



## Ditcher

Owner's Manual and Parts Book  
(Serial Number 95-101)



Model Number: \_\_\_\_\_  
Serial Number: \_\_\_\_\_  
Date of Purchase: \_\_\_\_\_





# LOFTNESS SPECIALIZED EQUIPMENT, INC.

## LIMITED WARRANTY POLICY

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

All Loftness products have a one (1) year limited warranty. The XLB10 Grain Bag Loader has a two (2) year limited warranty.

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

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

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

### WARRANTY REQUIREMENTS

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

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

### LIMITATIONS OF WARRANTY

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

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

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

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

### EXCLUSIONS OF WARRANTY

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

No agent, employee or representative of LOFTNESS has any authority to bind LOFTNESS to any affirmation, representation or warranty concerning its machinery and/or attachments except as specifically set forth herein. (October 2020)



# Table of Contents

---

## Warranty

### Table of Contents

#### Ordering Code

Ordering Code.....	1
Ditcher (Example) .....	1

#### Introduction

Owner Information.....	3
Warranty Policy .....	3
Serial Number Location.....	3
Manual Storage .....	3
Ditcher Features .....	4

#### Safety Instructions

Safety First .....	5
Owner's Responsibility .....	5
Mandatory Shut-Down Procedure.....	6
Safety Rules .....	6
Operating Safety .....	6
Maintenance Safety.....	7
Hydraulic Safety .....	8
California Proposition 65 Warning.....	8
Ditcher Identification .....	9
Safety Decal Locations .....	10

#### Set-up Instructions

Connecting Ditcher to Tractor.....	13
Connecting the PTO .....	13
Jack Stands.....	14
Raising the Jack Stands .....	14
Lowering the Jack Stands (Storage) .....	14

#### Operating Instructions

Getting Started .....	15
Pre-start Checklist.....	15
Starting Checklist .....	15
Operating the Ditcher .....	15
Speed .....	15
Turning.....	16
Stopping the Ditcher .....	16
Transporting.....	16
Road Travel .....	16
Hauling.....	16
Disconnecting Ditcher From Tractor .....	16

# Table of Contents

---

## Maintenance

General Maintenance .....	17
Break-In Schedule .....	17
Maintenance Schedule .....	17
Lubrication .....	17
Grease Points Location .....	17
Removing Belt Cover .....	19
Adjusting Belt Tension .....	19
Sheave Removal/Replacement .....	20
Removing Sheave .....	20
Blades .....	21
Adjusting Blades .....	21
Blade Care .....	21
Skid Shoe Depth Adjustment .....	21
Storage .....	22
End of Season .....	22
Beginning of the Season .....	22
Troubleshooting .....	23

## Parts Identification

Impeller and Tensioner .....	26
Belt Drive, Sheaves, Lubrication .....	28
Belt Cover, Depth Adjust .....	29
Shank, Hitch Pins/Hardware, Jack Stands .....	30
Belt Cover and Depth Adjust .....	32
PTO - (N30139), (N30140), (N30141) .....	33
Machine Decals and Signs .....	34

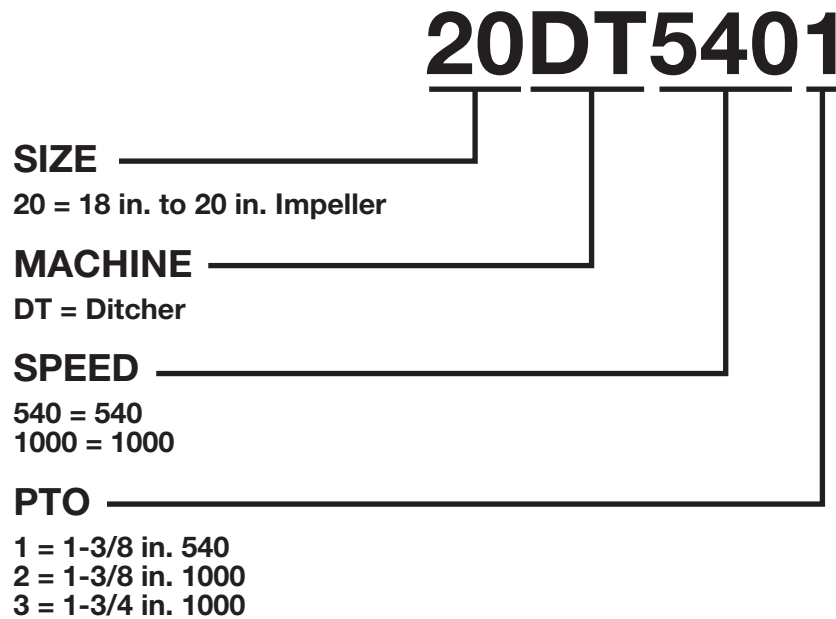
## Appendix

Specifications .....	37
Dimensions .....	38
Torque Specifications .....	39
Inches Hardware and Lock Nuts .....	39
Metric Hardware and Lock Nuts .....	40

### Ordering Code

#### Ditcher (Example)

The ordering code will consist of two numbers (impeller size), two letters (machine), two or three numbers (speed - RPM), and one number (PTO size and RPM). An example for a ditcher of this type would be as shown below.





## Owner Information

Thank you for your decision to purchase a Ditcher 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.

The Loftness Ditcher is an effective, reliable machine ideally used for constructing and maintaining surface drainage ditches using a standard farm tractor with a 3-point hitch. The ditcher will spread soil up to 30 ft. (9.1 m) and dig ditches up to 12 in. (30.5 cm) deep in one pass.

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.

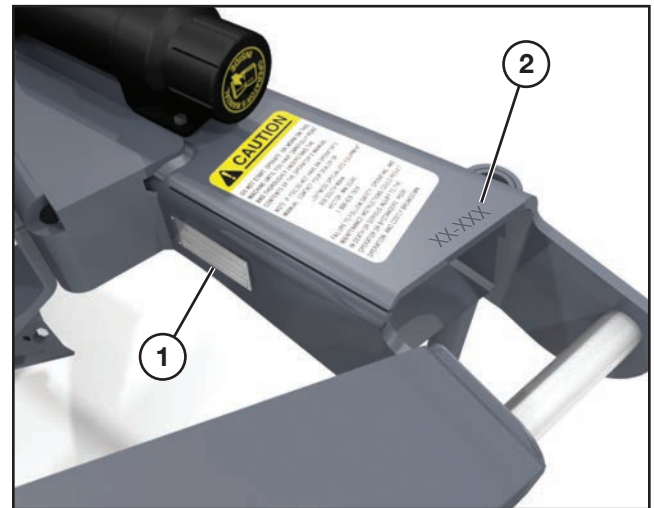
Make sure that all personnel have read this owner's manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

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 fill out the Warranty Registration form(s) completely with your dealer so as not to void the warranty.

## Serial Number Location



The callouts above indicate the location of the serial number tag (1) and the location of the serial number stamped into the frame (2).

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

## Manual Storage



Keep the owner's manual and the entire documentation packet in the manual holder (1) provided on your ditcher.

# ***Introduction***

---

## **Ditcher Features**

- Belt drive
- Spread soil 30 ft. (9.1 m)
- 12 in. (30.5 cm) cut depth
- 5-band belt with Taper-Lock sheaves
- Spring tensioner
- Reversible blades
- Impeller blade diameter adjustable from 18 in. to 20 in. (45.7 cm to 50.8 cm)
- Cat II or III quick hitch

## 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 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 6.

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.

Do not use the ditcher to grind tree stumps or for anything else other than moving soil. Severe damage could result if the ditcher is used for any application other than moving soil.

# Safety Instructions

---

## Mandatory Shut-Down Procedure

- Stop the tractor with attachment on a level surface, and disengage all power to the attachment. Lower the attachment to the ground.
- Move throttle to idle position.
- Shut off engine and remove the key.

Wait until the impeller 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.**

## Operating Safety

- Do not use the ditcher to grind tree stumps or for anything else other than moving soil. Severe damage could result if the ditcher is used for any application other than moving soil.
- Do not start, operate, or work on this attachment until you have carefully read and thoroughly understand the contents of this manual and the operator's manual for your tractor.
- Read and observe all warnings decals on the machine before attempting to operate the attachment. Do not attempt to operate this attachment unless all factory devices and decals are in place. Keep safety decals clean of dirt and grime. Keep all guards, shields and decals in place.
- Become familiar with and know how to operate all safety devices and controls on the machine and attachment before attempting to operate. Know how to stop the machine and attachment before starting it.
- Do not allow anyone to operate the attachment until he or she has read the owner's manual and is completely familiar with all safety precautions and controls. Keep the work area clear of all unauthorized personnel.
- Because of the potential safety hazard to eyes from flying debris, use of protective eyewear is absolutely mandatory for operator and others in the work area.
- Do not wear loose hanging clothes, neckties or jewelry around rotating parts. Long hair is to be placed under a cap or hat. These precautions will help prevent you from becoming caught in any moving parts on the machine and attachment.
- Do wear safety glasses, ear protection, respirators, gloves, hard hats, safety shoes and other protective clothing when required.
- Do not allow persons under the influence of alcohol, medications, or other drugs that can impair judgment or cause drowsiness to operate or maintain the machine.
- Never allow children to operate the equipment.
- Keep bystanders away from the ditcher while it is in operation, whether it is moving or idling.
- Keep children, bystanders and other workers off and away from the machine and attachment during operation. No riders allowed.
- Use the handholds and step plates when getting on and off the machine to prevent falls. Keep steps and platform cleared of mud and debris.
- Always have an operator in the machine while the attachment is in operation. Never leave the machine and attachment running and unattended.
- Keep your feet on the pedals, (floor plates) seat belt fastened snugly and seat bar lowered, (if equipped), when operating the attachment.
- Make certain there are no underground utilities or pipelines in the area where the ditcher will be operated. If you are not sure contact your local utilities so they can mark the area. If underground utilities or pipeline are buried in the area of operation it is important to ask how close to the locator markers the ditcher can be operated.
- Always use an approved roll bar and seat belt for safe operation. Overturning a machine without a roll bar and seat belt can result in injury or death.
- Operate the attachment only from the operator's seat.

## Safety Rules (Cont'd)

### Operating Safety (Cont'd)

- Do not operate this machine above 540 RPM if ditcher is rated for 540 RPM; above 1000 RPM if ditcher is rated for 1000 RPM. Excessive speed of PTO can be dangerous and could cause personal injury or damage to your tractor or ditcher.
- Do not engage PTO when tractor is running at high RPM. Slow RPM to idle before engaging PTO.
- **WARNING!** Do not use this machine with a PTO adaptor. The Agricultural Driveline Manufacturers Association and The Association of Equipment Manufacturers discourage the use of PTO adaptors due to serious safety and operational concerns.
- Before leaving the operator's position for ANY reason or allowing anyone to approach the machine and attachment, always perform the mandatory shutdown procedure.
- Keep hands and feet clear! Never step over or climb over the attachment while the engine is running; entanglement could occur.
- Disengage auxiliary hydraulics and place all machine controls in neutral and engage the parking brake before starting the engine.
- Remove from area of operation all foreign objects such as bottles, rocks, wire, etc. that might become tangled in the impeller, causing damage to the machine or be thrown striking other objects.
- Never attempt to make any adjustments while the attachment is running or the key is in the "ON" position in the machine. Before leaving the operator's position, disengage power to the attachment, shut off engine and remove ignition key.
- Should excessive vibration occur, disengage the PTO immediately and shut off engine. Do not continue to operate the attachment until the problem has been determined and corrected.

## Maintenance Safety

- Do not work on this attachment until you have carefully read and thoroughly understand the contents of this manual and the operator's manual for your tractor.
- Before inspecting, cleaning, lubricating, adjusting or servicing any part of the attachment, always exercise the Mandatory Shut-Down Procedure. See "Mandatory Shut-Down Procedure" on page 6. After service has been performed, be sure to restore all guards, shields and covers to their original position.
- Never attempt to lubricate, or make any adjustments while the tractor or attachment is running, or the key is in the "ON" position in the machine. Before leaving the operator's position, disengage power to the attachment, shut off engine and remove ignition key.
- When performing any maintenance, make sure the area is clear of any distracting objects. Keep work areas clean and free of grease and oil to avoid slipping or falling.
- Before working under the attachment, be certain it is securely blocked!
- Do not smoke while servicing the machine.
- Do not touch tractor or any attachment parts which might be hot from operation. Allow such parts to cool before attempting to maintain, adjust or service.
- Make sure all controls, (levers, pedals and switches), are in NEUTRAL position before starting the engine.
- Before leaving the operator's position for ANY reason or allowing anyone to approach the machine and attachment, always perform the mandatory shutdown procedure.
- Periodically check all guards, shields and structural members. Replace or repair anything that could cause a potential hazard.
- Do not replace components or parts with other than factory-recommended service parts. To do so may decrease the effectiveness of the machine and/or void the warranty.
- It is the operator's responsibility to be aware of machine and attachment operation and work area hazards at all times.

# Safety Instructions


---

## Safety Rules (Cont'd)

### Maintenance Safety (Cont'd)


- Never operate the attachment without adequate light and visibility.
- Keep hands and feet clear! Never step over or climb over the attachment while the PTO is engaged or the engine is running; entanglement could occur.
- Operators are responsible to know the location and function of all guards and shields including but not limited to the drive and impeller. Operators are responsible to make certain that all guards are in place when operating the machine and attachment.
- Operators are responsible to be aware of safety hazard areas and follow instructions on warning, caution, or danger decals applied to the machine.
- Know the area before operating the machine. Be aware of power lines or other equipment.

### Hydraulic Safety

	<b>WARNING:</b> <i>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!</i>
---	---

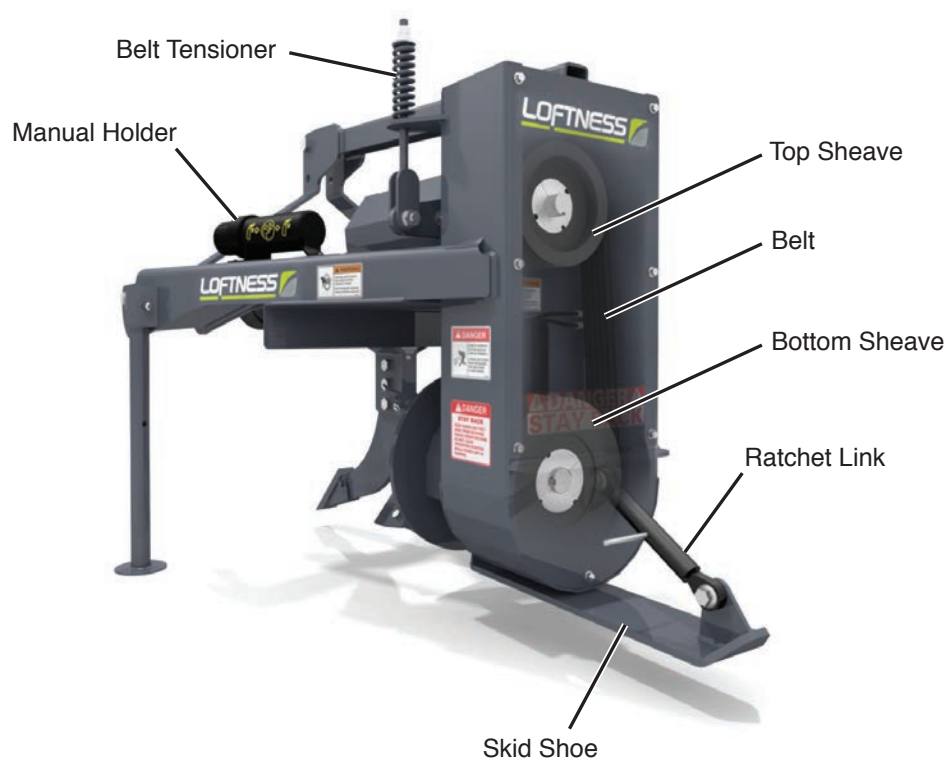
- Always wear safety goggles or glasses when working on hydraulic system to avoid eye injury.
- The hydraulic system is under high pressure. Make sure all lines and fittings are tight and in good condition. These fluids escaping under high pressure can have sufficient force to penetrate skin and cause serious injury.
- Never check for leaks by using any part of your body to feel 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

	<b>WARNING:</b> <i>This product can expose you to Mineral Oil, which is known to the State of California to cause cancer. For more information, go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>.</i>
---	---

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

## Ditcher Identification



# Safety Instructions

---

## Safety Decal Locations

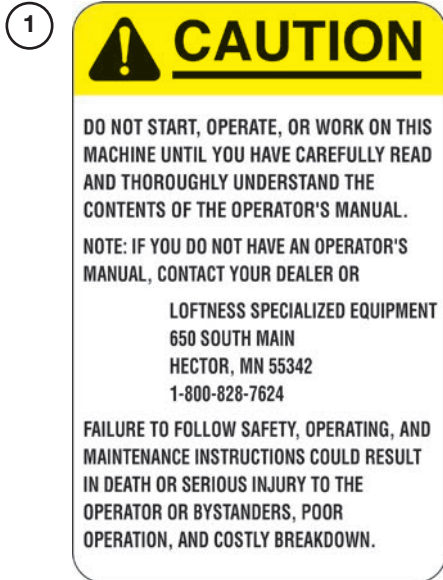
Check and replace any worn, torn, hard to read or missing safety decals on your machine.

**NOTE:** This section shows where safety-related decals are applied on the machine. For all machine decals see "Machine Decals and Signs" on page 34.



See the following page for detailed images of the safety decals called out above.

## Safety Decal Locations (Cont'd)



Part No. 4256



Part No. 4189



Part No. N68716



Part No. N68724



Part No. N28386



Part No. 203264



Part No. 4334



## Connecting Ditcher to Tractor

Before backing the tractor in front of the ditcher, check the PTO shaft travel. The PTO shaft must slide freely forward and must not bottom out.



**CAUTION:** If the PTO shaft doesn't slide freely or bottoms out, damage to the ditcher and/or tractor may occur.

Lubricate the PTO shaft per the instructions in the Maintenance & Lubrication Section of this manual.

Check the shearbolt(s) on the PTO.

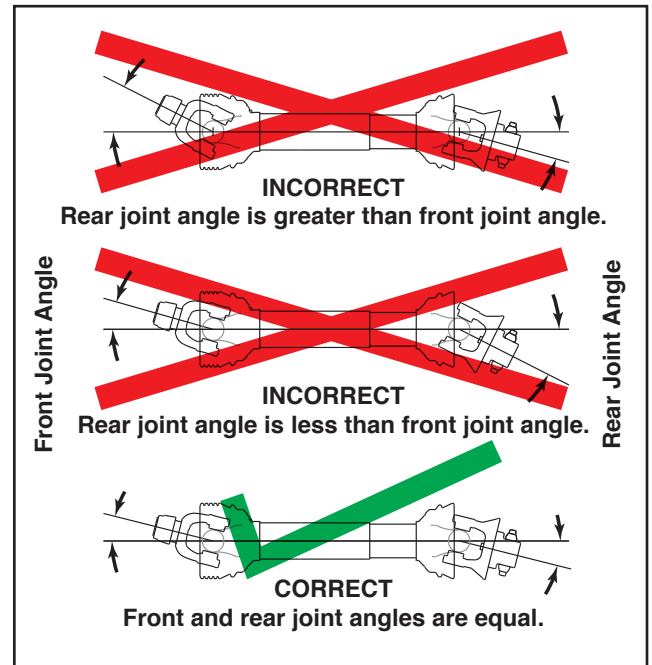
**IMPORTANT:** Make sure the tractor drawbar is moved to one side, retracted or removed. Do not leave the drawbar in the middle of the tractor as damage may occur to the PTO shaft.

The ditcher will fit either a Category II or Category III 3-point hitch, or a Category II quick coupler hitch. If a Category II hitch is desired, remove the three bushings located at each pin (see items 6 and 13 on page 31). The three tractor lift links should be connected to the ditcher with the connecting pins.

Connect the PTO shaft to the tractor PTO shaft by slipping the shaft forward until the quick disconnect pin slips into the groove on the tractor PTO shaft. Make sure the quick disconnect pin is properly seated.

Raise the jack stands. See "Jack Stands" on page 14 for jack stand instructions.

## Connecting the PTO



Verify the PTO shaft is firmly connected to the tractor.

Slowly raise the ditcher to check to ensure at least 6 in. of the shaft is engaged in the tubular portion of the universal drive shaft. Then lower the ditcher so the PTO is in the fully retracted position to verify it is not binding, is not bottomed out, and will turn freely. Ensure the drive shaft will not hit the tractor drawbar.

**NOTE:** There are two shear bolts in the PTO shaft. If these bolts shear, stop the tractor, disengage the PTO, and shut off tractor engine. Replace the sheared bolts.



**WARNING:** Shear bolts are designed to break under a specified load. Do not use a stronger bolt than is specified by the manufacturer.



**WARNING:** Do not use your ditcher with a PTO adaptor. The Agricultural Driveline Manufacturers Association and The Association of Equipment Manufacturers discourage the use of PTO adaptors due to serious safety and operational concerns.

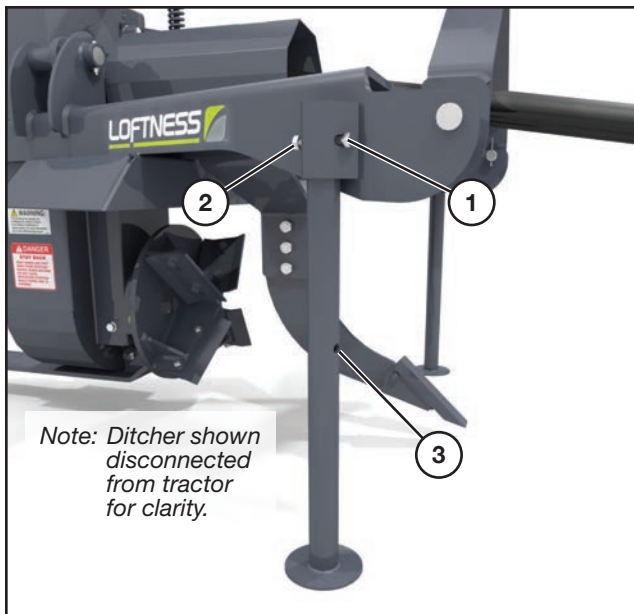
# Set-up Instructions

---

## Jack Stands

### Raising the Jack Stands

Once securely attached to the 3-point hitch of the tractor, raise the jack stands.



Loosen and remove the lock nut (1), and bolt (2).

Slide the jack stand UP until the hole near the base (3) aligns with the hole for the hardware to put the stand in the up position. Reinsert the bolt and secure with the lock nut.

Repeat procedure for the opposite jack stand.

### Lowering the Jack Stands (Storage)

Slide the jack stand DOWN until the hole near the top of the stand aligns with the hole for the hardware to put the stand in the down position.

Return the hardware to its original position and tighten.

**IMPORTANT:** *Keep the jack stands down to stabilize the ditcher whenever it is not attached to the tractor.*

## Getting Started

### Pre-start Checklist



**DANGER:** Shut down and lock out power from the tractor before performing the pre-start checklist. Failure to do so could result in serious injury or death.

- Make sure the ditcher is properly attached to the 3-point hitch.
- Grease the machine. See “Lubrication” beginning on page 17 for lubrication information.
- Check all bolts, nuts and set screws for tightness.
- Inspect the drive belt, and the drive belt tension. If the belt needs adjustment. See “Adjusting Belt Tension” on page 19 for instructions.
- Inspect the blades. If any are damaged or missing, replace. Make sure they are free of dried mud, string, wire, etc.



**WARNING:** Never operate the ditcher with out-of-balance blades. Check to make certain all blades are installed using the same mounting holes for either the 18 in. diameter or 20 in. diameter impeller.

- Verify the PTO shaft is firmly connected to the tractor and will not interfere with the drawbar on the tractor. Refer to “Connecting the PTO” on page 13 for safe and proper PTO installation.
- Inspect the driveline, including any and all bearings. When adjusted properly and operating correctly, the driveline should move freely by hand and the impeller should rotate.
- Verify the skid shoe is set at the correct, or proper depth. If adjustments are necessary, refer to “Skid Shoe Depth Adjustment” on page 21 for instructions.
- Review operator’s manual.



**DANGER:** Verify there are no underground utilities or pipelines in the area where the ditcher will be operated. Failure to do so could result in serious injury or death should the ditcher come in contact with a utility line. If you are not sure, contact your local utility agency so the area can be marked.

### Starting Checklist

For this procedure, the tractor can now be started.

- Slowly raise and lower the ditcher to check the engagement of the PTO shaft. There should be at least 6 in. of engagement between the two halves of the PTO shaft.

### Operating the Ditcher

**NOTE:** If the tractor is equipped with a float position on the 3-point lift it should be used. This will allow the skid shoe to control the depth of cut.



**WARNING:** Never operate the ditcher above its RPM rating. Excessive PTO speed can cause personal injury or damage to your tractor and ditcher.



**CAUTION:** The ditcher should never be raised to maximum height with the PTO engaged.

Slowly move the tractor forward while slowly lowering the ditcher until it has reached the set working depth.

### Speed

Under most conditions, the tractor can be driven between 2.5 and 5 MPH without causing undue wear on the ditcher. Various soil conditions require different ground speeds; however, the slower the ground speed the better the ditcher will perform.

Forward speed and depth of cut should be matched to soil condition. It is best not to exceed a 6 in. working depth on a single pass.

# Operating Instructions

## Operating the Ditcher (Cont'd)

### Turning

When making tight turns or backing up, raise the ditcher above the soil surface to avoid damaging the machine.


### Stopping the Ditcher

Before making any adjustments, lubricating or repairing. First, disengage the tractor's PTO and wait for the impeller and blades to come to a complete stop. Then slowly lower the ditcher until skid shoe is touching the ground. Before dismounting from the tractor shut off the engine set the parking brake and remove the key.


Clean the ditcher after every use.

## Transporting

### Road Travel



**CAUTION:** Always comply with all federal, state and local laws when traveling on public roads whether at night or during the day. Use accessory lights and devices for adequate warning to operators of other vehicles.




**CAUTION:** Always disengage the PTO shaft before raising the ditcher to the transport position.

When raising the ditcher to transport, be sure that the driveline does not contact the tractor or ditcher and the parking stand is pinned in the fully up position.

Select a safe ground travel speed when transporting from one area to another. Reduce tractor ground speed when turning.

### Hauling

When transporting the ditcher on a trailer or on a truck, make sure the machine is properly and safely tied down and that the PTO is secure.




**WARNING:** Failure to secure the ditcher when transporting could result in serious injury or death to surrounding.

## Disconnecting Ditcher From Tractor

Park on clear, level ground with enough room to lower the ditcher.

Lower the jack stands. See "Jack Stands" on page 14 for jack stand instructions.

Lower the ditcher until it is sitting firmly on jack stands and depth adjust.



**DANGER:** Always shut tractor engine off before unhooking PTO. Failure to do so could result in serious injury, or even death.

Disconnect the PTO from the tractor.

Secure PTO onto the ditcher.

**If using a quick hitch:** release the quick hitch latches, lower the quick hitch, and slowly pull forward.

**If using a standard 3-point hitch:** Remove the cotter pins, hitch pins, and spacers, and slowly pull forward. Return all lynch pins, hitch pins, and spacers to ditcher hitch.

## General Maintenance

**IMPORTANT:** Refer to “Maintenance Safety” on page 7 and become familiar with the safety rules before performing any maintenance or service on the ditcher.

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 ditcher after each use.

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.

## Break-In Schedule

Inspect and service after one (1) hour of operation all bolts, the impeller, blades, shank, belt and sheaves, and PTO.

Regular maintenance should then be followed thereafter. Refer to the chart below for the maintenance schedule.

## Maintenance Schedule

HOURS	SERVICE POINTS	SERVICE REQUIRED					
		CHECK	CLEAN	CHANGE	GREASE	ADJUST	OIL
Every 8	Machine		X				
	Loose Bolts					X	
	Lubrication Hoses	X					
	Oil Leaks	X					
	Bearings (2 places)				X		
	Blades	X					
	Belt Tension	X					
Every 100	Safety Labels	X					

## Lubrication

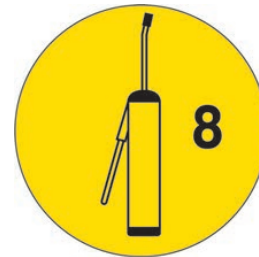
### Grease Points Location



**DANGER:** Shut down power from the tractor before lubricating.

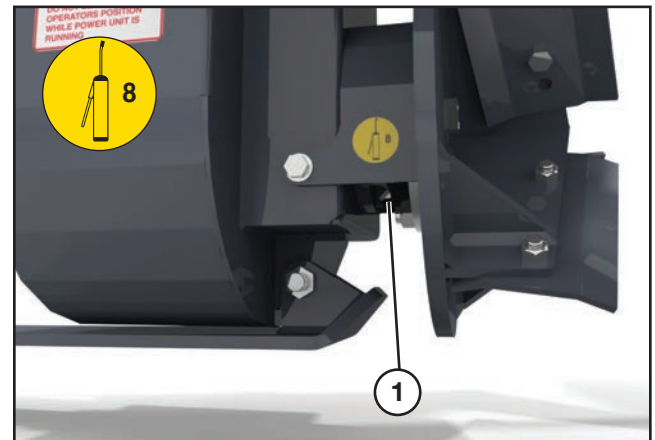
Use a #2 general purpose lithium based grease unless noted otherwise.

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



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

See “Ditcher Identification” on page 9 for component location and identification.



**Location:** Impeller bearing (1).

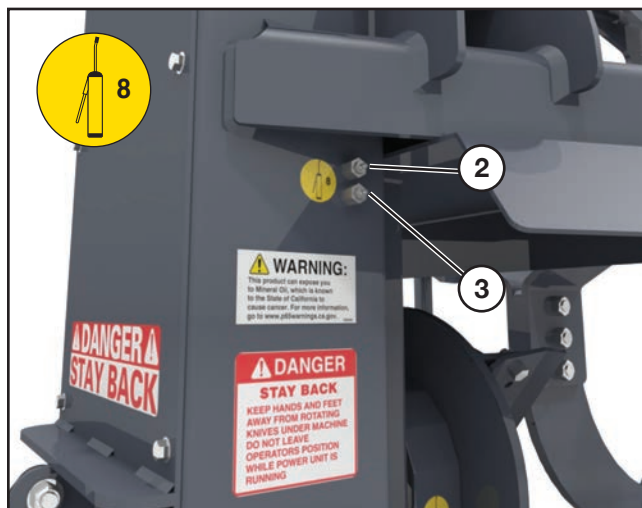
**Interval:** Every 8 hours of operation.

(Procedure continued on following page.)

# Maintenance

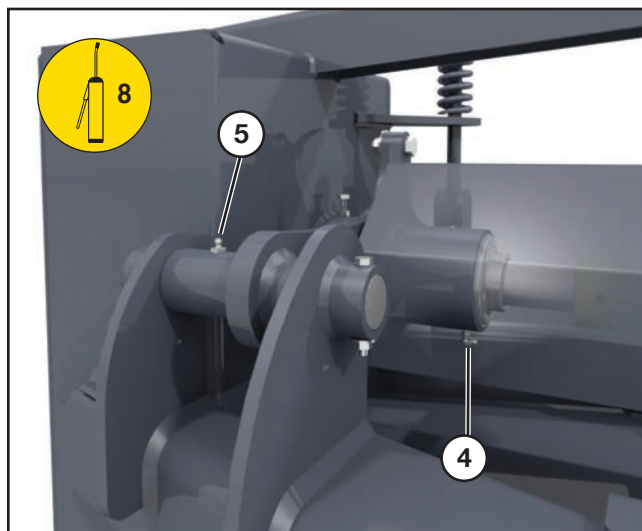
## Lubrication (Cont'd)

### Grease Points Location (Cont'd)



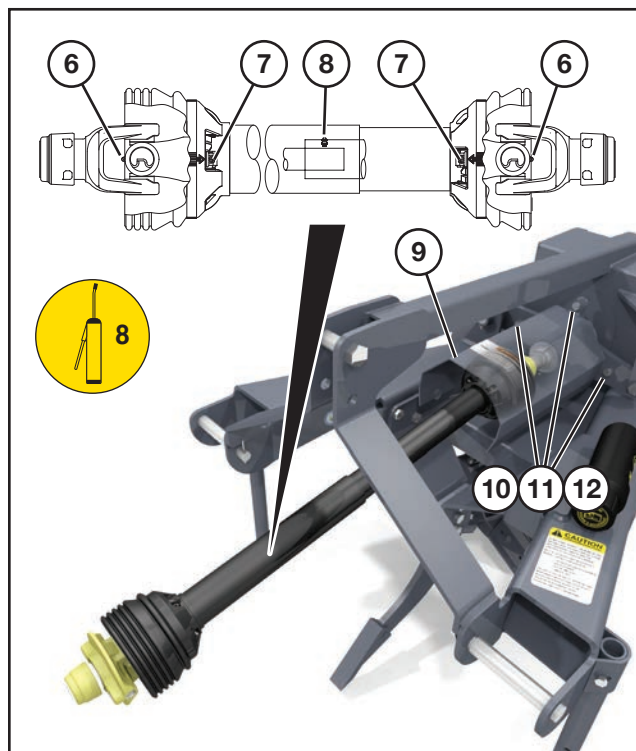
**Location:** Upper sheave bearing (2).  
Lower sheave bearing (3).

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



**Location:** Belt Tensioner (4).  
Tensioner Pivot (5)

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



**Location:** PTO shaft cross and bearings (6).  
PTO guard bushings (7).  
PTO telescoping member (8).

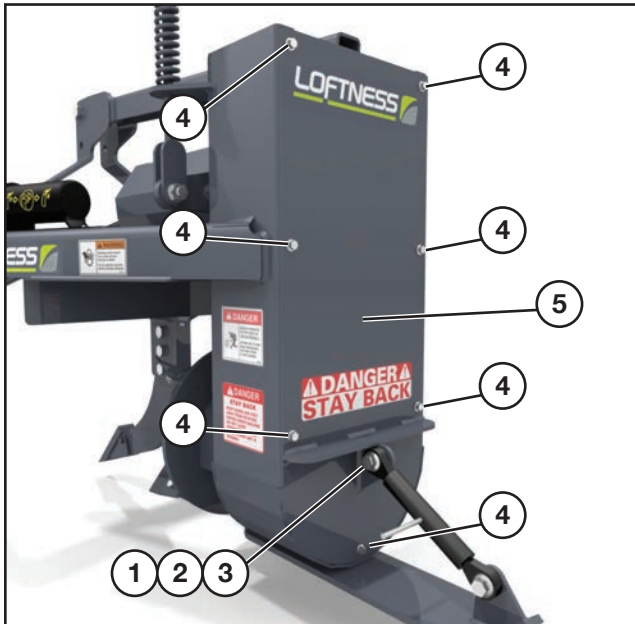
**Interval:** Every 8 hours of operation.

**NOTE:** For easier access to grease points on the implement end of the PTO, the guard (9) can be removed. Remove the three bolts (10), washers (11), and nuts (12) and lift the cover off.

## Removing Belt Cover



**DANGER:** Shut down power from the tractor before removing the belt cover.



Use a 5/16" socket and wrench to remove the top nut (1), bolt (2), and washer (3) on the depth adjust ratchet link.

Use an 9/16" socket to remove the seven bolts (4) securing the cover (5) to the main frame.

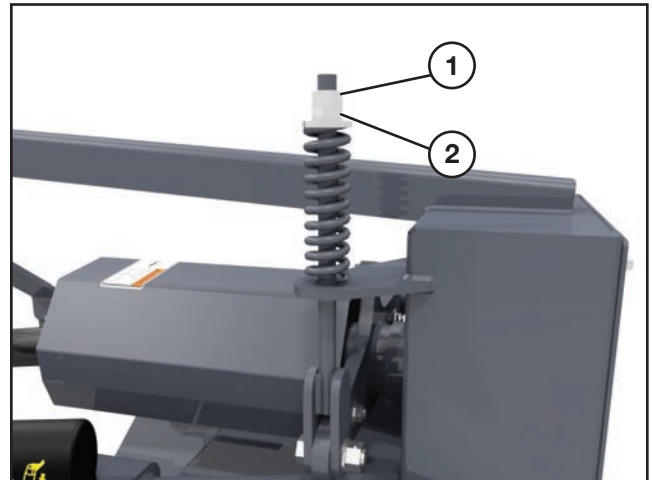
Return the cover and all connecting hardware when service/maintenance is complete.

## Adjusting Belt Tension



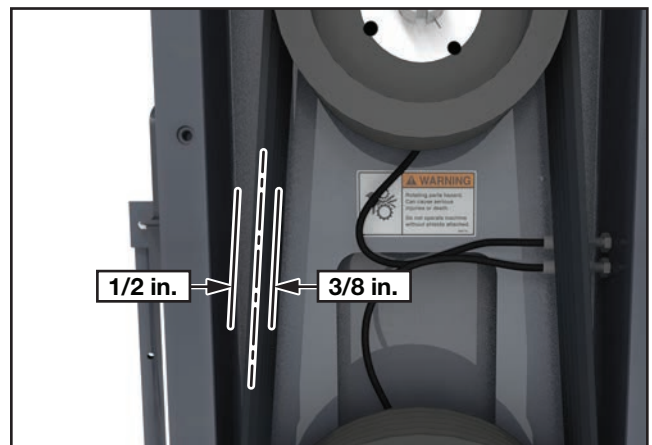
**DANGER:** Disconnect the ditcher from the tractor to ensure that all power is cut off before starting this procedure.

Remove Belt Cover. See "Removing Belt Cover" preceding this subsection for instructions.



Loosen the jam nut (1).

Turn the hex nut (2) to either increase or decrease belt tension. Tighten jam nut (1) to lock.



Belt should move no more than 1/2 in. (12.7 mm) to the left, and no more than 3/8 in. (9.5 mm) to the right when pressure applied at the midpoint.

If belt tension needs more adjustment, repeat procedure.

# Maintenance

## Sheave Removal/Replacement

The sheave removal procedure is identical for both the upper and lower sheave. The procedure in this manual will show the removal of the lower sheave. To remove the upper sheave, follow the same instructions.

**NOTE:** See page 28 for an exploded view of the belt and sheave assembly.

### Removing Sheave

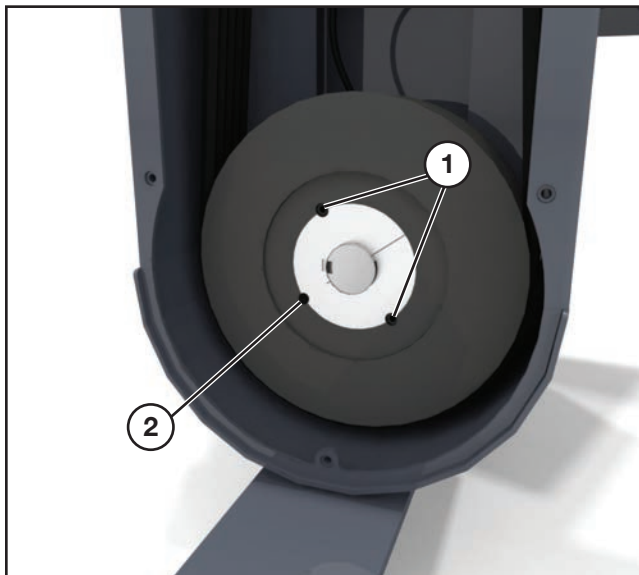
1. Disconnect or turn off all power to the ditcher.



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

Remove Belt Cover. See “Removing Belt Cover” on page 19 for instructions.

Remove the drive belt by loosening the belt tension first. Refer to the instructions in “Adjusting Belt Tension” on page 19.



2. Remove the two screws (1) from the taper lock bushing of the drive sheave .
3. Insert one screw into the threaded hole (2).
4. Tighten screw until bushing grip is released. (If excessively tight, lightly hammer face of sheave using drift pin or sleeve).

**NOTE:** Never hit sheave directly with hammer.

5. Replace the sheave by cleaning the shaft, bore of bushing, outside of bushing and hub bore of all oil, paint and dirt. File away any burrs.
6. Insert bushing into hub. Match the hole pattern, not threaded holes (each complete hole will be threaded on one side only).
7. Apply a thread-locking compound to setscrews and thread into the two opposing holes.
8. Position assembly on shaft and alternately torque setscrews to 35 ft.-lbs.
9. To increase gripping force, hammer face of bushing using drift or sleeve.

**NOTE:** Do not hit bushing directly with hammer.

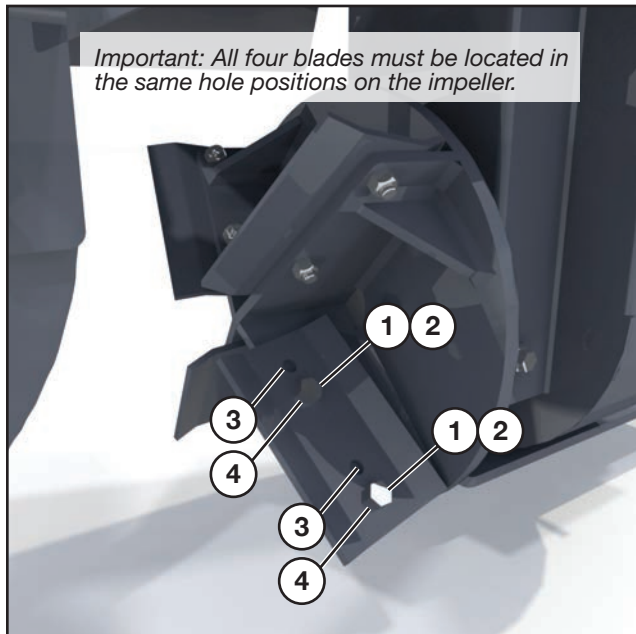
10. Re-torque screws after hammering.
11. Recheck screw torque after initial run-in, and periodically thereafter, repeat steps 4, 5 & 6 if loose.
12. Check alignment of the sheaves. Repeat sheave removal and assembly procedures if necessary.

## Blades

### Adjusting Blades



**DANGER:** Disconnect the ditcher from the tractor to ensure that all power is cut off before starting this procedure.



The impeller blade diameter can be adjusted by moving the location of the blades on the impeller. Remove the two bolts (1) and two nuts (2) on each blade.

Position the blades on the *inside* set of holes (4) for an 18 in. (45.7 cm) diameter cut.

Position the blades on the *outside* set of holes (3) for a 20 in. (50.87 cm) diameter cut.

Reinstall the bolts and nuts. Tighten.



**WARNING:** Never operate the ditcher with out-of-balance blades. Check to make certain all blades are installed using the same mounting holes for either the 18 in. or 20 in. diameter configuration.

## Blade Care

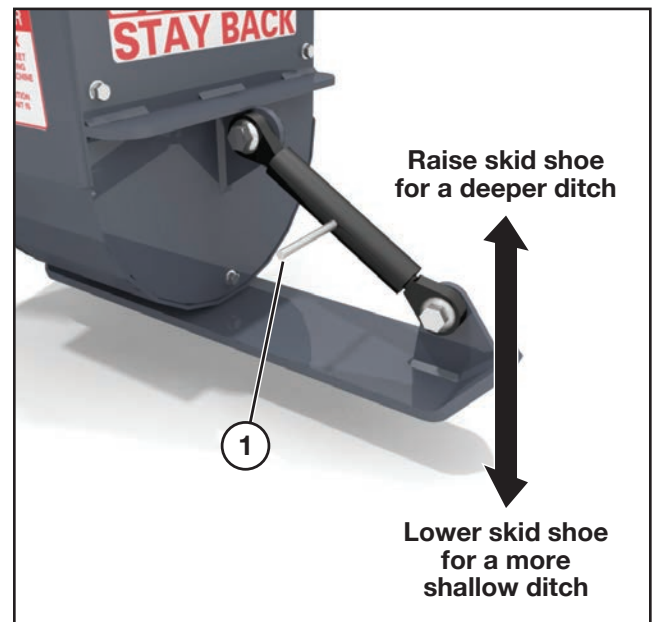
If blades become worn, they can be reversed to utilize the opposite edge until that edge becomes worn. When all edges are worn, blades must be replaced. Refer to “Adjusting Blades” on page 21 as a guide for removing the blades.

## Skid Shoe Depth Adjustment

To adjust the depth, slowly lower the ditcher until the skid shoe is touching the ground.



**DANGER:** Shut down power from the tractor before making adjustments to the skid shoe.



Under normal conditions, adjust the bottom of the skid shoe so it is positioned 1/2 in. (1.27 cm) to 1 in. (2.54 cm) above the bottom of the blades. This will allow the ditcher to reach normal cutting depth after a few feet of travel.

Use the adjusting ratchet (1) to control the depth of the skid shoe.

For a deeper ditch, *raise* the skid shoe.

For a shallow ditch, *lower* the skid shoe.

# Maintenance

---

## Storage

### End of Season

- Store ditcher in a flat, dry area. Refer to “Disconnecting Ditcher From Tractor” on page 16 for unhitching instructions.
- Clean entire ditcher thoroughly. Wash off and remove any dirt or grass, weeds, etc.
- Lubricate all parts of the machine. See “Lubrication” on page 17.
- Make a list of all worn or damaged parts and replace them.
- Paint all parts that are worn or rusted.
- Store ditcher in a clean, dry area.
- Review the ditcher operator’s manual.

### Beginning of the Season

- Review the ditcher operator’s manual.
- Lubricate all parts of the machine. See “Lubrication” on page 17.
- Tighten all bolts, nuts, and set screws. See “Torque Specifications” on page 39.
- Remove the shear bolts and lock nuts from the PTO shear yoke assembly and inspect the shear yoke. Check for corrosion and test to see if the yoke moves freely. Reinstall the shear bolts and lock nuts after inspection is complete.
- Replace all damaged, worn or missing decals.
- Install the ditcher onto a tractor and test for proper operation. See “Set-up Instructions” section beginning on page 13 for installing the ditcher onto the tractor.

### Troubleshooting

PROBLEM	CAUSE	SOLUTION
PTO shaft vibrates.	Check for worn out universal joints.	Replace universal joint if needed.
	Check for bent PTO shaft.	Replace PTO shaft if it is bent.
Ditcher is not achieving desired cutting depth.	Ditcher cutting depth is restricted by tractor 3-point.	Adjust tractor 3-point lift arms to a deeper depth setting.  The skid shoe maybe out of adjustment. Raise for a deeper cut.
	Ditcher needs to be adjusted so the impeller driveline is running parallel to the soil surface.	Adjust 3-point hitch center link to align impeller.
Impeller will not rotate.	PTO shaft is not engaged.	Engage PTO shaft.
	PTO shaft shear bolt maybe sheared.	Replace shear bolt.
	Drive belt may be broken or has jumped off the drive sheaves.	Repair drive belt or realign on drive sheaves and adjust tension.
Ditcher has excessive vibration.	Impeller is out of balance.	Check for unevenly worn or missing blades.  Check for soil or other debris build up on the impeller.
Blades do not leave a smooth soil surface.	Check the blade edges for wear.	If the blades are reversible rotate them. If not or completely worn out replace them.



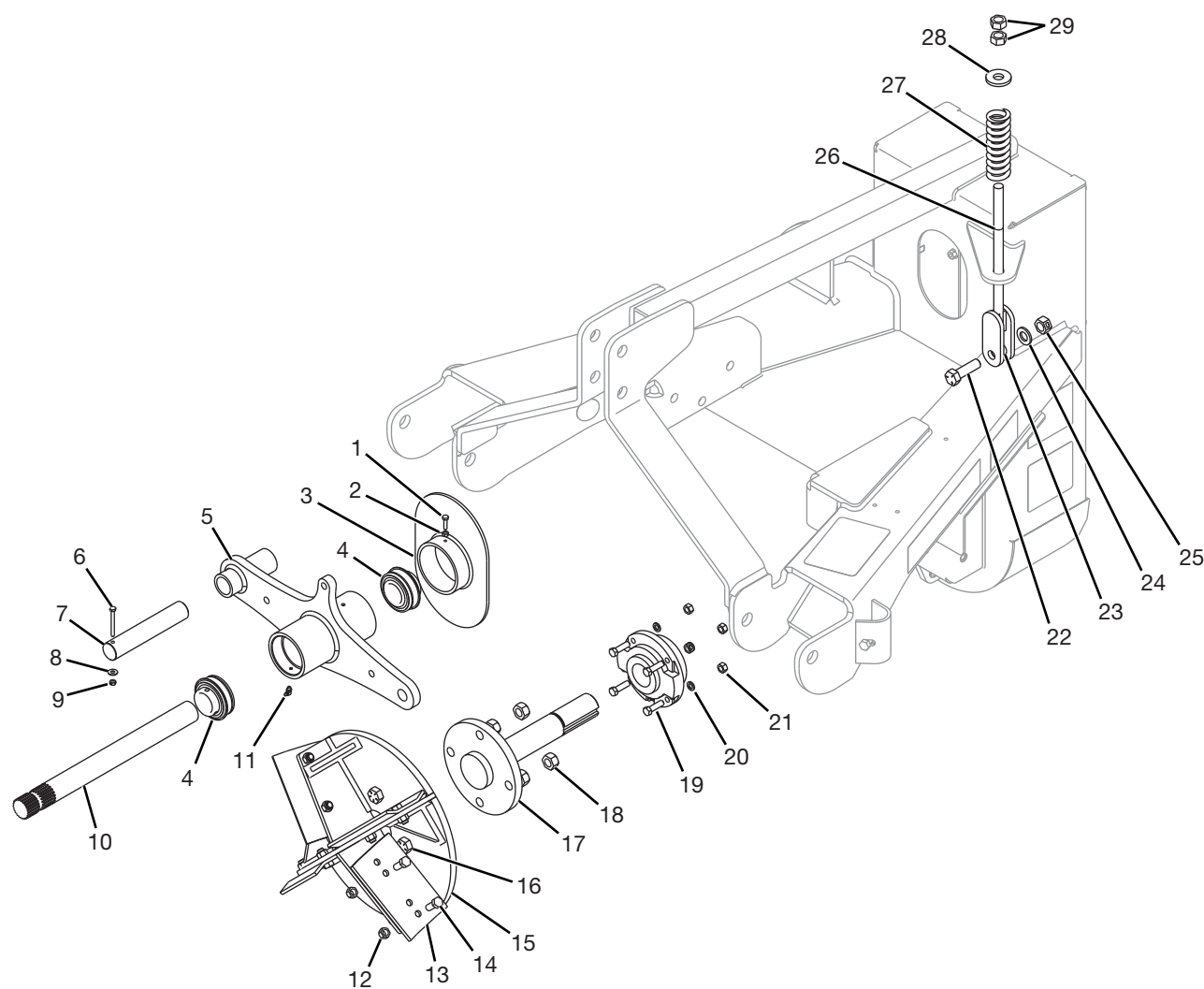


## PARTS IDENTIFICATION

# Parts Identification

---

## Impeller and Tensioner

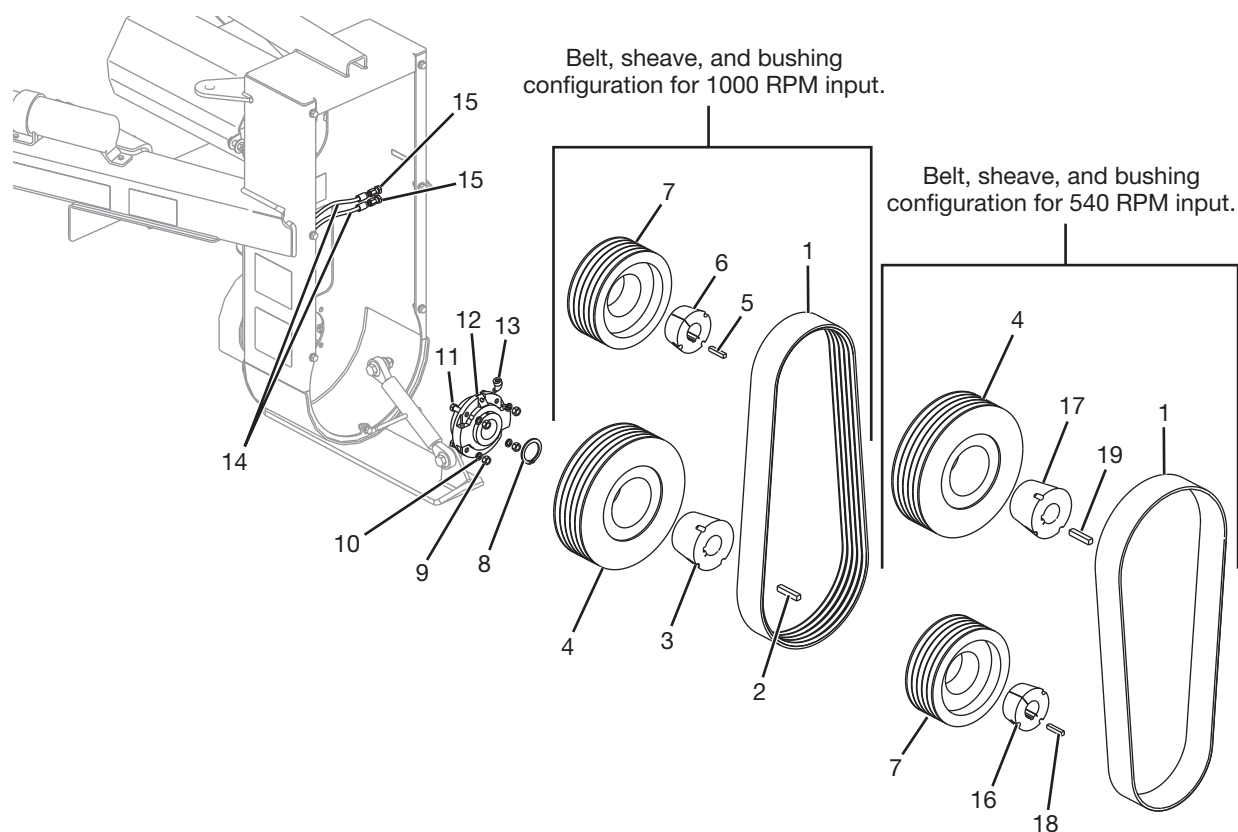


### Impeller and Tensioner

#	QTY.	PART #	DESCRIPTION
1	1	4000	BOLT, 1/4" X 1" GRADE 5
2	1	4230	NUT, STANDARD 1/4"
3	1	207081	COVER, TENSIONER PIVOT
4	2	207120	BEARING, BALL INSERT 1-3/4
5	1	207055	TENSIONER, DITCHER
6	1	4003	BOLT, 1/4" X 2-1/2" GRADE 5
7	1	207059	SHAFT, PIVOT TENSIONER
8	1	3183	WASHER, FLAT 1/4"
9	1	4050	NUT, 1/4" LOCK
10	1	207382	SHAFT, PTO SPLINED
11	1	N25062	GREASEZERK, 90 DEG 1/8" NPT
12	8	4436	NUT, 1/2" LOCK FN TD GRADE 8
13	4	207062	BLADE, DITCHER
14	8	4535	BOLT, 1/2-20 X 1-1/4 GR 8
15	1	207388	HEAD, IMPELLER DITCHER
16	4	4343	BOLT, 3/4" X 2-1/4" FN TH GR 8
17	1	207385	SHAFT, DITCHER
18	4	N16352	NUT, LOCK 3/4" GRADE 8 FINE
19	4	4010	BOLT, 7/16" X 1-1/2" GRADE 5
20	4	N16471	WASHER, 7/16 NORDLOCK
21	4	4523	NUT, 7/16" STANDARD
22	1	4224	BOLT, 3/4" X 2-1/2" GRADE 5
23	1	207094	BUSHING
24	1	N35327	WASHER, FLAT 3/4" SAE
25	1	4056	NUT, LOCK 3/4"
26	1	207090	ROD, TENSION ADJUST
27	1	207096	SPRING, TENSIONER
28	1	4479	WASHER, 2OD X 3/4ID X 1/4TK
29	2	4288	NUT, 3/4" STANDARD

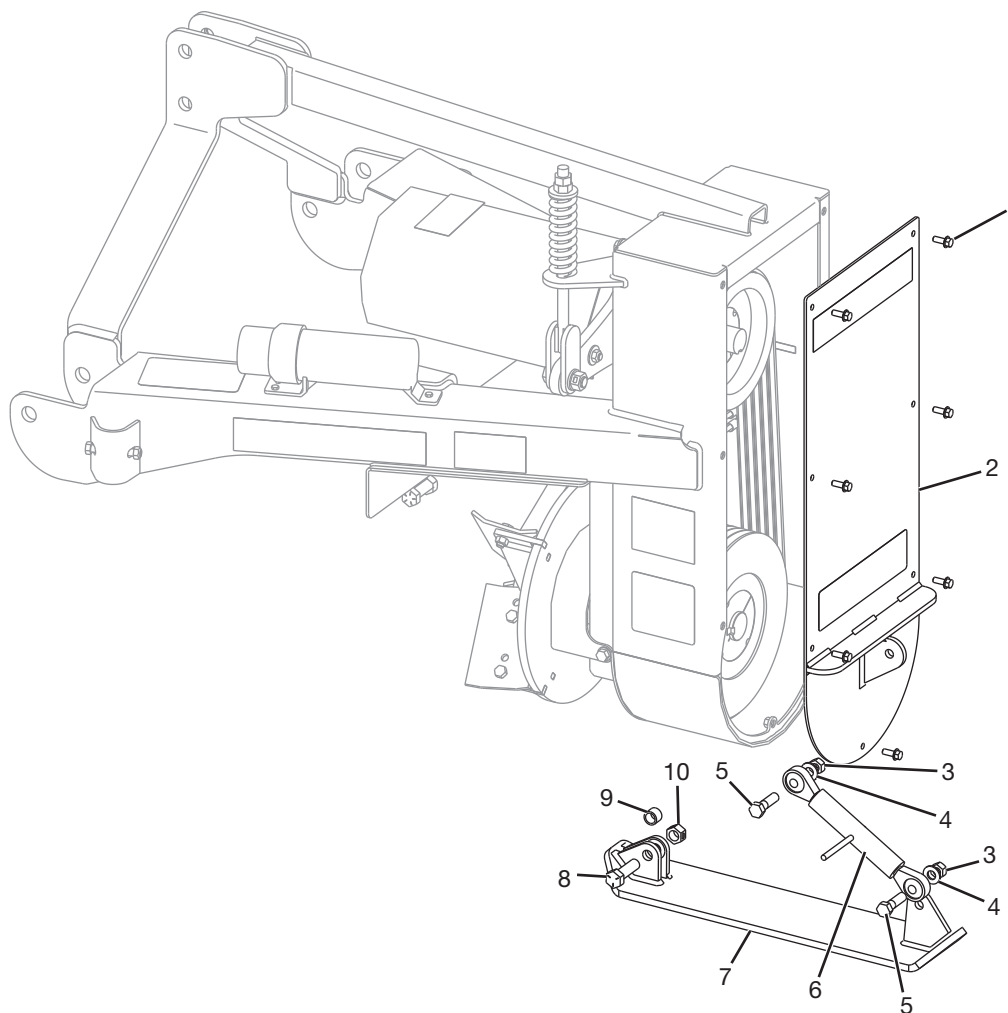
## Parts Identification

### Belt Drive, Sheaves, Lubrication



#	QTY.	PART #	DESCRIPTION
1	1	207122	BELT, 5 BAND 5VX 80 LONG
2	1	7122-02	KEY, 1/2" X 3-1/2"
3	1	N16390	BUSHING, 2" TPL 3020
4	1	207083	SHEAVE, 5B X 13.2 - 3535 111045
5	1	7121-03	KEY, 3/8" X 2"
6	1	N24256	BUSHING, 1-3/4" TPL 3020
7	1	207084	SHEAVE, 5B X 9.75 - 3020 111109
8	1	207078	RING, RETAINING
9	4	4523	NUT, 7/16" STANDARD
10	4	N16471	WASHER, 7/16 NORDLOCK
11	4	4010	BOLT, 7/16" X 1-1/2" GRADE 5
12	1	207127	BEARING, PILOT 2 TAPER ROLLER
13	1	4471	ELBOW, 1/8" 45 DEG.STREET
14	2	4304	HOSE, GREASE 1/8 X 15
15	2	4304-10	BULKHEAD, FITTING-GREASE HOSE
16	1	N16916	BUSHING, 2 TPL 3020
17	1	N16927	BUSHING, 1-3/4 TPL 3535
18	1	7122-04	KEY, 1/2 X 2
19	1	7121-08	KEY, 3/8 X 4

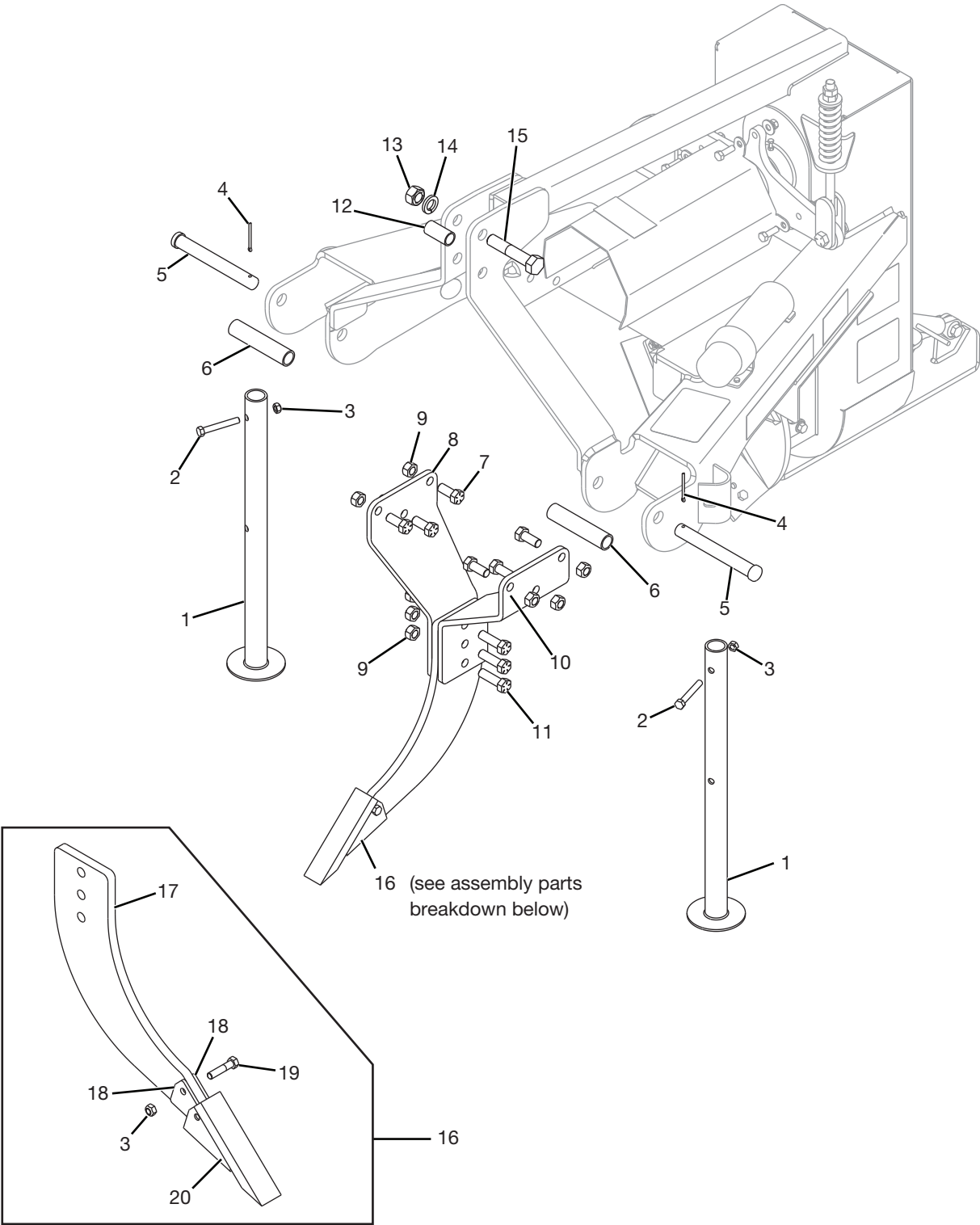
## Belt Cover, Depth Adjust



#	QTY.	PART #	DESCRIPTION
1	7	N26743	BOLT, 3/8" X 1" SER FLG
2	1	207393	COVER, BELT WITH DECALS
3	2	4057	NUT, 5/8" FINE THREAD TOP LOCK
4	2	4997	WASHER, FLAT 5/8" SAE
5	2	4494	BOLT, 5/8-18 X 2-1/4 GR 8
6	1	207077	TOP LINK, 5/8 PIN 11 TO 16
7	1	207071	DEPTH ADJUST
8	2	4224	BOLT, 3/4" X 2-1/2" GRADE 5
9	1	207645	BUSHING
10	2	4056	NUT, LOCK 3/4"

# Parts Identification

## Shank, Hitch Pins/Hardware, Jack Stands

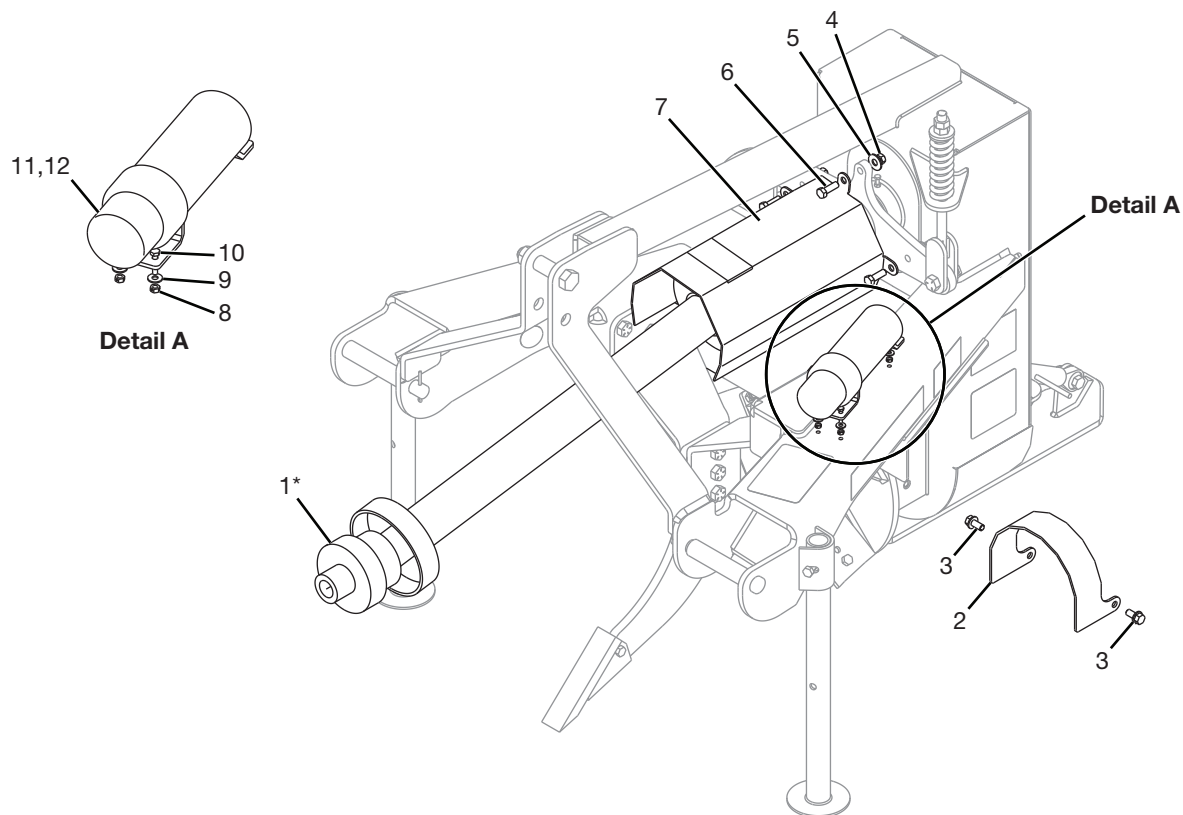


### Shank, Hitch Pins/Hardware, Jack Stands

#	QTY.	PART #	DESCRIPTION
1	2	207360	JACK, STORAGE STAND
2	2	4154	BOLT, 1/2" X 3-1/2" GRADE 5
3	3	4054	NUT, LOCK 1/2" TOP
4	2	4329	PIN, COTTER 7/32" X 2-1/2"
5	2	207401	PIN, CLEVIS 1-1/8, 8-3/8 USABLE
6	2	207402	BUSHING, 1.438OD X 1.125ID X 6.75
7	6	N16753	BOLT, 3/4" X 1-3/4" FN THD GR 8
8	1	207374	MOUNT, SHANK
9	9	N16352	NUT, LOCK 3/4" GRADE 8 FINE
10	1	207381	MOUNT, SHANK
11	3	N16349	BOLT, 3/4 X 2-1/2 FN TH GR 8
12	1	9665	BUSHING, 1.010" ID X 2.500" L
13	1	4059	NUT, 1" STANDARD
14	1	4166	WASHER, 1" LOCK
15	1	4168	BOLT, 1"-8UNC X 5" GRADE 5
16	1	207101	SHANK, ASSY POINT
17	1	207099	MOUNT, POINT
18	2	207415	SPACER, POINT
19	1	N20043	BOLT, 1/2" X 2-1/4" FN TD GR 8
20	1	207100	POINT

## Parts Identification

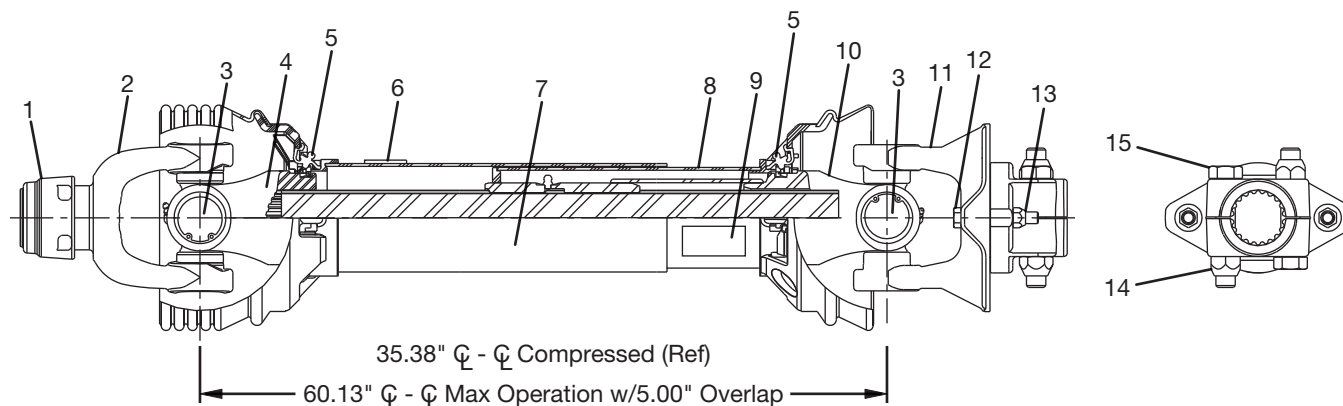
### Belt Cover and Depth Adjust



\* For PTO options and parts breakdown, see page 33.

#	QTY.	PART #	DESCRIPTION
1	1	N30139	PTO, 1-3/8 WEASLER 540RPM 55R
		N30140	PTO, 1-3/8 WEASLER 1000RPM 55R
		N30141	PTO, 1-3/4 WEASLER 1000 LG
2	1	207380	COVER, BEARING
3	2	N26748	BOLT, 1/2" X 1" SER FLG
4	3	4054	NUT, LOCK 1/2" TOP
5	3	4486	WASHER, 1/2" FLAT
6	3	4013	BOLT, 1/2" X 1-1/2" GRADE 5
7	1	207392	COVER, WITH DECALS
8	3	4050	NUT, 1/4" LOCK
9	3	3183	WASHER, FLAT 1/4"
10	3	4528	BOLT, 1/4" X 1-1/4" GRADE 5
11	1	N19600	HOLDER, 01-315A STND.MANUAL
12	1	207499	OWNER'S MANUAL

## PTO - (N30139), (N30140), (N30141)



To order the complete 1-3/8" 540 RPM PTO w/plastic guards, use part number N30139.  
 To order the complete 1-3/8" 1,000 RPM PTO w/plastic guards, use part number N30140.  
 To order the complete 1-3/4" 1,000 RPM PTO w/plastic guards, use part number N30141.

#	QTY.	PART #	DESCRIPTION
1	1	8209-01	(for 1-3/8" 540 RPM PTO)
	1	8209-01	(for 1-3/8" 1,000 RPM PTO)
	1	8264-01	(for 1-3/4" 1,000 RPM PTO)
2	1	8011-09	(for 1-3/8" 540 RPM PTO)
	1	8011-08	(for 1-3/8" 1,000 RPM PTO)
	1	N14107	(for 1-3/4" 1,000 RPM PTO)
3	2	8011-10	(for 1-3/8" 540 RPM PTO)
	2	8011-10	(for 1-3/8" 1,000 RPM PTO)
	2	8011-08	(for 1-3/4" 1,000 RPM PTO)
4	1	N31278	SHAFT,55R YOKE
5	2	N14130	KIT, NYLON REPAIR
6	1	8256-09	DECAL, 55R SAFETY OUTER
7	1	N31279	GUARD, OUTER PLASTIC
8	1	N31280	GUARD, INNER PLASTIC
9	1	8256-10	DECAL, 55R PTO SAFETY
10	1	N31281	YOKE, TUBE & SLIP SLEEVE
11	1	N27105	YOKE, 55R SER SHEAR 3/8 BOLT
12	2	4313	BOLT, 3/8 X 2-1/2 GRD 5
13	2	4052	NUT, LOCK 3/8
14	2	4055	NUT, LOCK 5/8 FN
15	2	4048	BOLT, 5/8 X 3-1/2 GR8 FN

## Parts Identification

### 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 10.

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

Part No. 4256



Part No. N28386



Part No. 4334



Part No. N68724



Part No. N68716



Part No. 203264

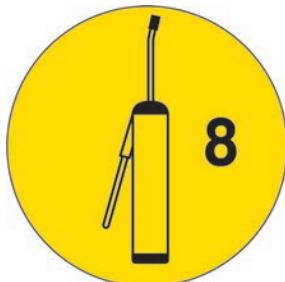


Part No. 4189



### Machine Decals and Signs (Cont'd)

Part No. N28010



Part No. N13721



Part No. N26974 (Horizontal Small)



Part No. N13517



Part No. 4138





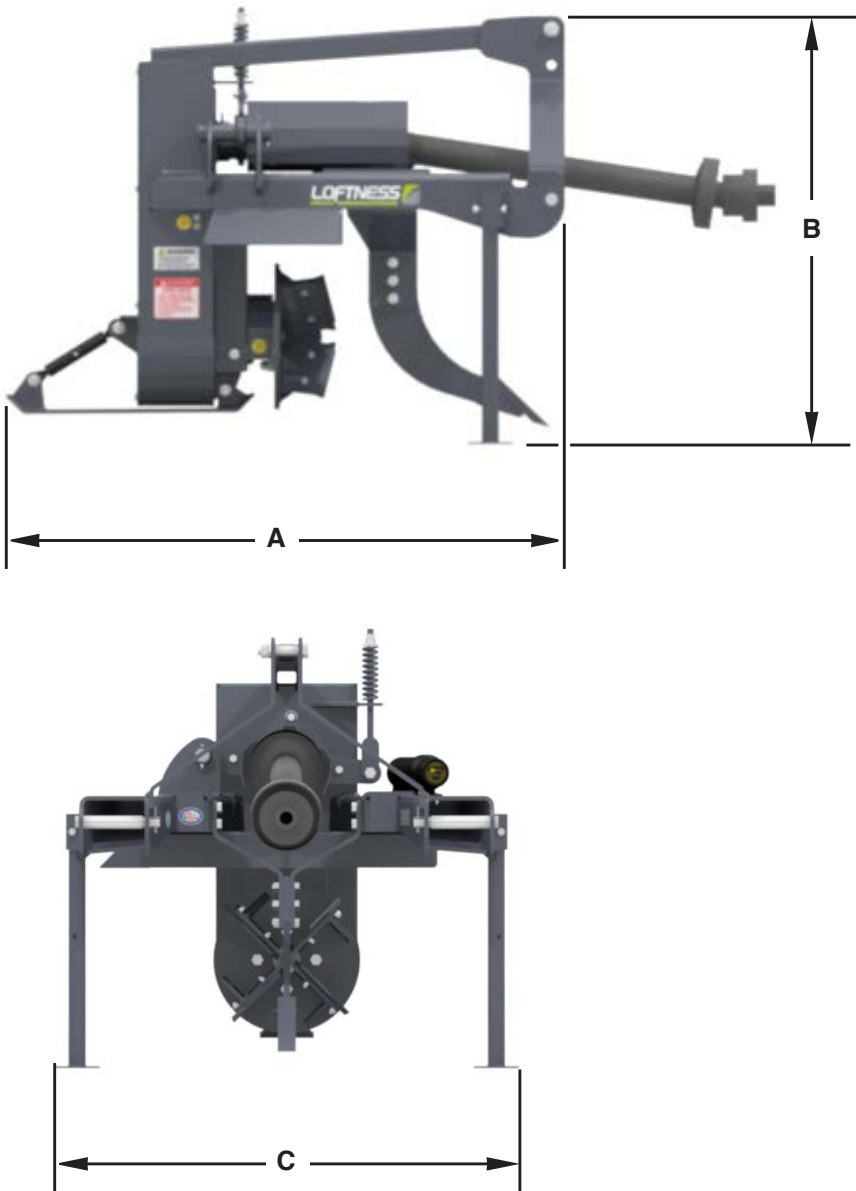
---

**Specifications**

DESCRIPTION	DITCHER
Soil Spread	30 ft. (9.1 m)
Maximum Depth	12 in. (30.5 cm)
Impeller Diameter	18 in. or 20 in. (45.7 cm or 50.8 cm)
Mount	3-point Cat II or III quick hitch
Drive	PTO driven, belt drive
Blades	Reversible, hardened
Skid Shoes	Ratchet Adjust

Appendix

Dimensions



DESCRIPTION	DITCHER
Ditcher Length (A)	62.5 in. (158.8 cm)
Ditcher Height (B)	47.75 in. (121.3 cm)
Ditcher Width (C)	51.5 in. (130.8 cm)
Weight	985 lbs. (447 kg)

## Torque Specifications

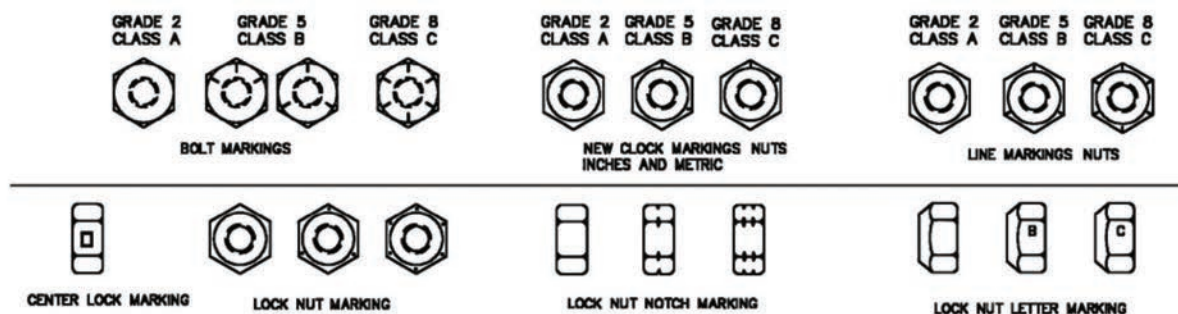
### Inches Hardware and Lock Nuts

#### 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)



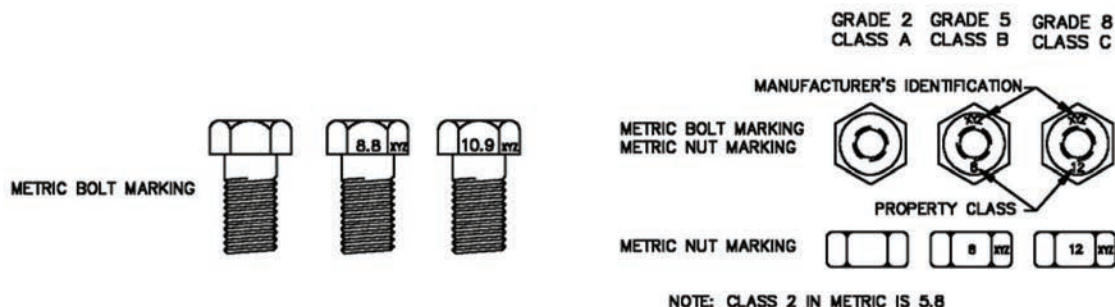
# Appendix

## Torque Specifications (Cont'd)

### Metric Hardware and Lock Nuts

**TORQUE CHARTS**  
Minimum Hardware Tightening Torques  
Normal Assembly Applications  
(Metric Hardware and Lock Nuts)

Nominal Size	Class 5,8		Class 8,8		Class 10,9		Lock nuts
	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	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.)







---

**[www.loftness.com](http://www.loftness.com)**

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

Printed in USA  
© Loftness 2022