. Align the holes in bearing and push center bolts completely through both bearings and center plate. Install new locking nuts but do not torque.
10. Install outer bearings onto shafts (grease fitting to point up when machine is in operating position) and tighten new lock nuts to 170 ft. Lbs.
11. While supporting the rotor at the center plate, tighten the bearing bolts to 170 ft lbs.
12. Apply a thread locking compound and tighten the set screws.

13. Replace stripper bolts directly across from each other to maintain proper rotor balance.

### Gearbox Removal:

1. Remove belts following instructions given earlier in manual.
2. Remove the bolts securing the line-shaft bearing located behind the large pulley. Also remove the bolts securing the pillow block bearing supporting the line-shaft.
3. Loosen and remove the clamp bolts securing the U-joint to the gearbox shaft.
4. Slide the line-shaft outward until the U-joint is free of the shaft.
5. Repeat steps 1-4 to remove opposite side line-shaft.
6. Remove PTO shaft by loosening and removing the clamp bolts. Then slide it off the shaft.
7. Remove the four bolts securing the gearbox to the frame.

### Gearbox Repair:

Repairs to the gearbox by the customer will be limited to the replacing of the cross or pinion shaft seals. These seals can be removed and replaced by using a screwdriver or similar instrument without opening the gearbox.

If the machine is still under warranty, do not attempt to repair the gearbox as unauthorized repairs will void the warranty. All warranty repairs should be done through your "Authorized Loftness Dealer". Contact your dealer or the Loftness factory for specific details concerning the gearbox warranty.

## **Owner's Manual (12' –' Vegetable/Potato Shredder)**

### **Maintenance Continued:**

#### **Storage:**

#### **End of the Season:**

- Clean entire shredder thoroughly.
- Paint all parts that are worn.
- Lubricate all parts of the machine.  
(see lubrication section)
- Block up the frame of the shredder and do not deflate the tires.
- Store shredder in a dry area.
- Review your operator's manual.

#### **Beginning of the Season:**

- Review your operator's manual.
- Check air pressure in the tires.
- Drain and refill gearbox to lower check plug hole.
- Lubricate all parts of the machine.
- Tighten all loose bolts, nuts and set screws.  
Check and replace all worn knives.
- Should any knives need replacing, remember to replace the worn knives and those directly across from those being replaced to avoid rotor imbalance and subsequent vibration.

## Owner's Manual (12' –' Vegetable/Potato Shredder)

### Maintenance Continued:

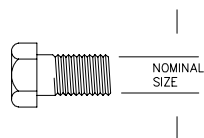
### Trouble Shooting:

To assist with maintenance and repair, the following list of common problems and corrections is provided

<u>Symptom:</u>	<u>Possible Cause:</u>	<u>Solution:</u>
Excessive Vibration	Broken or missing knives	Replace broken/missing knives plus the worn knives on the opposite side of the rotor to maintain a balanced rotor
	Mud and/or debris wrapped around the drum or knives.	Clean & remove all debris/mud
	Bearing malfunction	Check rotor & drive-line bearings, replace faulty bearings.
	Rotor damage	Inspect rotor for physical damage. If damaged, remove and return to factory for proper repair.
Rotors Do Not Turn	Knife has become wedged	Dislodge wedged knife between the end plate and the balancing ring.
	Gearbox malfunction	Disconnect PTO and manually rotate the gearbox, if unable to rotate. remove gearbox and contact dealer for servicing.

## Bolt Torque Chart

### Minimum Hardware Tightening Torque's



In Foot Pounds (Newton-Meters) for Normal Assembly Applications

Inches Hardware and Lock Nuts

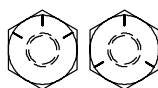
SAE Gr. 2 Nominal Size	SAE Grade 5		SAE Grade 8		Lock Nuts			
	Unplated or Plated Silver	Plated W/ZnCr Gold	Unplated or Plated Silver	Plated W/ZnCr Gold	Unplated or Plated Silver	Plated W/ZnCr Gold	Grade W/Gr.5 Bolt	Grade W/Gr.8 Bolt
1/4	55* (6.2)	72* (8.1)	86* (9.7)	112* (13)	121* (14)	157* (18)	61* (6.9)	86* (9.8)
5/16	115* (13)	149* (17)	178* (20)	229* (26)	250* (28)	324* (37)	125* (14)	176* (20)
3/8	17 (23)	22 (30)	26 (35)	34 (46)	37 (50)	48 (65)	19 (26)	26 (35)
7/16	27 (37)	35 (47)	42 (57)	54 (73)	59 (80)	77 (104)	30 (41)	42 (57)
1/2	42 (57)	54 (73)	64 (87)	83 (113)	91 (123)	117 (159)	45 (61)	64 (88)
9/16	60 (81)	77 (104)	92 (125)	120 (163)	130 (176)	169 (229)	65 (88)	92 (125)
5/8	83 (112)	107 (145)	128 (174)	165 (224)	180 (244)	233 (316)	90 (122)	127 (172)
3/4	146 (198)	189 (256)	226 (306)	293 (397)	319 (432)	413 (560)	160 (217)	226 (306)
7/8	142 (193)	183 (248)	365 (495)	473 (641)	515 (698)	667 (904)	258 (350)	364 494)
1	213 (289)	275 (373)	547 (742)	708 (960)	773 (1048)	1000 (1356)	386 (523)	545 739)

GRADE 2  
CLASS A



BOLT MARKING'S

GRADE 5  
CLASS B



GRADE 8  
CLASS C



GRADE 2  
CLASS A



GRADE 5  
CLASS B



GRADE 8  
CLASS C



NEW CLOCK MARKING'S NUTS  
INCHES AND METRIC

GRADE 2  
CLASS A



GRADE 5  
CLASS B



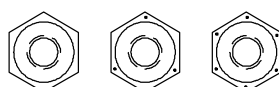
GRADE 8  
CLASS C



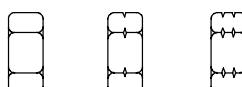
LINE MARKING'S NUTS



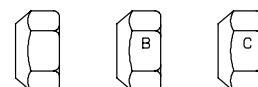
CENTER LOCK MARKING



LOCK NUT MARKING



LOCK NUT NOTCH MARKING



LOCK NUT LETTER MARKING

# Owner's Manual (12' – Vegetable/Potato Shredder)

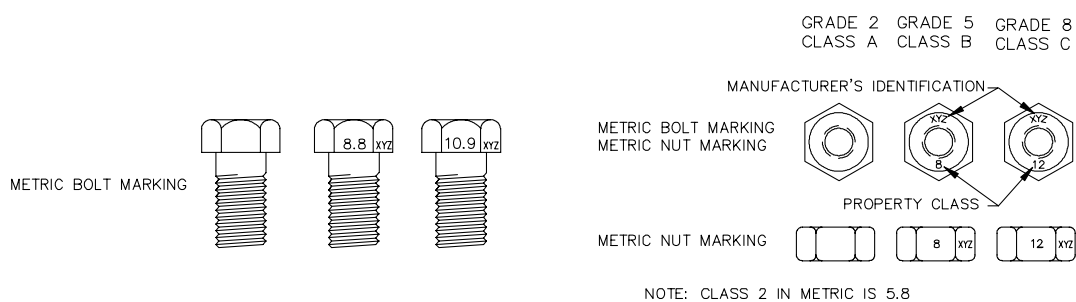
## Bolt Torque Chart

### Minimum Hardware Tightening Torque

### Inch Pounds for Normal Assembly Applications

#### Metric Hardware and Lock Nuts

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





**Section**

**4**

**Service Parts**





## **Owner's Manual (12' – 18' Vegetable/Potato Shredders)**

### **Service Parts**

#### **Service Parts Ordering:**

To assist our customer service department in providing you with the correct replacement parts promptly and accurately, follow the ordering instructions as listed below.

1. Order replacement parts by providing the following information:
  - A) Shredder serial number – refer to serial number plate, which also includes the model number, located on left hand side of unit above the driveline. Or if the plate is missing, check the main frame of shredder to the right hand side of the gearbox as you are facing the unit (serial number is stamped into the metal frame tube).
  - B) Part description – illustration drawings are provided to assist in identifying the parts by description and part numbers. Use this information to insure that correct service parts are ordered and sent to you.
  - C) Quantities - order the exact number of parts required, do not order by “sets”.
  - D) Shipping instructions – give company/customer name, shipping point or will call and mailing address notification if different than shipping point. state whether freight, express, parcel or other handling is desired. Confirm telephone orders in writing.
2. Inspection of parts when received is important. Damages or shortages should be brought to the attention of the carrier at the time the parts are accepted. Shipper's responsibilities ceases upon delivery of shipment, in good order, to the customer.

#### **Return Policy:**

Return of parts for either warranty or incorrect parts received, must have a “Return of Materials Authorization” (RMA) number. Call Loftness Specialized Equipment, Inc. service department for this return number. To receive this number you will need your “Sales Order, Invoice and Part Numbers” with quantities of parts to be returned. Credit information and shipping instructions will be given to you when you have received your “RMA” number. Be sure to place this number on the outside of the shipping package and on any documents placed inside.

#### **Illustrated Parts Listings:**

Illustrated parts drawings are included in this section, starting with page 4-4 that will assist you in identifying your Multi-crop Shredder and the parts available for service. These pages include part numbers, descriptions and quantities required for the various sizes of shredders. Include this information on your purchase order to insure correct receiving of replacement parts.

# Owner's Manual (12' – 18' Vegetable/Potato Shredders)

## Decals:

4135: Danger Rotating Knives – (2) required  
 4136: Oil – (1) required  
 4137: Grease – (10) required  
 4138: F.E.M.A. – (1) required  
 4140: Amber reflector – (2) required  
 4141: Red reflector – (2) required  
 4142: Caution Extremely Important – (1) required  
 4189: Warning – Rotating Parts – (1) required  
 4334: Danger – Stay Back – (4) required

4335: Caution – Extremely Important – (1) required  
 N13517: Proudly Made in the USA – (1) required  
 N13721: Model & Serial Number Tag – (1) required  
 N13729: Caution Do Not Operate– (1) required  
 N17013: Warning – Flying Debris - (1) required  
 N22763: Warning – Read – (1) required  
 N26972: Loftness Horizontal Large – (1) required  
 N26973: Loftness Horizontal Medium – (3) required  
 N33104: CropLogix QR Code – (1) required  
 N32275: CropLogix – (2) required



N26972, N26973



N32275



4135



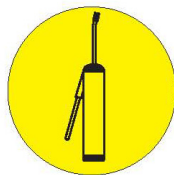
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N22763



4136



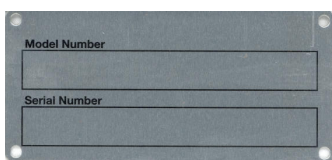
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4138

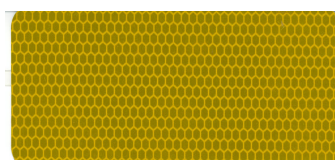


4189



N13721

N14823



4140

4 - 2

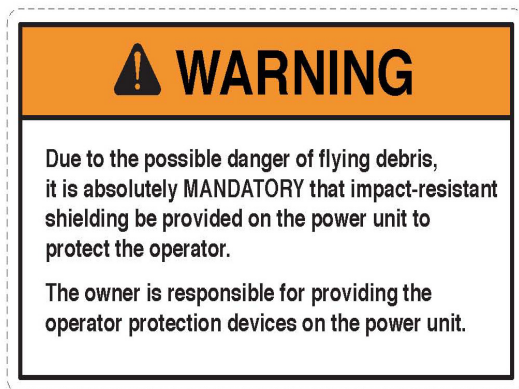


4141

March, 2012

## Owner's Manual (12' – 18' Vegetable/Potato Shredders)

### Decals Continued:



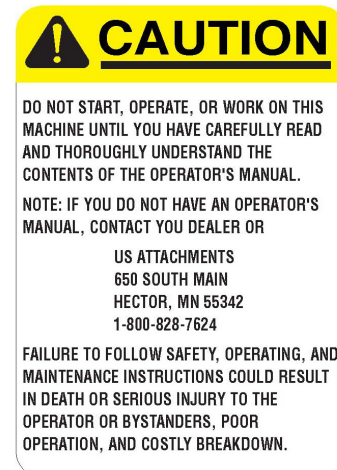
N17013



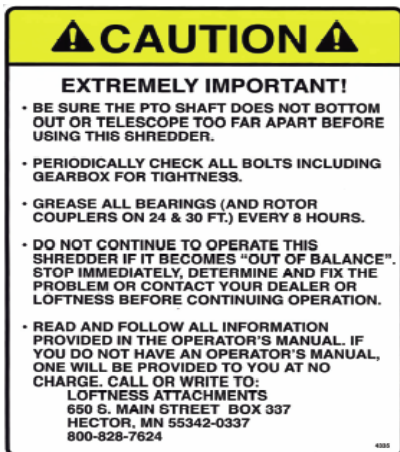
N33104



N13517



N13729



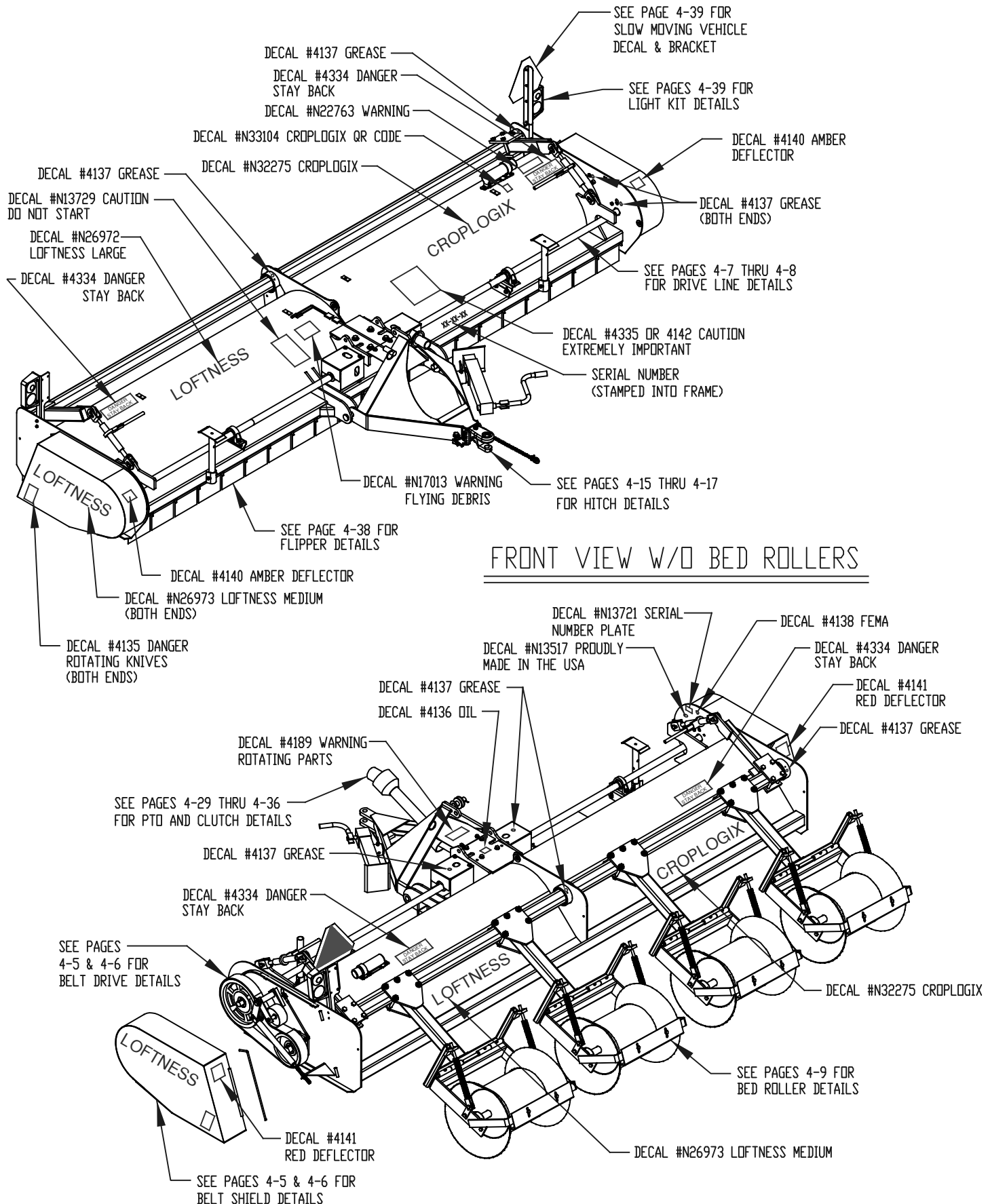
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4142

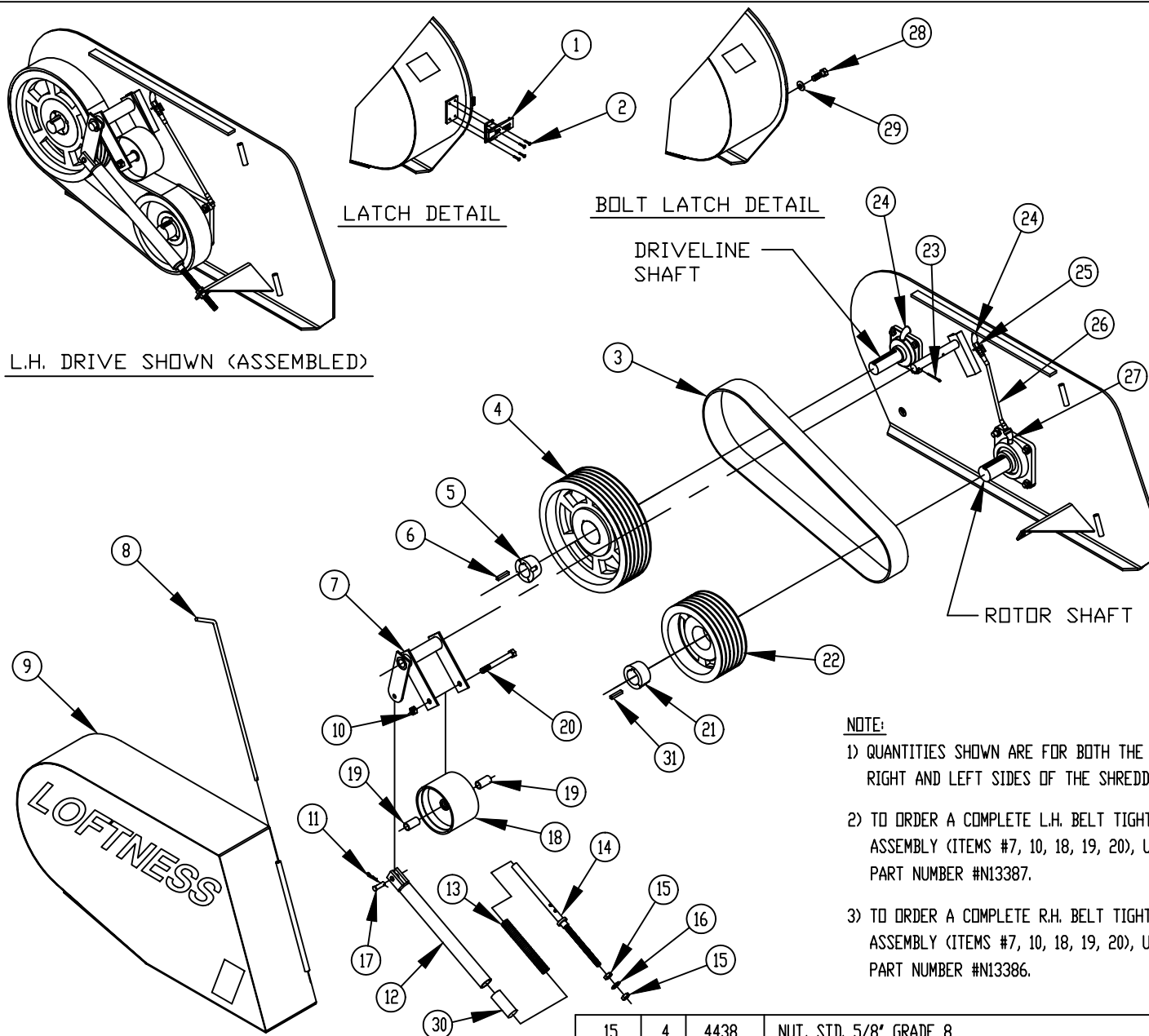


# VEGETABLE/POTATO SHREDDER



THIS ILLUSTRATION PAGE IS A GENERAL OVERVIEW OF THE VEGETABLE/POTATO SHREDDER, SHOWN IS THE DECAL PLACEMENT AND REFERENCES TO THE DIFFERENT PAGES WHICH SHOW THE PARTS BREAK DOWN OF VARIOUS ASSEMBLIES. THE GENERAL SERVICE PORTION OF THE MANUAL IN SECTION 3, EXPLAINS THE ASSEMBLY OR DISSASSEMBLY OF THE SHREDDER PARTS AND ALSO WILL REFER TO THESE PAGES AS PICTORIAL GUIDES IN SERVING.

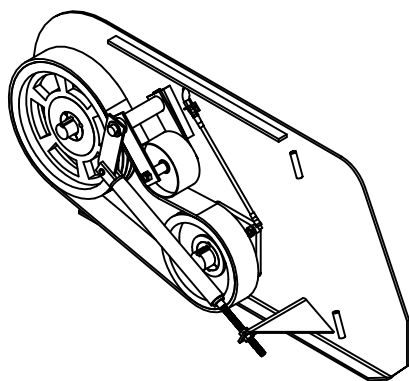
# VEGETABLE/POTATO SHREDDER 4-BAND DRIVE PARTS LIST



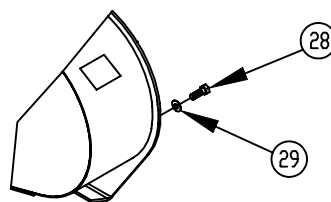
31	2	7122-04	KEY, 1/2" X 2"
30	1	N12006	SPACER, BELT TIGHTNER TUBE
29	2	4074	WASHER, 2" O.D. X 1/2" I.D.
28	2	4013	BOLT, 1/2" X 1-1/2" GRADE 5
27	2	4471	ELBOW, 1/8" 45° STREET
26	2	4304	HOSE, 15' GREASE (W/FITTINGS)
25	2	4304-10	FITTING, BULKHEAD GREASE
24	4	4472	ELBOW, 1/8" 90° STREET
23	2	4092	PIN, COTTER (5/32" X 2")
22	2	8139	SHEAVE, 4B X 11" TAPER LOCK (4-BAND)
21	2	8165	BUSHING, 2-3/16" TAPER LOCK
20	2	4457	BOLT, 5/8" X 6-1/2" GRADE 5
19	4	N11995	SPACER, BELT TIGHTNER
18	2	N10508	PULLEY, IDLER (6-1/2" O.D. W/5/8" BORE)
17	2	4392	PIN, 1/2" X 1-1/2"
16	2	4069	WASHER, FLAT 5/8"
ITEM	QTY	PART NO	DESCRIPTION

15	4	4438	NUT, STD. 5/8" GRADE 8
14	2	N12000	SHAFT, BELT TIGHTNER
13	2	8067	SPRING, BELT TIGHTNER
12	2	N12003	TUBE, BELT TIGHTNER
11	2	4089	CLIP, HAIRPIN (.093" X 1-5/8")
10	2	4055	NUT, LOCK 5/8"
9	1	N12008	SHIELD, R.H. BELT
	1	N12007	SHIELD, L.H. BELT (SHOWN)
8	2	N12018	PIN, BELT SHIELD BACK
7	1	N13456	BRACKET, R.H. BELT TIGHTNER
	1	N13457	BRACKET, L.H. BELT TIGHTNER (SHOWN)
6	2	7121-03	KEY, 3/8" X 2"
5	2	8127	BUSHING, 1-3/4" KEYWAY TAPER LOCK
4	2	8140	PULLEY, 4B X 16" TAPER LOCK (4-BAND)
3	2	N13406	BELT, 4B" X 93" (4-BAND)
2	8	N13441	RIVET, STEEL PDP (3/16" X 15/16")
1	2	N13420	LATCH, ADJUSTABLE DOOR
ITEM	QTY	PART NO	DESCRIPTION

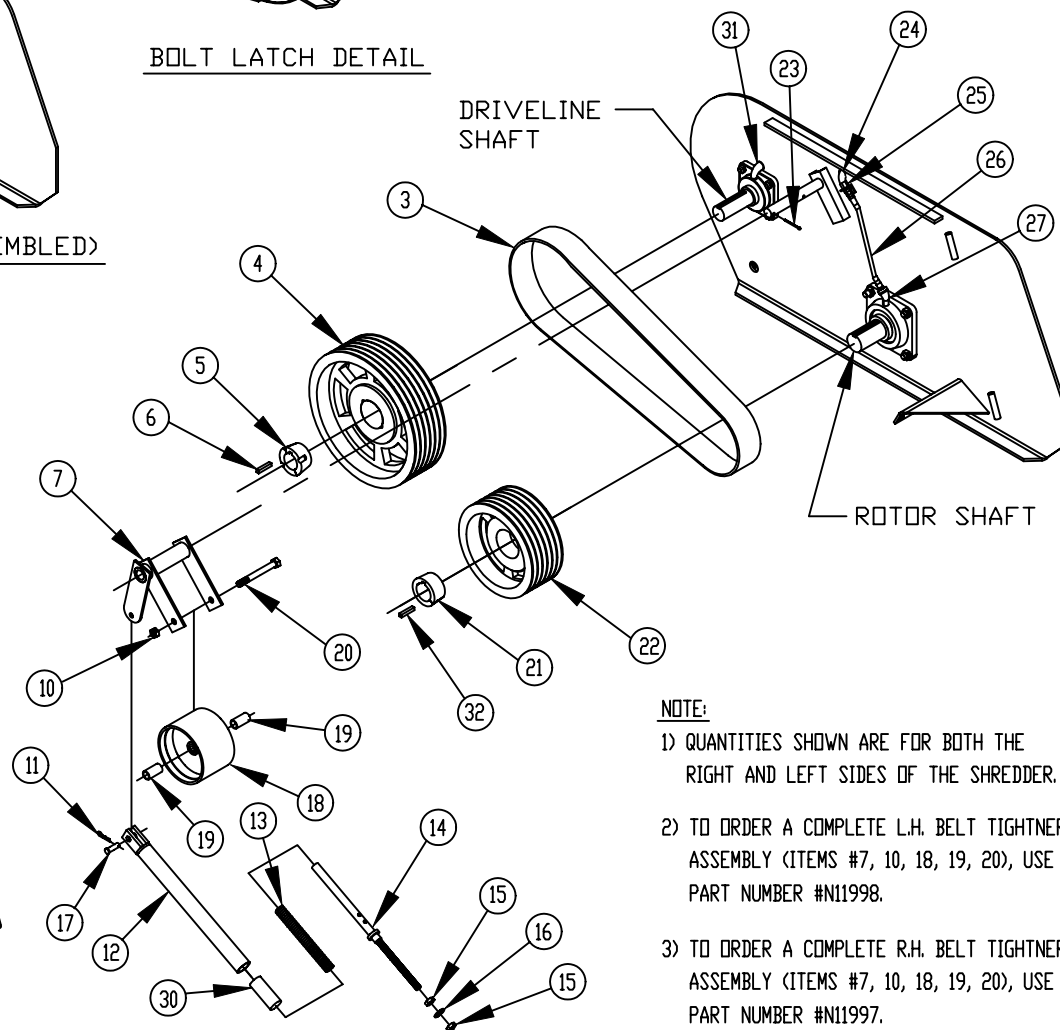
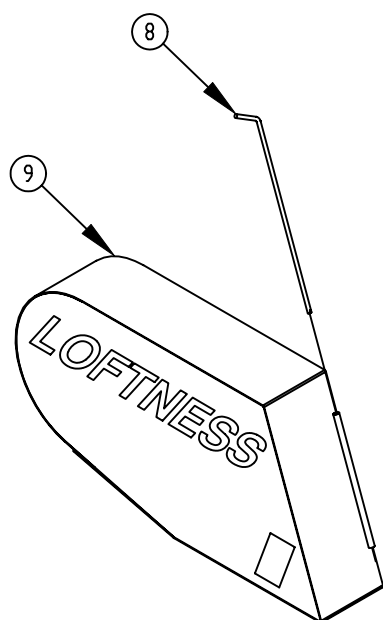
# VEGETABLE/POTATO SHREDDER 6-BAND DRIVE PARTS LIST



L.H. DRIVE SHOWN (ASSEMBLED)



BOLT LATCH DETAIL



## NOTE:

- 1) QUANTITIES SHOWN ARE FOR BOTH THE RIGHT AND LEFT SIDES OF THE SHREDDER.
- 2) TO ORDER A COMPLETE L.H. BELT TIGHTNER ASSEMBLY (ITEMS #7, 10, 18, 19, 20), USE PART NUMBER #N11998.
- 3) TO ORDER A COMPLETE R.H. BELT TIGHTNER ASSEMBLY (ITEMS #7, 10, 18, 19, 20), USE PART NUMBER #N11997.

32	2	7122-04	KEY, 1/2" X 2"
31	2	4106	GREASE ZERK, 45° SCREW-IN 1/8" NPT
30	1	N12006	SPACER, BELT TIGHTNER TUBE
29	2	4074	WASHER, 2" O.D. X 1/2" I.D.
28	2	4013	BOLT, 1/2" X 1-1/2" GRADE 5
27	2	4471	ELBOW, 1/8" 45° STREET
26	2	4304	HOSE, 15' GREASE (W/FITTINGS)
25	2	4304-10	FITTING, BULKHEAD GREASE
24	2	4472	ELBOW, 1/8" 90° STREET
23	2	4092	PIN, COTTER (5/32" X 2")
22	2	8107	SHEAVE, 6B X 11" TAPER LOCK (6-BAND)
21	2	8165	BUSHING, 2-3/16" TAPER LOCK
20	2	4457	BOLT, 5/8" X 6-1/2" GRADE 5
19	4	N11995	SPACER, BELT TIGHTNER
18	2	N11999	PULLEY, IDLER (6B W/5/8" BORE)
17	2	4392	PIN, 1/2" X 1-1/2"
16	2	4069	WASHER, FLAT 5/8"
ITEM	QTY	PART NO	DESCRIPTION

15	4	4438	NUT, STD. 5/8" GRADE 8
14	2	N12000	SHAFT, BELT TIGHTNER
13	2	8067	SPRING, BELT TIGHTNER
12	2	N12003	TUBE, BELT TIGHTNER
11	2	4089	CLIP, HAIRPIN (.093" X 1-5/8")
10	2	4055	NUT, LOCK 5/8"
9	1	N12008	SHIELD, R.H. BELT
	1	N12007	SHIELD, L.H. BELT
8	2	N12018	PIN, BELT SHIELD BACK
7	1	N13456	BRACKET, R.H. BELT TIGHTNER
	1	N13457	BRACKET, L.H. BELT TIGHTNER
6	2	7121-03	KEY, 3/8" X 2"
5	2	8127	BUSHING, 1-3/4" KEYWAY TAPER LOCK
4	2	8119	PULLEY, 6B X 16" TAPER LOCK (6-BAND)
3	4	N13390	BELT, 3B" X 93" (3-BAND)
2			N/A
1			N/A
ITEM	QTY	PART NO	DESCRIPTION

# 12' - 18' VEGETABLE/POTATO SHREDDER DRIVE LINE PARTS LIST

## NOTE:

1) REFER TO PAGE 4-28 FOR GEARBOX #8170 PARTS LIST.  
REFER TO PAGE 4-27 FOR GEARBOX #N10505 PARTS LIST.  
REFER TO PAGE 4-26 FOR GEARBOX #N11631 PARTS LIST.

2) REFER TO PAGE 4-29 FOR PTO #8173 PARTS LIST.  
REFER TO PAGE 4-30 FOR PTO #8174 PARTS LIST.  
REFER TO PAGE 4-31 FOR PTO #8175 PARTS LIST.  
REFER TO PAGE 4-32 FOR PTO #8176 PARTS LIST.  
REFER TO PAGE 4-33 FOR PTO #N10512 PARTS LIST.

\* 3) 12' AND 13' SHREDDERS HAVE ONLY ONE DRIVELINE AND  
SHIELD ON EACH SIDE. NO CENTER SUPPORT BEARING  
AND BRACKETS ARE REQUIRED.

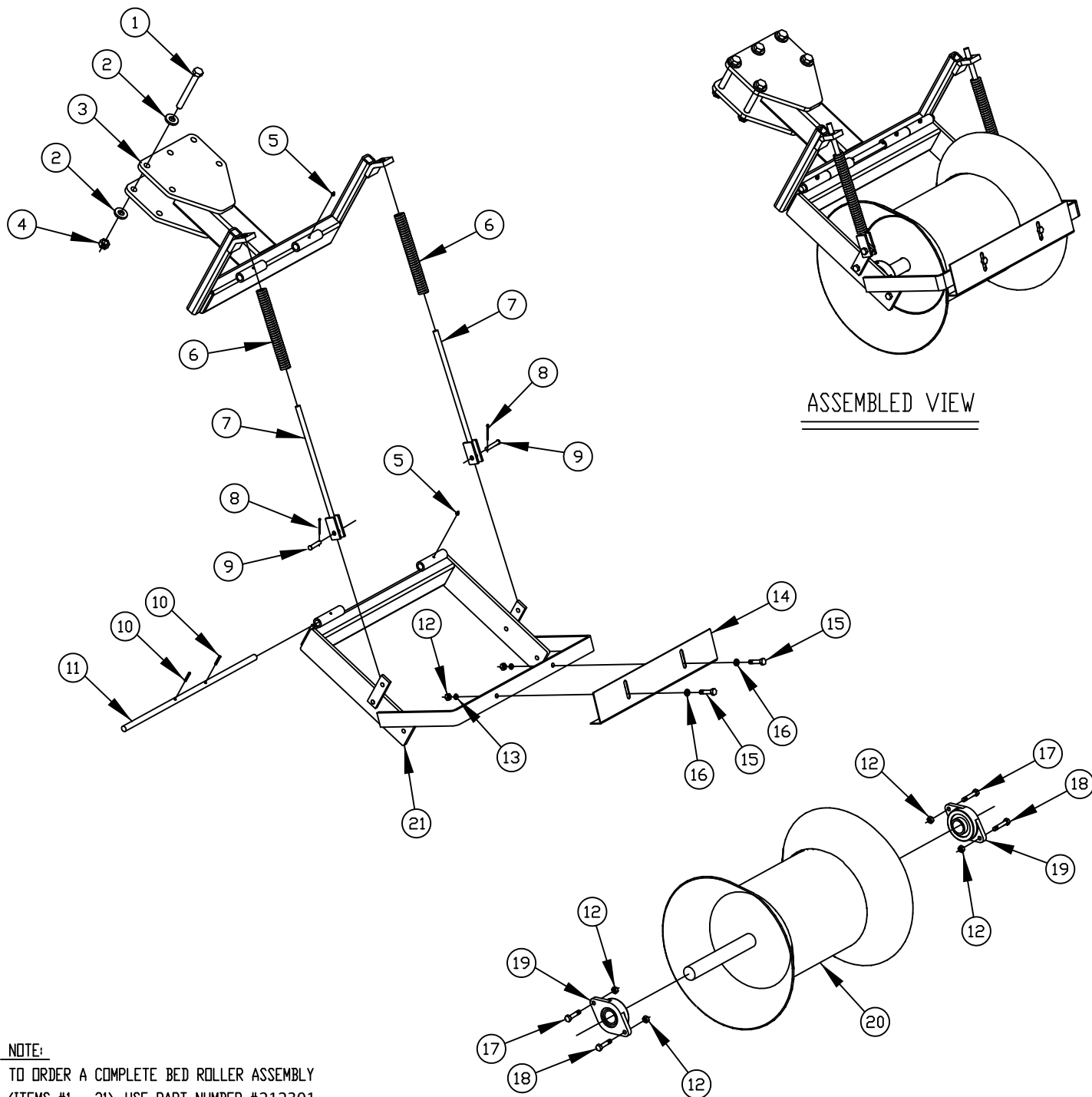
4) REFER TO PAGE 4-37 FOR U-JOINT #N12440 PARTS LIST.

* 24	1	9127	MOUNT, RIGHT DRIVELINE BEARING	15	1	N11988	SHIELD, LEFT DRIVELINE
				14	2	N13022	SHIELD, INNER DRIVELINE (18' SHREDDER)
23	1	N13950	GEARBOX, BONDIOLE 1:1 RATIO 1450 RPM (3/4" BOLTS)		2	N13022	SHIELD, INNER DRIVELINE (15' SHREDDER)
	1	N13951	GEARBOX, BONDIOLE 1:1.18 RATIO 1700 RPM (3/4" BOLTS)		2	N13145	SHIELD, INNER DRIVELINE (13' SHREDDER)
	1	N13952	GEARBOX, BONDIOLE 1:1.35 RATIO 2000 RPM (3/4" BOLTS)		2	N13157	SHIELD, INNER DRIVELINE (12' SHREDDER)
	1	N11631	GEARBOX, BONDIOLE 1:1 RATIO 1450 RPM (M16 BOLTS)	* 13	2	8089	BEARING, 1-3/4" PILLOW BLOCK
	1	N10505	GEARBOX, BONDIOLE 1:1.18 RATIO 1700 RPM (5/8" BOLTS)	* 12	4	4014	BOLT, 1/2" X 1-3/4" GRADE 5
	1	8170	GEARBOX, BONDIOLE 1:1.35 RATIO 2000 RPM (5/8" BOLTS)	* 11	10	4012	BOLT, 1/2" X 1-1/4" GRADE 5
22	1	N10512	PTO, PT (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)	* 10	1	9098	MOUNT, LEFT DRIVELINE BEARING
	1	8176	PTO, PT (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)	* 9	22	4068	WASHER, FLAT 1/2" SAE
	1	8175	PTO, PT (1-3/8"-21 SPLINED W/OVERRUNNING CLUTCH)	* 8	2	N13119	SHIELD, OUTER DRIVELINE (18' SHREDDER)
	1	8174	PTO, MTD (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)		2	N13132	SHIELD, OUTER DRIVELINE (15' SHREDDER)
	1	8173	PTO, MTD (1-3/8"-21 SPLINED W/OVERRUNNING CLUTCH)			N/A	SHIELD, OUTER DRIVELINE (13' SHREDDER)
21	1	9110	SHIELD, PTO 12" X 16"			N/A	SHIELD, OUTER DRIVELINE (12' SHREDDER)
20	4	4071	WASHER, FLAT 3/4" (USE W/N13950, N13951, N13952)	7	2	9093	SHAFT, DRIVELINE 1-3/4" X 100-1/2" LG. (18' SHREDDER)
	4	4069	WASHER, FLAT 5/8"		2	9092	SHAFT, DRIVELINE 1-3/4" X 82-1/2" LG. (15' SHREDDER)
19	4	4287	WASHER, LOCK 3/4" USE W/N13950, N13951, N13952)		2	9133	SHAFT, DRIVELINE 1-3/4" X 70-1/2" LG. (13' SHREDDER)
	4	4070	WASHER, LOCK 5/8"		2	9091	SHAFT, DRIVELINE 1-3/4" X 64-1/2" LG. (12' SHREDDER)
18	4	N13997	BOLT, 3/4" X 1-3/4" GR5 (USE W/N13950, N13951, N13952)	6	8	4013	BOLT, 1/2" X 1-1/2" GRADE 5
	4	4462	BOLT, M16 X 50MM GRADE 8.8 (USE W/N11631 GEARBOX)	* 5	8	4054	NUT, LOCK 1/2"
	4	4021	BOLT, 5/8" X 1-3/4" GRADE 5	4	4	7121-03	KEY, 3/8" X 2"
17	1	N11987	SHIELD, RIGHT DRIVELINE	3	2		ZERK, 1/8" NPT STRAIGHT GREASE (INCLUDED W/8087)
16	2	N12440	U-JOINT, 1-3/4" RB X 1-3/4"-20 SPLINE	2	2	4472	ELBOW, 1/8" 90° STREET
ITEM	QTY	PART NO	DESCRIPTION	1	2	8087	BEARING, 1-3/4" 4-BOLT FLANGE
				ITEM	QTY	PART NO	DESCRIPTION



NOTE:  
ITEMS MARKED WITH AN (\*) ARE NOT  
12' OR 13' SHREDDERS.

# VEGETABLE/POTATO SCHREDDER BED ROLLER PARTS LIST



## NOTE:

TO ORDER A COMPLETE BED ROLLER ASSEMBLY  
(ITEMS #1 - 21), USE PART NUMBER #212301

21	1	212302	MOUNT, BED ROLLER NG	11	1	N13467	ROD, HINGE BED ROLLER
20	1	212303	DRUM, BED ROLLER NG	10	2	4498	PIN, ROLL (1/4" X 1")
19	2	N30232	BEARING, 1-3/4IN DODGE 2-BLT FL	9	2	4392	PIN, 1/2" DIA X 1-1/2" LG.
18	2	4014	BOLT, 1/2" X 1-3/4" GRADE 5	8	2	4092	PIN, COTTER (5/32" X 2")
17	2	4015	BOLT, 1/2" X 2" GRADE 5	7	2	N13481	GUIDE, SPRING BED ROLLER
16	2	4068	WASHER, 1/2" SAE FLAT	6	2	8067	SPRING
15	2	4012	BOLT, 1/2" X 1-1/4" GRADE 5	5	4	4105	ZERK, GREASE (1/4" SCREW-IN)
14	1	212305	SCRAPER, WHEEL BED ROLLER NG	4	5	4056	NUT, LOCK 3/4"
13	2	4155	WASHER, LOCK 1/2"	3	1	N13486	MOUNT, HINGED BED ROLLER
12	6	4054	NUT, LOCK 1/2"	2	10	4479	WASHER, 1-3/4" O.D. X 13/16" I.D. X 1/4" THK
ITEM	QTY	PART NO	DESCRIPTION	1	5	4458	BOLT, 3/4" X 6-1/2" GRADE 5
ITEM	QTY	PART NO	DESCRIPTION				

This technical diagram illustrates the exploded view of a shredder rotor assembly. The central component is the rotor (1), which features a circular body with multiple sets of shredding teeth (22) mounted on a shaft (15). The rotor is supported by bearings (2) and (3) and is secured by a nut (4) and a washer (5). The assembly is mounted on a base plate (10) which is secured by bolts (9) and (12). The base plate is further supported by a frame (16) and a mounting bracket (17). The diagram includes 25 numbered callouts identifying various parts: 1 (Rotor), 2 (Bearing), 3 (Bearing), 4 (Nut), 5 (Washer), 6 (Bolt), 7 (Washer), 8 (Bolt), 9 (Bolt), 10 (Base Plate), 11 (Rotor Body), 12 (Bolt), 13 (Bolt), 14 (Washer), 15 (Shaft), 16 (Frame), 17 (Mounting Bracket), 18 (Bolt), 19 (Bolt), 20 (Rotor Body), 21 (Rotor Body), 22 (Teeth), 23 (Rotor Body), 24 (Teeth), and 25 (Teeth).

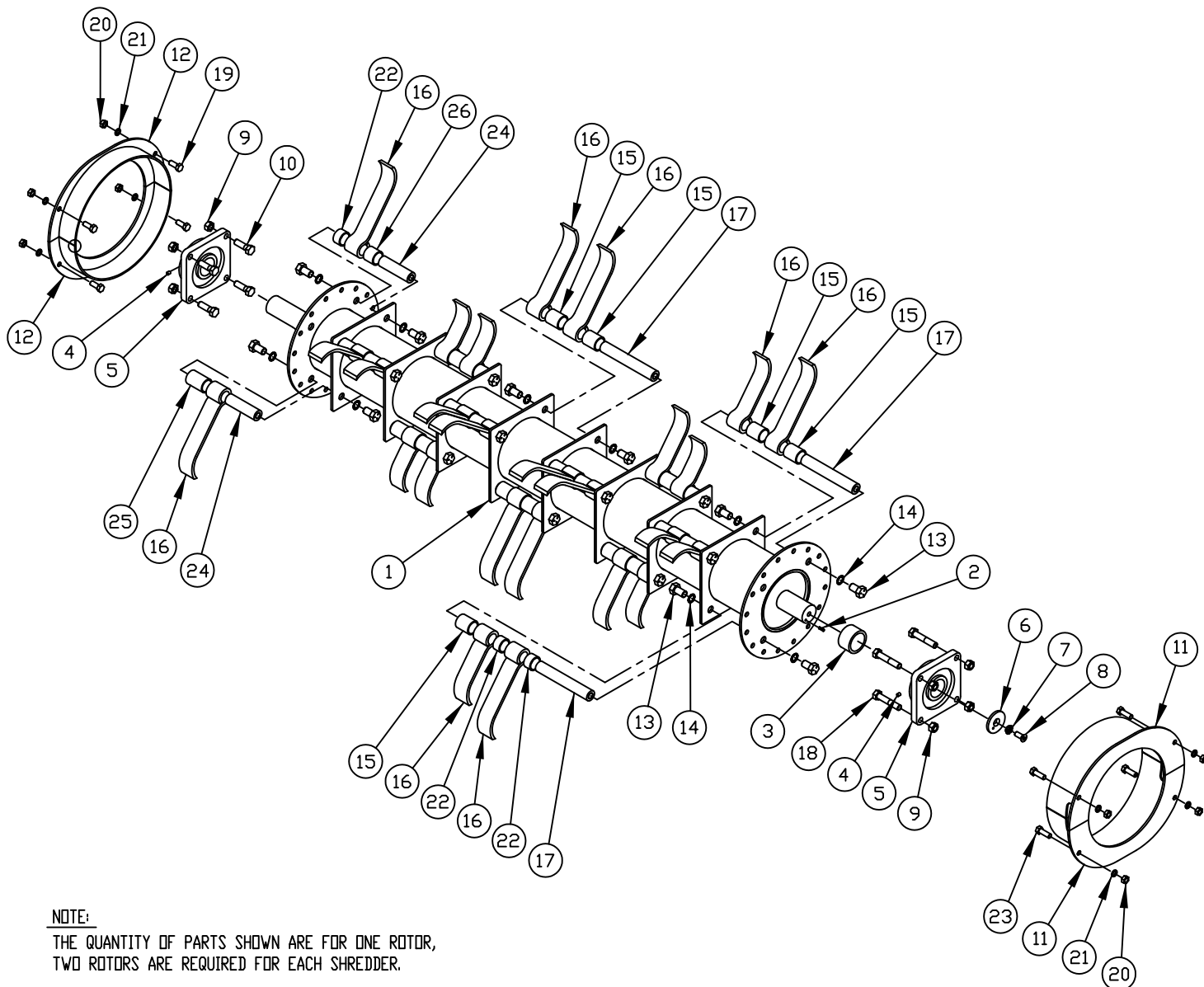
**NOTE:**  
THE QUANTITY OF PARTS SHOWN ARE FOR ONE ROTOR,  
TWO ROTORS ARE REQUIRED FOR EACH SHREDDER.

THE QUANTITY OF PARTS SHOWN ARE FOR ONE ROTOR,  
TWO ROTORS ARE REQUIRED FOR EACH SHREDDER.

CONTACT LOFTNESS FOR KNIFE LENGTH PATTERN  
FOR SPECIFIC ROW SPACING.

13	32	4307	BOLT, 3/4" X 1-1/4" FN TH GR 5
12	2	N28861	ANTIWRAP, VEG END 12' 15'
11	2	N28873	ANTIWRAP, VEG CEN 12'
10	4	4042	BOLT, 5/8" X 2" FN TH GR 8
9	8	4057	NUT, LOCK 5/8" FINE THREAD
8	1	4468	SCREW, 1/2" UNF X 1-1/4" FLAT HD CAP
7	1	4076	WASHER, 1/2" EXT CNTSK LOCK
6	1	4075	WASHER, BEARING RET. 2-5/8" OD
5	2	N16969	BEARING, 2-3/16"4BF SEALMASTER
4	2	4261	SCREW, 5/16" UNF X 3/8" SET
3	1	N18076	SPACER, SHRD ROTOR 2-3/16
2	1	4085	PIN, ROLL 3/16" X 3/4"
1	1	N13521	ROTOR, 12" W/D CONTOUR VEGETABLE KNIVES
ITEM	QTY	PART NO	DESCRIPTION

# 13 FT ROTOR W/VEGETABLE KNIVES - 38" & 40" ROWS



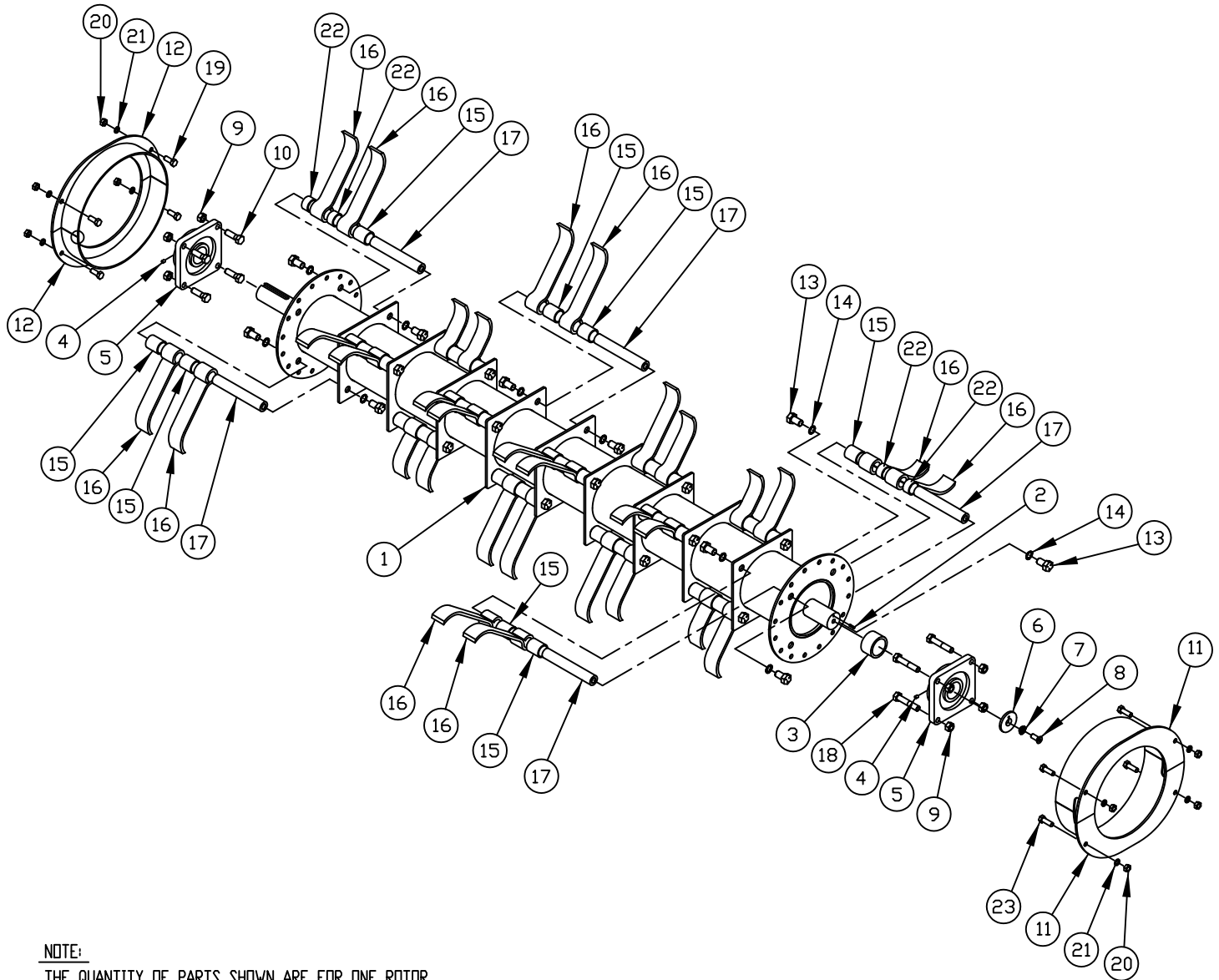
## NOTE:

THE QUANTITY OF PARTS SHOWN ARE FOR ONE ROTOR,  
TWO ROTORS ARE REQUIRED FOR EACH SHREDDER.

CONTACT LOFTNESS FOR KNIFE LENGTH PATTERN  
FOR SPECIFIC ROW SPACING.

26	1	N28887	SPACER, CONTOUR 1.43'	14	36	4308	WASHER, 3/4" INT.TOOTH LOCK
25	1	N28886	SPACER, CONTOUR 2.45'	13	36	4307	BOLT, 3/4" X 1-1/4" FN TH GR 5
24	2	N28884	MOUNT, CONTOUR VEGETABLE 4.5'	12	2	N28864	ANTIWRAP, VEG END 13'
23	4	4013	BOLT, 1/2" X 1-1/2" GR 5	11	2	N28869	ANTIWRAP, VEG CEN 13' 15' 18'
22	3	N28866	SPACER, COUNTOUR VEG SHORT	10	4	4042	BOLT, 5/8" X 2" FN TH GR 8
21	8	N16472	WASHER, NORD-LOCK 1/2"	9	8	4057	NUT, LOCK 5/8" FINE THREAD
20	8	4250	NUT, STANDARD 1/2"	8	1	4468	SCREW, 1/2" UNF X 1-1/4" FLAT HD CAP
19	4	4012	BOLT, 1/2" X 1-1/4" GR 5	7	1	4076	WASHER, 1/2" EXT CNTSK LOCK
18	4	4047	BOLT, 5/8" UNF X 3-1/4" GR 8	6	1	4075	WASHER, BEARING RET. 2-5/8" OD
17	16	9123	MOUNT, CONTOUR VEGETABLE KNIFE (8')	5	2	N16969	BEARING, 2-3/16"4BF SEALMASTER
16	14	N36139	KNIFE, CONTOUR VEG HVY (10')	4	2	4261	SCREW, 5/16" UNF X 3/8" SET
	8	N36138	KNIFE, CONTOUR VEG HVY (8')	3	1	N18076	SPACER, SHRD ROTOR 2-3/16
	12	N36137	KNIFE, CONTOUR VEG HVY (6')	2	1	4085	PIN, ROLL 3/16" X 3/4"
15	31	9122	SPACER, CONTOUR VEGETABLE KNIFE	1	1	N10840	ROTOR, 13" W/D CONTOUR VEGETABLE KNIVES
ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION

# 15 FT ROTOR W/VEGETABLE KNIVES - 34" & 41" ROWS



## NOTE:

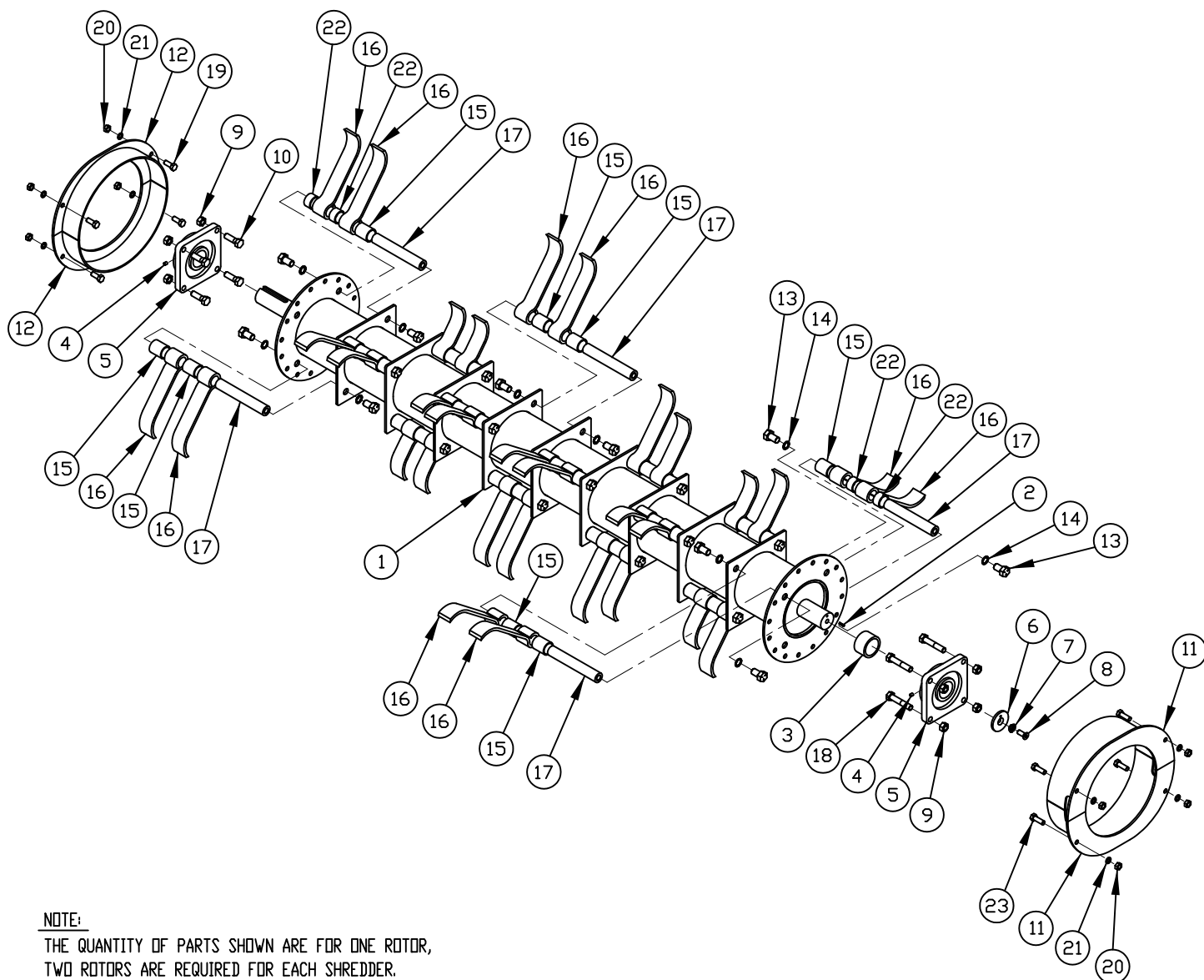
THE QUANTITY OF PARTS SHOWN ARE FOR ONE ROTOR,  
TWO ROTORS ARE REQUIRED FOR EACH SHREDDER.

CONTACT LOFTNESS FOR KNIFE LENGTH PATTERN  
FOR SPECIFIC ROW SPACING.

23	4	4013	BOLT, 1/2" X 1-1/2" GR 5
22	4	N28866	SPACER, CONTOUR VEG SHORT
21	8	N16472	WASHER, NORD-LOCK 1/2"
20	8	4250	NUT, STANDARD 1/2"
19	4	4012	BOLT, 1/2" X 1-1/4" GR 5
18	4	4047	BOLT, 5/8" UNF X 3-1/4" GR 8
17	20	9123	MOUNT, CONTOUR VEGETABLE KNIFE (8")
16	20	N36139	KNIFE, CONTOUR VEG HVY (10")
	8	N36138	KNIFE, CONTOUR VEG HVY (8")
	12	N36137	KNIFE, CONTOUR VEG HVY (6")
15	38	9122	SPACER, CONTOUR VEGETABLE KNIFE
14	40	4308	WASHER, 3/4" INT.Tooth LOCK
13	40	4307	BOLT, 3/4" X 1-1/4" FN TH GR 5
ITEM	QTY	PART NO	DESCRIPTION

12	2	N28861	ANTIWRAP, VEG END 12' 15'
11	2	N28869	ANTIWRAP, VEG CEN 13' 15' 18'
10	4	4042	BOLT, 5/8" X 2" FN TH GR 8
9	8	4057	NUT, LOCK 5/8" FINE THREAD
8	1	4468	SCREW, 1/2" UNF X 1-1/4" FLAT HD CAP
7	1	4076	WASHER, 1/2" EXT CNTSK LOCK
6	1	4075	WASHER, BEARING RET. 2-5/8" OD
5	2	N16969	BEARING, 2-3/16" 4BF SEALMASTER
4	2	4261	SCREW, 5/16" UNF X 3/8" SET
3	1	N18076	SPACER, SHRD ROTOR 2-3/16
2	1	4085	PIN, ROLL 3/16" X 3/4"
1	1	N13520	ROTOR, 15' W/D CONTOUR VEGETABLE KNIVES
ITEM	QTY	PART NO	DESCRIPTION

# 15 FT ROTOR W/VEGETABLE KNIVES - 44" ROWS



## NOTE:

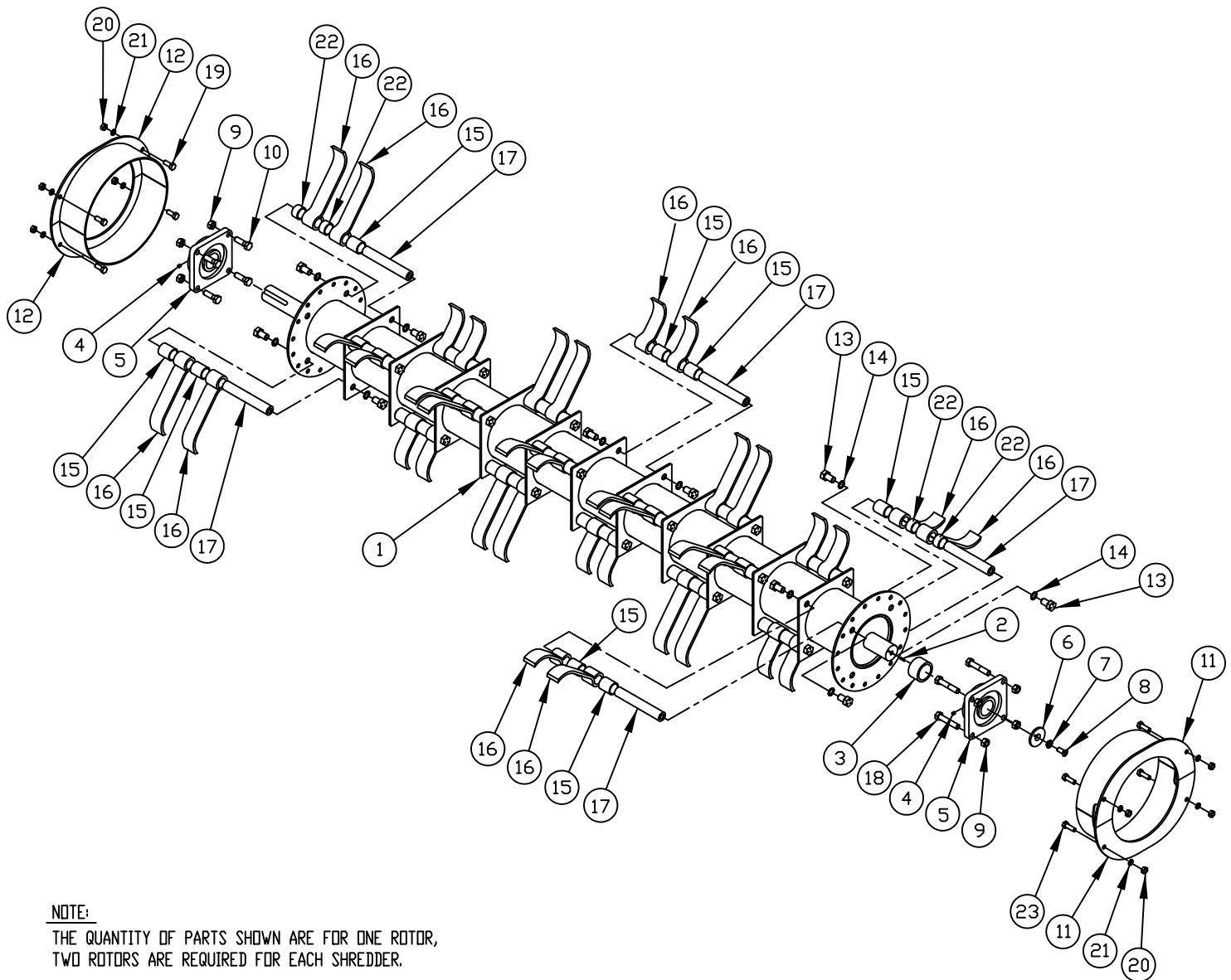
THE QUANTITY OF PARTS SHOWN ARE FOR ONE ROTOR,  
TWO ROTORS ARE REQUIRED FOR EACH SHREDDER.

CONTACT LOFTNESS FOR KNIFE LENGTH PATTERN  
FOR SPECIFIC ROW SPACING.

23	4	4013	BOLT, 1/2" X 1-1/2" GR 5
22	4	N28866	SPACER, CONTOUR VEG SHORT
21	8	N16472	WASHER, NORD-LOCK 1/2"
20	8	4250	NUT, STANDARD 1/2"
19	4	4012	BOLT, 1/2" X 1-1/4" GR 5
18	4	4047	BOLT, 5/8" UNF X 3-1/4" GR 8
17	20	9123	MOUNT, CONTOUR VEGETABLE KNIFE (8")
16	20	N36139	KNIFE, CONTOUR VEG HVY (10")
	8	N36138	KNIFE, CONTOUR VEG HVY (8")
	12	N36137	KNIFE, CONTOUR VEG HVY (6")
15	38	9122	SPACER, CONTOUR VEGETABLE KNIFE
14	40	4308	WASHER, 3/4" INT. TOOTH LOCK
13	40	4307	BOLT, 3/4" X 1-1/4" FN TH GR 5
ITEM	QTY	PART NO	DESCRIPTION

12	2	N28861	ANTIWRAP, VEG END 12' 15'
11	2	N28869	ANTIWRAP, VEG CEN 13' 15' 18'
10	4	4042	BOLT, 5/8" X 2" FN TH GR 8
9	8	4057	NUT, LOCK 5/8" FINE THREAD
8	1	4468	SCREW, 1/2" UNF X 1-1/4" FLAT HD CAP
7	1	4076	WASHER, 1/2" EXT CNTSK LOCK
6	1	4075	WASHER, BEARING RET. 2-5/8" OD
5	2	N16969	BEARING, 2-3/16" 4BF SEALMASTER
4	2	4261	SCREW, 5/16" UNF X 3/8" SET
3	1	N18076	SPACER, SHRD ROTOR 2-3/16
2	1	4085	PIN, ROLL 3/16" X 3/4"
1	1	N13520	ROTOR, 15' W/D CONTOUR VEGETABLE KNIVES
ITEM	QTY	PART NO	DESCRIPTION

# 18 FT ROTOR W/VEGETABLE KNIVES - 34" & 36" ROWS



## NOTE:

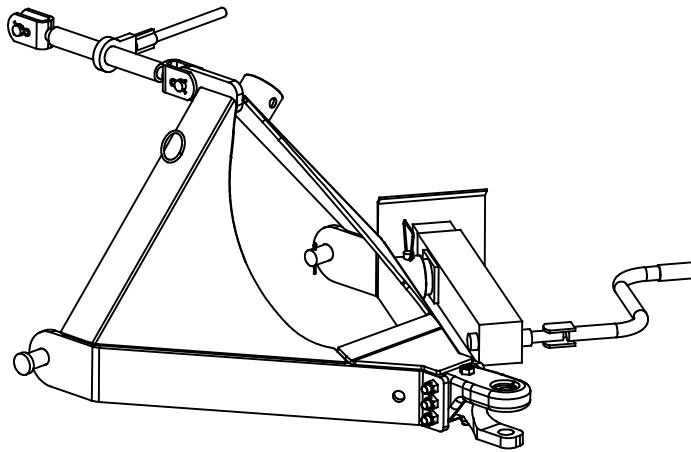
THE QUANTITY OF PARTS SHOWN ARE FOR ONE ROTOR,  
TWO ROTORS ARE REQUIRED FOR EACH SHREDDER.

CONTACT LOFTNESS FOR KNIFE LENGTH PATTERN  
FOR SPECIFIC ROW SPACING.

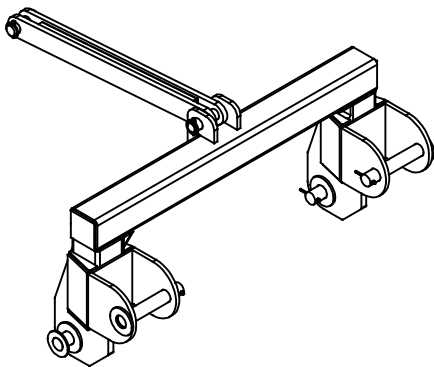
23	4	4013	BOLT, 1/2" X 1-1/2" GR 5
22	4	N28866	SPACER, CONTOUR VEG SHORT
21	8	N16472	WASHER, NORD-LOCK 1/2"
20	8	4250	NUT, STANDARD 1/2"
19	4	4012	BOLT, 1/2" X 1-1/4" GR 5
18	4	4047	BOLT, 5/8" UNF X 3-1/4" GR 8
17	24	9123	MOUNT, CONTOUR VEGETABLE KNIFE (8")
16	18	N36139	KNIFE, CONTOUR VEG HVY (10")
	12	N36138	KNIFE, CONTOUR VEG HVY (8")
	18	N36137	KNIFE, CONTOUR VEG HVY (6")
15	46	9122	SPACER, CONTOUR VEGETABLE KNIFE
14	48	4308	WASHER, 3/4" INT.Tooth LOCK
13	48	4307	BOLT, 3/4" X 1-1/4" FN TH GR 5
ITEM	QTY	PART NO	DESCRIPTION

12	2	N28867	ANTIWRAP, VEG END 18'
11	2	N28869	ANTIWRAP, VEG CEN 13' 15' 18'
10	4	4042	BOLT, 5/8" X 2" FN TH GR 8
9	8	4057	NUT, LOCK 5/8" FINE THREAD
8	1	4468	SCREW, 1/2" UNF X 1-1/4" FLAT HD CAP
7	1	4076	WASHER, 1/2" EXT CNTSK LOCK
6	1	4075	WASHER, BEARING RET. 2-5/8" OD
5	2	N16969	BEARING, 2-3/16"4BF SEALMASTER
4	2	4261	SCREW, 5/16" UNF X 3/8" SET
3	1	N18076	SPACER, SHRD ROTOR 2-3/16
2	1	4085	PIN, ROLL 3/16" X 3/4"
1	1	N13512	ROTOR, 18' W/O CONTOUR VEGETABLE KNIVES
ITEM	QTY	PART NO	DESCRIPTION

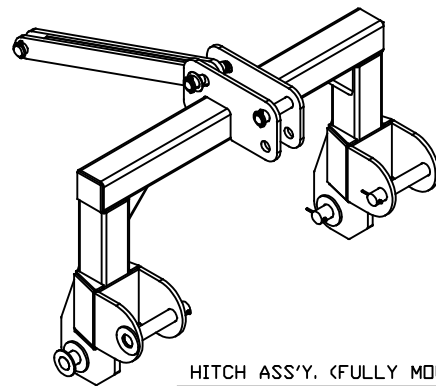
# VEGETABLE/POTATO SHREDDER HITCH OPTIONS



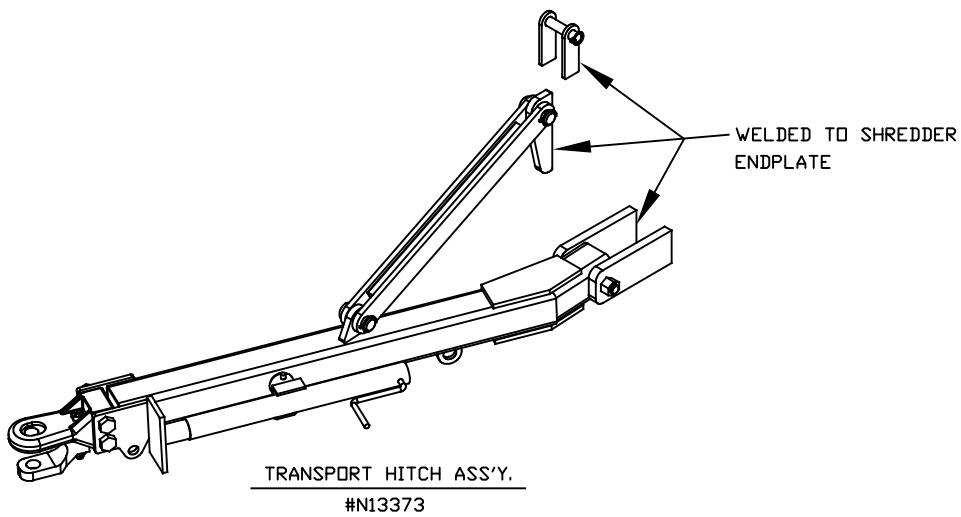
HITCH ASS'Y. (PULL TYPE)  
#N40152



HITCH ASS'Y. (SEMI-MOUNTED)  
#N13427



HITCH ASS'Y. (FULLY MOUNTED)  
#N13080



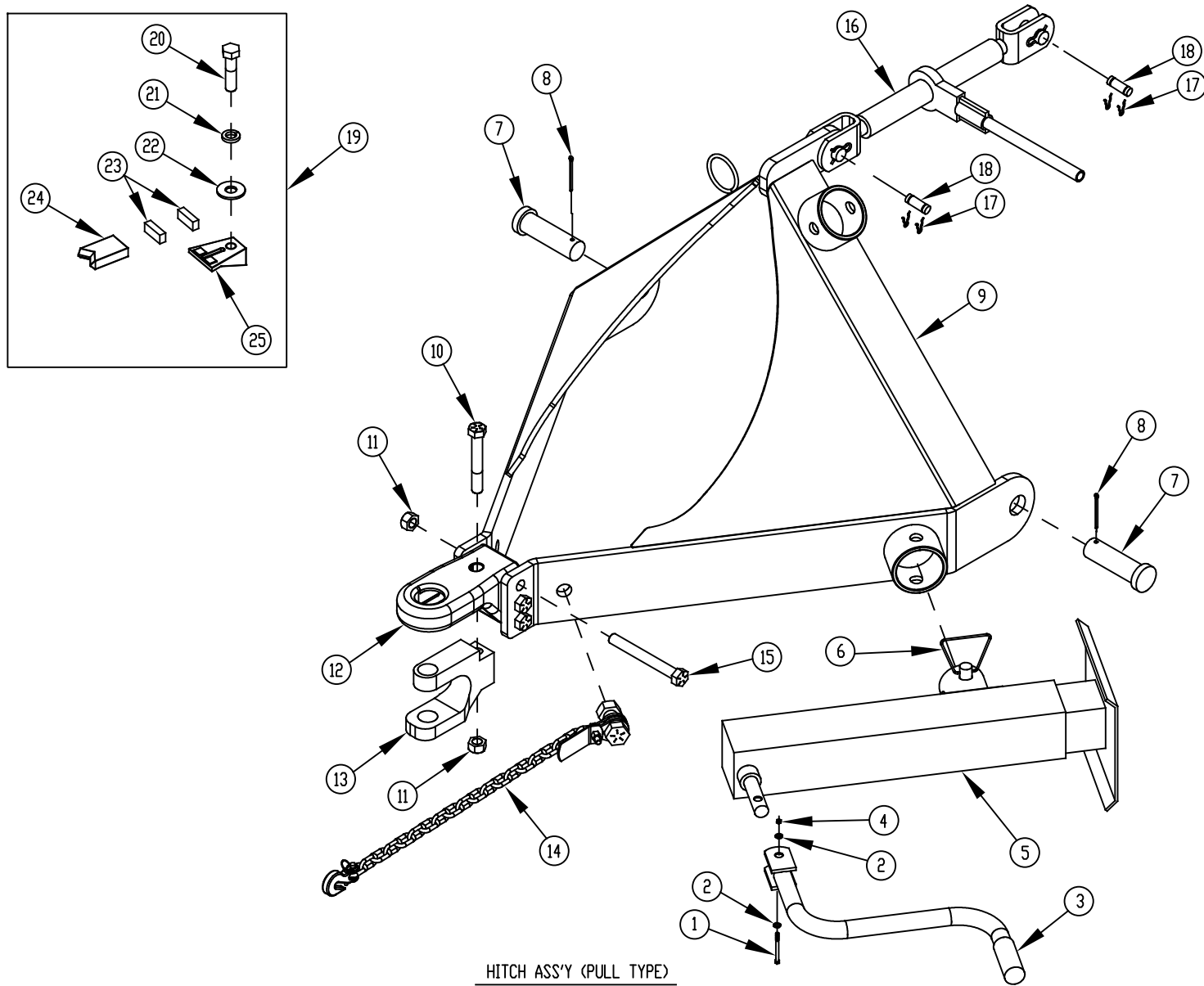
TRANSPORT HITCH ASS'Y.  
#N13373

NOTE:

SELECT THE HITCH OPTION THAT IS ON YOUR SHREDDER, THEN  
REFER TO PAGE 4-16 OR 4-17 FOR LISTING OF SERVICE PARTS.



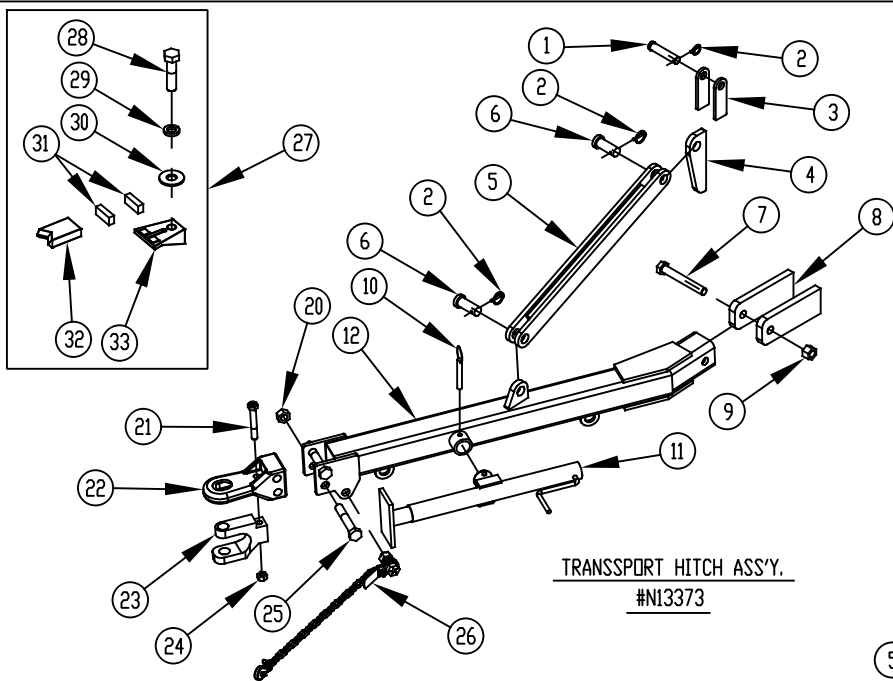
# VEGETABLE/POTATO SHREDDER HITCH PARTS LIST



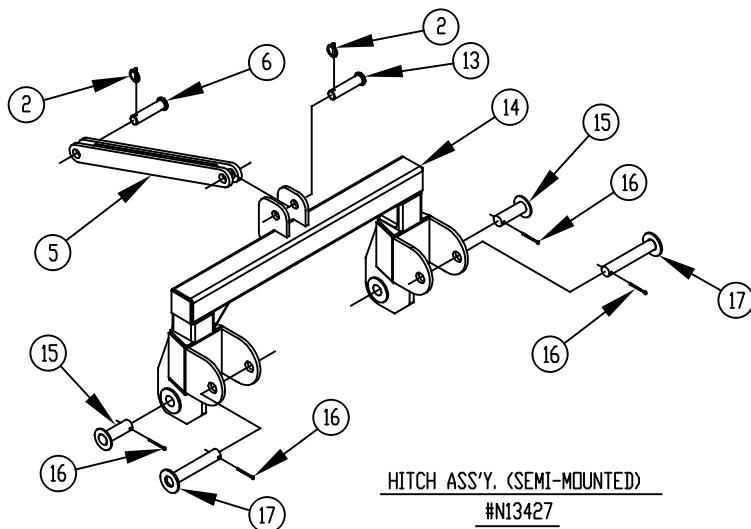
TO ORDER A COMPLETE PULL TYPE HITCH ASS'Y. (ITEMS  
#5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 & 19), USE PART NUMBER #N40152.

25	1	N37476	PLATE, CAT 2 BOLT-ON REC TOP (INCLUDED W/N37609)	13	1	N37463	CLEVIS, CAT 2 BOLT-ON HITCH
24	1	N37475	BLOCK, CAT 2 BOLT-ON REC V (INCLUDED W/N37609)	12	1	N32970	HITCH, BOLT-ON, CAT 3
23	2	N37477	CUSHION, CAT 2 BOLT-ON REC (INCLUDED W/N37609)	11	4	N16352	NUT, LOCK 3/4" FN THD GR 8
22	4	4071	WASHER, FLAT 3/4" (INCLUDED W/N37609)	10	1	4577	BOLT, 3/4" X 5" FN TH GR 8
21	1	4287	WASHER, LOCK 3/4" (INCLUDED W/N37609)	9	1	N32583	HITCH, UNIV SHWD PULL-TYPE
20	1	4352	BOLT, 3/4" X 3" GR 5 (INCLUDED W/N37609)	8	2	4355	PIN, COTTER (3/16" X 2-1/2")
19	1	N37609	KIT, GBU10 HITCH CONV	7	2	N13095	PIN, HITCH (1-1/2" X 4")
18	2		PIN, RATCHET JACK (1" X 2-1/2" INCLUDED W/8048)	6	1	N28616	PIN, JACK STAND (INCLUDED W/N13732)
17	4		CLIP, RATCHET JACK (INCLUDED W/8048)	5	1	N13732	JACK, HEAVY DUTY
16	1	8048	JACK, RATCHET	4	1	4052	NUT, LOCK 3/8" (INCLUDED W/N13732)
15	3	N16351	BOLT, 3/4" X 6-1/2" FN TH GR 8	3	1	N123712	HANDLE, JACK (INCLUDED W/N13732)
14	1	N50260	CHAIN,SAFETY21,000W/HARDWARE	2	2	4064	WASHER, FLAT 3/8" (INCLUDED W/N13732)
ITEM	QTY	PART NO	DESCRIPTION	1	1	4313	BOLT, 3/8" X 2-1/2" GRADE 5 (INCLUDED W/N13732)
ITEM	QTY	PART NO	DESCRIPTION				

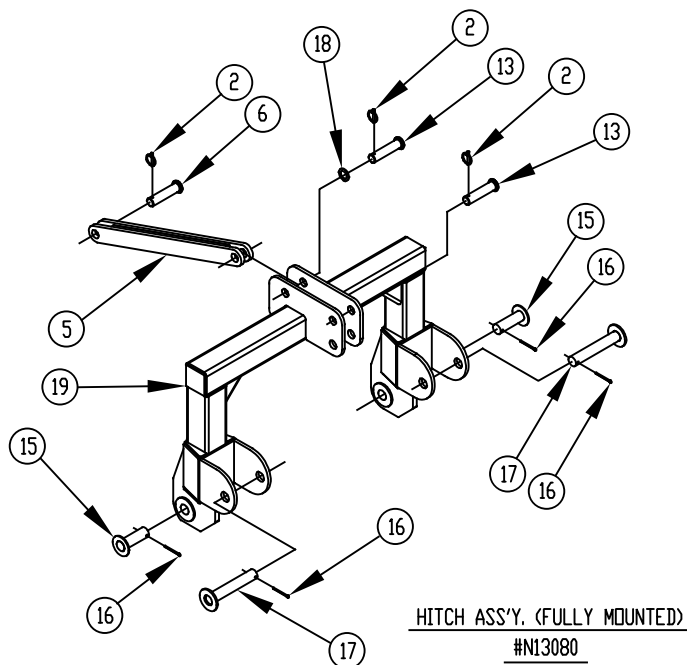
# VEGETABLE/POTATO SHREDDER HITCH PARTS LIST



TRANSPORT HITCH ASS'Y.  
#N13373



HITCH ASS'Y. (SEMI-MOUNTED)  
#N13427



HITCH ASS'Y. (FULLY MOUNTED)  
#N13080

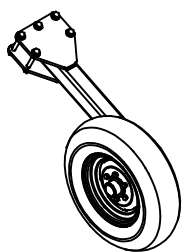
## NOTE:

- 1) TO ORDER A COMPLETE FULLY MOUNTED HITCH ASS'Y, (ITEMS #2, 5, 6, 13, 15, 16, 17, 18, 19) USE PART NUMBER #N13080.
- 2) TO ORDER A COMPLETE SEMI-MOUNTED HITCH ASS'Y. (ITEMS #2, 5, 6, 13, 14, 15, 16, 17), USE PART NUMBER #N13427.
- 3) TO ORDER A COMPLETE TRANSPORT HITCH ASS'Y. (ITEMS #1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 20-27), USE PART NUMBER #N13373.

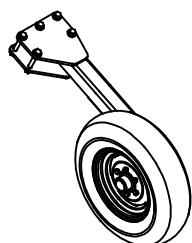
17	VAR	N13218	PIN, LOWER HITCH (1-7/16" X 8")
16	VAR	4329	PIN, COTTER (7/32" X 2-1/2")
15	VAR	N13095	PIN, HITCH (1-1/2" X 4")
14	1	N13422	HITCH, SEMI-MOUNTED
13	VAR	4291	PIN, MOUNTED HITCH (1-1/4" X 4-1/2")
12	1	N36751	WELDMENT, SHRD TRANSPORT HITCH
11	1	8047	JACK, BULLDOG
10	1	8047-10	PIN, BULLDOG JACK (INCLUDED W/8047)
9	1	4249	NUT, LOCK 1"
8	2	N13370	EAR, TRANSPORT FOLD-UP
7	1	N13410	BOLT, TRANSPORT HITCH
6	VAR	4290	PIN, MOUNTED HITCH (1-1/4" X 2-1/2")
5	1	9286	BAR, UPPER LINK HITCH
4	1	N13372	ANCHOR, TRANSPORT BODY
3	2	N13380	PLATE, HITCH UPRIGHT
2	VAR	4095	CLIP, LYNCH PIN
1	1	N11932	PIN, HITCH (1" X 4-1/4")
ITEM	QTY	PART NO	DESCRIPTION

33	1	N37476	PLATE, CAT 2 BOLT-ON REC TOP (INCLUDED W/N37609)
32	1	N37475	BLOCK, CAT 2 BOLT-ON REC V (INCLUDED W/N37609)
31	2	N37477	CUSHION, CAT 2 BOLT-ON REC (INCLUDED W/N37609)
30	1	4071	WASHER, FLAT 3/4" (INCLUDED W/N37609)
29	1	4287	WASHER, LOCK 3/4" (INCLUDED W/N37609)
28	1	4352	BOLT, 3/4" X 3" GR 5 (INCLUDED W/N37609)
27	1	N37609	KIT, GBU10 HITCH CONV
26	1	N24248	CHAIN, SAFETY W/MOUNT HARDWARE
25	2	N28583	BOLT, 1" X 6" GR 8 FN TH
24	1	N16352	NUT, LOCK 3/4" FN THD GR 8
23	1	N37463	CLEVIS, CAT 2 BOLT-ON HITCH
22	1	N37474	BASE, CAT 2 BOLT-ON REC HITCH
21	1	4577	BOLT, 3/4" X 5" FN TH GR 8
20	2	N16700	NUT, LOCK 1" FN THD GR 8 TOP
19	1	N10312	HITCH, FULLY MOUNTED
18	1	4316	WASHER, FLAT 1-1/4"
ITEM	QTY	PART NO	DESCRIPTION

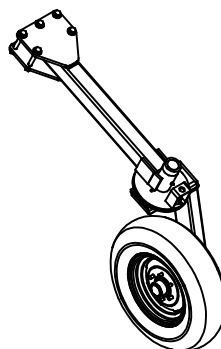
# VEGETABLE/POTATO SHREDDER REAR WHEEL OPTIONS



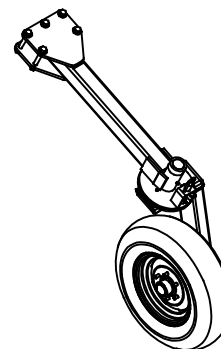
ASSIST WHEEL ASS'Y  
#N10223



OFFSET ASSIST WHEEL ASS'Y  
#N13413



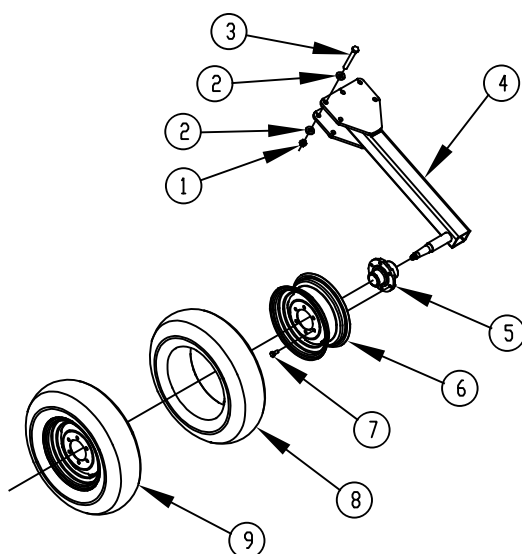
ASSIST WHEEL ASS'Y  
#N13248 (W/O PIN)



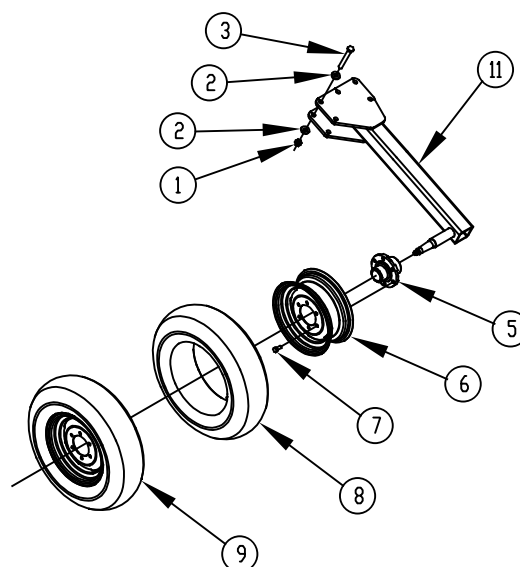
ASSIST WHEEL ASS'Y  
#N10802 (W/PIN)

## NONE-SWIVEL ASSIST WHEEL ASSEMBLIES

## SWIVEL ASSIST WHEEL ASSEMBLIES (SEE PAGE 4-19 FOR PARTS LIST)



ASSIST WHEEL ASSEMBLY  
#N10223



OFFSET ASSIST WHEEL ASSEMBLY  
#N13413

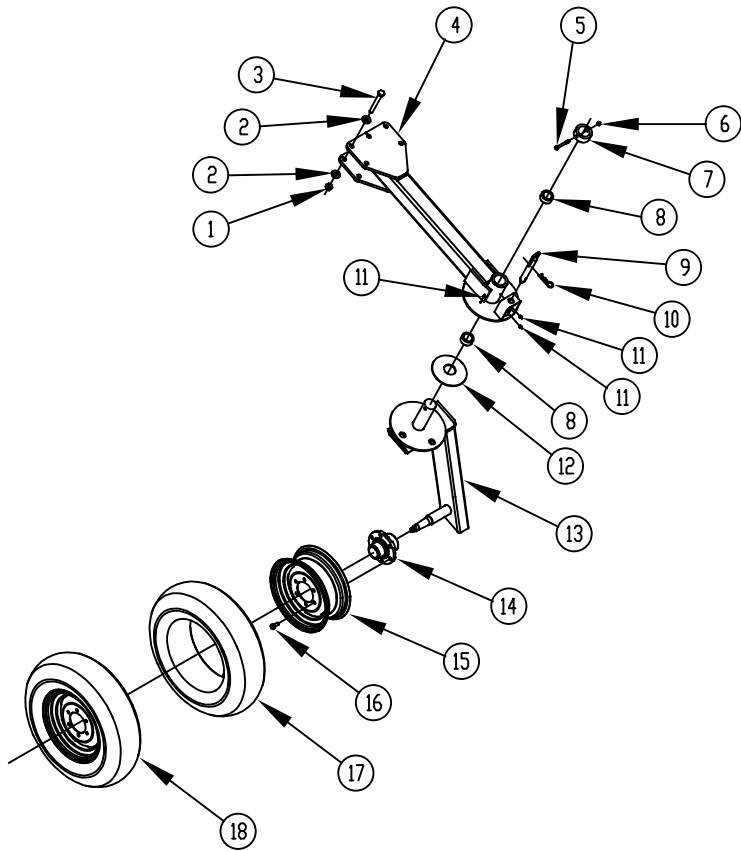
### NOTE:

- 1) REFER TO PAGE 4-23 FOR 6-BOLT HUB PARTS LISTING.
- 2) TO ORDER A COMPLETE ASSIST WHEEL ASSEMBLY, USE THE PART NUMBERS SHOWN WITH EACH ILLUSTRATION.

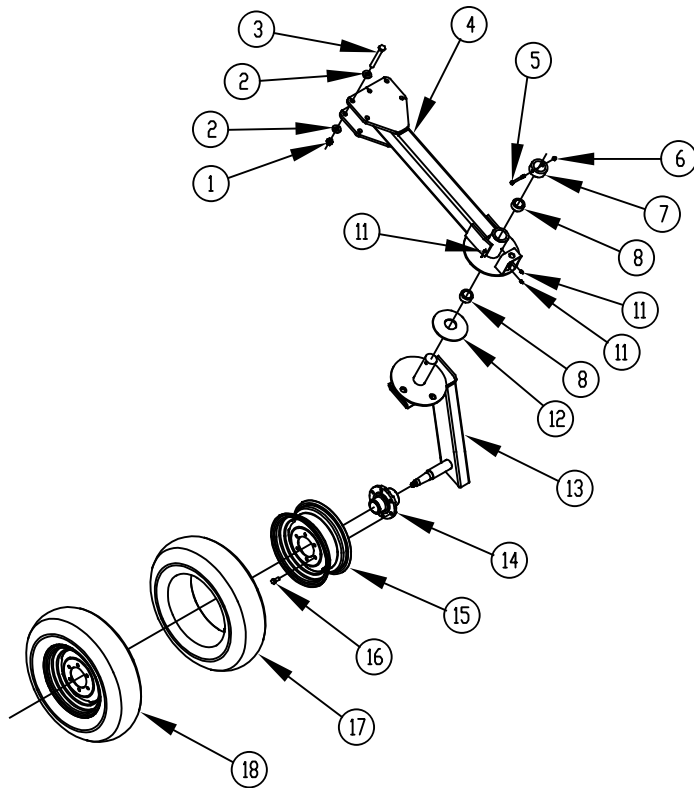
11	1	N13414	STRUT, REAR OFFSET WHEEL
10	1	8079	STEM, TIRE VALVE (NOT SHOWN)
9	1	N22459	WHEEL, 11L15 COMPLETE ASS'Y (INCLUDES ITEMS 6, 8, 10)
8	1	N22461	TIRE, 11L15 - 10 PLY
7	1	4049	BOLT, LUG (9/16"-18 UNF X 1-3/4")
ITEM	QTY	PART NO	DESCRIPTION

6	1	N22460	RIM, 15 X 8 LB - 8' WIDE
5	1	8082	HUB, 6-BOLT (COMPLETE)
4	1	N11618	STRUT, REAR WHEEL
3	5	4458	BOLT, 3/4"-10 X 6-1/2" GRADE 5
2	5	4479	WASHER, 1-3/4" O.D. X 13/16" I.D. X 1/4" THK.
1	5	4056	NUT, LOCK 3/4"
ITEM	QTY	PART NO	DESCRIPTION

# VEGETABLE/POTATO SHREDDER REAR WHEEL PARTS LIST



ASSIST WHEEL ASSEMBLY (W/PIN)  
#N10802



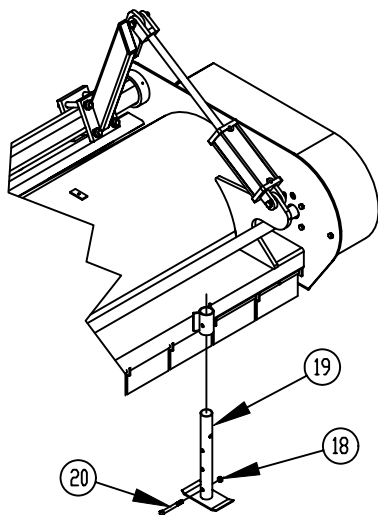
ASSIST WHEEL ASSEMBLY (W/O PIN)  
#N13248

## NOTE:

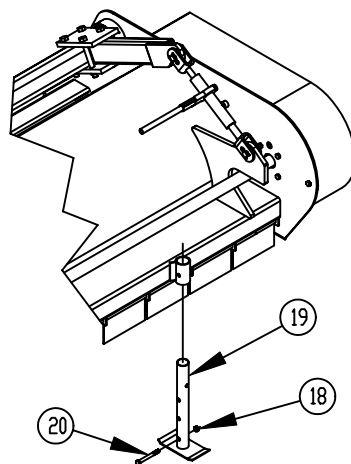
- 1) REFER TO PAGE 4-23 FOR 6-BOLT HUB PARTS LISTING.
- 2) TO ORDER A COMPLETE ASSIST WHEEL ASSEMBLY,  
USE THE PART NUMBERS SHOWN WITH EACH ILLUSTRATION.

19	1	8079	STEM, TIRE VALVE (NOT SHOWN)	10	1	4389	CLIP, HAIRPIN (3/16" X 3")
18	1	N22459	WHEEL, 11L15 COMPLETE ASS'Y (INCLUDES ITEMS 15, 17, 19)	9	1	N10806	PIN, ASSIST WHEEL LOCKING
17	1	N22461	TIRE, 11L15 - 10 PLY	8	2	N13331	BUSHING, BRONZE (2-3/4" OD X 2-1/2" ID X 2")
16	6	4049	BOLT, LUG (9/16"-18 UNF X 1-3/4")	7	1	N13335	COLLAR, ASSIST WHEEL
15	1	N22460	RIM, 15 X 8 LB - 8" WIDE	6	1	4052	NUT, LOCK 3/8"
14	1	8082	HUB, 6-BOLT (COMPLETE)	5	1	4255	BOLT, 3/8" X 3-1/2" GRADE 5
13	1	N13333	CASTER, REAR ASSIST WHEEL	4	1	N13329	ARM, ASSIST WHEEL (REAR)
12	1	N10214	INSERT, ASSIST WHEEL	3	VAR	4458	BOLT, 3/4"-10 X 6-1/2" GRADE 5
11	4	4105	ZERK, 1/4" SCREW-IN GREASE	2	VAR	4479	WASHER, 1-3/4" O.D. X 13/16" I.D. X 1/4" THK
ITEM	QTY	PART NO	DESCRIPTION	1	VAR	4056	NUT, LOCK 3/4"
ITEM	QTY	PART NO	DESCRIPTION				

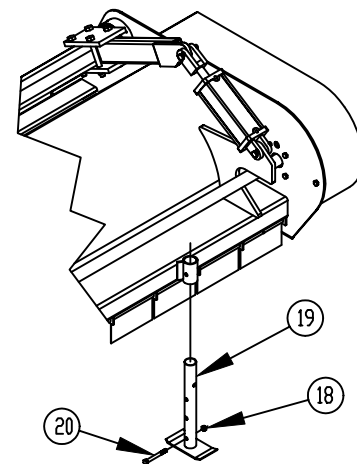
# VEGETABLE/POTATO SHREDDER REAR WHEEL ADJUSTMENT OPTIONS



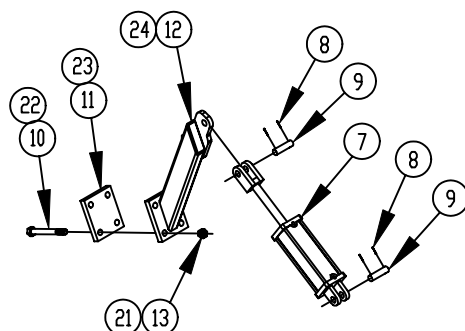
SEMI-MOUNT W/HYDRAULIC CYLINDER  
(L.H. SHOWN)



PULL-TYPE W/RATCHET JACK  
(L.H. SHOWN)

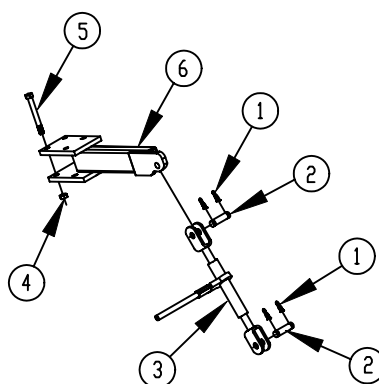


PULL-TYPE W/HYDRAULIC CYLINDER  
(L.H. SHOWN)



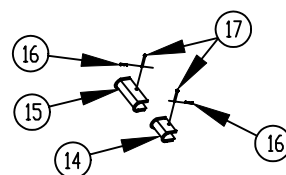
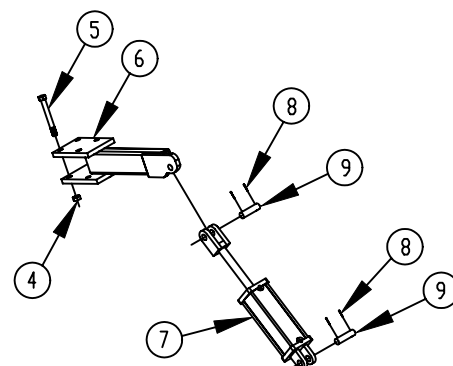
A COMPLETE REAR WHEEL L.H. LIFT CYLINDER ARM, ITEMS #10, 11, 12, & 13, IS REPLACED WITH ITEMS #21, 22, 23, & 24 STARTING WITH SERIAL NUMBER #100. USE PART NUMBER #N13394.

A COMPLETE REAR WHEEL R.H. LIFT CYLINDER ARM, ITEMS #10, 11, 12, & 13, IS REPLACED WITH ITEMS #21, 22, 23, & 24 STARTING WITH SERIAL NUMBER #100. USE PART NUMBER #N13393.



TO ORDER A COMPLETE REAR WHEEL L.H. LIFT ARM (ITEMS #4, 5, 6), USE PART NUMBER #N13392.

TO ORDER A COMPLETE REAR WHEEL R.H. LIFT ARM (ITEMS #4, 5, 6), USE PART NUMBER #N13391.

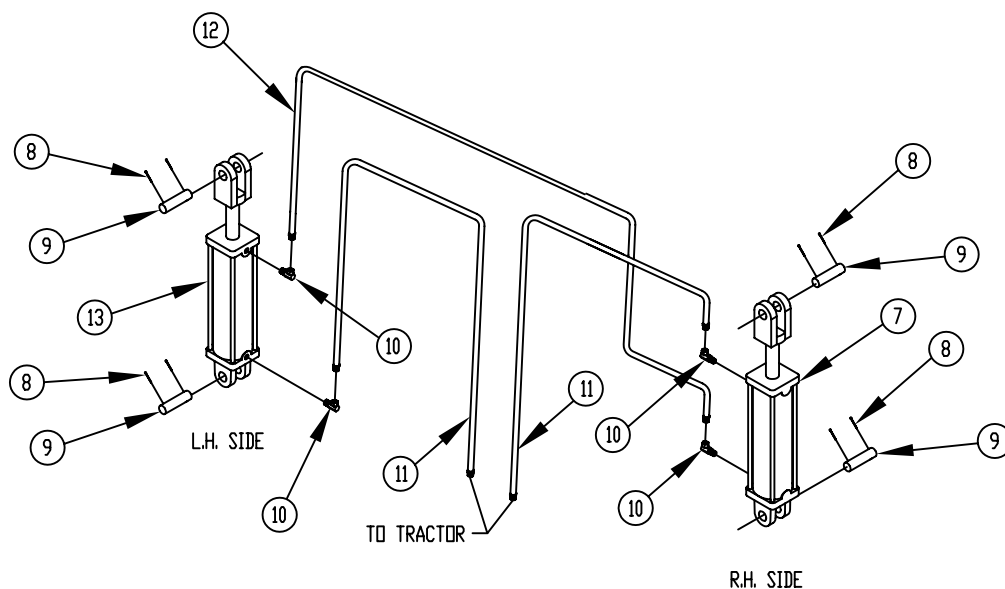


HYDRAULIC CYLINDER STOPS

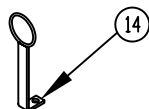
24	1	N16412	PLATE, REAR WHEEL LIFT MOUNTING
23	1	N16410	ARM, REAR WHEEL L.H. CYLINDER LIFT
	1	N16411	ARM, REAR WHEEL R.H. CYLINDER LIFT (NOT SHOWN)
22	4	N16413	BOLT, 1" X 7-1/2" GRADE 8
21	4	4249	NUT, 1" LOCK
20	1	4016	BOLT, 1/2" X 3" GRADE 5
19	1	9011	JACK, STORAGE STAND
18	1	4054	NUT, 1/2" LOCK
17	2	4093	PIN, BAR PIN 3/8" X 1-5/8"
16	2	4089	
15	1	9242	STOP, LARGE CYLINDER
14	1	9243	STOP, SMALL CYLINDER
13	4	4170	NUT, 7/8" LOCK
12	1	N10248	ARM, REAR WHEEL L.H. CYLINDER LIFT
	1	N10247	ARM, REAR WHEEL R.H. CYLINDER LIFT (NOT SHOWN)
ITEM	QTY	PART NO	DESCRIPTION

11	1	N10252	PLATE, REAR WHEEL LIFT MOUNTING
10	4	4480	BOLT, 7/8" X 7" GRADE 8
9			PIN (INCLUDED W/HYDRAULIC CYLINDER)
8			PIN (INCLUDED W/HYDRAULIC CYLINDER)
7			CYLINDER, HYDRAULIC (SEE PAGE 4-46)
6	1	N10255	ARM, REAR WHEEL L.H. LIFT
	1	N10254	ARM, REAR WHEEL R.H. LIFT (NOT SHOWN)
5	4	4458	BOLT, 3/4" X 6-1/2" GRADE 5
4	4	4056	NUT, 3/4" LOCK
3	1	8048	JACK, RATCHET
2	2		PIN, RATCHET JACK (1" X 2-1/2" INCLUDED W/8048)
1	4		CLIP, RATCHET JACK (INCLUDED W/8048)
ITEM	QTY	PART NO	DESCRIPTION

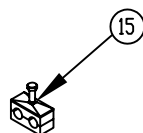
# VEGETABLE/POTATO SHREDDER REAR WHEEL HYD. ADJUSTMENT OPTIONS



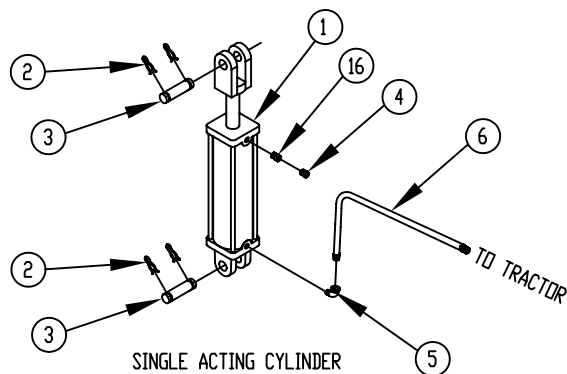
**TWO PHASING CYLINDER SYSTEM**  
12' - 18' SHREDDERS



**HOSE BRACKET**



**HOSE SUPPORT CLAMP**

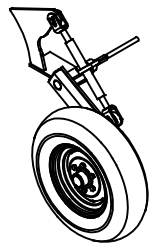


**SINGLE ACTING CYLINDER**  
12' - 15' SHREDDERS

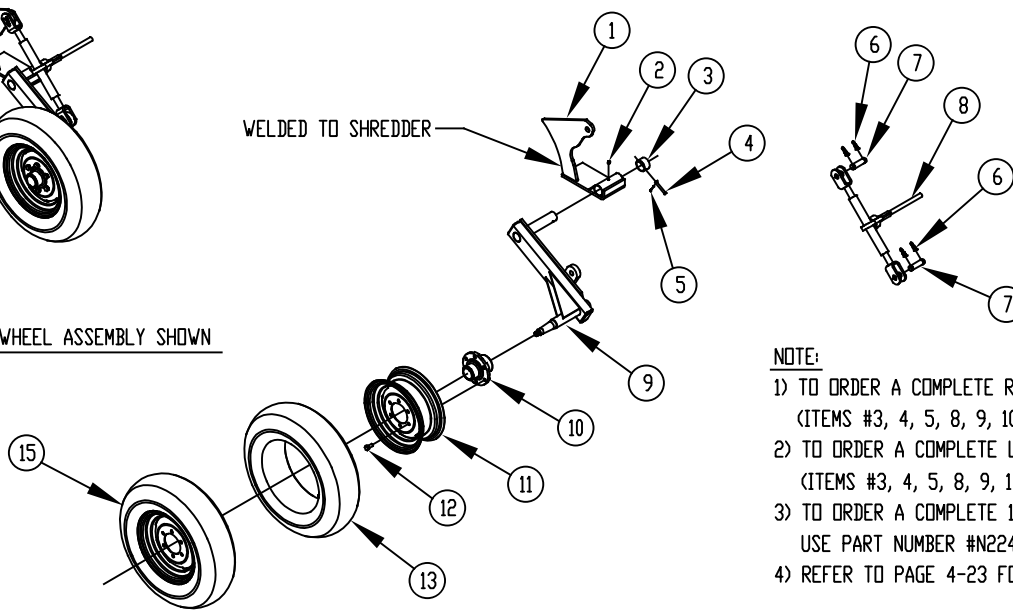
16	1	N23457	ADAPTER, 8MDR - 8FP
15	VAR.	N13383	CLAMP, HOSE SUPPORT
14	1	N13653	BRACKET, HOSE
13	1	8043	CYLINDER, HYDRAULIC PHASING (3-1/4')
12	1	N13642	HOSE, 1/2" X 19' (NON-SWIVEL ENDS - 18' MODEL)
	1	N13641	HOSE, 1/2" X 16' (NON-SWIVEL ENDS/12' - 15' MODEL)
11	2	N13641	HOSE, 1/2" X 16' (NON-SWIVEL ENDS - 18' MODEL)
	2	N13647	HOSE, 1/2" X 15' (NON-SWIVEL ENDS - 15' SEMI-MT)
	2	N13640	HOSE, 1/2" X 13' (NON-SWIVEL ENDS - 12' & 13' SEMI-MT)
10	4	4359	ADAPTER, 3/4" M O-RING BOSS 90° X 1/2" SWIVEL FEMALE
ITEM	QTY	PART NO	DESCRIPTION

9	4	8042-01	PIN, 1" X 3-1/4" (INCLUDED W/8042 & 8043)
8	8	8042-03	PIN, COTTER 5/32" X 1-1/2" (INCLUDED W/8042 & 8043)
7	1	8042	CYLINDER, HYDRAULIC PHASING (3')
6	1	N13653	HOSE, 1/2" X 13' (SWIVEL FITTING ONE END/12' - 15')
5	1	4359	ELBOW, 90 DEG - 8MDR - 8FP SWL
4	1	4176	BREATHER, 1/2"
3	2	8039-11	PIN, 1" X 2-3/4" (INCLUDED W/8039)
2	4	8039-12	CLIP, RETAINER (INCLUDED W/8039)
1	1	N21715	CYLINDER, HYDRAULIC SINGLE ACTING (3' X 8')
ITEM	QTY	PART NO	DESCRIPTION

# VEGETABLE/POTATO SHREDDER FRONT GAGE WHEEL OPTION

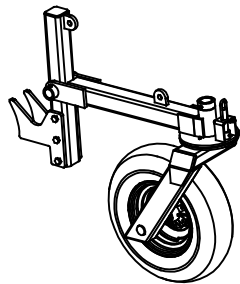


R.H. GAGE WHEEL ASSEMBLY SHOWN

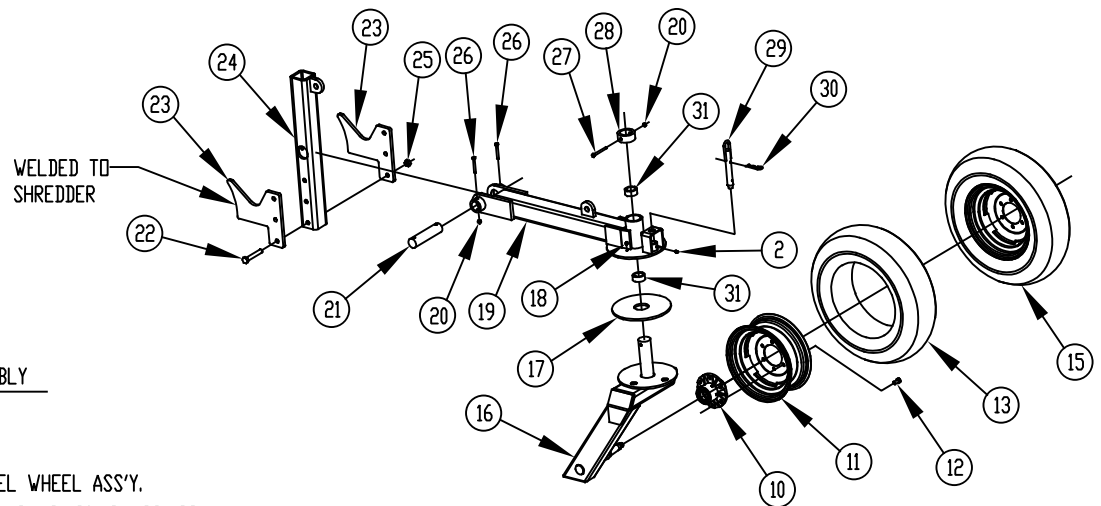


## NOTE:

- 1) TO ORDER A COMPLETE RIGHT HAND GAGE WHEEL ASS'Y. (ITEMS #3, 4, 5, 8, 9, 10, 12, 15), USE PART NUMBER #9273.
- 2) TO ORDER A COMPLETE LEFT HAND GAGE WHEEL ASS'Y (ITEMS #3, 4, 5, 8, 9, 10, 12, 15), USE PART NUMBER #9290.
- 3) TO ORDER A COMPLETE 11L15 WHEEL ASS'Y. (ITEMS #11, 13, 14), USE PART NUMBER #N22459.
- 4) REFER TO PAGE 4-23 FOR 6-BOLT HUB PARTS LISTING.



FRONT SWIVEL WHEEL ASSEMBLY



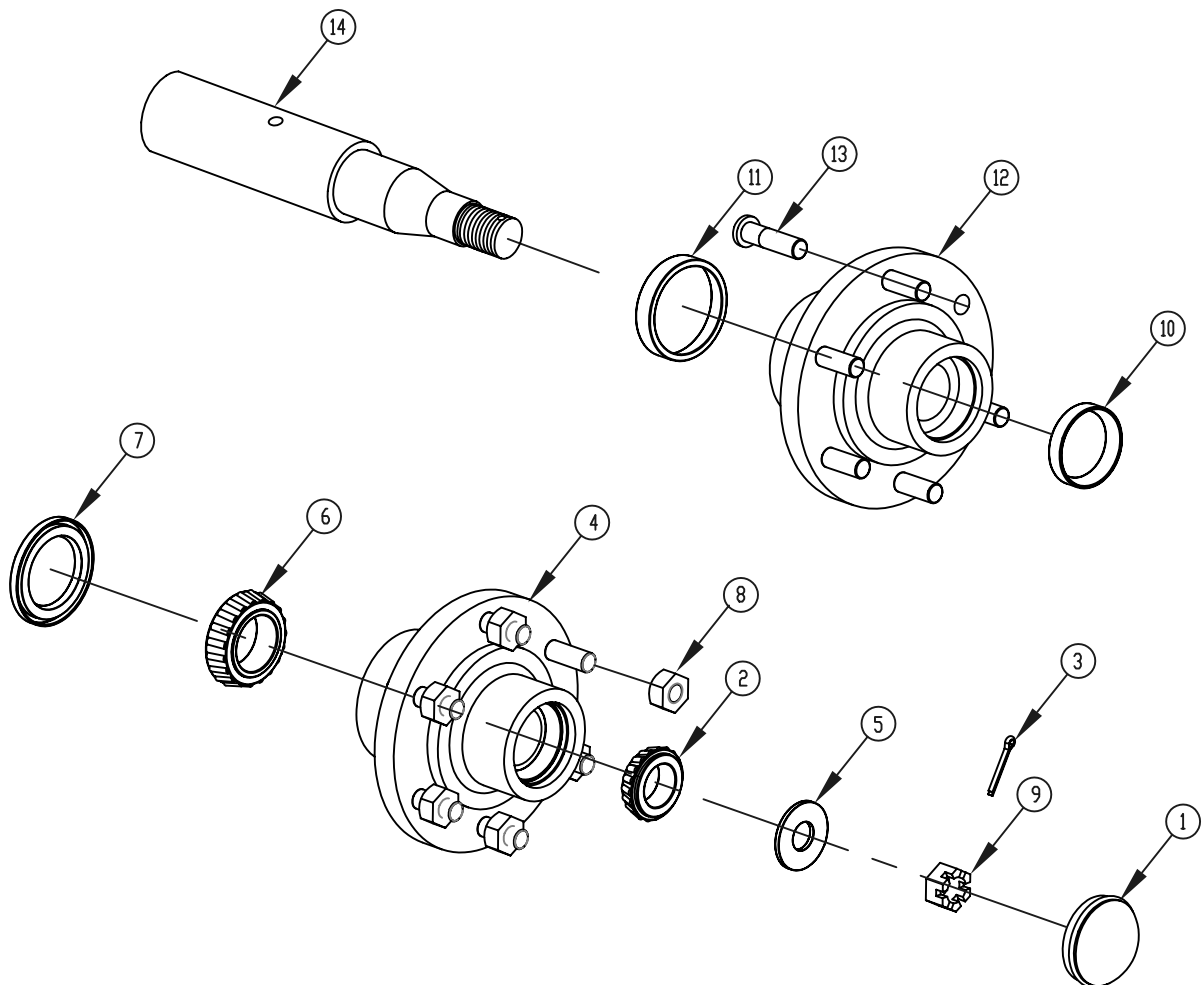
## NOTE:

- 1) TO ORDER A COMPLETE FRONT SWIVEL WHEEL ASS'Y. (ITEMS #2, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31), USE PART NUMBER #N11616.

31	2	N13331	BUSHING, 2-3/4" O.D. X 2-1/2" I.D. X 2"
30	1	4389	CLIP, HAIRPIN (3/16" X 3")
29	1	N10806	PIN, ASSIST WHEEL LOCKING
28	1	N13335	COLLAR, ASSIST WHEEL
27	1	4456	BOLT, 3/8 X 4" GRADE 5
26	2	4007	BOLT, 3/8" X 3" GRADE 5
25	3	4056	NUT, 3/4" LOCK
24	1	N10227	TOWER, FRONT ASSIST WHEEL
23	2	N10225	MOUNT, FRONT ASSIST WHEEL
22	3	4458	BOLT, 3/4"-10 X 6-1/2" GRADE 5
21	1	N10237	PIN, FRONT ASSIST WHEEL
20	3	4052	NUT, 3/8" LOCK
19	1	N13336	ARM, FRONT SWIVEL WHEEL
18	2	4104	ZERK, 1/4" DRIVE-IN GREASE
17	1	N10214	INSERT, ASSIST WHEEL
16	1	N10204	CASTER, FRONT ASSIST WHEEL
ITEM	QTY	PART NO	DESCRIPTION

15	VAR	N22459	WHEEL, 11L15 COMPLETE ASS'Y (INCLUDES ITEMS 11, 13, 14)
14	VAR	8079	STEM, TIRE VALVE (NOT SHOWN)
13	VAR	N22461	TIRE, 11L15 - 10 PLY
12	VAR	4049	BOLT, LUG (9/16"-18 UNF X 1-3/4")
11	VAR	N22460	RIM, 15 X 8 LB - 8" WIDE
10	VAR	8082	HUB, 6-BOLT (COMPLETE)
9	1	9292	STRUT, LEFT GAGE WHEEL
	1	9291	STRUT, RIGHT GAGE WHEEL (SHOWN)
8	2	8048	JACK, RATCHET
7	4		PIN, RATCHET JACK (1" X 2-1/2" INCLUDED W/8048)
6	8		CLIP, RATCHET JACK (INCLUDED W/8048)
5	2	4099	PIN, COTTER (1/8" X 1-1/2")
4	2	4093	PIN, GAGE WHEEL (3/8" X 3")
3	2	9280	COLLAR, ASSIST WHEEL LOCK
2	VAR	4105	ZERK, 1/4" SCREW-IN GREASE
1	1	N13283	MOUNT, GAGE WHEEL LEFT
	1	N13288	MOUNT, GAGE WHEEL RIGHT (SHOWN)
ITEM	QTY	PART NO	DESCRIPTION

# 6 BOLT HUB & SPINDLE PARTS LIST



## NOTE:

1. ORDER PART NUMBER N23778 TO RECEIVE ITEMS #1-9.
2. ORDER PART NUMBER N23676 TO RECEIVE ITEMS #10-13.
3. ITEM #12 (N26576) IS NOT SOLD SEPARATELY.

14	1	8076-01	SPINDLE, TRANSPORT AXLE (2\" X 15\")	7	1	8082-04	SEAL, GREASE (6-BOLT HUB)
13	6	N27304	STUD, HUB 9/16 - 18UNF	6	1	8082-03	CONE, BEARING (LARGE)
12	1	N26576	CASTING, HUB 6 BOLT (NO PARTS)	5	1	8082-07	WASHER, SPINDLE
11	1	8082-02	CUP, BEARING (LARGE)	4	1	N23676	HUB, 6-BOLT STUD CASTING ONLY
10	1	8082-05	CUP, BEARING (SMALL)	3	1	8082-09	PIN, COTTER (3/16\" X 1-1/2\")
9	1	8082-08	NUT, CASTLE SPINDLE (3/4\"-16 UNF)	2	1	8082-06	CONE, BEARING (SMALL)
8	6	N23764	NUT, LUG 9/16\"-18 UNF	1	1	8082-10	CAP, END (6-BOLT HUB)
ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION

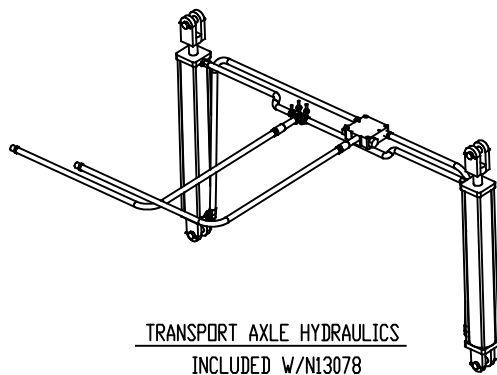
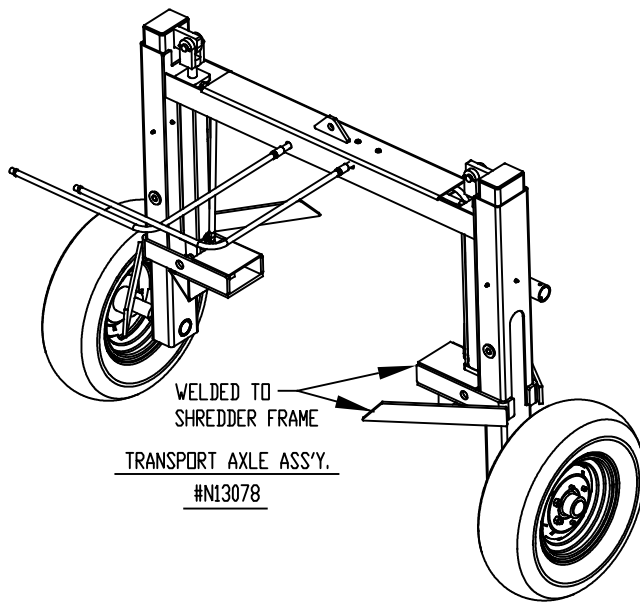
N14823

January, 2011



# VEGETABLE/POTATO SHREDDER TRANSPORT AXLE PARTS LIST

## 18 FT. MODEL ONLY



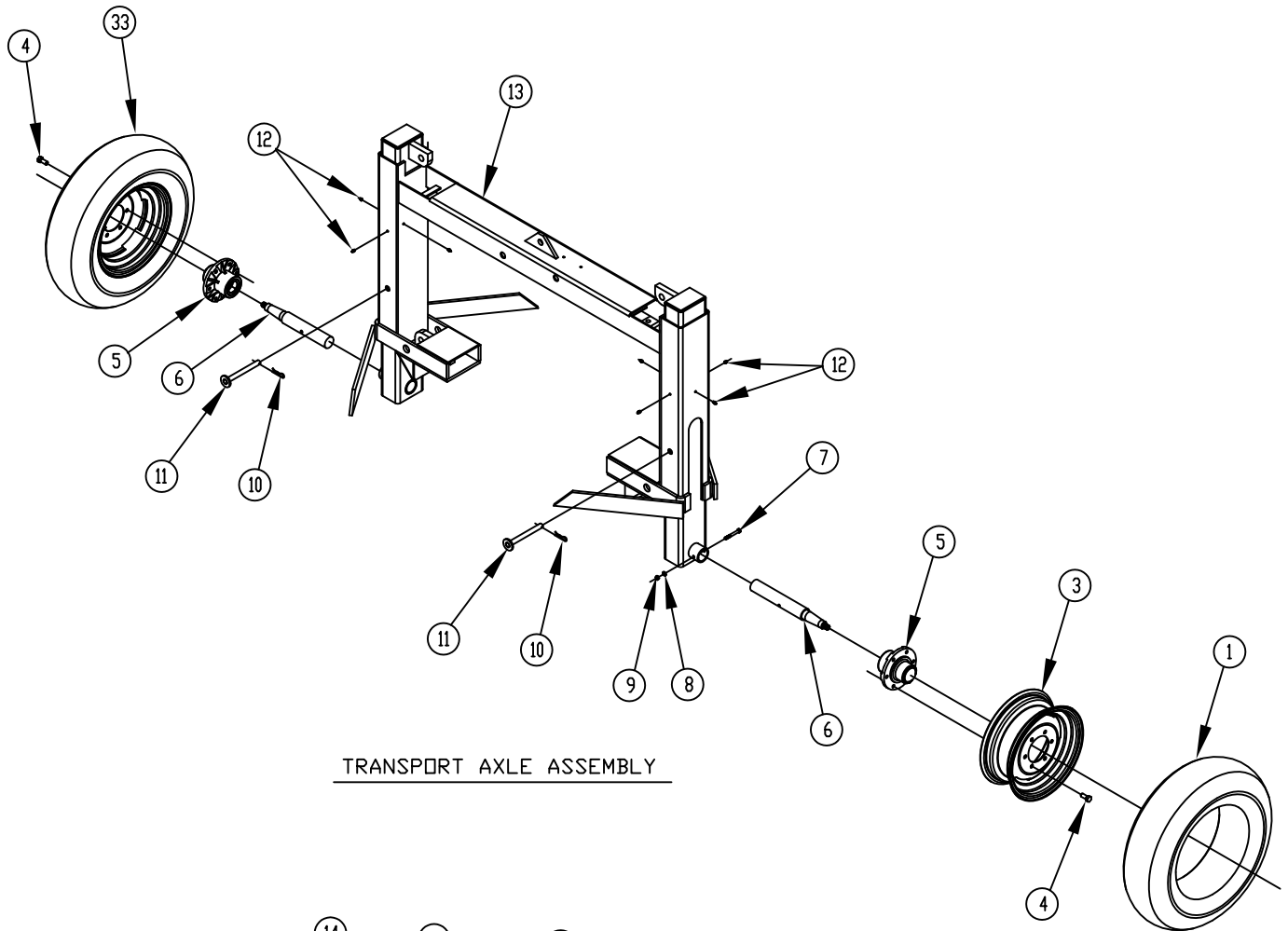
### NOTE:

- 1) TO ORDER A COMPLETE ASSEMBLED WHEEL (ITEMS #1, 2, 3), USE PART NUMBER N22459.
- 2) TO ORDER A COMPLETE TRANSPORT AXLE ASSEMBLY (ITEMS 1 THRU 32), USE PART NUMBER N13078.
- 3) REFER TO PAGE 4-23 FOR 6-BOLT HUB PARTS LISTING.
- 4) TRANSPORT AXLE USED ONLY ON THE 18 FT. SHREDDER.

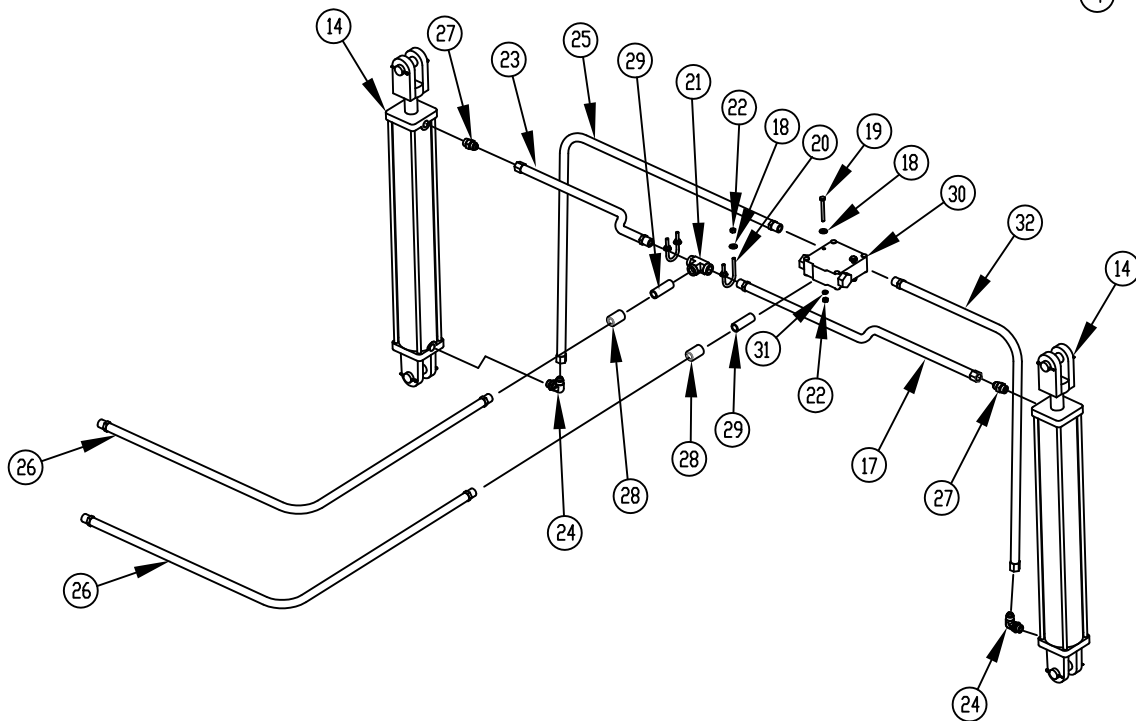
33	2	N22459	WHEEL, 11L15 COMPLETE ASS'Y (INCLUDES ITEMS 1, 2, 3)
32	1	N31054	HOSE, 1/2" X 39' - 8MPX -8FJIX SWL
31	2	4231	WASHER, LOCK 1/4"
30	1	8143	VALVE, FLOW DIVIDER
29	2	4320	NIPPLE, PIPE (1/2" X 2-1/2")
28	2	4353	COUPLING, PIPE (1/2")
27	2	N20228	ADAPTER, 8MJIC - 8MDR
26	2	N13650	HOSE, 1/2" X 14' HYDRAULIC TRANSPORT (18', 22', 8M)
25	1	N31055	HOSE, 1/2" X 53' - 8MPX -8FJIX SWL
24	2	N11952	ELBOW, 90 DEG - 8MJIC - 8MDR
23	1	N31056	HOSE, 1/2" X 15-1/2" - 8MPX -8FJIX SWL
22	6	4230	NUT, STANDARD 1/4"
21	1	4177	TEE, 1/2"
20	2	4178	U-BOLT, 1/4" X 1-1/4" X 1-3/4"
19	2	4003	BOLT, 1/4" X 2-1/2" GRADE 5
18	6	4460	WASHER, FLAT 1/4" SAE
17	1	N31057	HOSE, 1/2" X 27-1/2"-8MPX-8FJIX SWL
16	4	4325	PIN, COTTER 3/16" X 1-1/2" (INCLUDED W/N24091 - NOT SHOWN)
15	4	8040-10	PIN, CYLINDER MOUNT (INCLUDED W/N24091 - NOT SHOWN)
14	2	N24091	CYLINDER, 3" X 24 " 3000 PSI
13	1	N13077	FRAME, HUDRAULIC TRANSPORT
12	10	4105	ZERK, GREASE 1/4" SCREW IN
11	2	9240	PIN, LOCKING
10	2	4336	CLIP, HAIRPIN (1/8" X 2-1/4")
9	2	4233	NUT, STANDARD 3/8"
8	2	4065	WASHER, LOCK 3/8"
7	2	4007	BOLT, 3/8" X 3" GRADE 5
6	2	8076-01	SPINDLE, 2" X 15"
5	2	N23778	HUB, 6 BOLT 6" PAT W/STUDS
4	12	4049	BOLT, LUG (9/16"-18 UNF X 1-3/4")
3	2	N22460	RIM, 15 X 8 LB - 8" WIDE
2	2	8079	STEM, TIRE VALVE (NOT SHOWN)
1	2	N22461	TIRE, 11L15 - 10 PLY
ITEM	QTY	PART NO	DESCRIPTION

# VEGETABLE/POTATO SHREDDER TRANSPORT AXLE ILLUSTRATION

18 FT. MODEL ONLY

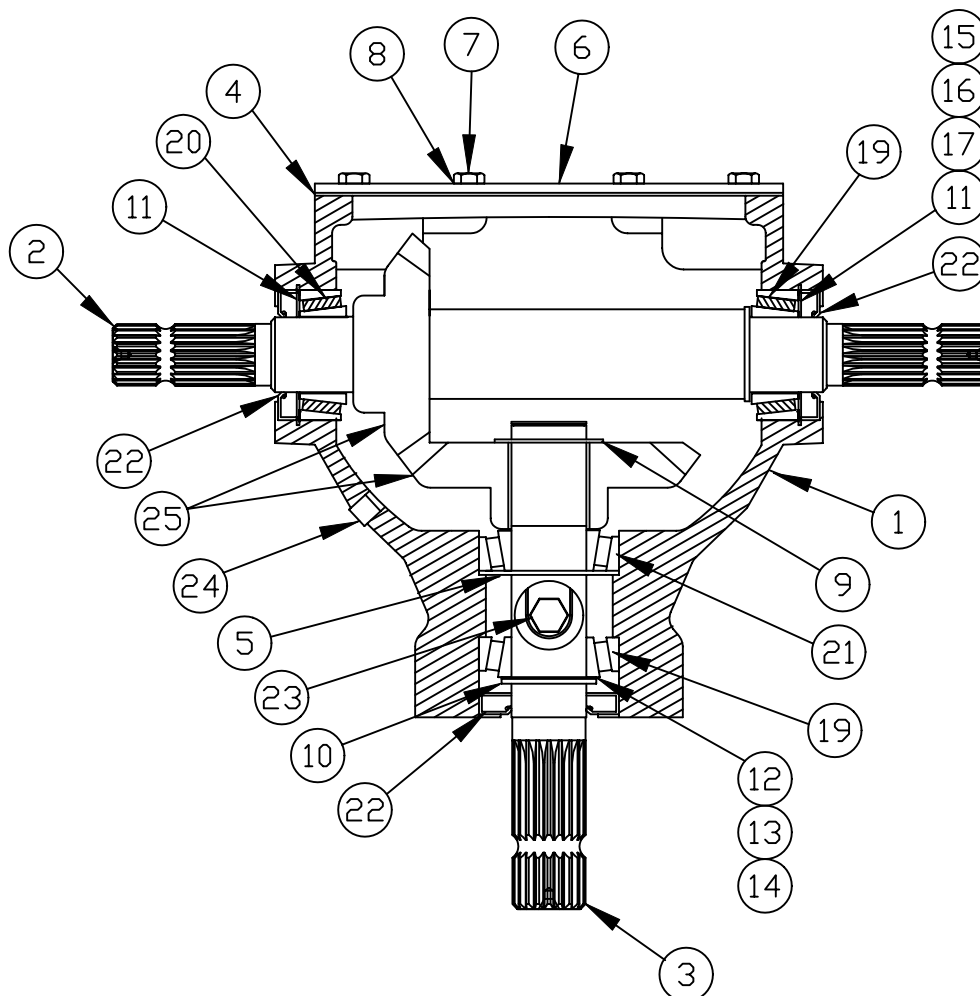


TRANSPORT AXLE ASSEMBLY



HYDRAULIC PLUMBING SCHEMATIC

# 2155 BONDIOLI GEARBOX 1:1 1450 RPM PARTS LIST



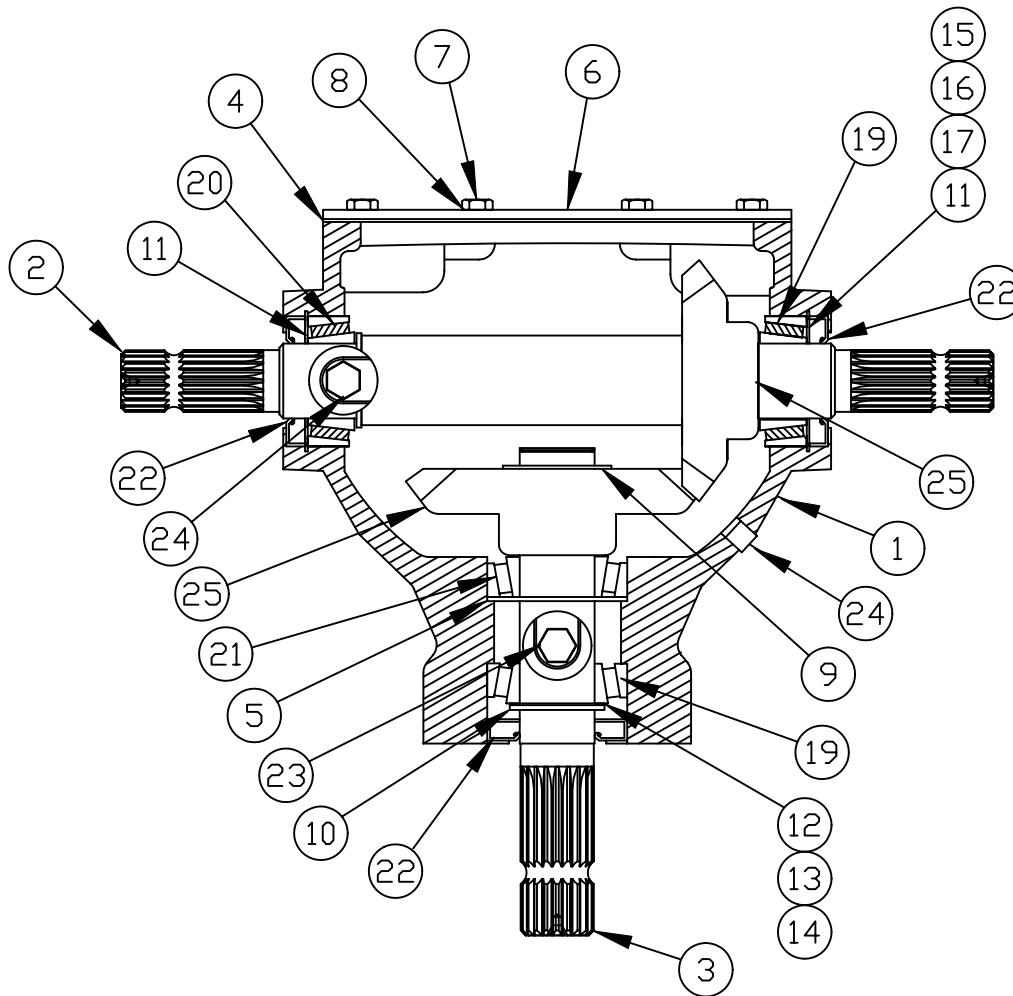
## NOTE:

1) TO ORDER A COMPLETE GEARBOX (ITEMS 1 - 25),  
USE PART NUMBER #N13950.

2) THIS GEARBOX USES 3/4"-10 UNC BOLTS  
FOR MOUNTING TO THE SHREDDER.

25	1	N14119	GEAR, BEVEL 1:1 (SET)	448101704	13	1	8170-13	RING, PINION SHAFT	340050002
24	5	8001-19	PLUG, OIL	373010000	12	1	8170-12	RING, PINION SHAFT	340050001
23	1	8001-18	PLUG, OIL VENT	373007000	11	2	8170-11	SNAP-RING, THROUGH SHAFT	339000090
22	3	8170-22	SEAL, OIL	355020050	10	1	8170-10	SNAP-RING, PINION SHAFT	339000050
21	1	8170-21	BEARING, PINION SHAFT	354405050	9	1	8170-09	CIRCLIP, PINION SHAFT	337000060
20	1	8170-20	BEARING, THROUGH SHAFT	354401050	8	8	8170-08	WASHER, COVER SCREW	335009000
19	2	8170-19	BEARING, TAPERED ROLLER	354400050	7	8	8170-07	SCREW, COVER	310001100
18	2	8170-18	RING, THROUGH SHAFT	340080003	6	1	8170-06	COVER, HOUSING	298625400
17	2	8170-17	RING, THROUGH SHAFT	340080002	5	1	N14120	SPACER, PINION SHAFT	298405025
16	2	8170-16	RING, THROUGH SHAFT	340080001	4	1	8170-04	GASKET, COVER	298321400
15	2	8170-15	RING, THROUGH SHAFT	340080000	3	1	N14121	SHAFT, PINION	295384036
14	1	8170-14	RING, PINION SHAFT	340050003	2	1	8170-02	SHAFT, THROUGH	295383803
ITEM	QTY	PART NO	DESCRIPTION		ITEM	QTY	PART NO	DESCRIPTION	

# 2155 BONDIOLI GEARBOX 1:1.18 1700 RPM PARTS LIST



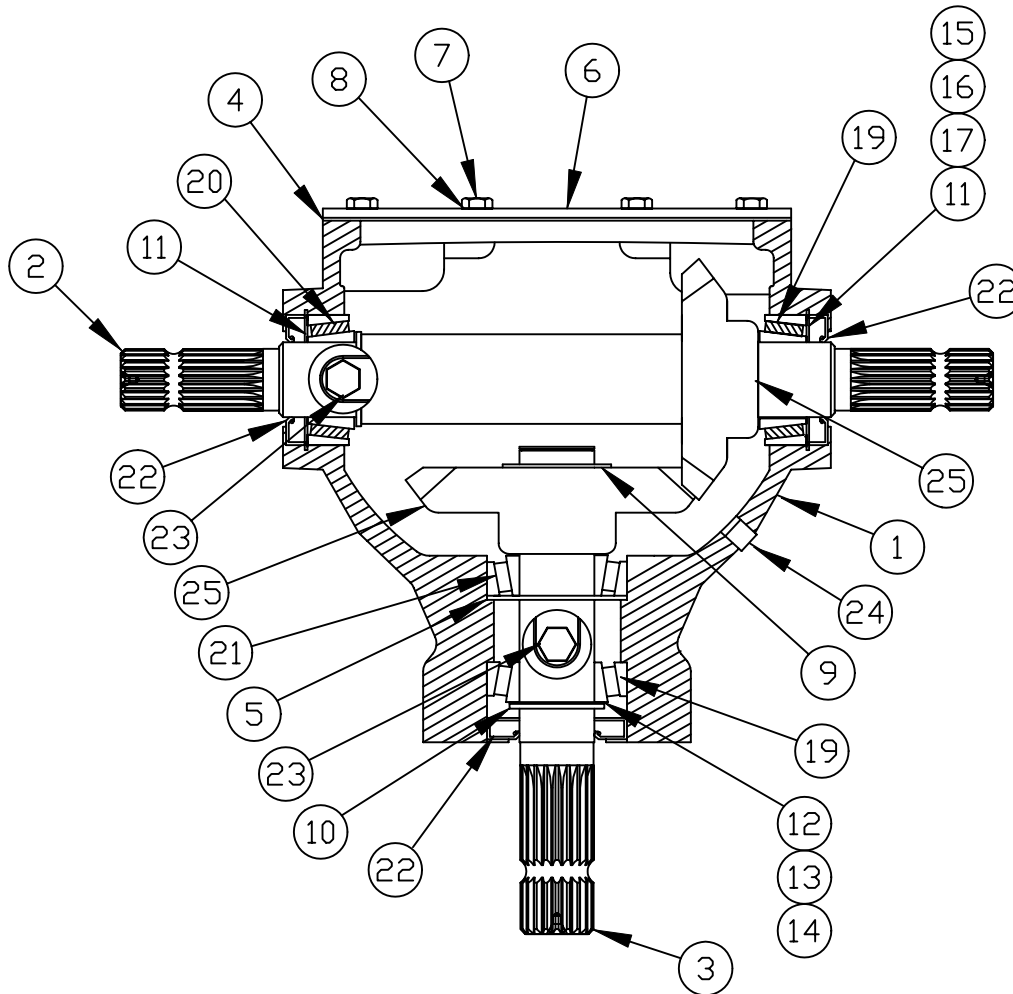
## NOTE:

1) TO ORDER A COMPLETE GEARBOX (ITEMS 1 - 25),  
USE PART NUMBER #N13951.

2) THIS GEARBOX USES 3/4"-10 UNC BOLTS  
FOR MOUNTING TO THE SHREDDER.

25	1	N11422	GEAR, BEVEL 1:1.18 (SET)	448085700	13	1	8170-13	RING, PINION SHAFT	340050002
24	5	8001-19	PLUG, OIL	373010000	12	1	8170-12	RING, PINION SHAFT	340050001
23	1	8001-18	PLUG, OIL VENT	373007000	11	2	8170-11	SNAP-RING, THROUGH SHAFT	339000090
22	3	8170-22	SEAL, OIL	355020050	10	1	8170-10	SNAP-RING, PINION SHAFT	339000050
21	1	8170-21	BEARING, PINION SHAFT	354405050	9	1	8170-09	CIRCLIP, PINION SHAFT	337000060
20	1	8170-20	BEARING, THROUGH SHAFT	354401050	8	8	8170-08	WASHER, COVER SCREW	335009000
19	2	8170-19	BEARING, TAPERED ROLLER	354400050	7	8	8170-07	SCREW, COVER	310001100
18	2	8170-18	RING, THROUGH SHAFT	340080003	6	1	8170-06	COVER, HOUSING	298625400
17	2	8170-17	RING, THROUGH SHAFT	340080002	5	1	N14120	SPACER, PINION SHAFT	298405025
16	2	8170-16	RING, THROUGH SHAFT	340080001	4	1	8170-04	GASKET, COVER	298321400
15	2	8170-15	RING, THROUGH SHAFT	340080000	3	1	N14121	SHAFT, PINION	295384036
14	1	8170-14	RING, PINION SHAFT	340050003	2	1	8170-02	SHAFT, THROUGH	29383803
ITEM	QTY	PART NO	DESCRIPTION		1	1	N14123	HOUSING, GEARBOX	290291324
					ITEM	QTY	PART NO	DESCRIPTION	

# 2155 BONDIOLI GEARBOX 1:1.35 2000 RPM PARTS LIST



## NOTE:

1) TO ORDER A COMPLETE GEARBOX (ITEMS 1 - 25),  
USE PART NUMBER #N13952.

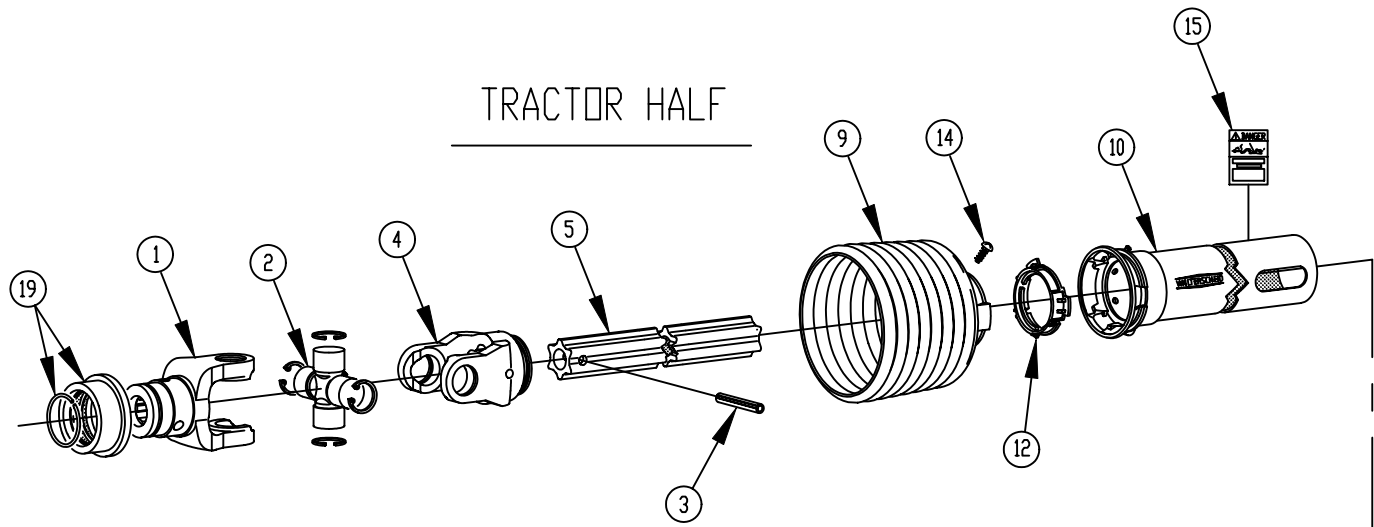
2) THIS GEARBOX USES 3/4"10 UNC BOLTS  
FOR MONTING TO THE SHREDDER.

					13	1	8170-13	RING, PINION SHAFT	340050002
25	1	8170-25	GEAR, BEVEL 1:1.35 (SET)	448135701	12	1	8170-12	RING, PINION SHAFT	340050001
24	5	8001-19	PLUG, OIL	373010000	11	2	8170-11	SNAP-RING, THROUGH SHAFT	339000090
23	1	8001-18	PLUG, OIL VENT	373007000	10	1	8170-10	SNAP-RING, PINION SHAFT	339000050
22	3	8170-22	SEAL, OIL	355020050	9	1	8170-09	CIRCLIP, PINION SHAFT	337000060
21	1	8170-21	BEARING, PINION SHAFT	354405050	8	8	8170-08	WASHER, COVER SCREW	335009000
20	1	8170-20	BEARING, THROUGH SHAFT	354401050	7	8	8170-07	SCREW, COVER	310001100
19	2	8170-19	BEARING, TAPERED ROLLER	354400050	6	1	8170-06	COVER, HOUSING	298625400
18	2	8170-18	RING, THROUGH SHAFT	340080003	5	1	N14120	SPACER, PINION SHAFT	298405025
17	2	8170-17	RING, THROUGH SHAFT	340080002	4	1	8170-04	GASKET, COVER	298321400
16	2	8170-16	RING, THROUGH SHAFT	340080001	3	1	N14121	SHAFT, PINION	295384036
15	2	8170-15	RING, THROUGH SHAFT	340080000	2	1	8170-02	SHAFT, THROUGH	29383803
14	1	8170-14	RING, PINION SHAFT	340050003	1	1	N14123	HOUSING, GEARBOX	290291324
ITEM	QTY	PART NO	DESCRIPTION		ITEM	QTY	PART NO	DESCRIPTION	

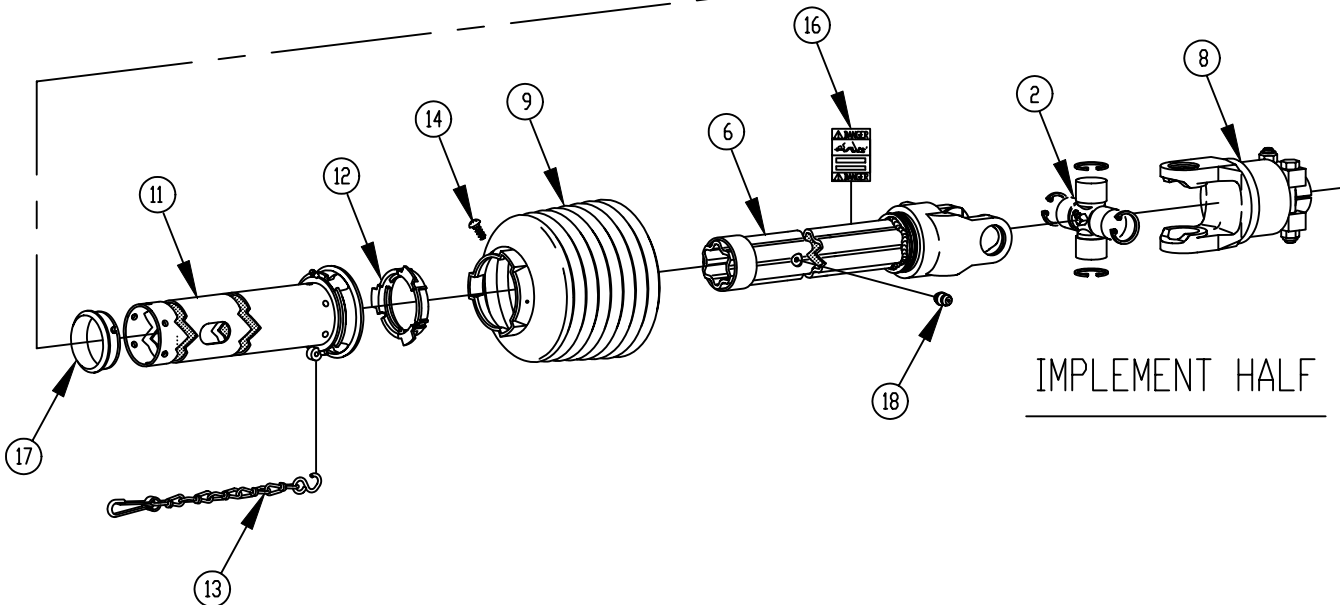
# 1-3/8" WALTERSCHEID PTO W/OVERRUNNING CLUTCH

## MOUNTED SHREDDER

### TRACTOR HALF



### IMPLEMENT HALF



#### NOTE:

1) TO ORDER A COMPLETE TRACTOR HALF OF THE PTO (ITEMS #1, 2, 3, 4, 5, 9, 10, 12, 14, 15, 19), USE PART NUMBER #10336.

2) TO ORDER A COMPLETE IMPLEMENT HALF OF THE PTO (ITEMS #2, 6, 8, 9, 11, 12, 13, 14, 16, 17, 18), USE PART NUMBER #10387.

3) REFER TO PAGE #4-60 FOR A COMPLETE PARTS BREAK DOWN ON THE OVERRUNNING CLUTCH (ITEM #8), PART NUMBER #8192.

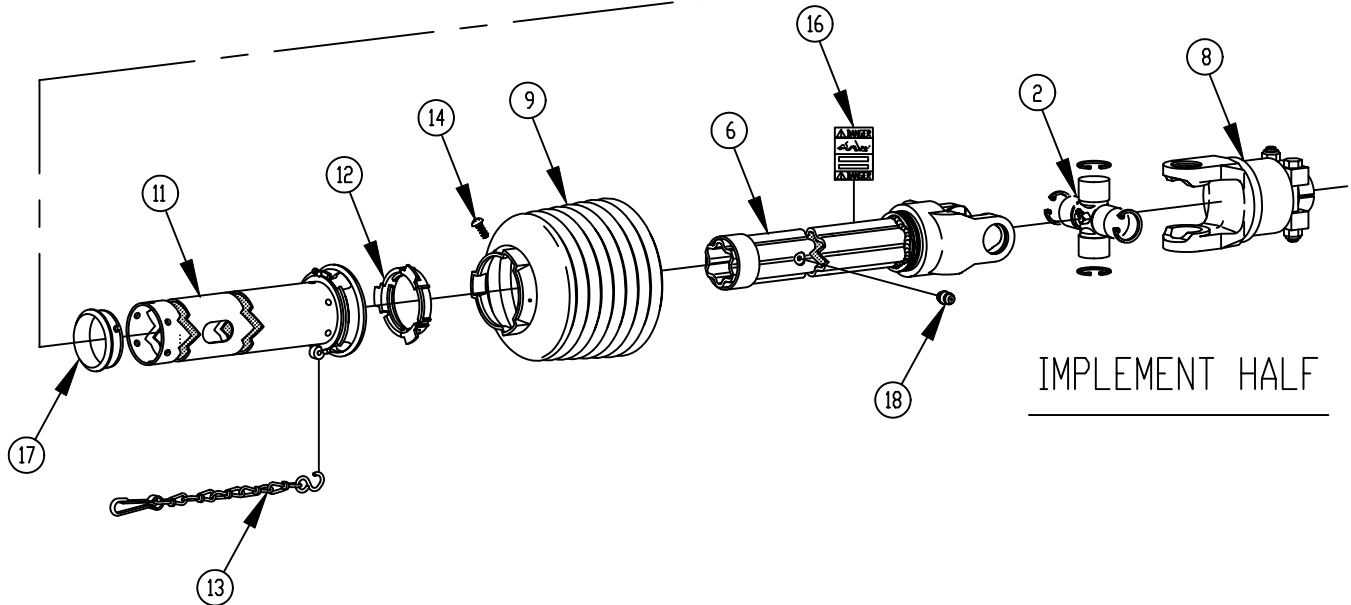
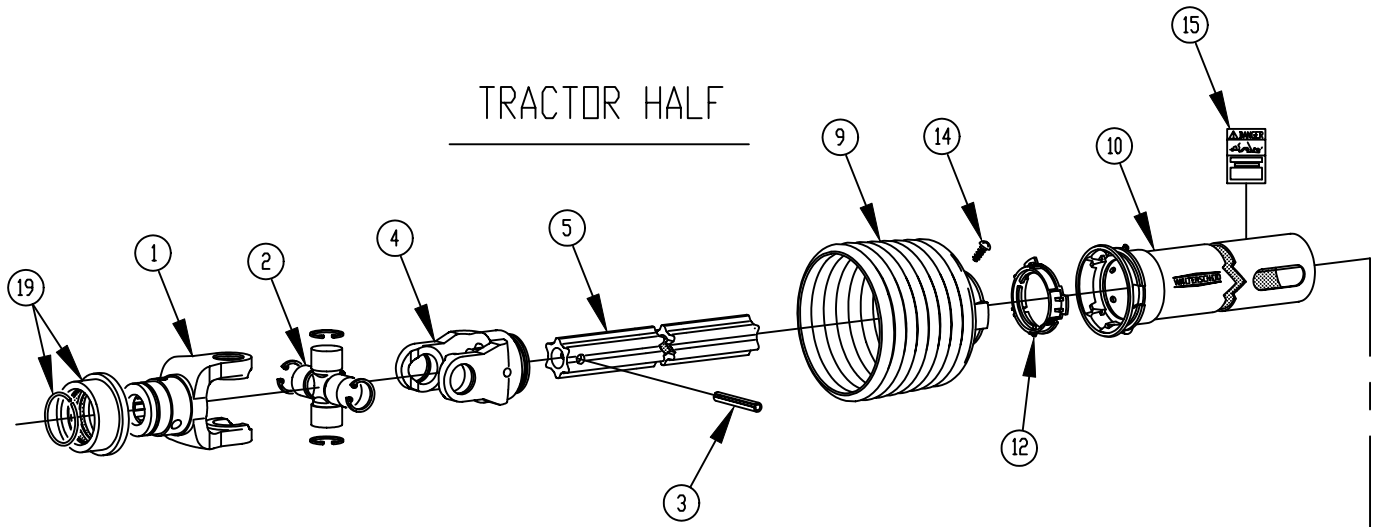
4) TO ORDER THE COMPLETE PTO, USE PART NUMBER #8173.

19	1	N10360	KIT, PTO SNAP RING (INCLUDED W/N10370)
18	1	N10359	ZERK, PTO GREASE (INCLUDED W/N10865)
17	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
16	1	N11761	DECAL, PTO TUBE GUARD (INCLUDED W/N10865)
15	1	N10357	DECAL, PTO SHAFT GUARD (INCLUDED W/N10867)
14	2	N11750	SCREW, PTO RIBBED SHIELD (INCLUDED W/10367)
13	1	N10356	CHAIN, PTO SAFETY
12	2	N10348	RING, PTO BEARING (SC25)
11	1	N10868	GUARD, PTO INNER TUBE
ITEM	QTY	PART NO	DESCRIPTION
10	1	N10867	GUARD, PTO SHAFT OUTER
9	2	N10367	SHIELD, PTO CONE 7-RIB
8	1	8192	CLUTCH, PTO OVERRUNNING
7			
6	1	N10865	TUBE, PTO PROFILE W/ SLEEVE & YOKE
5	1	N10866	SHAFT, PTO PROFILE & SLEEVE
4	1	N10364	YOKE, PTO INBOARD
3	1	N10342	PIN, PTO SPRING (10MM X 90MM)
2	2	N10347	KIT, PTO CROSS & BEARING
1	1	N10346	YOKE, PTO 1-3/8"-21 SPLINE ASG
ITEM	QTY	PART NO	DESCRIPTION

# 1-3/4" WALTERSCHEID PTO W/OVERRUNNING CLUTCH

## MOUNTED SHREDDER

### TRACTOR HALF



#### NOTE:

1) TO ORDER A COMPLETE TRACTOR HALF OF THE PTO (ITEMS #1, 2, 3, 4, 5, 9, 10, 12, 14, 15, 19), USE PART NUMBER #10386

2) TO ORDER A COMPLETE IMPLEMENT HALF OF THE PTO (ITEMS #2, 6, 8, 9, 11, 12, 13, 14, 16, 17, 18), USE PART NUMBER #10387.

3) REFER TO PAGE #4-60 FOR A COMPLETE PARTS BREAK DOWN ON THE OVERRUNNING CLUTCH (ITEM #8), PART NUMBER #8192.

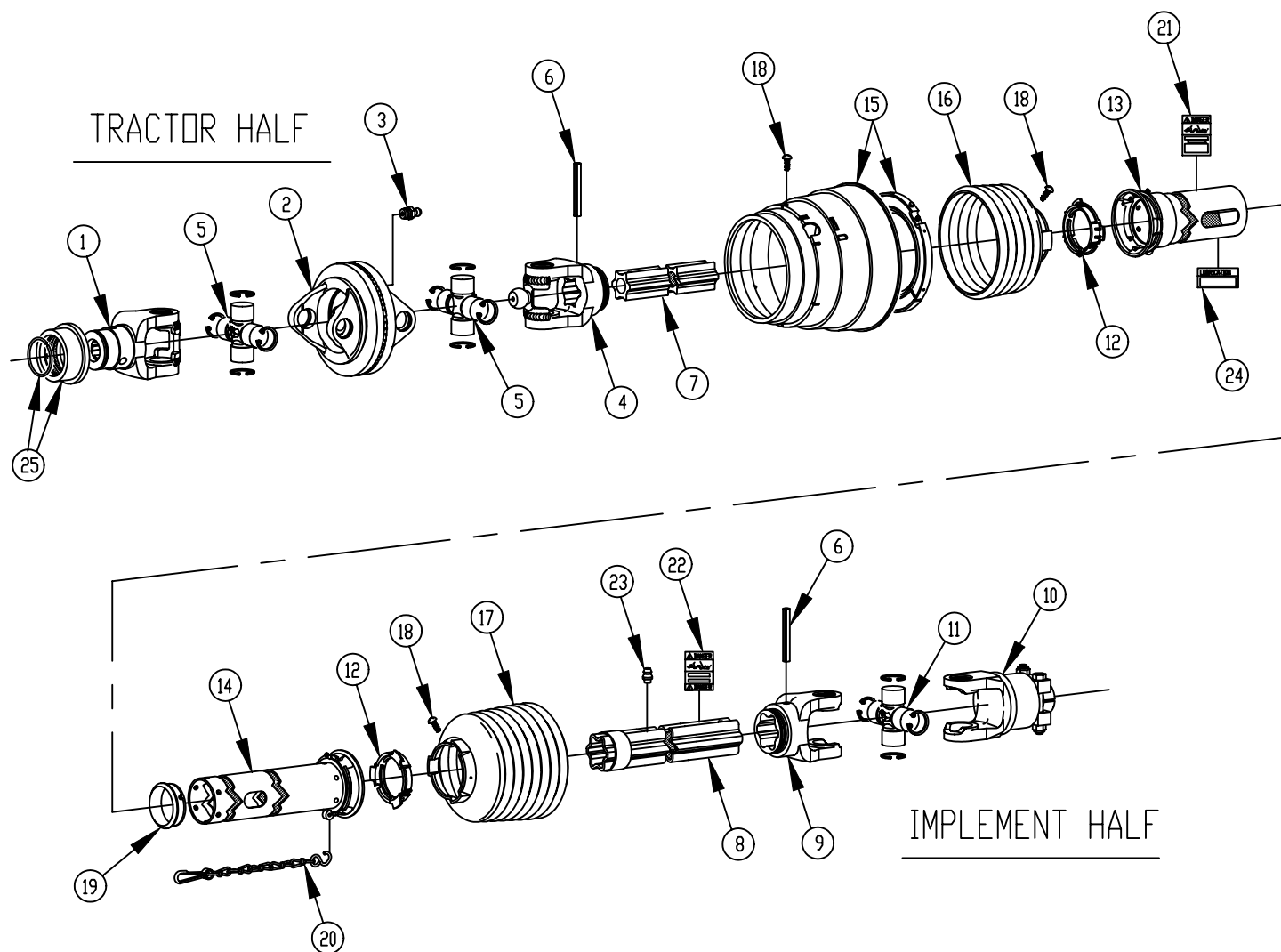
4) TO ORDER THE COMPLETE PTO, USE PART NUMBER #8174.

19	1	N10362	KIT, PTO SNAP RING (INCLUDED W/N10370)
18	1	N10359	ZERK, PTO GREASE (INCLUDED W/N10865)
17	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
16	1	N11761	DECAL, PTO TUBE GUARD (INCLUDED W/N10865)
15	1	N10357	DECAL, PTO SHAFT GUARD (INCLUDED W/N10867)
14	2	N11750	SCREW, PTO RIBBED SHIELD (INCLUDED W/10367)
13	1	N10356	CHAIN, PTO SAFETY
12	2	N10348	RING, PTO BEARING (SC25)
11	1	N10868	GUARD, PTO INNER TUBE
ITEM	QTY	PART NO	DESCRIPTION

10	1	N10867	GUARD, PTO SHAFT OUTER
9	2	N10367	SHIELD, PTO CONE 7-RIB
8	1	8192	CLUTCH, PTO OVERRUNNING
7			
6	1	N10865	TUBE, PTO PROFILE W/ SLEEVE & YOKE
5	1	N10866	SHAFT, PTO PROFILE & SLEEVE
4	1	N10364	YOKE, PTO INBOARD
3	1	N10342	PIN, PTO SPRING (10MM X 90MM)
2	2	N10347	KIT, PTO CROSS & BEARING
1	1	N10370	YOKE, PTO 1-3/4"-20 SPLINE AS
ITEM	QTY	PART NO	DESCRIPTION

# 1-3/8" WALTERSCHEID PTO W/OVERRUNNING CLUTCH

## PULL TYPE SHREDDER



### NOTE:

- 1) TO ORDER A COMPLETE TRACTOR HALF OF THE PTO (ITEMS #1, 2, 3, 4, 5, 6, 7, 12, 13, 15, 16, 18, 21, 24, 25), USE PART NUMBER #N10332.
- 2) TO ORDER A COMPLETE IMPLEMENT HALF OF THE PTO (ITEMS #6, 8, 9, 10, 11, 12, 14, 17, 18, 19, 20, 22, 23), USE PART NUMBER #N10333.

3) REFER TO PAGE #4-60 FOR A COMPLETE PARTS BREAK DOWN ON THE OVERRUNNING CLUTCH (ITEM #10), PART NUMBER #8192.

4) TO ORDER THE COMPLETE PTO, USE PART NUMBER #8175.

25	1	N10360	KIT, PTO SNAP RING (INCLUDED W/N10337)
24	1	N10862	DECAL, PTO LUBRICATION (INCLUDED W/N10349)
23	1	N10359	ZERK, PTO GREASE (INCLUDED W/N10861)
22	1	N11761	DECAL, PTO TUBE GUARD (INCLUDED W/N10861)
21	1	N10357	DECAL, PTO SHAFT GUARD (INCLUDED W/N10349)
20	1	N10356	CHAIN, PTO SAFETY
19	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
18	8	N11750	SCREW, PTO RIBBED SHIELD (W/N10351, N10352 & N10367)
17	1	N10367	SHIELD, PTO CONE 7-RIB
16	1	N10352	SHIELD, PTO CONE 4-RIB
15	1	N10351	BEARING, PTO CV CONE
14	1	N10350	GUARD, PTO TUBE INNER
ITEM	QTY	PART NO	DESCRIPTION

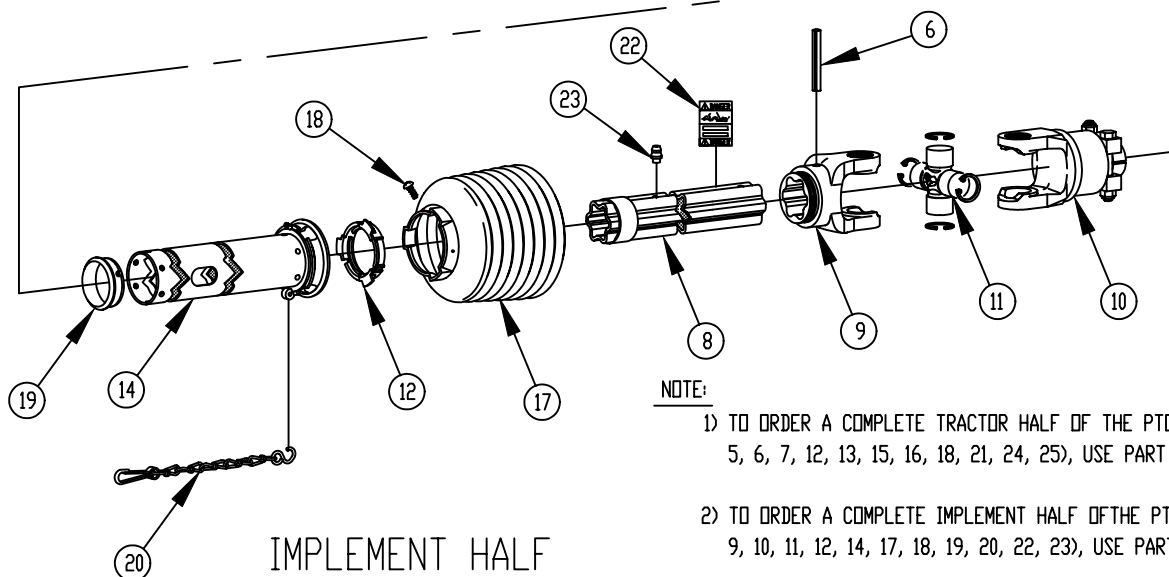
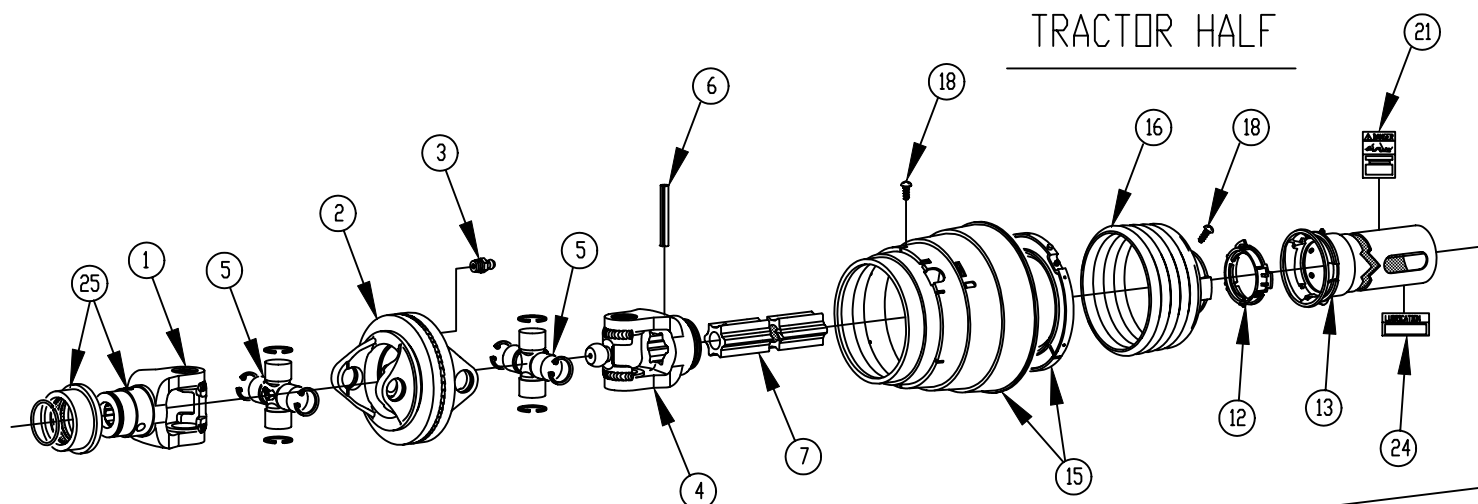
13	1	N10349	GUARD, PTO SHAFT OUTER
12	2	N10348	RING, PTO BEARING (SC25)
11	1	N10347	KIT, PTO CROSS & BEARING
10	1	8192	CLUTCH, PTO OVERRUNNING
9	1	N10345	YOKE, PTO INBOARD (S5)
8	1	N10861	TUBE, PTO PROFILE W/SLEEVE
7	1	N10343	SHAFT, PTO PROFILE (S4GA)
6	2	N10342	PIN, PTO SPRING (10MM X 90MM)
5	2	N10341	KIT, PTO CROSS & BEARING
4	1	N10340	YOKE, PTO INBOARD (S4)
3	1	N10339	ZERK, PTO GREASE (INCLUDED W/N10338)
2	1	N10338	YOKE, PTO DOUBLE
1	1	N10337	YOKE, PTO 1-3/8"-21 SPLINE AS
ITEM	QTY	PART NO	DESCRIPTION



# 1-3/4" WALTERSCHEID PTO W/OVERRUNNING CLUTCH

## PULL TYPE SHREDDER

### TRACTOR HALF



#### NOTE:

- 1) TO ORDER A COMPLETE TRACTOR HALF OF THE PTO (ITEMS #1, 2, 3, 4, 5, 6, 7, 12, 13, 15, 16, 18, 21, 24, 25), USE PART NUMBER #N10334.
- 2) TO ORDER A COMPLETE IMPLEMENT HALF OF THE PTO (ITEMS #6, 8, 9, 10, 11, 12, 14, 17, 18, 19, 20, 22, 23), USE PART NUMBER #N10333.
- 3) REFER TO PAGE #4-60 FOR A COMPLETE PARTS BREAK DOWN ON THE OVERRUNNING CLUTCH (ITEM #10), PART NUMBER #8192.
- 4) TO ORDER THE COMPLETE PTO, USE PART NUMBER #8176.

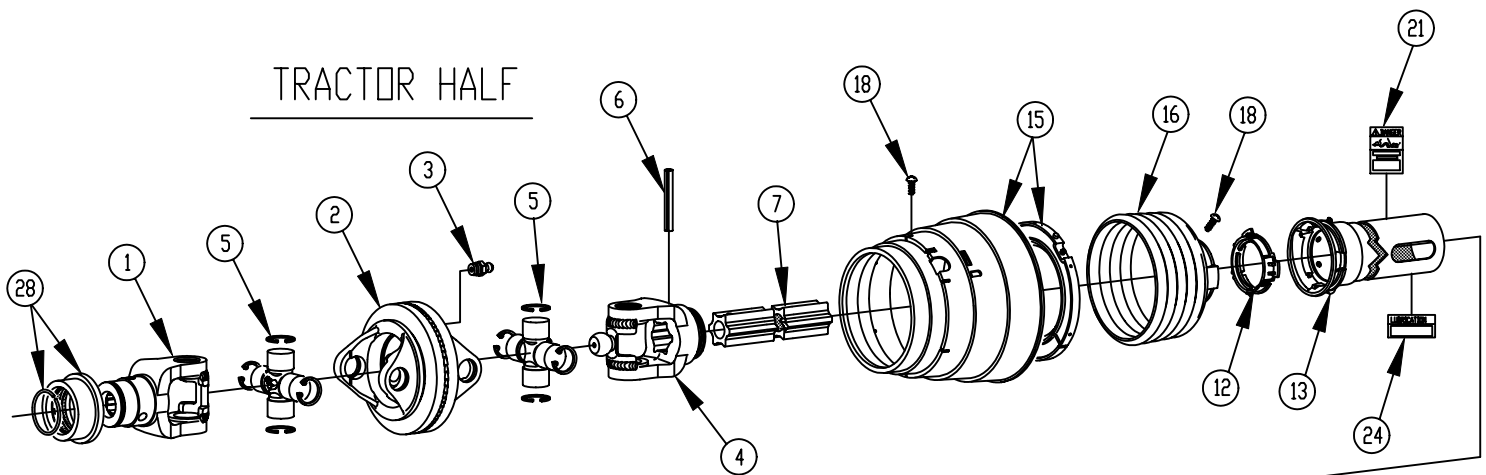
25	1	N10362	KIT, PTO SNAP RING (INCLUDED W/N10361)
24	1	N10862	DECAL, PTO LUBRICATION
23	1	N10359	ZERK, PTO GREASE
22	1	N11761	DECAL, PTO TUBE GUARD
21	1	N10357	DECAL, PTO SHAFT GUARD (INCLUDED W/N10349)
20	1	N10356	CHAIN, PTO SAFETY
19	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
18	8	N11750	SCREW, PTO RIBBED SHIELD (INCLUDED W/N10351 & N10367)
17	1	N10367	SHIELD, PTO CONE 7-RIB
16	1	N10352	SHIELD, PTO CONE 4-RIB
15	1	N10351	BEARING, PTO CV CONE
14	1	N10350	GUARD, PTO TUBE INNER
ITEM	QTY	PART NO	DESCRIPTION

13	1	N10349	GUARD, PTO SHAFT OUTER
12	2	N10348	RING, PTO BEARING (SC25)
11	1	N10347	KIT, PTO CROSS & BEARING
10	1	8192	CLUTCH, WALTERSCHIED PTO OVERRUNNING
9	1	N10345	YOKE, PTO INBOARD (S5)
8	1	N10861	TUBE, PTO PROFILE W/SLEEVE
7	1	N10343	SHAFT, PTO PROFILE (S4GA)
6	2	N10342	PIN, PTO SPRING (10MM X 90MM)
5	2	N10341	KIT, PTO CROSS & BEARING
4	1	N10340	YOKE, PTO INBOARD (S4)
3	1	N10339	ZERK, PTO GREASE (INCLUDED W/N10338)
2	1	N10338	YOKE, PTO DOUBLE
1	1	N10361	YOKE, PTO 1-3/4"-20 SPLINE AS
ITEM	QTY	PART NO	DESCRIPTION

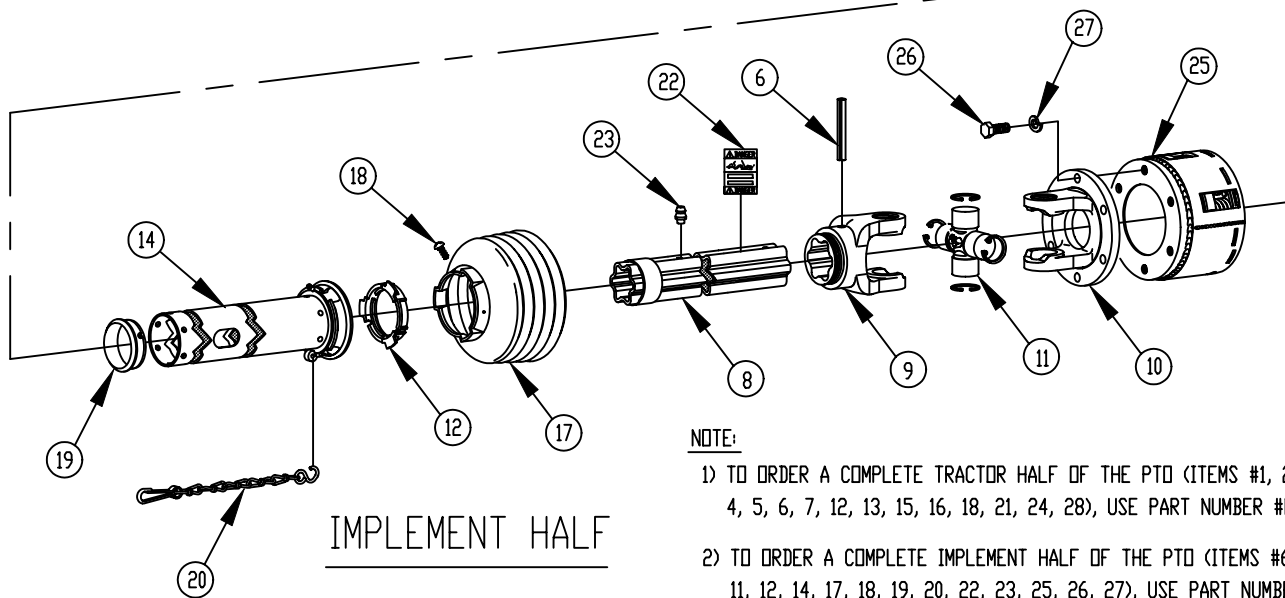
# 1-3/4" WALTERSCHEID PTO W/97 FRICTION OVERRUNNING CLUTCH

## PULL TYPE SHREDDER

### TRACTOR HALF



### IMPLEMENT HALF



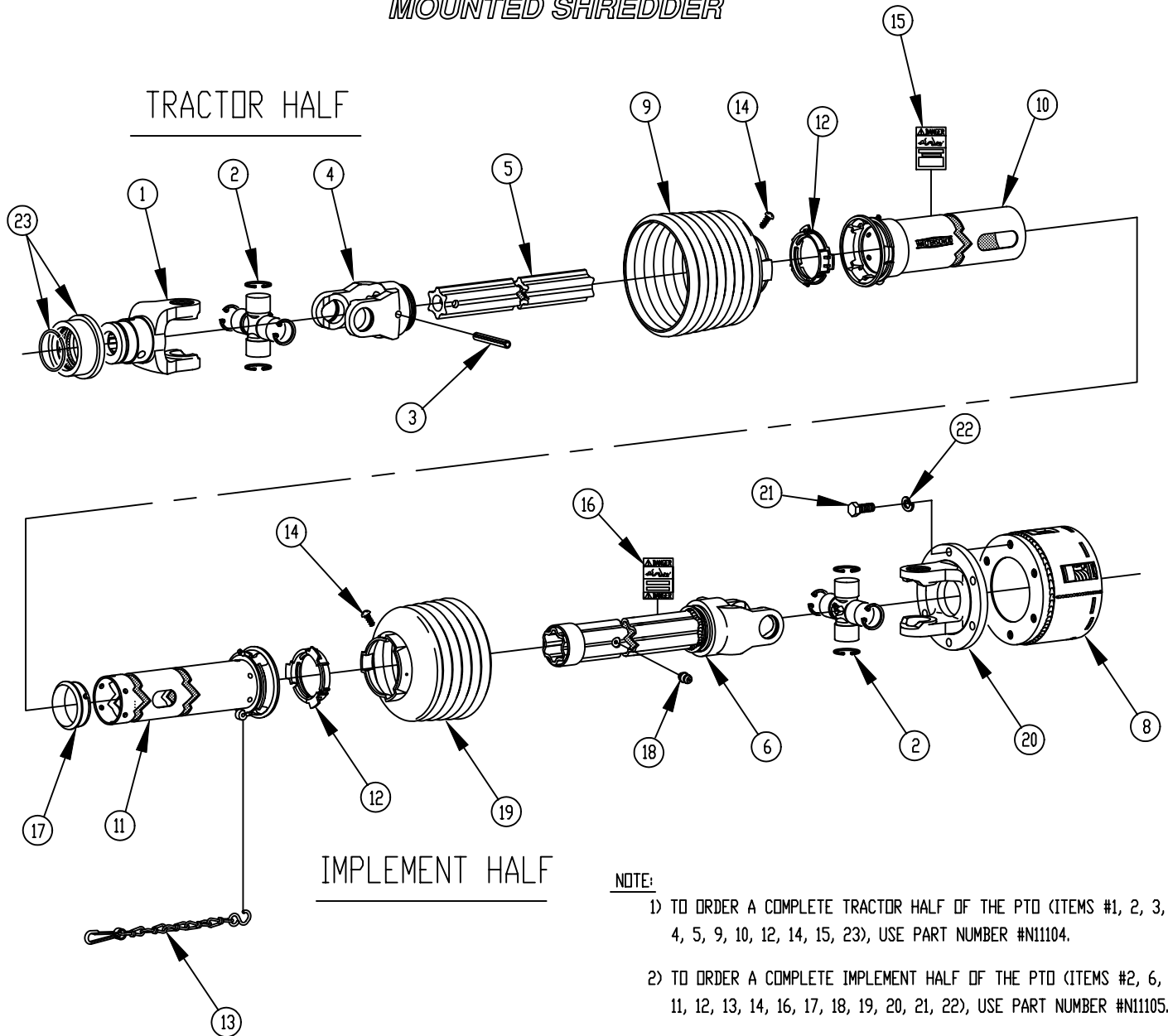
#### NOTE:

- 1) TO ORDER A COMPLETE TRACTOR HALF OF THE PTO (ITEMS #1, 2, 3, 4, 5, 6, 7, 12, 13, 15, 16, 18, 21, 24, 28), USE PART NUMBER #N10334.
- 2) TO ORDER A COMPLETE IMPLEMENT HALF OF THE PTO (ITEMS #6, 8, 9, 10, 11, 12, 14, 17, 18, 19, 20, 22, 23, 25, 26, 27), USE PART NUMBER #N11103.
- 3) REFER TO PAGE #4-61 FOR THE COMPLETE PARTS BREAK DOWN ON THE FRICTION/OVERRUNNING CLUTCH (ITEM #25), PART NUMBER #N10856.
- 4) TO ORDER THE COMPLETE PTO, USE PART NUMBER N10512

28	1	N10362	KIT, PTO SNAP RING (INCLUDED W/N10361)
27	6	N10860	WASHER, M12 LOCK
26	6	N10859	BOLT, M12 X 30MM
25	1	N10856	CLUTCH, PTO 97 FRICTION/OVERRUNNING
24	1	N10862	DECAL, PTO GUARD LUBRICATION (INCLUDED W/N10349)
23	1	N10359	ZERK, PTO GREASE (INCLUDED W/N10861)
22	1	N11761	DECAL, PTO TUBE GUARD (INCLUDED W/N10861)
21	1	N10357	DECAL, PTO SHAFT GUARD (INCLUDED W/N10349)
20	1	N10356	CHAIN, PTO SAFETY
19	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
18	8	N11750	SCREW, PTO RIBBED SHIELD (INCLUDED W/N10351 & N10353)
17	1	N10353	SHIELD, PTO CONE 6-RIB
16	1	N10352	SHIELD, PTO CONE 4-RIB
15	1	N10351	BEARING, PTO CV CONE
ITEM	QTY	PART NO	DESCRIPTION
14	1	N10350	GUARD, PTO TUBE INNER
13	1	N10349	GUARD, PTO SHAFT OUTER
12	2	N10348	RING, PTO BEARING (SC25)
11	1	N10347	KIT, PTO CROSS & BEARING
10	1	N10858	YOKE, PTO FLANGE
9	1	N10345	YOKE, PTO INBOARD (S5)
8	1	N10861	TUBE, PTO PROFILE W/ SLEEVE
7	1	N10343	SHAFT, PTO PROFILE (S4GA)
6	2	N10342	PIN, PTO SPRING (10MM X 90MM)
5	2	N10341	KIT, PTO CROSS & BEARING
4	1	N10340	YOKE, PTO INBOARD (S4)
3	1	N10339	ZERK, PTO DOUBLE YOKE GREASE (INCLUDED W/N10338)
2	1	N10338	YOKE, PTO DOUBLE
1	1	N10361	YOKE, PTO 1-3/4"-20 SPLINE ASS'Y
ITEM	QTY	PART NO	DESCRIPTION

# 1-3/4" WALTERSCHEID PTO W/97 FRICTION OVERRUNNING CLUTCH

## MOUNTED SHREDDER

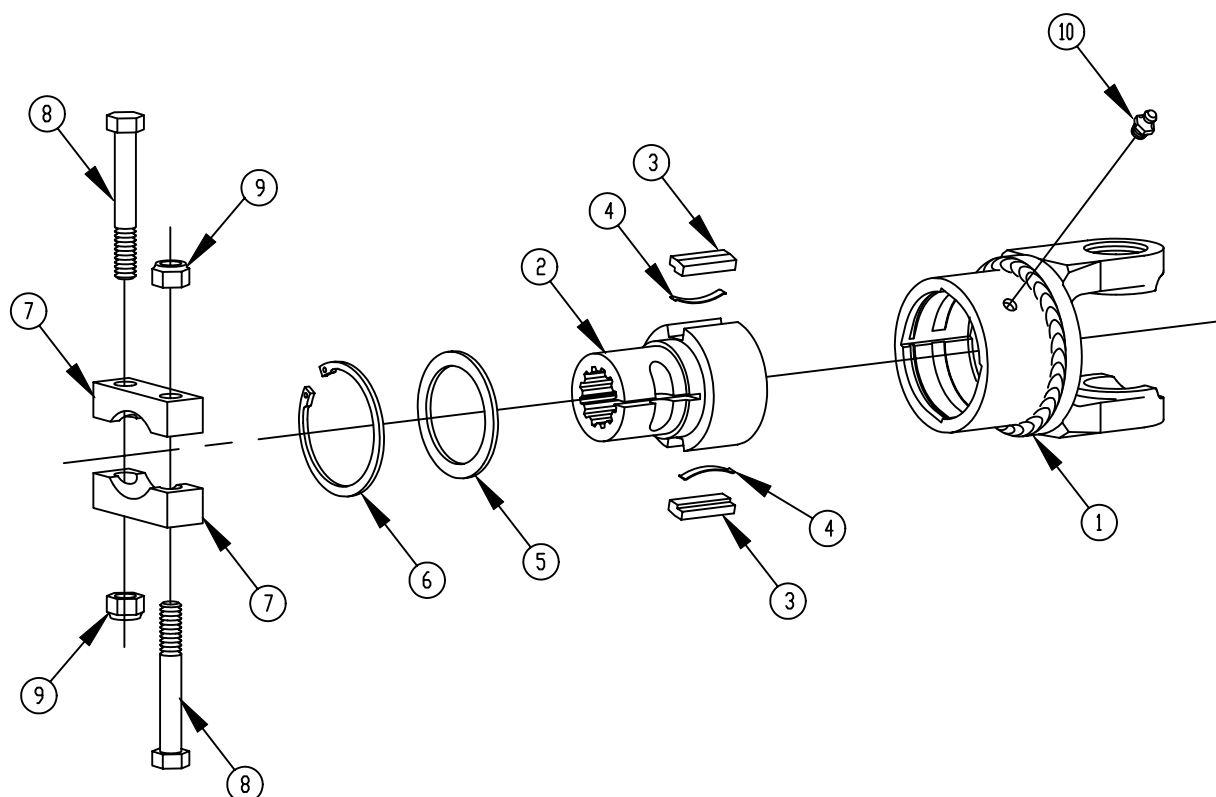


### NOTE:

- 1) TO ORDER A COMPLETE TRACTOR HALF OF THE PTO (ITEMS #1, 2, 3, 4, 5, 9, 10, 12, 14, 15, 23), USE PART NUMBER #N11104.
- 2) TO ORDER A COMPLETE IMPLEMENT HALF OF THE PTO (ITEMS #2, 6, 8, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22), USE PART NUMBER #N11105.
- 3) REFER TO PAGE #4-61 FOR THE COMPLETE PARTS BREAK DOWN ON THE FRICTION/OVERRUNNING CLUTCH (ITEM #8), PART NUMBER #N10856.
- 4) TO ORDER THE COMPLETE PTO, USE PART NUMBER #N10515.

23	1	N10362	KIT, PTO SNAP RING (INCLUDED W/N10370)
22	6	N10860	WASHER, M12 LOCK
21	6	N10859	BOLT, M12 X 30MM
20	1	N10858	YOKE, PTO FLANGE
19	1	N10353	SHIELD, PTO CONE 6-RIB
18	1	N10359	ZERK, PTO GREASE (INCLUDED W/N10857)
17	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
16	1	N11761	DECAL, PTO TUBE GUARD (INCLUDED W/N10857)
15	1	N10357	DECAL, PTO SHAFT GUARD (INCLUDED W/N10368)
14	2	N11750	SCREW, PTO RIBBED SHIELD (INCLUDED W/N10367 & N10353)
13	1	N10356	CHAIN, PTO SAFETY
ITEM	QTY	PART NO	DESCRIPTION
12	2	N10348	RING, PTO BEARING (SC25)
11	1	N10369	GUARD, PTO TUBE INNER
10	1	N10368	GUARD, PTO SHAFT OUTER
9	1	N10367	SHIELD, PTO CONE 7-RIB
8	1	N10856	CLUTCH, PTO 97 FRICTION/OVERRUNNING
7			
6	1	N10857	TUBE, PTO PROFILE W/SLEEVE & YOKE
5	1	N14075	SHAFT, WALTERSCHEID PTO PROFILE (S4GA)
4	1	N10364	YOKE, PTO INBOARD (S4)
3	1	N10342	PIN, PTO SPRING (10MM X 90MM)
2	2	N10347	KIT, PTO CROSS & BEARING
1	1	N10370	YOKE, PTO 1-3/4"-20 SPLINE ASG
ITEM	QTY	PART NO	DESCRIPTION

# 1-3/4" WALTERSCHEID OVERRUNNING CLUTCH

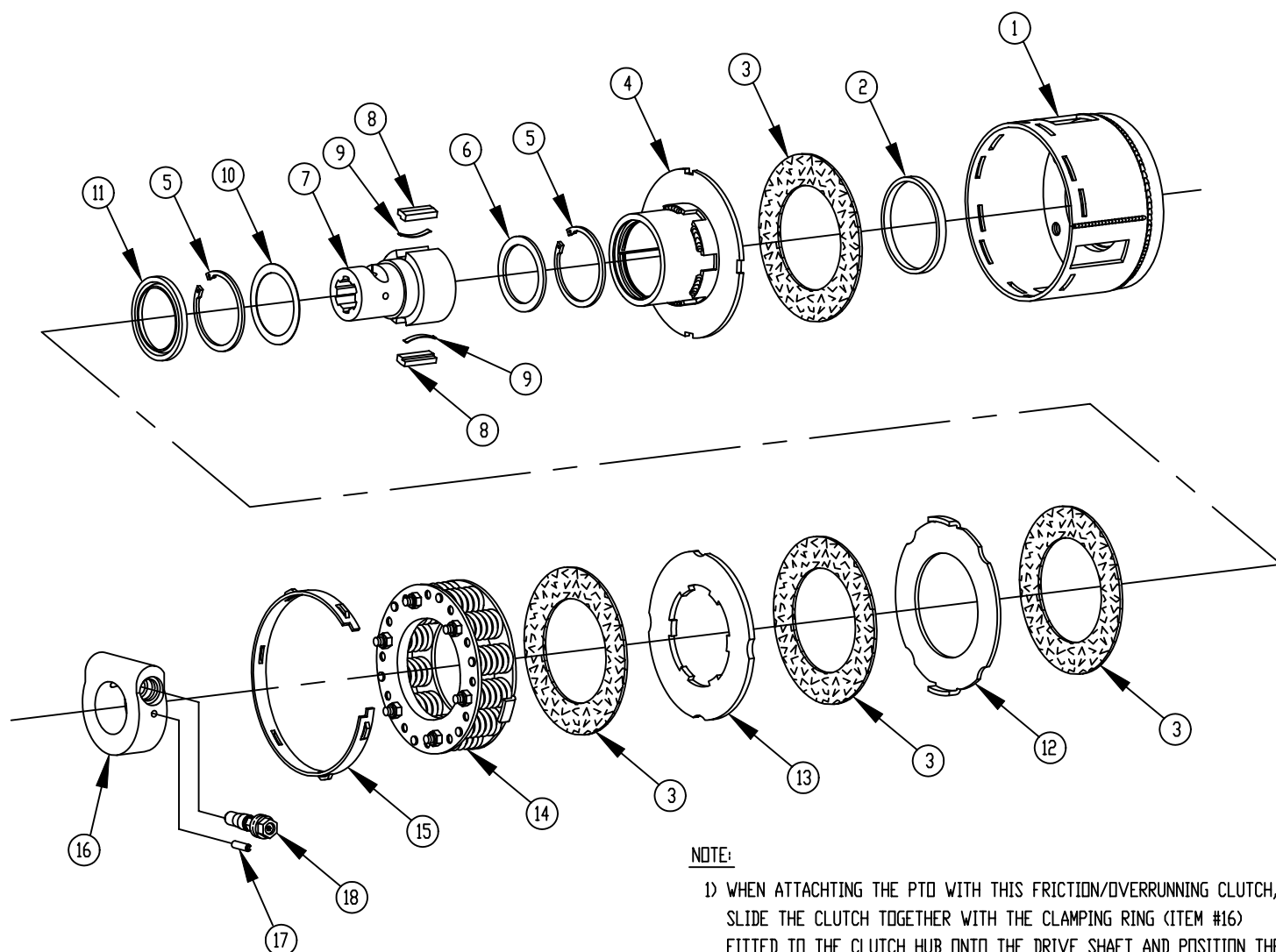


## NOTE:

TO ORDER A COMPLETE OVERRUNNING CLUTCH (ITEMS #1, 2, 3, 4, 5, 6, 7, 8, 9, 10), USE PART NUMBER #8192.

10	1	N10339	ZERK, GREASE (INCLUDED W/N10887)	5	1	N10878	WASHER, 1-3/4' HD CLUTCH (59.8 X 72)
9	2	4449	NUT, M16 LOCK	4	2	N10877	SPRING, 1-3/4' HD CLUTCH LEAF
8	2	4448	BOLT, M16 X 110MM HEX HD.	3	2	N10888	KEY, CLUTCH
7	2	N10388	BRIDGE, CLUTCH CLAMP	2	1	N10892	HUB, 1-3/4'-20 SPLINE CLUTCH
6	1	N10873	RING, 1-3/4' HD CLUTCH RETAINING	1	1	N10887	HOUSING, CLUTCH
ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION

# WALTERSCHEID 97 FRICTION OVERRUNNING CLUTCH



## NOTE:

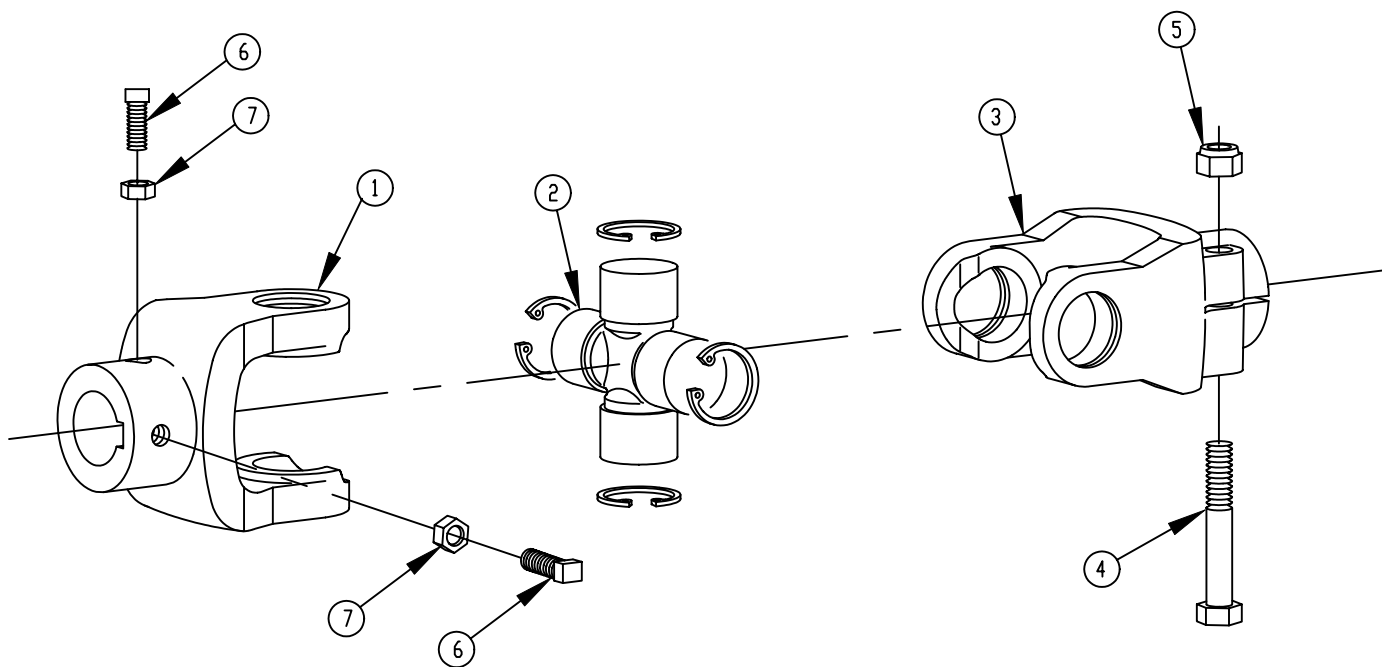
1) WHEN ATTACHING THE PTO WITH THIS FRICTION/OVERRUNNING CLUTCH, SLIDE THE CLUTCH TOGETHER WITH THE CLAMPING RING (ITEM #16) FITTED TO THE CLUTCH HUB ONTO THE DRIVE SHAFT AND POSITION THE LOCATION HOLE FOR THE CLAMPING CONE (ITEM #17) ABOVE THE ANNULAR GROOVE. SCREW CLAMPING CONE INTO THE LOCATION HOLE OF THE CLAMPING RING AND DRIVE IT HOME (APPROX. 100 Nm/74 FT. LBS.) MOVING THE CLUTCH TO AND FRO. CHECK TIGHT AND SAFE FIT OF THE CLUTCH HUB BY APPLICATION OF TENSION AND PRESSURE. DURING OPERATION, CHECK SAFE FIT OF THE CLUTCH AT REGULAR INTERVALS.

2) TO ORDER A COMPLETE 97 FRICTION/OVERRUNNING CLUTCH, USE PART NUMBER #N10856.

18	1	N10885	CONE, CLUTCH CLAMPING
17	1	N10886	PIN, CLUTCH SPRING (6 x 22)
16	1	N10884	RING, CLUTCH CLAMPING
15	1	N10883	RING, CLUTCH SETTING
14	1	N10882	SPRING, CLUTCH PACK
13	1	N10881	PLATE CLUTCH INNER DRIVE
12	1	N10880	PLATE, CLUTCH OUTER DRIVE
11	1	N10879	RING, CLUTCH SEAL
10	1	N10878	WASHER, CLUTCH (59.8 x 72)
ITEM	QTY	PART NO	DESCRIPTION

9	2	N10877	SPRING, CLUTCH LEAF
8	2	N10876	KEY, CLUTCH
7	1	N10875	HUB, CLUTCH
6	1	N10874	WASHER, CLUTCH (56x72)
5	2	N10873	RING, CLUTCH RETAINING
4	1	N10872	HOUSING, CLUTCH OVERRUNNING
3	4	N10871	DISK, CLUTCH FRICTION
2	1	N10870	RING, CLUTCH WEAR
1	1	N10869	HOUSING, CLUTCH
ITEM	QTY	PART NO	DESCRIPTION

# WALTERSCHEID 1-3/4" RB X 1-3/4"-20 SPLINED U-JOINT



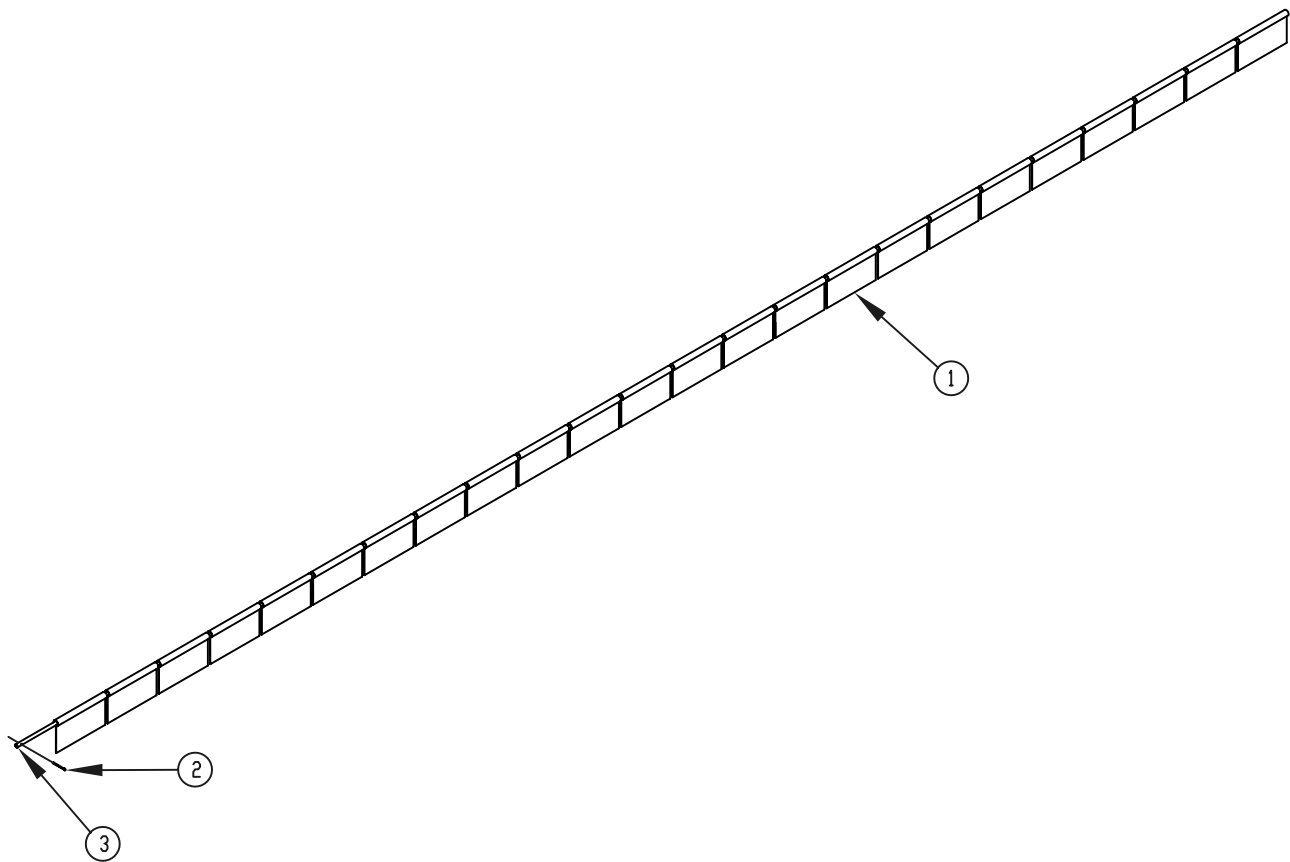
## NOTE:

TO ORDER A COMPLETE U-JOINT (ITEMS #1, 2, 3, 4, 5),  
USE PART NUMBER #N12440.

7	2	4061	NUT, 3/8" JAM
6	2	4082	SCREW, 3/8" X 1" SQ. HD. SET
5	1	4449	NUT, M16 LOCK
ITEM	QTY	PART NO	DESCRIPTION

4	1	4500	BOLT, M16 X 90MM HEX HD
3	1	N14073	YOKER, 1-3/4"-20 SPLINE IC
2	1	N10347	KIT, CROSS & BEARING
1	1	N14072	YOKER, 1-3/4" RB W/3/8" KEYWAY
ITEM	QTY	PART NO	DESCRIPTION

VEGETABLE/POTATO SHREDDER MISC. PARTS LIST

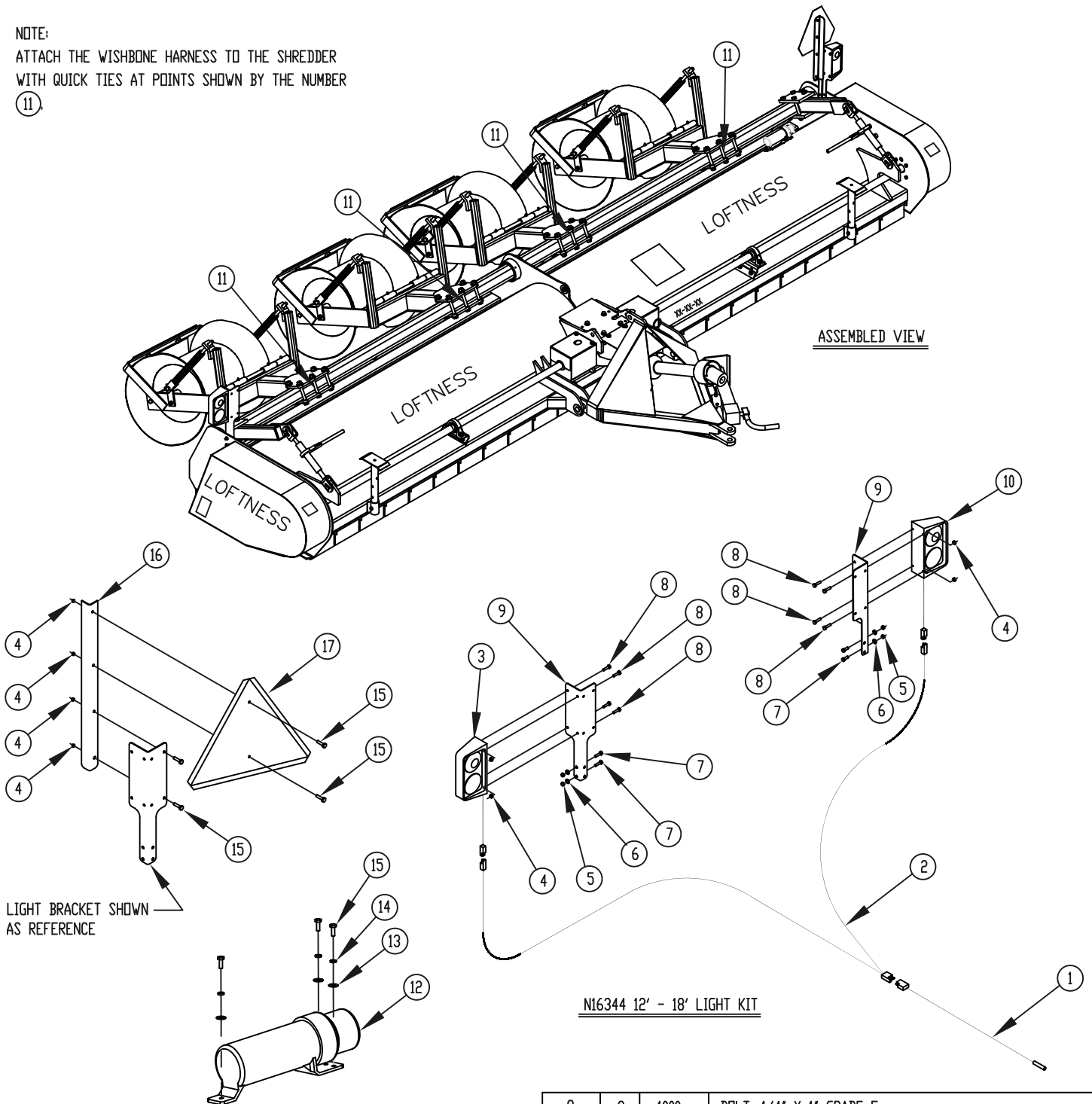


				2	2	4092	PIN, COTTER (5/32" X 2")
3	2	8446	ROD, FLIPPER 24' SHREDDER	1	29	N18774	FLIPPER, SHREDDER (9-1/2" X 8-1/2") 24' SHREDDER
	1	9084	ROD, FLIPPER 18' SHREDDER		21	N18774	FLIPPER, SHREDDER (9-1/2" X 8-1/2") 18' SHREDDER
	1	9083	ROD, FLIPPER 15' SHREDDER		18	N18774	FLIPPER, SHREDDER (9-1/2" X 8-1/2") 15' SHREDDER
	1	9130	ROD, FLIPPER 13' SHREDDER		15	N18774	FLIPPER, SHREDDER (9-1/2" X 8-1/2") 13' SHREDDER
	1	9082	ROD, FLIPPER 12' SHREDDER		14	N18774	FLIPPER, SHREDDER (9-1/2" X 8-1/2") 12' SHREDDER
ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION

VEGETABLE/POTATO SHREDDER 12' - 18' LIGHT KIT AND MANUAL HOLDER

**NOTE:**

ATTACH THE WISHBONE HARNESS TO THE SHREDDER  
WITH QUICK TIES AT POINTS SHOWN BY THE NUMBER



17	1	N18549	EMBLEM, (SLOW MOVING) ALUM.
16	1	N18546	BRACKET, SMV WINDROW
15	7	4340	BOLT, 1/4" X 3/4" GRADE 5
14	3	4231	WASHER, LOCK 1/4"
13	3	4460	WASHER, FLAT 1/4"
12	1	N19600	HOLDER, LG. OPERATORS MANUAL
11	VAR		TIE, QUICK (ZIP - NOT SHOWN)
10	1	N16289	LIGHT, DUAL AG LEFT
9	2	N16182	MOUNT, LIGHT
ITEM	QTY	PART NO	DESCRIPTION

8	8	4000	BOLT, 1/4" X 1" GRADE 5
7	4	4195	BOLT, 3/8" X 1" GRADE 5
6	4	4065	WASHER, LOCK 3/8"
5	4	4233	NUT, STD 3/8"
4	12	4050	NUT, LOCK 1/4"
3	1	N16290	LIGHT, DUAL AG RIGHT
2	1	N16288	HARNESS, 24' REAR WISHBONE BRAIDED
	1	N16286	HARNESS, 15' - 18' REAR WISHBONE BRAIDED
1	1	N16287	HARNESS, 24' BRAIDED TONGUE
	1	N16285	HARNESS, 15' - 18' BRAIDED TONGUE
ITEM	QTY	PART NO	DESCRIPTION



**Section**

**5**

**Service Parts**

**24 Ft Shredder**



## **Owner's Manual (24 Ft Vegetable/Potato Shredder)**

This section of the manual pertains to only the 24 ft. Vegetable/Potato Shredder and the service parts required for repairs. Pages located in sections 1, 2, and 3 will also be used for safety, operation, and maintenance.

The pages located in Section 4 will be used for identifying and ordering additional service parts. They are as follows:

4-1	Service Parts Ordering
4-2	Decals
4-3	Decals
4-6	6-Band Drive Parts List
4-17	Hitch Parts
4-18	Rear Wheel Options
4-19	Rear Wheel Options
4-20	Rear Wheel Adjustment Options
4-21	Rear Wheel Hydraulic Adjustment Options
4-22	Front Gage Wheel Options
4-23	6-Bolt Hub & Spindle
4-24	Transport Axle
4-25	Transport Axle
4-26	Gear Box Option
4-27	Gear Box Option
4-28	Gear Box Option
4-29	PTO, 1-3/8" Mounted Shredder
4-30	PTO, 1-3/4" Mounted Shredder
4-31	PTO, 1-3/8" Pull Type Shredder
4-32	PTO, 1-3/4" Pull Type Shredder
4-33	PTO, 1-3/4" Pull Type Shredder
4-34	PTO, 1-3/4" Mounted Shredder
4-35	Overrunning Clutch, 1-3/4"
4-36	Overrunning Clutch
4-37	U-joint, 1-3/4" x 1-3/4"-20 Spline
4-38	Flippers & Flipper Rod
4-39	Light Kit

# 24 FT VEGETABLE/POTATO SHREDDER DRIVE LINE PARTS LIST

## NOTE:

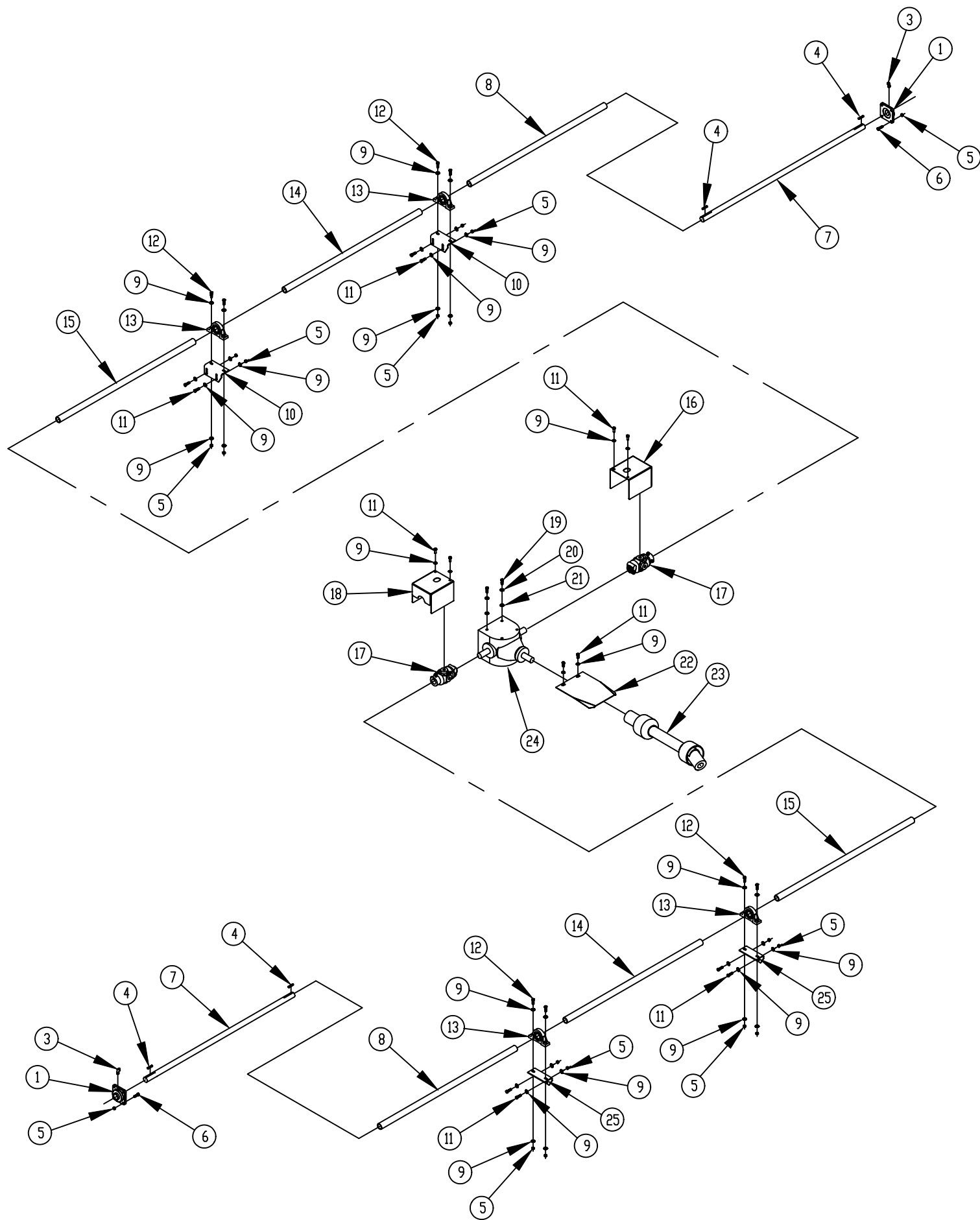
1) REFER TO PAGE 4-28 FOR GEARBOX #N13952 PARTS LIST.  
REFER TO PAGE 4-27 FOR GEARBOX #N13951 PARTS LIST.  
REFER TO PAGE 4-20 FOR GEARBOX #N13950 PARTS LIST.

2) REFER TO PAGE 4-37 FOR U-JOINT #12440 PARTS LIST.

3) REFER TO PAGE 4-29 FOR PTO #8173 PARTS LIST.  
REFER TO PAGE 4-30 FOR PTO #8174 PARTS LIST.  
REFER TO PAGE 4-31 FOR PTO #8175 PARTS LIST.  
REFER TO PAGE 4-32 FOR PTO #8176 PARTS LIST.  
REFER TO PAGE 4-33 FOR PTO #N10512 PARTS LIST.  
REFER TO PAGE 4-34 FOR PTO #N10515 PARTS LIST.

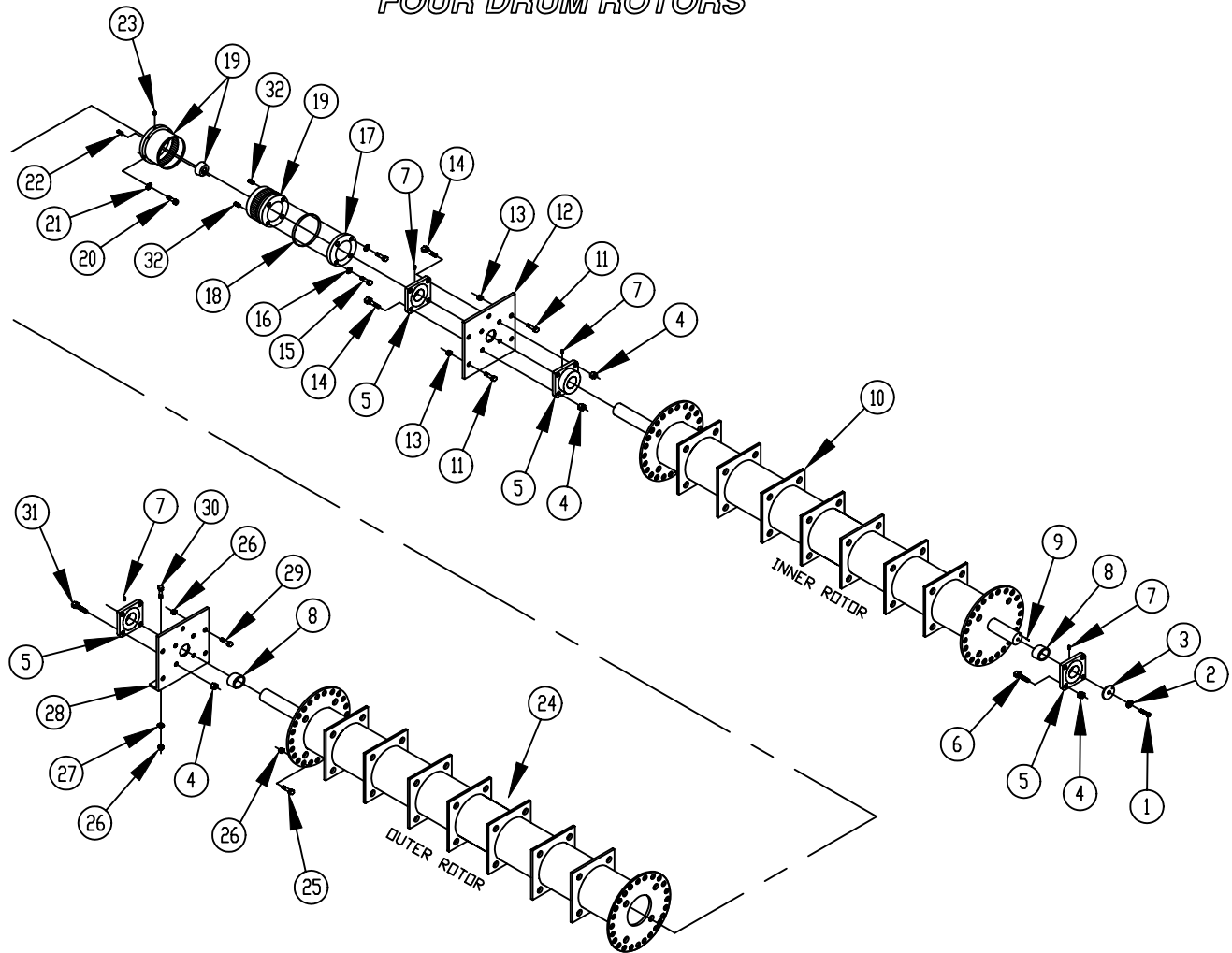
25	2	9127	MOUNT, RIGHT DRIVELINE BEARING	19	4	N13997	BOLT, 3/4" X 1-3/4" GR5 (USE W/N13950, N13951, N13952)
					4	4462	BOLT, M16 X 50MM GRADE 8.8 (USE W/N11631 GEARBOX)
					4	4021	BOLT, 5/8" X 1-3/4" GRADE 5
				18	1	N11987	SHIELD, RIGHT DRIVELINE
				17	2	N12440	U-JOINT, 1-3/4" RB X 1-3/4"-20 SPLINE
				16	1	N11988	SHIELD, LEFT DRIVELINE
24	1	N13950	GEARBOX, BONDIOLO 1:1 RATIO 1450 RPM (3/4" BOLTS)	15	2	N13022	SHIELD, INNER DRIVELINE (24' SHREDDER)
	1	N13951	GEARBOX, BONDIOLO 1:1.18 RATIO 1700 RPM (3/4" BOLTS)	14	2	N13194	SHIELD, MIDDLE DRIVELINE (24' SHREDDER)
	1	N13952	GEARBOX, BONDIOLO 1:1.35 RATIO 2000 RPM (3/4" BOLTS)	13	4	N16971	BEARING, 1-3/4" PILLOW BLOCK
	1	N11631	GEARBOX, BONDIOLO 1:1 RATIO 1450 RPM (M16 BOLTS)	12	8	4014	BOLT, 1/2" X 1-3/4" GRADE 5
	1	N10505	GEARBOX, BONDIOLO 1:1.18 RATIO 1700 RPM (5/8" BOLTS)	11	14	4012	BOLT, 1/2 X 1-1/4" GRADE 5
	1	8170	GEARBOX, BONDIOLO 1:1.35 RATIO 2000 RPM (5/8" BOLTS)	10	2	9098	MOUNT, LEFT DRIVELINE BEARING
23	1	N10515	PTO, PT (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)	9	28	4068	WASHER, FLAT 1/2" SAE
	1	N10512	PTO, PT (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)	8	2	N13195	SHIELD, OUTER DRIVELINE (24' SHREDDER)
	1	8176	PTO, PT (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)	7	2	9349	SHAFT, DRIVELINE 1-3/4" X 136-1/2" LG. (24' SHREDDER)
	1	8175	PTO, PT (1-3/8"-21 SPLINED W/OVERRUNNING CLUTCH)	6	8	4013	BOLT, 1/2" X 1-1/2" GRADE 5
	1	8174	PTO, MTD (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)	5	8	4054	NUT, LOCK 1/2"
	1	8173	PTO, MTD (1-3/8"-21 SPLINED W/OVERRUNNING CLUTCH)	4	4	7121-03	KEY, 3/8" X 2"
22	1	9110	SHIELD, PTO 12" X 16"	3	2	4106	GREASE ZERK, 45° SCREW-IN 1/8" NPT
21	4	4071	WASHER, FLAT 3/4" (USE W/N13950, N13951, N13952)	2			N/A
	4	4069	WASHER, FLAT 5/8"	1	2	N16970	BEARING, 1-3/4" 4-BOLT FLANGE
20	4	4287	WASHER, LOCK 3/4" (USE W/N13950, N13951, N13952)	ITEM	QTY	PART NO	DESCRIPTION
	4	4070	WASHER, LOCK 5/8"				
ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION

# 24 FT VEGETABLE/POTATO SHREDDER DRIVE LINE ILLUSTRATION



# 24 FT VEGETABLE/POTATO SHREDDER ROTOR PARTS LIST

## FOUR DRUM ROTORS

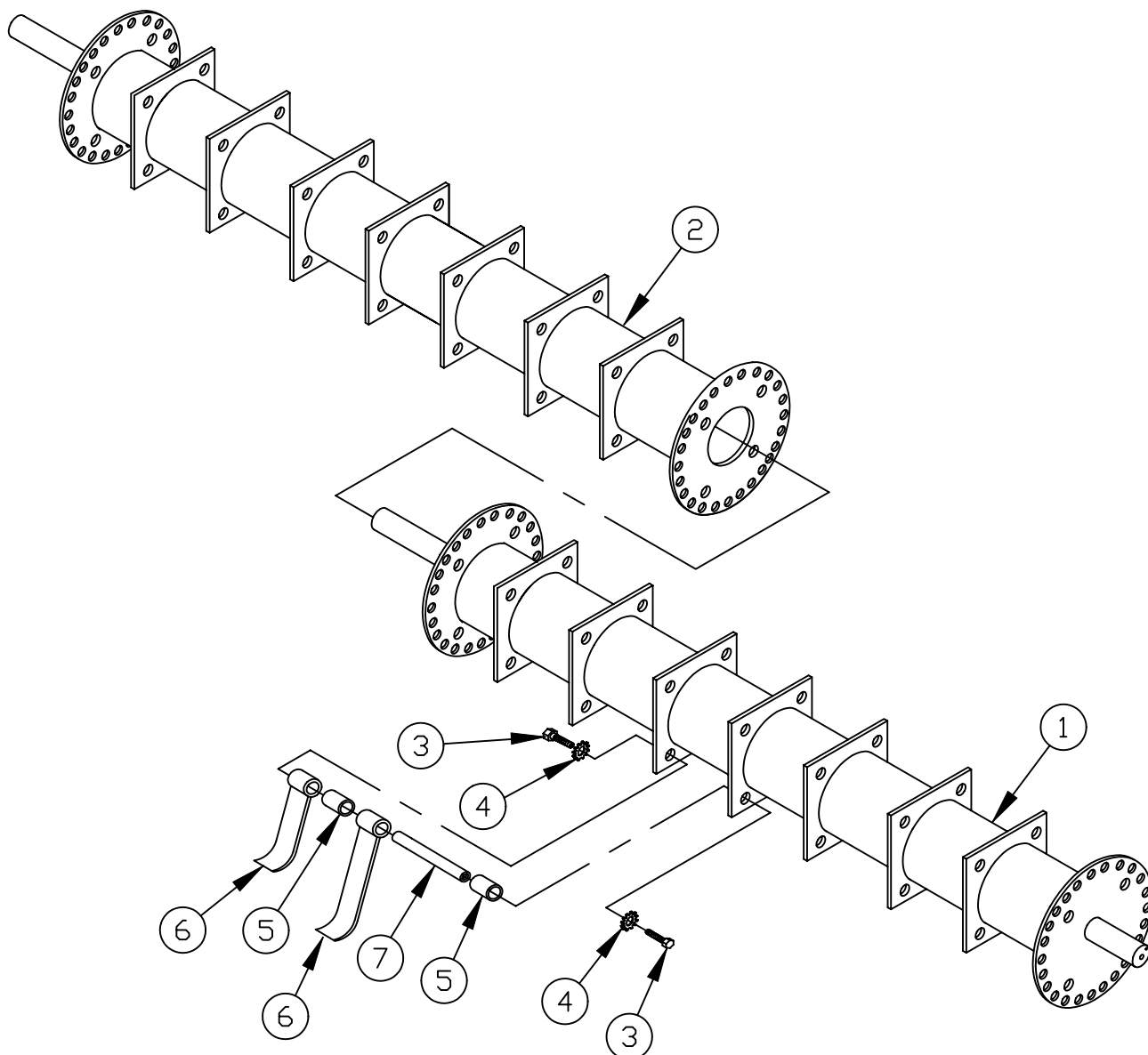


### NOTE:

QUANTITIES OF PARTS SHOWN BELOW IS FOR ONE HALF OF THE MACHINE ONLY.

32	2	8128-10	SCREW, SET 1/2-13' X 1'	16	4	4231	WASHER, LOCK 1/4'
31	4	4042	BOLT, 5/8"UNF X 2' GRADE 8	15	4	3211	BOLT, 1/4' X 1/2'
30	2	4013	BOLT, 1/2' X 1-1/2' GRADE 5	14	4	4306	BOLT, 5/8' UNF X 3' GRADE 8
29	5	4012	BOLT, 1/2' X 1-1/4' GRADE 5	13	5	4055	NUT, LOCK 5/8'
28	1	N11427	PLATE, OUTER 2-3/16" BEARING (4-DRUM)	12	1	N10498	PLATE, INNER ROTOR 2-3/16" BEARING MOUNTING
27	2	4155	WASHER, LOCK 1/2'	11	5	4020	BOLT, 5/8' X 1-1/2' GRADE 5
26	3	4054	NUT, LOCK 1/2'	10	1	N13355	ROTOR, 24' INNER W/O KNIVES
25	1	4152	BOLT, 1/2' X 2-1/2' (FULL THREAD)	9	1	4085	PIN, ROLL (3/16" X 3/4')
24	1	N13354	ROTOR, 24' OUTER W/O KNIVES	8	2	N18075	SPACER, 2-3/16" BEARING
23	6	4105	ZERK, GREASE 1/4" SCREW-IN	7	8	4261	SCREW, SET (5/16" UNF X 3/8')
22	1	7122-04	KEY, 1/2" X 2"	6	4	4047	BOLT, 5/8' UNF X 3-1/4' GRADE 8
21	6	1099	WASHER, 1/2" INTERNAL TOOTH LOCK	5	4	N16969	BEARING, 2-3/16" 4-BOLT FLANGE W/FLINGER
20	6	4501	SCREW, 1/2" X 1-3/4" ALLEN HD	4	12	4057	NUT, LOCK 5/8' UNF
19	1	8037	COUPLER, VALLEY DRIVE (2')	3	1	4075	WASHER, 5/8" BEARING RETAINING
18	1	8463	O-RING, VALLEY DRIVE COUPLER (INCLUDED W/8037)	2	1	4076	WASHER, EXTERNAL TOOTH LOCK 1/2'
17	1	9346	COVER, DUST	1	1	4468	SCREW, 1/2" X 1-1/4' FLAT HEAD
ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION

# 24 FT ROTOR W/VEGETABLE KNIVES - 34" & 36" ROWS



## NOTE:

1) THE QUANTITY OF PARTS SHOWN ARE FOR ONE INNER AND ONE OUTER ROTOR, TWO OF EACH ROTORS ARE REQUIRED FOR EACH SHREDDER.

2) REFER TO PAGE 5 - 4 FOR BEARINGS AND ALL PARTS REQUIRED TO ATTACH THE ROTORS TO THE SHREDDER.

3) BEFORE REMOVING THE OLD KNIVES, RECORD THE KNIFE SEQUENCE TO INSURE THE NEW KNIVES WILL BE REPLACED IN THE SAME LOCATIONS.

24 FT ROTOR W/VEGETABLE KNIVES - 36" ROWS			
7	32	9123	MOUNT, CONTOUR VEGETABLE KNIFE (8")
6	32	8026	KNIFE, CONTOUR VEGETABLE (10")
	64	8025	KNIFE, CONTOUR VEGETABLE (8")
	32	8024	KNIFE, CONTOUR VEGETABLE (6")
5	64	9122	SPACER, CONTOUR KNIFE (1-5/16" LG)
4	64	4308	WASHER, 3/4" EXTERNAL STAR
3	64	4307	BOLT, 3/4" UNF X 1-1/4" GR 5
2	1	N13354	ROTOR, 24' OUTER W/O KNIVES
1	1	N13355	ROTOR, 24' INNER W/O KNIVES (SHOWN)
ITEM	QTY	PART NO	DESCRIPTION

24 FT ROTOR W/VEGETABLE KNIVES - 34" ROWS			
7	32	9123	MOUNT, CONTOUR VEGETABLE KNIFE (8")
6	40	8026	KNIFE, CONTOUR VEGETABLE (10")
	52	8025	KNIFE, CONTOUR VEGETABLE (8")
	38	8024	KNIFE, CONTOUR VEGETABLE (6")
5	64	9122	SPACER, CONTOUR KNIFE (1-5/16" LG)
4	64	4308	WASHER, 3/4" EXTERNAL STAR
3	64	4307	BOLT, 3/4" UNF X 1-1/4" GR 5
2	1	N13354	ROTOR, 24' OUTER W/O KNIVES
1	1	N13355	ROTOR, 24' INNER W/O KNIVES
ITEM	QTY	PART NO	DESCRIPTION



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Loftness Specialized Equipment, Inc.  
650 So. Main Street • PO Box 337 • Hector, MN 55342  
Tel: 320.848.6266 • Fax: 320.848.6269 • Toll Free: 1.800.828.7624

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