LOFTNESS

Air Windrower Shredder

20' Model

Owner's Manual and Parts Book
(Originating with Serial Number 59-204)

Model Number: _____
Serial Number: _____
Date of Purchase: _____

209757 Rev. B

06.08.26


LOFTNESS

LOFTNESS SPECIALIZED EQUIPMENT, INC.
LIMITED WARRANTY POLICY

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

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, Stump Ax, BT20, Kwik Cut.

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, Inc. ("LOFTNESS") 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. The second year of limited warranty includes only parts, and not labor.

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 request 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 disclaimed, and excluded from this limited warranty.** The remedies set forth in this warranty are the sole and exclusive 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 2025)


LOFTNESS

LOFTNESS
CROPLOGIX
RESIDUE MANAGEMENT EQUIPMENT

To the Dealer:

In order to ensure that your customer's unit will provide many years of trouble free service, please ensure that the following Pre-Delivery Inspection has been done. Refer to manual for specifications.

PRE-DELIVERY INSPECTION

____ All fasteners are tight.
____ Grease PTO shaft (u-joints and slide tube).
____ Grease all grease zerks.
____ PTO shields in place and rotate freely.
____ Driveshaft key stock installed and secure.
____ Bearing locking collar set screws are tight.
____ Set screws on the drive sprockets are tight.
____ Belts tensioned correctly.
____ Gearbox oil level(s) are checked to manual specifications.
____ Wheel nuts are tight, 6 bolt hub (100 FT-LB), 8 bolt hub (135 FT-LB).
____ All safety decals in place and legible.
____ All safety lights work.
____ Paint scratches touched up.

Model specific

____ Diffuser pivots freely and locks easily (End Delivery).

Run In

____ Hydraulic pressure checked for leaks and operation of all functions of unit.
____ PTO shaft operates correctly.

Approximate set up time per unit

End Delivery: 1.5 hours
Center Discharge (with transport): 6 hours
Standard (with transport): 1.5 hours
Vegetable: 1.5 hours (w/tires)
Vegetable: 6 hours (w/bed rollers)
Center Discharge (without transport): 6 hours
Standard (without transport): 1.5 hours

To the Customer

Use this manual as your first source of information about the machine. If you follow the instructions in the manual, your residue management equipment will perform at its optimum for many years.
The photos and line drawings used in this manual are of a production unit, but due to our program of continuous improvement, your machine may vary slightly from the one shown. We reserve the right to make changes and improvements at any time.


LOFTNESS

Table of Contents

Warranty

Table of Contents

Ordering Code

Ordering Code 1
Air Windrower Shredder (Example) 1

Introduction

Owner Information 3
Warranty Policy 3
Serial Number Location 3
Owner's Manual Access 3
Air Windrower Shredder Features 4
Air Windrower Shredder Options 4

Safety Instructions

Safety First 5
Owner's Responsibility 5
Mandatory Shut-Down Procedure 5
Safety Rules 6
Safety Instructions for Operation and Maintenance 6
Hydraulic Safety 7
California Proposition 65 Warning 7
Air Windrower Shredder Identification 8
Safety Decal Locations 9

Set-up Instructions

Equipment Set-up 13
Remove Shipping Tie-Down Brackets 13
PTO Shield 13
Installing the Slow Moving Vehicle Sign 13
Operation Hitch Installation (Transport Models) 14
Operation Hitch Installation (Models without Transport) 14
Route Hoses and Wiring Harness 14
Transport Wheels 15
Transport Lights 15
Gearbox Shaft Guard 15
PTO Set-up 16
PTO Sizing 16

Table of Contents

Operating Instructions

Getting Started 17
Pre-Start Checklist 17
Attaching the Windrower for Operation 17
Jack Stands 17
Belt Tension 17
Cutting Conditions 18
Operating Speed 18
Maintaining Rotor Balance 18
Cutting Height 18
Adjusting the Cutting Height 18
Deflector Adjustment 19
Turning 20
Transport to Operation Configuration Procedure 20
Putting the Operation Hitch into Position 20
Installing the Jack 22
Removing and Storing Rear Cylinder Stop 22
Raising the Transport Wheels 22
Installing the Front Cylinder Stop 23
Disconnecting the Tractor from Transport Hitch 23
Connecting to the Operation Hitch 24
Connecting to the Operation Hitch 24
Connecting to the Hydraulics 25
Moving the Pivot Wing into the Operating Position 25
Moving the Diffuser into the Operating Position 26
Storing the Transport Hitch 26
Adjust the Cutting Height 27
Operation to Transport Configuration Procedure 28
Lowering the Windrower 28
Setting Up the Transport Hitch 28
Rotate the Diffuser into the Transport Position 29
Folding the Wing Assembly 30
Removing and Storing the Front Cylinder Stop 30
Disconnect from the Operation Hitch 31
Disconnecting the PTO Shaft 31
Disconnecting the Hydraulic Hoses 31
Connecting to the Transport Hitch 32
Lowering the Transport Wheels 33
Folding the Operation Hitch 33
Folding the Operation Hitch (Cont'd) 34
Transporting 35
Transporting the Windrower in the Operation Configuration 35

Maintenance

General Maintenance 37
Maintenance Schedule 37
Lubrication. 37
Grease Points Location 38
8-Hour Lubrication Points 38
25-Hour Lubrication Points 39
50-Hour Lubrication Points 39
100-Hour Lubrication Points 40
PTO Lubrication Points 41
Other Lubrications Points 41
Adding Oil to Gearbox. 41
Belt Shields 42
Belt Adjustment. 42
Belt Replacement 43
Sheave and Pulley Removal 44
Pulley Assembly 44
Rotor Removal. 45
Rotor Assembly. 45
Knife Replacement 46
70° High Residue. 46
Cupped 46
Gearbox Repair 46
Gearbox Removal 46
Rear Operation Wheel Spacing. 48
Storage 48
End of the Season. 48
Beginning of the Season 48
Troubleshooting. 49

Parts Identification

Wing Pivot Assembly; Wing; Chute. 52
Wing; Deflectors (212484) 54
Discharge Chute (212668). 56
Deflector (209869). 58
Jack Stand. 59
4-Band Drive 60
Rotors, with Knives 62
Rotors, with Bearings and Lubrication 64
Drive Lines. 66
Gearbox, 1450 RPM Bondioli (N13950) 68
PTO, 1-3/8" Walterscheid w/Overrunning Clutch (8175). 70
PTO, 1-3/4" Walterscheid w/Overrunning Clutch (8176). 72
Clutch, 1-3/4" Walterscheid Overrunning (8192). 74
Rear Tube Bushings 75

Table of Contents

Parts Identification (Cont'd)

Assist Wheel Assembly 76
Transport Wheel Assembly (Transport Models) 78
6 Bolt Hub (N23778) 80
Hub, 8 Bolt (N41447) 81
Operation Hitch - Transport Models 82
Operation Hitch - Models without Transport (N40152) 84
Transport Hitch (Transport Models) 86
Hydraulics, Hose (Transport Models) 88
Hydraulics, Hose (Models without Transport) 90
Light Kit, Operation (Transport Models, and Models without Transport) 92
Light Kit, Transport (Transport Models) 93
Machine Decals and Signs 94

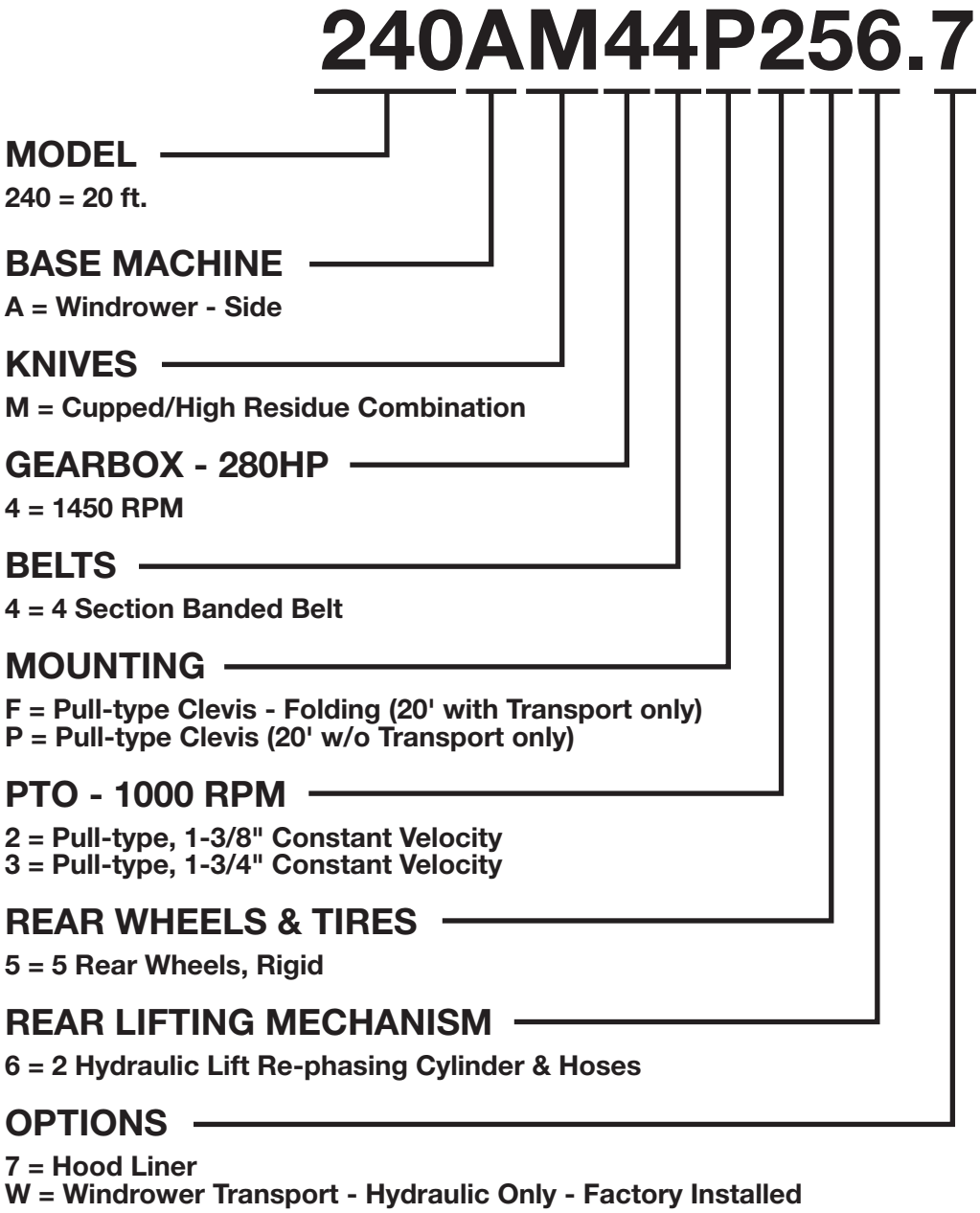
Appendix

Specifications 97
Dimensions - Transport Model (Wing Unfolded) 98
Dimensions - Transport Model (Wing Folded) 99
Dimensions - Models without Transport (Operation Configuration) 100
Torque Specifications 101
    Inches Hardware and Lock Nuts 101
    Metric Hardware and Lock Nuts 102

Ordering Code

Air Windrower Shredder (Example)

The ordering code will consist of three numbers (machine model), one letter (base machine), one letter (knives type), one number (gearbox rpm), one number (belt style), one letter (mounting type), one number (PTO type), one number (rear wheel setup), one number (lifting mechanism), and one to three numbers/letters (options). An example for a Air Windrower Shredder of this type would be as shown below.




LOFTNESS

Owner Information

Thank you for your decision to purchase an Air Windrower Shredder from Loftness. To ensure maximum performance of your machine, it is mandatory that you thoroughly study the owner's manual and follow its recommendations. Proper operation and maintenance are essential to prevent injury or damage and to maximize machine life.

Operate and maintain this machine 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.

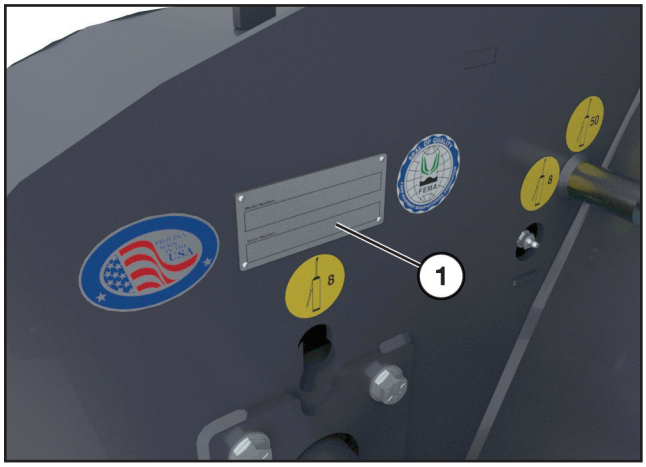
Make sure that all personnel have read this owner's manual and thoroughly understand safe and correct operating, setup, installation and maintenance procedures.

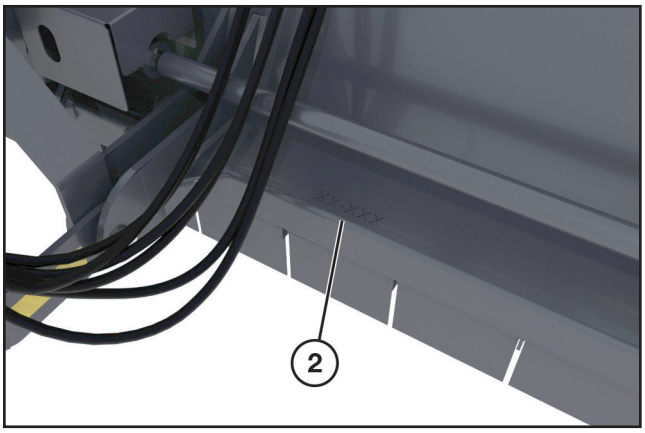
Continuous improvement and advancement of Loftness products may result in changes to your equipment that may not be reflected in this publication. Loftness reserves the right to make product improvements to the machine at any time. Although great care has been taken to ensure the accuracy of this publication, Loftness does not assume any liability for errors or omissions.

Warranty Policy

Be sure to read and understand the Warranty Policy at the beginning of this manual. It is also important that you completely fill out the Warranty Registration form(s with your dealer so as not to void the warranty.

Serial Number Location

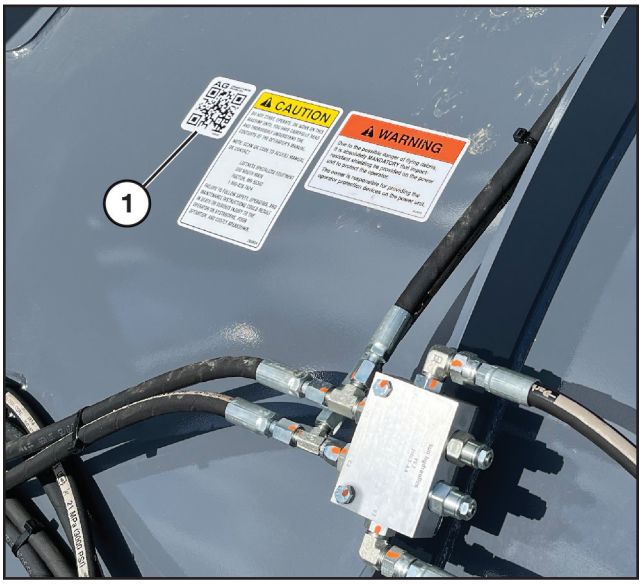




The arrows indicate the location of the serial number tag (1) and the location of the serial number stamped into the frame (2), adjacent to the operation hitch.

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

Owner's Manual Access



The Air Windrower Shredder is shipped with a printed owner's manual. The manual must be available to all operators. Keep it in a safe, dry location.

To access a digital owner's manual, use a smartphone to scan the QR code (1) located on the motor cover. This code will link to the Air Windrower Shredder owner's manual on the Loftness website.

Introduction

Air Windrower Shredder Features

- 20' Cutting Width
- Pull-type Hitch
- 37 in. Side Discharge
- 1-3/8 in. or 1-3/4 in. 1000 RPM PTO
- 1,450 RPM Rotor
- 4-1/2 in. Wide Cupped Knives - Hardened Combined with High Residue Knives
- Flow Deflectors
- Four-Groove Banded Belts
- Spring-loaded Push-type Idler System
- Adjustable Wheel Spacing
- Folding Wing
- Hood Liner

Air Windrower Shredder Options

- Transport System (Street Side and Curb Side Transport Wheels Hydraulically Positioned)

Safety First

Safety Alert Symbol

This message alert symbol identifies important safety messages on the machine and in the owner's manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

In the owner's manual and on decals used on the machine, the words **DANGER, WARNING, CAUTION, IMPORTANT, and NOTE** are used to indicate the following:

DANGER: This word warns of immediate hazards which, if not avoided, will result in severe personal injury or death. The color associated with Danger is RED.

WARNING: This word refers to a potentially hazardous situation which, if not avoided, could result in severe personal injury or death. The color associated with Warning is ORANGE.

CAUTION: This word refers to a potentially hazardous or unsafe situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

IMPORTANT: Highlights information that must be heeded.

NOTE: A reminder of other related information that needs to be considered.

If Safety Decals on this machine are ISO two panel pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as and if used, are RED.

Be certain all machine operators are aware of the dangers indicated by safety decals applied to the machine, and be certain they follow all safety decal instructions. Contact Loftness for safety decal replacement.

Loftness cannot anticipate every possible circumstance that may involve a potential hazard. The warnings in this owner's manual are not all-inclusive.

Owner's Responsibility

Due to the potential danger of flying debris, it is the owner's responsibility and it is "**ABSOLUTELY MANDATORY** that **IMPACT-RESISTANT SHIELDING**" be installed on the machine to protect the operator.

It is **ABSOLUTELY MANDATORY** that all personnel read and follow all safety precautions before operating the machine and attachment.

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

Operate and maintain this machine 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 this owner's manual instructions.

Make sure that all personnel know how to stop the machine and attachment by disengaging all controls. See "Mandatory Shut-Down Procedure" on page 5.

Make sure the attachment is installed on the machine correctly before being placed in service. At regular intervals thereafter, the attachment should be serviced in accordance with procedures outlined in this owner's manual.

Mandatory Shut-Down Procedure

- Stop the machine and attachment on a level surface and lower the attachment to the ground.
- Move throttle to idle position.
- Disengage all power to the attachment.
- Shut off engine and remove the key.

Wait until the rotor has stopped completely before inspecting the attachment.

Safety Rules

These are general safety considerations. Additional precautions may be necessary to operate your machine in a safe manner. Be certain you are operating your machine in accordance with all safety codes, OSHA rules and regulations, insurance requirements and local, state, and federal laws.

- Never allow children to operate equipment. Never allow adults to operate equipment without proper instructions.
- Keep the area of operation clear of all unauthorized persons.
- Remove from area of operation all foreign objects such as sticks, wire, rocks, etc., that might become tangled in rotors, causing damage to the windrower or being thrown from the windrower and striking other objects.
- Never attempt to make any adjustments while the tractor is running or the key is in the “ON” position. Before leaving the operator’s position, disengage power to the windrower and remove the ignition key.
- Disengage PTO, clutch, and hydraulic valve and shift the tractor into neutral or park before starting engine.

Safety Instructions for Operation and Maintenance

The following safety warnings are used here and on the windrower. 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 windrower 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 the windrower with a 540 RPM tractor.
- Never use a steel hammer when connecting or disconnecting a PTO shaft.

CAUTION:

- Repeated impact of the knives with frozen ground or hard objects can cause excessive wear and damage to the tractor or windrower. 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.

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.
- Keep hands, feet, and clothing away from moving components.

Safety Instructions for Operation and Maintenance (Cont'd)

WARNING:

- Do not wear loose or baggy clothing around rotating machinery. Machine must be clear of people, tools, and other objects before engaging the PTO.
- Engage the PTO slowly at idle speed to prevent unnecessary stress to driveline.
- Read and observe all warnings on the machine before attempting to operate the windrower. Do not attempt to operate this machine unless all factory-installed safety devices are in place.
- Never attempt to lubricate the windrower with the engine running. Always be sure to exercise the mandatory shut-down procedure.
- Be extremely careful not to bottom out or overextend the PTO shaft, as damage to the tractor or windrower could occur. Avoid lifting the windrower too high, as this can result in excessive PTO shaft wear if the machine is operated during a turning maneuver. DO NOT USE PTO ADAPTERS OF ANY KIND.
- Do not operate the windrower without the universal joints locked to the tractor and gearbox shafts.
- Operating the windrower at less than the 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 windrower above the rated RPM.

DANGER:

- Escaping fluid under pressure can be invisible and can penetrate the skin. Do not use your 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 driveline. Personal injury or death can result from entanglement.

Hydraulic Safety

WARNING: *Contact with high-pressure fluids may cause fluid penetration and burn hazards. Fluid that is under pressure can penetrate body tissue. Fluid penetration can cause serious injury and possible death. If fluid is injected into the skin, seek medical attention immediately!*

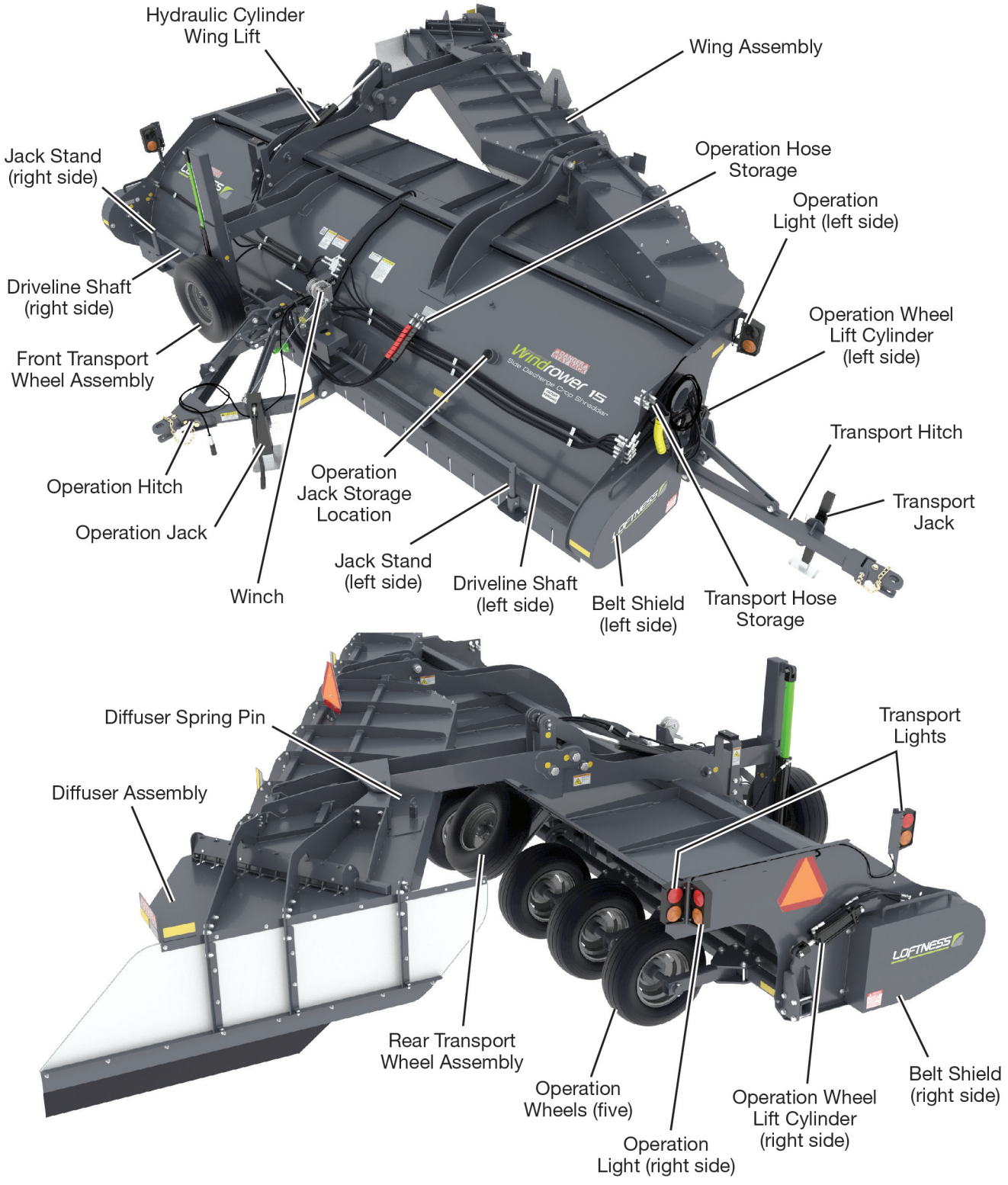
- Always wear safety goggles or glasses when working on the hydraulic system to avoid eye injury.
- The hydraulic system is under high pressure. Make sure all lines and fittings are tight and in good condition. These fluids, escaping under high-pressure can have sufficient force to penetrate skin and cause serious injury.
- Never check for leaks by using any part of your body to check for escaping fluid.
- To prevent serious personal injury from escaping high-pressure fluid, never attempt to inspect, service, or disassemble any part of the hydraulic system until all pressure has been relieved from the system.

California Proposition 65 Warning

WARNING: *This product can expose you to Mineral Oil, which is known to the State of California to cause cancer. For more information, go to www.p65warnings.ca.gov.*

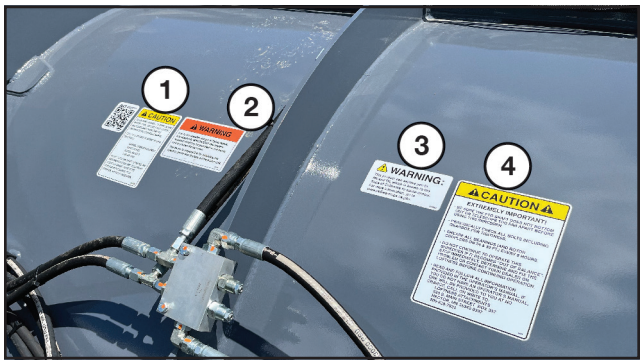
A decal with this warning statement is adhered to the machine. If the decal should become worn or missing, replace it immediately.

Air Windrower Shredder Identification



Safety Decal Locations

Check and replace any worn, torn, hard to read or missing safety decals on your machine.



1

⚠ 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.

NOTE: SCAN QR CODE TO ACCESS MANUAL OR CONTACT

LOFTNESS SPECIALIZED EQUIPMENT
650 SOUTH MAIN
HECTOR, MN 55342
1-800-828-7624

FAILURE TO FOLLOW SAFETY, OPERATING, AND MAINTENANCE INSTRUCTIONS COULD RESULT IN DEATH OR SERIOUS INJURY TO THE OPERATOR OR BYSTANDERS, POOR OPERATION, AND COSTLY BREAKDOWN.

208824

Part No. 208824

2

⚠ WARNING

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.

Part No. N17013

3

⚠ WARNING:

This product can expose you to Mineral Oil, which is known to the State of California to cause cancer. For more information, go to www.p65warnings.ca.gov.

203264

Part No. 203264

4

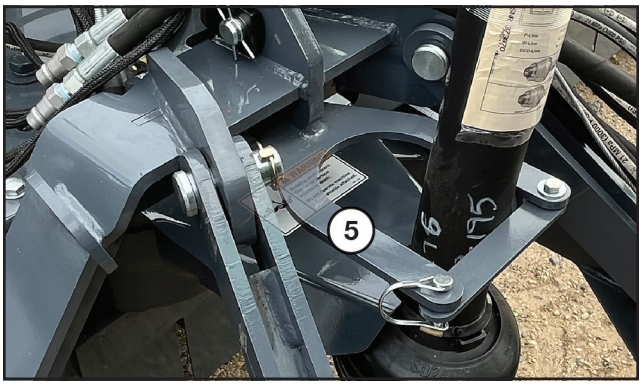
⚠ CAUTION ⚠

EXTREMELY IMPORTANT!

- BE SURE THE PTO SHAFT DOES NOT BOTTOM OUT OR TELESCOPE TOO FAR APART BEFORE USING THIS SHREDDER.
- PERIODICALLY CHECK ALL BOLTS INCLUDING GEARBOX FOR TIGHTNESS.
- GREASE ALL BEARINGS (AND ROTOR COUPLERS ON 24 & 30 FT.) EVERY 8 HOURS.
- DO NOT CONTINUE TO OPERATE THIS SHREDDER IF IT BECOMES "OUT OF BALANCE." STOP IMMEDIATELY, DETERMINE AND FIX THE PROBLEM OR CONTACT YOUR DEALER OR LOFTNESS BEFORE CONTINUING OPERATION.
- READ AND FOLLOW ALL INFORMATION PROVIDED IN THE OPERATOR'S MANUAL. IF YOU DO NOT HAVE AN OPERATOR'S MANUAL, ONE WILL BE PROVIDED TO YOU AT NO CHARGE. CALL OR WRITE TO:
  LOFTNESS SPECIALIZED FARM EQUIPMENT
  S. HIGHWAY 4 - BOX 337
  HECTOR, MN 55342-0337
  320-848-6273

4335

Part No. 4335



5

⚠ WARNING

Rotating parts hazard. Can cause serious injuries or death.

Do not operate machine without shields attached.

PN 4189

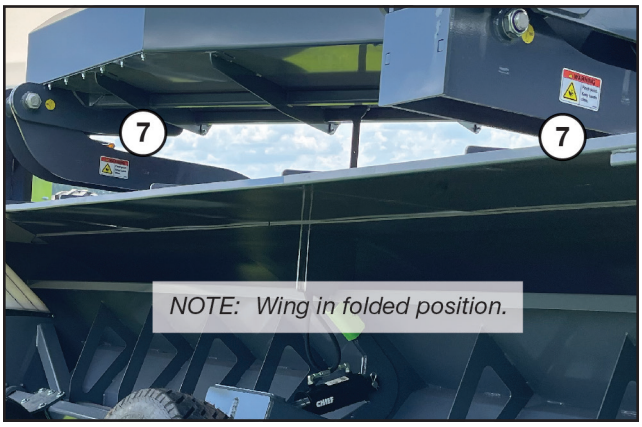
Part No. 4189

Safety Decal Locations (Cont'd)

6

DANGER
STAY BACK

Part No. 4334



7

⚠ WARNING

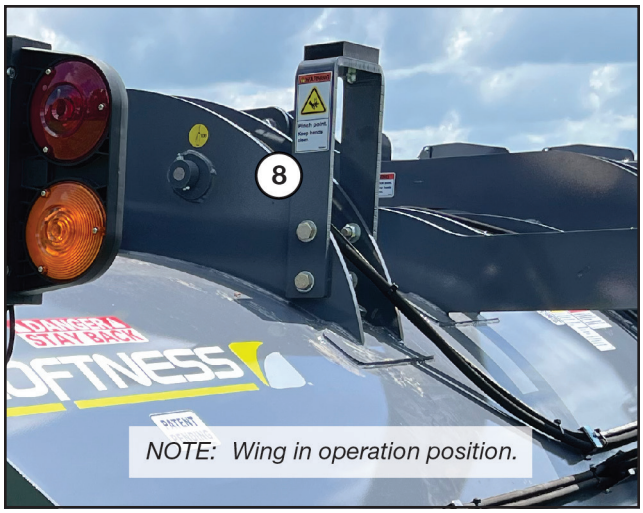
Pinch point.

Keep hands clear.

206502

Part No. 206502

Safety Decal Locations (Cont'd)



8

⚠ WARNING

Pinch point.

Keep hands clear.

206502

Part No. 206502

9

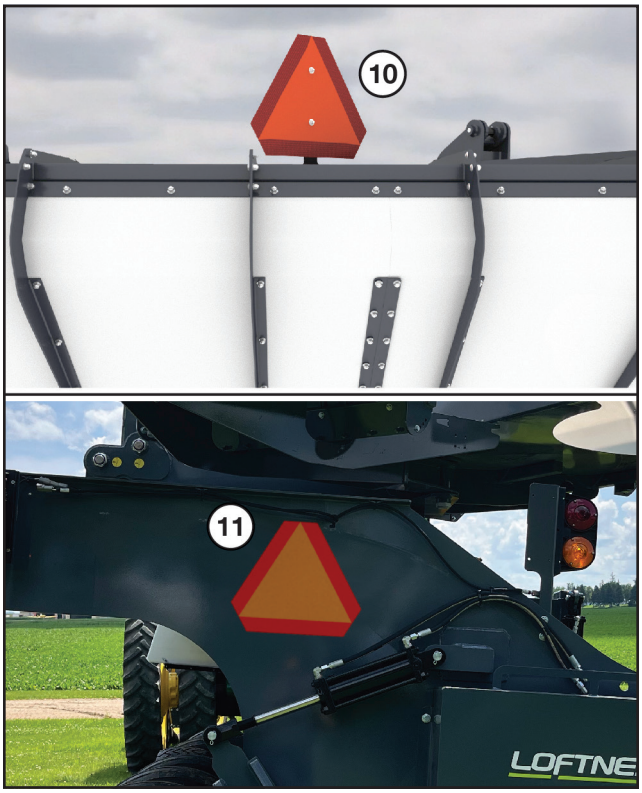
⚠ DANGER

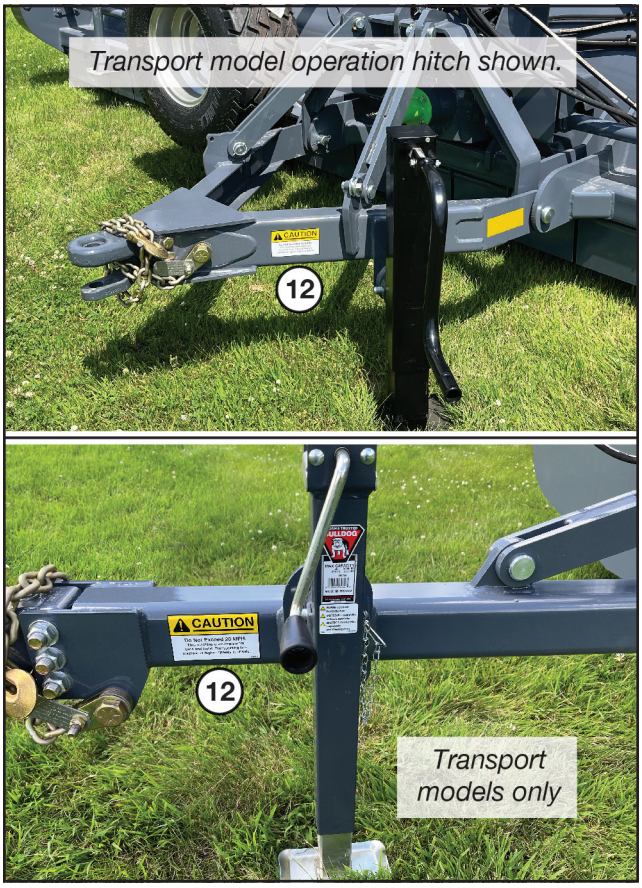
STAY BACK

KEEP HANDS AND FEET AWAY FROM ROTATING KNIVES UNDER MACHINE. DO NOT LEAVE OPERATOR'S POSITION WHILE PTO IS ENGAGED AND TRACTOR IS RUNNING.

Part No. 4135

Safety Decal Locations (Cont'd)





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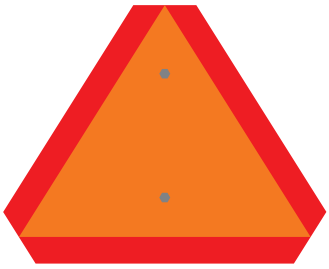


Part No. N18549

11

Part No. 4132

(Transport models only)

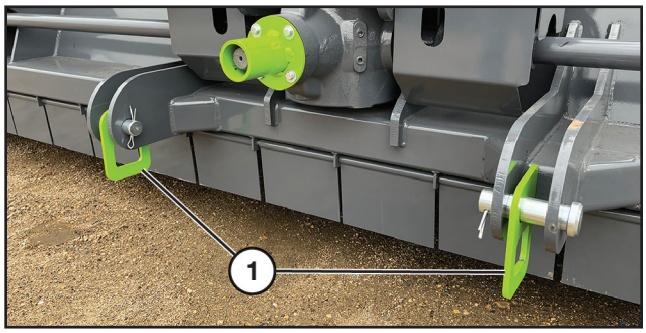
12

Part No. N23931

Equipment Set-up

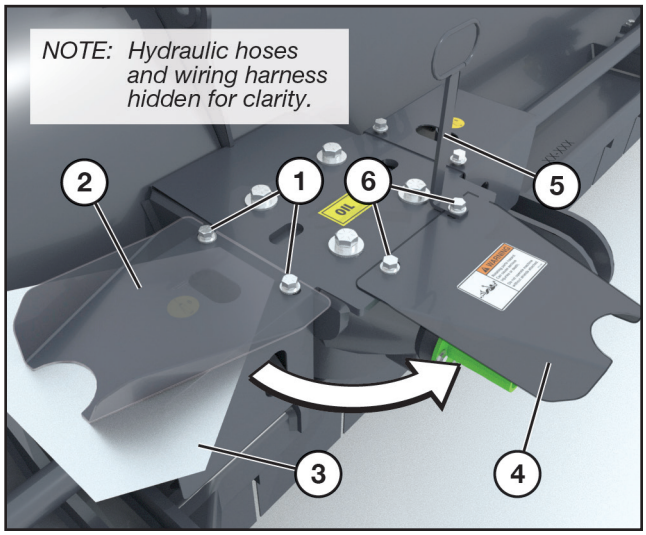
To accommodate the shipping width, some components of the windrower have been removed or secured in a temporary non-operating position. Follow the steps in this section to get the windrower into the operational configuration.

Remove Shipping Tie-Down Brackets



Remove the two brackets (1) that were used to secure the windrower during shipping.

PTO Shield



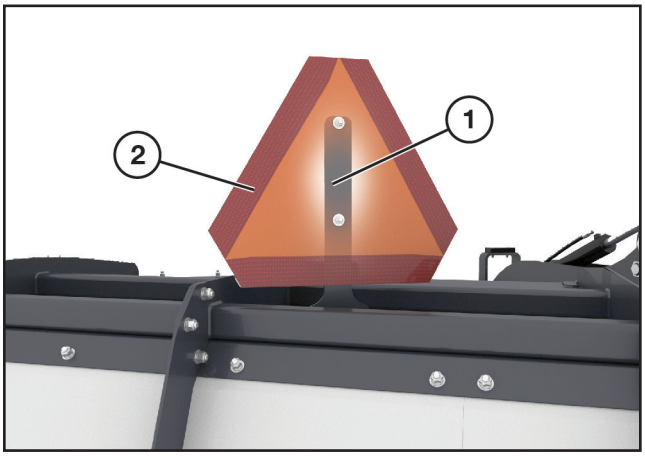
Remove the two bolts and washers (1) and lift the PTO shield (2) off the driveline guard.

Set the slow moving vehicle sign (3) aside. This will be assembled in the following step.

Return the bolts and washers back into the same position. Tighten.

Reposition the PTO shield in the new position as shown (4). The hose holder (5) will need to be removed from its shipping location and repositioned on top of the PTO shield. Use the existing hardware (6) to secure. Tighten all hardware.

Installing the Slow Moving Vehicle Sign



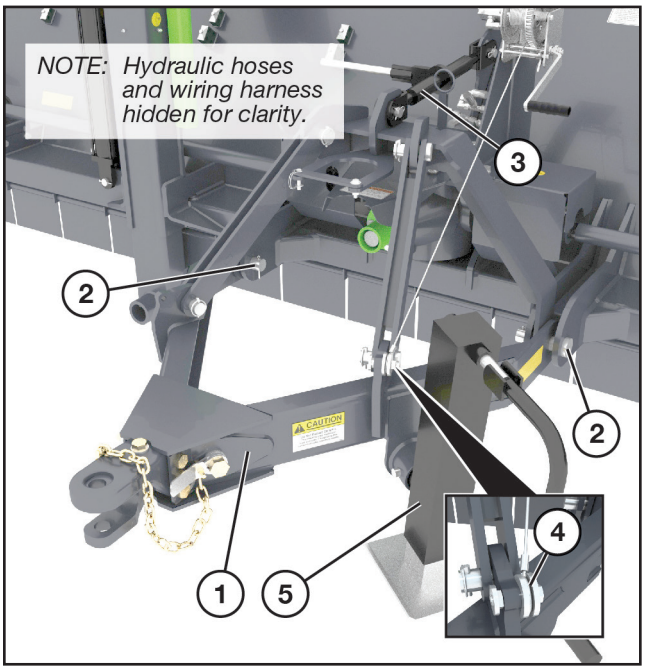
Using the hardware already located on the bracket (1) at the rear of the wing assembly, secure the slow moving vehicle sign (2).

Equipment Set-up (Cont'd)

Operation Hitch Installation (Transport Models)

The operation hitch assembly is heavy. Use a hoist and chains (or straps) to lift and place the hitch into position.

> **DANGER:** ***Crushing Hazard.*** *Failure to safely secure and lift the hitch assembly could result in severe injury or death. Use a power hoist and proper lifting equipment. Allow only trained personnel to lift the hitch assembly.*



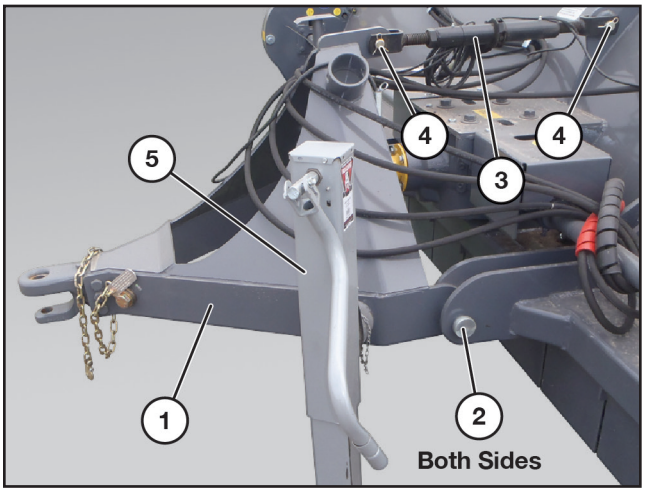
Install the operation hitch assembly (1), insert the pins and secure with the cotter pins (2).

Connect the ratchet jack (3) from the frame to the hitch, insert pins and secure with clips.

Connect the winch cable end loop (4) at the location shown. Loop the cable end between the two large washers. Tighten the hardware.

Position the operation jack (5) in the jacking location and secure with the pin.

Operation Hitch Installation (Models without Transport)

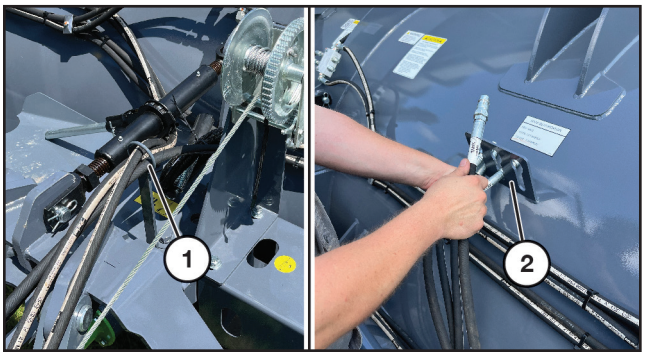


Install the hitch assembly (1), insert pins and secure with the cotter pins (2).

Connect the ratchet jack (3) from the frame to the hitch, insert pins on each end (4) and secure with clips.

Position the operation jack (5) in the jacking location.

Route Hoses and Wiring Harness

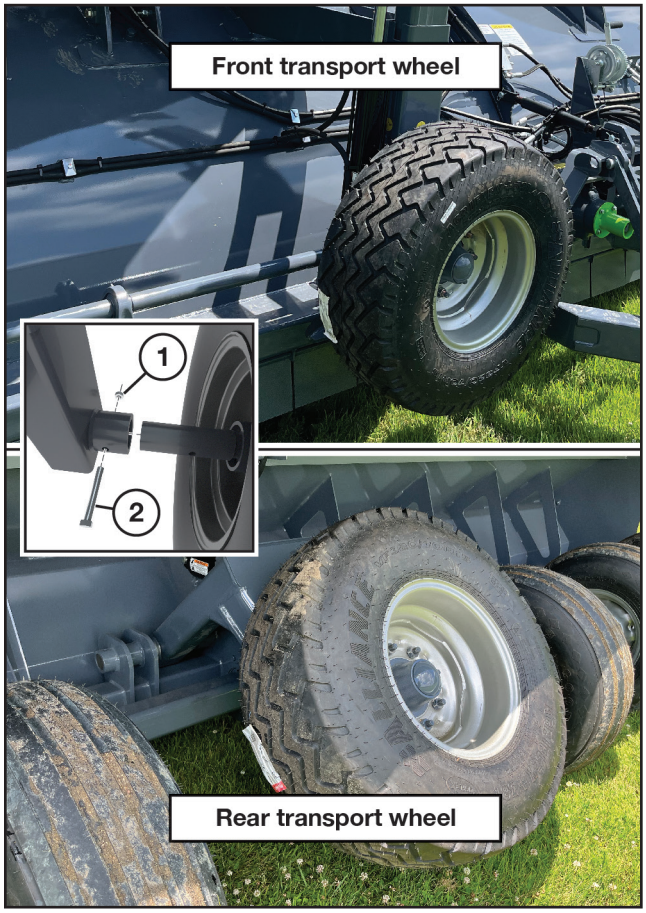


After installing the operation hitch assembly, route the hydraulic hoses and wiring harness through the hose holder (1). Secure the hose ends onto the storage rack (2) located on the hood of the shredder.

Equipment Set-up (Cont'd)

Transport Wheels

NOTE: *Before this step, make sure there is enough clearance to install the transport wheels. Use the jack on the operation hitch to raise the windrower if necessary.*

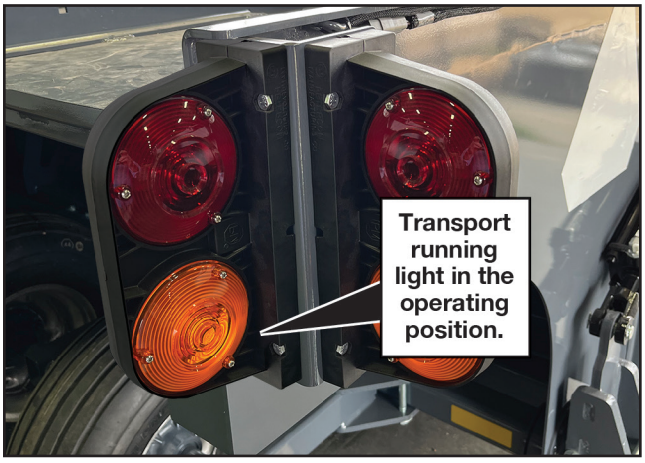


Remove the nut (1) and bolt (2) from the windrower frame. Lift and slide the transport wheel assembly into place. Reinstall the hardware and tighten.

Repeat the procedure for the opposite transport wheel.

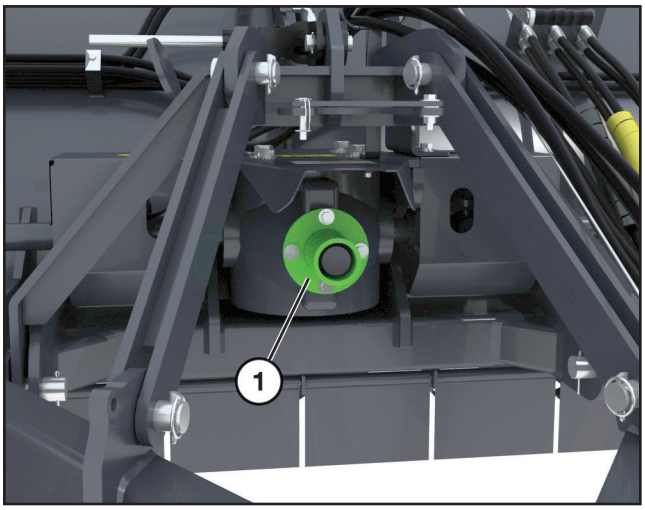
Transport Lights

NOTE: *This procedure is only for windrower models equipped with the transport feature.*



Remove the single running light from the shipping tote. Use the supplied hardware to fasten the light assembly into the operating position as shown above.

Gearbox Shaft Guard



Remove the gearbox shaft guard (1) by removing the four bolts with washers.

NOTE: *Keep the shaft guard and store in a convenient location. Use it to protect the shaft splines whenever the PTO shaft is not installed.*

PTO Set-up

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

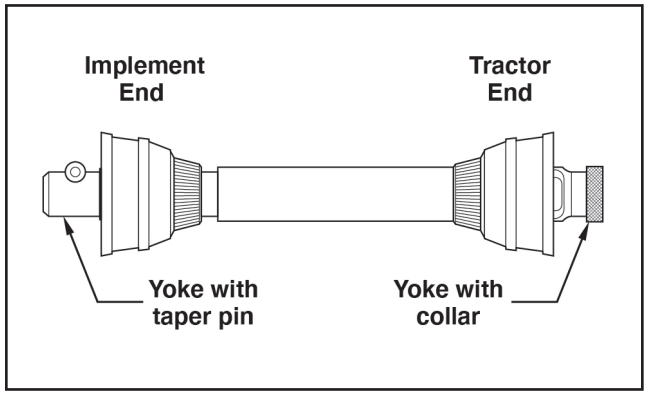
The PTO provided with each Loftness windrower will work on most tractors without modification.

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

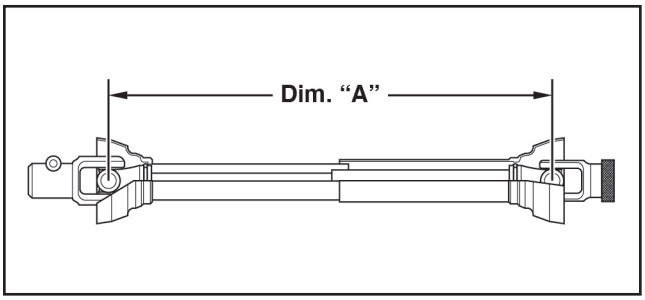
Check PTO length (6" overlap min.). Lubricate CV before initial start-up and before connecting to tractor to allow movement of tractor yoke in all directions to help distribute grease throughout the moving parts. Lubricate after every 8 hours of use. Tighten PTO clamp bolts (torque to 150 ft-lb), then recheck after 10 minutes of operation and again after 1 hour of operation.

PTO Sizing

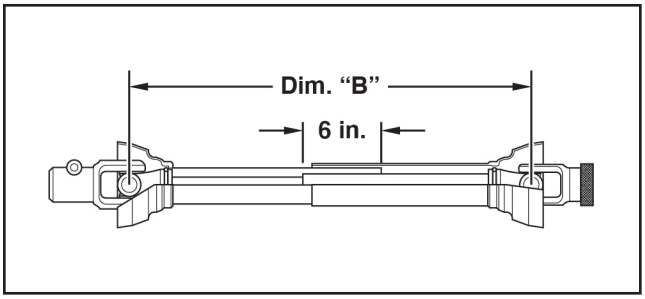
The following diagrams assist in sizing the PTO as outlined in "PTO Set-up" above.



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

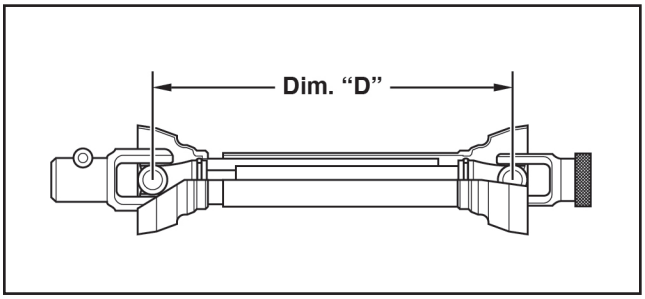


Extend the PTO until it is fully extended, but not completely separated. This will determine dimension "A".



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

IMPORTANT: *Never operate equipment with the PTO extended further than dimension "B".*



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

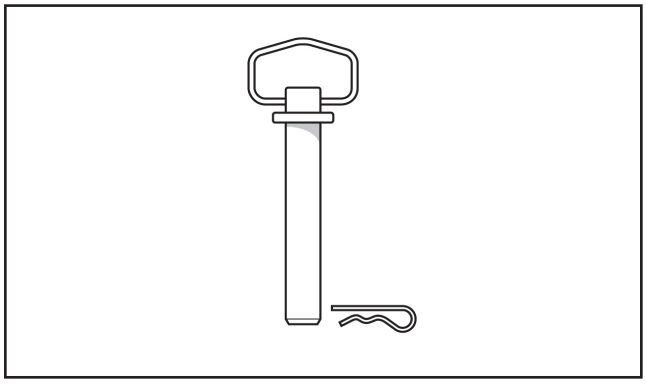
IMPORTANT: *Never operate equipment with the PTO collapsed to less than dimension "D".*

Getting Started

Pre-Start Checklist

- Grease the machine. See “Grease Points Location” on page 38 for grease point locations.
- Adjust tire air pressure to the recommended specification.
- Check oil level in gearbox (maintain level to the lower check plug hole on the side of the gearbox case).
- Drive belt tension – if the belt needs adjustment, refer to “Belt Tension” on page 17 for instructions.
- Check all bolts, nuts, and set screws for tightness.
- Review the operator’s manual.

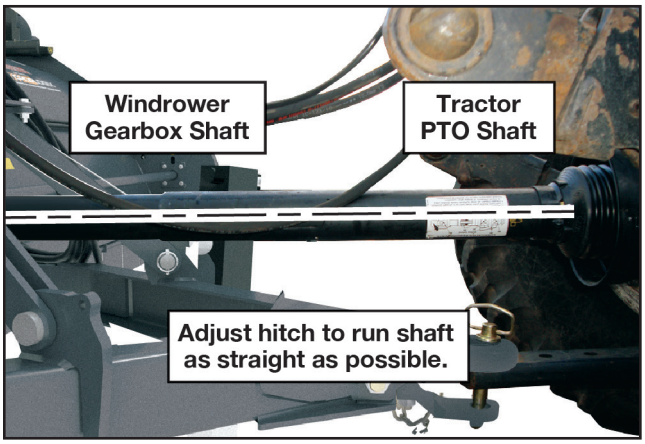
Attaching the Windrower for Operation



IMPORTANT: *Use a safety locking pin when connecting hitch pins.*

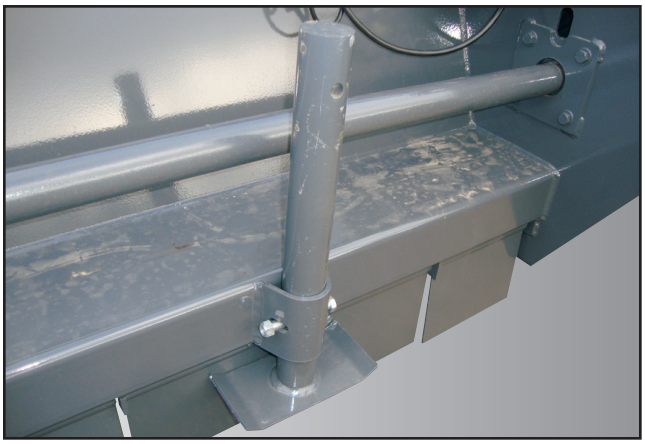
⚠	**DANGER:** *Failure to install a safety locking pin could result in loss of hitch pin, causing the windrower to become disconnected from the tractor during operation, or in transport, which could cause serious injury or death to those nearby.*

The windrower can be attached to any tractor with a PTO that conforms to ASAE/SAE standards; see “PTO Set-up” on page 16 for PTO specifications and set-up. Do not use a windrower built for 1000 RPM with a 540 RPM tractor or serious damage to the windrower could occur.



Connect the hitch to the draw bar. Adjust hitch to permit PTO shaft to run as straight as possible.

Jack Stands



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

Belt Tension

Check the rotor drive belts to ensure they have 1/2" maximum deflection at the midpoint between the pulleys. If adjustments need to be made, see “Belt Adjustment” on page 42 for instructions.

IMPORTANT: *To avoid damage or excessive wear, always engage or disengage the PTO with engine at idle speed.*

Cutting Conditions

The windrower is most efficient when crop and field conditions are dry.

IMPORTANT: *To minimize clogging issues, avoid cutting in damp conditions.*

Operating Speed

Various shredding conditions require different ground speeds. Under most conditions, the tractor can be driven between 3 and 7 MPH. Maintain the needed ground speed and 1,000 PTO RPM for proper air flow.

Maintaining Rotor Balance

The rotors of the windrower 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. See “Knife Replacement” on page 46 for instructions on replacing the knives.

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.*

⚠	**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.

⚠	**CAUTION:** *Repeated impact to the knives from frozen ground or other hard objects can cause excessive wear and damage to tractor or windrower. Repeated impact to hard objects can cause the metal ring constraining knives to rotor to fail and release the knife from the rotor. Be sure to maintain recommended ground clearance as specified in this manual.*

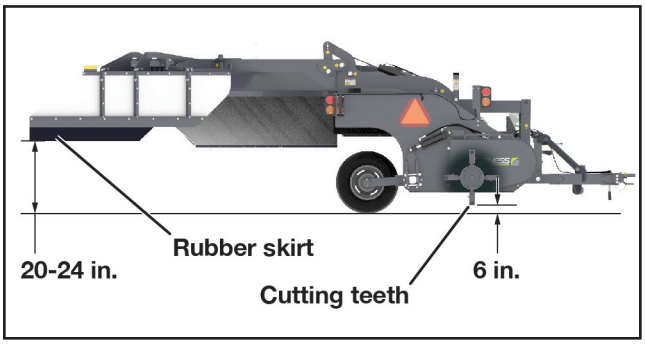
Cutting Height

The recommended minimum cutting height is 6 in. Continually cutting below this height increases the likelihood that ground scalping could occur. Frequent scalping greatly reduces windrower component lifetimes. Loftness considers this pattern to be misuse, and subsequently will not be covered under warranty.

The cutting height is adjusted and controlled with the rear hydraulic cylinders (rear operation wheels). The customer may need to supply cylinder stops to aid in obtaining the recommended cutting height. Maintaining the proper cutting height will provide a uniform crop shredding. 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 windrower need to be close to parallel after adjustment into the operating position. It might be necessary to remove the PTO shaft from the windrower when adjusting the cutting height for a better viewpoint to get the shaft angles similar. See “Attaching the Windrower for Operation” on page 17, and “PTO Set-up” on page 16 for more information on installing and adjusting the PTO shaft.

Adjusting the Cutting Height

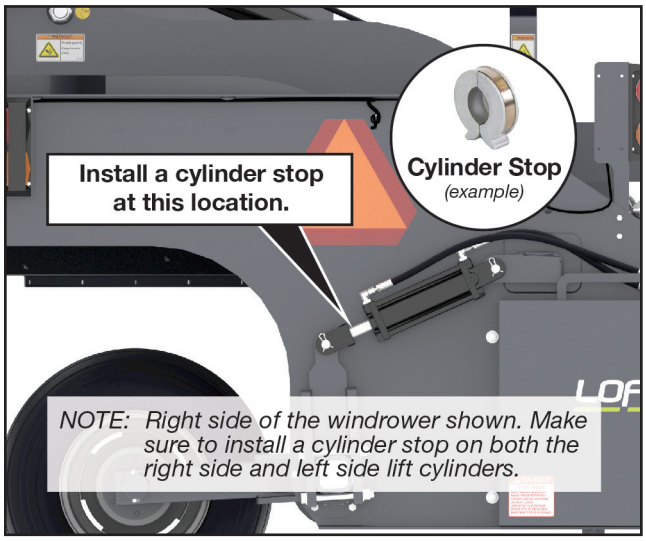


The cutting teeth should be kept 6 in. off the ground, and the distance between the rubber skirt on the rear-most part of the discharge chute and the ground should be between 20 in. and 24 in.

(Procedure continued on following page.)

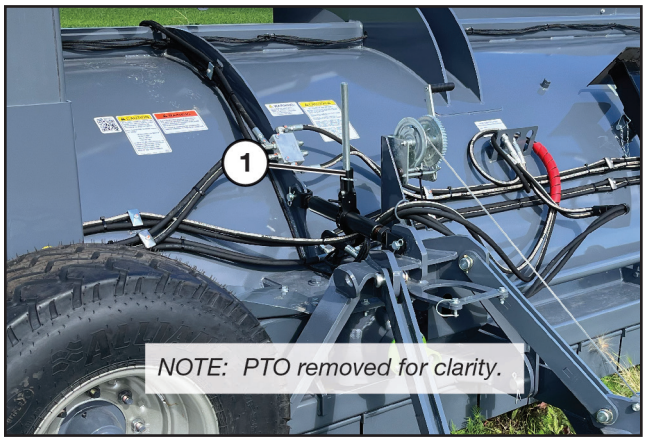
Cutting Height (Cont'd)

Adjusting the Cutting Height (Cont'd)



Inserting a cylinder stop on the lift cylinders (both sides) can help control the cutting height of the machine.

NOTE: *Loftness does not supply the cylinder stops.*



Use the ratchet jack (1) on the operation hitch to make final height adjustments.

Extending the jack will lower the tail end of the machine, and retracting the jack with raise it.

NOTE: *Keep in mind that adjustments to the ratchet jack will slightly alter the height of the cutting head.*

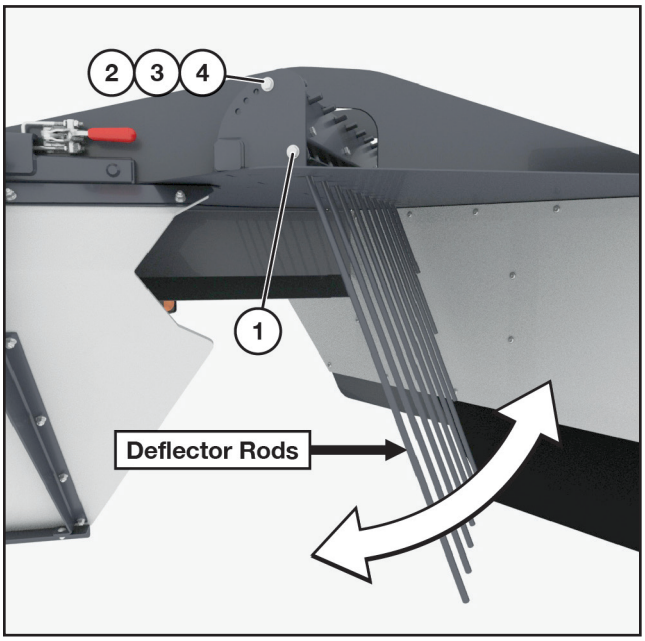
Adjust accordingly to maintain the 6 in. cutting height while keeping the rubber skirt between 20 in. and 24 in. off the ground.

Deflector Adjustment

Adjustments can be made to the deflector to control the width of the windrow as it is dispelled out of the windrower chute.

Raise the deflector rods for a narrow windrow.

Lower the deflector rods for a wider windrow.



To adjust the angle of the diffuser rods, loosen (do not remove) the hardware (1) at the pivot point. Repeat the procedure on the opposite side of the deflector.

Then remove the nut (2), bolt (3), and washers (4) on both sides of the deflector that lock the deflector into position.

Pivot the deflector assembly by hand until the hole on the deflector assembly aligns with the desired setting hole on the discharge chute assembly - (there are four deflector angle settings total).

Reinstall the locking hardware through the aligned holes. Make sure to install the locking hardware on the opposite side of the deflector.

Tighten all hardware.

Turning

IMPORTANT: *The constant velocity PTO shaft can be turned with PTO engaged.*

IMPORTANT: *To avoid damage or excessive wear, do not engage or disengage the PTO with engine at high speed.*

⚠	**CAUTION:** *Be aware of the front transport wheel assembly on the windrower when making right turns. Contact with the tractor tire can occur if turns are made too sharp, resulting in damage to the windrower and/or tractor.*

⚠	**CAUTION:** *Be extremely careful not to bottom out or extend PTO shaft too far, damage to tractor or windrower could occur. Be careful to avoid lifting the windrower too high, which results in excessive PTO shaft wear if machine is operated during turning maneuvers. Do not use PTO adapters of any kind.*

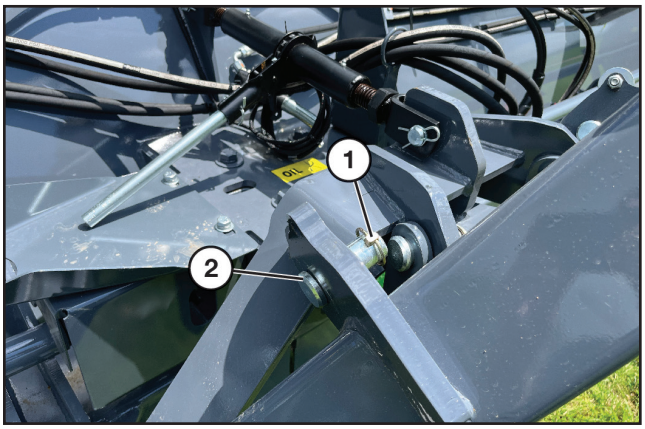
Transport to Operation Configuration Procedure

If equipped with the transport option, follow this section for proper instructions to safely convert the windrower from a transport configuration to an operation configuration.

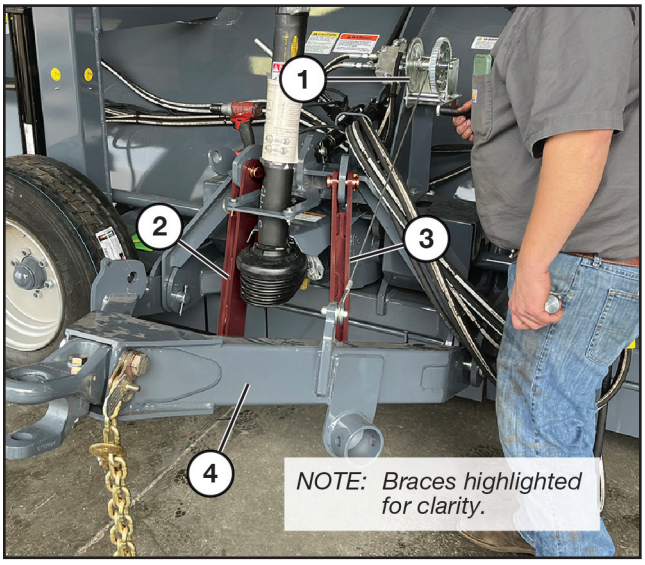
Putting the Operation Hitch into Position

Turn off the tractor and dismount. Follow the “Mandatory Shut-Down Procedure” on page 5.

⚠	**DANGER:** *Failure to turn the tractor off before disconnecting could result in serious injury or death.*



Remove the linch pin (1) and hitch pin (2) on the operating hitch and set aside.

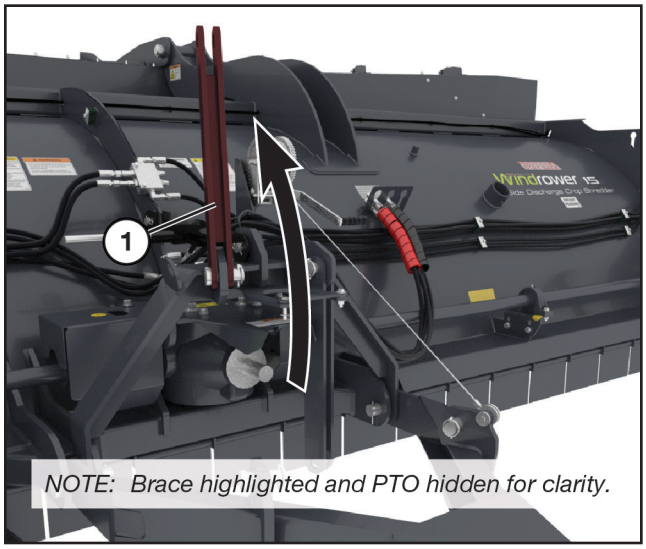


Lower the hitch using the hand winch (1) until the hitch braces (2 and 3) can rotate up and through the hitch frame (4).

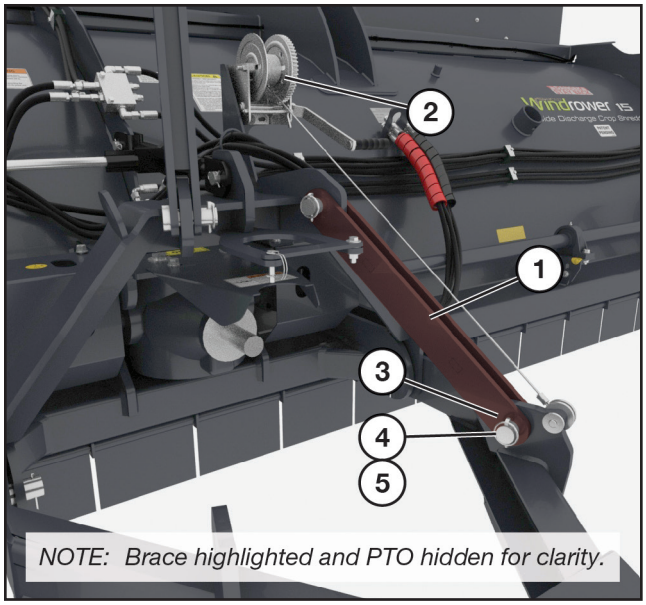
(Procedure continued on following page.)

Transport to Operation Configuration Procedure (Cont'd)

Putting the Operation Hitch into Position (Cont'd)



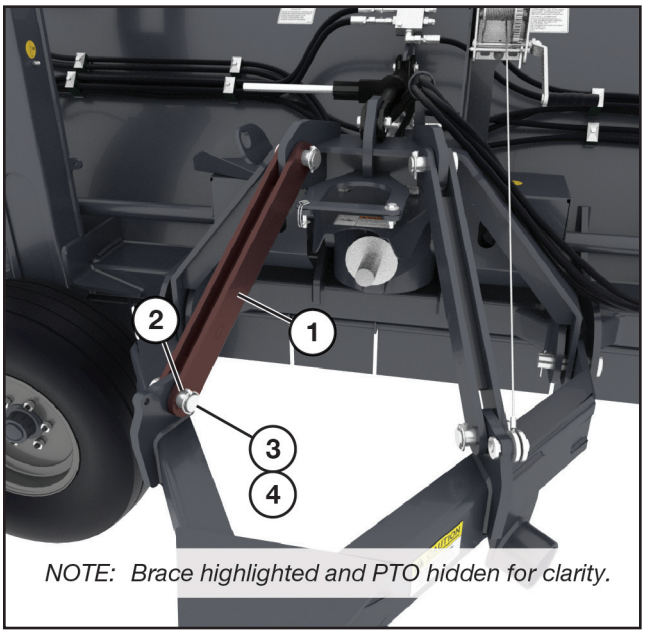
Rotate the right side hitch brace (1) to a vertical position.



NOTE: *When the hitch is folded up, the pin (4) and linch pin (5) are stored in the hole where the lower end of the left side brace will be secured. Remove them before aligning the holes in this procedure.*

Hold the left hitch brace (1) while operating the hand winch (2) to bring the hitch into alignment with the lower hole (3) in the left brace.

Insert the pin (4), and secure with linch pin (5).



Lower the right brace (1) and align with the hole (2) in the hitch. Insert the pin (3) and secure with the linch pin (4) as shown above.

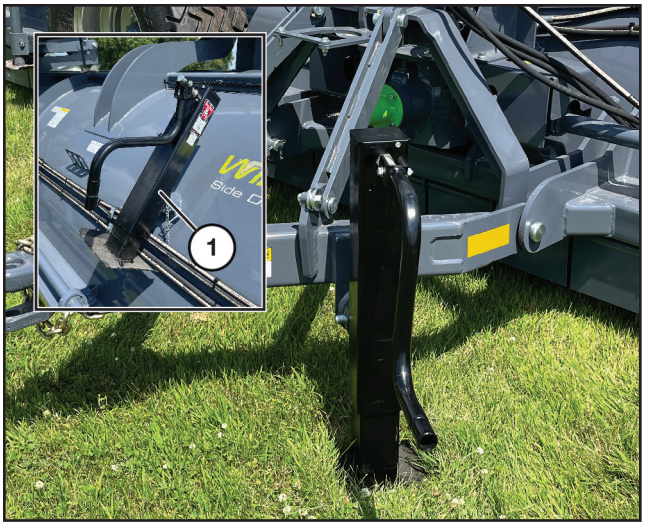
IMPORTANT: *After completing this step, operate the hand winch to add some slack in the operation hitch cable to allow for sharp turns.*

(Procedure continued on following page.)

Transport to Operation Configuration Procedure (Cont'd)

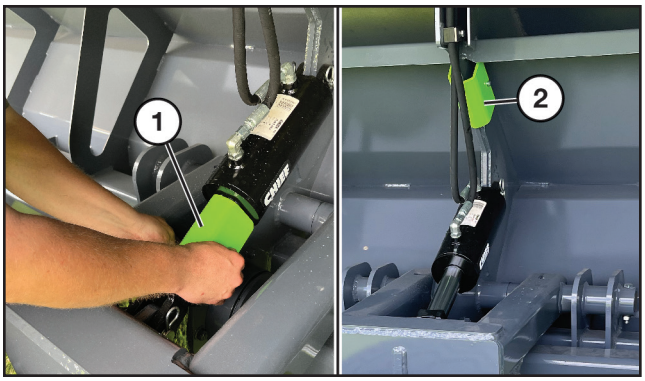
Putting the Operation Hitch into Position (Cont'd)

Installing the Jack



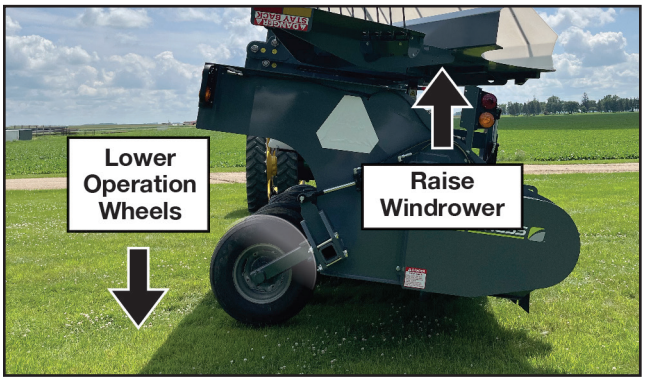
Remove the jack from the storage position (1), and install on the operation hitch as shown above. Secure with pin.

Removing and Storing Rear Cylinder Stop



Remove the pin and hairpin clip from the cylinder stop (1) on the rear transport wheel cylinder. Move the stop to the storage position (2) and secure it with the same pin and retaining clip.

Raising the Transport Wheels



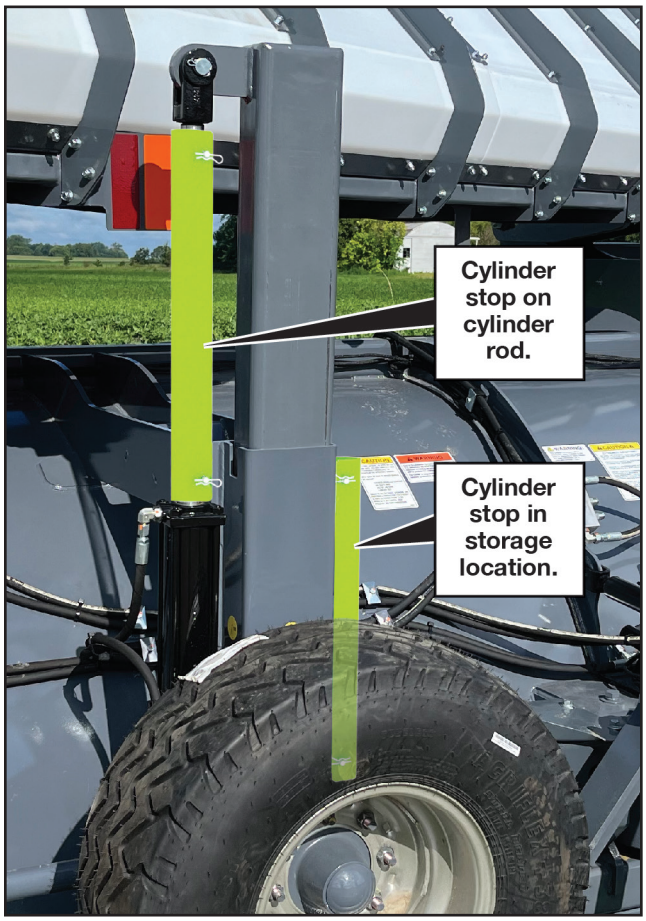
Lower the operation wheels until the windrower is fully raised. This relieves pressure on the rear transport wheel and allows it to swing out freely.

Raise the transport wheels. This lowers the windrower and it will now be supported by the rear operation wheels and the jack on the operation hitch.

Once the transport wheels are fully raised, raise the operating wheels to lower the machine into the unhooking position.

Transport to Operation Configuration Procedure (Cont'd)

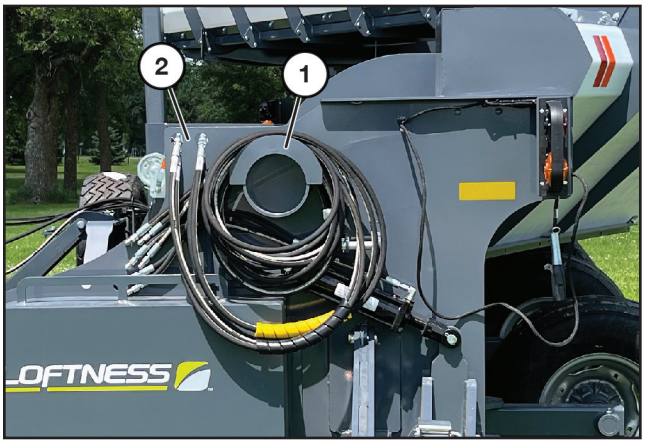
Installing the Front Cylinder Stop



Remove the upper and lower pins with hairpin clips from the cylinder stop and take the stop out of the storage location.

Place the stop onto the rod of the front transport lift cylinder. Secure it with the same pins and retaining clips.

Disconnecting the Tractor from Transport Hitch



Disconnect the electrical wiring harness and the hydraulic hoses from the tractor.

Wrap the hoses securely around the hose holder (1) on the windrower as shown and secure hose ends in the hose rack (2).

After securing the hydraulic hoses, wrap the electrical wiring harness around the hoses on the hose holder, ensuring it is properly secured.

Remove the drawbar pin from the hitch.

Disconnect the safety chain.

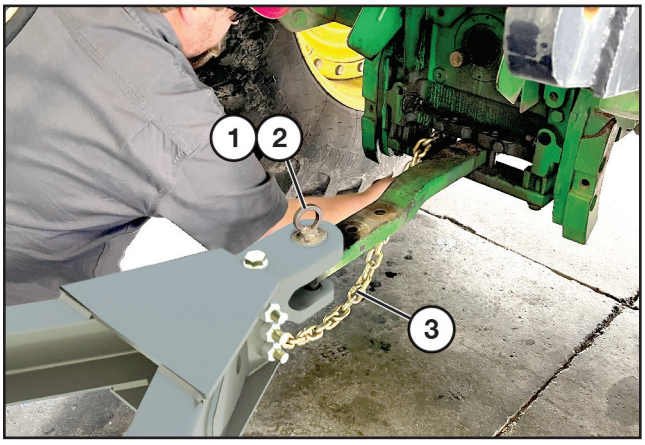
Transport to Operation Configuration Procedure (Cont'd)

Connecting to the Operation Hitch

Remount the tractor, start, and move into position to connect to the operation hitch.

Once aligned, turn off the tractor and dismount.

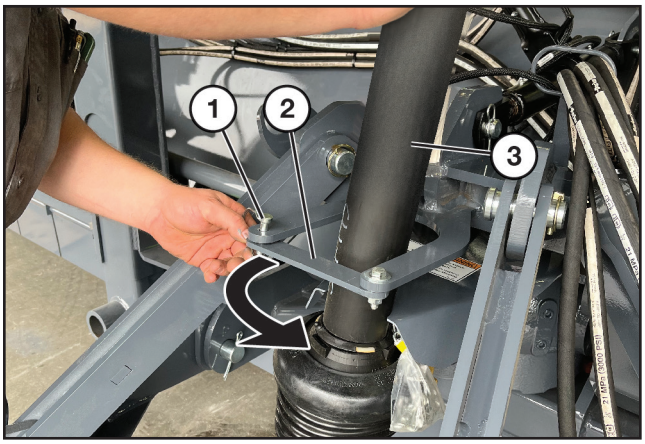
> **DANGER:** *Failure to turn the tractor off before connecting the hydraulic lines and PTO shaft could result in serious injury or death.*



Insert the drawbar pin (1), secure with the safety locking (2) pin.

NOTE: *Use the hitch ratchet if necessary to align the operation hitch with the tractor's drawbar.*

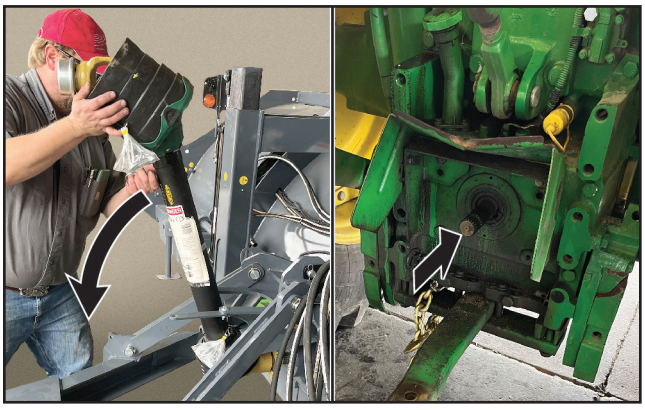
Connect the safety chain (3).



Pull the retaining pin (1) on the PTO holder and move the arm (2) out of the way to release the tractor end of the PTO shaft (3).

Return the arm and retaining pin back into position.

Connecting to the Operation Hitch



Pivot the PTO shaft into position and connect to the tractor's PTO.

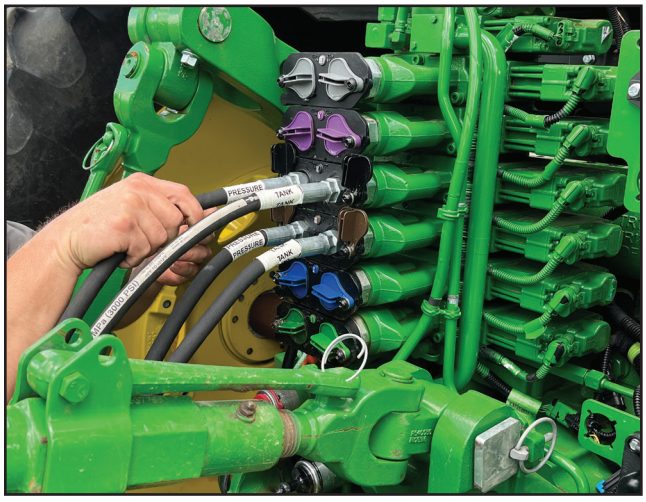
NOTE: *Watch the length of the PTO shaft. Make sure you have enough clearance to get by the tractor's hitch configuration. You may need to release the PTO shaft before connecting the windrower to the tractor.*

Refer to "PTO Set-up" on page 16 for reference on installing and adjusting the PTO shaft.

Transport to Operation Configuration Procedure (Cont'd)

Connecting to the Hydraulics

Remove the hose coupler ends from the storage rack on top of the windrower.



Connect the hydraulic hoses to the tractor's hydraulic system.

NOTE: *Hydraulic hoses are labeled to indicate which coupler to connect to on the tractor's hydraulic system.*

NOTE: *Make sure there is enough slack in the hydraulic hoses to allow for sharp turns.*

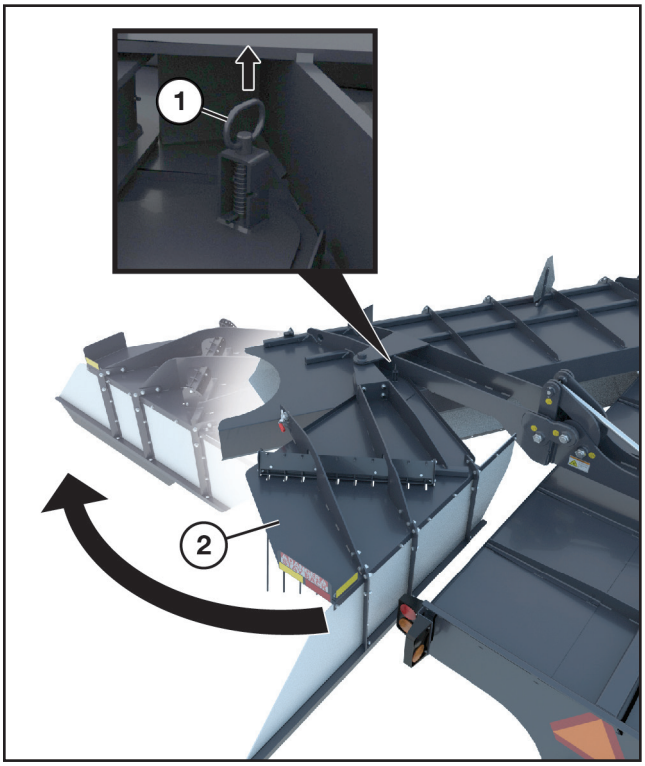
Connect the windrower's wiring harness to the tractor's wiring connection.

Moving the Pivot Wing into the Operating Position

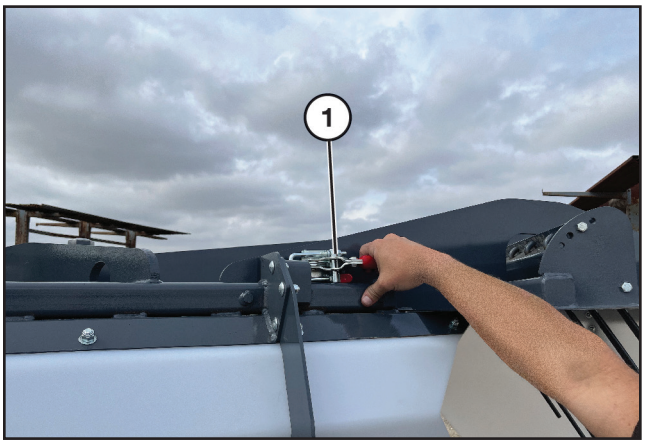
Using the hydraulic system, extend the wing pivot cylinder until plate on the wing meets the frame (1).

Transport to Operation Configuration Procedure (Cont'd)

Moving the Diffuser into the Operating Position



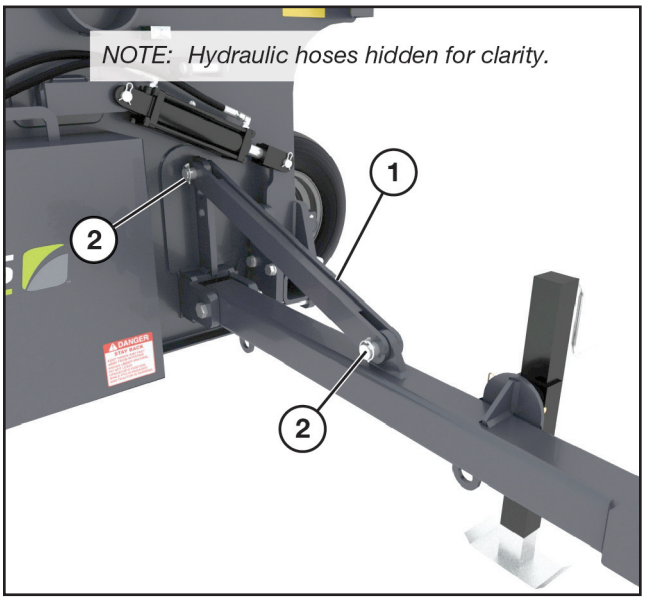
Lift the spring pin (1) and rotate the diffuser assembly (2) into the operating position.



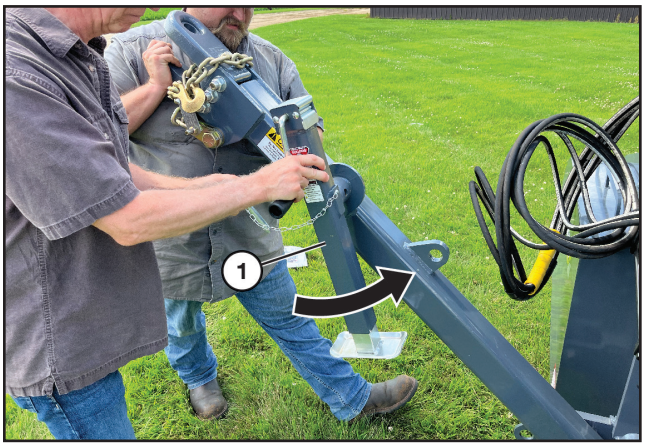
Engage the latch (1) to secure the diffuser into place.

Storing the Transport Hitch

CAUTION: *The transport hitch assembly is heavy. Have an extra person available to assist with this procedure. Failure to do so could result in injury.*



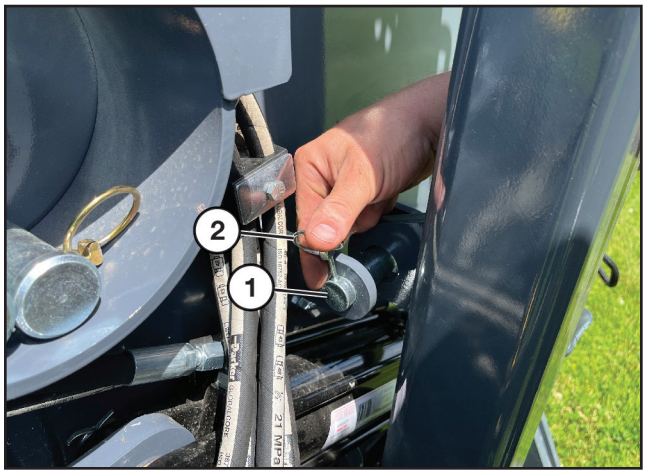
Remove the transport hitch support bar (1) by removing the pins and linch pins at each end (2). Set the bar, pins, and linch pins aside.



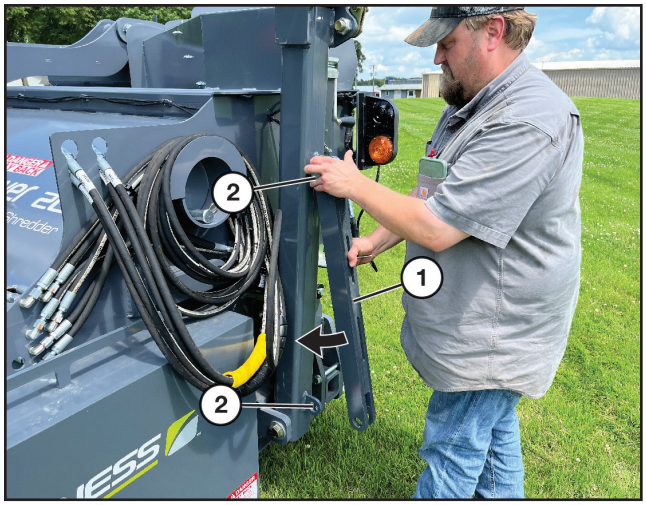
Have one person support the hitch while the other person removes the pin and rotates the transport jack (1) into the storage position. Reinstall the pin to secure the jack.

(Procedure continued on following page.)

Transport to Operation Configuration Procedure (Cont'd)



Lift the hitch to its vertical storage position and install the pin (1). Secure with the linch pin (2).



Attach the support bar (1) to the bottom of the transport hitch and secure with the pins and the linch pins at each end of the bar (2).

Adjust the Cutting Height

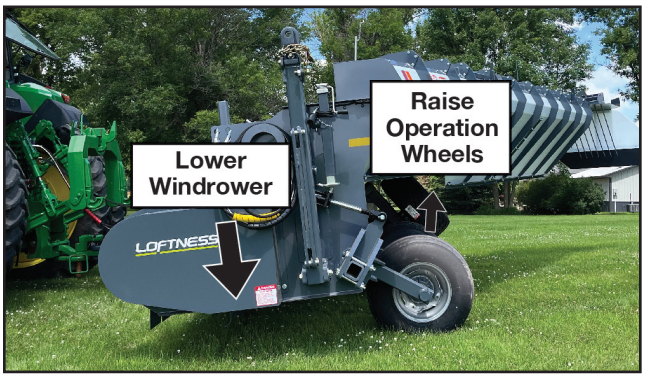
Using the hydraulic system, adjust the position of the rear operation wheels to the desired cutting height.

NOTE: *For the most efficient operation, the cutting teeth should be kept 6 in. off the ground, and the distance between the rubber skirt on the rear-most part of the discharge chute and the ground should be between 20 in. and 24 in. See "Adjusting the Cutting Height" on page 18 if adjustments need to be made to keep the machine height within these measurements.*

Operation to Transport Configuration Procedure

If equipped, follow this section for proper instructions to safely convert the windrower from an operating configuration to a transport configuration.

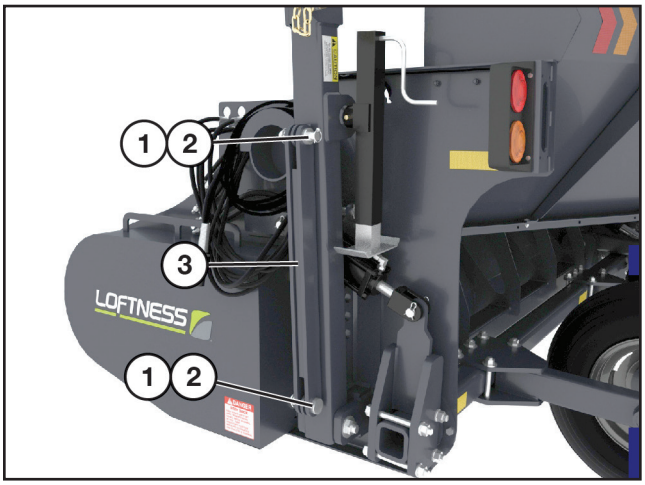
Lowering the Windrower



Using the hydraulic system, raise the rear operation wheels to lower the windrower to its lowest position. At this point the lift cylinders are fully retracted

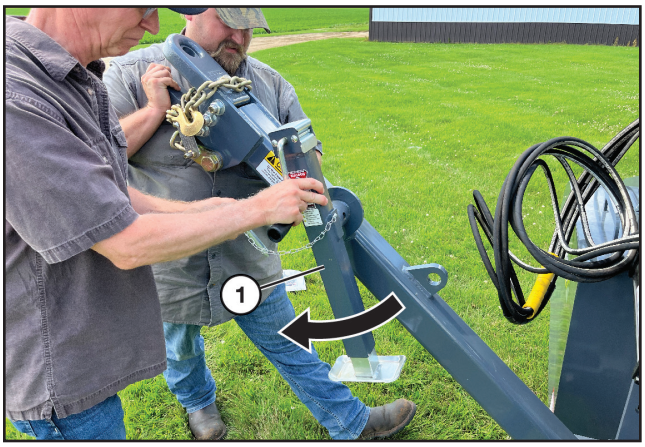
Setting Up the Transport Hitch

⚠	**CAUTION:** *The transport hitch assembly is heavy. Have an extra person available to assist with this procedure. Failure to do so could result in injury.*



Remove the pins and linch pins (1 and 2) securing the support bar (3) to the underside of the transport hitch and set the bar aside.

Have one person support the transport hitch while the other removes the linch pin (1) and pin (2) to release the transport hitch from the storage position.



Lower and support the hitch while the other person removes the pin securing the jack in place, then rotates the transport jack (1) into the operating position. Reinstall the pin to secure the jack.

(Procedure continued on following page.)

Operation to Transport Configuration Procedure (Cont'd)

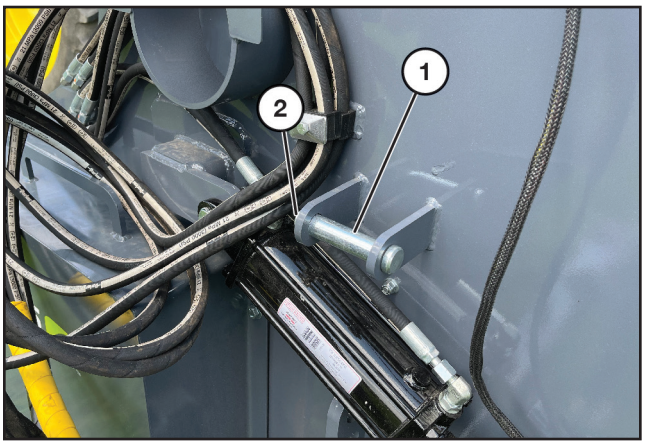
Setting Up the Transport Hitch (Cont'd)

NOTE: *The windrower frame has three adjustment holes. Select the hole position that provides the best alignment with your tractor's hitch to keep the windrower as parallel to the ground as possible.*

Connect the machine end of the support bar (1) into one of the holes in the windrower as shown, securing with the pin and linch pin.

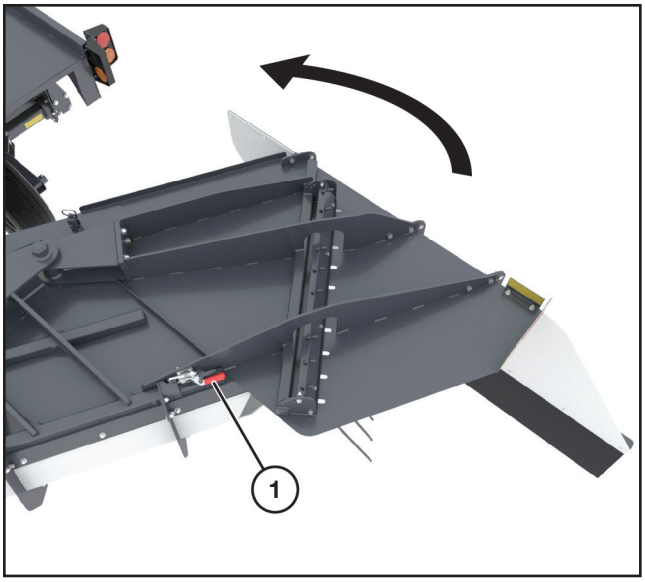
Adjust and position the hitch tongue until the hole in the opposite end of the support bar (1) aligns with the hole in the hitch tongue (2). Insert the pin and secure with the linch pin.

Use the transport jack to align the transport hitch with the tractor drawbar height.



Return the pin (1) used to hold the transport hitch in the upright position back to its storage position on the windrower frame. Secure with the linch pin (2).

Rotate the Diffuser into the Transport Position

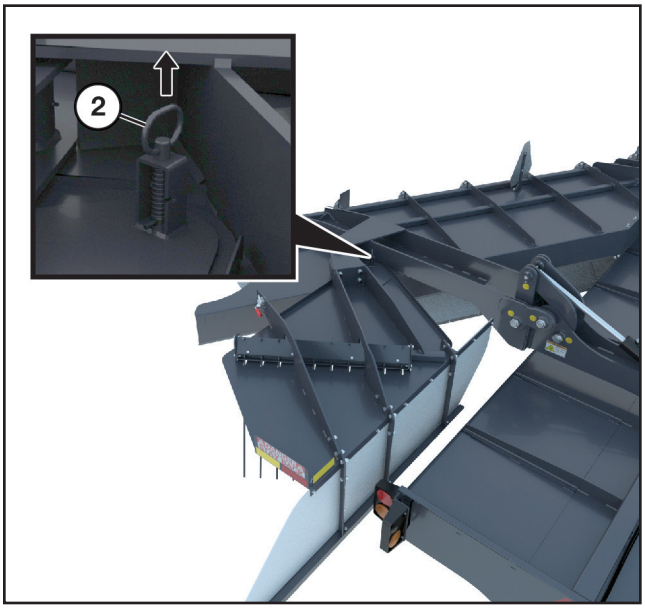


Release the latch (1) and rotate the diffuser into the transport position.

(Procedure continued on following page.)

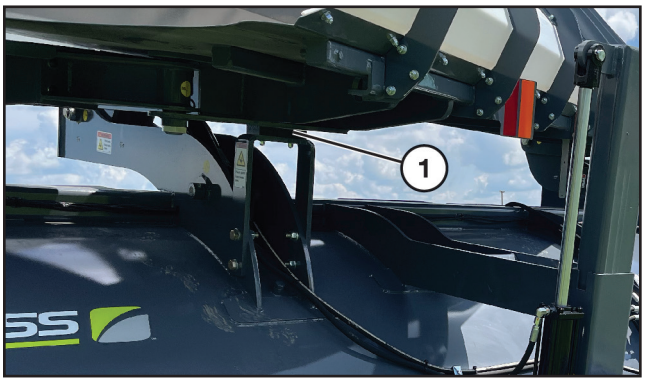
Operation to Transport Configuration Procedure (Cont'd)

Rotate the Diffuser into the Transport Position (Cont'd)



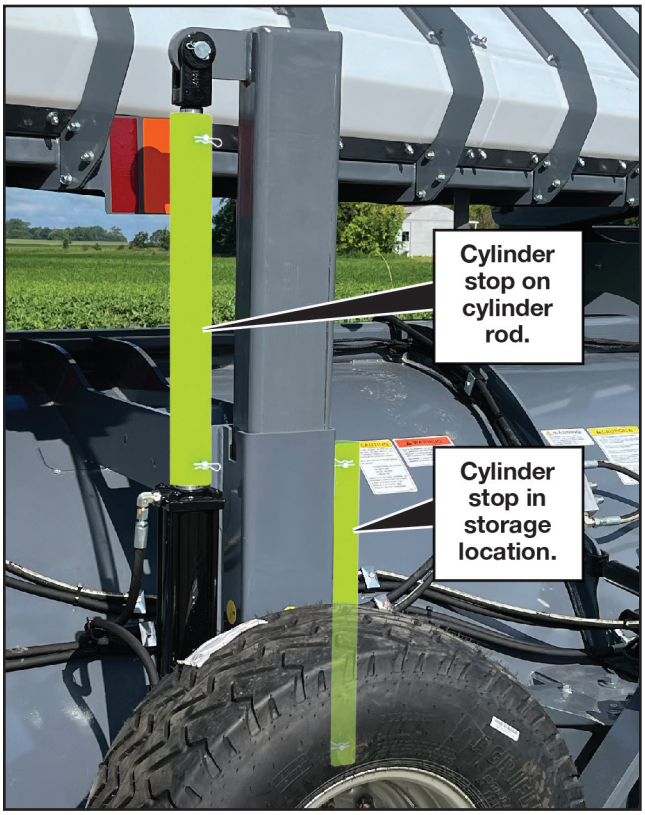
Engage the spring pin (2) to lock the diffuser assembly into place.

Folding the Wing Assembly



Use the hydraulic system to fold the wing assembly into the transport position until it comes to rest on the stop (1).

Removing and Storing the Front Cylinder Stop



Remove the upper and lower pins with hairpin clips from the cylinder stop and take the stop off of the cylinder rod.

Move the stop back to the storage position. Secure it with the same pins and retaining clips.

Operation to Transport Configuration Procedure (Cont'd)

Disconnect from the Operation Hitch

Turn the tractor off and cycle the hydraulic valves to remove any pressure from the hoses before disconnecting.

Dismount the tractor.

Follow the "Mandatory Shut-Down Procedure" on page 5.

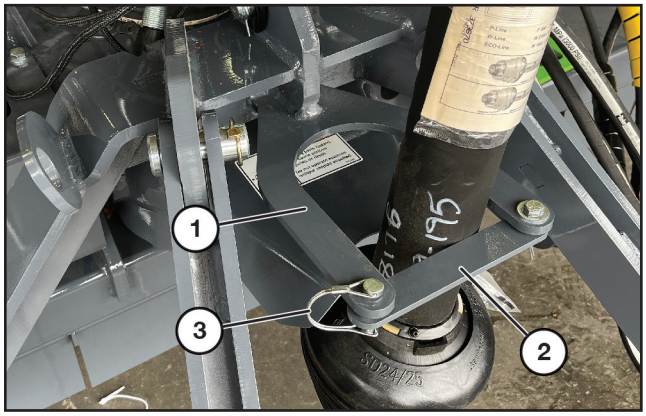
⚠	**DANGER:** *Failure to turn the tractor off before disconnecting could result in serious injury or death.*

NOTE: *Use the hitch ratchet if necessary to relieve any tension between the operation hitch and the tractor's drawbar.*

Disconnect the safety chain connected to the tractor.

Disconnecting the PTO Shaft

⚠	**DANGER:** *Failure to turn the tractor off before disconnecting the PTO shaft could result in serious injury or death.*



With the tractor turned off, disconnect the PTO shaft from the tractor end and position in the PTO holder (1) as shown. Make sure the arm (2) is secured with the retaining pin (3).

Disconnecting the Hydraulic Hoses

⚠	**DANGER:** *Failure to turn the tractor off before disconnecting the hydraulic lines could result in serious injury or death.*

Disconnect all hydraulic couplers and the wiring harness connection from the windrower to the tractor.

Wrap all hydraulic hoses neatly and make sure they are secure. Place coupler ends in the storage rack on top of windrower.

Secure the wiring harness.

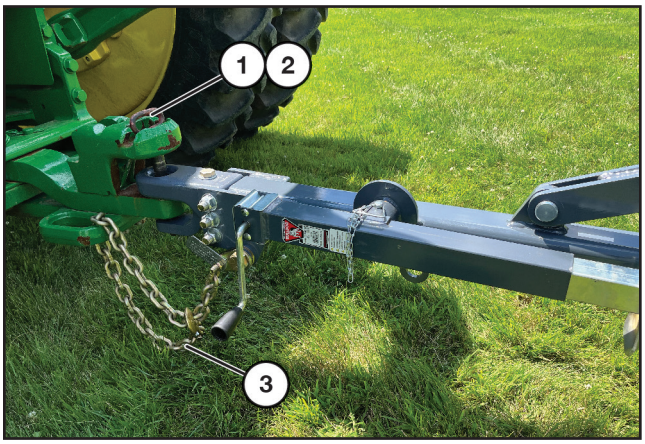
Operation to Transport Configuration Procedure (Cont'd)

Connecting to the Transport Hitch

Remount tractor, start, and move into position to connect to the transport hitch.

Turn off the tractor and dismount. Follow the "Mandatory Shut-Down Procedure" on page 5.

⚠	**DANGER:** *Failure to turn the tractor off before connecting could result in serious injury or death.*



Insert the drawbar pin (1), securing with the safety locking pin (2).

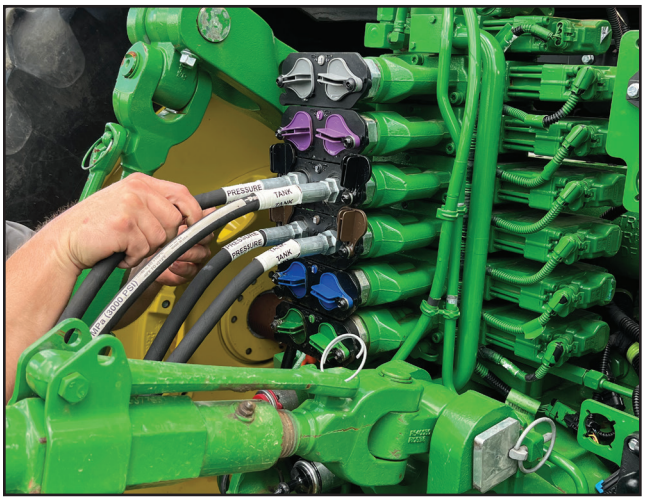
Connect the safety chain (3).

⚠	**DANGER:** *Failure to install a safety locking pin could result in loss of hitch pin, causing the windrower to become disconnected from the tractor during transport, which could cause serious injury or death to those nearby.*

Rotate the transport jack into the storage position (parallel with the hitch tongue). Secure with pin.

Connect the electrical wiring harness for transport.

NOTE: *Make sure there is enough slack in the wiring harness to allow for sharp turns.*



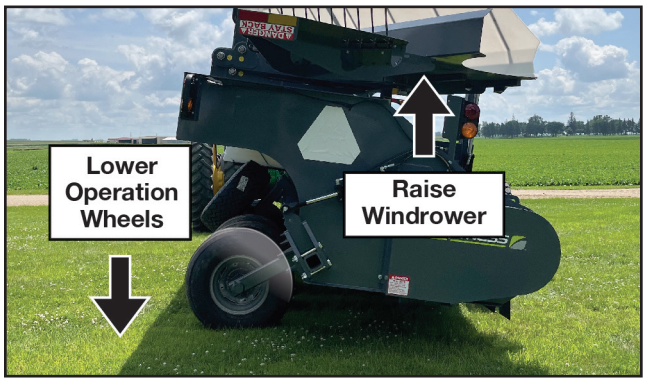
Connect the hydraulic hoses to the tractor's hydraulic system.

NOTE: *Hydraulic hoses are labeled to indicate which coupler to connect to on the tractor's hydraulic system.*

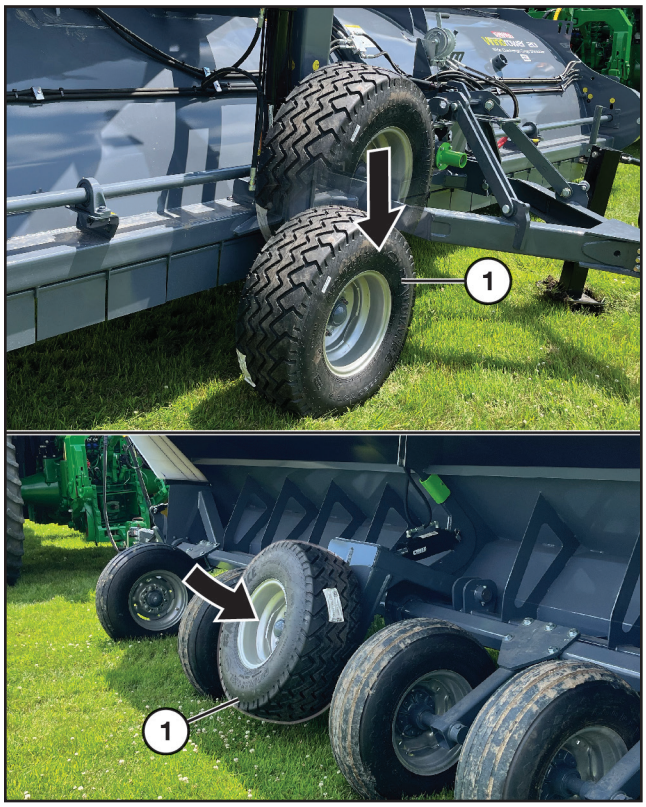
NOTE: *Make sure there is enough slack in the hydraulic hoses to allow for sharp turns.*

Operation to Transport Configuration Procedure (Cont'd)

Lowering the Transport Wheels

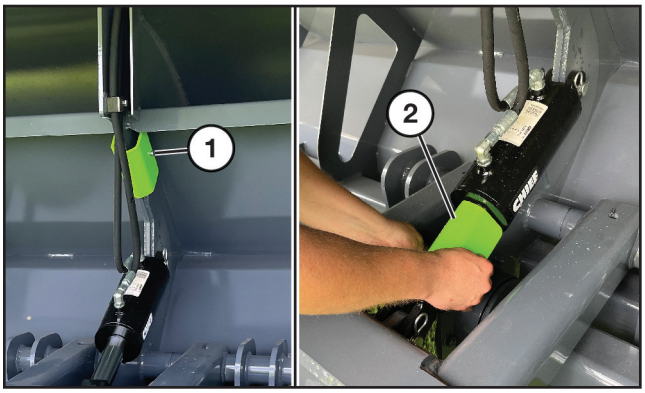


After the wing has been folded into the transport position, lower the operation wheels until the windrower is fully raised. This relieves pressure on the rear transport wheel and allows it to swing in freely.



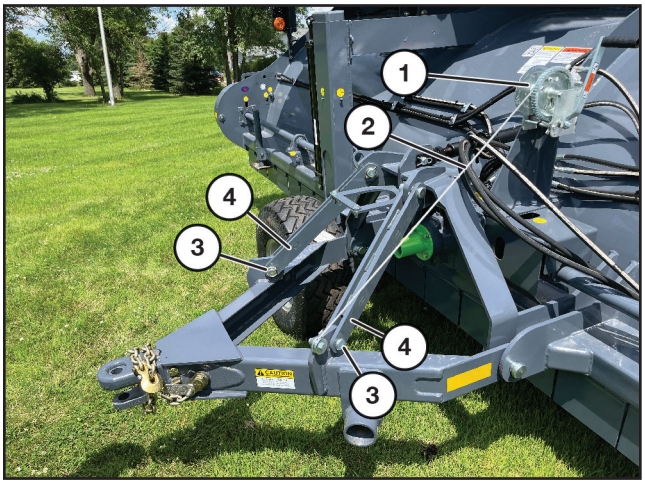
Lower the transport wheels (1).

Once the transport wheels are fully lowered, raise the operating wheels to lower the machine.



Remove the pin and hairpin clip from the cylinder stop (1) on the rear transport wheel storage location. Move the stop to the cylinder (2) and secure it with the same pin and retaining clip.

Folding the Operation Hitch



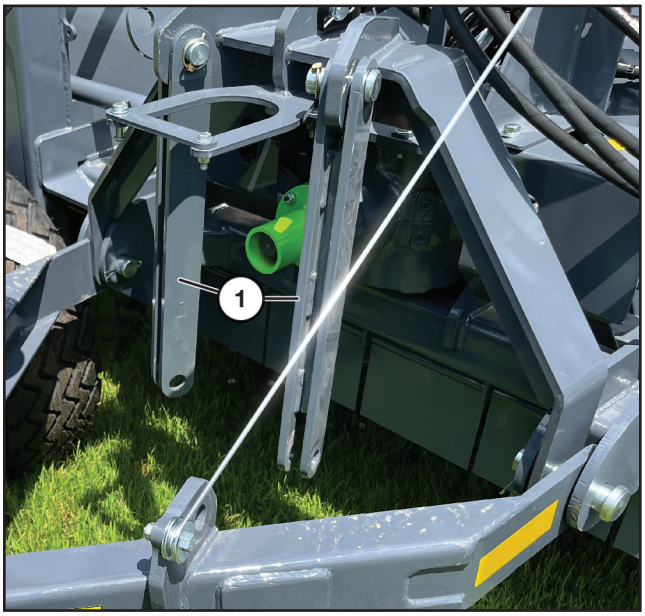
Using the hand winch (1) on the operation hitch, adjust the cable (2) to create enough slack to allow the lower pins (3) in the braces (4) to be removed.

Remove the lower linch pins/pins and set aside. These will be reinstalled into the same holes on the hitch after the hitch assembly is raised.

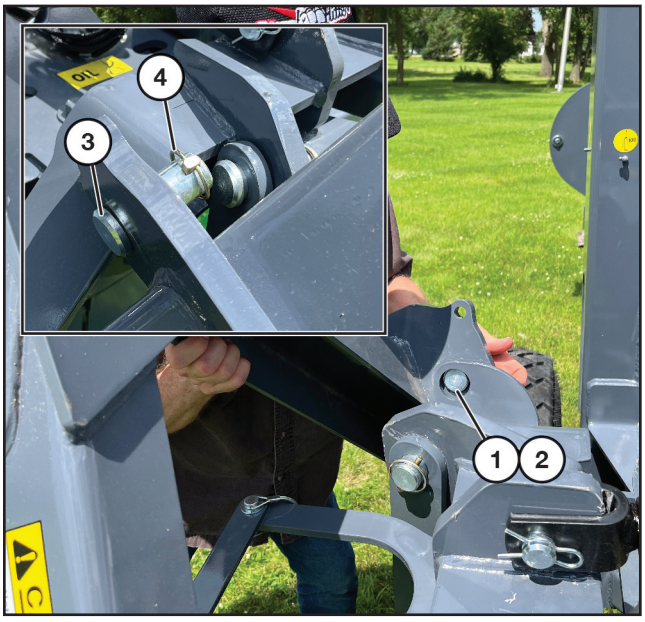
(Procedure continued on following page.)

Operation to Transport Configuration Procedure (Cont'd)

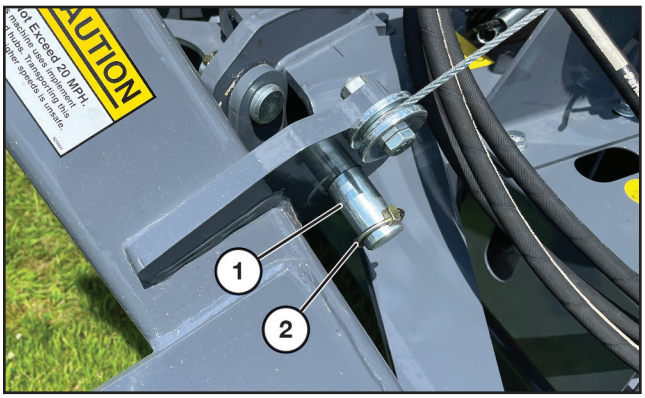
Folding the Operation Hitch (Cont'd)



With the pins removed, lower the hitch with the hand winch until the braces (1) drop clear through the hitch as shown above.



Using the hand winch, raise the hitch until the holed bracket (1) on the right side of the hitch assembly aligns with the hole on the windrower frame (2). Insert the right brace pin (3) and linch pin (4) to secure into position.



Return the left brace pin (1) to the original hole on the hitch assembly where the lower end of the left brace was installed. Secure with the linch pin (2).

⚠	**CAUTION:** *Verify warning lights are properly operating before transporting the windrower on public roads. Make sure "Slow Moving Vehicle" decal is visible.*

⚠	**CAUTION:** *Verify all jacks have been returned to their storage positions and the jack stands are raised and locked in their highest position before transport.*

Transporting

Whenever transporting the windrower on public roads, verify taillights are operating correctly.

⚠	**CAUTION:** *Do not exceed 20 mph when transporting the windrower.*

Transporting the Windrower in the Operation Configuration

When transporting the windrower short distances in its operation configuration, rear operation wheels (1) must be lowered so the windrower is at its highest position.

IMPORTANT: *Do not fold the wing when transporting the windrower in the operation configuration; the wing must remain in the operation position as shown above.*

⚠	**CAUTION:** *Verify warning lights are properly operating before transporting the windrower on public roads. Make sure "Slow Moving Vehicle" decal is visible.*

⚠	**CAUTION:** *Verify all jacks have been returned to their storage positions and the jack stands are raised and locked in their highest position before transport.*

⚠	**CAUTION:** *For windrowers with the transport option, be aware of the front transport wheel assembly when making right turns. Contact with the tractor tire can occur if turns are made too sharp, resulting in damage to the windrower and/or tractor.*


LOFTNESS

General Maintenance

To ensure efficient operation, you should inspect, lubricate, and make necessary adjustments and repairs at regular intervals. Parts that are starting to show wear should be ordered ahead of time, before a costly breakdown occurs and you have to wait for replacement parts. Keep good maintenance records, and adequately clean your windrower after each use.

Maintenance of any type on equipment is dangerous when the machine is running.

DANGER: *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" before attempting any service work.*

When reassembling components, always use new lock nuts and apply a thread-locking compound to prevent loosening from vibration. Apply an anti-seize compound to all bearing and shaft contact surfaces.

Maintenance Schedule

HOURS	SERVICE POINTS	SERVICE REQUIRED					
		CHECK	CLEAN	CHANGE	GREASE	ADJUST	OIL
Every 8	Machine		X				
	Loose Bolts					X	
	Hoses and Wiring	X					
	Oil Leaks	X					
	Rotor Bearings				X		
	Knives	X					
	Belt Tensioner				X		
	Line Shaft Bearings	X			X		
	PTO CV Shaft	X			X		
Every 25	Telescoping PTO Tube	X			X		
	Line Shaft U-Joints	X			X		
Every 50	PTO Overrunning Clutch	X			X		
	Wheel Lift Tubes	X			X		
	Drive Belt Tension	X					
	Drive Belt	X					
	Safety Labels	X					
Every 100	Wheel Bearings	X			X		
	Gearbox (w/oil change)	X					X

Lubrication

Proper lubrication is important. Too little lubricant will cause premature failure of a bearing. Too much lubrication usually causes high operating temperature and early failure of seals. Follow all lubrication instructions and schedules included in this section.

The operating life of the machine and its components depends heavily on regular and proper lubrication. The recommended lubrication intervals are based on normal operating conditions. Severe or unusual conditions may require more frequent servicing.

Lubrication (Cont'd)

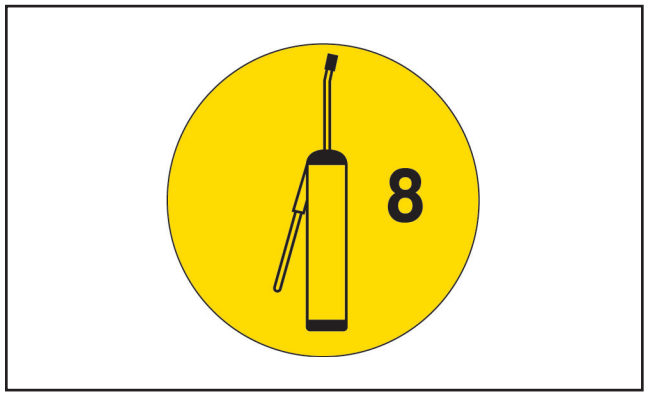
Grease Points Location

Use a #2 general purpose lithium-based grease unless noted otherwise.

NOTE: *Replace any broken or missing grease fittings. Be sure to clean fittings before greasing.*

WARNING: *Do not lubricate parts while the machine is running.*

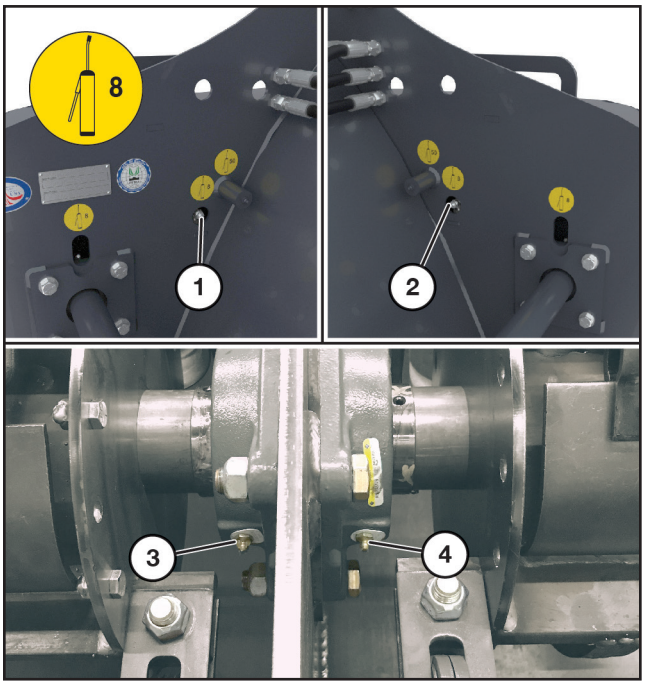
⚠	**DANGER:** *Shut down and lock out power from the tractor before lubricating the shredder. Failure to do so could result in serious injury or death.*



NOTE: *Lubricate the grease points every "X" hours indicated on the decal adjacent to the grease point.*

See "Air Windrower Shredder Identification" on page 8 for component location and identification.

8-Hour Lubrication Points



Location: Rotor Bearings (1, 2) - outside. Located on the left and right ends of the windrower, inside the end plates.
Rotor bearings (3, 4) - inside. Located on the bearings positioned between the two rotors. Access the fittings from underneath the windrower near the operation hitch.

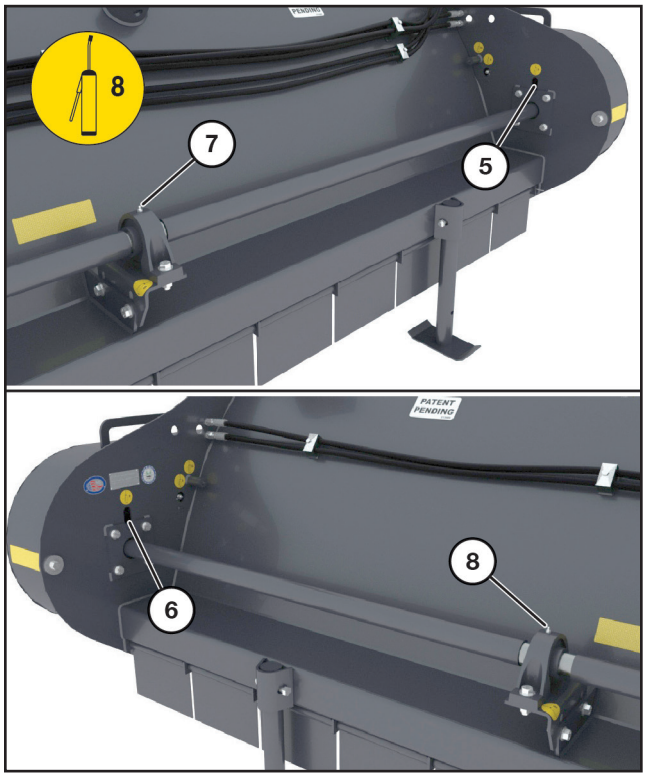
NOTE: *Rotor bearings cannot be damaged by overgreasing. Grease fittings until a small amount of grease is purged from the bearing.*

Interval: Every 8 hours of operation.

Lubrication (Cont'd)

Grease Points Location (Cont'd)

8-Hour Lubrication Points (Cont'd)

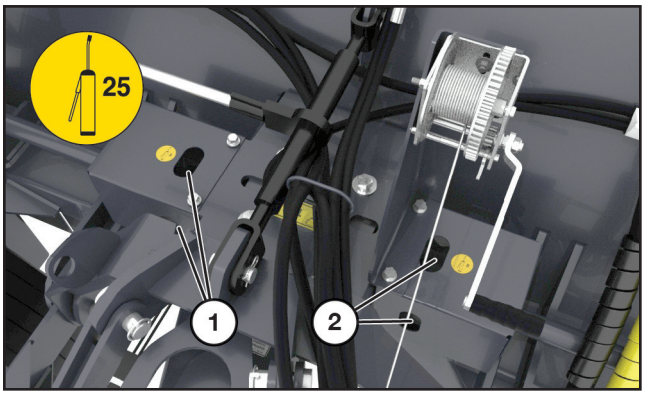


Location: Line shaft ends (5, 6). One zerk located on each end of the windrower, inside the end plates. Lubricate the fitting through the opening in the frame.

Line shaft pillow blocks (7, 8). One zerk located on each pillow block to the left and right of the gear box.

Interval: Every 8 hours of operation.

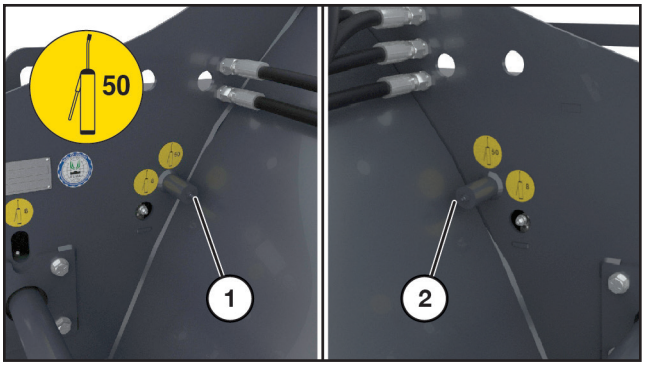
25-Hour Lubrication Points



Location: Gearbox U-joint (1, 2). (Located on the U-joints on each side of the gearbox. Access via holes on top or side of gearbox shields.)

Interval: Every 25 hours of operation.

50-Hour Lubrication Points



Location: Belt tensioner (1, 2). Located on the left and right ends of the windrower, inside the end plates.

NOTE: *Remove the belt cover when lubricating the fitting. Visually inspect the idler pulley components while lubricating. Do Not over-lubricate the idler tensioner shaft.*

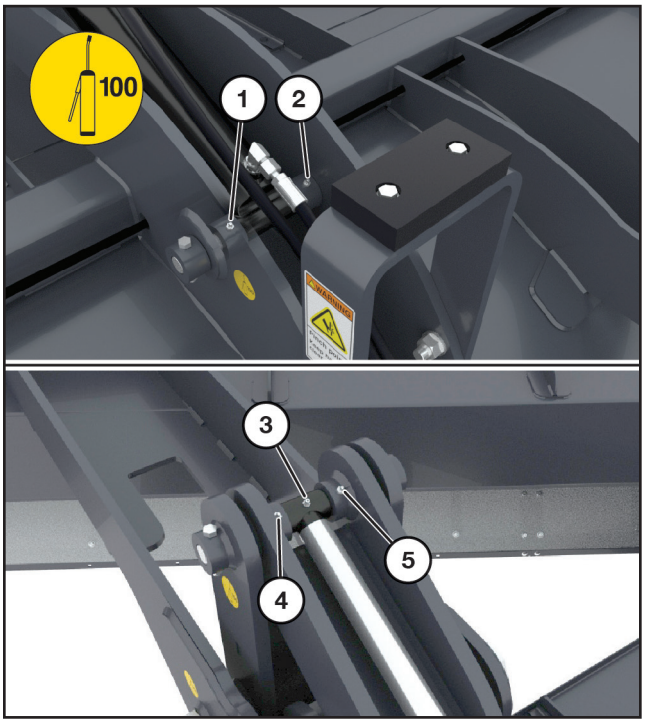
NOTE: *Over-lubrication may transfer to the belt, causing belt slip and resulting in loss of rotor RPM.*

Interval: Every 50 hours of operation.

Lubrication (Cont'd)

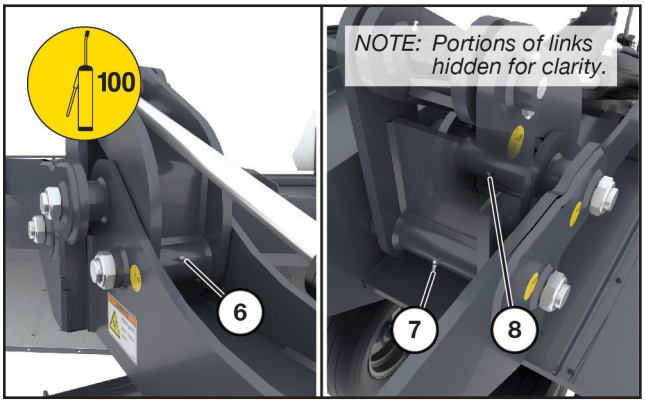
Grease Points Location (Cont'd)

100-Hour Lubrication Points



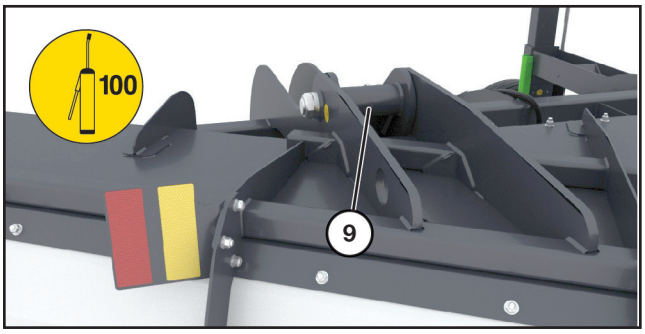
Location: Wing cylinder, base end (1, 2);
Wing cylinder, rod end (3).
Wing, top link (4, 5)

Interval: Every 100 hours of operation.



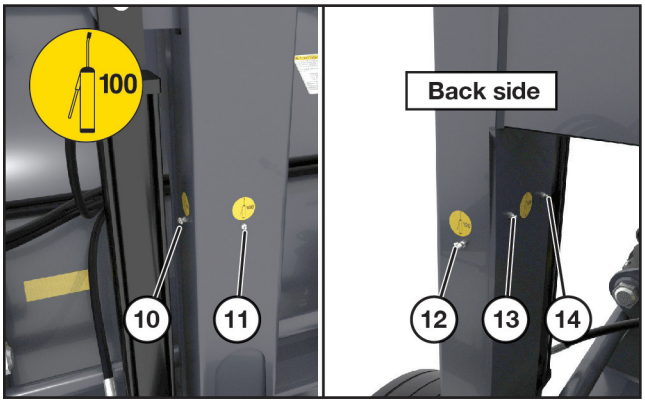
Location: Wing links, right side (6, 7, 8).

Interval: Every 100 hours of operation.



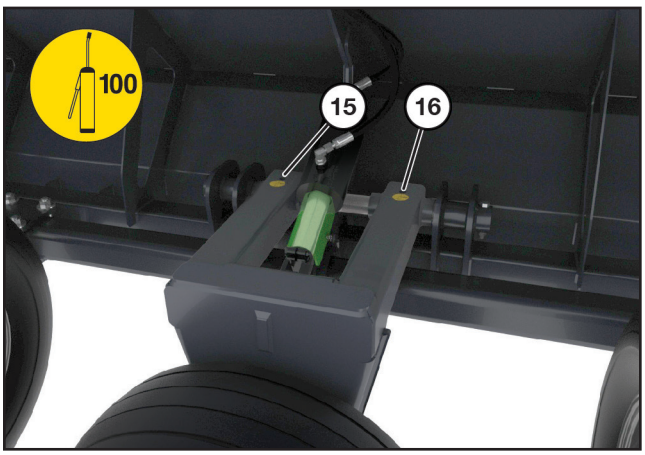
Location: Wing link, left side (9).

Interval: Every 100 hours of operation.



Location: Front transport wheel tower (10, 11, 12, 13, 14) - front of the windrower. Five fittings located on the front transport wheel assembly.

Interval: Every 100 hours of operation.



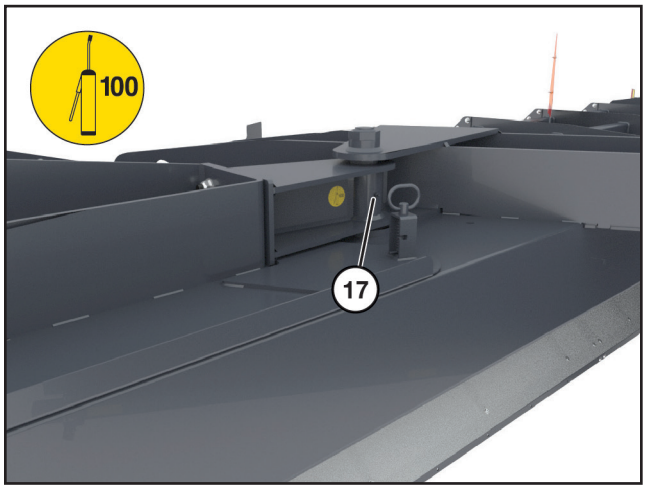
Location: Rear transport wheel tower (15, 16) - rear of the windrower. Two fittings located on the rear transport wheel assembly.

Interval: Every 100 hours of operation.

Lubrication (Cont'd)

Grease Points Location (Cont'd)

100-Hour Lubrication Points (Cont'd)



Location: Diffuser (17). Located at the pivot point of the diffuser assembly.

Interval: Every 100 hours of operation.

PTO Lubrication Points

Location: **(Not shown)** Standard PTO CV shaft. Three U-joints and two additional fittings located under the bell housing.

Interval: Every **8 hours** of operation.

Location: **(Not shown)** Telescoping PTO tube. One located by lining up the hole in the PTO guard with grease zerk.

Interval: Every **25 hours** of operation.

Location: **(Not shown)** PTO overrunning clutch. Located near U-joint yoke.

Interval: Every **50 hours** of operation.

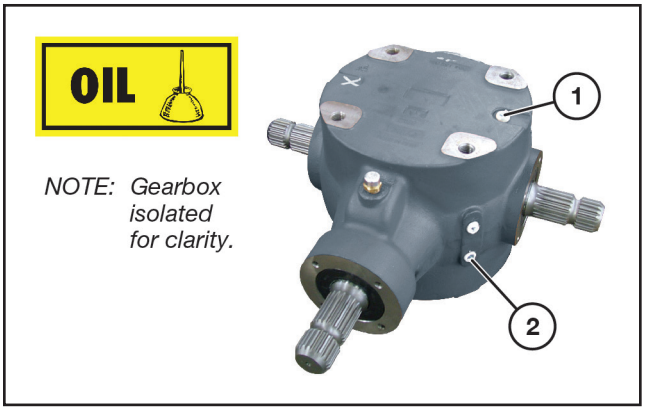
Other Lubrications Points

Location: **(Not shown)** Operation wheel bearings - 5 total.
Transport wheel bearings - 2 total.

NOTE: *Grease and repack.*

Interval: Every 100 hours of operation.

Adding Oil to Gearbox



Remove the plug from the upper port (1), and the plug from the lower port (2).

Using a funnel, add 80W-90 gear oil into the upper port until oil runs out of the lower port.

NOTE: *The gearbox holds approximately 128 oz.*

Reinstall the lower plug and tighten.

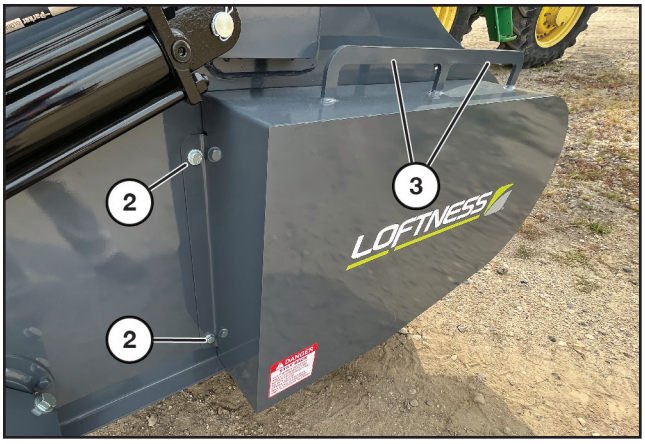
Reinstall the upper plug and tighten.

Belt Shields

DANGER: *Shut down and lock out power from the tractor before removing the belt covers. Failure to do so could result in serious injury or death.*

NOTE: *The belt shield removal procedure is the same for both sides. The right side is shown for this procedure.*

To remove the belt shield, remove the bolt with washer (1) securing the belt shield to the frame.



Remove the two bolts with washers (2) to free the belt shield.

Lift the shield up and off of the frame using the handle (3). This will expose the belt drive components.

Reverse the procedure to reinstall the belt shield.

Belt Adjustment

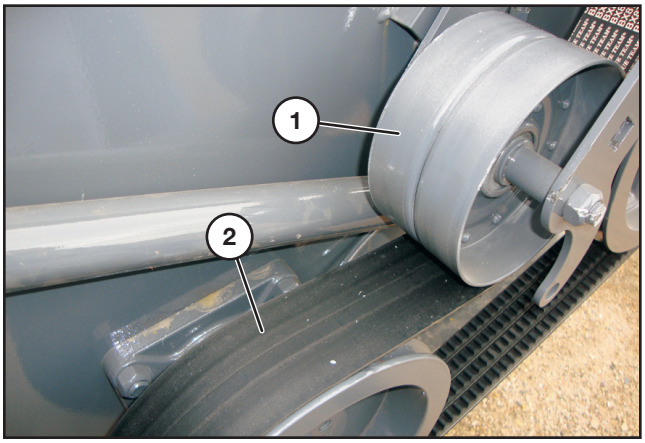
NOTE: *The belt adjustment procedure is the same for both sides. The right side is shown for this procedure.*

NOTE: *Refer to "4-Band Drive" on page 60 for parts breakdown and assembly of belt drive components.*

Turn off all power to the windrower.

DANGER: *Failure to turn off power to the windrower before adjusting the belt drive could result in serious injury or death.*

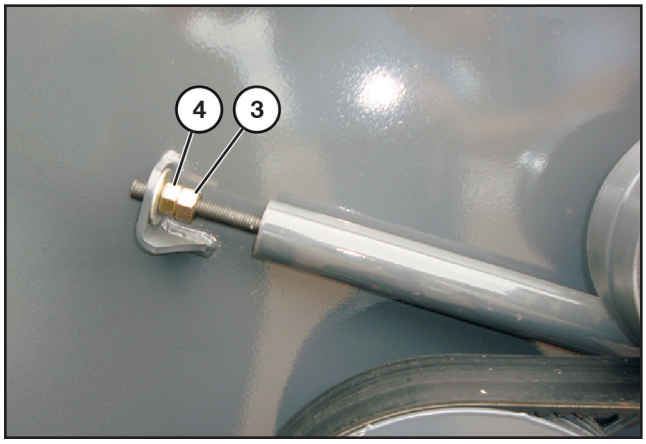
Remove belt shield. See "Belt Shields" for instructions on removing the belt shields.



Check belt idler (1) position to ensure it is centered on the belt (2).

(Procedure continued on following page.)

Belt Adjustment (Cont'd)



Loosen the jam nut (3).

Turn the hex nut (4) next to the adjustment bracket clockwise until the washer on the spring base is recessed into the tightener tube. Tighten jam nut (3) to lock.

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

Reinstall the belt shield when complete.

Belt Replacement

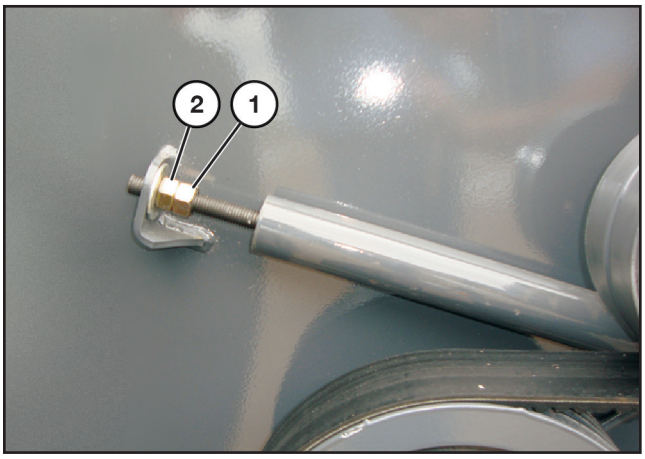
NOTE: *The belt replacement procedure is the same for both sides. The right side is shown for this procedure.*

NOTE: *Refer to "4-Band Drive" on page 60 for parts breakdown and assembly of belt drive components.*

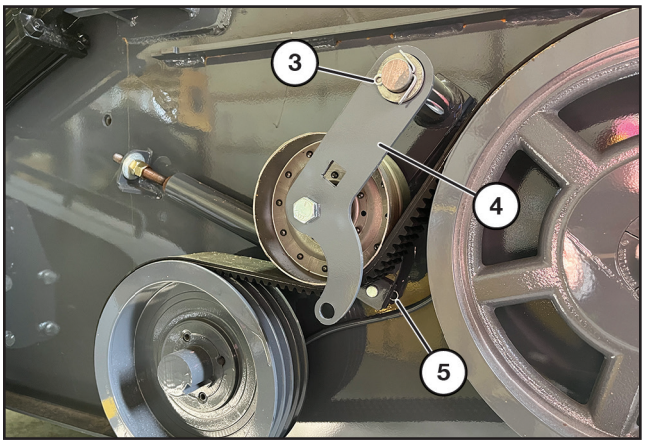
Turn off all power to the windrower.

⚠	**DANGER:** *Failure to turn off power to the windrower before replacing the belt could result in serious injury or death.*

Remove belt shield. See "Belt Shields" on page 42 for instructions on removing the belt shields.



Loosen jam nuts (1 and 2) on the belt tightener which will release the tension from the belt.



Remove the pin (3) holding the tensioner assembly (4) onto the tightener/tensioner mount.

Then remove the pin (5) that secures the belt tightener tube to the tensioner assembly.

Slide the tensioner assembly off of the mount. The belt can now be removed.

Replace with the new belt.

Reinsert the tensioner assembly and reinstall the pins.

Adjust the tension on the belt. Refer to "Belt Adjustment" on page 42 for instructions.

Reinstall the belt shield when complete.

Sheave and Pulley Removal

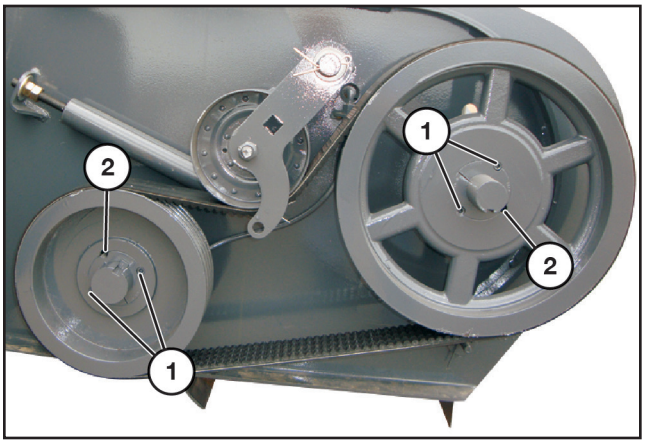
NOTE: *Refer to "4-Band Drive" on page 60 for parts breakdown and assembly of belt drive components.*

Turn off all power to the windrower.

⚠	**DANGER:** *Failure to turn off power to the windrower before removing the pulleys could result in serious injury or death.*

Remove belt shield. See "Belt Shields" on page 42 for instructions on removing the belt shields.

Remove the idler arm and drive belt, following the instructions in "Belt Replacement" on page 43.



Remove the taper lock bushing set screws (1).

Insert set screw into threaded hole (2).

Tighten screw until bushing grip is released. If excessively tight, lightly hammer face of pulley using drift or sleeve.

IMPORTANT: *Never strike pulley directly with a hammer.*

⚠	**CAUTION:** *Excessive or uneven pressure on set screws may damage the bushing, making removal difficult or possibly damaging the sheave.*

⚠	**CAUTION:** *Excessive screw torque may cause damage to the bushing or sheave. Recommended torque is 430 in-lb.*

Pulley Assembly

Clean shaft, bore of bushing, outside of bushing, and hub bore of all oil, paint, and dirt. File away any burrs

Insert bushing in hub. Match the hole pattern, not threaded holes (each complete hole will be threaded on one side only).

Apply a thread-locking compound to setscrews and thread into the two opposing holes.

Position assembly on shaft and alternately torque set screws to 35 ft-lb.

To increase gripping force, hammer face of bushing using drift or sleeve.

IMPORTANT: *Never hit bushing directly with hammer.*

Re-torque screws after hammering.

Recheck screw torque after initial run-in, and periodically thereafter. If loose, hammer face of bushing and re-torque screws again.

Check alignment of the pulleys. Repeat pulley removal and assembly procedures if necessary.

Install belt. See "Belt Replacement" on page 43 for reference.

Reinstall the belt shield when complete.

Rotor Removal

This service section is written as if the windrower 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).

NOTE: *Refer to "Rotors, with Bearings and Lubrication" on page 64 for parts breakdown and assembly of rotor components.*

Turn off all power to the windrower.

⚠	**DANGER:** *Failure to turn off power to the windrower before removing the rotors could result in serious injury or death.*

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 ensure 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.

Repeat steps 3 through 8 for the opposite rotor.

Rotor Assembly

1. Slide bearing spacer on shorter shaft of the rotor. (Shaft with 1/2 in. [1.27 cm] 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.
4. Apply thread-locking compound to flat head screw. Slide through washers and install into threaded hole in shaft. Torque to 75 ft-lb.

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

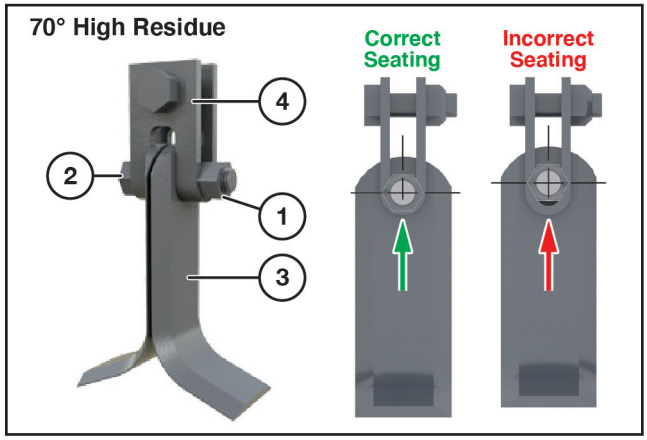
5. Insert four outer bearing bolts into end plate with the heads of the bolts inside the rotor cavity (nuts will be inside belt housing).
6. Install rotor by inserting the outer end (long shaft) into the bearing hole of the end plate.
7. Align the four bearing bolts with the center plate holes and insert the bolts so that they protrude about 1/4 in. (.635 cm) 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-lb.
11. While supporting the rotor at the center plate, tighten the bearing bolts to 170 ft-lb.
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.

Knife Replacement

Turn off all power to the shredder.

> **DANGER:** *Failure to turn off power to the shredder before replacing knives could result in serious injury or death.*

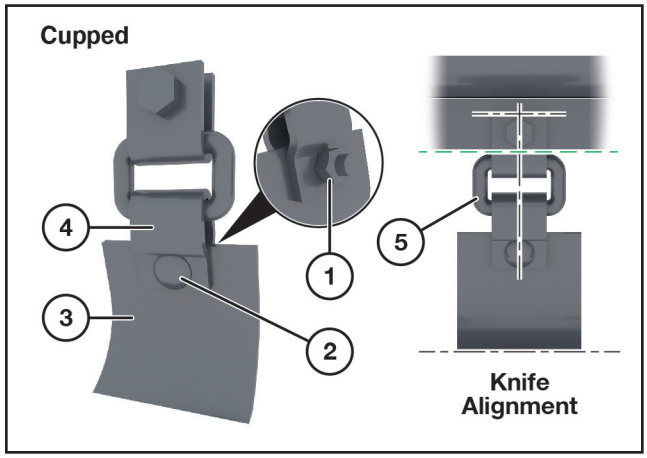
70° High Residue



Remove the lock nut (1) and the bushing with bolt (2). Then remove the knives (3) from the slotted u-bar (4).

Install the new knives and reinstall the bushing and hardware. Before tightening, ensure the bushing and hardware assembly is seated within the U-bar as shown above. Proper seating is required to maintain rotor balance during rotation.

Cupped



Remove lock nut (1) and bolt (2). Slide knife (3) out of U-bar (4).

Install the new knife and reinstall the hardware. Ensure the knife and all hardware are aligned square to the rotor. Verify that the u-bar pivots freely on the square-ring (5).

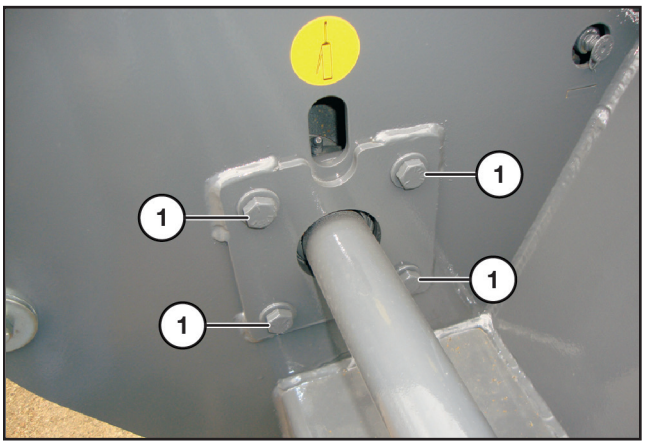
IMPORTANT: *The rotors of the shredder are factory balanced and must remain in balance during the life of the machine. Should any knives on the machine need replacing, be sure to also replace the knives directly opposite to avoid vibration and maintain the rotor balance. If a knife is not available,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

Gearbox Repair

Repairs to the gearbox by the customer will be limited to the replacing of the cross or pinion shaft seals. See “Gearbox, 1450 RPM Bondioli (N13950)” on page 68 for parts breakdown. 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.

Gearbox Removal

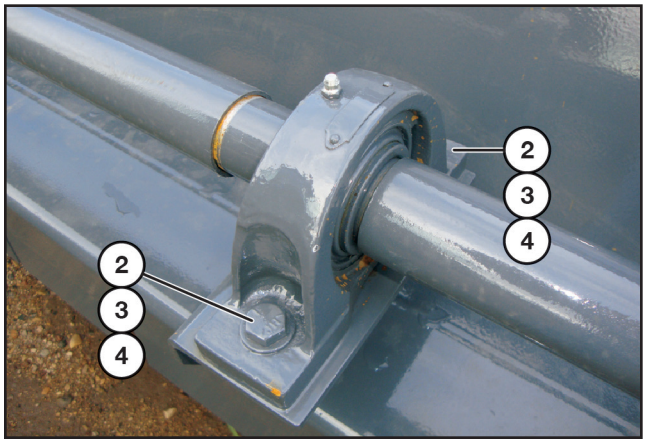
Remove the drive belt. Follow instructions in “Belt Replacement” on page 43 up until the point where the drive belt is removed.



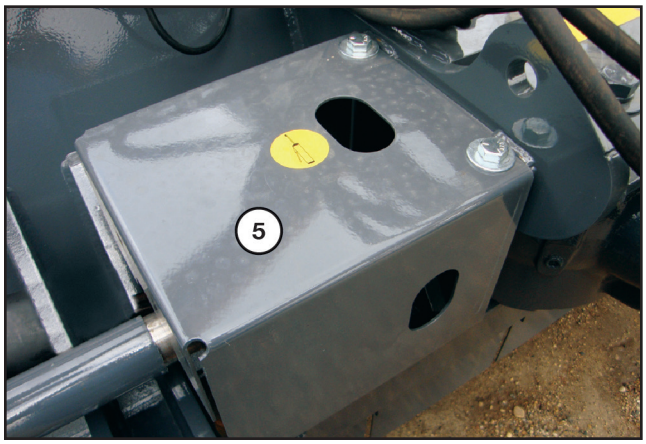
Remove the bolts (1) with washers securing the line-shaft bearing located behind the large pulley.

(Procedure continued on following page.)

Gearbox Removal (Cont'd)



Remove the bolts (2), washers (3), and nuts (4) securing the pillow block bearing supporting the line-shaft.

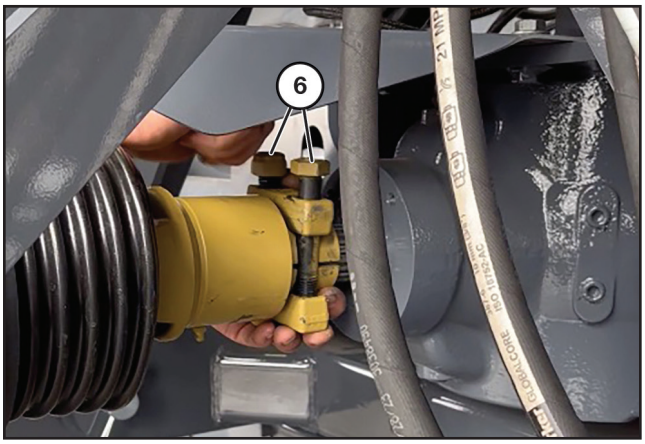


Remove driveline shield (5).

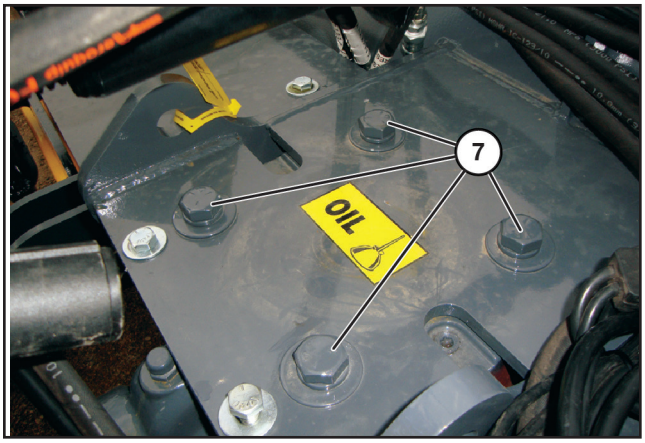
Loosen and remove the clamp bolts securing the U-joint to the gearbox shaft.

Slide the line-shaft outward until the U-joint is free of the shaft.

Repeat steps to remove opposite side line-shaft.



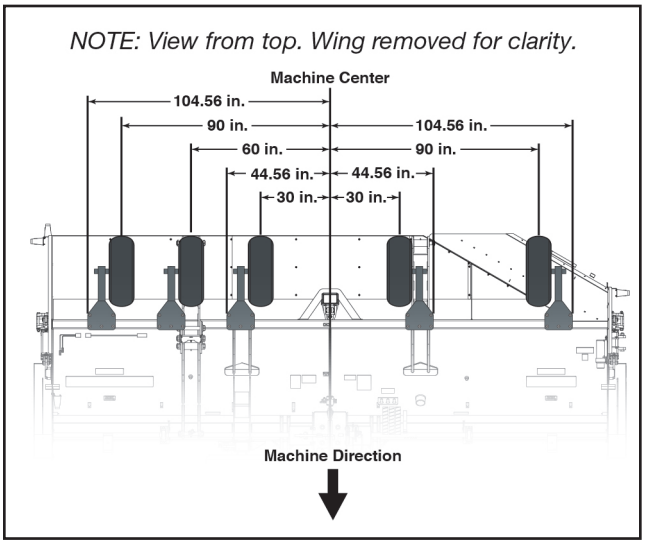
Remove PTO shaft by loosening and removing the clamp bolts (6). Then slide it off the shaft.



Remove the four bolts (7) with lock washers and washers securing the gearbox to the frame.

Rear Operation Wheel Spacing

NOTE: *The rear operation wheels are factory set for 30 in. row spacing.*



Follow the figure above for wheel orientation and reference for wheel assembly locations.

To obtain the best results from the windrower, wheel spacing should conform to crop row spacing.

To adjust wheel spacing, raise windrower and install blocks under windrower end plates. Raise rear wheels with hydraulic cylinders. Loosen wheel strut clamping bolts and adjust wheels to desired spacing.

Storage

End of the Season

- Clean the entire windrower thoroughly.
- Paint all parts that are worn.
- Lubricate all parts of the machine.
- Block up the frame of the windrower, DO NOT deflate the tires.
- Store the windrower in a dry area with the wing positioned out of direct sunlight.
- Review your operator's manual.

Beginning of the Season

- Review your operator's manual.
- Check air pressure in the tires.
- Drain and refill the gearbox to the proper level. Gearbox should be filled to the lower plug. The gearbox holds approximately 128 oz. of 80w-90 gear oil.
- 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 the those being replaced to avoid rotor imbalance and subsequent vibration.

Troubleshooting

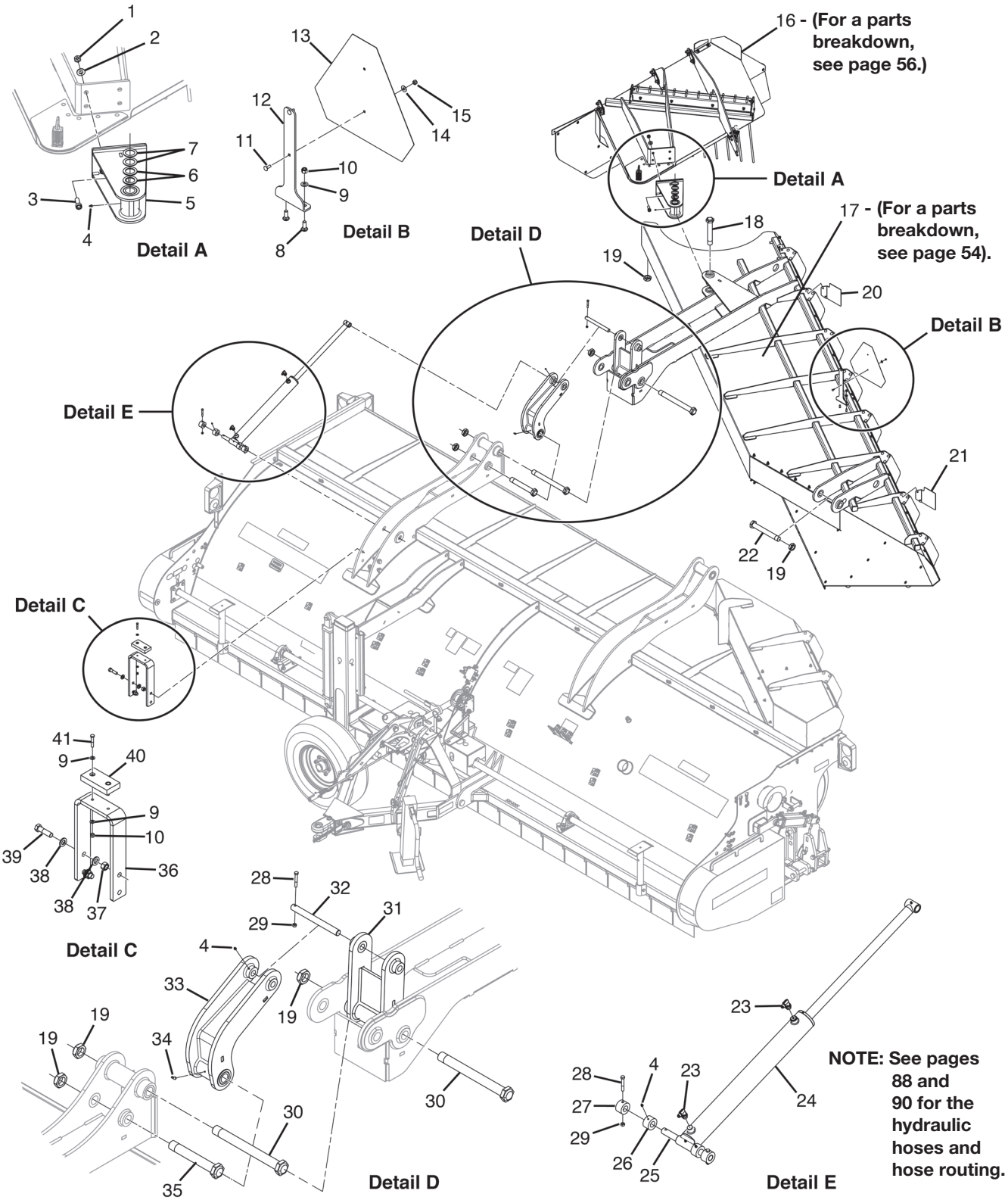
To assist with maintenance and repair, the following list of common problems and corrections is provided.

PROBLEM	POSSIBLE CAUSE	SOLUTION
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 & driveline bearings, replace faulty bearings.
	Rotor damage.	Inspect rotor for physical damage. If damaged, remove and return to factory for proper repair.
Rotor Does 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.


LOFTNESS

PARTS IDENTIFICATION

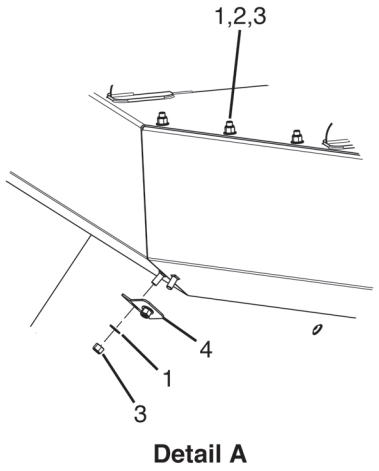
Wing Pivot Assembly; Wing; Chute

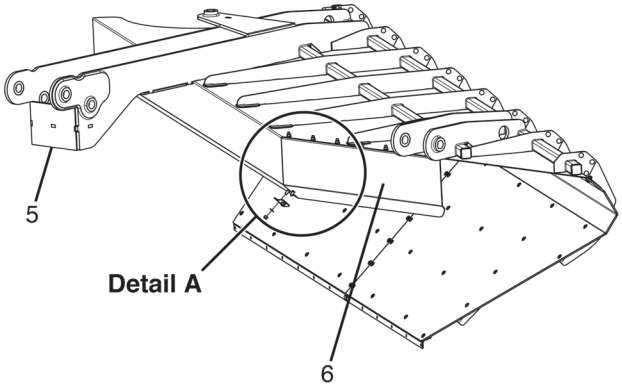


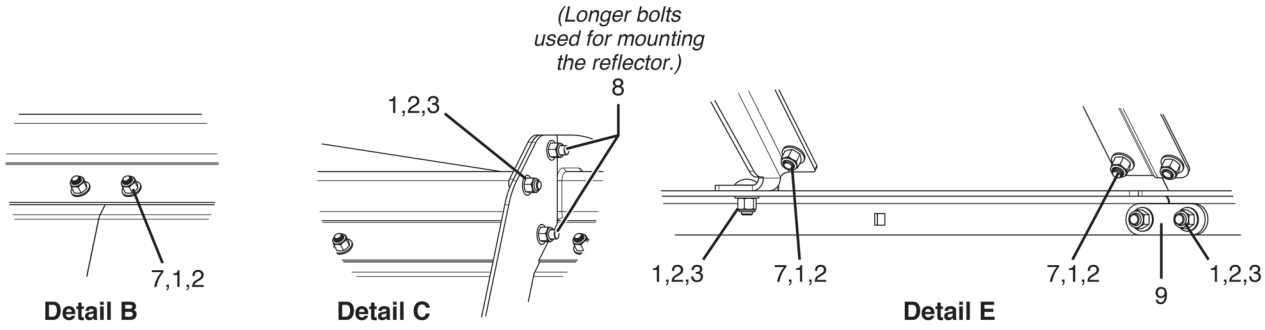
Wing Pivot Assembly; Wing; Chute

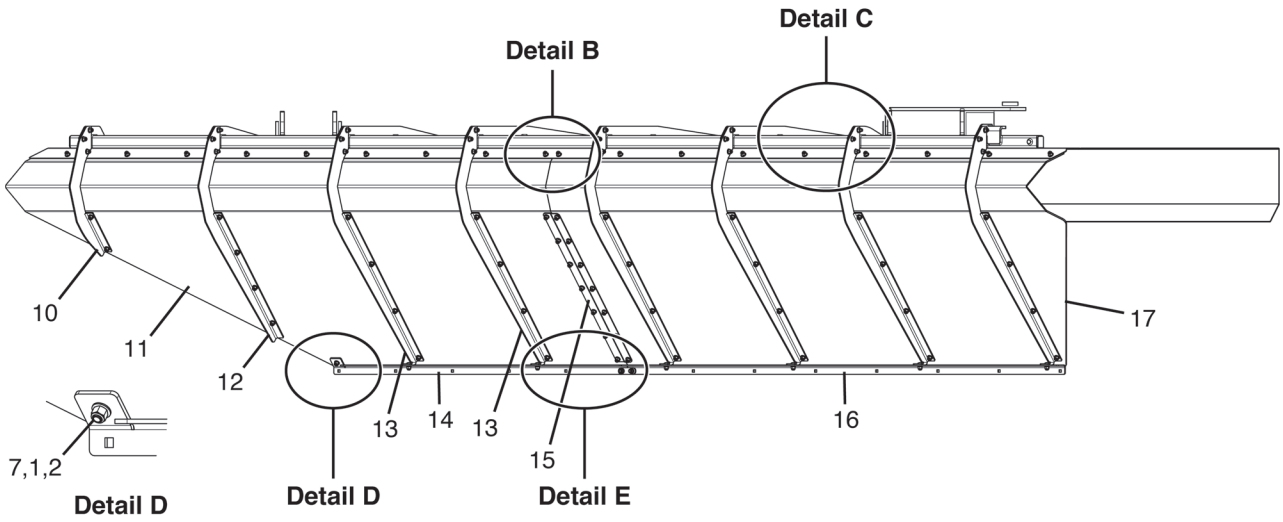
#	QTY.	PART #	DESCRIPTION
1	4	4055	NUT, LOCK 5/8" TOP
2	4	4997	WASHER, FLAT 5/8" SAE
3	4	215070	SCREW, 5/8-11 X 1.75" GR 8
4	5	4105	GREASE-ZERK, 1/4" SCREW-IN
5	1	212674	LINK, CHUTE ROTATION
6	2	N25028	WASHER, 1-1/2" MACH NAR 10 GA
7	2	212680	WASHER, 1.520ID X 2.250OD
8	2	4034	BOLT, CARRIAGE 3/8" X 1" GR. 5
9	4	N31741	WASHER, FLAT 3/8" SAE
10	4	209887	NUT, LOCK 3/8IN-16 NYLOCK
11	2	4302	BOLT, CARRIAGE 1/4" X 3/4"
12	1	209963	PLATE, SMV SIGN HOLDER
13	1	N18549	DECAL, (SLOW MOVING SIGN)
14	2	3183	WASHER, FLAT 1/4"
15	2	4996	NUT, LOCK 1/4" NYLOCK
16	1	212668	CHUTE, SHWA DISCHARGE
17	1	212484	WING, SHWA W/DEFL
18	1	212039	BOLT, 1.50-6 X 9.125 UNC-2A
19	5	209936	NUT, LOCK 1-1/2-6 NYLOCK THIN
20	1	212310	BRACKET, REFLECTOR W/DECALS R
21	1	212311	BRACKET, REFLECTOR W/DECALS L
22	1	212036	BOLT, 1.50-6 X 11.500 UNC-2A
23	2	N28002	ELBOW, 90 -6MJIC-8MORB .031 OR
24	1	212547	CYLINDER, 3IN X 24 IN 3000 PSI
25	1	212794	PIN, 1 X 10.875 LINK
26	2	212791	BUSHING, 1.010 X 1.188 HINGE
27	2	212793	BUSHING, 1.010 X 1.250 HINGE
28	3	4313	BOLT, 3/8" X 2-1/2" GRADE 5
29	3	202505	NUT, LOCK 3/8IN TOP LOCK
30	2	212525	BOLT, 1.50-6 X 14.875 UNC-2A
31	1	212766	LINK, TOP
32	1	212771	PIN, 1 X 10.500 LINK
33	1	212786	LINK, PIVOT
34	2	4106	GREASEZERK,45 DEG SCW-IN 1/4-28
35	1	212523	BOLT, 1.50-6 X 10.125 UNC-2A
36	1	212797	STOP, WING W/DECALS
37	4	212858	NUT, LOCK 3/4 GRADE 8 NC
38	8	N35327	WASHER, FLAT 3/4" SAE
39	4	209430	BOLT, 3/4IN X 2-3/4IN UNC GR 8
40	1	212784	PAD, WING STOP
41	2	4226	BOLT, 3/8" X 2" GRADE 5

Wing; Deflectors (212484)





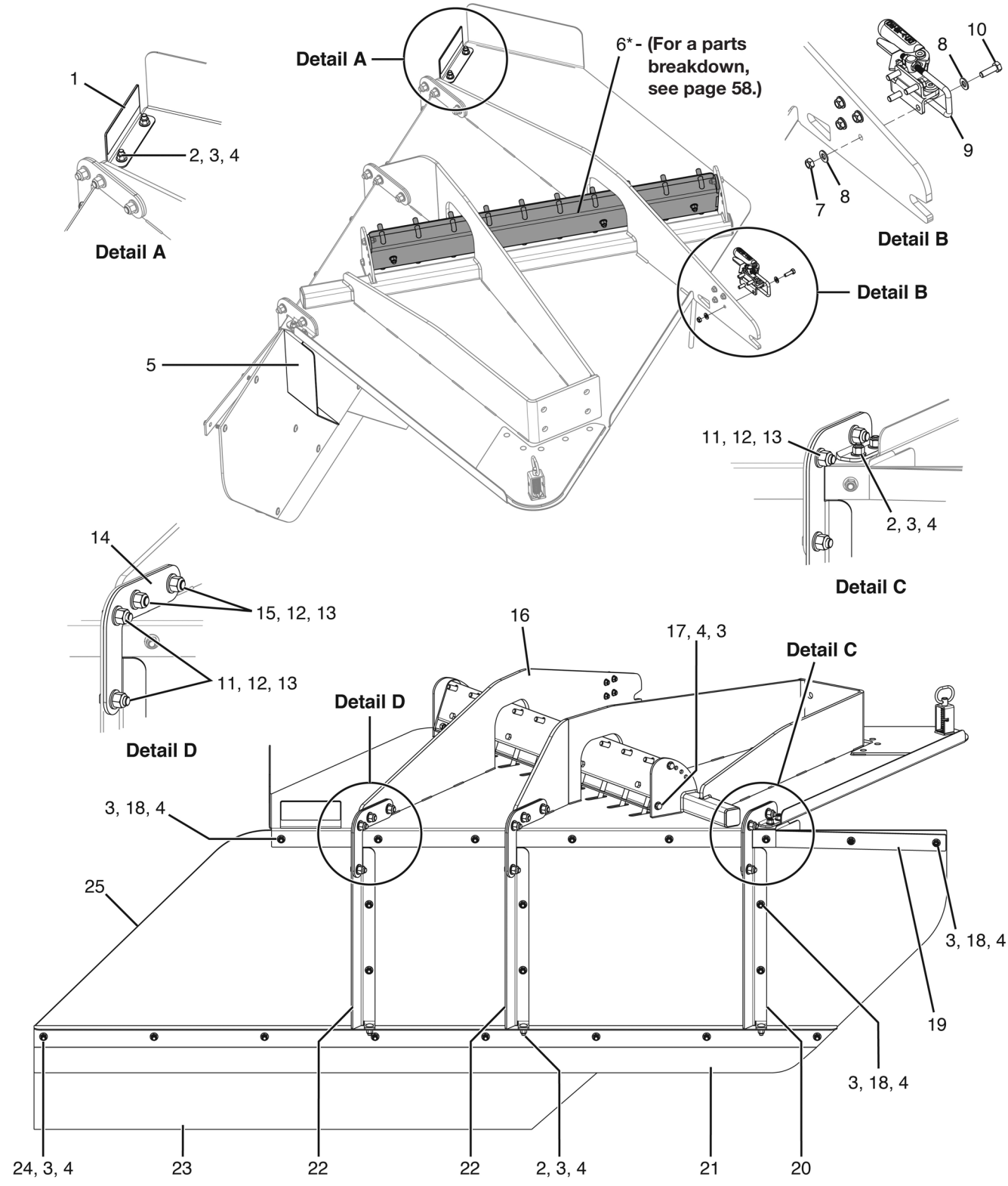




Wing; Deflectors (212484)

#	QTY.	PART #	DESCRIPTION
1	104	N31741	WASHER, FLAT 3/8" SAE
2	104	209887	NUT, LOCK 3/8IN-16 NYLOCK
3	37	4034	BOLT, CARRIAGE 3/8" X 1" GR. 5
4	1	212269	PLATE, COVER MENDING
5	1	212485	WELDMENT, SHWA WING
6	1	212267	PLATE, WING BOLT-ON COVER
7	63	212272	SCREW, BHCS 3/8-16 X 1 FLANGED
8	4	4390	BOLT, 3/8" X 1-1/4" CARRIAGE
9	1	212268	PLATE, TAIL MENDING
10	1	212435	PLATE, WING TAIL MOUNT 3
11	1	212191	DEFLECTOR, SHWA WING LEFT
12	1	212434	PLATE, WING TAIL MOUNT 2
13	6	212433	PLATE, WING TAIL MOUNT 1
14	1	212234	PLATE, WING BOTTOM LEFT
15	1	212545	PLATE, WING TAIL CONNECTOR
16	1	212233	PLATE, WING BOTTOM RIGHT
17	1	212192	DEFLECTOR, SHWA WING RIGHT

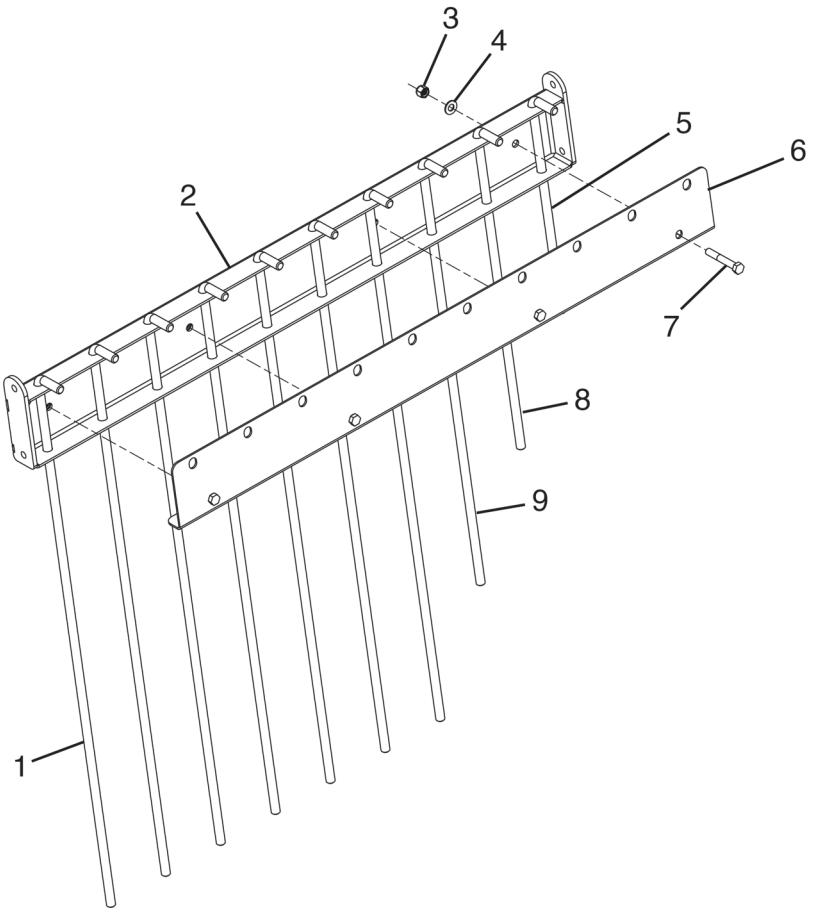
Discharge Chute (212668)



Discharge Chute (212668)

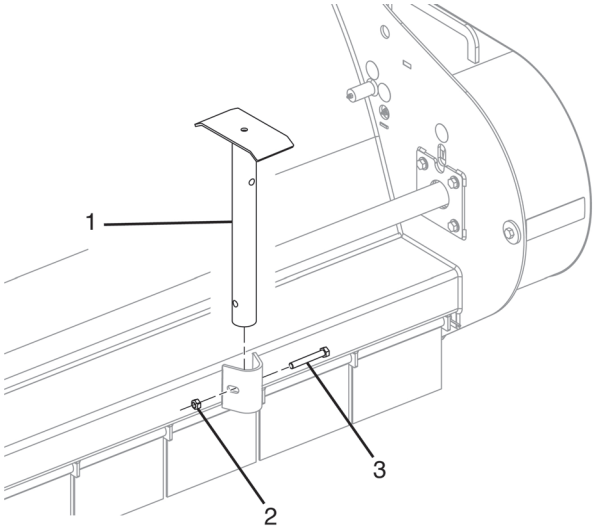
#	QTY.	PART #	DESCRIPTION
1	1	212862	BRACKET, CHUTE REFL W/DECALS
2	7	4034	BOLT, CARRIAGE 3/8" X 1" GR. 5
3	33	209887	NUT, LOCK 3/8IN-16 NYLOCK
4	33	N31741	WASHER, FLAT 3/8" SAE
5	1	212293	PLATE, DUST COVER
6	1	209869	DEFLECTOR ASSY, SHWA
7	4	4414	NUT, NYLOCK 5/16"
8	8	N28927	WASHER, FLAT 5/16 SAE
9	1	212442	CLAMP, TOGGLE LATCH-STYLE
10	4	4203	BOLT, 5/16" X 1" GRADE 5
11	7	4012	BOLT, 1/2" X 1-1/4" GRADE 5
12	11	4068	WASHER, 1/2" SAE FLAT
13	11	N149702	NUT, LOCK 1/2-13 NYLOCK
14	2	212273	PLATE, CHUTE BRACE STIFFENER
15	4	4013	BOLT, 1/2" X 1-1/2" GRADE 5
16	1	212669	CHUTE, TOP WELDMENT W/DECALS
17	4	4005	BOLT, 3/8" X 1-1/4" GRADE 5
18	14	212272	SCREW, BHCS 3/8-16 X 1 FLANGED
19	1	212799	PLATE, CHUTE BRACE STIFFENER 20
20	1	212659	PLATE, CHUTE RIB A
21	1	212656	PLATE, RUBBER MOUNT
22	2	212655	PLATE, CHUTE RIB
23	1	212657	SKIRT, RUBBER SHWA ANG
24	8	212539	SCREW, BHCS 3/8-16 X 1-1/4 FLG
25	1	212658	SIDE, CHUTE EXTENDED

Deflector (209869)



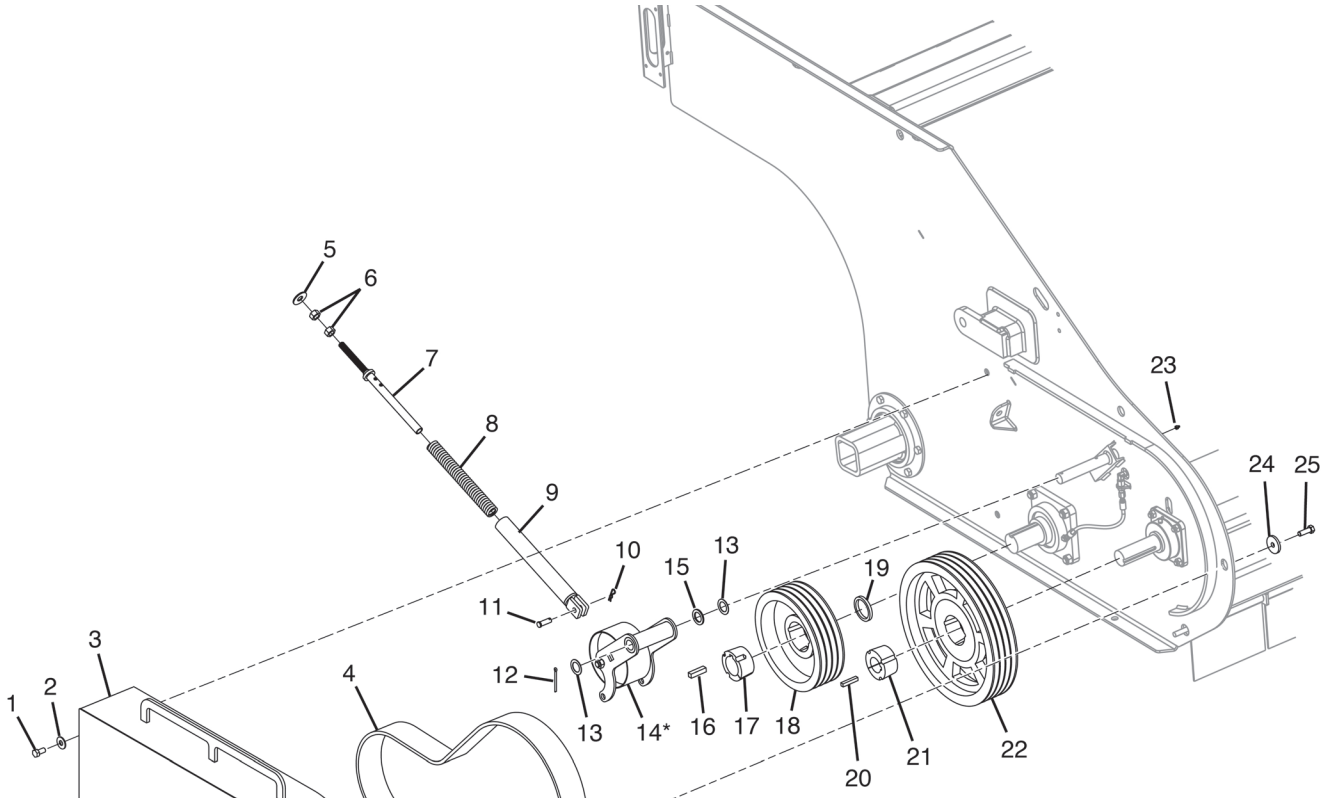
#	QTY.	PART #	DESCRIPTION
1	7	N19502	ROD, REAR TAIL - WINDROW
2	1	209870	WELDMENT, ROD PIVOT HEAD
3	4	209887	NUT, LOCK 3/8IN-16 NYLOCK
4	4	N31741	WASHER, FLAT 3/8" SAE
5	1	209886	ROD, REAR TAIL 14.500
6	1	209874	PLATE, SHWA ROD CLAMP
7	4	4313	BOLT, 3/8" X 2-1/2" GRADE 5
8	1	209885	ROD, REAR TAIL 21.500
9	1	209884	ROD, REAR TAIL 28.500

Jack Stand

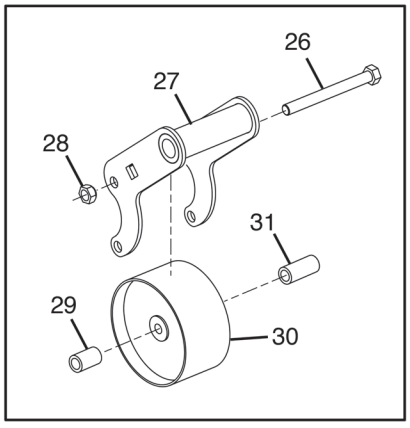


#	QTY.	PART #	DESCRIPTION
1	2	N32552	JACK, STORAGE STAND (SHREDDER)
2	2	4054	NUT, LOCK 1/2" TOP
3	2	4154	BOLT, 1/2" X 3-1/2" GRADE 5

4-Band Drive



*** Item 14 - Belt Tightener**
Right - N18090 (shown)
Left - N18056



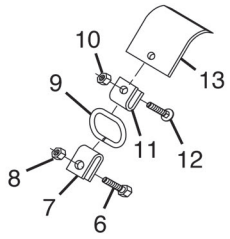
Item 29 (spacer) is always on the outside of the pulley, towards the belt shield.

NOTE: Quantities shown are for both the right and left sides of the windrower. Right side shown.

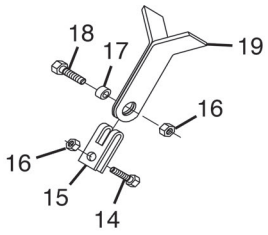
4-Band Drive

#	QTY.	PART #	DESCRIPTION
1	4	4011	BOLT, 1/2" X 1" GRADE 5
2	6	4486	WASHER, 1/2" FLAT
3	1	209238	SHIELD, SHW FLAT R W/DECALS *(Shown)*
	1	209237	SHIELD, SHW FLAT L W/DECALS
4	2	N10507	BELT, 4B X 87" BOND. SHRD.
5	2	4069	WASHER, FLAT 5/8"
6	4	4438	NUT, 5/8" STANDARD GRADE 8
7	2	7525	ROD, BMO & FLAIL BELT TIGHTENER
8	2	8067	SPRING, BELT TIGHTENER
9	2	N18517	TUBE, WINDROW BELT TIGHTENER
10	2	4089	CLIP, HAIRPIN .093 X 1-5/8"
11	2	4392	PIN, 1/2" X 1-1/4"
12	2	4329	PIN, COTTER 7/32" X 2-1/2"
13	4	4491	WASHER,1 3/4"ODX 1 1/8"ID 18GA
14	1	N18090	TIGHTENER, BELT RIGHT 4B *(Shown)*
	1	N18056	TIGHTENER, NARROW BELT LEFT 4B
15	2	4470	WASHER, 1-3/4OD X 1-1/8 X 10GA
16	2	7122-04	KEY, 1/2" X 2"
17	2	8165	BUSHING, 2-3/16 TPL 2517
18	2	8139	SHEAVE, 4B X 11" TAPERLOCK
19	2	N16445	BUSHING, 2-3/16 ID" X 2-3/4"OD
20	4	7121-03	KEY, 3/8" X 2"
21	2	8127	BUSHING, 1-3/4 KW TAPERLOCK
22	2	8140	PULLEY, 4B X 16" TAPERLOCK
23	2	4105	GREASEZERK, 1/4" SCREW-IN
24	4	4074	WASHER, 2" OD X 1/2" ID X 1/4"
25	2	4013	BOLT, 1/2" X 1-1/2" GRADE 5
26	2	4457	BOLT, 5/8" X 6-1/2" GRADE 5
27	2	N18057	BRACKET, BELT TIGHTENER
28	2	4055	NUT, LOCK 5/8"
29	2	N18088	PIPE, BELT TIGHTENER SPACER (SHORT)
30	2	N10508	PULLEY, IDLER 6-1/2" O.D. w/5/8" BORE
31	2	N18089	PIPE, BELT TIGHTENER SPACER (LONG)

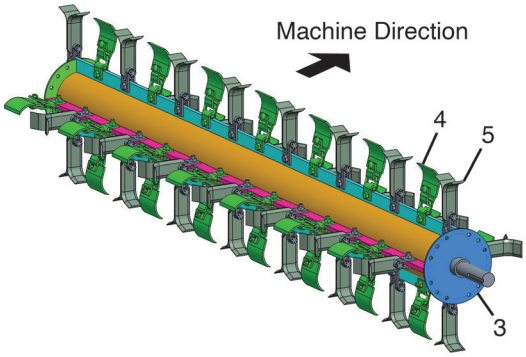
Rotors, with Knives



Cupped Knife Detail - 4

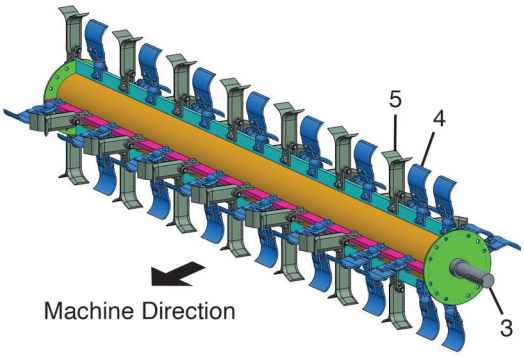


High Residue Knife Detail - 5



Right Side Rotor

1 - **To order a complete right side rotor with knives, use part number 212294.**



Left Side Rotor

2 - **To order a complete left side rotor with knives, use part number 212295.**

Rotors, with Knives

#	QTY.	PART #	DESCRIPTION
1	1	212294	ROTOR, 20' W/CUPPED & HI-RES RIGHT
2	1	212295	ROTOR, 20' W/CUPPED & HI-RES LEFT
3	2	N13242	ROTOR, 20' SHRD 2-3/16" W/O KNIVES
4	*Right Rotor* 28 *Left Rotor* 32	8022-10	KIT, CUPPED KNIFE COMPL ASSY
5	*Right Rotor* 30 *Left Rotor* 26	8136-10	SET, COMP. 70DEGREE HIGH RESIDUE

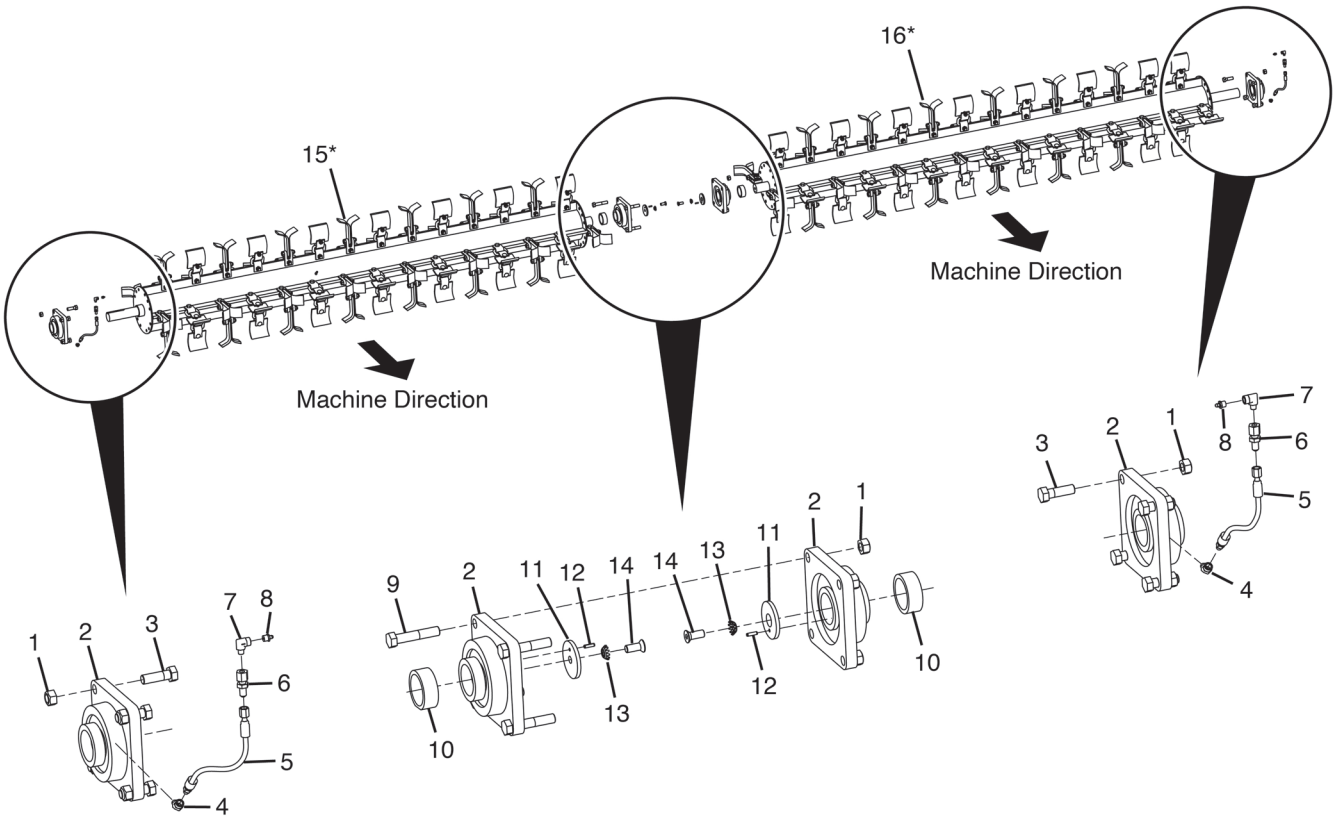
Quantities below are for one (1) cupped knife assembly (8022-10)

#	QTY.	PART #	DESCRIPTION
6	1	4043	BOLT, 5/8" X 2" GR 8
7	1	8033	U-BAR, KNIFE
8	1	4055	NUT, 5/8" LOCK
9	1	N24282	SQUARE-RING, CUPPED KNIFE
10	1	4054	NUT, LOCK 1/2" TOP
11	1	8035	CLIP, CUPPED KNIFE
12	1	4039	BOLT, CARRIAGE 1/2" X 1-1/2" GR5
13	1	8022	KNIFE, HARD-SURFACED CUPPED

Quantities below are for one (1) high residue knife assembly (8136-10)

#	QTY.	PART #	DESCRIPTION
14	1	4043	BOLT, 5/8" X 2" GR 8
15	1	8034	U-BAR, SLOTTED
16	2	4055	NUT, 5/8" LOCK
17	1	9073	BUSHING, KNIFE
18	1	4045	BOLT, 5/8" X 2-3/4" GR 8
19	2	8136	KNIFE, 70° HIGH RESIDUE

Rotors, with Bearings and Lubrication

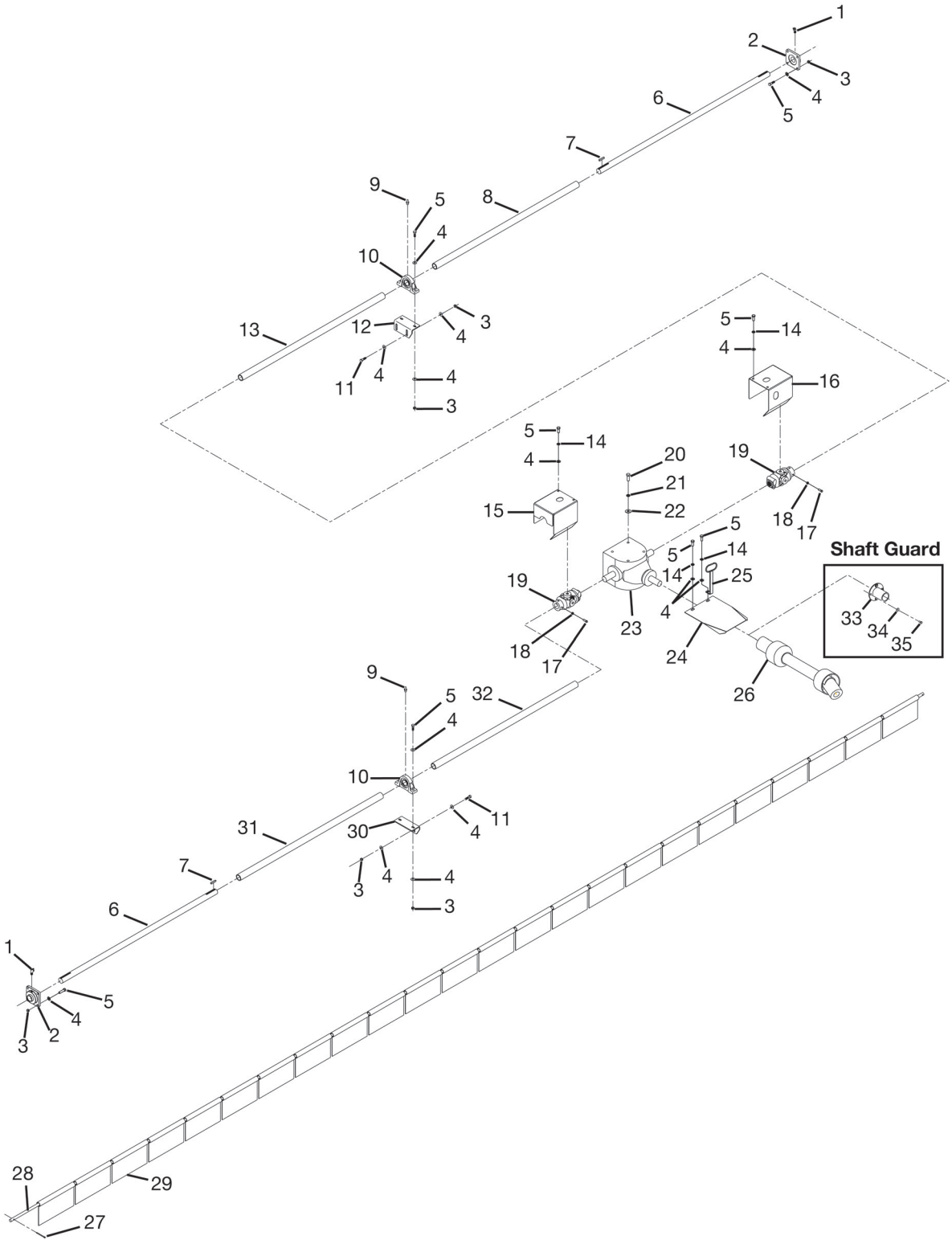


*** For a parts breakdown of items 15 and 16 - Rotors, see page 62.**

Rotors, with Bearings and Lubrication

#	QTY.	PART #	DESCRIPTION
1	12	4057	NUT, 5/8" FINE THREAD TOP LOCK
2	4	211873	BEARING, 2-3-16 4 BOLT DODGE
3	8	4042	BOLT, 5/8" X 2" FINE THRD GR. 8
4	2	4471	ELBOW, 1/8" 45 DEG.STREET
5	2	4304	HOSE, GREASE 1/8" X 15"
6	2	4304-10	BULKHEAD, FITTING-GREASE HOSE
7	2	4472	ELBOW, 1/8" 90 DEG. STREET
8	2	N17007	GREASEZERK, 1/8" NPT
9	4	4306	BOLT, 5/8" X 3" GR 8 FN TH
10	2	211869	SPACER, SHRD ROTOR 2-3/16
11	2	4075	WASHER, 2-5/8" OD
12	2	4085	PIN, ROLL 3/16" X 3/4"
13	2	4076	WASHER, 1/2" EXT CNTSK LOCK
14	2	4468	BOLT, 1/2-20 UNF X 1-1/4 FL HD
15	1	212294	ROTOR, 20' W/CUPPED & HI-RES RIGHT
16	1	212295	ROTOR, 20' W/CUPPED & HI-RES LEFT

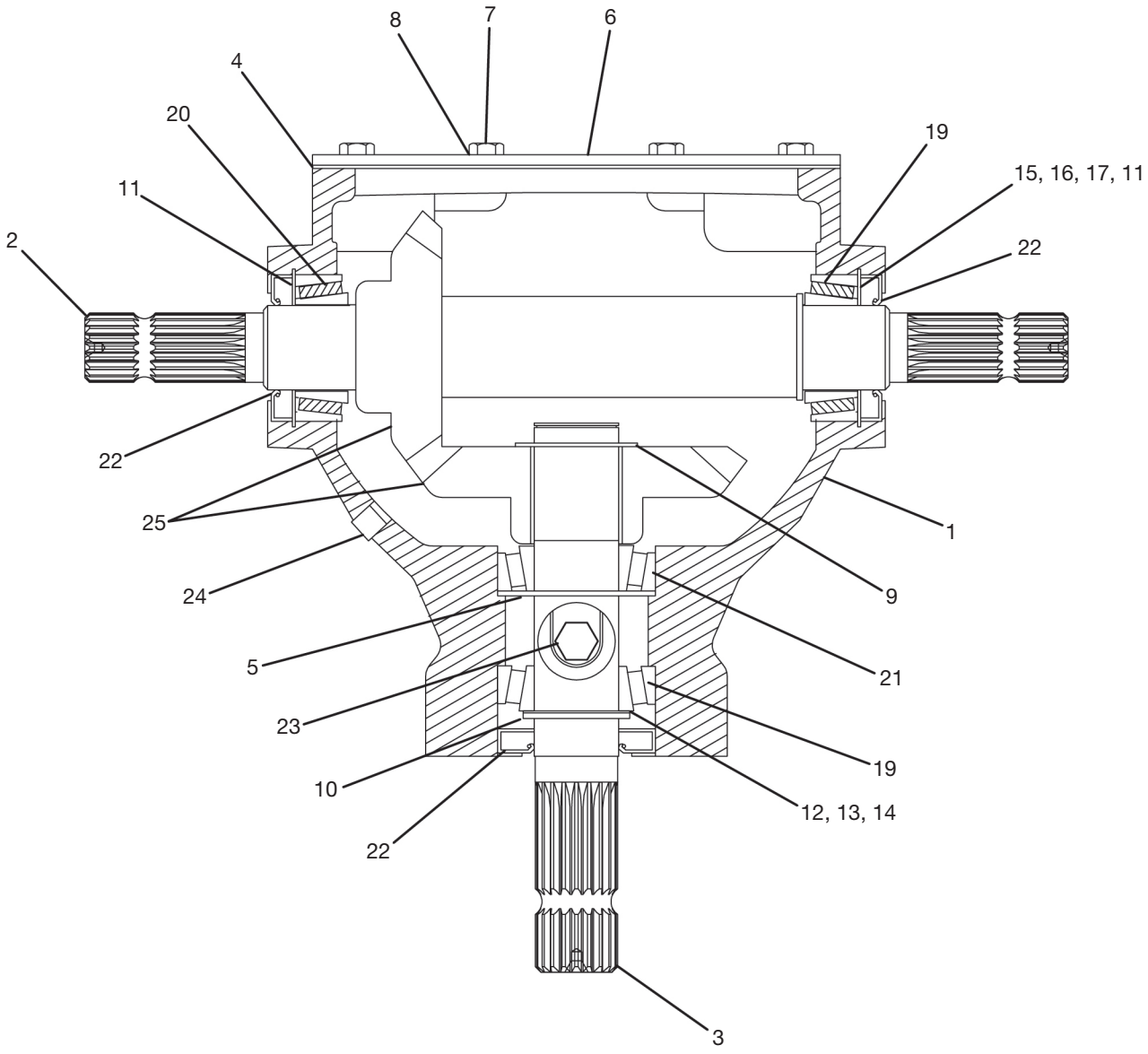
Drive Lines



Drive Lines

#	QTY.	PART #	DESCRIPTION
1	2	4106	GREASEZERK, 45 DEG SCW-IN 1/8NPT
2	2	8087	BEARING, 1-3/4 DODGE 4 BOLT
3	16	4054	NUT, LOCK 1/2" TOP
4	30	4068	WASHER, 1/2" SAE FLAT
5	18	4014	BOLT, 1/2" X 1-3/4" GRADE 5
6	2	9094	SHAFT, SHRD DRIVELINE 112-1/2"
7	2	7121-03	KEY, 3/8" X 2"
8	1	N13023	SHIELD, SHRD 20' DRVLN OTR PVC
9	2	4105	GREASE-ZERK, 1/4" SCREW-IN
10	2	8089	BEARING, 1-3/4 DODGE PILLOWBLOCK
11	4	4012	BOLT, 1/2" X 1-1/4" GRADE 5
12	1	9098	MOUNT, SHRD DRIVELINE BEARING LEFT
13	1	N13022	SHIELD, SHRD DRIVELINE INNER PVC
14	6	4155	WASHER, LOCK 1/2"
15	1	N11987	SHIELD, UNV SHRD BONDIOLI DRIVELINE RIGHT
16	1	N11988	SHIELD, UNV SHRD BONDIOLI DRIVELINE LEFT
17	4	4082	SCREW, SQ HEAD SET 3/8" X 1-1/4"
18	4	4061	NUT, 3/8" JAM
19	2	N12440	U-JOINT, 1-3/4" RB X 1-3/4"-20SPL
20	4	4517	BOLT, 3/4" X 2" GR 5
21	4	4287	WASHER, LOCK 3/4"
22	4	4071	WASHER, FLAT 3/4"
23	1	N13950	GEARBOX, 1450RPM 1:1 BONDIOLI
24	1	209236	SHIELD, PTO FOLDING HITCH W/DECAL
25	1	N13652	HOLDER, HOSE
26	1	8176	PTO, PT (1-3/4"-20 SPLINED W/OVERRUNNING CLUTCH)
	1	8175	PTO, PT (1-3/8"-21 SPLINED W/OVERRUNNING CLUTCH)
27	1	4092	PIN COTTER 5/32" X 2"
28	1	N36458	ROD, FLIPPER SHWD 20'
29	24	N18774	FLIPPER, SHREDDER 9-1/2" X 8-1/2"
30	1	9127	MOUNT, SHRD DRVLN BEARING RIGHT
31	1	209864	SHIELD, 20 DRIVELINE OTR PVC SH
32	1	209865	SHIELD, 20 DRIVELINE OTR PVC LG
33	1	N13858	GUARD, GEARBOX SHAFT
34	4	4064	WASHER, FLAT 3/8"
35	4	4193	BOLT, 3/8" X 3/4" GRADE 5

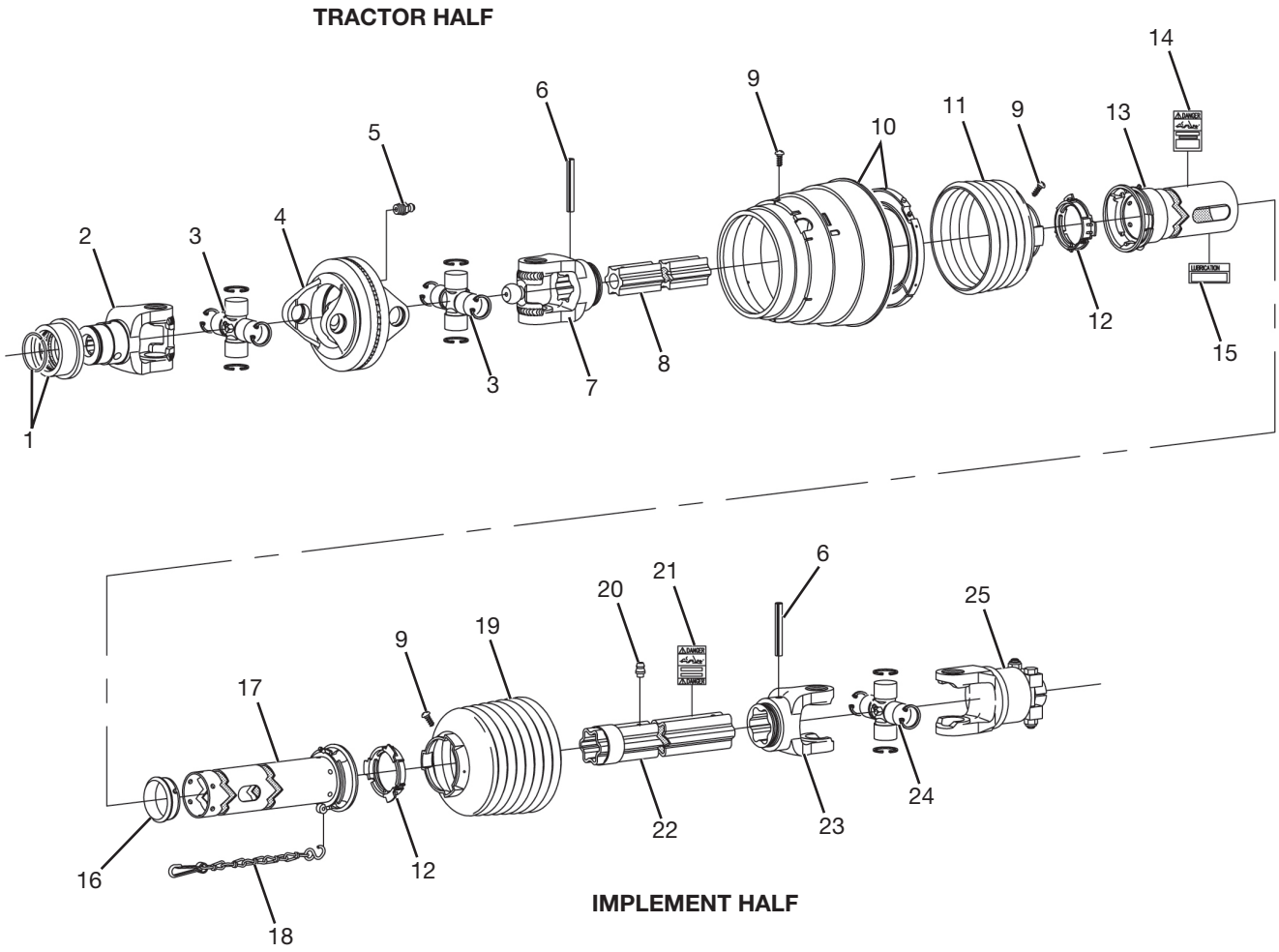
Gearbox, 1450 RPM Bondioli (N13950)



Gearbox, 1450 RPM Bondioli (N13950)

#	QTY.	PART #	DESCRIPTION
1	1	N14122	HOUSING, GEARBOX
2	1	8170-02	SHAFT, THROUGH
3	1	N14121	SHAFT, PINION
4	1	8170-04	GASKET, COVER
5	1	N14120	SPACER, PINION SHAFT
6	1	8170-06	COVER, HOUSING
7	8	8170-07	SCREW, COVER
8	8	8170-08	WASHER, COVER SCREW
9	1	8170-09	CIRCLIP, PINION SHAFT
10	1	8170-10	SNAP-RING, PINION SHAFT
11	2	8170-11	SNAP-RING, THROUGH SHAFT
12	1	8170-12	RING, PINION SHAFT
13	1	8170-13	RING, PINION SHAFT
14	1	8170-14	RING, PINION SHAFT
15	2	8170-15	RING, THROUGH SHAFT
16	2	8170-16	RING, THROUGH SHAFT
17	2	8170-17	RING, THROUGH SHAFT
18	2	8170-18	RING, THROUGH SHAFT
19	2	8170-19	BEARING, TAPERED ROLLER
20	1	8170-20	BEARING, THROUGH SHAFT
21	1	8170-21	BEARING, PINION SHAFT
22	3	8170-22	SEAL, OIL 2155 GEARBOX
23	1	8001-18	PLUG, OIL VENT
24	5	8001-19	PLUG, OIL
25	1	N14119	GEAR, BEVEL 1:1 (SET)

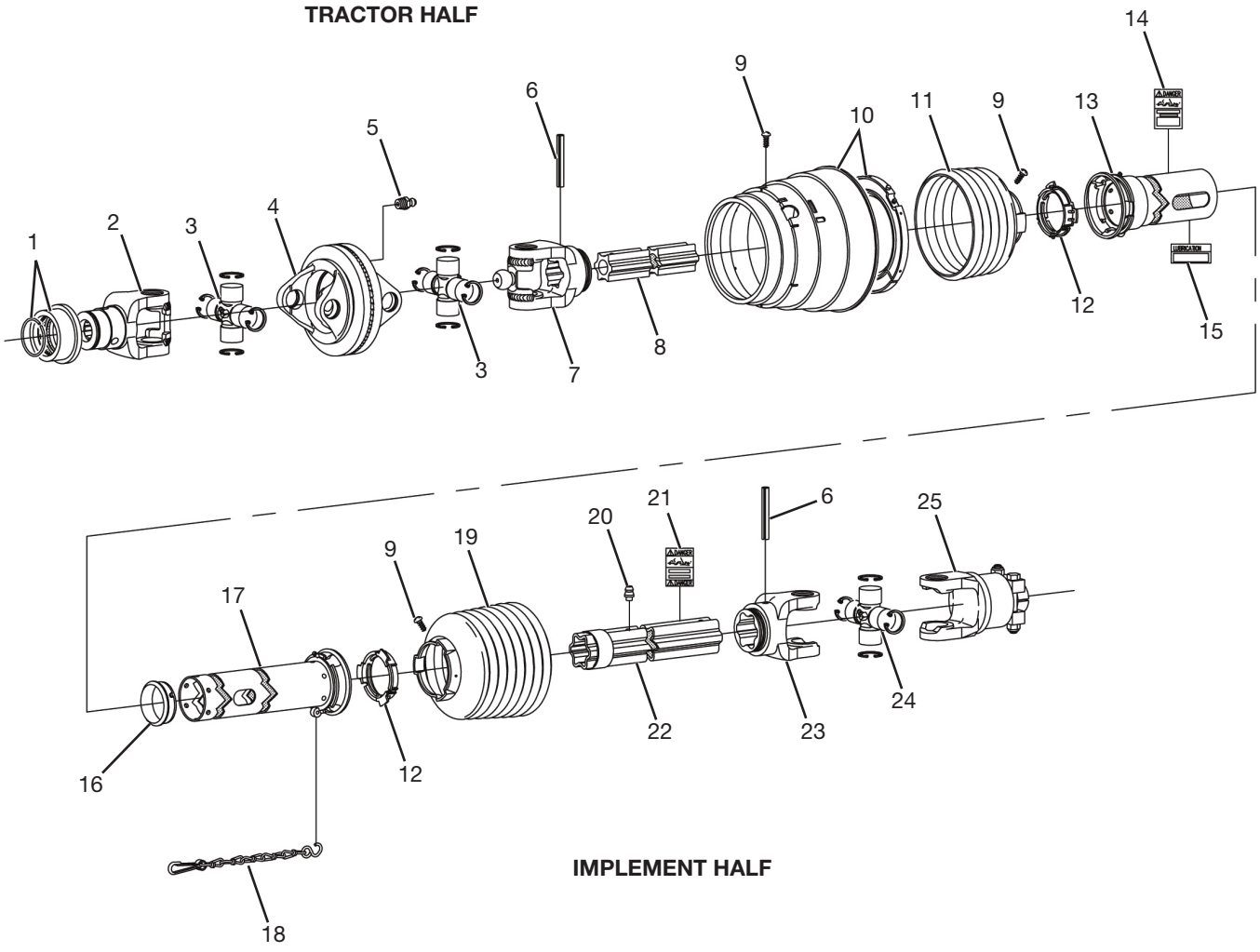
PTO, 1-3/8" Walterscheid w/Overrunning Clutch (8175)



PTO, 1-3/8" Walterscheid w/Overrunning Clutch (8175)

#	QTY.	PART #	DESCRIPTION
1	1	N10360	KIT, PTO SNAP RING (INCLUDED W/N10337)
2	1	N10337	YOKE, PTO 1-3/8"-21 SPLINE AS
3	2	N10341	KIT, PTO CROSS & BEARING
4	1	N10338	YOKE, PTO DOUBLE
5	1	N10339	ZERK, PTO GREASE (INCLUDED W/N10338)
6	2	N10342	PIN, PTO SPRING (10MM X 90MM)
7	1	N10340	YOKE, PTO INBOARD (S4)
8	1	N10343	SHAFT, PTO PROFILE (S4GA)
9	8	N11750	SCREW, PTO RIBBED SHIELD (W/N10351, NI0352 & N10367)
10	1	N10351	BEARING, PTO CV CONE
11	1	N10352	SHIELD, PTO CONE 4-RIB
12	2	N10348	RING, PTO BEARING (SC25)
13	1	N10349	GUARD, PTO SHAFT OUTER
14	1	N10357	DECAL, PTO SHAFT GUARD (INCLUDED W/N10349)
15	1	N10862	DECAL, PTO LUBRICATION
16	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
17	1	N10350	GUARD, PTO TUBE INNER
18	1	N10356	CHAIN, PTO SAFETY
19	1	N10367	SHIELD, PTO CONE 7-RIB
20	1	N10359	ZERK, PTO GREASE (INCLUDED W/N10861)
21	1	N11761	DECAL, PTO TUBE GUARD (INCLUDED W/N10861)
22	1	NI0861	TUBE, PTO PROFILE W/SLEEVE
23	1	N10345	YOKE, PTO INBOARD (S5)
24	1	N10347	KIT, PTO CROSS & BEARING
25	1	8192	CLUTCH, PTO OVERRUNNING

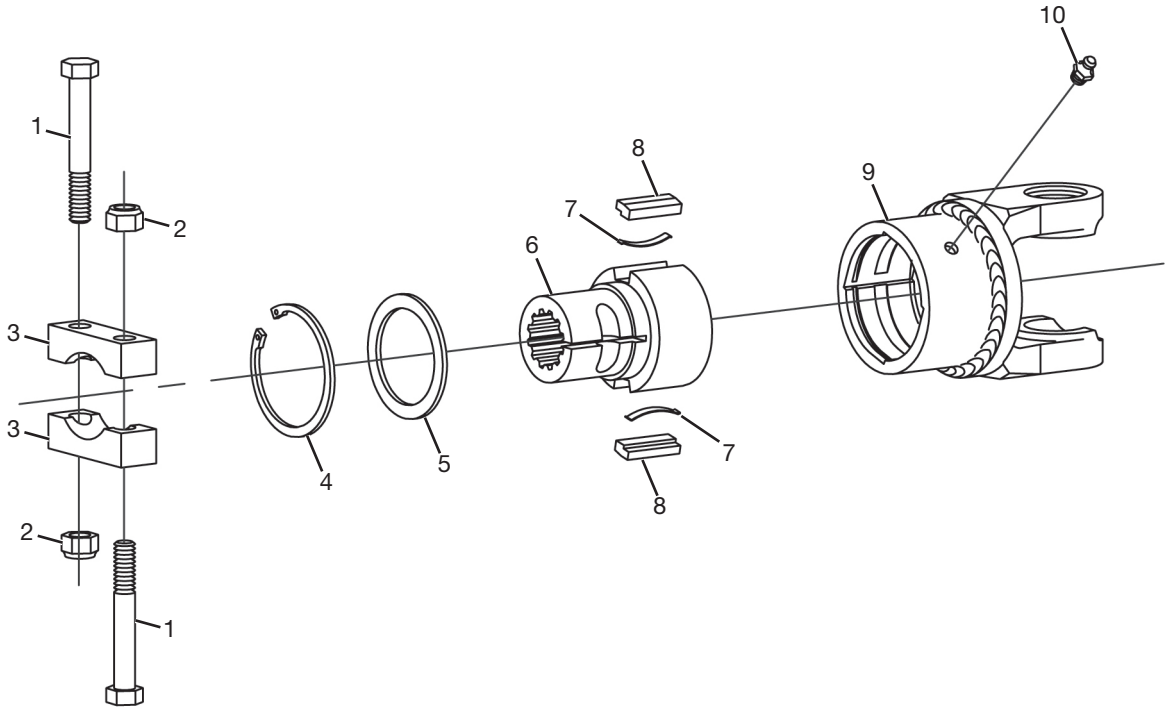
PTO, 1-3/4" Walterscheid w/Overrunning Clutch (8176)



PTO, 1-3/4" Walterscheid w/Overrunning Clutch (8176)

#	QTY.	PART #	DESCRIPTION
1	1	N10362	KIT, PTO SNAP RING (INCLUDED W/N10361)
2	1	N10338	YOKE, PTO 1-3/4"-20 SPLINE AS
3	2	N10341	KIT, PTO CROSS & BEARING
4	1	N10338	YOKE, PTO DOUBLE
5	1	N10339	ZERK, PTO GREASE (INCLUDED W/N10338)
6	2	N10342	PIN, PTO SPRING (10MM X 90MM)
7	1	N10340	YOKE, PTO INBOARD (S4)
8	1	N10343	SHAFT, PTO PROFILE (S4GA)
9	8	N11750	SCREW, PTO RIBBED SHIELD (W/N10351 & N10367)
10	1	N10351	BEARING, PTO CV CONE
11	1	N10352	SHIELD, PTO CONE 4-RIB
12	2	N10348	RING, PTO BEARING (SC25)
13	1	N10349	GUARD, PTO SHAFT OUTER
14	1	N10357	DECAL, PTO SHAFT GUARD
15	1	N10862	DECAL, PTO LUBRICATION
16	1	N10355	BEARING, PTO TUBE GUARD SUPPORT
17	1	N10350	GUARD, PTO TUBE INNER
18	1	N10356	CHAIN, PTO SAFETY
19	1	N10367	SHIELD, PTO CONE 7-RIB
20	1	N10359	ZERK, PTO GREASE
21	1	N11761	DECAL, PTO TUBE GUARD
22	1	Nl0861	TUBE, PTO PROFILE W/SLEEVE
23	1	N10345	YOKE, PTO INBOARD (S5)
24	1	N10347	KIT, PTO CROSS & BEARING
25	1	8192	CLUTCH, PTO OVERRUNNING

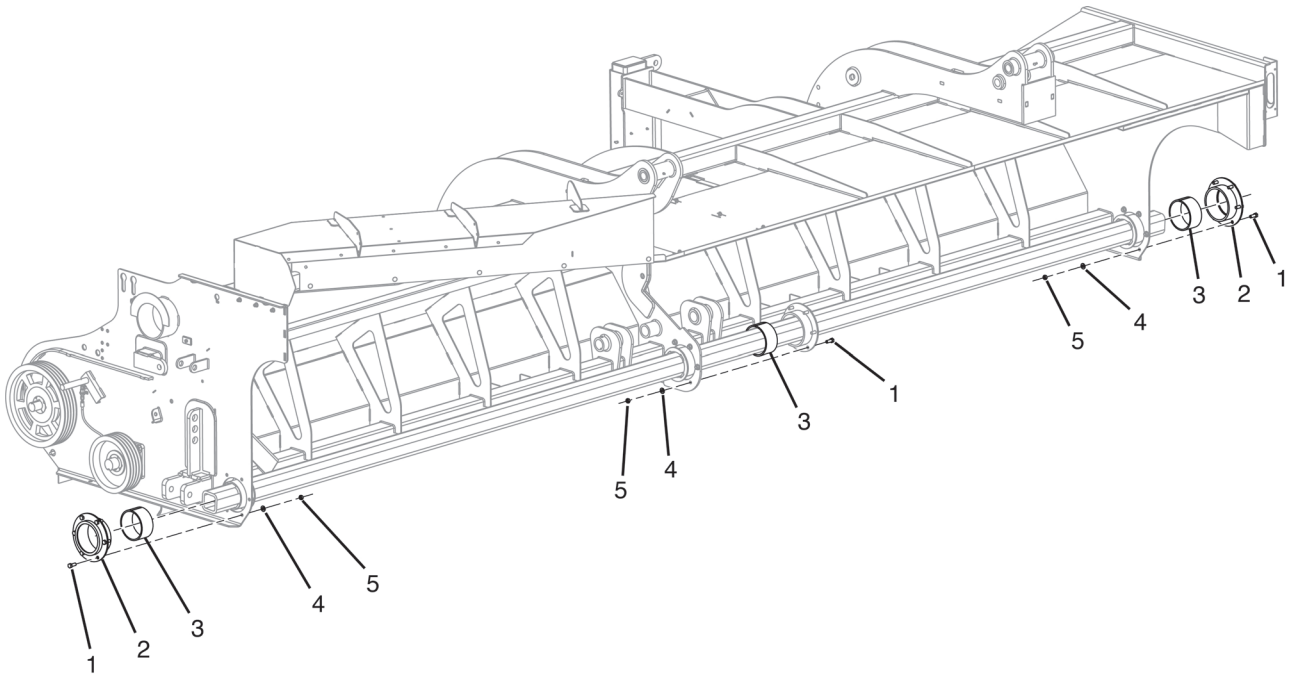
Clutch, 1-3/4" Walterscheid Overrunning (8192)



To order a complete overrunning clutch (items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10), use part number 8192

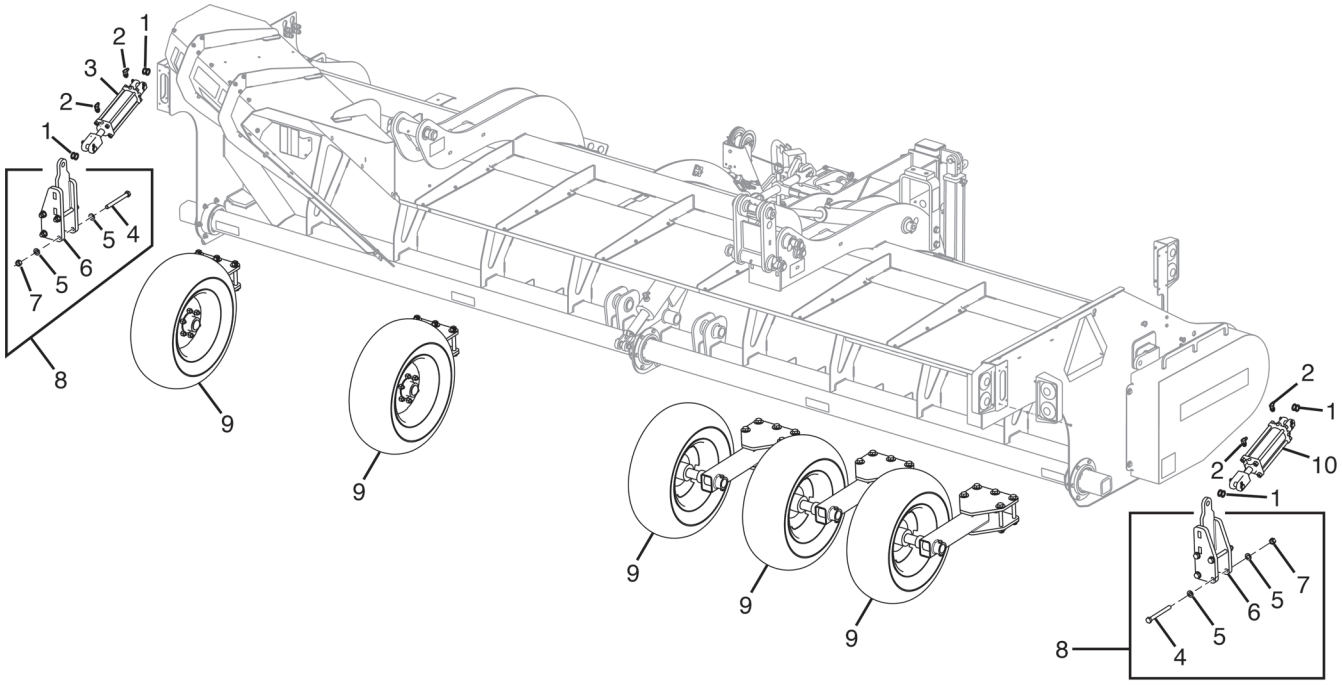
#	QTY.	PART #	DESCRIPTION
1	2	4448	BOLT, M16 X 110MM HEX HD.
2	2	4449	NUT, M16 LOCK
3	2	N10388	BRIDGE, CLUTCH CLAMP
4	1	N10873	1-3/4" HD CLUTCH RETAINING
5	1	N10878	WASHER, 1-3/4" HD CLUTCH (59.8 X 72)
6	1	N10892	HUB, 1-3/4"-20 SPLINE CLUTCH
7	2	N10877	SPRING, 1-3/4" HD CLUTCH LEAF
8	2	N10888	KEY, CLUTCH
9	1	N10887	HOUSING, CLUTCH
10	1	N10339	ZERK, GREASE (INCLUDED W/N10887)

Rear Tube Bushings

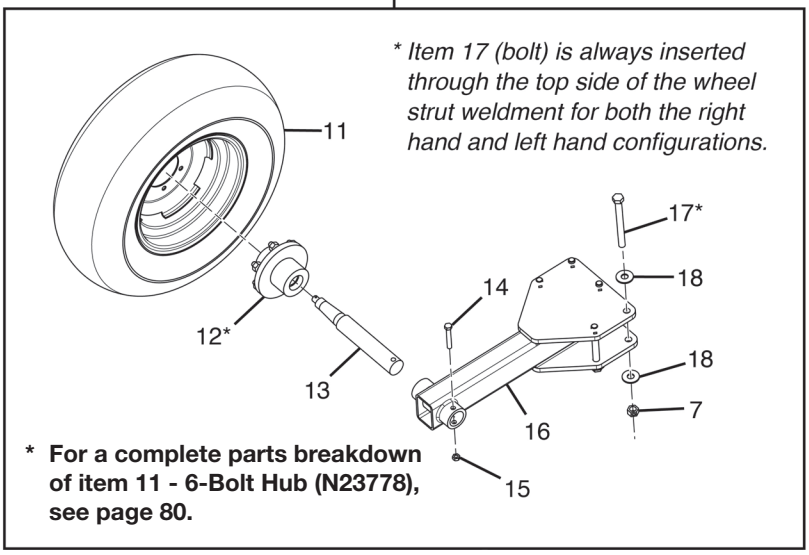


#	QTY.	PART #	DESCRIPTION
1	18	4012	BOLT, 1/2" X 1-1/4" GRADE 5
2	2	N34956	BUSHING, WHEEL
3	3	N34900	BUSHING, WHEEL PIVOT
4	18	4068	WASHER, 1/2" SAE FLAT
5	18	4054	NUT, LOCK 1/2" TOP

Assist Wheel Assembly



Rear Operation Wheel Detail - 9



*** For a complete parts breakdown of item 11 - 6-Bolt Hub (N23778), see page 80.**

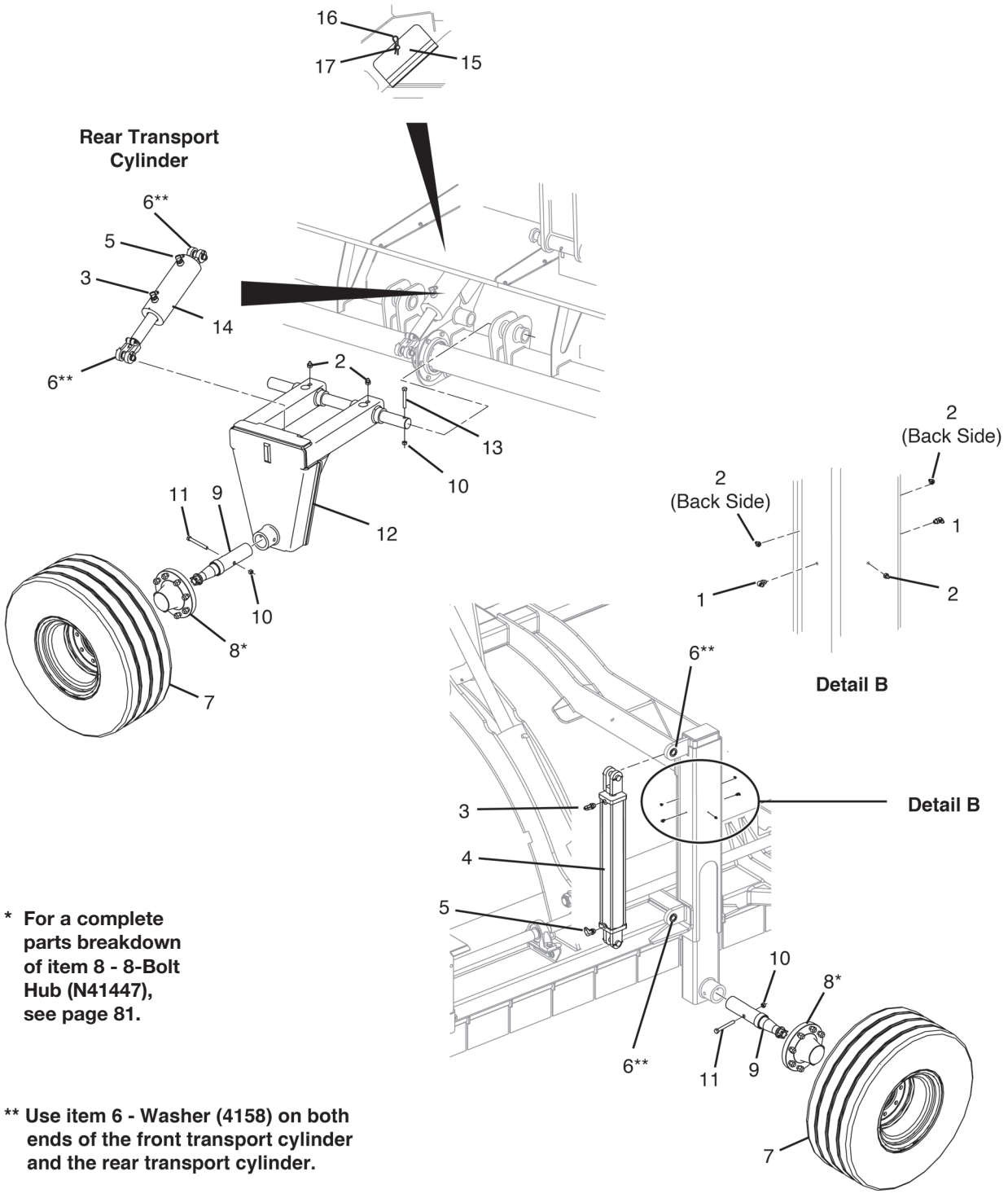
IMPORTANT: ITEMS 3 AND 10 ARE REPHASING CYLINDERS AND CANNOT BE INTERCHANGED!

NOTE: See pages 88 and 90 for the hydraulic hoses and hose routing.

Assist Wheel Assembly

#	QTY.	PART #	DESCRIPTION
1	8	4158	WASHER, 1" ID THICK SPACER
2	4	N20037	ELBOW, 90 DEG - 6MJIC - 8MOR
3	1	8042	CYLINDER, 3" X 8" REPHASING
4	8	4545	BOLT, 3/4" X 7-1/2" GR 5
5	16	N35327	WASHER, FLAT 3/4" SAE
6	2	209749	ARM, WHEEL CYL
7	33	4056	NUT, LOCK 3/4"
8	2	209748	ARM, UNV REAR PT CYLINDER
9	5	N34860	ASSY, ASSIST WHEEL SHWD
10	1	8043	CYLINDER, 3-1/4" X 8" REPHASNG
11	5	N22459	WHEEL, 11L-15 HIWAY D RATING
12	5	N23778	HUB, 6 BOLT 6" PAT W/STUDS
13	5	N25199	SPINDLE, GBL
14	5	4467	BOLT, 1/2" X 3-1/4" GRADE 5
15	5	4054	NUT, LOCK 1/2" TOP
16	5	209747	WLDMT, SHWA WHEEL STRUT DUAL
17	25	4458	BOLT, 3/4" X 6-1/2" GR 5
18	50	4071	WASHER, FLAT 3/4" USS ZINC

Transport Wheel Assembly (Transport Models)



*** For a complete parts breakdown of item 8 - 8-Bolt Hub (N41447), see page 81.**

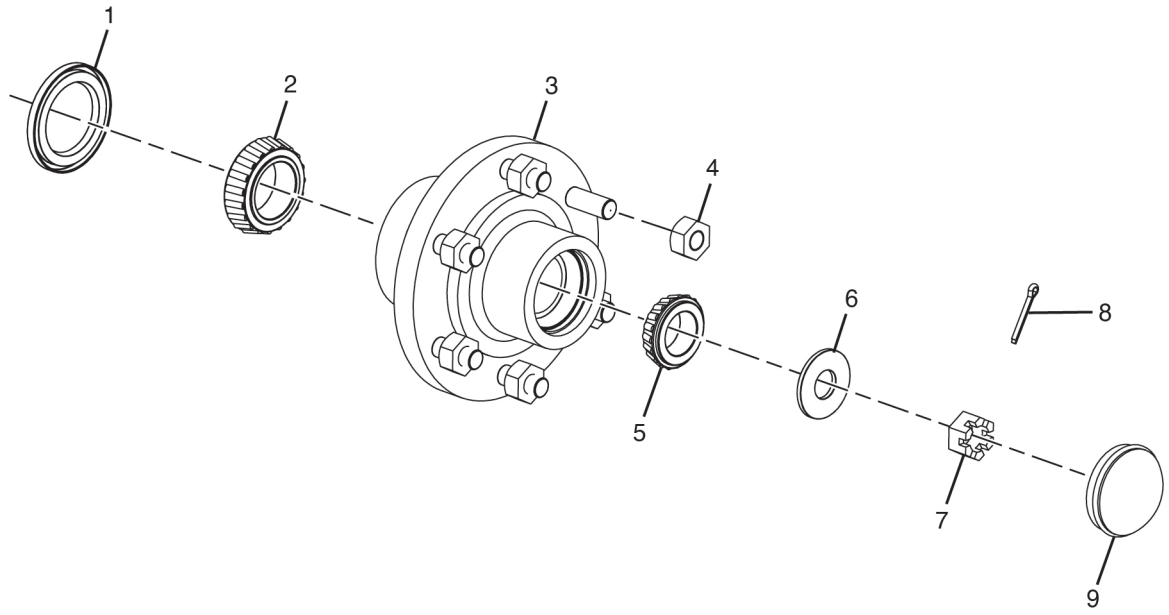
**** Use item 6 - Washer (4158) on both ends of the front transport cylinder and the rear transport cylinder.**

NOTE: See page 88 for the hydraulic hoses and hose routing.

Transport Wheel Assembly (Transport Models)

#	QTY.	PART #	DESCRIPTION
1	6	4107	GREASE-ZERK, 1/4" SCREW-IN 90 DEG
2	5	4105	GREASE-ZERK, 1/4" SCREW-IN
3	2	N20037	ELBOW, 90 DEG - 6MJIC - 8MOR
4	1	N24091	CYLINDER, 3" X 24" 3000 PSI
5	2	212049	ELBOW, 90 -6MJIC-8MORB .062 OR
6	8	4158	WASHER, 1" ID THICK SPACER
7	2	216130	WHEEL, IF320/70R15 146D 1.120 OFFSET
8	2	N41447	HUB, 8 BOLT 4.0" BOLT CIRCLE
9	2	215813	SPINDLE, WITH BUSHING
10	2	4054	NUT, LOCK 1/2" TOP
11	2	212649	BOLT, 1/2" X 4-1/4" GR5
12	1	212906	MOUNT, SHWA REAR TRANSPORT
13	3	4154	BOLT, 1/2" X 3-1/2" GRADE 5
14	1	212919	CYLINDER, 4 X 6 3000 PSI
15	1	212914	STOP, 6 INCH CYLINDER
16	5	4089	CLIP, HAIRPIN .093 X 1-5/8"
17	1	4093	PIN, 3/8" X 3" (2.75" USEABLE)

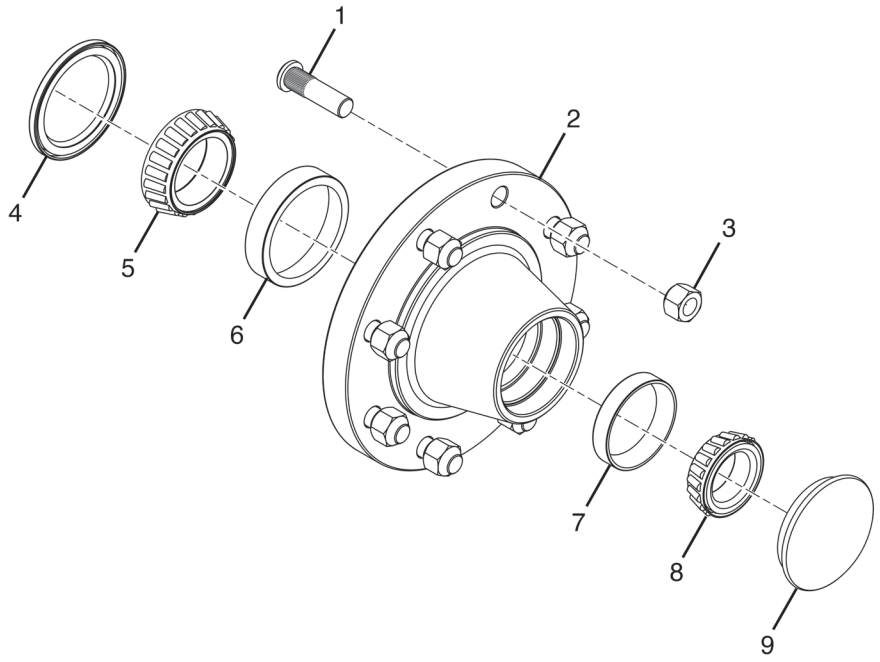
6 Bolt Hub (N23778)



To order complete hub, use part number N23778.

#	QTY.	PART #	DESCRIPTION
1	1	8082-04	SEAL, GREASE (6-BOLT HUB)
2	1	8082-03	CONE, BEARING (LARGE)
3	1	N23676	HUB, 6-BOLT STUD CASTING ONLY
4	6	N23764	NUT, LUG 9/16"-18 UNF
5	1	8082-06	CONE, BEARING (SMALL)
6	1	8082-07	WASHER, SPINDLE
7	1	8082-08	NUT, CASTLE SPINDLE (3/4"-16 UNF)
8	1	8082-09	PIN, COTTER (3/16" X 1-1/2")
9	1	8082-10	CAP, END (6-BOLT HUB)

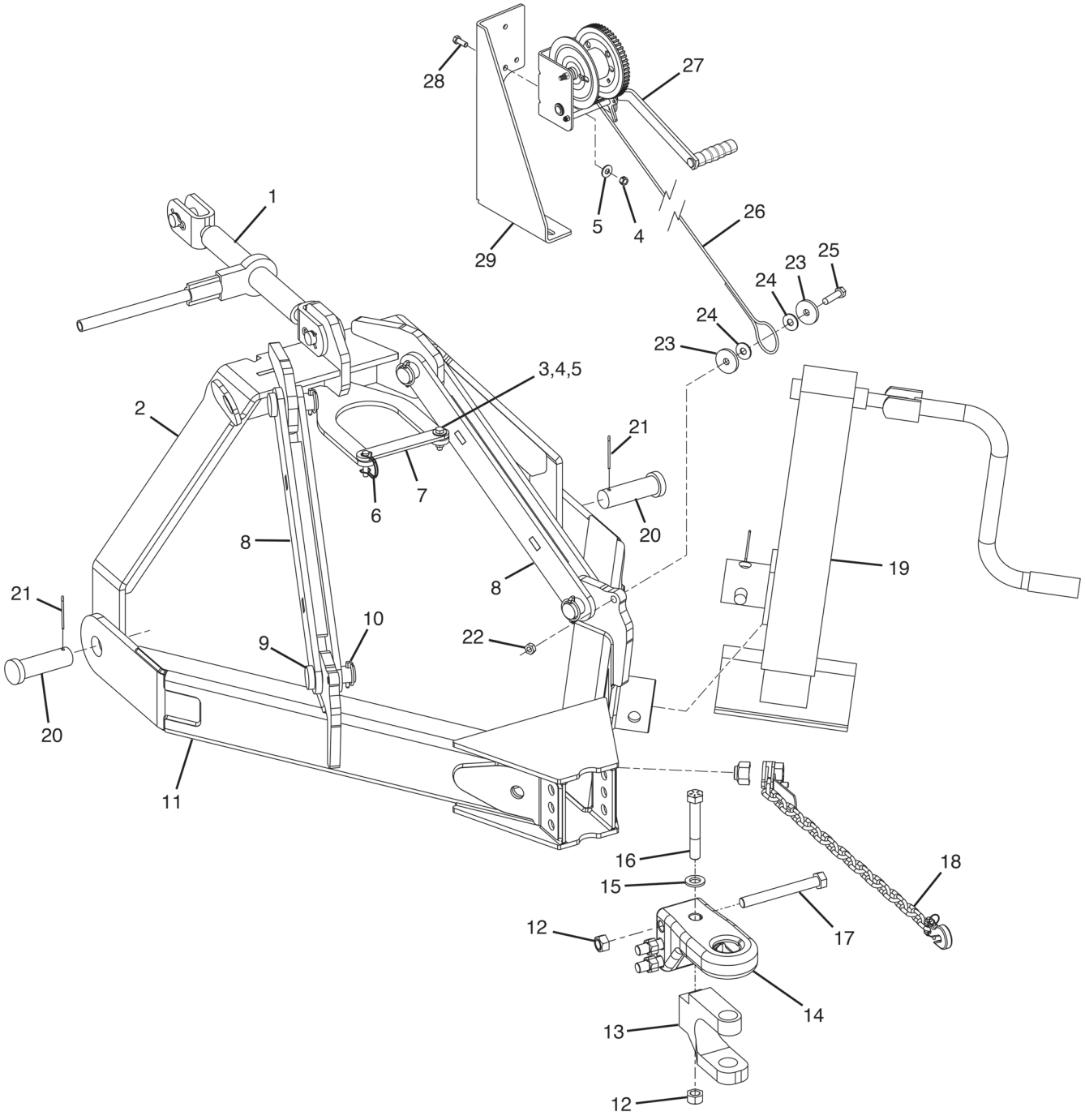
Hub, 8 Bolt (N41447)



To order complete 8-bolt hub, use part number N41447.

#	QTY.	PART #	DESCRIPTION
1	8	N39122	STUD, 5/8-18X2.25
2	1	N39121	HUB, 8 BOLT
3	8	N39123	NUT, 5/8-18 60DEG
4	1	N39118	SEAL, GREASE
5	1	N39120	BEARING, CONE
6	1	203718	CUP, BEARING JLM506810
7	1	203717	CUP, BEARING LM501310
8	1	N39119	BEARING, CONE
9	1	N39117	CAP, HUB

Operation Hitch - Transport Models

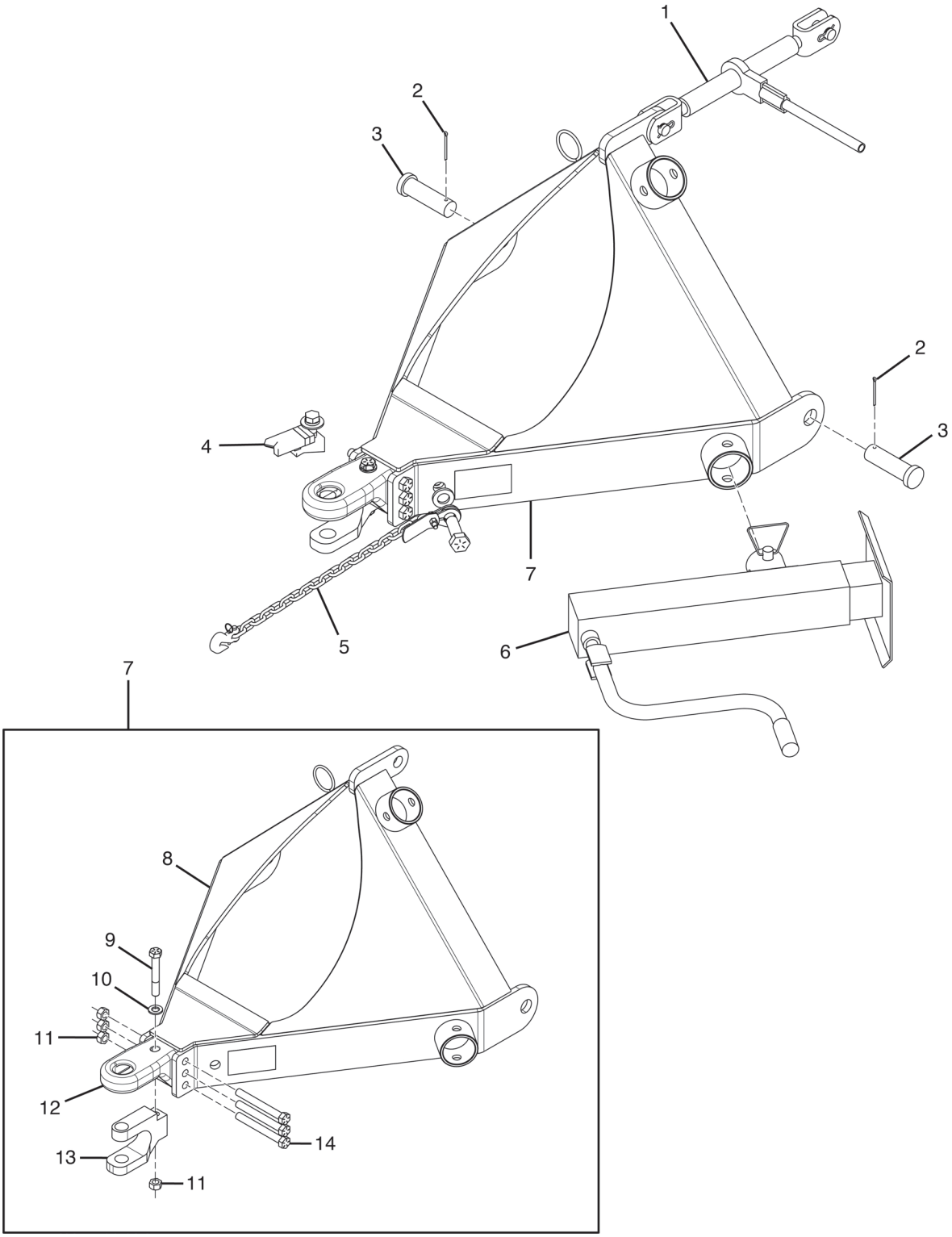


To order a complete pull-type folding hitch (Items 1 through 18), use part number 212748

Operation Hitch - Transport Models

#	QTY.	PART #	DESCRIPTION
1	1	8048	BODY, RATCHET JACK
2	1	N32960	VERTICAL HITCH WELD - FOLDING HITCH
3	1	4006	BOLT, 3/8" X 1-1/2" GRADE 5
4	3	4052	NUT, LOCK 3/8"
5	5	4064	WASHER, FLAT 3/8"
6	1	N27991	PIN, 3/8" X 1-3/8" RETAINER
7	1	N27990	BAR, GBL SWING AUG PTO HOLDER
8	2	N32957	LINK WELD - FOLDING HITCH
9	4	4290	PIN, 1-1/4 X 2-1/2 MOUNTED HITCH
10	4	4095	CLIP, LINCHPIN
11	1	212749	HITCH, SHW FOLDING W/DECALS
12	4	N16352	NUT, LOCK 3/4" GRADE 8 FINE
13	1	N37463	CLEVIS, CAT 2 BOLT-ON HITCH
14	1	N32970	HITCH, BOLT-ON, CAT 3
15	1	N35327	WASHER, FLAT 3/4" SAE
16	1	4577	BOLT, 3/4" X 5" FN TH GR 8
17	3	N16351	BOLT, 3/4" X 6-1/2" FN TH GR 8
18	1	N50260	CHAIN,SAFETY 21,000LB W/ HDWR
19	1	N13732	JACK, PULL-TYPE HITCH
20	2	N13095	PIN, HITCH 1-1/2" X 4-3/8"
21	2	4355	PIN, COTTER 3/16" X 2-1/2"
22	1	4054	NUT, LOCK 1/2" TOP
23	2	4074	WASHER, 2" OD X 1/2" ID X 1/4"
24	2	4486	WASHER, 1/2" FLAT
25	1	4015	BOLT, 1/2" X 2" GRADE 5
26	1	N13272	CABLE, WINCH ASSY
27	1	201805	WINCH, CABLE 1800# DL
28	2	4195	BOLT, 3/8" X 1" GRADE 5
29	1	212183	PLATE, WINCH MOUNT BRACKET

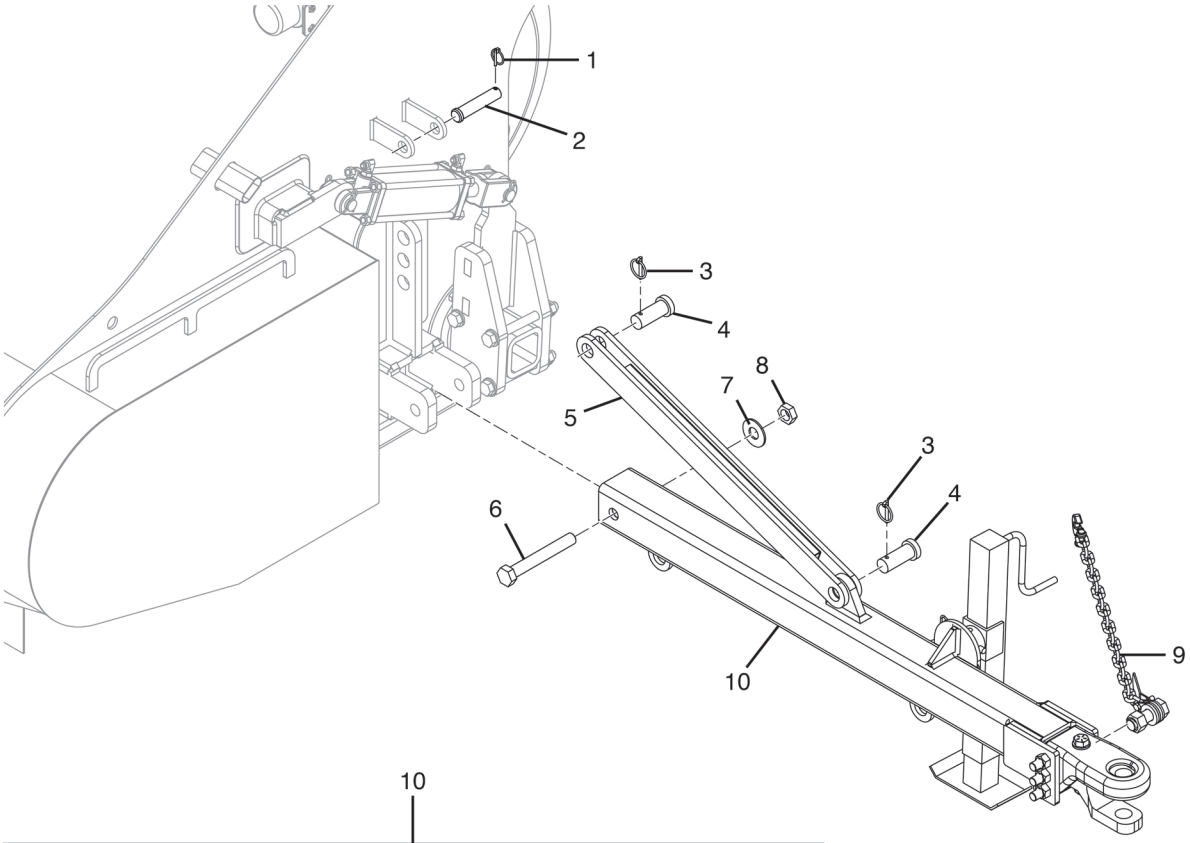
Operation Hitch - Models without Transport (N40152)

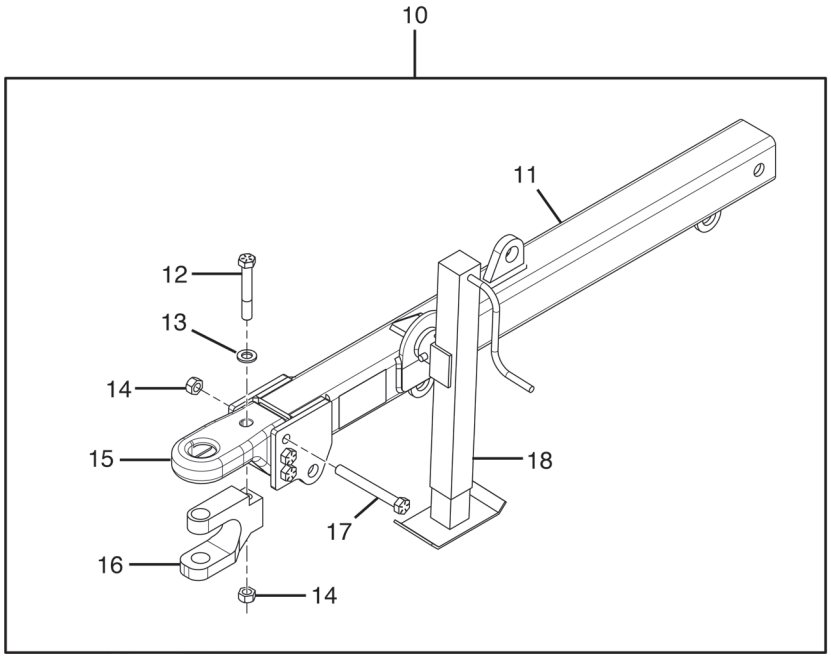


Operation Hitch - Models without Transport (N40152)

#	QTY.	PART #	DESCRIPTION
1	1	8048	BODY, RATCHET JACK
2	2	4355	PIN, COTTER 3/16" X 2-1/2"
3	2	N13095	PIN, HITCH 1-1/2" X 4-3/8"
4	1	N37609	KIT, GBU HITCH CONV PART
5	1	N50260	CHAIN, SAFETY 21,000LB W/ HDWR
6	1	N13732	JACK, PULL-TYPE HITCH
7	1	N32583	HITCH, UNIV SHWD PULL-TYPE
8	1	209249	HITCH, SHWD PULL-TYPE W/DECAL
9	1	4577	BOLT, 3/4" X 5" FN TH GR 8
10	1	N35327	WASHER, FLAT 3/4" SAE
11	4	N16352	NUT, LOCK 3/4" GRADE 8 FINE
12	1	N32970	HITCH, BOLT-ON, CAT 3
13	1	N37463	CLEVIS, CAT 2 BOLT-ON HITCH
14	3	N16351	BOLT, 3/4" X 6-1/2" FN TH GR 8

Transport Hitch (Transport Models)

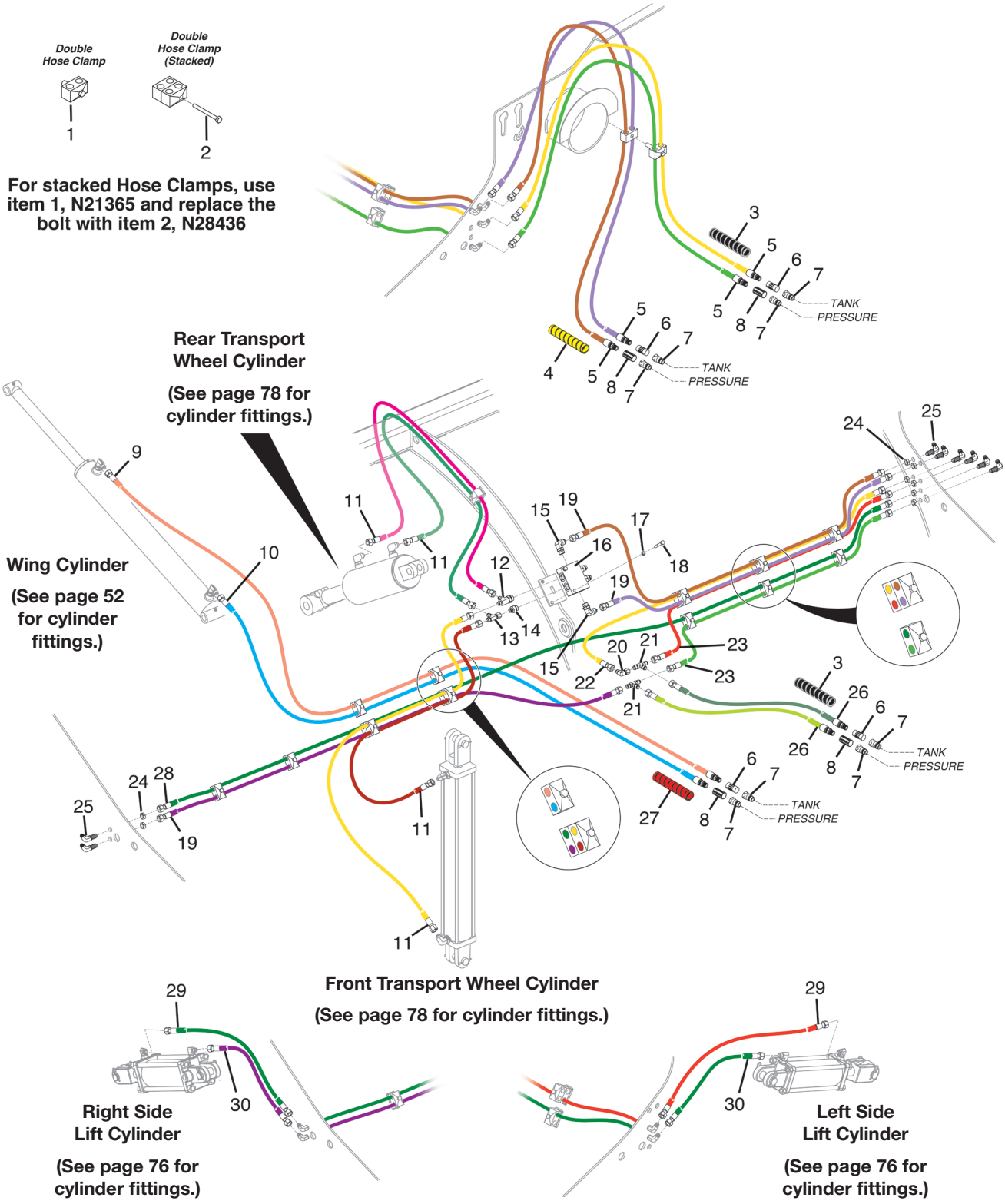




Transport Hitch (Transport Models)

#	QTY.	PART #	DESCRIPTION
1	1	N22192	PIN, LINCH 3/16" X 1-9/16"
2	1	N11932	PIN, 1" X 4-1/2" PLATED HITCH
3	2	4095	CLIP, LINCHPIN
4	2	4290	PIN, 1-1/4 X 2-1/2 MOUNTED HITCH
5	1	N23271	LINK, WIND SHRD TRANSPORT HITCH
6	1	N13410	BOLT, TRANSPORT SHORTENED
7	1	4356	WASHER, 1" FLAT
8	1	N19767	NUT, 1" GR. 8 TOPLOCK
9	1	N50260	CHAIN,SAFETY 21,000LB W/ HDWR
10	1	212756	HITCH, SHWA TRANSPORT W/DECAL
11	1	212757	TONGUE, SHWA TRANS W/DECAL
12	1	4577	BOLT, 3/4" X 5" FN TH GR 8
13	1	N35327	WASHER, FLAT 3/4" SAE
14	4	N16352	NUT, LOCK 3/4" GRADE 8 FINE
15	1	N32970	HITCH, BOLT-ON, CAT 3
16	1	N37463	CLEVIS, CAT 2 BOLT-ON HITCH
17	3	N16351	BOLT, 3/4" X 6-1/2" FN TH GR 8
18	1	N34567	JACK, PULL-TYPE HITCH

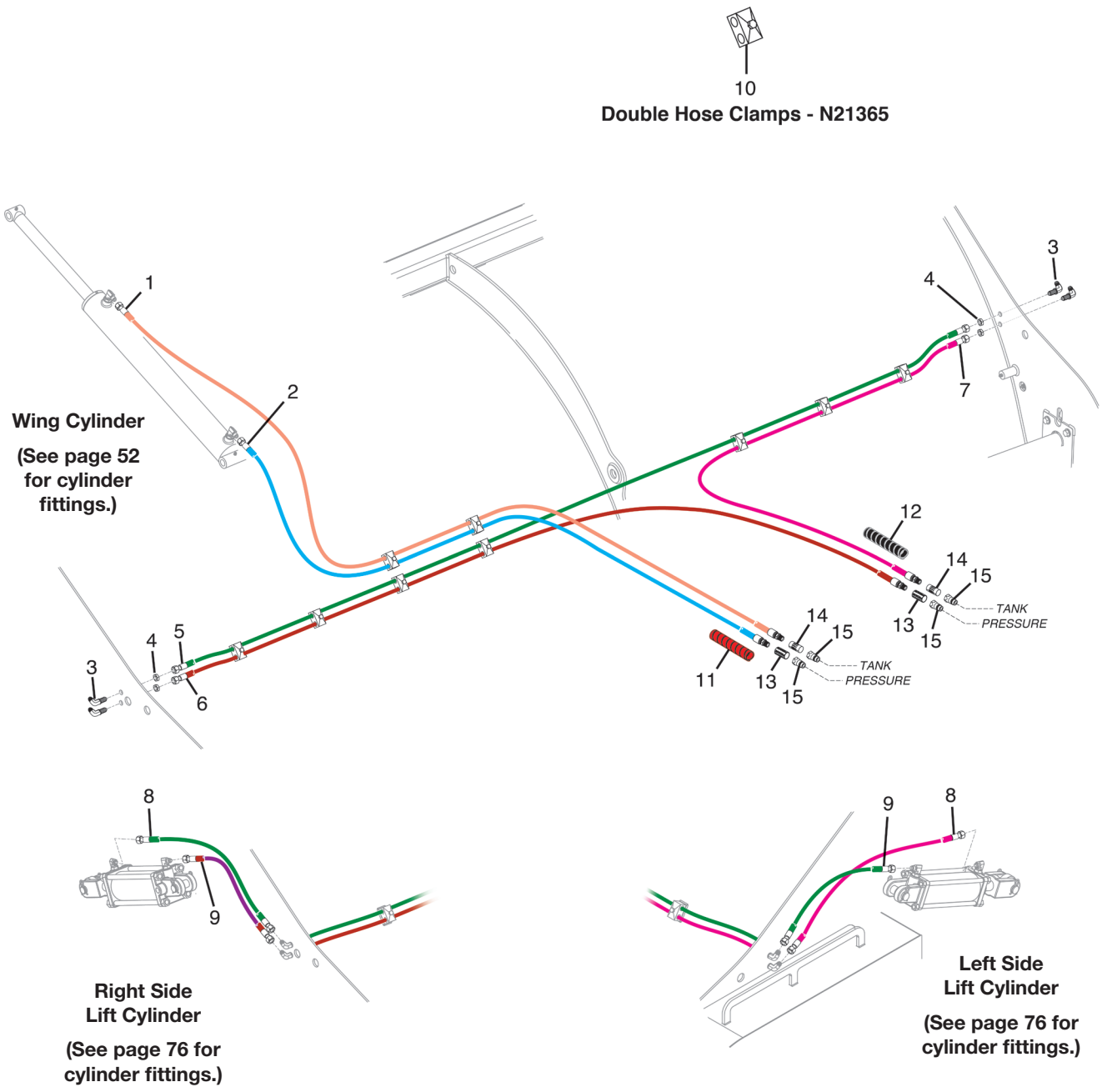
Hydraulics, Hose (Transport Models)



Hydraulics, Hose (Transport Models)

#	QTY.	PART #	DESCRIPTION
1	21	N21365	CLAMP, 3/8" DOUBLE HOSE
2	6	N28436	BOLT, 5/16" X 2-1/4" GR5
3	2	N32882	WRAP, HOSE BLACK
4	1	N32883	WRAP, HOSE YELLOW 1'
5	4	217291	HOSE, 3/8 X 158 -6FJIC -8MOR
6	4	N24823	DECAL, TANK
7	8	203957	COUPLER, 1/2" MALE PIONEER
8	4	N24822	DECAL, PRESSURE
9	1	217279	HOSE, 3/8 X 210 -6FJIC -8MOR
10	1	217281	HOSE, 3/8 X 185 -6FJIC -8MOR
11	4	217277	HOSE, 3/8 X 72.50 -6FJIC -6FJIC
12	1	212119	TEE, 6MJIC-8MOR-6MJIC
13	1	N37279	TEE, -6MJIC-6FJIC-6MJIC
14	1	N17022	ADAPTER, 6MJIC - 8MOR
15	8	N20037	ELBOW, 90 DEG - 6MJIC - 8MOR
16	1	N24644	VALVE, COUNTERBALANCE
17	2	N16469	WASHER, 5/16 NORDLOCK
18	2	4227	BOLT, 5/16" X 2" GRADE 5
19	3	217283	HOSE, 3/8 X 124 -6FJIC -6FJIC
20	1	N29078	ELBOW, 90 DEG - 6MJIC - 6FJIC
21	2	N24773	TEE, 6MJIC-6MJIC-6MJIC
22	1	217289	HOSE, 3/8 X 118 -6FJIC -6FJIC90S
23	2	217287	HOSE, 3/8 X 115 -6FJIC -6FJIC
24	8	N24780	NUT, LOCK BULKHEAD -6
25	8	N28429	ADAPTER, 90 BULKHEAD -6MJIC
26	2	217285	HOSE, 3/8 X 97 -6FJIC -8MOR
27	1	N32884	WRAP, HOSE RED 1'
28	1	215075	HOSE, 3/8 X 241 -6FJIC -6FJIC
29	2	215073	HOSE, 3/8 X 35.50 -6FJIC -6FJIC
30	2	215071	HOSE, 3/8 X 24.50 -6FJIC -6FJIC

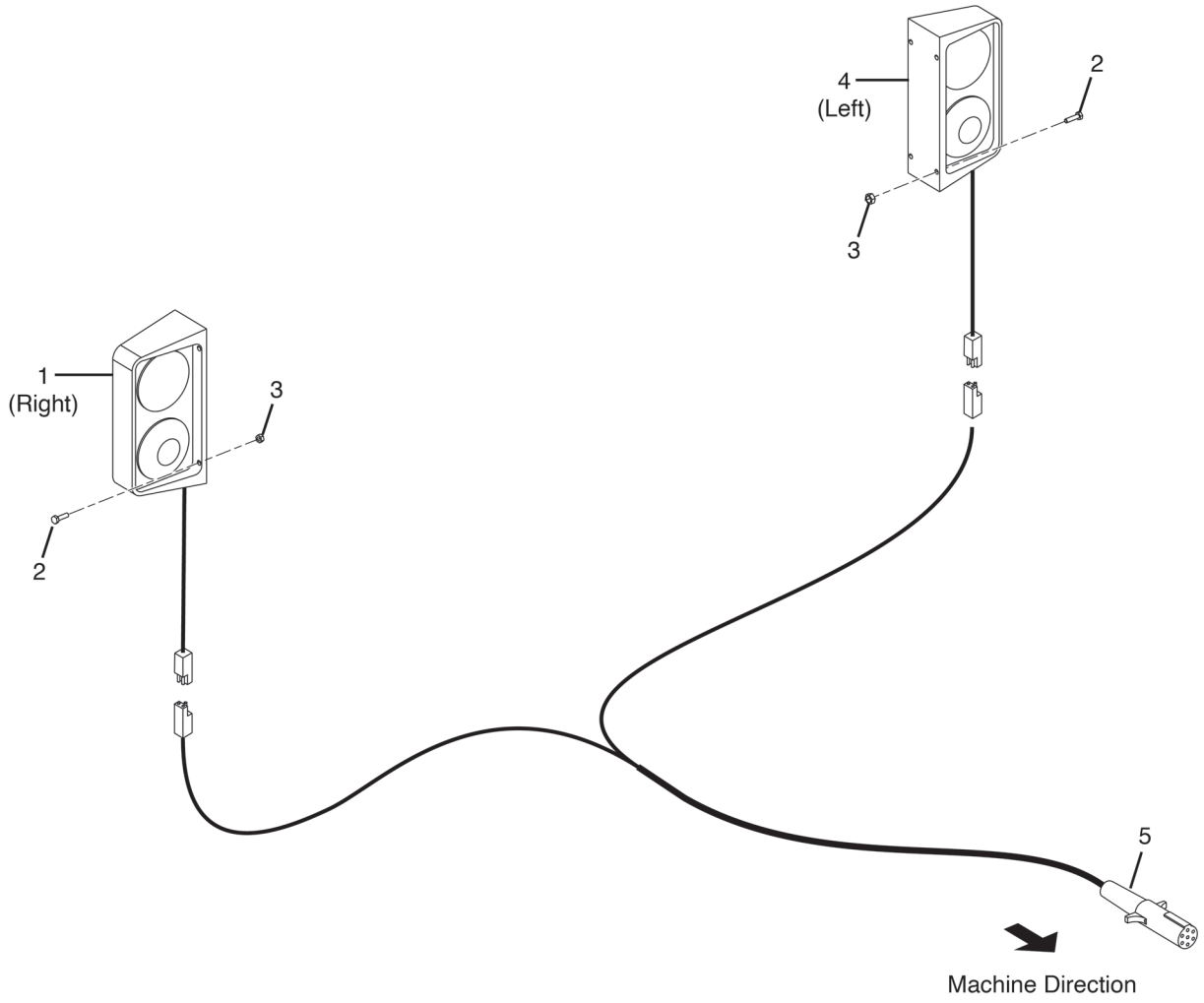
Hydraulics, Hose (Models without Transport)



Hydraulics, Hose (Models without Transport)

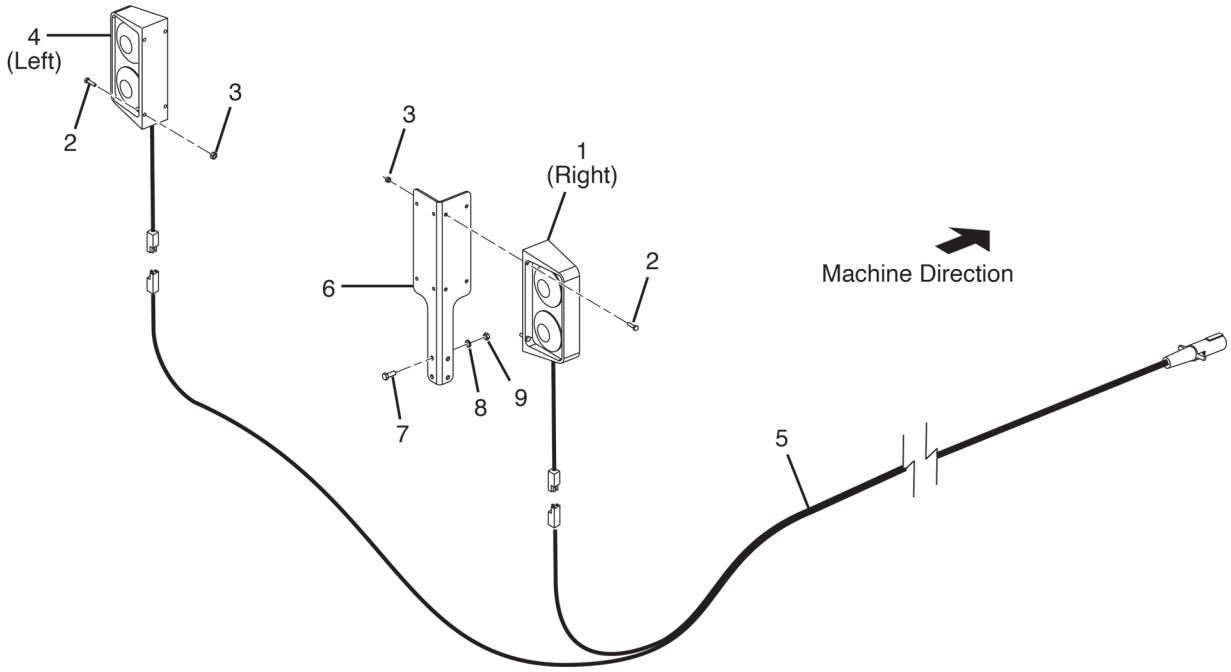
#	QTY.	PART #	DESCRIPTION
1	1	217279	HOSE, 3/8 X 210 -6FJIC -8MOR
2	1	217281	HOSE, 3/8 X 185 -6FJIC -8MOR
3	4	N28429	ADAPTER, 90 BULKHEAD -6MJIC
4	4	N24780	NUT, LOCK BULKHEAD -6
5	1	215075	HOSE, 3/8 X 241 -6FJIC -6FJIC
6	1	217295	HOSE, 3/8 X 218 -6FJIC -8MOR
7	1	217297	HOSE, 3/8 X 226 -6FJIC -8MOR
8	2	215073	HOSE, 3/8 X 35.50 -6FJIC -6FJIC
9	2	215071	HOSE, 3/8 X 24.50 -6FJIC -6FJIC
10	9	N21365	CLAMP, 3/8" DOUBLE HOSE
11	1	N32884	WRAP, HOSE RED 1'
12	1	N32882	WRAP, HOSE BLACK
13	2	N24822	DECAL, PRESSURE
14	2	N24823	DECAL, TANK
15	4	203957	COUPLER, 1/2" MALE PIONEER

Light Kit, Operation (Transport Models, and Models without Transport)



#	QTY.	PART #	DESCRIPTION
1	1	N16290	LIGHT, RIGHT
2	8	4000	BOLT, 1/4" X 1" GRADE 5
3	8	4050	NUT, 1/4" LOCK
4	1	N16289	LIGHT, LEFT
5	1	210314	HARNESS-LIGHT, 30FT WISHBONE

Light Kit, Transport (Transport Models)



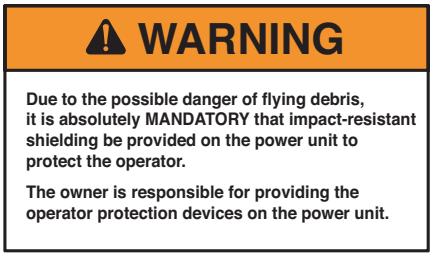
#	QTY.	PART #	DESCRIPTION
1	1	N16290	LIGHT, RIGHT
2	8	4000	BOLT, 1/4" X 1" GRADE 5
3	8	4050	NUT, 1/4" LOCK
4	1	N16289	LIGHT, LEFT
5	1	210314	HARNESS-LIGHT, 30FT WISHBONE
6	1	N16182	MOUNT, LIGHT
7	2	4195	BOLT, 3/8" X 1" GRADE 5
8	2	4065	WASHER, 3/8 LOCK
9	2	4233	NUT, STANDARD 3/8"

Machine Decals and Signs

NOTE: *All safety related decals are also shown in the Safety Instructions Section along with their location on the machine. See "Safety Decal Locations" on page 9.*

Check and replace any worn, torn, hard to read or missing decals on your machine.

Part No. N17013



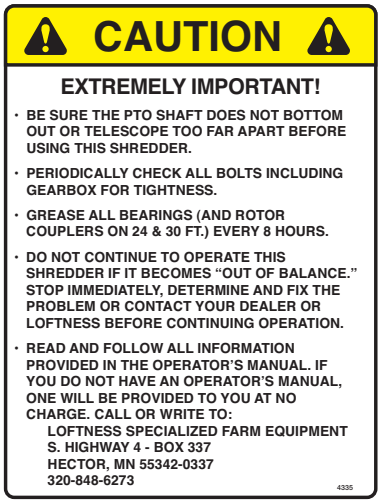
Part No. 208824

Part No. 4334

Part No. 4189

Part No. 4135

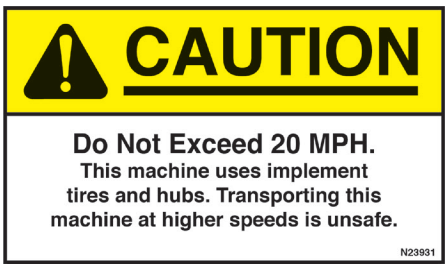
Part No. 4335



Part No. 206502

Machine Decals and Signs (Cont'd)

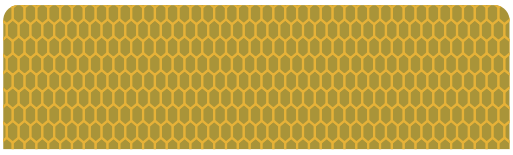
Part No. N23931



Part No. 203264

Part No. 4141

Part No. 4140



Part No. 204748

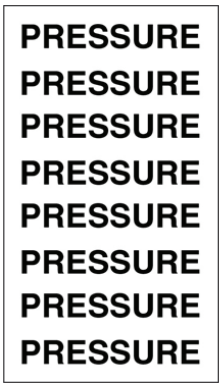
Part No. 4132

(Transport models only)

Part No. N18549

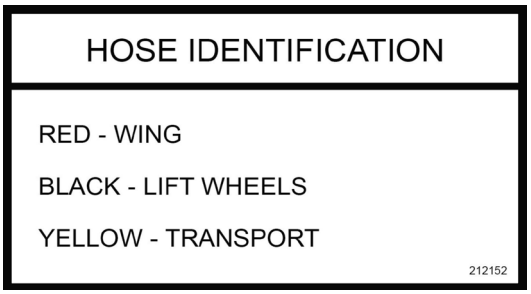
(Affixed to aluminum plate)

Part No. N24822



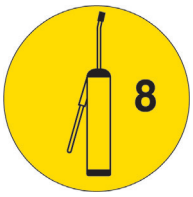
Part No. N24823

Part No. 212152

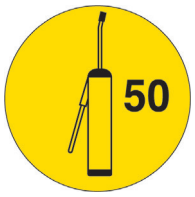


NOTE: *Grease point decals N28010, N28012, and N28013 are shown in their locations in the Lubrication section beginning on page 37.*

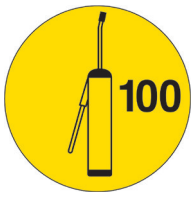
Part No. N28010



Part No. N28012



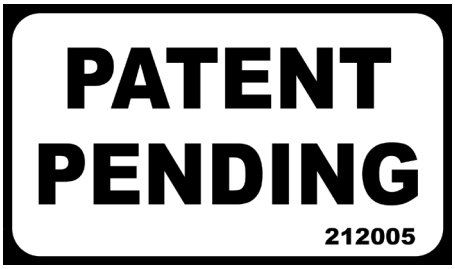
Part No. N28013



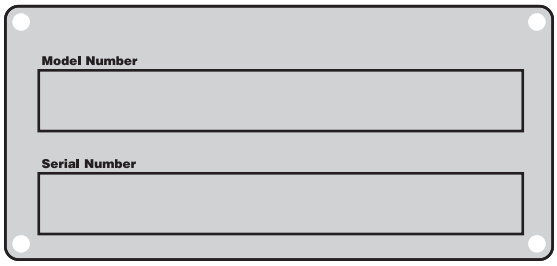
Part No. 4136

Machine Decals and Signs (Cont'd)

Part No. 212005



Part No. N13721



Part No. 209528

Part No. N13517

Part No. 4138

Part No. N26974 - *(small)*

Part No. N26973 - *(medium)*

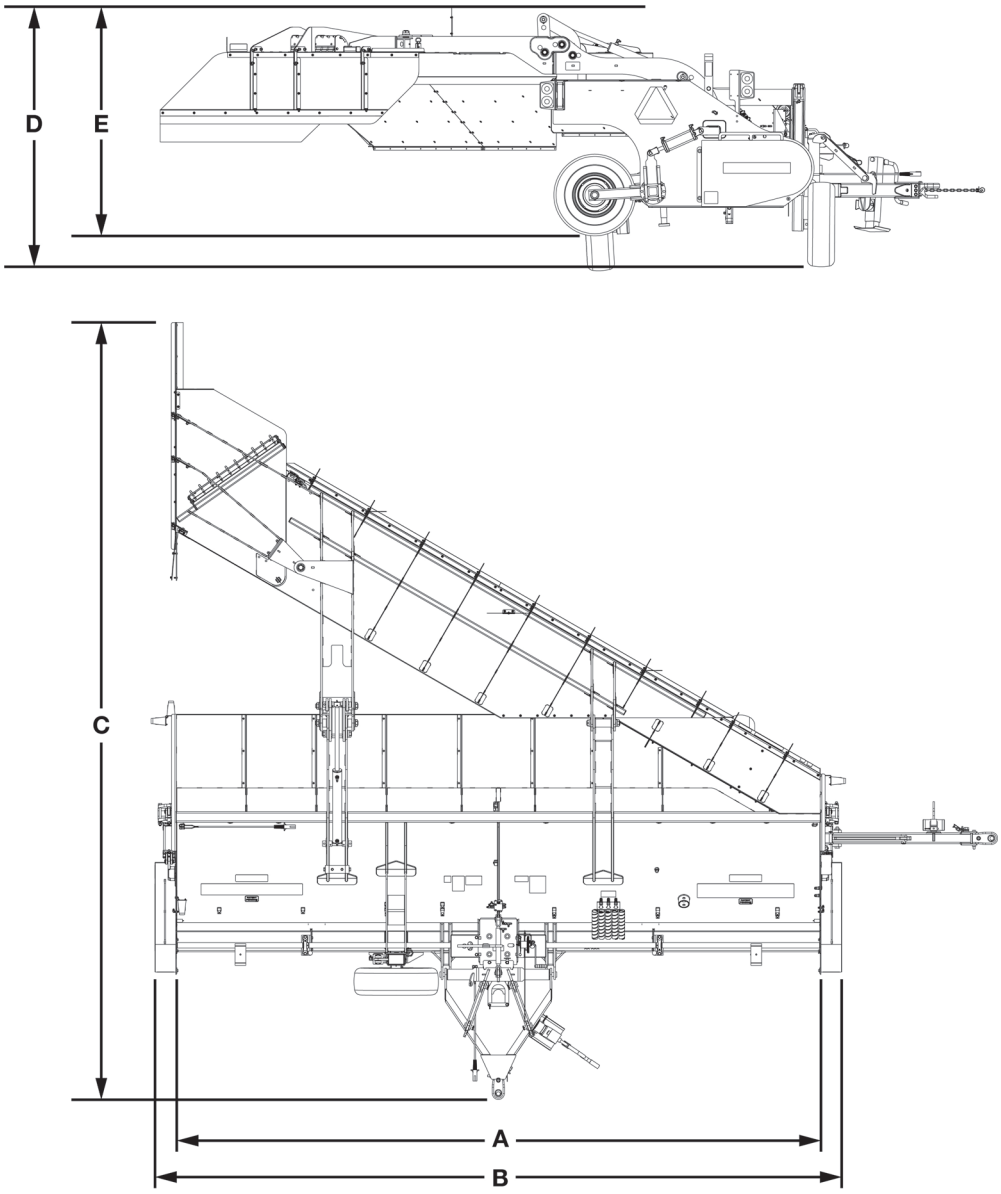
Part No. N26972 - *(large)*

Part No. 212666

Specifications

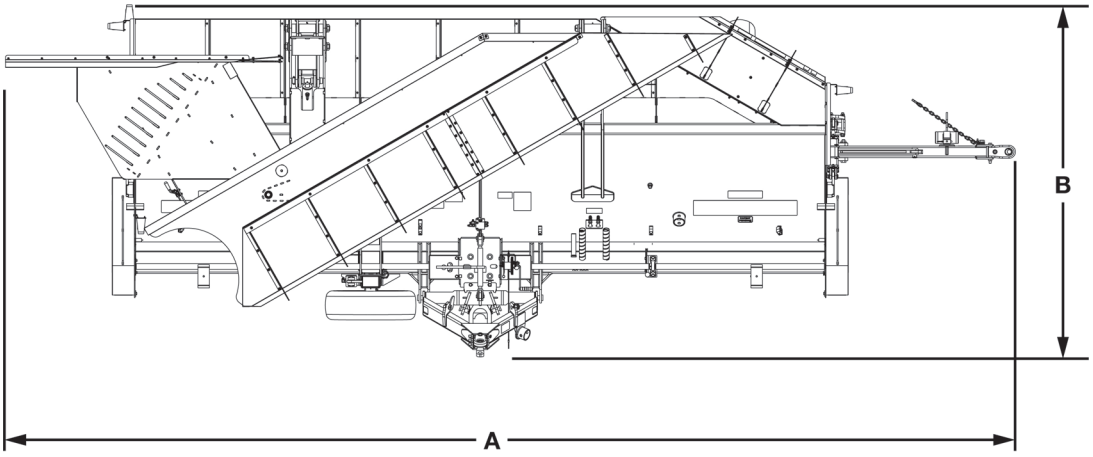
DESCRIPTION	AIR WINDROWER SHREDDER
Cutting Width	240 in. (609.6 cm)
Knives	60 Cupped, 112 High Residue
Weight	approx. 12,000 lbs. (5443.2 kg); approx. 10,800 lbs. (4898.8 kg) without Transport Option
Rotor	1450 RPM Computer Balanced
	7 1/2 in. (19.05 cm) Tube Diameter
	2 3/16 in. (5.55 cm) Shaft Diameter
Drive	1,000 RPM PTO
	Bondioli 280 HP

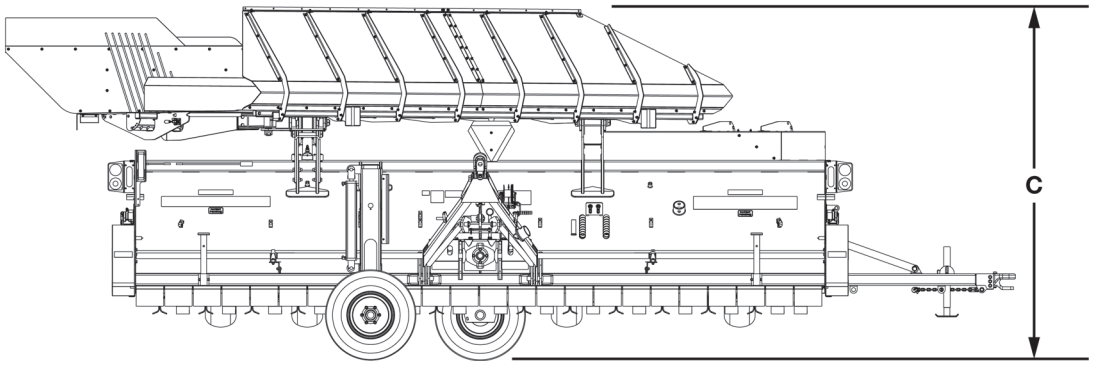
Dimensions - Transport Model (Wing Unfolded)



DESCRIPTION	AIR WINDROWER SHREDDER
Cutting Width (A)	240 in. (609.6 cm)
Overall Width (B)	255.3 in. (648.46 cm)
Total Depth (C)	289.2 in. (734.65 cm)
Standard Transport Height (D)	96.5 in. (245.11 cm)
Standard Operation Height (E)	85.03 in. (215.97 cm)

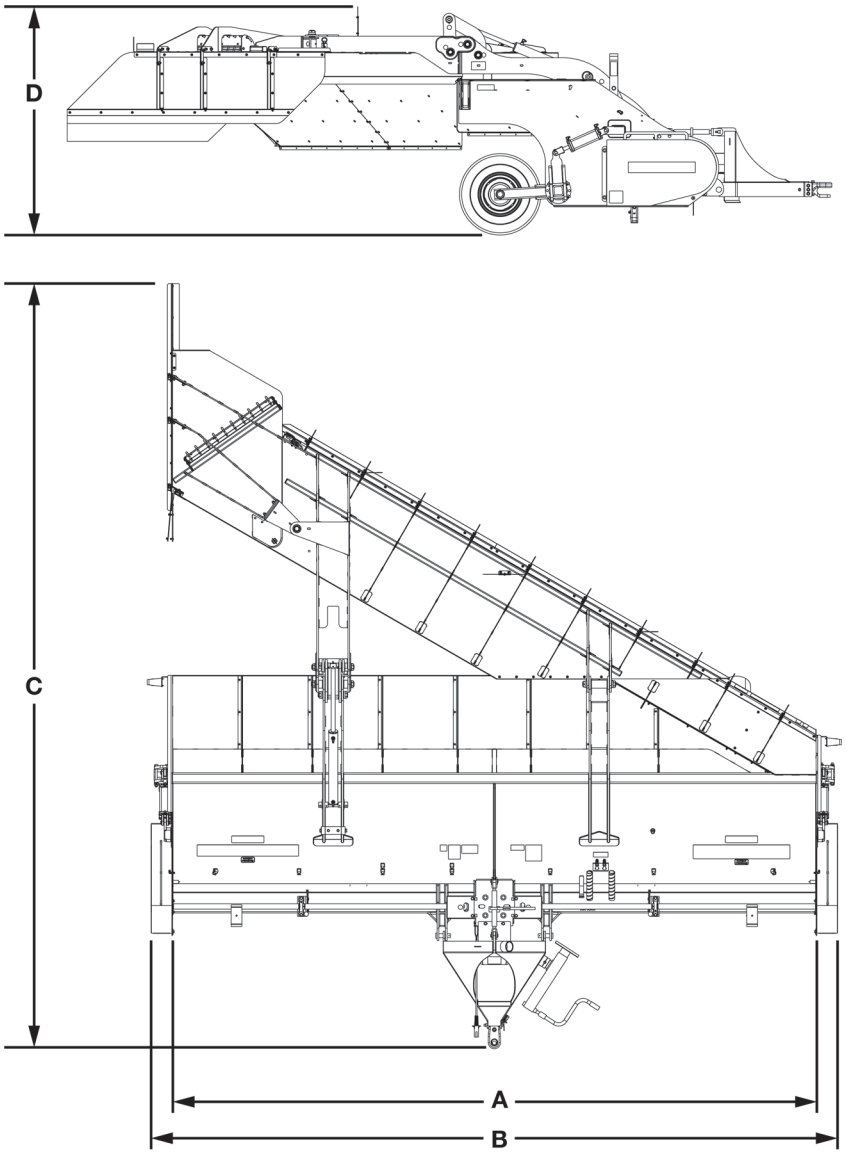
Dimensions - Transport Model (Wing Folded)





DESCRIPTION	AIR WINDROWER SHREDDER
Total Transport Length (A)	350.5 in. (890.17 cm)
Transport Width (B)	122.3 in. (310.61 cm)
Transport Height (C)	121.6 in. (309.03 cm)

Dimensions - Models without Transport (Operation Configuration)



DESCRIPTION	AIR WINDROWER SHREDDER
Cutting Width (A)	240 in. (609.6 cm)
Overall Width (B)	258.3 in. (656.08 cm)
Total Depth (C)	284.70 in. (723.14 cm)
Standard Transport Height (D)	85.04 in. (216.00 cm)

Torque Specifications

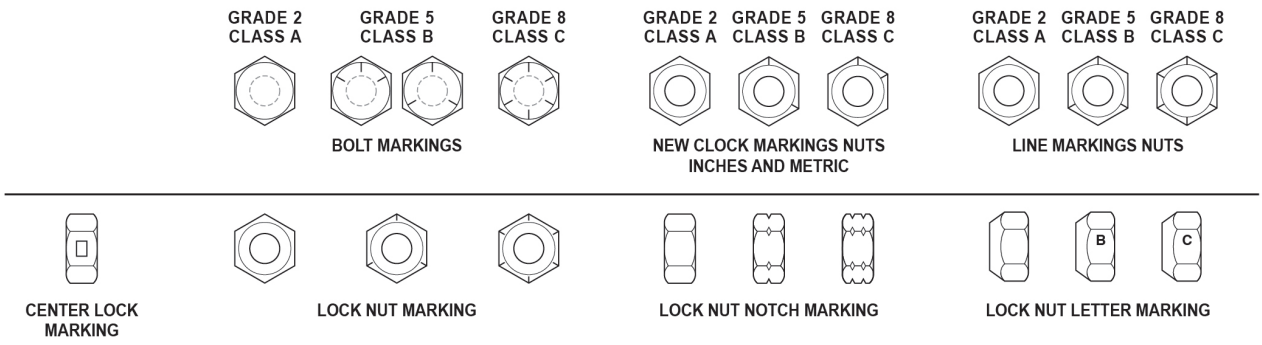
Inches Hardware and Lock Nuts

TORQUE CHARTS

Minimum Hardware Tightening Torques

Normal Assembly Applications
(Standard Hardware and Lock Nuts)

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



Torque Specifications (Cont'd)

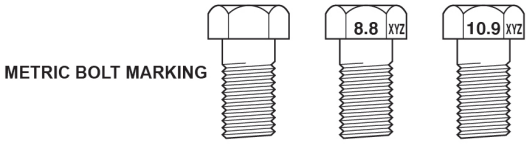
Metric Hardware and Lock Nuts

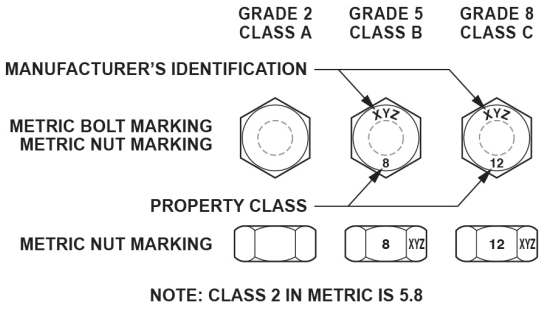
TORQUE CHARTS

Minimum Hardware Tightening Torques

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





NOTE: CLASS 2 IN METRIC IS 5.8

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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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