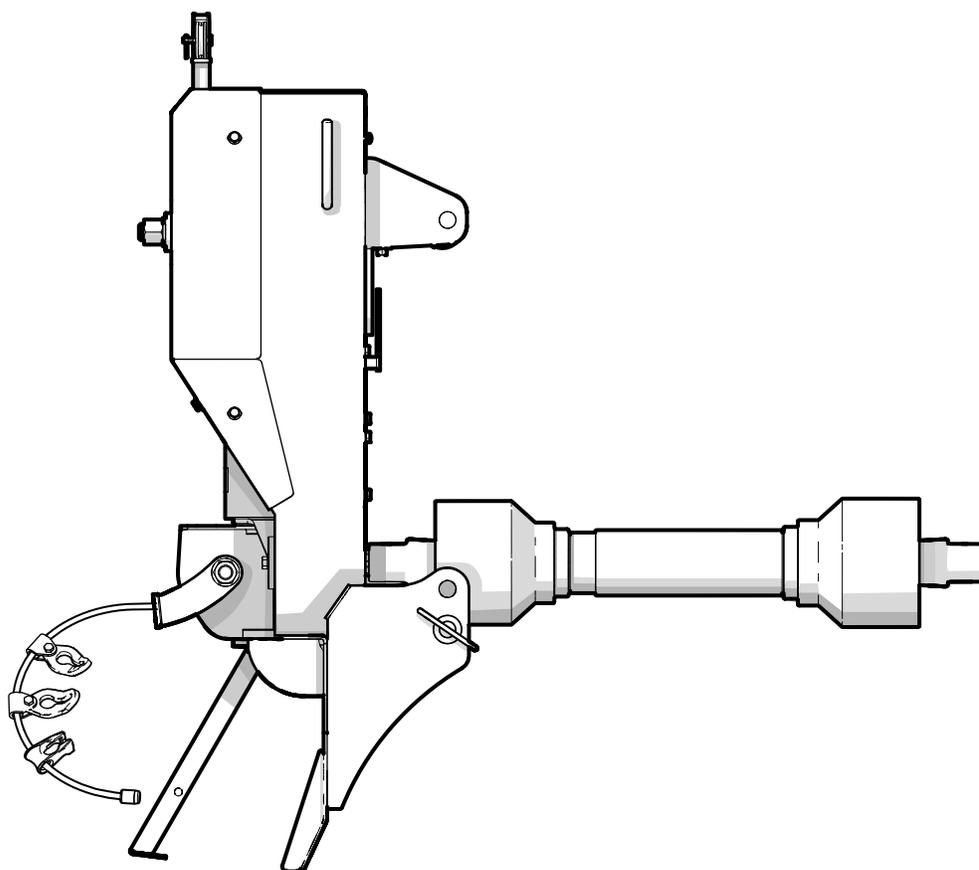


OPERATOR'S MANUAL

FX40 **PTO-driven Log Skidding Winch**



Rev May-2021

Part Number: Z97130_En

WALLENSTEIN

1. Foreword

1.1 Introduction

Congratulations on your choice of a **Wallenstein FX40 PTO-Driven Log Skidding Winch!**

The FX40 Winch is designed to pull those hard to reach logs, even on steep hills or through swampland.

Safe, efficient and trouble free operation of this Wallenstein product requires that anyone using or maintaining the machine reads and understands the Safety, Operation, Maintenance information contained within this Operator's Manual.

Units of measurement in Wallenstein Equipment technical manuals are written as:
US Customary (SI metric).

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Wallenstein dealer or distributor if you need assistance, information or additional copies of the manuals.

WARNING!

Do not attempt to start or operate the machine without thoroughly reviewing this manual for safe and proper operation.

Always keep this manual with the machine.

W034

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	WARNING
Cancer and Reproductive Harm www.P65Warnings.ca.gov	
	ADVERTENCIA
Cáncer y Daño Reproductivo www.P65Warnings.ca.gov	

www.wallensteinequipment.com

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1.2 Delivery Inspection Report

Wallenstein FX40 Logging Winch

To activate warranty, register your product at: www.wallensteinequipment.com

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

The product manuals have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation, and applicable warranty policy.

I have thoroughly instructed the buyer on the equipment care, adjustments, safe operation and applicable warranty policy and reviewed the manuals.

Customer

Dealer

Address

Address

City, State/Province, ZIP/Postal Code

City, State/Province, ZIP/Postal Code

()

Phone Number

()

Phone Number

Contact Name

Model

Serial Number

Delivery date

Dealer Inspection Report

- _____ Check condition of winch rope / spooled correctly.
- _____ Drive chain tension checked
- _____ PTO shaft telescopes, is greased. Shield turns
- _____ Fasteners tight
- _____ Grease zerks, pivot points lubricated
- _____ Clutch rope moves freely
- _____ Brake rope moves freely

Safety Checks

- _____ All safety decals installed
- _____ Guards and shields installed and secured
- _____ Retainer installed through hitch points
- _____ Review operating and safety instructions

1.3 Serial Number Location

Always provide the model and serial number of your Wallenstein product when ordering parts or requesting service or other information. This information is found on the serial number plate shown in the illustration below.

Record product information in the spaces provided for future reference.

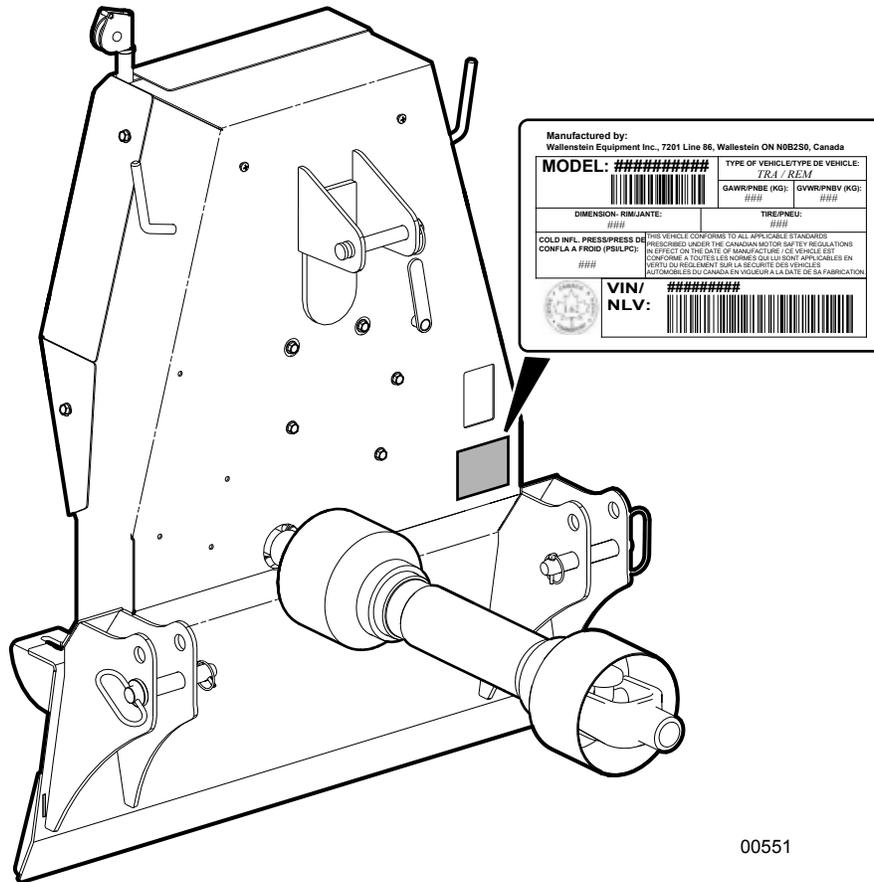


Fig. 1 – Serial Number Plate Location

Record Product Information Here	
Model:	FX40
Serial Number:	

1.4 Types of Decals on the Machine

When getting familiar with the Wallenstein product, notice that there are numerous decals located on the machine. There are different types of decals for safety, information, and product identification. The following section explains what they are for and how to read them.

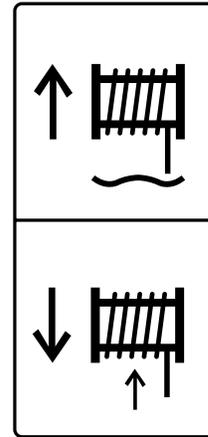
Safety Decals have a yellow background and are generally two panel. They can be either vertical or horizontal.



Safety Notice Decals are pictorial with a blue background and generally rectangular with single or multiple symbols. This decal informs what Personal Protective Equipment is required for safe operation.



Informative Decals are generally pictorial with a white background and can vary in the number of panels. This type of decal explains the operation of a control.



Product Decals indicate machine model and serial number, and other important information.

Manufactured by: Wallenstein Equipment Inc., 7201 Line 86, Wallenstein ON N0B2S0, Canada	
TYPE OF VEHICLE/TYPE DE VEHICULE: TRA / REM	
MODEL: #####	GAWR/PNEB (KG): ###
	GVWR/PNEV (KG): ###
DIMENSION: RIM/JANTE: ###	TIRE/PNEU: ###
<small>THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE (CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION)</small>	
VIN/ NLV: #####	

See the section on safety signs for safety decal definitions. For a complete illustration of decals and decal locations, download the parts manual for your model product at www.wallensteinequipment.com.

2. Safety

2.1 Safety Alert Symbol

This Symbol means:

**ATTENTION! BE ALERT!
YOUR SAFETY IS INVOLVED!**

The Safety Alert Symbol identifies important safety messages on the Wallenstein product and in the manual.

When you see this symbol, be alert to the possibility of personal injury or death! Follow the instructions in the safety message.



2.2 Signal Words

The signal words **DANGER**, **WARNING** and **CAUTION** determine the seriousness level of the warning messages in this manual. The appropriate signal word for each message in this manual has been selected using the following guidelines:

DANGER –

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

WARNING –

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

CAUTION –

Indicates a potentially hazardous situation that, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices.

IMPORTANT – To avoid confusing equipment protection with personal safety messages, a signal word **IMPORTANT** indicates a situation that if not avoided, could result in damage to the machine.

2.3 Why SAFETY is important

- Accidents Disable and Kill
- Accidents Cost
- Accidents Can Be Avoided

YOU are responsible for the SAFE operation and maintenance of your Wallenstein Log Skidding Winch. **YOU** must make sure that anyone who is going to use, maintain or work around the winch is familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** using this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented.

Do not risk injury or death by ignoring good safety practices.

2.4 Safety Rules

- **DO** give operating instructions to operators or employees before allowing them to operate the machine.
- **DO** always wear appropriate Personal Protective Equipment (PPE). This equipment includes but is not limited to the following:
 - A hard hat
 - Heavy gloves
 - Hearing protection
 - Protective shoes with slip resistant soles
 - Protective glasses, goggles or face shield



- **DO** set the machine in a Safe Condition before performing any service, maintenance work, storage preparation, or hooking up. **Safe Condition** involves performing the following:

SAFE CONDITION
<ol style="list-style-type: none">1. Disengage the PTO.2. Set the parking brake.3. Turn off the tractor engine. Remove the ignition key. Block the tractor wheels.4. Make sure all components have stopped moving.5. Check winch cable is not under tension.

- **DO** have a first-aid kit available for use should the need arise and know how to use it.
- **DO** read and learn all safety signs located on the machine before using, maintaining, adjusting or cleaning the winch.
- **DO** inspect and secure all guards before starting.



- **DO** have a fire extinguisher available for use should the need arise and know how to use it.



- **DO NOT** expect a person who has not read and understood all use and safety instructions to operate the machine. An untrained operator is not qualified and exposes himself and bystanders to possible serious injury or death. It is the owners responsibility to the operator to make sure familiarity and understanding of the machine.
- **DO NOT** modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **DO NOT** allow riders during transport.
- **DO NOT** risk injury or death by ignoring good safety practices.

2.5 Operating Safety

- Understand the meaning of the safety signs on the machine. Keep them clean. Replace them if they become damaged.
- Never operate this winch with guards or shields removed. The manufacturer has designed this skidding winch to be used with all its safety equipment properly attached, to minimize the chance of accidents.
- Read and understand the operator's manual before starting. Review safety instructions annually.
- Do not allow anyone within 20 ft (6 m) of machine or logs during operation.
- Stand at least 10 ft (3 m) to the side to activate the winch. Do not operate winch from tractor seat.
- Do not touch or stand directly in line with cable during operation.
- Check cable condition before using winch. Cable can break if it is kinked, corroded, knotted, or has broken strands. Replace if damaged.
- Never consume alcohol or take drugs that could hinder alertness or coordination while operating this equipment. Consult a doctor about operating this machine if taking prescription medications.
- Do not allow riders on this machine at any time. There is no safe place for any riders.
- Keep rear tractor wheels on level ground and lower winch blade when winching to provide stability.
- Do not exceed winching angle of more than 25° off center.
- Always winch up a slope. Do not winch across a slope.
- Do not operate on hillsides or when working area is cluttered, wet, muddy or icy to prevent slipping and tripping.

- Keep all components of PTO systems shielded and guarded.
- Regularly test driveline guards by spinning or rotating them to make sure they have not become stuck to the shaft.
- Disengage the PTO and shut off the tractor before dismounting to clean, repair, service, or adjust machinery.
- Walk around tractors and machinery rather than stepping over a rotating shaft.
- Do not exceed a safe travel speed when transporting.

2.6 Equipment Safety Guidelines

- Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
- Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs are indicated in this manual on page 12.
- Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.
- Never exceed the limits of the machine. If its ability to do a job is in question, or to do so safely – **STOP!**

2.7 Safety Training

- Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
- The best safety feature is an informed, careful operator—we ask you to be that kind of an operator. It is the operator's responsibility to read, understand and follow ALL safety and operation instructions in the manual. Review *Safety Sign Explanations on page 12*.

- Working with unfamiliar equipment can lead to careless injuries. Read this manual before assembly or using the machine to acquaint yourself with it. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that prior to using, the operator:
 - reads and understands the owner's manual
 - is instructed in safe and proper use of the equipment
 - understands and knows how to perform the Safe Condition procedure

- Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will use the machinery. Anyone not familiar with operation and safety instructions is not qualified to use the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.
- Know your controls and how to stop the machine quickly in an emergency. Read this manual thoroughly.

2.8 Preparation

- Never use the machine until the operators have been adequately trained in the safe operation of the machine and have read and completely understand:
 - safety, operation and feature sections of this manual
 - each of the safety messages found on the safety signs on the machine.
 - engine operator's manual
- PPE is recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the trailer. Do not allow long hair, loose fitting clothing or jewelry around equipment.
- Prolonged exposure to loud noise may cause permanent hearing loss! Power equipment with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80 dB. Noise over 85 dB on a long-term basis can cause severe hearing loss. Noise over 90 dB adjacent to the Operator over a long-term basis may cause permanent, total hearing loss.

- Be aware of overhead hazards: branches, cables, electrical wires.
- Use only in daylight or good artificial light.
- Make sure that all safety shielding and safety signs are properly installed and in good condition.
- Perform the **Pre-start Checklist** procedure before starting work (see *Pre-Operation Checklist on page 25*).

2.9 Maintenance Safety

- Follow good shop practices:
 - Keep service area clean and dry.
 - Be sure electrical outlets and tools are properly grounded.
 - Use adequate light for the job at hand.
- Before servicing or repairing, place the winch in a the **Safe Condition** to work on. See page 8.
- Never work under equipment unless it is blocked securely.
- When performing any service or maintenance work always wear proper personal protection equipment.
- Use only genuine factory replacement parts to restore the winch to original specifications. Wallenstein is not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
- When completing a maintenance or service function, make sure all safety shields and devices are installed before placing machine in service.
- When cleaning parts, do not use gasoline or diesel fuel. Use regular cleanser.
- Always use proper tools in good condition.
- Make sure a procedure is understood before beginning.

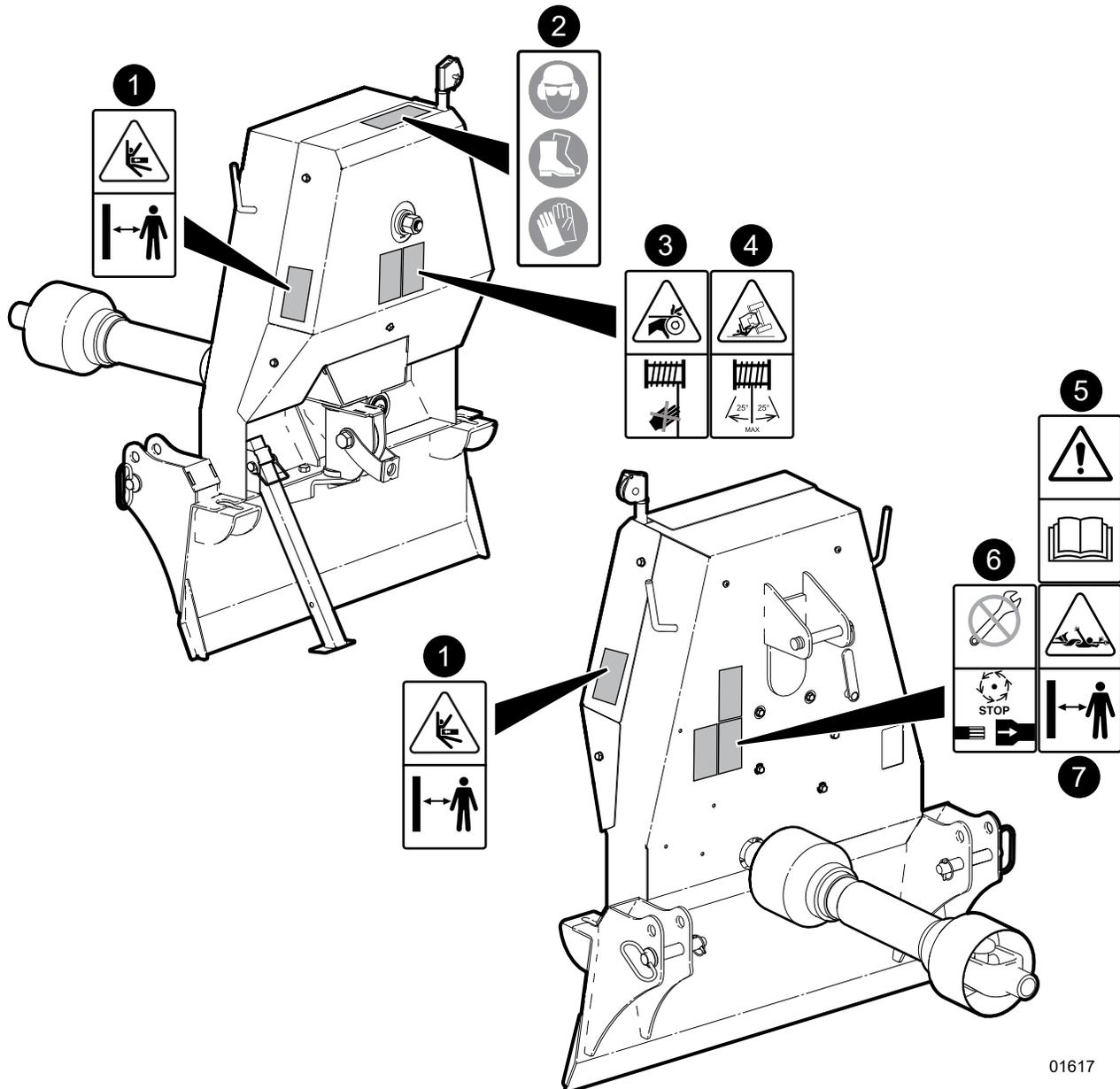
2.11 Safety Sign Explanations

The types of safety signs and locations on the equipment are shown in the illustrations that follow. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

Think SAFETY! Work SAFELY

IMPORTANT! If parts are replaced that have safety signs on them, new signs must be applied. Safety signs must always be replaced if they become damaged, are removed, or become illegible.

Safety signs are included in the product decal kit available from your authorized dealer. Decals are not available separately.



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Fig. 2—FX40 Safety Sign Decal Locations

1. Warning!



Crushing hazard.

Do not stand in front of the winch when using it. Stand to the side at a minimum 10 ft (3 m) away.

2. Warning!



Always wear appropriate Personal Protective Equipment when using this machine. For example:

- A hard hat
- Heavy gloves
- Hearing protection
- Protective shoes with slip resistant soles
- Protective glasses, goggles or face shield

3. Warning!



Risk of entanglement from winch cable.

Keep hands, loose clothing, and long hair away.

4. Warning!



Risk of tractor overturning.

Do not operate with the winch cable angle greater than 25° off center, in either direction.

5. Warning!



Refer to the operator's manual. Read ALL operating instructions in the manual and learn the meaning of ALL safety signs on the machine.

The best safety feature is an informed operator.

6. Warning!



Risk of injury when servicing or repairing this machine.

Disconnect the driveline before working on this machine.

7. Warning!



Risk of entanglement from rotating driveline.

Keep hands, loose clothing, and long hair away from driveline while it is rotating.

2.12 Replace Damaged Safety Signs

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Parts that were replaced with a safety Decal on them must also have the safety sign replaced.
4. Replacement safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

2.13 How to Install Safety Signs

1. Be sure that the installation area is clean and dry.
2. Be sure temperature is above 50 °F (10 °C).
3. Determine exact position before removing the backing paper.
4. Remove the smallest portion of the split backing paper.
5. Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
6. Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
7. Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

3. Familiarization

IMPORTANT! Before starting work with the winch, become familiar with the location and function of all controls.

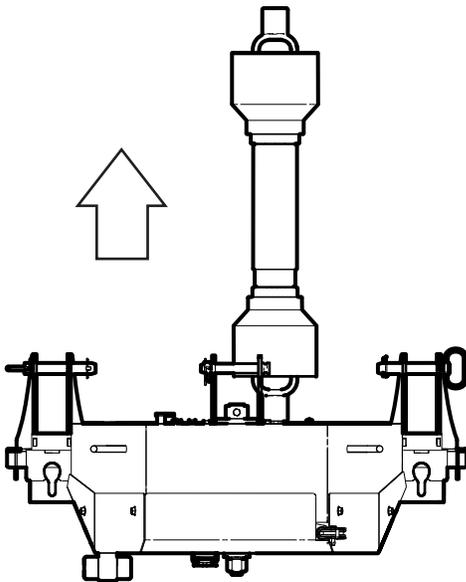
3.1 To the New Operator

It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly.

By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the work site. Untrained operators are not qualified to use the machine.

3.2 Operator Orientation

IMPORTANT! When describing controls as mentioned throughout this manual, the directions for left-hand, right-hand, backward and forward, are determined when sitting in the tractor seat, facing the direction of forward travel.



3.3 Training

Each operator must be trained in the proper set-up and operating procedures prior to being allowed to operate the machine.

1. Review control location, function and movement directions.
2. Move the unit to a large open area to allow the operator to become familiar with control function and machine response.
3. When a new operator is familiar and comfortable with the machine, they can proceed with the work. Do not allow untrained operators to use the machine. They can endanger themselves and others or damage property and the machine.

3.4 Job Site Familiarization

It is the responsibility of the operator to be thoroughly familiar with the work site prior to starting. Prevent the chance or possibility of problems or accidents by not being in the situation to start with. Some items the operators should check include but are not limited to:

1. Close or cramped work space. Be sure there is sufficient space and clearance for the machine to winch-in the log during operation.
2. Organize the working area to minimize the winching and wood removal distances. The shorter the distances, the faster the work will be finished.
3. Use care when pulling logs from a pile as they can roll when attaching the cable or winching.
4. Position the tractor so prevailing winds blow engine exhaust fumes away from operator.

3.5 Equipment Condition

1. Check the general condition of the winch. Make sure that all nuts and bolts are secure and that a moveable parts are secured and in their proper place.
2. Always inspect the cable as it is pulled out of the winch. Do not use the machine if the cable is cut, frayed, worn or knotted. Any problem can result in early failure and create an unsafe operating condition. Replace damaged cable before resuming work.

3.6 FX40 Components

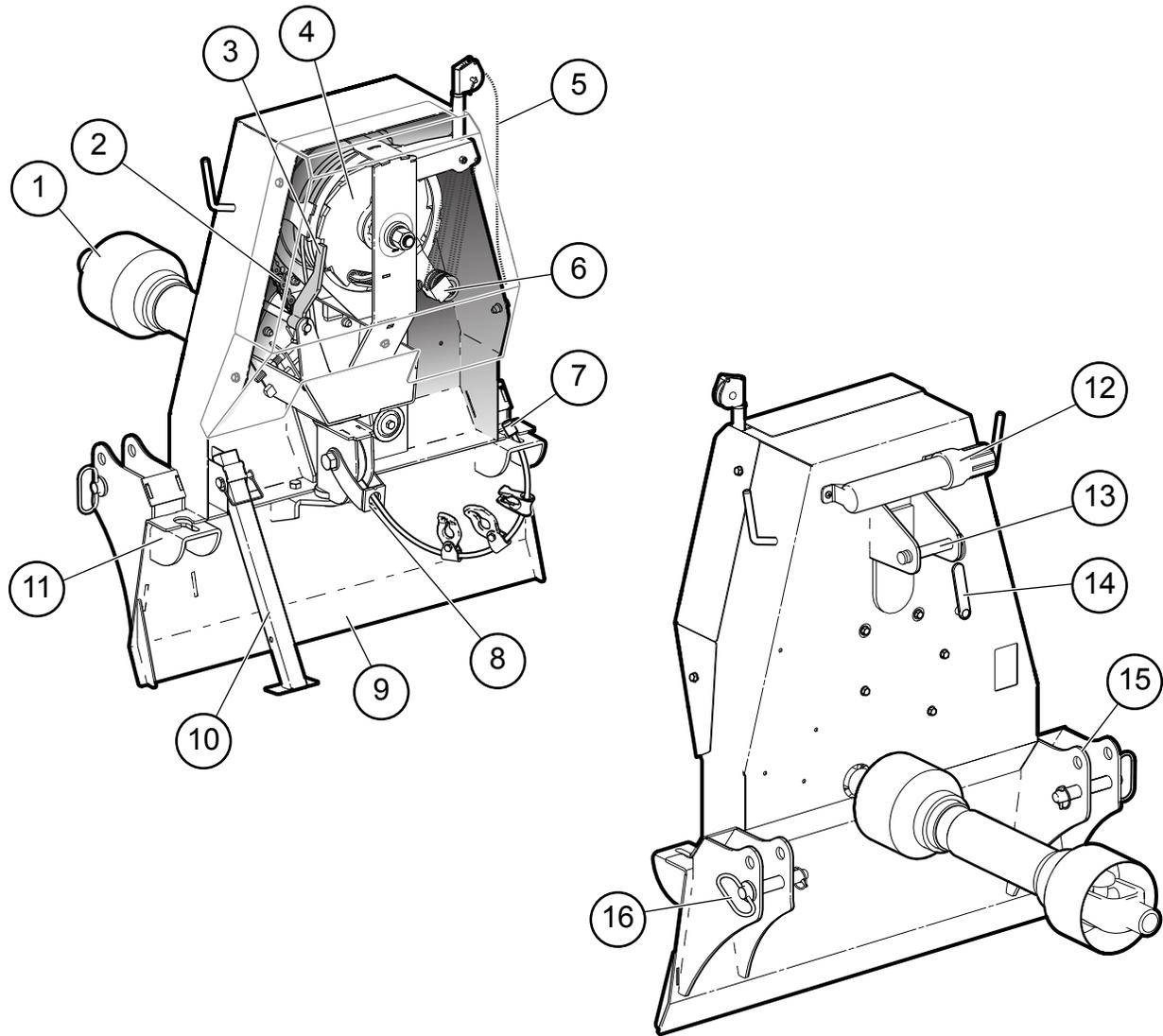


Fig. 3—FX40 Components

- 1. PTO Shaft
- 2. Drive Chain
- 3. Drum Lock Dog
- 4. Cable Drum Assembly
- 5. Clutch Rope
- 6. Clutch Rope Pulleys

- 7. Winch cable and Keyhole Sliders
- 8. Snatch Block
- 9. Anchor Blade
- 10. Support Foot
- 11. Keyhole Slots
- 12. Operator's Manual Tube

- 13. Top Link Connection
- 14. Winch Drum Lock
- 15. Lower Lift Arm Connection, LH
- 16. Lower Lift Arm Connection, RH

4. Sizing PTO Shaft

IMPORTANT! The PTO shaft that came with your machine may need to be shortened. A longer shaft is supplied because tractor lift arms vary in length.

The PTO shaft must be free to telescope and not bottom out when going through its working range. It should never completely collapse in use. There should always be 2" (50 mm) of space for retract.

If the shaft bottoms out, the bearings on both ends can be overloaded and could fail causing damage or injury.

WARNING!

Avoid the risk of personal injury or machine damage! Read the operator's manual before using this equipment. Carefully read all safety messages in the manual and follow all safety signs on the machine.

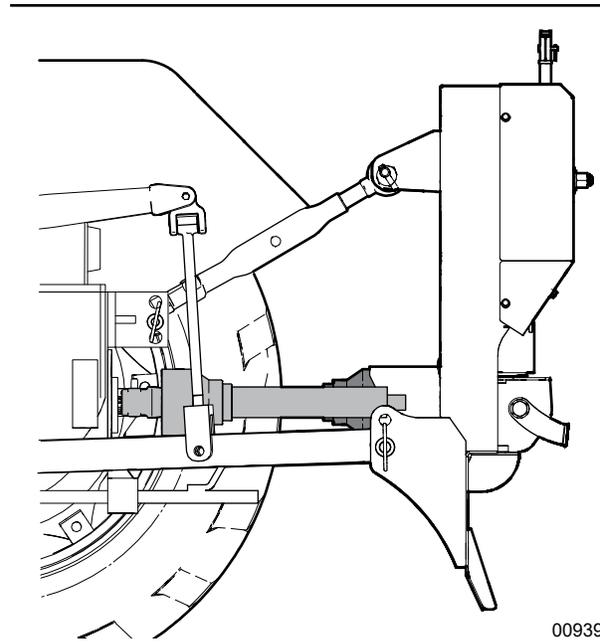
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CAUTION!

Wear suitable eye protection when cutting steel tubes.

Remove the PTO shaft and mount the attachment on the tractor three-point hitch.

1. Start the tractor and raise the three-point hitch up off the ground until the machine's input shaft is level with the tractor PTO output shaft. **This is the shortest distance between the input and output shafts.**
2. Make sure tractor is shut off with parking brake applied.
3. Pull the PTO shaft apart and place one end on the tractor *output* spline. Place the other on the implement *input*.



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Fig. 4—Input shaft and output shaft

4. Lift the shaft ends up so that they are as parallel to each other as possible. Support them with blocking or tie them together. If the shafts are too long or there is not enough room, see Alternate Method on page 4.

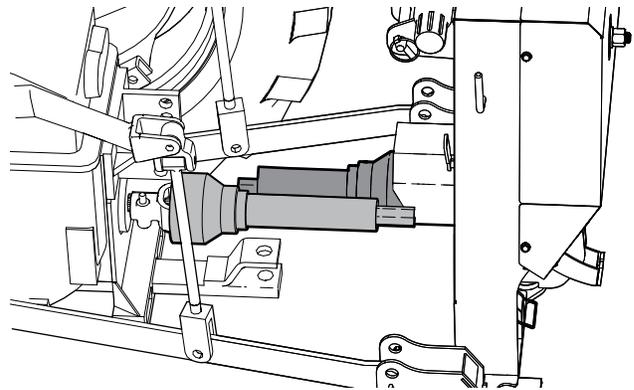


Fig. 5—Lift shaft ends up parallel

- Using a straight edge, transfer a mark from the end of one tube section to the other section as shown.

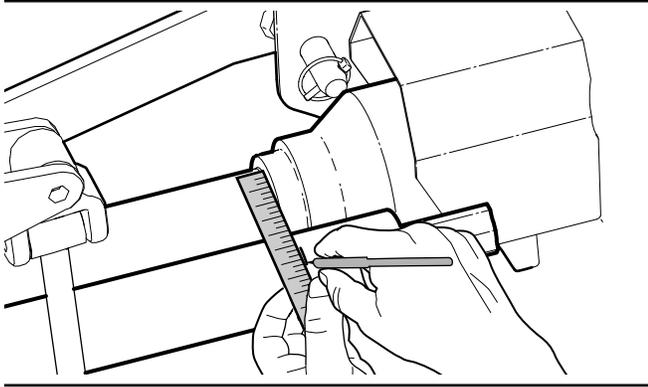


Fig. 6 – Transferring the mark

- Add 2 inches (50 mm) to that measurement and place a second mark on the outer plastic tube. This is where the plastic shielding needs to be cut off.

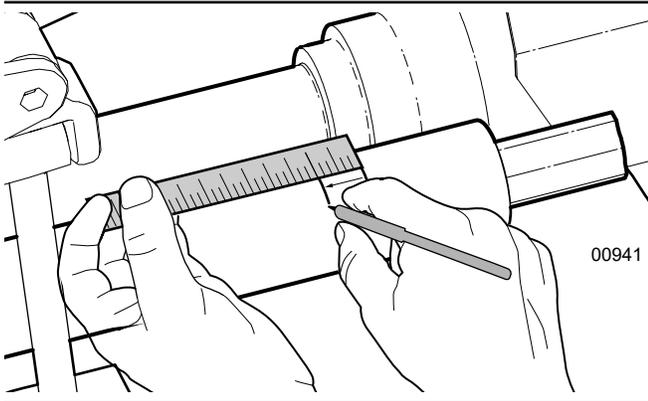


Fig. 7 – Place mark to cut plastic tube

- Cut the plastic tube off at the mark, leaving the steel shaft inside.

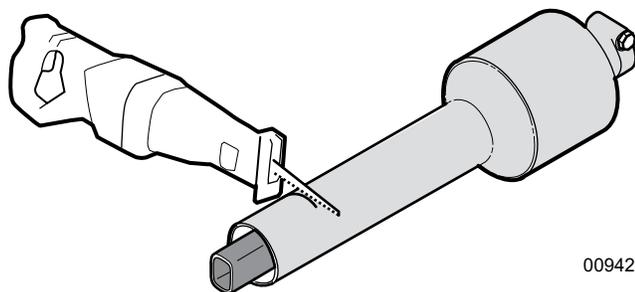


Fig. 8 – Cut plastic tube at the mark

- Using the cut-off length of plastic tube as a guide, mark the steel tube. Align the end of the plastic tube with the end of the steel shaft.

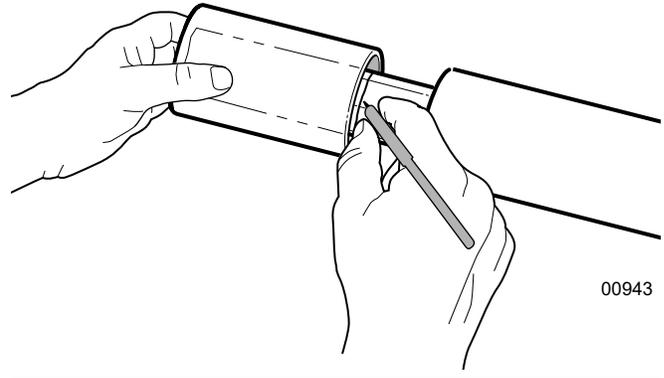


Fig. 9 – Marking steel tube.

- Cut the steel tube off at the mark.
- Using the cut-off length of plastic tube to mark the remaining cuts, repeat this process for **BOTH** PTO shaft halves.



Place the end of the steel shaft to be cut off in a vice so it is easier to control your cut.

- Remove the burrs from the edges of the steel shaft that were cut. Clean the steel shaft halves.
- Grease the inner tube so the tube halves slide together easier.

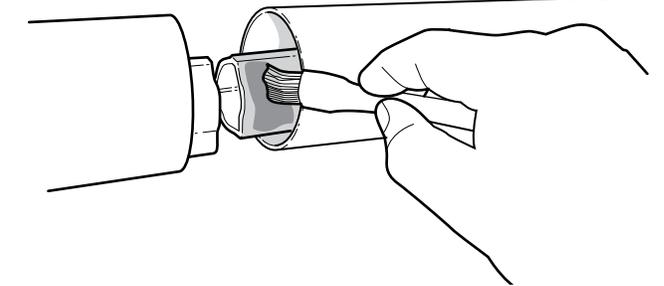


Fig. 10 – Grease the inner tube

- Assemble the two halves of the PTO shaft.

IMPORTANT! Using a driveshaft not supplied with your machine may result in being assembled out of phase (universal joint yokes are not aligned with each other). Make sure driveshaft is assembled with u-joints in phase otherwise unbalances cause wear and eventually lead to failure.

- Make sure the shaft can telescope freely before installing. If it does not, separate the two parts and inspect for burrs or cuttings on the shaft ends.

IMPORTANT! The two PTO shaft halves should overlap inside at least 6" (150 mm).

4.1 Alternate Method

This method can be used if the two ends of the PTO shaft cannot be put close enough together to measure.

1. Install the attachment on the tractor. Lift the attachment up so that the tractor output is level with implement input shaft.
2. Take the PTO shaft that came with your machine, fully collapse it, and measure the distance between the locking yokes. Call this measurement 'A'.

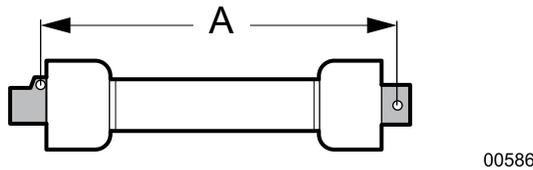


Fig. 11 – Measurement A

3. Measure the distance between the grooves for the locking collars on each input. Subtract 2 inches (50 mm) from this measurement. Call this measurement 'B'.

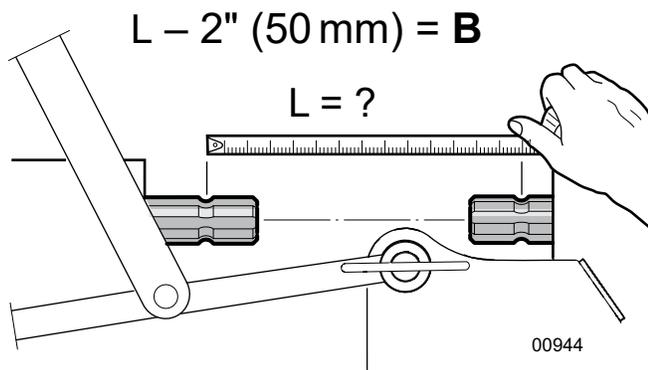


Fig. 12 – Measurement B

4. If the collapsed length **A** is longer than measurement **B** from Step 3, the PTO shaft must be shortened.
5. Subtract **B** from the uncut PTO shaft measurement **A**. ($A - B$)

The result is how much **BOTH** halves of the PTO shaft need to be shortened. Call this value **C**.

$$A - B = C$$

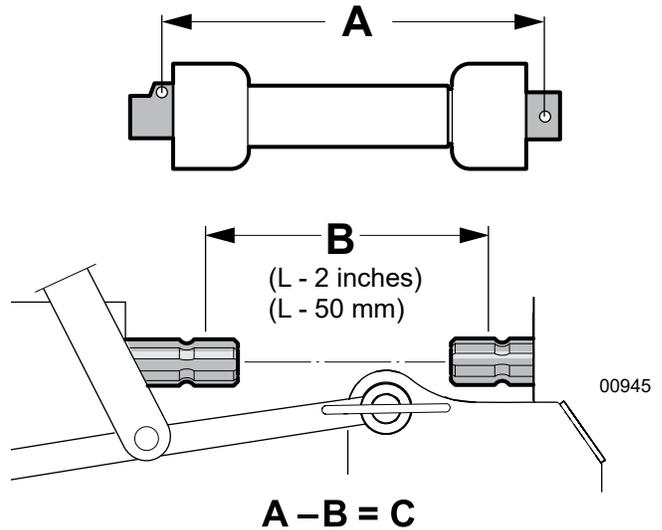


Fig. 13 – C = Cut Length

6. Pull the PTO shaft apart, then measure and cut the length **C** from both the outer plastic covers and the inner metal tubes.



Tip: Use the cut off piece of outer shielding to mark the inner tube. Leave the steel center tubes longer than the plastic outer tubes, otherwise they can be harder to put back together.

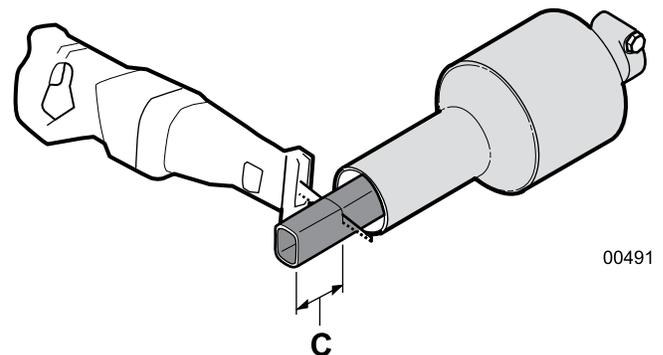


Fig. 14 – Cut off the Length C from both PTO Shaft halves

4.2 Installing PTO Shaft

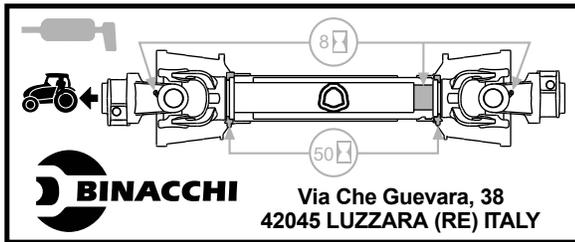
The implement must be mounted to the tractor, and fully lowered to the ground. Make sure tractor is shut off with parking brake applied.

Check to make sure the shielding on the PTO shaft is in good condition and able to turn freely, independent of the PTO shaft.

Make sure the PTO yoke ends are clean. Adding a small amount of lubricant on the splines can help them slide on.

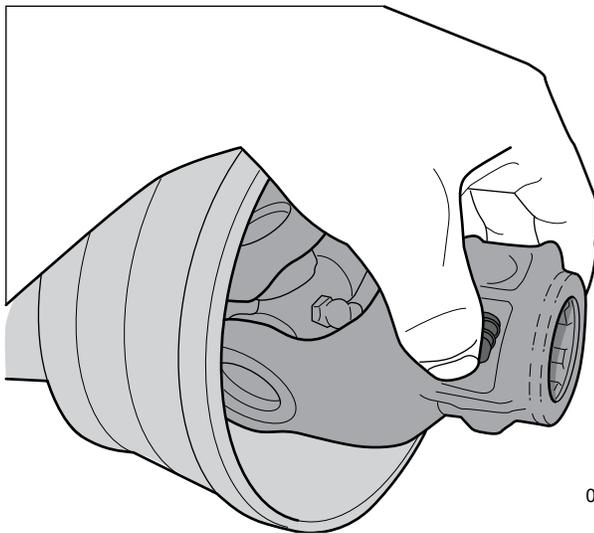


A decal on the shielding indicates the tractor-end of the driveshaft.



01655

1. Install the PTO shaft on the implement. Press the locking pin button and push the shaft end onto the input PTO. Connect the safety chain to the implement so that the shielding does not turn during operation.



00866

Fig. 15—Locking Pin Button

2. Slide out the end of the PTO shaft up to the tractor output PTO, aligning the two shaft splines. Press the locking pin button and push the shaft end onto output PTO.
3. Once started, slide the shaft all the way on. You might hear a click and your button should retract to the original position.

4. To check that the shaft lock is fully seated, pull back on the shaft with your hands off the button.
5. Start the tractor and raise / lower the attachment to check clearances. A correctly sized shaft should never bottom out or come apart.

IMPORTANT! Check driveshaft alignment. During operation, the working angle should not be greater than 15° between the tractor and the implement. Misalignment can cause premature wear and eventually failure.

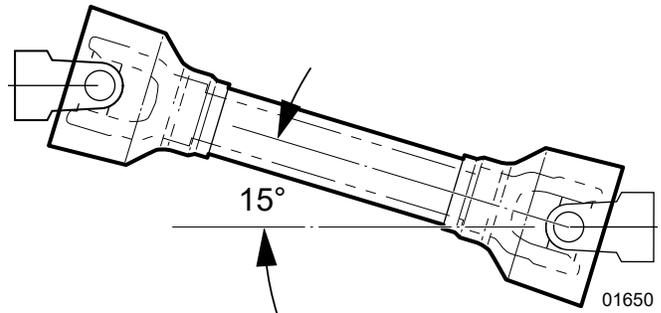


Fig. 16—Driveshaft Alignment

6. Check the rotation direction. A decal on the machine indicates correct rotation.

5. Attaching Winch to Tractor

WARNING!

Never let anyone stand between the tractor and the implement during hitching. Too fast of an approach or the operator's foot slipping from the clutch can lead to injury or fatality to the person standing nearby.

W048

Before hooking the winch up to the tractor, make sure PTO shaft length is correct. If the length has not been checked, see page 17.

Make sure there is enough room and clearance to safely back the tractor up to the winch.

1. Move the tractor drawbar forward for clearance, if required.
2. Place the tractor lift arms in their full sway position. Remove the hitch pins from the winch.
3. At the slowest speed, back the tractor up keeping it lined up with the winch.
4. When reversing, raise or lower the lift arms to align them to the hitch pin holes on the winch.

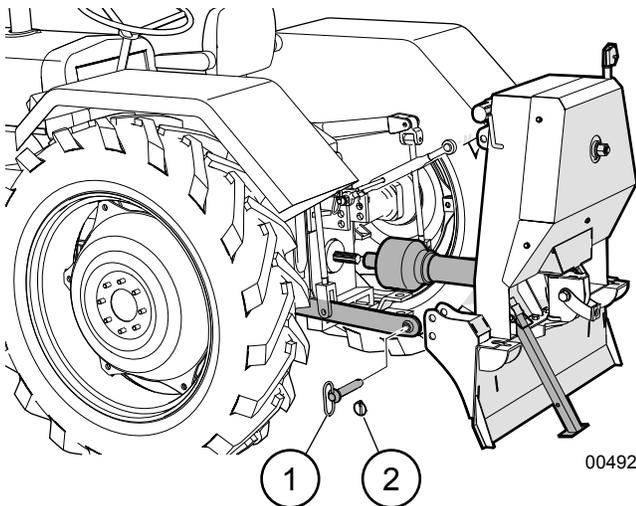


Fig. 17—Align Tractor to Winch

1. Hitch Pin
 2. Lynch Pin Retainer
5. Once properly aligned, apply the tractor park brake and turn the engine off.
 6. Slide a hitch pin through the lower lift arm holes and hitch pin holes on both sides. Install the lynch pin retainers on each pin.
 7. Remove the top pin and install the top link.

8. Adjust turnbuckle to align the top link. Insert the hitch pin and retainer. Adjust so the winch is level.
9. Slide the collar back on the PTO shaft yoke. Align the splines and slide the yoke on the tractor PTO.
10. Release the collar and make sure the locking pin clicks into position.
11. Attach the shield anchor safety chain to an adjacent frame member. The chain keeps the integral journal shield from spinning.
12. Raise winch support leg and insert snap lock pin.
13. Start the tractor and slowly raise the machine through its working range to make sure the telescoping portion of the PTO shaft does not bottom out.

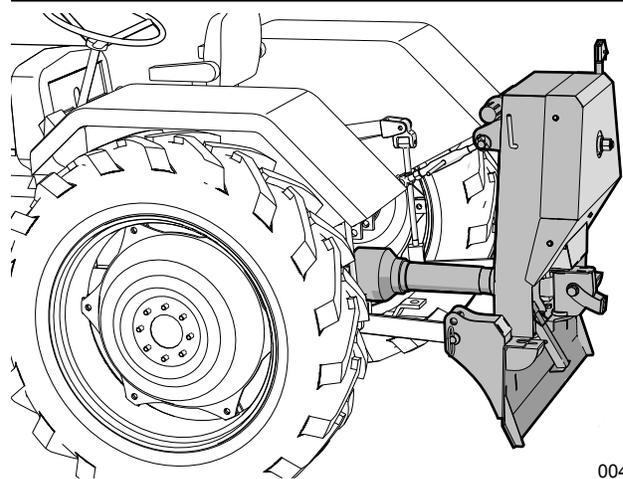


Fig. 18—Winch Attached

To detach winch from the tractor, reverse the above steps.

6. Controls

Before starting to work, become familiar with the winch controls.

6.1 Winch Clutch

The winch clutch is engaged by pulling the winch clutch control rope (1). Relaxing the rope disengages the clutch.

- Pull the rope firmly to engage the clutch and retract cable into the winch (2).
- Release the rope and a spring disengages the clutch (3).

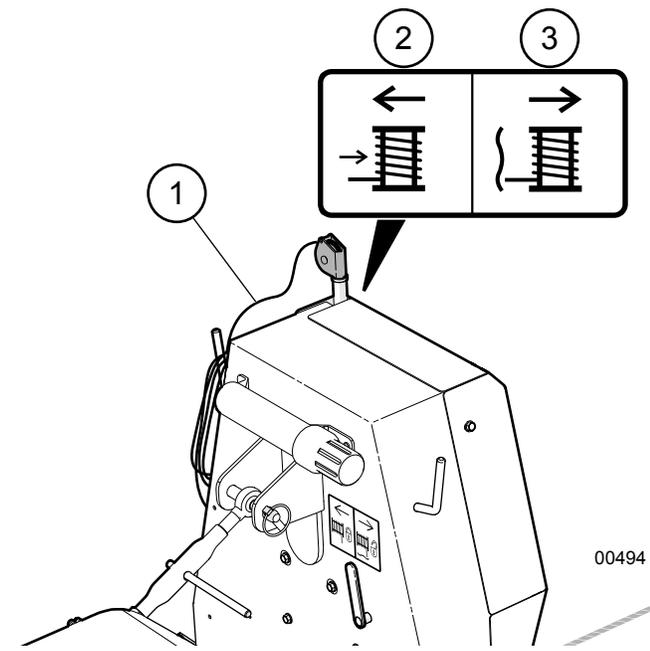


Fig. 19—Winch Clutch

The clutch control rope (1) runs through a swivel pulley (2) allowing it to be operated from any angle behind the skidding winch.

6.2 Winch Drum Lock

Lock the winch drum to prevent the cable unwinding while skidding.

- Push the lock handle to the left to engage the drum lock. Moving the tractor forward engages the lock on the cogged winch drum.
- The load applied on the cable keeps the drum locked.

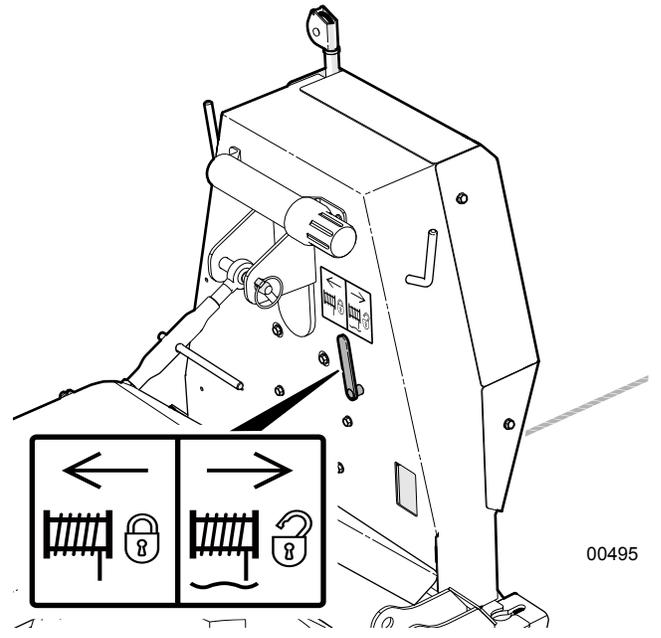


Fig. 20—Winch Drum Lock

- To disengage drum lock, ease the load off the cable and push the handle to the right.
- Stop the tractor or momentarily pull the winch clutch rope to ease the load off the lock.

The winch drum rotates freely with the lock disengaged and the clutch rope released.

6.3 Forged Cable End

The winch cable has a heavy duty forged steel end and choker.

- Wrap the cable end around a log and set the forged cable end into the choker.

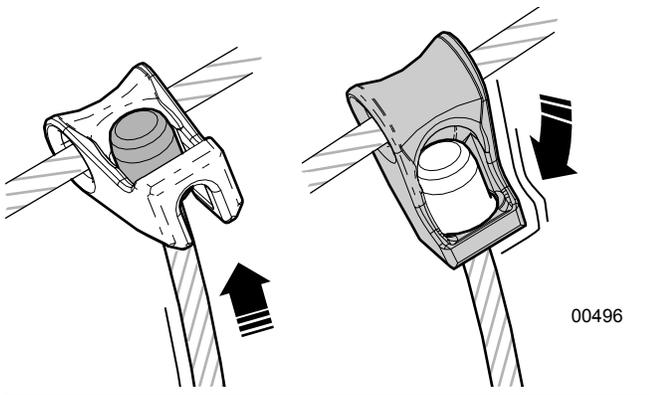


Fig. 21—Forged Cable End

IMPORTANT! Do not use the forged end ferrule on the cable as an end stop.

The ferrule is designed to be used in the choker hook only. The end ferrule can be damaged if used incorrectly.

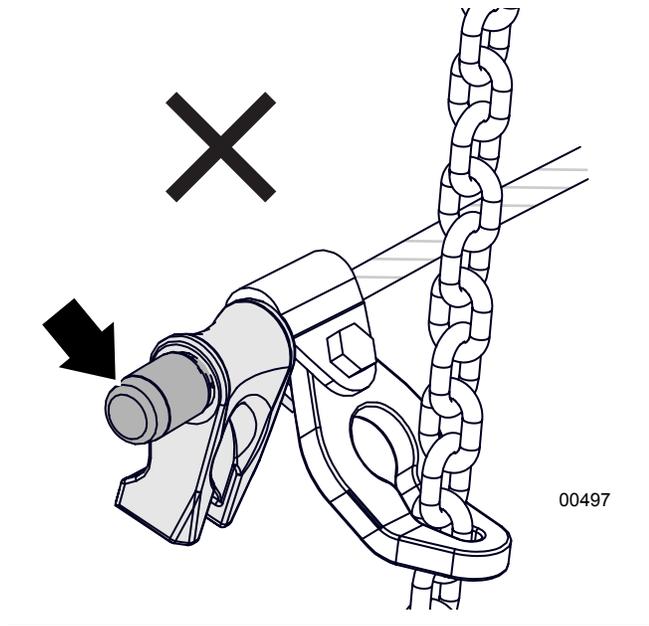


Fig. 22—Incorrect use of Forged end

6.4 Keyhole Sliders

The cable has two keyhole sliders that are used to attach the choker chain to the winch cable.

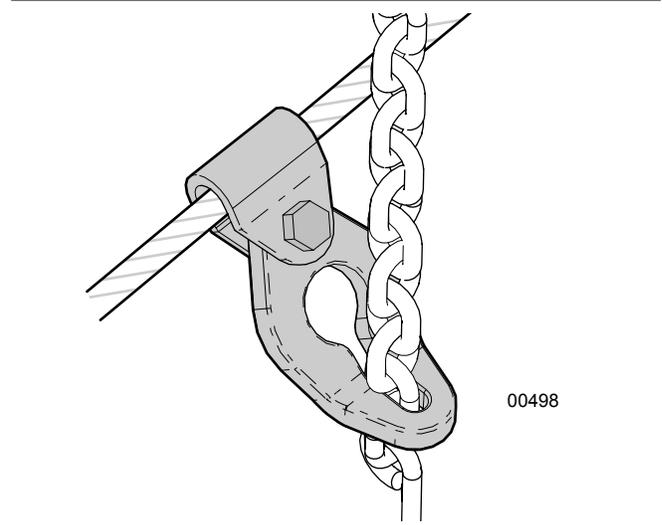


Fig. 23—Keyhole Sliders

6.5 Keyhole Slots

On the back of the winch are two keyhole slots. Each slot can be used to attach a chain for skidding additional logs.

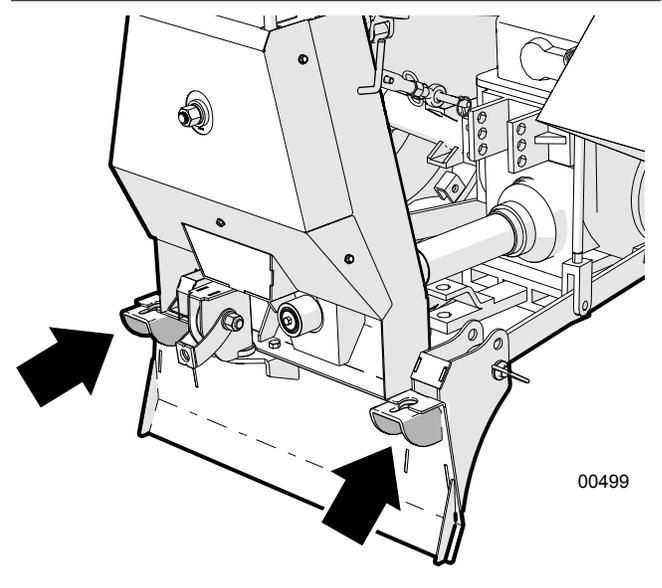


Fig. 24—Keyhole Slots

6.6 Choker Chains

- Push the probe end of the choker chain under the log.
- Pull the ends together and put the hook end over the choker chain.
- Attach the probe end of the choker chain to the keyhole slider on the cable.

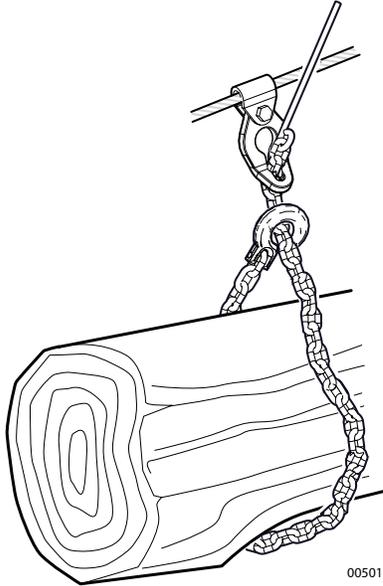


Fig. 25—Choker Chain

6.7 Synthetic Chokers

Synthetic chokers are available as an accessory. These chokers weigh less than the steel chain chokers and are easier to handle, however are more susceptible to abrasion.

Before each use, check the condition of the choker for visible damage. Replace if kinked, frayed, has knots, cuts, or any broken strands. Failure to replace could result in breakage.

! WARNING!

Synthetic rope that fails under tension can snap back with great force causing injury or death. Avoid sudden jerks, quick starts or stops. Start slowly and smoothly. Replace if kinked, badly frayed, has knots, cuts, or broken strands.

W095

- Push the probe end of the choker under the log.
- Pull the ends together and push the probe end through the loop.
- Attach the chain on the probe end to the keyhole slider on the cable.

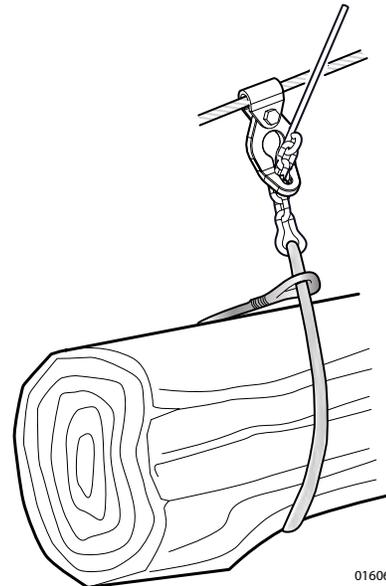


Fig. 26—Synthetic Choker

- A synthetic choker is very susceptible to damage from rubbing up against or sliding along rough ground or surfaces.
- Synthetic choker strength can be reduced if subjected to sudden jerking, or quick starts and stops. Avoid high shock loads on the rope by starting slowly and smoothly.

7. Operating Instructions

7.1 Pre-start Checks

Before operating the winch, perform the following pre-start checks.

A Pre-start Checklist is provided for both personal safety and to keep the winch in good mechanical condition.

Item to Check	✓
Check that the integral plastic journal shield on the PTO shaft can spin freely.	
Check and lubricate the PTO shaft following the schedule outlined in the Maintenance section.	
Check the condition of the cable. Replace if kinked, frayed or if it has any broken strands.	
Check the condition of the winch clutch.	
Check that all bearings turn freely. Replace any that are rough or seized.	
Check and make sure that all covers and guards are in place, secured and functioning as designed.	
Check all fasteners and tighten as required. Make sure equipment is working and in good repair.	

7.2 Machine Break-In

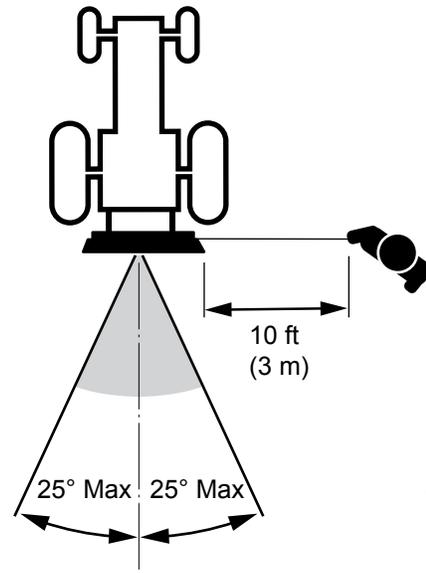
Although there are no operational restrictions on the winch when used for the first time, it is recommended that the following mechanical items be checked:

After 1–5 hours of operation:

1. Check all nuts, bolts and other fasteners. Tighten to specified torque.
2. Check condition of winch clutch.
3. Check the condition of the cable. Replace if kinked, frayed or if it has any broken strands.
4. Check for entangled material. Remove all entangled material before resuming work.
5. Check the condition of the clutch rope. Replace if cut, knotted, worn or if it has any broken strands.

7.3 Winching Safety

- **Never stand in line with the path of a rope under tension. Stand at least 10 ft (3 m) to the side to activate the winch. If a rope breaks under tension, it can snap back in an unpredictable direction with great force. The recoil may cause injury or death to a person in its path.**
- **Do not risk a rollover by exceeding a winching angle of $\pm 25^\circ$ from the centerline of the tractor. If unsure of winch angle, reposition tractor or use a snatch block. Whenever possible winch in-line with the tractor.**
- **Do not allow anyone within 20 ft (6 m) of logs when winching. Logs can roll in unpredictable ways.**
- **Choose a flat, solid skidding route for the tractor. Avoid steep slopes.**
- **Check that the winching trail is clear of other trees and obstructions so logs can be winched in easily.**
- **Make sure the winch is lowered and that the tractor parking brake is applied. Operate with the winch blade lowered, on level ground to provide stability.**

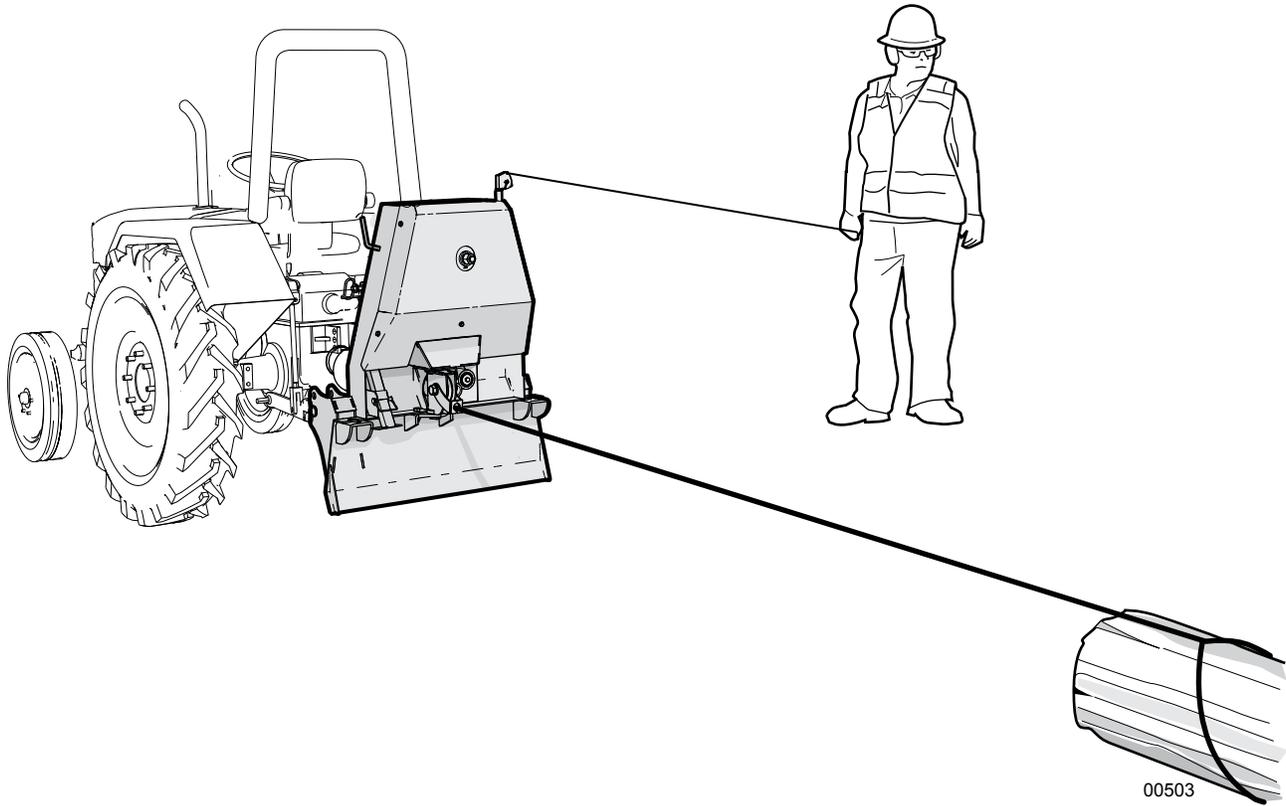


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Fig. 27 – Safe Winch Angle

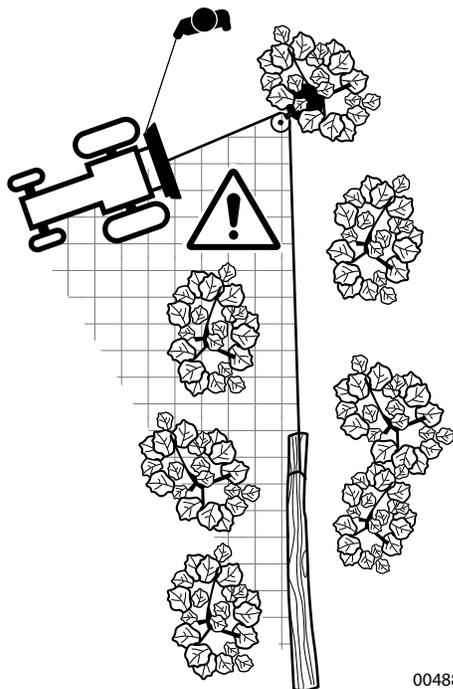
IMPORTANT! Avoid continuous side pulls which can pile up the rope at one end of the drum. This pile up can cause rope damage.

When using snatch block, be aware of danger zone created between the log, snatch block, and tractor.



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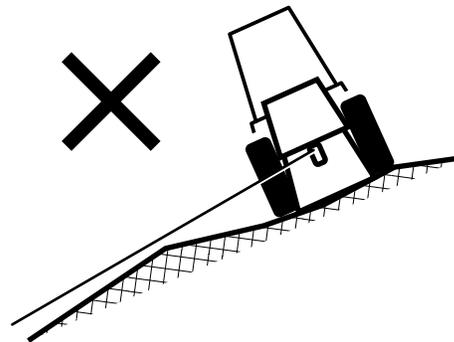
Fig. 35—Winching Operation



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Fig. 28—Using Snatch Block or Self-releasing Pulley

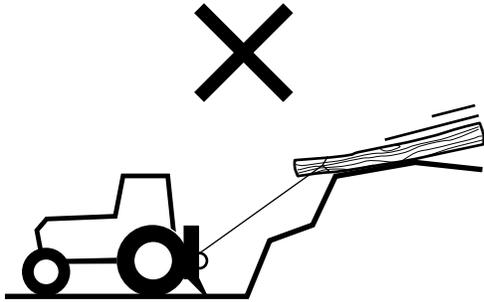
Do not winch with the tractor sitting sideways on a slope or hillside. Tractor could roll over. Always position the tractor in line with the direction of pull.



00490

Fig. 29—Never Winch from the Side on a Slope

Never winch down slope. Winching down a slope could cause the log to roll or slide causing crushing injuries. Winch up-slope whenever possible.



00489

Fig. 30 – Never Winch Down Slope

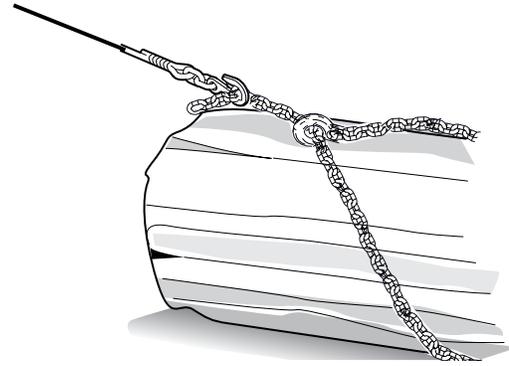


Fig. 31 – Choker Chain

7.4 Winching Logs

1. Position the machine at the work site.
2. Lower the frame and the blade to the ground.
3. Set the park brake and stop engine.
4. Pull the cable out to the load. Avoid twists in the cable.
5. Attach the choker chain to the log and to the cable end.
6. Start tractor engine and engage PTO. Set throttle to 1/4 to 1/2 range. (Winch speed is based on tractor PTO speed and can operate up to 540 rpm.)
7. Stand to the side of the winch and pull firmly on the clutch rope to retract the cable and load.

IMPORTANT! Keep a steady, firm pull on the clutch rope. Allowing the clutch to slip causes wear on the brake pads.

8. Release the clutch rope when the load is in the desired position. Disconnect from the choker chain.
9. Winch additional logs as required.

IMPORTANT! When pulling cable out of the winch, avoid unwinding it FULLY to the end. Putting tension on it at this point could cause it to pull out of its anchor. Always leave at least two wraps on the drum spool.

CAUTION!

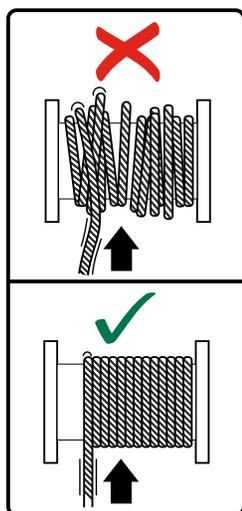
Always wear heavy leather gloves when handling winch rope. Steel rope can develop sharp burrs that can cut hands.

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Points to Remember:

- Equip the tractor with weights on the front or a front loader to provide stability. Weight on the front reduces the chance of the tractor tipping back or to the side.
- Set the tractor park brake whenever the winch is being used or the operator is leaving the seat. If operating on steep slopes is necessary, place chocks behind all the tires to prevent the tractor from slipping.
- When operating the winch, always stay at least 10 ft (3 m) to the side of the machine.
- Lower three-point hitch and winch frame to the ground when winching. The weight of the load helps push the blade into the ground, anchoring the winch and the tractor.
- Winching in from the top pulley lifts the end of the log up so it tends to dig into the ground less.
- Always wind cable in under load. Cable does not wind in properly when not under load.
- Several logs can be hooked up and winched in at one time by means of keyhole sliders on the cable.
- Use a log chain or choker to connect to the winch cable. Do not use a rope or strap to prevent breakage from abrasion or snagging. Choker chains have a probe on the end that makes it easier to pass the chain underneath the log.

IMPORTANT! If spooling the rope in with no load, keep a light tension on it to avoid entanglement. Make sure the rope is tightly and evenly layered.



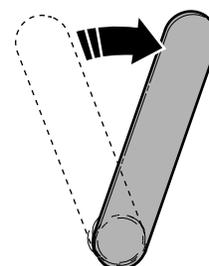
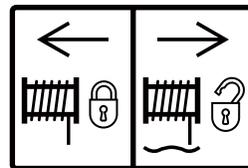
- Skid logs after they are winched up to the tractor. Be cautious of hills and rough terrain.

Skidding over Rough Ground

- Unlock the winch to let the cable drum free wheel. Leave the log hooked up to the winch.

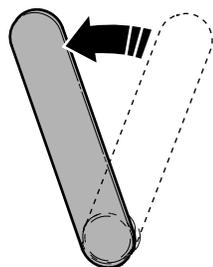
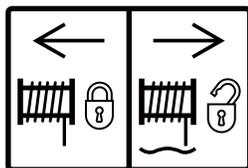
7.5 Skidding Logs

1. Turn the tractor PTO off.
2. Apply the winch drum lock.



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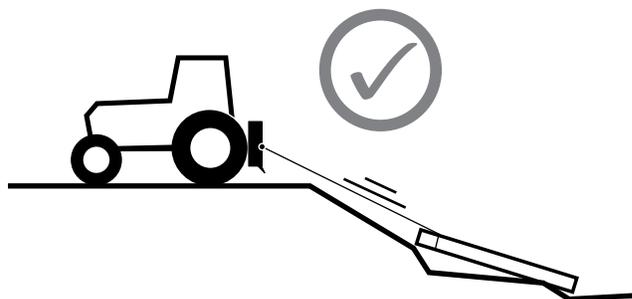
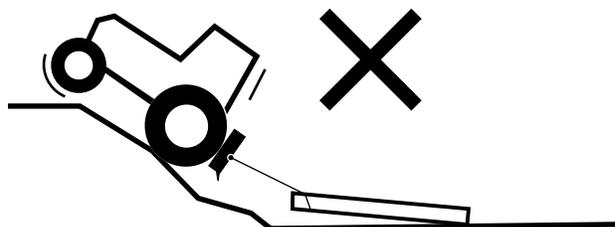
Fig. 33 – Unlock Winch Drum



00518

Fig. 32 – Winch Drum Lock

- Drive the tractor over the rough ground, then stop the tractor and winch the log through.
- Lock the winch drum and continue skidding.



00522

Fig. 34 – Skidding over Rough Ground

3. Raise the winch and drive the tractor forward to pull the load to the desired location.
4. To allow the winch drum to free-wheel, disengage the drum lock.

Points to Remember:

- Raise winch frame up above the ground to clear obstacles when skidding.
- Use a log chain or choker chain to connect to the winch cable. Do not use a rope or strap to prevent breakage from abrasion or snagging.

Tractor Gets Stuck

- Unlock the winch to let the cable drum free wheel.
- Drive the tractor to firm ground, then winch the load back in.
- If the tractor cannot be moved, drop the load and winch the tractor out.

8. Service and Maintenance

CAUTION!

Do not risk injury by working in an unsafe situation. Take steps to make the machine safe to work on before performing any maintenance or service procedure.

Follow steps listed to put the machine in a Safe Condition.

W049

SAFE CONDITION

1. Disengage the PTO.
2. Set the parking brake.
3. Turn off the tractor engine. Remove the ignition key. Block the tractor wheels.
4. Make sure all components have stopped moving.
5. Check winch cable is not under tension.

8.1 Maintenance Schedule

Perform maintenance procedures at time shown or hour interval, whichever comes first.

As Required

Remove any entangled material from winch.

Check that all fasteners are tight.

Every 50 hours or weekly

Grease PTO shaft	See page 30
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Check chain drive	See page 33
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Check condition of clutch rope.	See page 31
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Every 100 hours or Annually

Clean machine. Remove debris and entangled material.	—
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Check chain tension	See page 33
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Disassemble PTO shaft to clean and lubricate.	—
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Inspect winch cable.	See page 32
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8.2 Grease Points

Use an SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multipurpose lithium-based grease.

Use a hand-held grease gun for all greasing. Pump one shot of grease slowly into each fitting.

- Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
- If fittings do not take grease, remove and clean them thoroughly. Replace grease fittings as necessary.

IMPORTANT! Do not over grease. Pumping more than one shot from a grease gun into the bearings can push the grease out of the seals. Doing that repeatedly can damage the seals. Grease is then not kept in, and dirt and moisture are not kept out.

Location	Grease every 50 hours of operation or weekly
1	Drive shaft – PTO shaft shield and U-joints (2 places)
2	Drive shaft slip joint

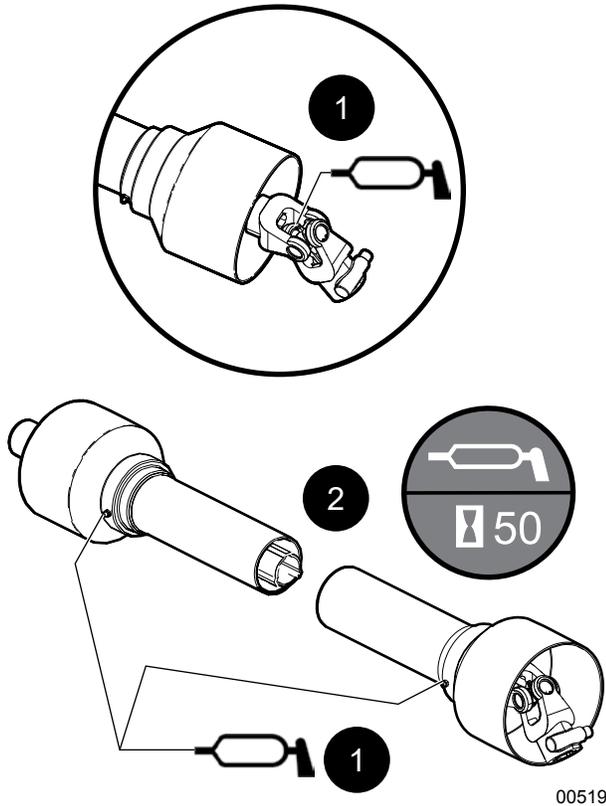


Fig. 36–Grease Points

The PTO shaft is designed to telescope as the 3-point hitch goes through its operational range. A heavy duty plastic tubular guard encloses the driving components.

The PTO shaft should telescope easily and the guard turn freely on the shaft at all times. Annual disassembly, cleaning and lubrication is recommended to make sure that all components function as intended.

Make sure that the universal joints are lubricated, inspect and lubricate every 50 hours.

The PTO shaft has a shear pin at the input yoke to prevent overloading the drive system. The winch is designed to perform well without the shear pin failing. However, if the pin does fail, generally it is because the winch was overloaded.

8.3 Clutch Rope – Replacing

Replace the clutch rope if it becomes frayed or worn. Remove the rear cover from the winch to gain access to the rope pulleys.

1. Thread the replacement rope through the swivel pulley at the top (1).
2. String it around the lower groove pulley (2) and back up around the upper groove pulley (3).
3. Loop it around the lower groove pulley twice more, then, tie it off at the hole near the upper groove pulley.

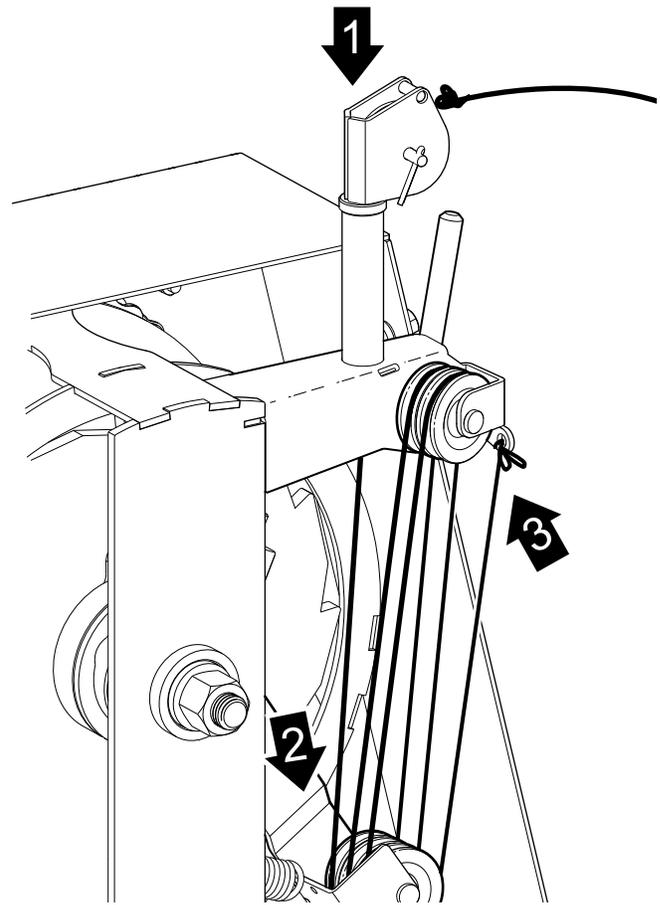


Fig. 37–Threading in Clutch Control Rope

4. Pull the rope taut and check that it is laying properly in the pulley grooves.
5. Tying a knot in the rope at the swivel pulley prevents it from falling inside the winch and tangling when released.
6. Check operation of clutch spring and rope before using the winch.

8.4 Cable Inspection

Check the general condition of the wire. Look for localized damage and wear, especially at attachments. Inspect all parts that come in contact with the cable.

Inspect regularly for kinks, broken wires, abrasions, lack of lubrication, rust damage, crushing, reduction of diameter, stretch or other obvious damage. If any of these conditions exist or if there is any other apparent damage, replace the cable.

If unsure whether the cable should be used, replace it.

Conditions to check for:

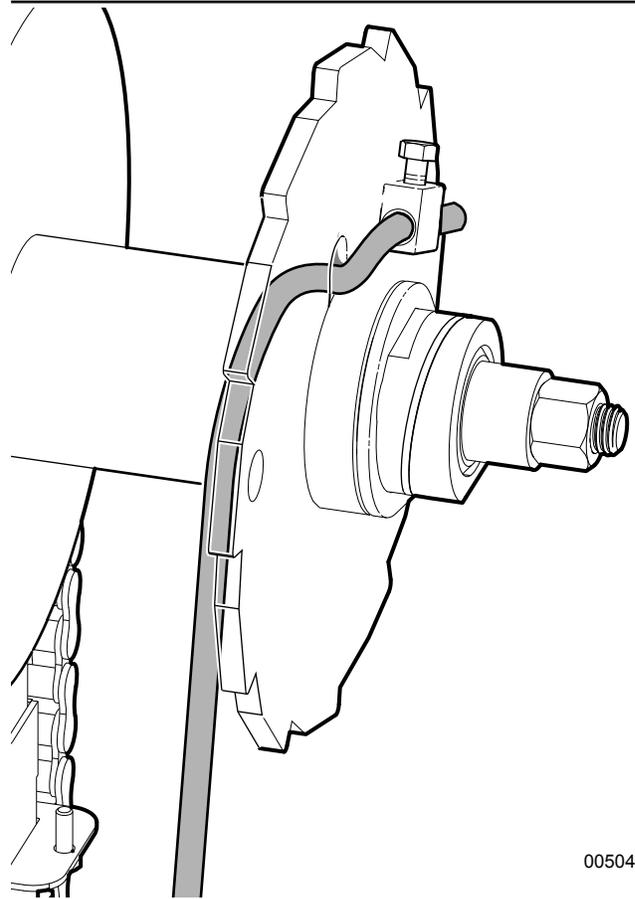
- Surface wear—normal and unusual
- Broken wires—number and location
- Reduction in diameter
- Rope stretch (elongation)
- Integrity of end attachments
- Evidence of abuse or contact with another object
- Corrosion

Conditions that can lead to problems:

- Sheaves that are too small, worn or corrugated cause damage to a cable.
- Broken wires mean a loss of strength.
- Kinks permanently damage a cable and must be avoided.
- Cables are damaged by knots. Cables with knots must never be used.
- Environmental factors such as corrosive conditions and heat can damage a cable.

8.5 Winch Cable Replacement

1. Remove rear cover to access winch cable.
2. Pull out and unwind the old cable out of the winch.
3. Loosen the bolt securing the cable end on the winch drum and pull the end out.
4. Route new cable through the lower pulley and up around the winch drum.
5. Thread the cable end through the hole in the winch drum, then thread through the cable capture block.
6. Tighten the hex bolt down to secure the end.



00504

Fig. 38—Winch Cable Routing

8.6 Drive Chain Tension – Adjusting

Proper chain tension is when the drive chain can be pulled away from the tensioner 1/4" (6 mm). Do not over tighten.

Adjust as required.

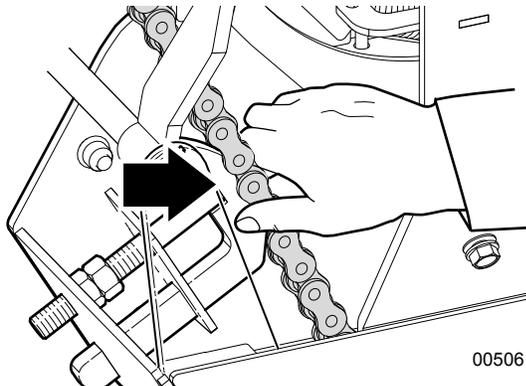


Fig. 39 – Measure Chain Tension

1. Remove front cover.
2. Loosen jam nut (1).
3. Turn adjuster nut (2) to change drive chain tension. Tighten jam nut.

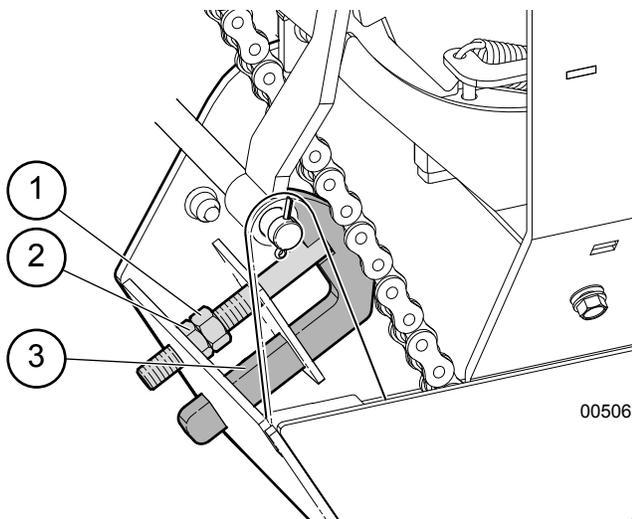


Fig. 40 – Drive Chain

1. Jam Nut
2. Adjuster Nut
3. Drive Chain tensioner

IMPORTANT! Do not oil or grease the drive chain. Lubricating the chain can result in lubricant getting on the brake pads causing them to slip.

8.7 Clutch Adjustment

Pulling on the clutch rope forces the clutch ramp handle against the fixed ramp, pushing the winch drum against the brake pads on the sprocket. Through use, periodic adjustment of the clutch may be required.

Check to make sure the brake pads are clean and free of oil and grease.

1. Disconnect the PTO shaft from the tractor.
2. Remove the rear cover from the winch.
3. Tighten the hex locknut (1) to adjust the gap between the winch drum and the brake pads on the sprocket.
4. Adjust so there is no slippage.
5. Check during operation. Releasing the clutch rope **MUST** disengage the clutch.

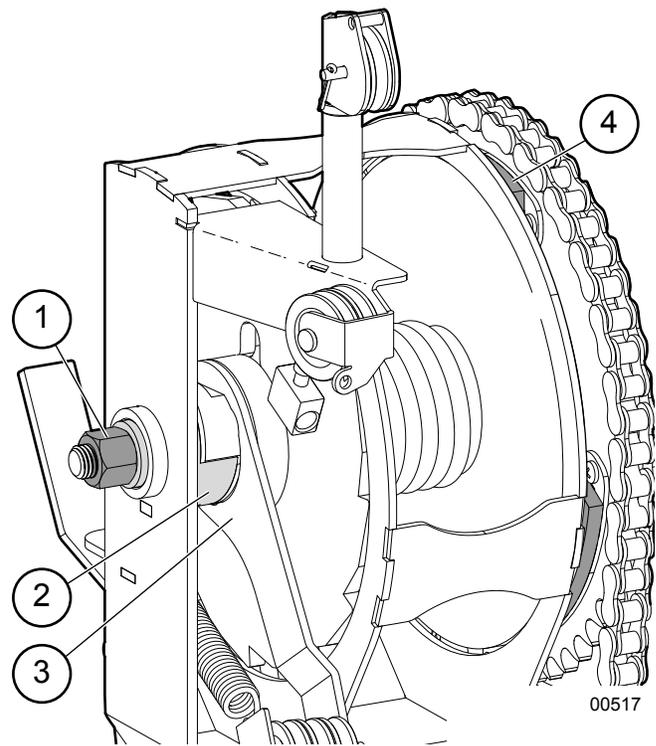


Fig. 41 – Clutch Adjustment

1. Hex Lock Nut
2. Fixed Clutch Ramp
3. Clutch Ramp Handle
4. Brake Pads (3)

NOTE: If the clutch slips after adjustment, check the brake pads. They may need to be cleaned or replaced.

8.8 Clutch Brake Pads – Changing

To change or repair the clutch pads, remove the clutch/drum frame assembly from the winch.

IMPORTANT! Leave winch attached to tractor for support.

8.8.1 Clutch Assembly – Removing

1. Remove the rear cover(1) and the PTO shaft (2) from the winch.
2. Unspool the cable off the winch drum. Remove the end from the cable capture block.

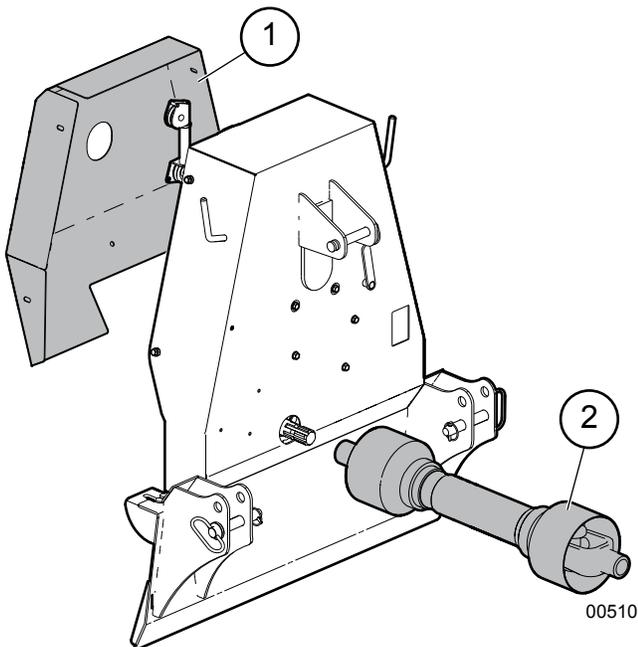


Fig. 42 – Rear Cover and PTO Shaft

3. Attach a lifting sling through the inside of the clutch/drum frame assembly to support it.
4. Remove the three screws (3) on the front side of the winch securing the drum frame to the main A-frame.

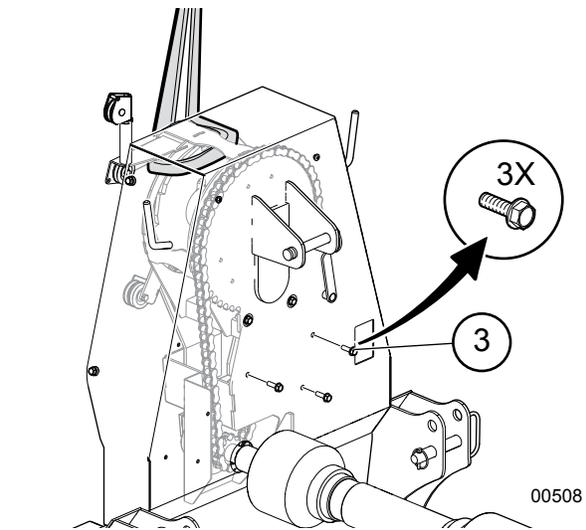


Fig. 43 – Screws on the front side

5. Remove the bolt (4) and locknut (5) from the end of the drum shaft

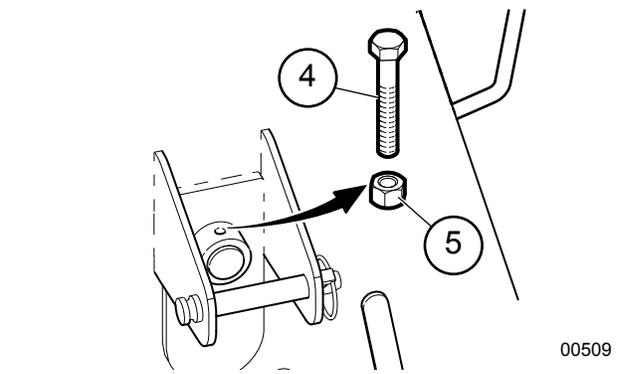


Fig. 44 – Drum Shaft Bolt

6. Pull the drum/frame assembly from the main A-frame.
7. Locate the master link (6) on the drive chain. Disconnect and remove the chain.

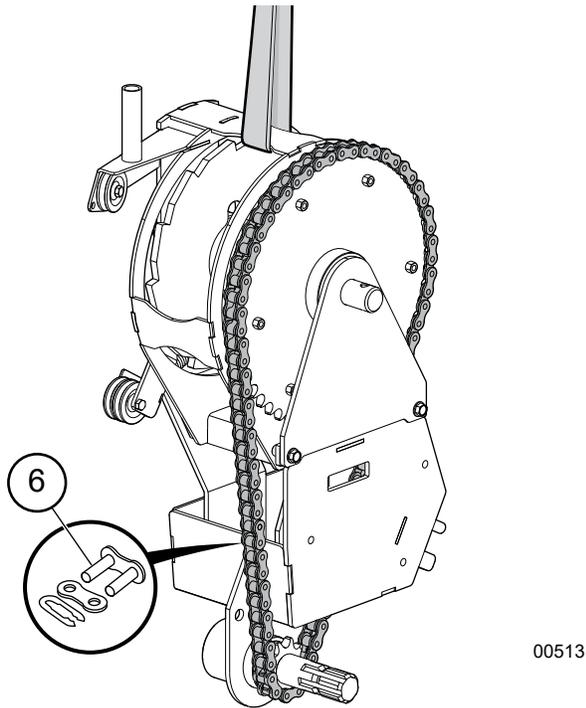


Fig. 45—Remove Drive Chain

8. Lay the drum/frame assembly down on wood blocks.
9. Remove the drum retaining plate (7).
10. Pull the drum shaft (8) out enough to pull off the clutch sprocket (9) with the thrust washer (10).

 **NOTE:** When removing the sprocket be aware the spring in the winch drum is under compression.

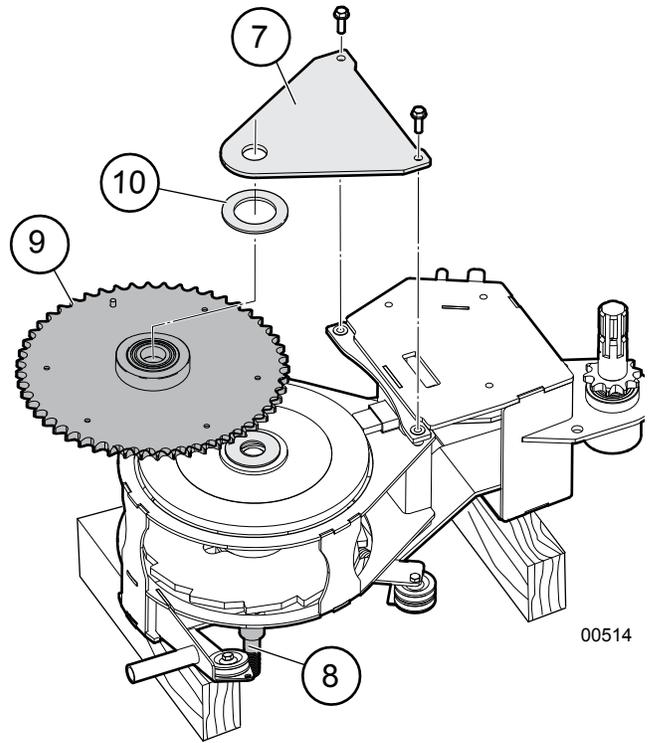


Fig. 46—Remove Drive Sprocket

11. Replace all three brake pads on the sprocket.

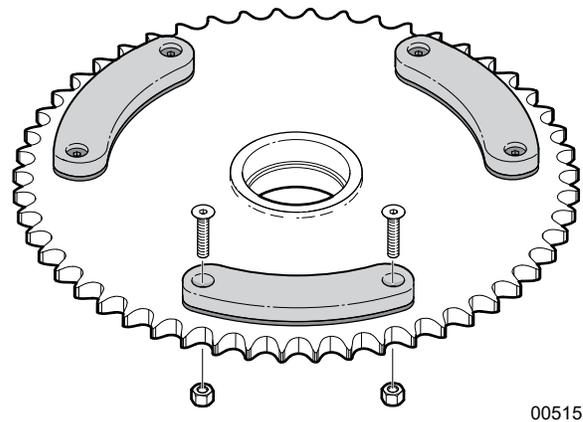


Fig. 47—Brake Pads on Clutch Sprocket

IMPORTANT! With the drive sprocket removed, check the condition of the sprocket bearings.

8.8.2 Sprocket Bearings – Checking

Check bearings with the sprocket removed from the winch drum. Noise is a classic sign of a bearing problem. If any of the following conditions exist, replace both bearings.

- Vibration or wobble
- Grinding
- Seal failure

8.8.3 Clutch Assembly – Installing

1. Reassemble the sprocket onto the winch drum assembly and install the drum retaining plate.
2. Install the drive chain and tension it correctly. See *Drive Chain Tension – Adjusting* on page 33.
3. Install the drum/frame assembly into the winch A-frame. Install the three screws on the front side of the winch securing the drum frame to the main A-frame.
4. Install the bolt (4) and locknut (5) on the end of the drum shaft

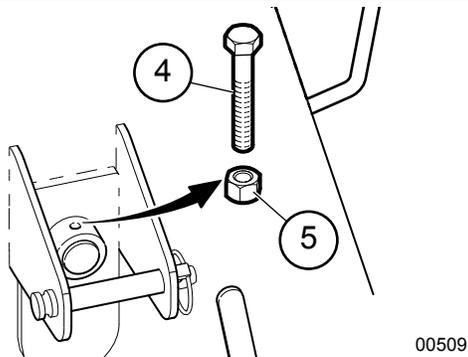


Fig. 48 – Drum Shaft Bolt

5. Re-install the cable. See page 32 for instructions.

6. Install the rear cover and the PTO shaft (1, 2).

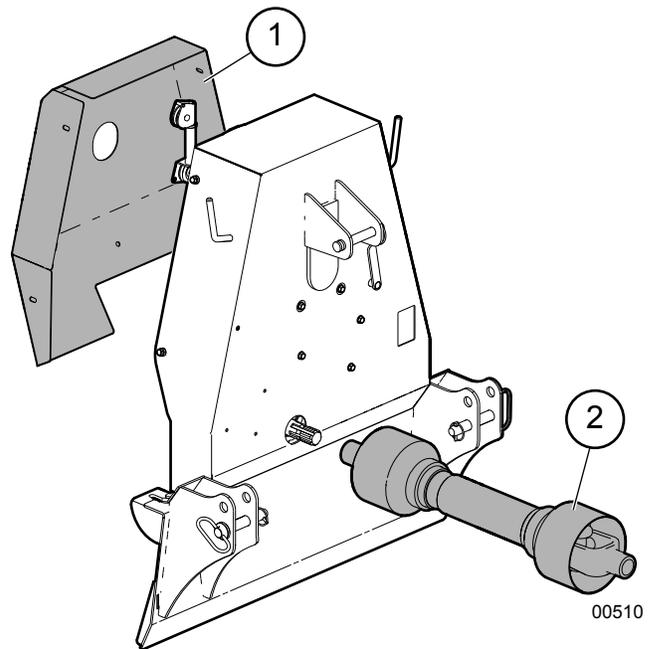


Fig. 49 – Rear Cover and PTO Shaft

7. Test clutch function before putting the winch back to work.

8.9 Drum Assembly Components

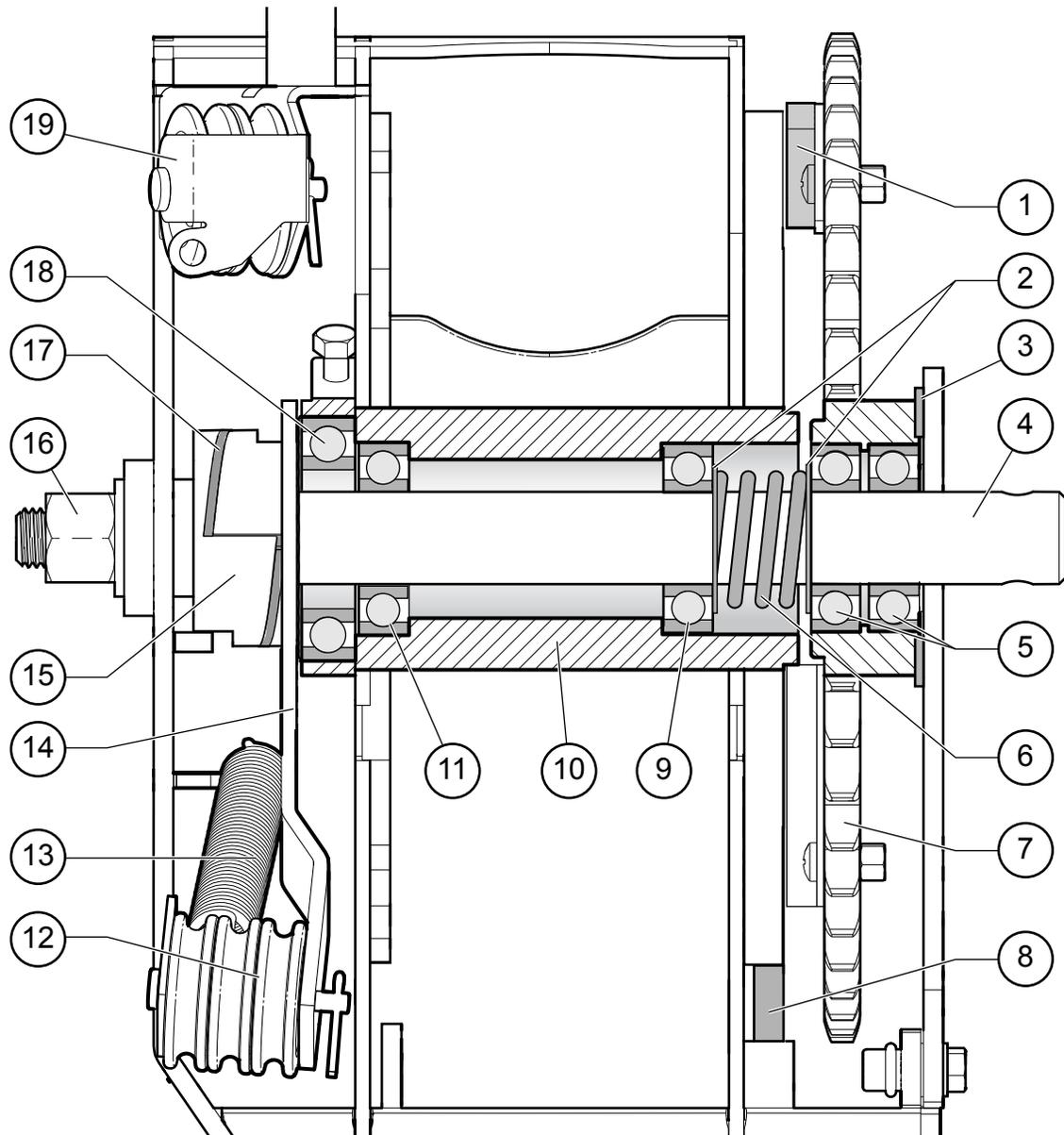


Fig. 50—Cable Drum Assembly

- | | | |
|------------------------|-----------------------------|-----------------------------|
| 1. Brake Pads (3) | 8. Drum Brake Block | 15. Fixed Clutch Ramp |
| 2. Spacing Washers (3) | 9. Drum Bearing | 16. Drum Shaft Hex Nut |
| 3. Thrust Washer | 10. Winch Drum | 17. Needle Thrust Bearing |
| 4. Drum Shaft | 11. Drum Bearing | 18. Drum Bearing—Outer |
| 5. Sprocket Bearings | 12. Lower Groove Pulley (3) | 19. Upper Groove Pulley (2) |
| 6. Compression Spring | 13. Extension Spring | |
| 7. Clutch Sprocket | 14. Clutch Ramp Handle | |

8.10 Storage

After the season's use or when the machine is not going to be used for a period of time, place the winch in storage.

Completely inspect all major systems. Replace or repair any worn or damaged components to prevent any unnecessary down time at next use.

1. Park the winch away from human activity in a dry, level area.
2. Lower the winch to the ground. Make sure support leg (2) is lowered and locked in position. If the ground is soft, place a board or plate under the leg.
3. Detach winch from the tractor. Keep the PTO shaft out of the dirt by resting it on wood blocking.
4. Wash the machine to remove all dirt, mud, and debris. Inspect all rotating parts and remove any entangled material.
5. Check the condition of chain and sprockets. Replace or adjust as required.
6. If the winch cannot be stored inside, cover with a waterproof tarp.

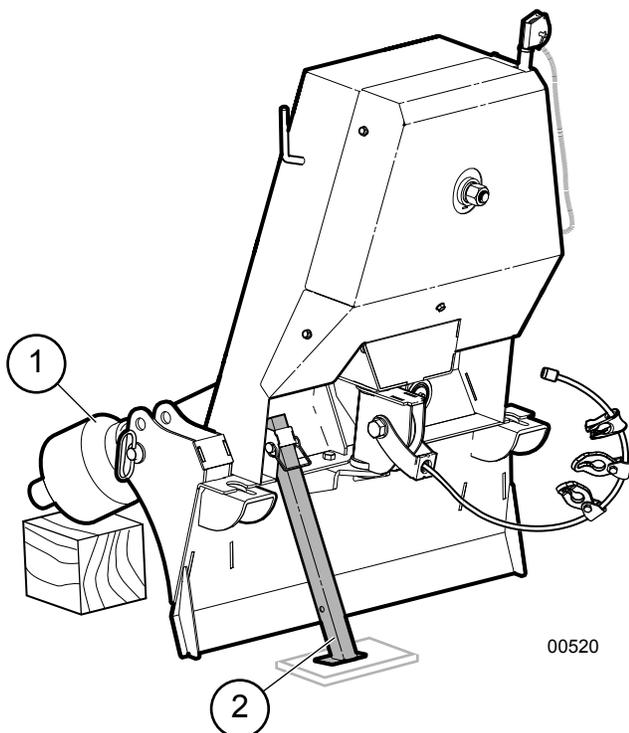


Fig. 51 – Storage Position

1. PTO Shaft on a block.
2. Winch Support Leg

8.11 Transporting

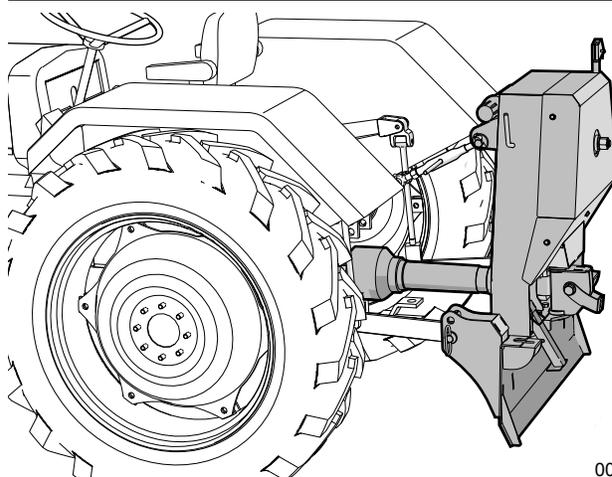


Fig. 52 – Winch Attached

- Comply with local laws governing safety and transporting of machinery on public roads.
- Do not exceed a safe travel speed. Slow down for rough terrain.
- Be sure the winch is hitched properly to the tractor and a retainer is used through the mounting pins.
- Never allow riders on the machine.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, and so on.
- Watch for traffic when near or crossing roadways.
- Do not drink and drive.

9. Troubleshooting

Identify machine serial number. See *Serial Number Location on page 5*.

If a problem is encountered that is difficult to solve, even after having read through this troubleshooting section, contact your local dealer, distributor or Wallenstein Equipment.

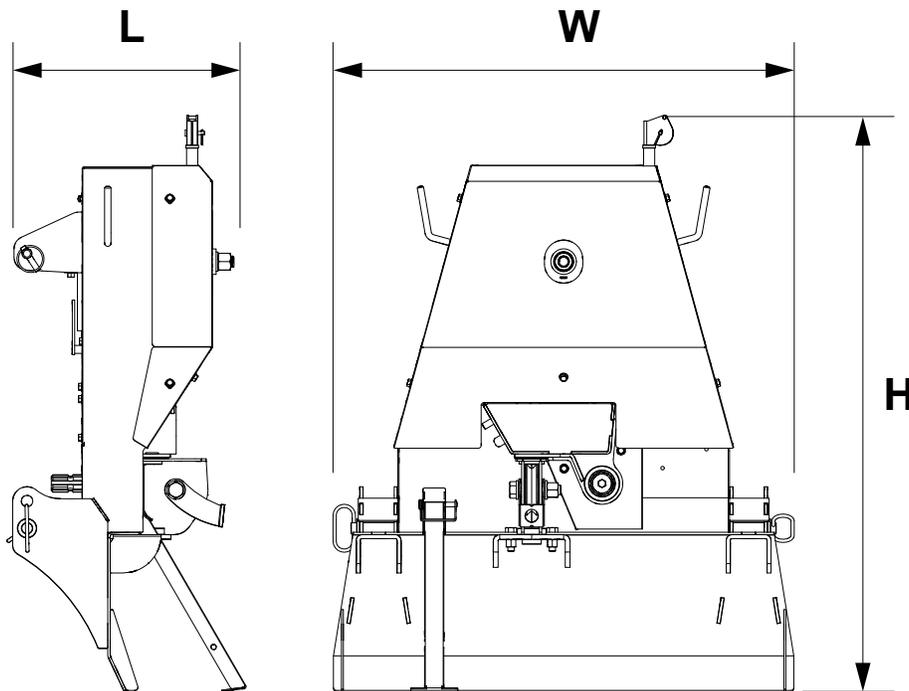
Problem	Cause	Solution
Cable does not retract.	Cable jammed.	Disengage winch or release brake, pull cable out and rewind cable onto the spool. Check winch brake.
	Winch clutch disengaged.	Engage clutch.
	PTO not operating.	Turn tractor PTO drive on.
	Clutch brake pads worn out.	Replace pads.
	Clutch out of adjustment.	Adjust clutch.
	Broken PTO shaft shear pin.	Replace pin and reduce size of load.
Cable does not pull out.	Winch drum lock engaged.	Disengage winch lock.
	Cable jammed.	Disengage winch or release brake and pull cable out. Rewind cable onto the spool. Check winch brake.
Slow cable retraction.	PTO shaft speed too slow.	Increase PTO speed (maximum 540 rpm)
	Clutch slipping.	Pull harder on clutch rope.
		Adjust Clutch. See <i>page 33</i> .
		Clutch brake pads worn. Replace. See <i>page 34</i> .
		Reduce load.
Grease or oil has got on clutch brake pads, probably resulting from improper chain lubrication. Clean or replace clutch brake pads. See <i>page 34</i> .		
Winch does not operate.	Clutch not engaged.	Pull harder on clutch rope.
	Clutch brake pads worn out.	Inspect or replace brake pads. See <i>page 34</i> .
Drive chain comes off.	Drive chain too loose.	Check the alignment of the chain and for possible damage. Adjust chain tension. Replace if necessary
Cable twists / jams and does not wind in correctly.	Winch brake not working properly.	Clean brake block (greasy).
		Replace brake block (worn out).
		Repair damaged brake parts.
Cable pulls out when clutch engaged.	Clutch out of adjustment.	Adjust clutch to prevent cable creep.
Winch jerks and shakes while in operation.	Drive chain loose.	Check chain tensioner and adjust.
	Drive sprocket misaligned. PTO shaft too long.	Check that PTO shaft is the correct length.
Front end of tractor comes off ground when winching.	Tractor too light in front.	Add front end weights.
Tractor slides backwards when winching	Parking brake not applied.	Apply parking brake.
	Winch blade not fully lowered enough to anchor firmly in the ground.	Lower the winch all way to the ground.

10. Specifications

10.1 Machine Specifications¹

FX40 PTO Log Skidding Winch	
Weight	280 lb (127 kg)
Machine Dimensions L x W x H (see below)	17 in x 36 in x 45 in (43 cm x 91 cm x 114 cm)
Pulling Capacity	4000 lb (1814 kg)
Horsepower Range	15–30 hp
PTO Input Speed	540 rpm
Winch Type	Mechanical, Dry Disc Clutch
Winch Line Speed	103–290 ft/min (31–88 m/min)
Winch Cable	
Type	Steel
Length	165 ft (50 m)
Diameter	3/8 in (10 mm)
PTO Height	16 in (41 cm)
Mounting System Category	Cat I

¹Specifications subject to change without notice.



00527

Fig. 53—Dimensions

10.2 Bolt Torque

Checking Bolt Torque

The tables shown give correct torque values for various bolts and capscrews. Tighten all bolts to the torque values specified in the table, unless indicated otherwise. Check tightness of bolts periodically.

IMPORTANT! If replacing hardware, use fasteners of the same grade.

IMPORTANT! Torque figures indicated in the table are for non-greased or non-oiled threads. Do not grease or oil threads unless indicated otherwise. When using a thread locker, increase torque values by 5%.

 **NOTE:** Bolt grades are identified by their head markings.

Imperial Bolt Torque Specifications						
Bolt Diameter	Torque Value					
	SAE Gr. 2		SAE Gr. 5		SAE Gr. 8	
	lbf•ft	N•m	lbf•ft	N•m	lbf•ft	N•m
1/4"	6	8	9	12	12	17
5/16"	10	13	19	25	27	36
3/8"	20	27	33	45	45	63
7/16"	30	41	53	72	75	100
1/2"	45	61	80	110	115	155
9/16"	60	95	115	155	165	220
5/8"	95	128	160	215	220	305
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	345	630	850	970	1320



Metric Bolt Torque Specifications				
Bolt Diameter	Torque Value			
	Gr. 8.8		Gr. 10.9	
	lbf•ft	N•m	lbf•ft	N•m
M3	0.4	0.5	1.3	1.8
M4	2.2	3	3.3	4.5
M6	7	10	11	15
M8	18	25	26	35
M10	37	50	52	70
M12	66	90	92	125
M14	83	112	116	158
M16	166	225	229	310
M20	321	435	450	610
M30	1,103	1 495	1,550	2 100



11. Accessories

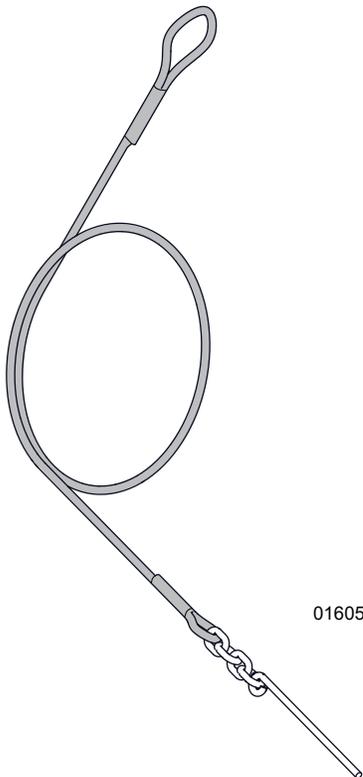
Contact your dealer or distributor for pricing and availability.

Choker Chains



00549

Fig. 54—Steel Choker Chain

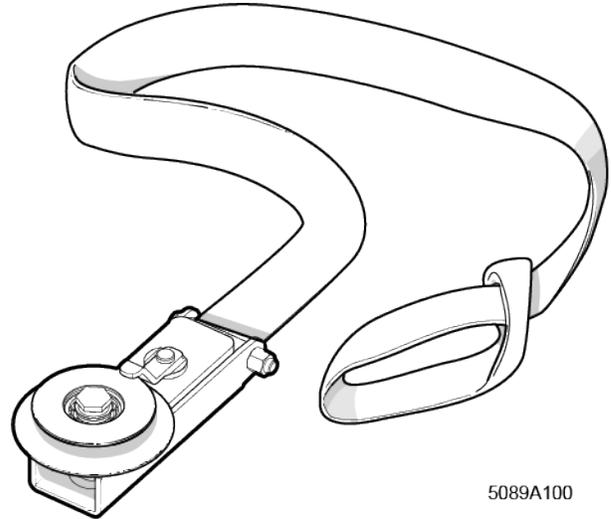


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Fig. 55—Synthetic Choker

Self-releasing Directional Pulley

When obstacles prevent direct winching, or to prevent damage to other trees, the Wallenstein self-releasing directional pulley should be used. The pulley releases the rope when the keyhole slider reaches it.

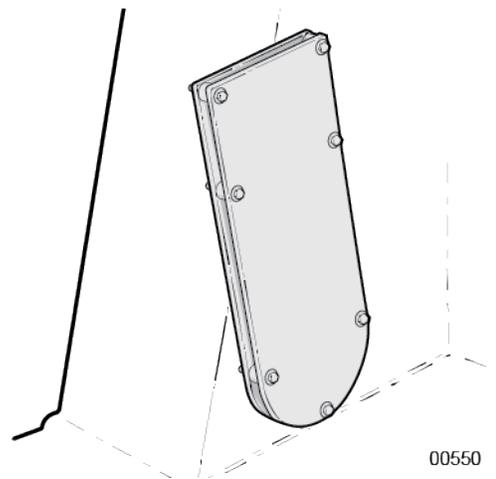


5089A100

Fig. 56—Self-releasing Directional Pulley

Chain Saw Holder

The chain saw holder bolts to the side of the winch.



00550

Fig. 57—Chain Saw Holder

12. Product Warranty



LIMITED WARRANTY

Wallenstein products are warranted to be free of defects in materials and workmanship under normal use and service, for a period of

Five Years for Consumer Use
Two Years for Commercial/Rental Use

from the date of purchase, when operated and maintained in accordance with the operating and maintenance instructions supplied with the unit. Warranty is limited to the repair of the product and/or replacement of parts.

This warranty is extended only to the original purchaser and is not transferable.

Repairs must be done by an authorized dealer. Products will be returned to the dealer at the customer's expense. Include the original purchase receipt with any claim.

This warranty does not cover the following:

- 1) Normal maintenance or adjustments
- 2) Normal replacement of wearable and service parts
- 3) Consequential damage, indirect damage, or loss of profits
- 4) Damages resulting from:
 - Misuse, negligence, accident, theft or fire
 - Use of improper or insufficient fuel, fluids or lubricants
 - Use of parts or aftermarket accessories other than genuine Wallenstein parts
 - Modifications, alteration, tampering or improper repair performed by parties other than an authorized dealer
 - Any device or accessories installed by parties other than an authorized dealer
- 5) Engines. Engines are covered by the manufacturer of the engine for the warranty period they specify. For the details of your engine warranty, see your engine owner's manual. Information about engine warranty and service is also available in the FAQ section at www.wallensteinequipment.com

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