

MUSKOX

OPERATORS MANUAL

MODEL 27-82i



MODEL NUMBER: 27-82i

SERIAL NUMBER (RECORD BELOW)

TO LOCATE YOUR SERIAL NUMBER SEE PAGE 3.

33 S 3RD ST, STE D
GRAND FORKS, ND 58201

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MUSKOX

BRING IT. DO IT. OWN IT.



Adam & Ron Bergman
MUSKOX Founders & Owners

EXPANDING THE PRODUCT LINE

As the company grew, MUSKOX continued developing operator-focused solutions, including the Inverted Blower and MAX AT-TACH quick-attach system.

GROWING ACROSS NORTH AMERICA

MUSKOX products began reaching contractors, farmers, municipalities, property managers, and equipment owners across the United States and Canada.

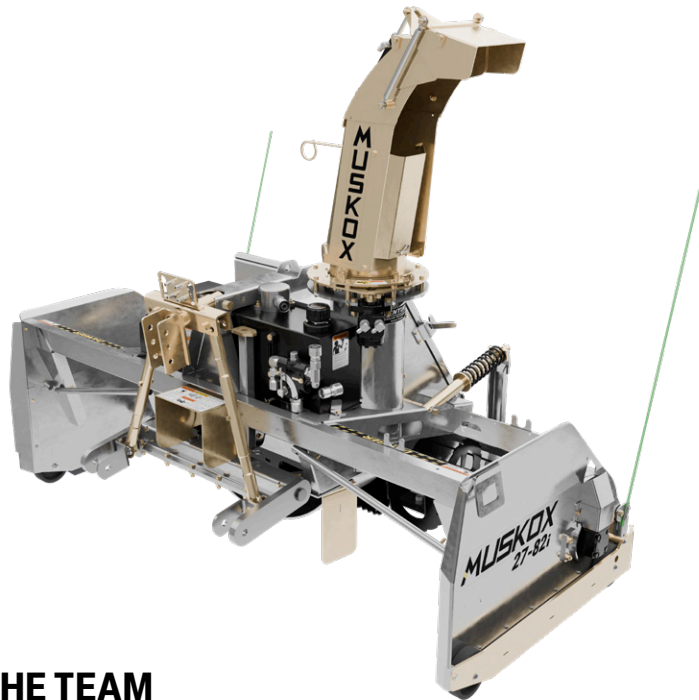


THE BEGINNING

MUSKOX began as a father-and-son venture between Ron and Adam Bergman, built around one belief: hardworking operators deserve smarter, tougher equipment.

RETHINKING SNOW REMOVAL

MUSKOX set out to improve traditional skid-steer snow removal equipment. That led to the development of the patented MUSKOX snowblower, designed to improve productivity, visibility, and control.



BUILDING THE TEAM

What started with a father and son has grown into a talented team across engineering, operations, sales, marketing, manufacturing, and customer experience.

TODAY AND BEYOND

MUSKOX is focused on growing and expanding its product portfolio, advancing manufacturing, and continuing to develop equipment that makes operators more productive.

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SERIAL NUMBER LOCATION



PREFACE

GENERAL INFORMATION

This product was carefully designed and manufactured. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the attachment is mounted.

WARNING!

 Never let anyone operate the machine without reading the "Safety Precautions" and "Operating Instructions" sections of this manual. Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.

 **NOTE:** The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

NOTICE

 Notice indicates information considered important, but not hazard-related (e.g. messages relating to property damage).

 This symbol by itself or used with a warning word throughout this manual is used to call your attention to instructions involving your personal safety or the safety of others. Failure to follow these instructions can result in injury or death.

SAFETY STATEMENTS

SAFETY DEFINITIONS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

DANGER

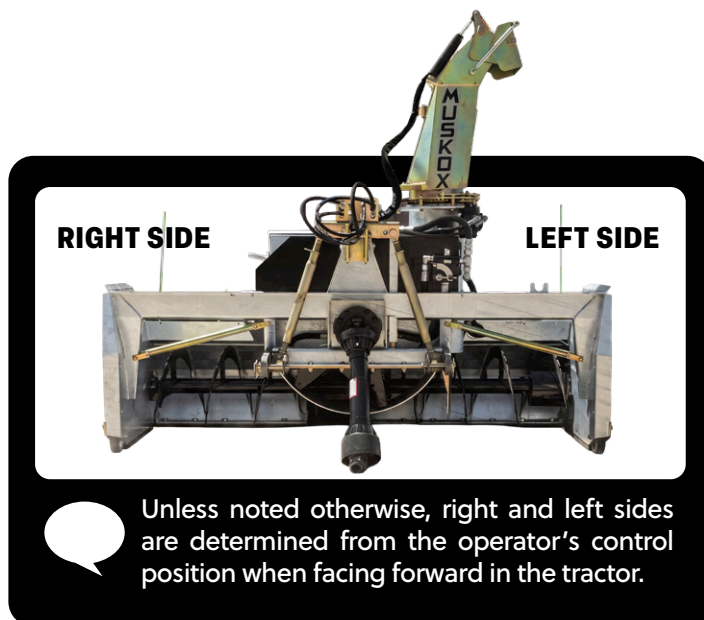
Danger indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Warning indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Caution indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



BEFORE OPERATION

The primary responsibility for safety with equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer to obtain further assistance. Keep this manual available for reference. Provide this manual to any new owners and/or operators.

SERVICE

Use only manufacturer replacement parts. Substitute parts may not meet the required standards. Record the model and serial number of your unit on the cover of this manual. The parts department needs this information to ensure that you receive the correct parts.

SOUND & VIBRATION

Sound pressure levels and vibration data for this attachment are influenced by many different parameters; some items are listed below (not inclusive)

Prime mover type, age, condition, with or without cab Enclosure and configuration

Operator training, behavior, stress level

Job site organization, working material condition, environment

Based on the uncertainty of the prime mover, operator, and job site, it is impossible to get precise machine and operator sound pressure levels, or vibration levels for this attachment.

GENERAL SAFETY PRECAUTIONS

READ MANUAL PRIOR TO INSTALL

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance.

FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL.

READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing or operating this equipment.

KNOW YOUR EQUIPMENT

Know your equipment's capabilities, dimensions and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to assure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn and hard to read.

(Safety decal replacements are available free of charge from the manufacturer).

PROTECT AGAINST FLYING DEBRIS

Always wear proper safety glasses, goggles or a face shield when driving pins in or out or when operation causes dust, flying debris, or any other hazardous material.

LOWER OR SUPPORT RAISED EQUIPMENT

Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or onto blocks. Lower booms and attachments to the ground before leaving the cab or operator's station.

DO NOT MODIFY MACHINE OR ATTACHMENTS

Modifications may weaken the integrity of the attachment and may impair the function, safety, life and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection System) equipment or device. Any modifications must be authorized in writing by the manufacturer.

SAFELY MAINTAIN AND REPAIR EQUIPMENT

Do not wear loose clothing, or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.

- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tool for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer.

SAFELY OPERATE EQUIPMENT

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your prime mover's manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operator's position.
- Never leave equipment unattended with the engine running or with this attachment in a raised position.
- Do not alter or remove any safety features from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

HYDRAULICS SAFETY

USE CARE WITH HYDRAULIC FLUID PRESSURE



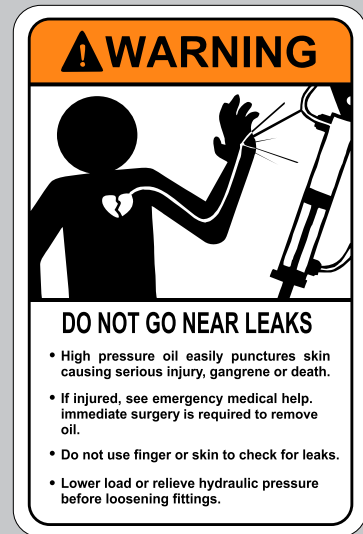
Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your prime movers operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.

If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research immediately to determine proper treatment.

Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks.

DO NOT USE YOUR HANDS!



POWER TAKE OFF (PTO) SAFETY



The MUSKOX 27-82i is powered by your tractor's 540 RPM Power Take-Off (PTO). When engaged, the PTO shaft, driveline, and snowblower components rotate at high speed and can cause serious injury or death if proper safety procedures are not followed.

ALWAYS inspect the PTO driveline, shields, and guards before operating the snowblower. Never operate the machine if any PTO shield or driveline guard is missing or damaged. Ensure the rear access door is fully closed and latched before engaging the PTO.



TO REDUCE THE RISK OF ENTANGLEMENT:

- Do not wear loose-fitting clothing, scarves, hood strings, jewelry, or other items that could become caught in rotating components.
- Tie back long hair and secure loose clothing before operating the machine.
- Wear appropriate close-fitting work clothing and sturdy footwear.



Keep all shields, guards, and covers installed and in good condition at all times. Never operate the snowblower if a safety guard has been removed or damaged.

Maintain a safe distance from the machine during operation and ensure all people and pets remain well clear of the work area. The blower can discharge snow, ice, rocks, and other debris at high velocity.

If an unusual vibration, noise, or obstruction occurs, immediately disengage the PTO, shut off the tractor, remove the key, and inspect the machine before resuming operation.

BEFORE PERFORMING ANY MAINTENANCE, ADJUSTMENTS, OR CLEARING OBSTRUCTIONS, ALWAYS:

- Park the tractor on a level surface.
- Disengage the PTO.
- Shut off the engine.

Wait for all rotating components to come to a complete stop. Never attempt to clear snow, ice, or debris from the auger, fan, or chute while the PTO is engaged or while components are still rotating.

Keep yourself and all bystanders away from the rotating PTO driveline whenever it is engaged. Never step over, straddle, or reach across a rotating PTO shaft.

PTO INSTALLATION



See page XX for installation of the PTO driveline and also for additional safety parameters and instructions..



WARNING

Contact with a rotating PTO driveline, auger, or impeller fan can result in entanglement, amputation, or death. Never approach or service the snowblower until the PTO is disengaged, the engine is shut off, the ignition key has been removed, and all rotating components have completely stopped.

EQUIPMENT SAFETY PRECAUTIONS

REMOVE PAINT BEFORE WELDING OR HEATING



Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well-ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

END OF LIFE DISPOSAL



At the completion of the useful life of the unit, drain all fluids and dismantle by separating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.

KNOW WHERE UTILITIES ARE



Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

ROTATING OBJECTS



Never allow anyone to reach into, kick into, or otherwise come in contact with a rotating auger or with a non-rotating clogged auger. The auger can crush and/or dismember. Keep everyone clear of the auger until the prime mover engine is off and the hydraulic pressure has been relieved.

Never allow anyone to reach into the chute, force objects (i.e. bars, poles, etc.) down the chute, kick into the fan, or otherwise come in contact with a rotating fan or with a non-rotating clogged fan. The fan can throw objects at a lethal speed and can dismember. Keep everyone clear of the fan until the prime mover engine is off and the hydraulic pressure has been relieved.

AVOID PINCH POINTS

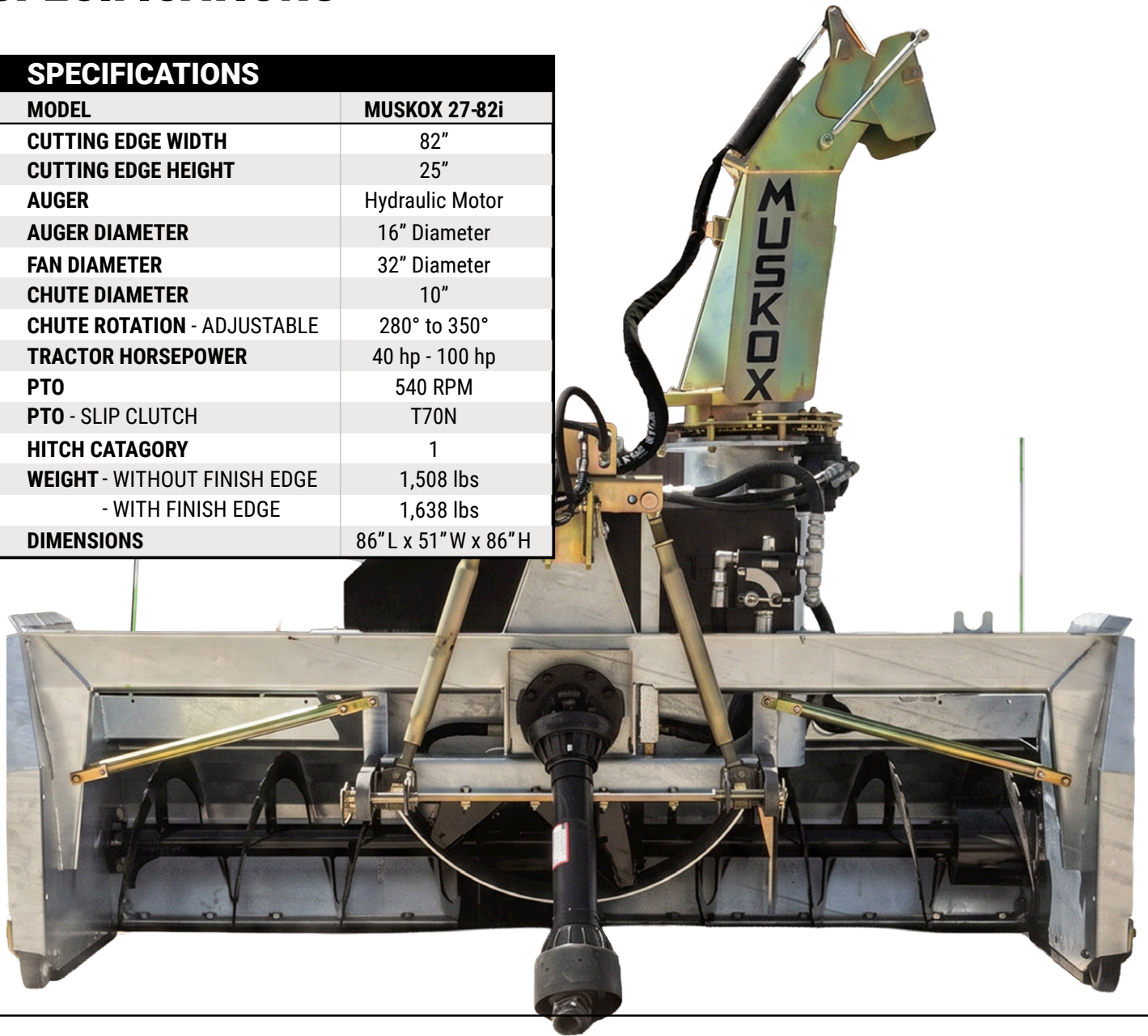


Avoid pinch points and be aware of rotating parts when manually turning the fan or auger.



SPECIFICATIONS

SPECIFICATIONS	
MODEL	MUSKOX 27-82i
CUTTING EDGE WIDTH	82"
CUTTING EDGE HEIGHT	25"
AUGER	Hydraulic Motor
AUGER DIAMETER	16" Diameter
FAN DIAMETER	32" Diameter
CHUTE DIAMETER	10"
CHUTE ROTATION - ADJUSTABLE	280° to 350°
TRACTOR HORSEPOWER	40 hp - 100 hp
PTO	540 RPM
PTO - SLIP CLUTCH	T70N
HITCH CATEGORY	1
WEIGHT - WITHOUT FINISH EDGE	1,508 lbs
- WITH FINISH EDGE	1,638 lbs
DIMENSIONS	86" L x 51" W x 86" H



SAFETY DECALS

SAFETY DECAL REPLACEMENT

INSTRUCTIONS

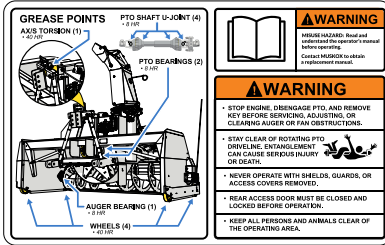
- Keep all safety signs clean and legible.
- Replace all missing, illegible, or damaged safety signs.
- Replacement parts with safety signs attached must also have safety signs attached. Safety signs are available, free of charge from MUSKOX.

PLACEMENT OR REPLACEMENT OF SAFETY SIGNS

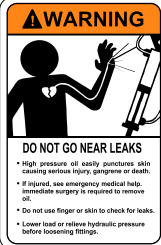
- Clean the area of application with non-flammable solvent, and then wash the same area with soap and water.
- Allow the surface to fully dry.
- Remove the backing from the safety sign, exposing the adhesive surface.
- Apply the safety sign to the position shown in the diagram below and smooth out any bubbles.

SAFETY DECAL LOCATIONS

1 0309-415 DECAL GREASE POINT



4 0309-110 DECAL HIGH PRESSURE FLUID



5 0309-411 DECAL CHUTE WARNING



6 0309-412 DECAL WARNING ROTATING



7 0309-410 DECAL WARNING GEAR



8 0309-109 (Quantity 2) DECAL FLYING DEBRIS



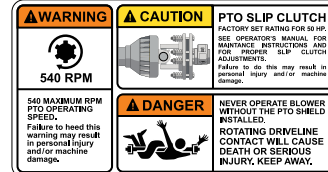
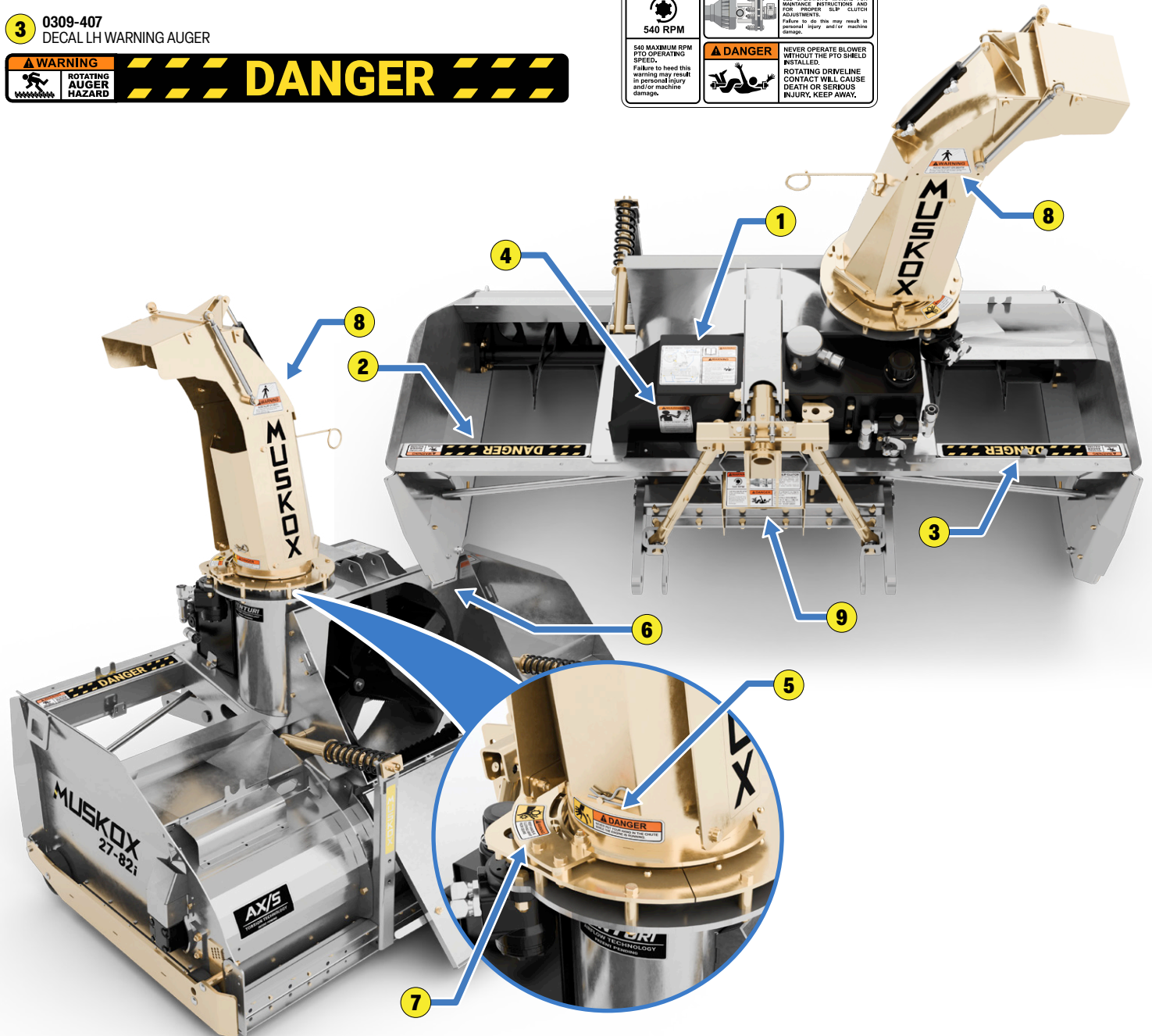
2 0309-408 DECAL RH WARNING AUGER



3 0309-407 DECAL LH WARNING AUGER



9 0309-414 DECAL PTO COVER



LIFT POINT

The Lift Point is identified in the image below. Lifting at other points is unsafe and can damage attachment. Do not attach lifting accessories around cylinders or in any way that may damage hoses or hydraulic components.

- Attach lifting accessories to unit at the recommended lifting point.
- Lift gradually, maintaining the equilibrium of the unit.



NOTE:

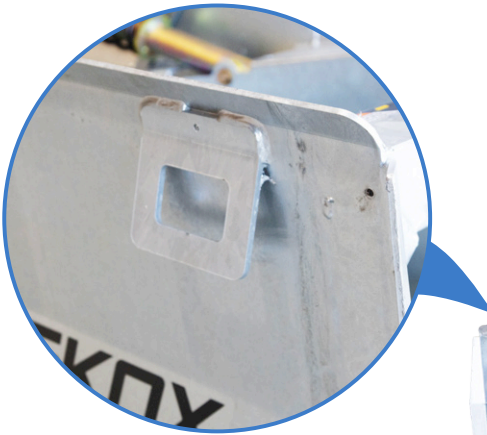
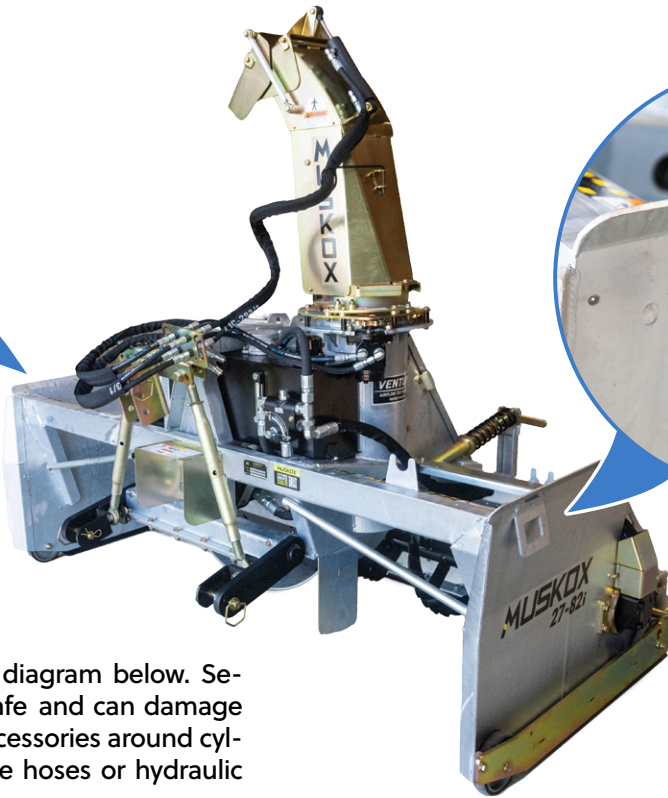
Use a lifting pin rated for the weight of the blower. (Lifting pin not included)

Secure all lifting accessories in such a way to prevent unintended disengagement. Failure to do so could result in the attachment falling and causing serious personal injury or death.

USE LIFTING ACCESSORIES (CHAINS, SLINGS, ROPES, SHACKLES AND ETC.) THAT ARE CAPABLE OF SUPPORTING THE SIZE AND WEIGHT OF YOUR ATTACHMENT.



TIE DOWN POINTS



Tie down points are identified in the diagram below. Securing to trailer at other points is unsafe and can damage attachment. Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components.

- Attach tie down accessories to unit as recommended.
- Check unit stability before transporting.



USE TIE DOWN ACCESSORIES (CHAINS, SLINGS, ROPES, SHACKLES AND ETC.) THAT ARE CAPABLE OF SUPPORTING THE SIZE AND WEIGHT OF YOUR ATTACHMENT.

INSTALLATION & SETUP

STEP	INSTRUCTIONS
1 PLACE ON LEVEL GROUND	Place the product on a firm, level surface that is large enough to safely accommodate this product, your prime mover and all workers involved in the mounting process.
2 GREASE AND FILL HYDRAULIC FLUID	Lubricate all grease fittings and fill hydraulic fluid to the half way point before connecting this product to your tractor. (See photo below)
3 READ AND UNDERSTAND YOUR TRACTOR OPERATORS MANUAL	Refer to the operator's manual(s) for your prime mover and follow the mounting instructions contained therein.
4 ATTACH TO THREE POINT HITCH	Attach three point hitch to the MUSKOX 27-82i. DO NOT USE A QUICK HITCH. (See note below)
5 LEVEL THE BLOWER	Set the blower down on a level surface. Install Top Link so that it is level with the ground. Adjust the spring tension on the Top Link. (See page 12 for instructions)
6 CONNECT PTO	Connect PTO Driveline to blower. Make sure the implement yoke (the yoke with the slip clutch) is seated fully to the rear before securing with bolt.
7 CHECK PTO AND HOSE CLEARANCE	Carefully raise the three point hitch to check clearances and to verify that all mounting procedures have been successfully completed. <ul style="list-style-type: none"> • Verify the PTO SHAFT has proper clearances and angles • Verify the HYDRAULIC HOSES have an appropriate amount of slack.
8 BURNISH PTO SLIP CLUTCH (SKIP FOR FIRST TIME USE. SHIPS PRE-BURNISHED)	Burnish the slip clutch after extended storage. (See page 17 for burnishing instructions.)
9 INSTALL GUIDE POLES	Install the guides poles onto the back of the blower. These are used as an aid in backing up to buildings and garage doors. (See page 28 for instructions)



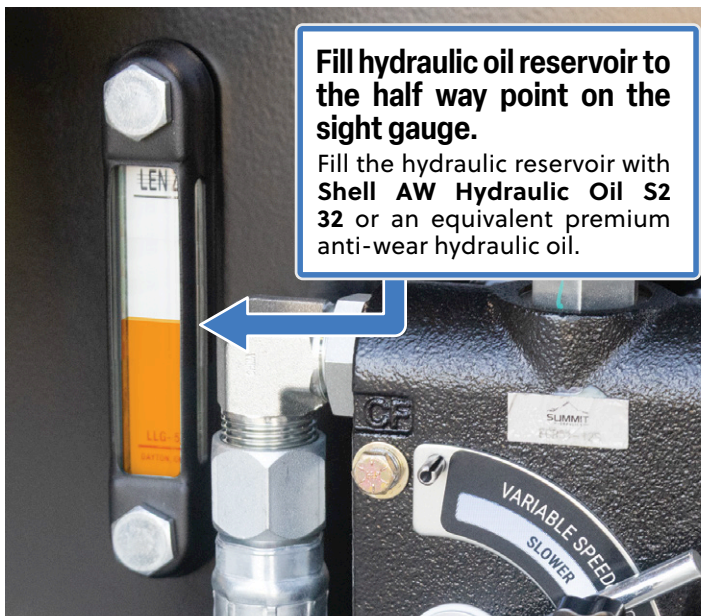
BEFORE FIRST USE!

Lubricate all grease fittings and fill hydraulic fluid to the half way point before connecting this product to your tractor. Refer to the MAINTENANCE section on page XX, and follow the instructions



DO NOT USE A QUICK HITCH

The design of a quick hitch will counteract the motion AX/S Torsion system, nullifying the movement benefits it provides. Do not use a quick hitch when connecting the inverted blower to your tractor.

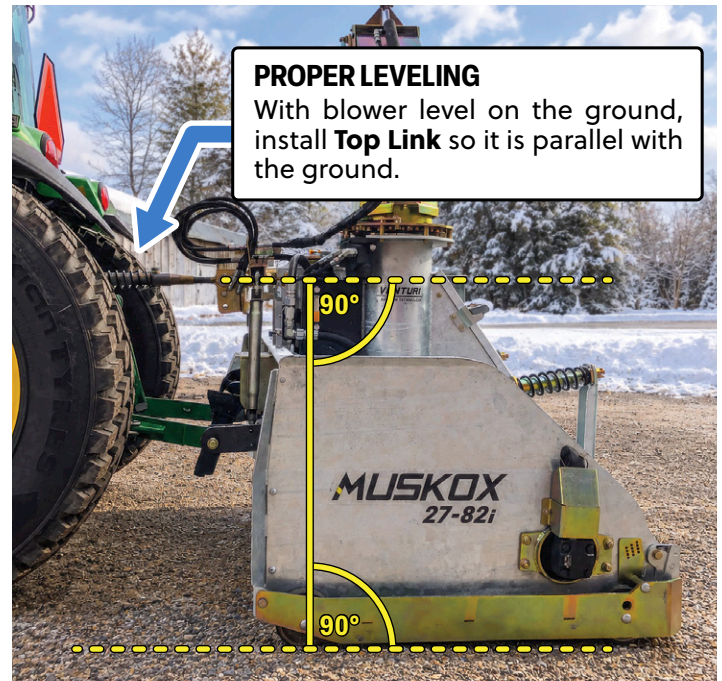


LEVELING THE BLOWER

Properly leveling the blower helps maintain consistent ground contact and allows the Dual Cut Edge System to provide the best possible scrape.

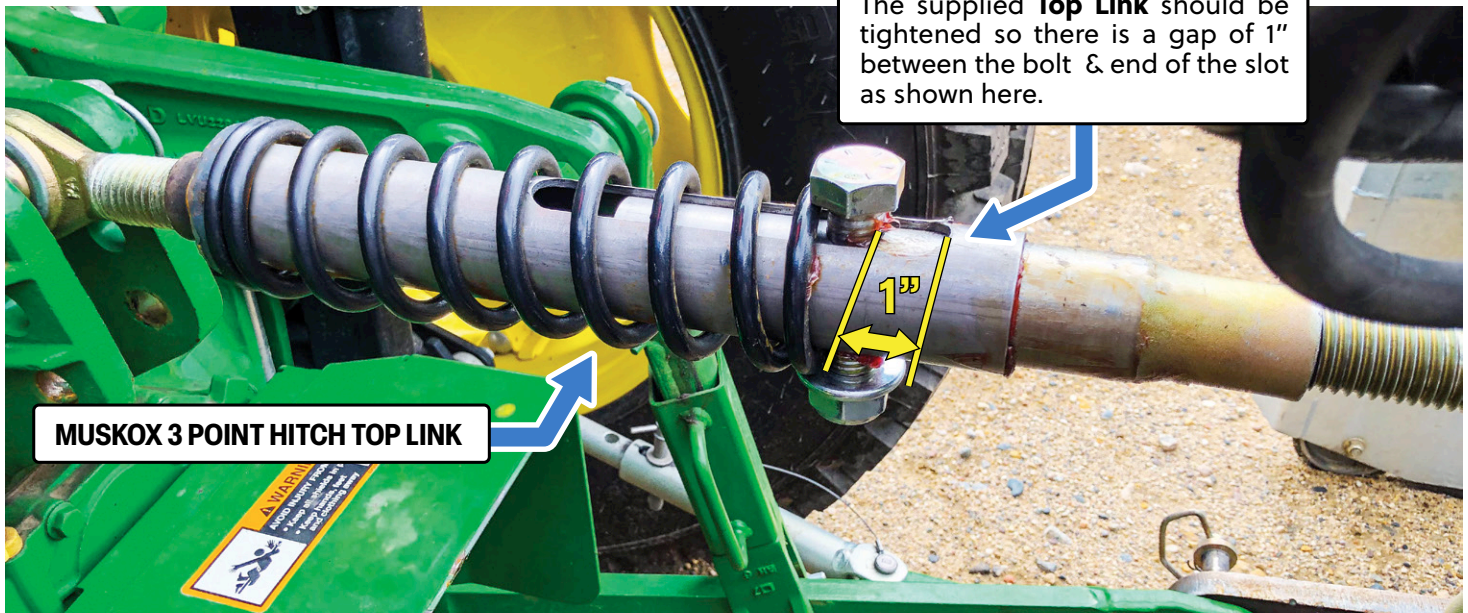
1. Install Top Link of 3 point hitch parallel & equal distance from the ground, as shown to the right.
2. Lower the blower onto a level surface. All 4 wheels should rest flat on the ground.
3. Adjust the tensioning of the MUSKOX supplied Top Link so there is a 1" gap between the bolt & the end of the slot as shown below.
4. Verify the blower position. The blower should remain level from side to side with the front wheels level to the operating surface.

This is the recommended operating angle for the blower. Proper adjustment allows the rear scrape edge to maintain effective contact with the surface, helping the Dual Cut Edge System and AX/S Torsion Technology provide a clean, consistent scrape.



TOP LINK SPRING TENSIONING

The supplied **Top Link** should be tightened so there is a gap of 1" between the bolt & end of the slot as shown here.



READ MANUAL PRIOR TO INSTALLATION

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance.

FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).

WARNING

Failure to obey the following procedures could result in death or serious injury. Before doing any work on your prime mover's battery, read and understand all prime mover instructions and safety signs for your prime mover's electrical system. Pay special attention to hazard avoidance and remedial action related to explosive gas and acid.

PTO DRIVELINE SYSTEM

SYSTEM OVERVIEW

The MUSKOX 27-82i utilizes a PTO-driven powertrain designed to maximize performance while minimizing downtime. Power from the tractor PTO is transferred through the driveline to operate both the blower fan and the hydraulic pump. The hydraulic pump supplies oil to the hydraulic auger motor, allowing the auger to operate independently of the blower fan.

Because the auger is hydraulically driven, its speed can be adjusted to match changing snow conditions without affecting fan speed. This independent control provides smoother material flow, improved snow handling, and greater operator control in varying conditions.

The PTO driveline also incorporates multiple levels of overload protection to help reduce downtime and protect major driveline components.

PTO SPEED

The MUSKOX 27-82i is designed to operate with a 540 RPM PTO.

 540 RPM	⚠ WARNING	
	540 MAXIMUM RPM PTO OPERATING SPEED.	Failure to heed this warning may result in personal injury and/or machine damage.

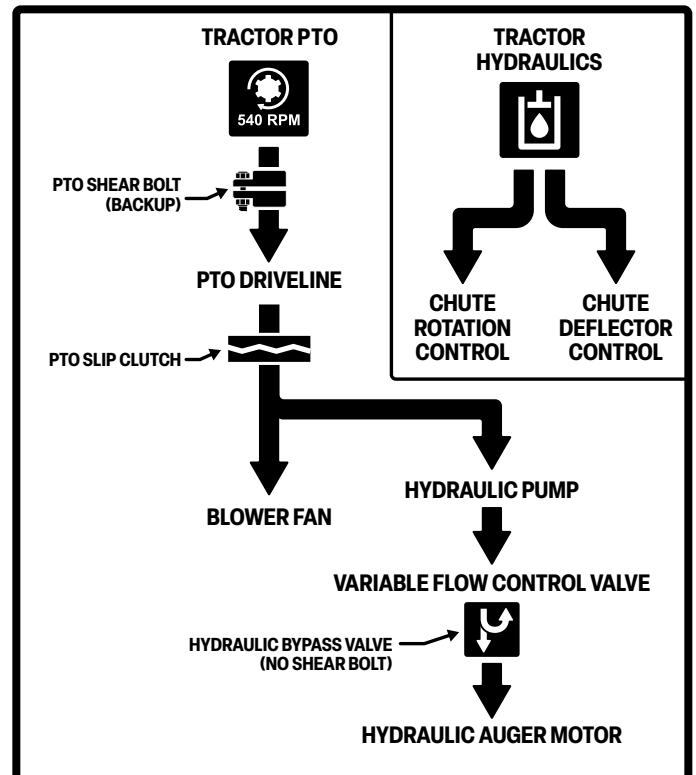
ENGAGING THE PTO

To reduce shock loading on the driveline and hydraulic components:

1. Lower the tractor engine speed to idle.
2. Engage the PTO smoothly.
3. Gradually increase engine speed until the tractor reaches 540 PTO RPM.
4. Allow the blower fan and auger to reach operating speed before entering heavy snow.

Avoid engaging the PTO at high engine speeds.

POWER FLOW



NOTICE:
Never operate the blower above 540 PTO RPM. Overspeeding the PTO can damage the blower fan, hydraulic pump, driveline components, bearings, and other rotating assemblies.

DURING OPERATION

For best performance:

- Maintain a constant 540 PTO RPM.
- Reduce ground speed—not PTO speed—when operating in heavy or deep snow.
- Monitor the machine for unusual vibration, noise, or performance changes.
- Disengage the PTO immediately if an obstruction or abnormal condition is suspected.

PTO DRIVELINE SETUP AND OPERATION

⚠ WARNING

- STAY CLEAR OF ROTATING PTO DRIVELINE. ENTANGLEMENT CAN CAUSE SERIOUS INJURY OR DEATH.



SAFETY

Do not operate the machine unless all tractor, PTO driveline, and implement shields are properly installed and in good condition. Driveline shields must rotate freely without binding.

Keep operators and bystanders a safe distance from all moving components.

All rotating components must be properly shielded before operation.

Make sure the PTO driveline is securely attached to both the tractor and implement. Verify that all driveline guards are properly installed and rotate freely.

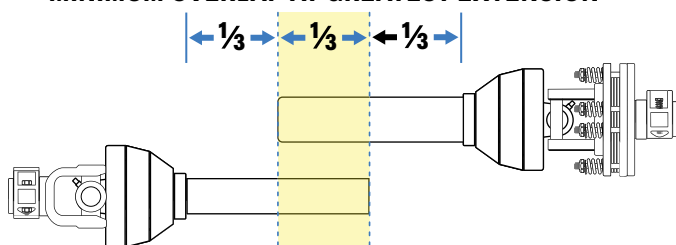
Before approaching, inspecting, adjusting, or servicing the implement, disengage the PTO, shut off the tractor engine, remove the ignition key, and wait for all moving parts to come to a complete stop.

PTO DRIVELINE LENGTH

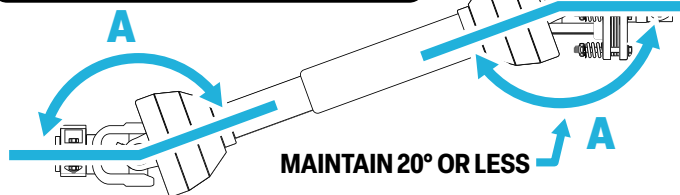
Before operating, confirm that the PTO driveline is the correct length throughout the implement's full range of movement.

The telescoping driveline tubes must maintain a **minimum overlap of 1/3 of their length** during operation. The driveline must also have sufficient clearance at its shortest operating position to prevent the tubes from bottoming out.

MINIMUM OVERLAP AT GREATEST EXTENSION



**20° MAXIMUM ANGLE
GREATER ANGLES CREATE
UNEVEN WEAR.**



PTO DRIVELINE RANGE OF MOVEMENT

With the tractor properly hitched to the blower, position the driveline so that the operating angles of the universal joints are as small and as equal as possible.

Disengage the PTO if the driveline joint angles become excessive or significantly unequal. Do not operate the PTO at excessive driveline angles.

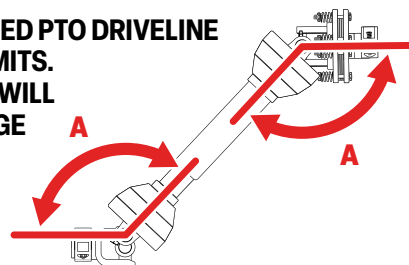


CAUTION

DON'T OVERLIFT WHILE PTO IS ENGAGED



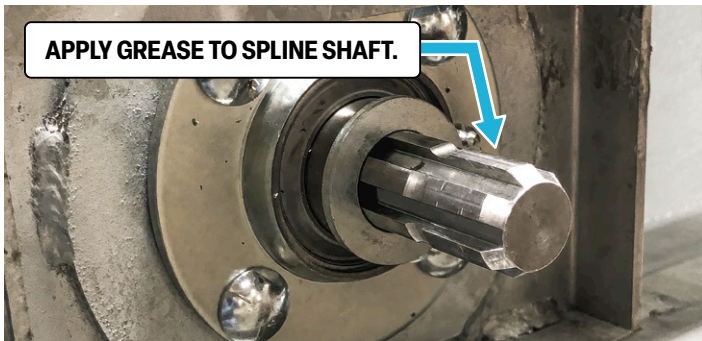
**ANGLE MAY EXCEED PTO DRIVELINE
OPERATIONAL LIMITS.
PTO SHEAR BOLT WILL
BREAK OR DAMAGE
MAY OCCUR.**



NOTE: DON'T OVERLIFT WITH PTO RUNNING!

Raising the three point hitch to its maximum height with the PTO engaged may cause the joint angles to exceed the rotational limits. This will trigger the shear bolt to break, or may result in damage to the equipment.

Before operating, make sure the PTO driveline is fully engaged and securely attached to both the tractor PTO shaft and the implement input shaft.



Clean and grease the tractor PTO shaft and implement input shaft before installing the PTO driveline.

CONNECTING/DISCONNECTING DRIVELINE

Press and hold the locking pin while sliding the driveline yoke onto the PTO shaft. Continue sliding the yoke until the locking pin aligns with and engages the groove in the PTO shaft.

Release the locking pin and verify that it returns fully to the locked position. Pull back on the driveline to confirm that the yoke is securely attached before operating.

PTO DRIVELINE (SHOWN WITHOUT SLIP CLUTCH SHIELD)



WARNING

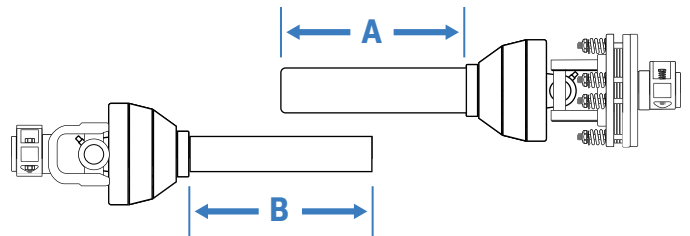
An incorrectly sized PTO driveline can damage the tractor, PTO driveline, or implement. Always verify minimum and maximum driveline lengths before operation.

SHORTENING THE PTO DRIVELINE

If the PTO driveline is too long for the tractor and implement combination, it must be shortened before operation.

1. Remove the driveline shielding.
2. Shorten the inner and outer telescoping drive tubes to the required length. Cut the same amount from each corresponding tube.

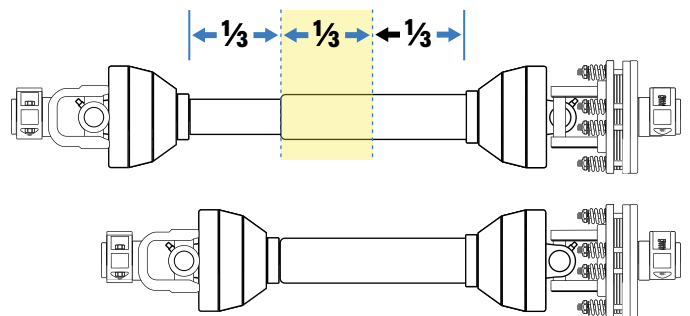
LENGTH OF A = LENGTH OF B



NOTE:

The telescoping drive tubes must maintain a minimum overlap of 1/3 of their length during operation.

OVERLAP



3. Deburr the cut edges with a file and thoroughly remove all metal filings and debris from the tubes.
4. Shorten the inner and outer plastic shield tubes by the same amount removed from the corresponding drive tubes.
5. Grease the telescoping drive tubes and reinstall the driveline shielding.
6. After reassembly, check the PTO driveline throughout the implement's full range of movement. Make sure:
 - The driveline does not bottom out at its shortest position.
 - The telescoping drive tubes maintain at least 1/3 overlap during operation.
 - The driveline shield tubes maintain adequate overlap and never separate during operation.

PTO TORQUE LIMITERS

SHEAR BOLT TORQUE LIMITER

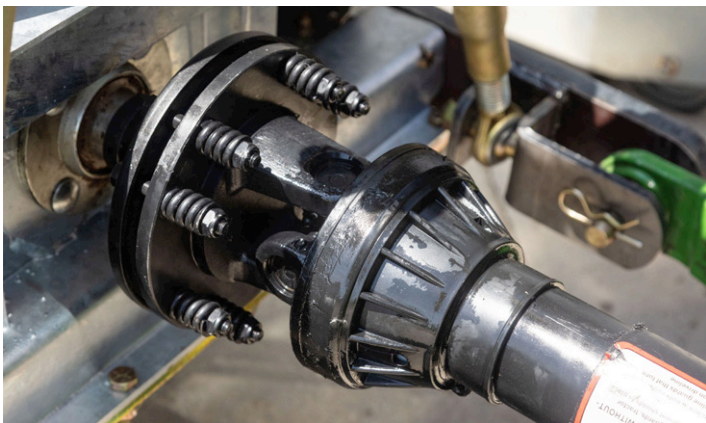
The shear bolt on the PTO driveline provides secondary driveline protection by interrupting power transmission if the applied torque exceeds its designed limit. During an excessive overload, the bolt is designed to shear and disconnect power to help protect driveline and blower components.

Replace a sheared bolt only with a **M10 x 60 Shear Bolt**. Substituting a different size or grade may prevent the torque limiter from operating as designed and could result in equipment damage.

Lubricate the shear bolt with grease at least once each season and after extended periods of inactivity.

NOTE:

The MUSKOX 27-82i ships with two extra shear bolts.



PTO SLIP CLUTCH – FRICTION TORQUE LIMITER

The PTO slip clutch protects the driveline and blower by limiting the amount of torque that can be transmitted during an overload. When the torque exceeds the clutch setting, the friction discs slip to help protect the tractor, driveline, and implement from damage.

Do not alter spring compression unless adjustment of the clutch torque setting is required.

To adjust the torque setting, tighten or loosen all eight adjustment nuts evenly in 1/4-turn increments, then check the clutch for proper operation. Tightening the nuts increases the torque setting; loosening the nuts decreases it. Repeat as necessary until proper operation is achieved.

NOTICE:

Do not overtighten the adjustment nuts. Excessive spring compression can prevent the clutch from slipping at the intended torque and may result in damage to the tractor, PTO driveline, or implement.

HOW THE SLIP CLUTCH WORKS

During normal operation, the slip clutch transfers full PTO power to the blower fan.

If the fan suddenly encounters an obstruction or experiences an excessive load, the clutch discs begin to slip, limiting the amount of torque transmitted through the driveline. Once the overload is removed, the clutch resumes normal operation.

Unlike replacing a broken shear bolt, the slip clutch typically allows operators to resume work immediately after the obstruction has been cleared.

OPERATION

The slip clutch operates automatically and requires no action from the operator. Regular maintenance of the slip clutch is required to maintain proper working order.

IF THE CLUTCH SLIPS:

- Disengage the PTO.
- Shut off the tractor.
- Inspect the blower for obstructions.



WARNING

PTO OPERATIONAL SAFETY

-  Always disengage the PTO before leaving the tractor.
-  Shut off the engine and remove the ignition key before servicing the driveline or blower.
-  Keep all PTO shields installed and in good condition.
-  Never wear loose clothing, gloves with dangling cuffs, jewelry, or anything that can become entangled in rotating components.
-  Stay clear of the PTO driveline whenever it is engaged.
-  Never step over or reach across a rotating PTO shaft.

- Remove the obstruction before resuming operation.
- If repeated slipping occurs without an obstruction present, inspect the slip clutch for wear or improper adjustment.

- Inspect clutch components for wear or damage.
- Verify mounting hardware is tight.
- Keep PTO bearings and universal joints properly greased.
- Replace damaged PTO shields immediately.
- Follow the clutch maintenance and burnishing procedure after extended storage or seasonal inactivity.

MAINTENANCE

Inspect the slip clutch and PTO driveline before each season and periodically throughout operation.

BURNISING THE PTO SLIP CLUTCH

BURNISHING THE PTO SLIP CLUTCH

The basics of the burnishing procedure is to temporarily reduce spring pressure, intentionally slip the clutch for only a few seconds at low PTO speed, then restore the original setting exactly.

1. Park the tractor and implement on level ground. Disengage the PTO, shut off the engine, remove the key, and wait for all movement to stop.
2. Mark or record the original clutch setting. Measure the spring length or mark the position of each of the eight adjustment nuts so they can be returned to the exact original setting.
3. Loosen all eight spring adjustment nuts evenly until the clutch spring pressure is reduced enough to allow the clutch to slip. Do not completely remove the nuts.
4. Start the tractor and operate at idle speed. With all people clear of the machine, engage the PTO for approximately 2–3 seconds, then disengage it. The clutch should slip during this period.
5. Repeat once if necessary to ensure the friction surfaces have broken free. Avoid prolonged slipping, which can overheat and damage the clutch. Friction clutches can become extremely hot during this procedure.
6. Shut off the tractor and remove the key. Allow the clutch to cool before handling it.
7. Return all eight adjustment nuts to their exact original position or specified spring length. Make sure all springs are compressed evenly.
8. Reinstall all guards and shields before operating the blower.



WARNING

Never allow the clutch to slip for an extended period. Friction clutches generate significant heat and may damage the friction discs or create a fire hazard if allowed to slip continuously.

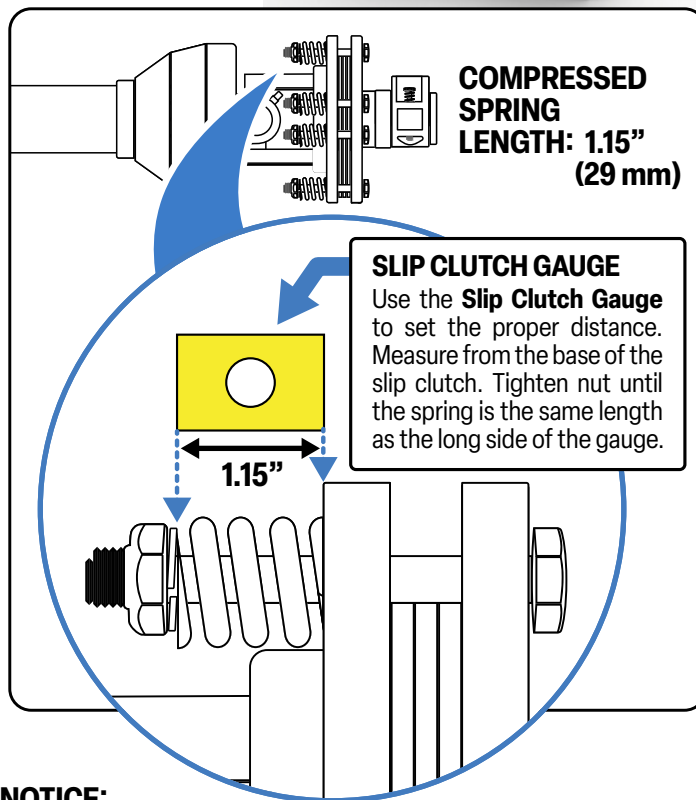


Video Instructions for clutch maintenance, including the burnishing procedure at this QR Code.



SCAN FOR MORE INFO

SLIP CLUTCH GAUGE



NOTICE:

Failure to restore the slip clutch to its original setting may cause the clutch to slip during normal operation or prevent it from slipping during an overload, potentially resulting in equipment damage.

PTO HYDRAULIC DRIVE SYSTEM

SYSTEM OVERVIEW

The PTO Hydraulic Pump System supplies hydraulic power to the auger drive motor while the tractor PTO powers the blower fan. This independent drive system allows the auger speed to be adjusted separately from the fan, giving the operator greater control in changing snow conditions.

A variable flow control valve regulates hydraulic flow to the auger, allowing operators to optimize feeding performance without affecting fan speed. The hydraulic reservoir includes a sight gauge for monitoring oil level, and MUSKOX adds a colored dye to the hydraulic oil to make leaks easy to identify during routine inspections.



CAUTION

Operating the hydraulic pump without adequate oil will cause severe damage to the hydraulic system.



CAUTION

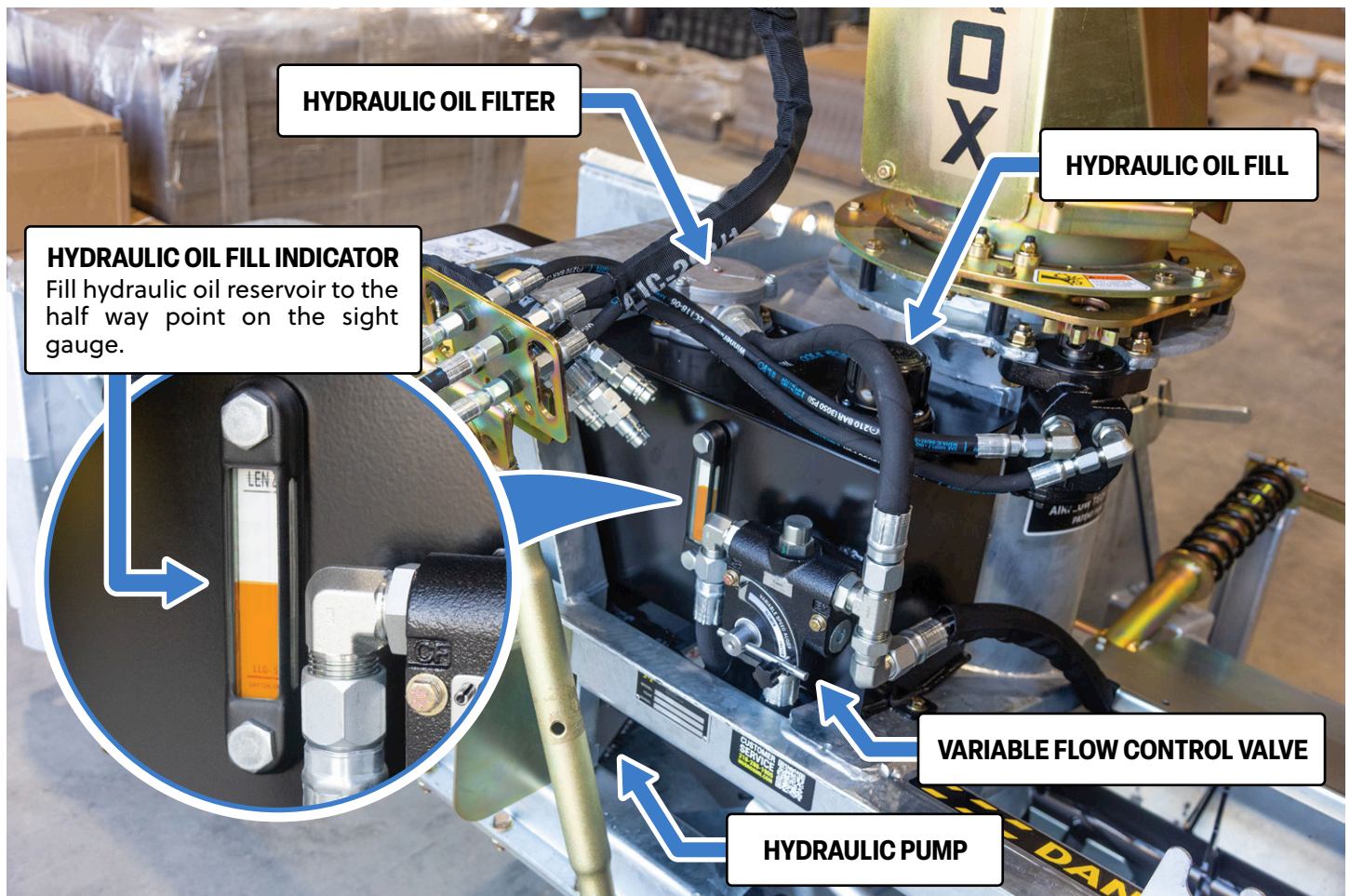
FILL HYDRAULIC OIL BEFORE OPERATING

RECOMMENDED OIL:
SHELL AW HYDRAULIC OIL S2 32
OR EQUIVALENT

FIRST TIME SETUP

Before operating the snowblower for the first time:

- Fill the hydraulic reservoir to the half way point with Shell AW Hydraulic Oil S2 32 or an equivalent premium anti-wear hydraulic oil.
- Verify the oil level using the reservoir sight gauge.
- Inspect the hydraulic filter to ensure it is properly installed.
- Inspect all hydraulic hoses and fittings.
- Grease all PTO driveline lubrication points.
- Confirm all guards and shields are properly installed.



HYDRAULIC AUGER PROTECTION — NO SHEAR BOLTS

One of the biggest advantages of the MUSKOX hydraulic auger system is that there are no auger shear bolts to replace.

Instead of relying on sacrificial shear bolts, the hydraulic system automatically protects itself. If an obstruction stops the auger, the bypass built into the Variable Flow Control Valve opens and relieves hydraulic pressure. Once the obstruction is removed, normal operation resumes without replacing broken components.

BENEFITS INCLUDE:

- No auger shear bolts to replace
- Reduced downtime during snow events
- No working outside in freezing conditions to repair shear bolts
- Automatic hydraulic protection against sudden auger stoppage
- Faster return to operation after clearing an obstruction

The blower fan is protected separately by a PTO slip clutch. If a severe obstruction enters the fan housing, the slip clutch is designed to limit torque and help protect the driveline. A backup shear bolt serves as a secondary failsafe should the slip clutch be unable to absorb the overload.



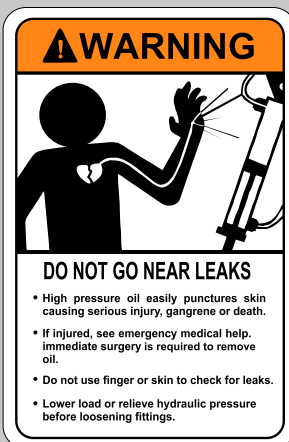
OPERATOR TIP: HYDRAULIC PUMP HEALTH

The best indicator of hydraulic pump health is change. If the pump becomes noticeably louder, hotter, slower, or rougher than normal, stop and inspect the hydraulic system. Addressing small issues early can prevent costly repairs and extended downtime.

HYDRAULIC PUMP TROUBLESHOOTING & FAILURE PREVENTION

The PTO hydraulic pump is designed to provide many years of reliable service when properly maintained. Most hydraulic pump failures are not caused by defects in the pump itself, but by operating conditions such as contaminated oil, insufficient oil supply, overheating, or air entering the hydraulic system. Routine inspection and maintenance can help prevent costly repairs and unexpected downtime.

See TROUBLESHOOTING section on Page XX to help diagnose potential issues you may encounter. Contact MUSKOX Support for additional help.



READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals before beginning any Snow Blower hydraulic connection. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.

WARNING!

Do not lock the auxiliary hydraulics of your prime mover in the "ON" position. Failure to obey this warning could result in death or serious injury.

HYDRAULIC FILTER REPLACEMENT

Replace the hydraulic filter at the interval specified in the maintenance schedule, or sooner if the filter restriction indicator shows that service is required or hydraulic contamination is suspected.

Always clean the area around the filter before removal to prevent dirt or debris from entering the hydraulic system. After installing the new filter, operate the hydraulic system at low speed and inspect for leaks. Check the hydraulic fluid level and add the specified fluid as necessary.

REPLACE OIL FILTER WITH:
27-82i OIL FILTER
PART #0809-136



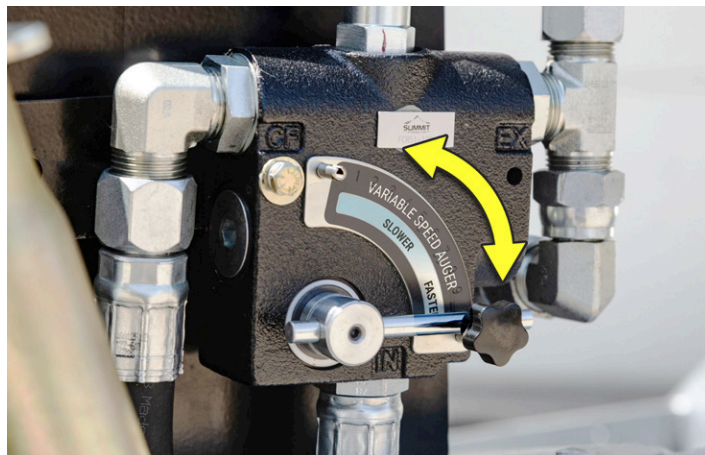
RELEASING HYDRAULIC PRESSURE ON THE AUGER MOTOR

Turning the Variable Flow Control Valve all the way to the left will cut off the flow of hydraulic fluid to the auger motor. This releases the pressure on the system and allows the auger to be rotated by hand.

This is helpful if debris, such as a branch or a chain, becomes lodged in the auger.

If debris becomes lodged in the auger:

- Disengage the PTO and ensure the tractor is in park
- Turn the tractor off
- Turn the valve all the way to the left
- You can now spin the auger backwards to help dislodge or the debris



VARIABLE FLOW CONTROL VALVE

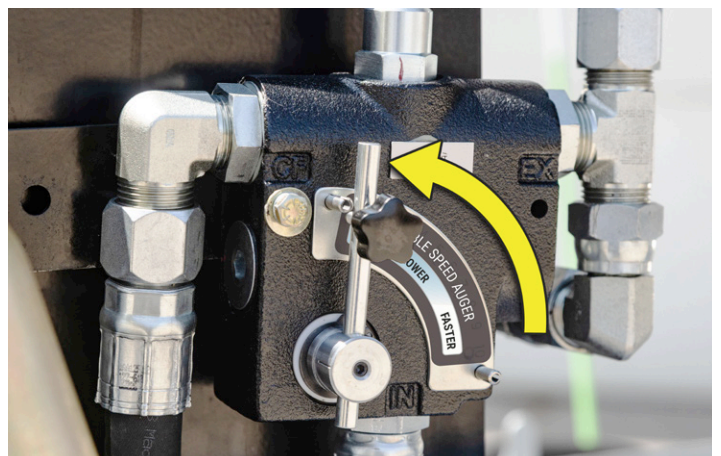
The variable flow control valve adjusts the spinning speed of the auger relative to the fan. The fan speed is driven directly by the PTO and is not affected by adjustments to this valve.

For normal operation, run the valve in the fully open position. In certain conditions you may want to slow down the speed of the auger, such as in heavy or wet snow. This reduces the flow of snow to the fan and helps prevent plugging. You may need to adjust your ground speed for optimal blowing.



OPERATOR TIP: CONTROL THAT AUGER SPEED

The variable flow control valve gives you the ability to set your auger speed separate from the fan speed for optimal blowing.



VALVE SHOWN WITH PRESSURE RELEASED ON HYDRAULIC AUGER MOTOR.

HYDRAULIC CONNECTIONS

CONNECTING HYDRAULICS FOR CHUTE AND DEFLECTOR CONTROL

Chute and deflector control is operated by

1. Disconnect the hydraulic hose quick couplers from one another and attach the quick couplers to your prime mover as per the instructions in your prime mover operator's manual.
2. Carefully raise the three point hitch and check for any interference. Operate the chute and deflector on this product to make the same checks.
3. Cycle the hydraulic cylinder(s) on this product several times from fully retracted to fully extended until all air has been completely removed from the cylinder(s).

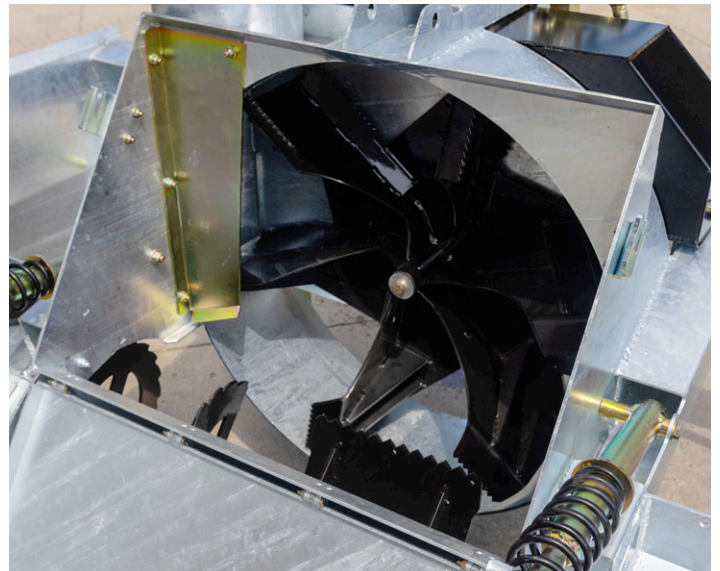
FAN

32" SIX BLADED FAN

The 27-82i features an industry-leading 32-inch, six-blade fan designed to move snow quickly and efficiently. The large fan diameter produces higher blade-tip speed, generating the velocity needed to throw snow farther and maintain consistent discharge.

The six-blade design provides a more continuous, even flow of snow through the chute, while serrated blade edges help break apart hard-packed snow and ice as it enters the fan.

The 27-82i also features an industry-first open-front fan housing. Instead of allowing snow to collect and build up in front of the fan housing, the open design allows snow to feed directly into the fan. This promotes more efficient snow flow into the fan and helps reduce buildup within the blower.



CHUTE SYSTEM

The MUSKOX chute system is designed to provide precise control of snow discharge while maximizing performance, safety, and operator convenience. Engineered with several innovative features, the chute allows the operator to accurately direct snow, adapt to changing operating conditions, and simplify transport and maintenance.

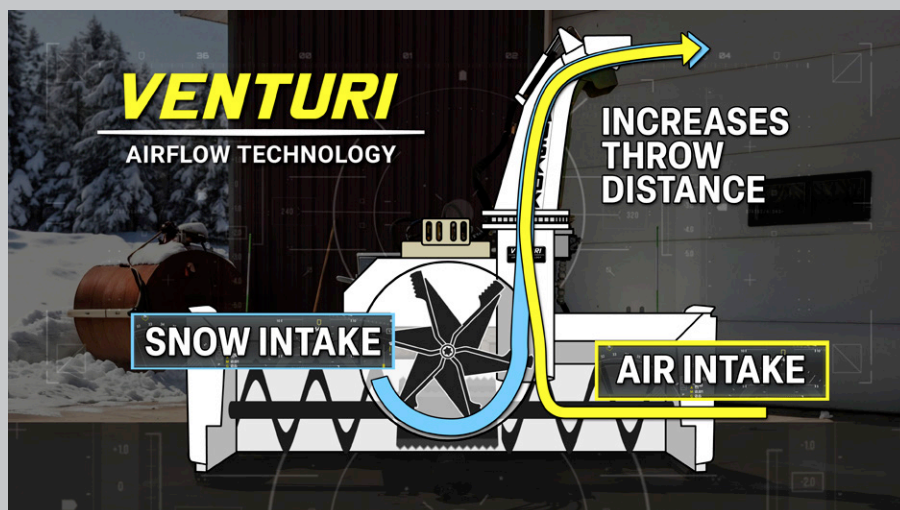
Features such as Venturi Airflow Technology improve throwing performance by maintaining a smooth, high-velocity discharge stream, while adjustable rotation stops allow the chute's range of motion to be customized for the job.

A cleanout access door provides safe, convenient access for clearing obstructions, and the tilt-back transport position reduces overall machine height for transport and storage. The unique Snow Recycling feature also allows snow to be temporarily recirculated within the blower when discharging snow is not practical or desirable.

Become familiar with the operation and adjustment of these features before operating the blower. Proper use of the chute system will improve performance, increase efficiency, and help ensure safe operation.

VENTURI AIRFLOW TECHNOLOGY

The MUSKOX blower features an optimized Venturi-style chute that increases air velocity as snow exits the fan. By accelerating airflow and minimizing turbulence, the chute helps move snow farther while reducing the likelihood of plugging in difficult conditions. The result is more efficient snow discharge, improved performance in wet or heavy snow, and consistent throwing distance across a wide range of operating conditions.

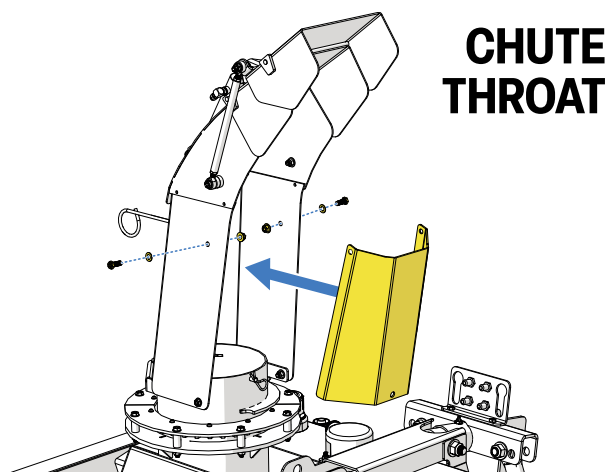


REMOVABLE CHUTE THROAT

The removable chute throat helps control and direct the flow of snow as it enters the chute. In cold, dry snow conditions, operating with the throat installed helps maintain a controlled, consistent discharge through the chute.

In warmer conditions or when handling heavy, wet snow, removing the chute throat provides a larger, less restricted discharge opening. This can improve material flow and reduce the likelihood of snow accumulating and plugging the chute.

Operators can install or remove the chute throat as needed to match snow conditions and achieve the best blower performance.



SNOW RECYCLING OPERATION

The MUSKOX blower features a unique Snow Recycling mode that allows snow to be temporarily recirculated within the blower instead of being discharged. By rotating the chute so it directs snow into the recycling hopper opening on either side of the blower, snow is returned into the fan housing for continuous circulation.

This feature is useful when passing areas where snow discharge is not desired, such as near vehicles, buildings, sidewalks, roadways, or pedestrians. Once clear of the area, simply rotate the chute back to the desired discharge direction to resume normal snow throwing.



CHUTE CLEANOUT ACCESS

The chute includes a cleanout access door that provides convenient access for removing packed snow or ice from the discharge path. If a blockage occurs, stop the tractor, disengage the PTO, shut off the engine, remove the key, and allow all moving parts to come to a complete stop before opening the access door.

Operator Tip: Keep the cleanout bar with the blower so it is readily available whenever operating in wet or heavy snow conditions.

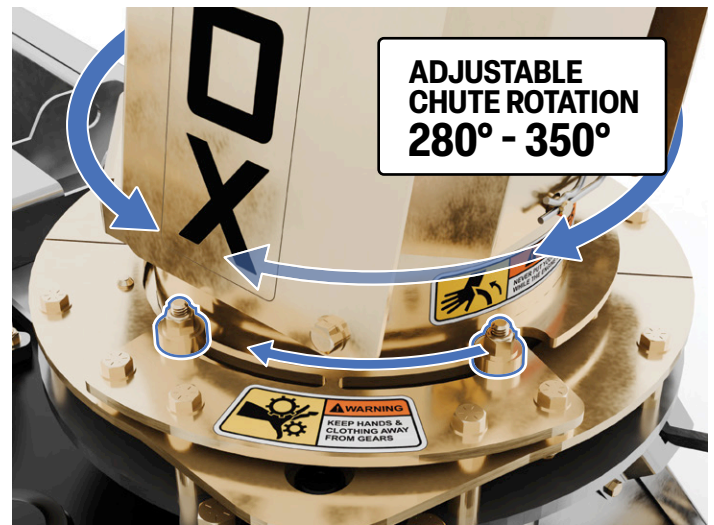
ADJUSTABLE CHUTE ROTATION STOPS

The chute is equipped with adjustable rotation stops that allow the operator to limit the chute's range of travel to suit the application. The stops can be configured to provide approximately 280° to 350° of chute rotation, helping prevent the discharge from directing snow into unwanted areas such as buildings, vehicles, roadways, or pedestrian traffic.



TILT-BACK TRANSPORT MODE

For transport and storage, the chute can be tilted forward into the transport position. Always ensure the chute is securely locked in the selected position before moving the tractor.

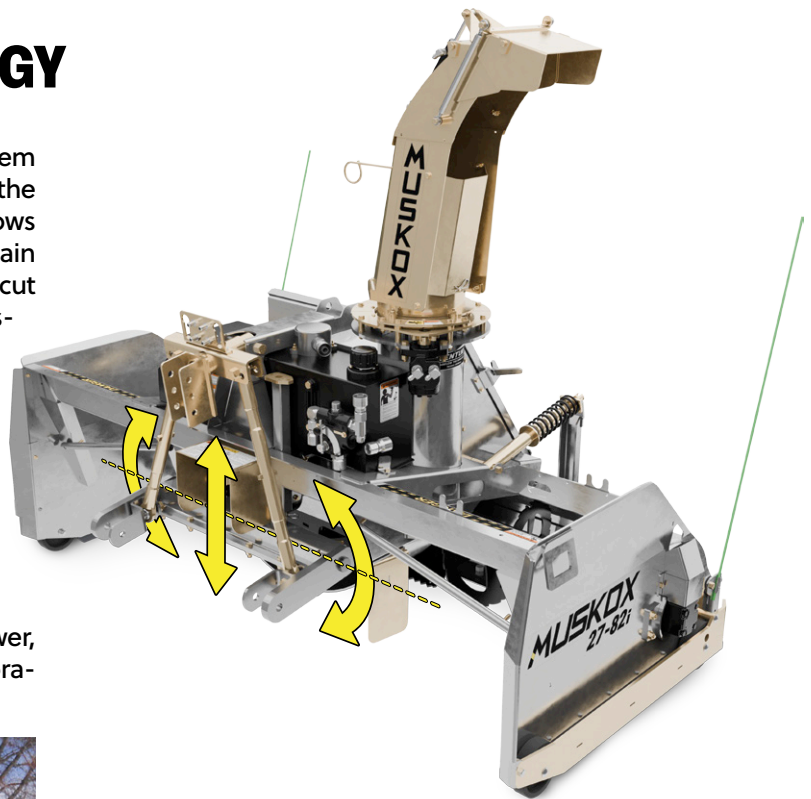


AX/S TORSION TECHNOLOGY

AX/S Torsion Technology is an integrated suspension system that allows the snowblower to move independently from the tractor as it follows uneven terrain. The torsion system allows up to 20 degrees of rotation, helping the blower maintain more consistent ground contact. This keeps the dual cut edges engaged with the surface for a cleaner, more consistent scrape, even when the tractor and blower encounter uneven terrain.

AX/S operates automatically and requires no operator input during normal operation. The system's rubber torsion elements eliminate the need for a hydraulic accumulator.

During higher-speed travel between job sites, AX/S also helps dampen bouncing caused by the weight of the blower, providing a smoother ride while reducing shock and vibration transferred between the blower and tractor.



NOTE: TORSION ARMS COME PRESET AT DIFFERENT ANGLES

The three-point hitch arms are designed to extend from the blower at slightly different angles to compensate for the additional weight on the left side of the machine. This offset is intentional and is part of the blower's suspension geometry.



DOWN PRESSURE

The AX/S Torsion System provides constant down pressure, keeping your cutting edges level to the ground and engaged in removing snow and moisture..

Once properly connected to the tractor and raised into operating position, the blower will hang level with the ground. This positioning allows the AX/S Torsion System to distribute the load properly and maintain consistent contact across the dual cut edges, helping both edges follow the surface and produce a cleaner, more even scrape.

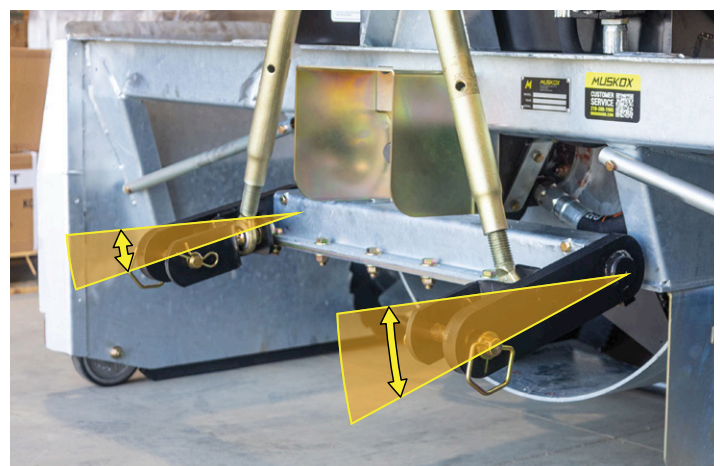
MAINTENANCE

The AX/S Torsion System is designed to require little to no routine maintenance. Grease the yoke according to the scheduls on page 35.

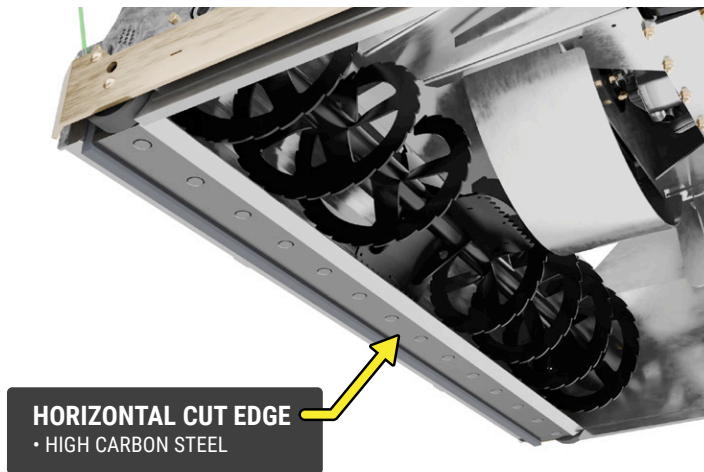
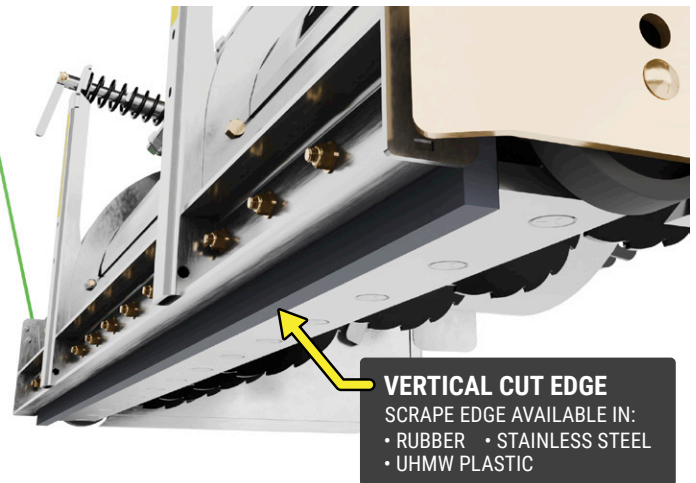


OPERATOR TIP: DO NOT USE A QUICK HITCH

The design of a quick hitch will counteract the motion AX/S Torsion system, nulifying the oscillating-movement benefits the AX/S Torsion system provides. Do not use a quick hitch when connecting the inverted blower to your tractor.



DUAL CUT EDGES



DUAL CUT EDGES

The 27-82i uses a dual cut edge system to combine aggressive snow removal with a clean finished surface. The two edges perform different jobs as the blower travels across the ground.

PRIMARY CUT EDGE

The horizontal primary cut edge is made from high carbon steel and is responsible for cutting through compacted snow and ice ahead of the finish edge.

Unlike a conventional cutting edge, the primary edge is installed inverted. This orientation allows the edge to cut and loosen packed material while reducing its tendency to dig or gouge into the surface. The loosened material is then collected by the blower, while the secondary finish edge follows behind to complete the scrape.

SECONDARY SCRAPE EDGE

The vertical scrape edge follows the primary cut edge and removes the remaining snow and moisture from the surface. Different edge materials are available so the blower can be configured for the surfaces being maintained and the desired level of scrape.

DESIGNED TO WORK WITH AX/S TORSION TECHNOLOGY

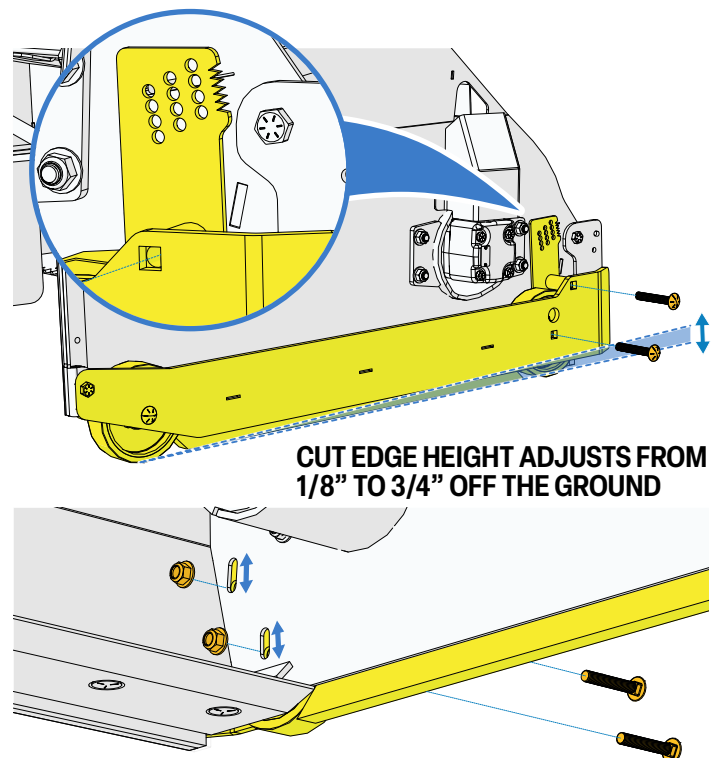
The Dual Cut Edge System works in conjunction with AX/S Torsion Technology to maintain consistent contact with the operating surface. As the blower travels across uneven terrain, AX/S allows it to move independently from the tractor, helping keep both cut edges engaged with the ground for a cleaner, more consistent scrape.

This controlled movement also helps the cutting edges follow changes in the surface rather than forcing the blower into them, reducing the potential for gouging or damage to the substrate. More consistent ground contact distributes wear across the cutting edges more evenly, helping extend edge life and reduce premature or uneven wear.

ADJUSTABLE HEIGHT CUT EDGES

The height of the cut edges can be adjusted by loosening two bolts on each of the curb guards. Use the gauge at the rear of the blower to ensure both sides are equal.

This procedure allows the operator to lower the back end of the blower, moving the primary cut edge closer to the ground for a more aggressive cut.



SECONDARY SCRAPE EDGE OPTIONS



EDGE SELECTION SHOULD BE BASED ON OPERATING SURFACE, SNOW CONDITIONS, AND THE DESIRED FINISHED RESULT.

Rubber provides a strong general-purpose option when a clean surface is the priority, while steel options provide a more aggressive scrape when packed snow and ice are the primary concern.

SCRAPE EDGE	BEST FOR	ADVANTAGES	CONSIDERATIONS
RUBBER	General snow removal, wet snow, finished surfaces	Provides a squeegee-like finish; flexible; forgiving around surface irregularities	Less aggressive on hard-packed snow and ice; wears faster than steel
UHMW PLASTIC	Finished or sensitive surfaces	Low-friction, non-marking and less aggressive toward the surface	Less effective for aggressive scraping of packed snow and ice
STAINLESS STEEL	Hard-packed snow, ice and applications where aggressive scraping is the priority	Most aggressive scrape; durable; effective on difficult packed material with excellent corrosion resistance	Greater potential to mark or damage sensitive surfaces

SECONDARY SCRAPE EDGE PROTECTION

SCRAPE EDGE RELIEF

The secondary scrape edge incorporates a spring-loaded relief function that allows the edge to deflect when it encounters a fixed obstacle such as a raised concrete joint, curb, rock, or other obstruction. Rather than transferring the full impact into the scrape edge, blower, and tractor, the spring system allows the edge to move away from the obstruction and return to its operating position after the obstacle has passed.

The Scrape Edge Relief helps protect the secondary scrape edge, blower, tractor, and operating surface while reducing impact transferred to the operator.



WARNING

The primary high-carbon steel cutting edge is permanently affixed to the blower and does not incorporate the Scrape Edge Spring Relief System.



MAINTENANCE: RELEASING SCRAPE EDGE SPRING TENSION

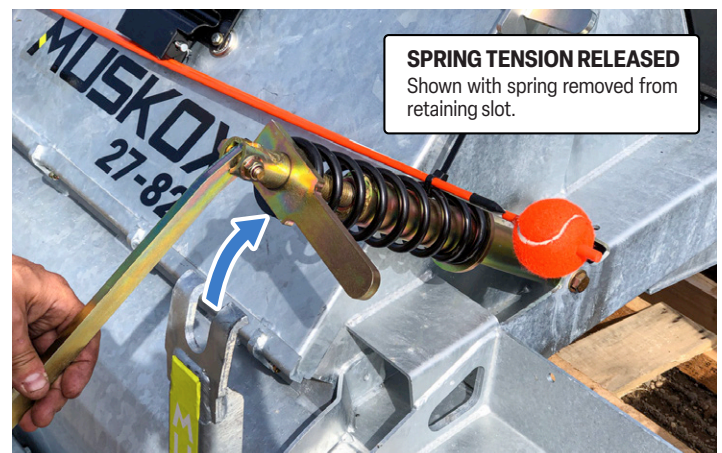
A long adjustment handle at each end of the scrape edge assembly is used to release tension from the spring system. Turn the handles clockwise until spring tension has been fully released.

Once tension has been released on both sides, the secondary scrape edge can be safely serviced or replaced.

RESETTING SCRAPE EDGE SPRING TENSION

After servicing or replacing the secondary scrape edge, align each spring with its retaining slot. Turn the adjustment handles counterclockwise to re-engage spring tension.

Continue adjusting until each spring is properly seated in its slot and firm tension has been restored to the scrape edge.



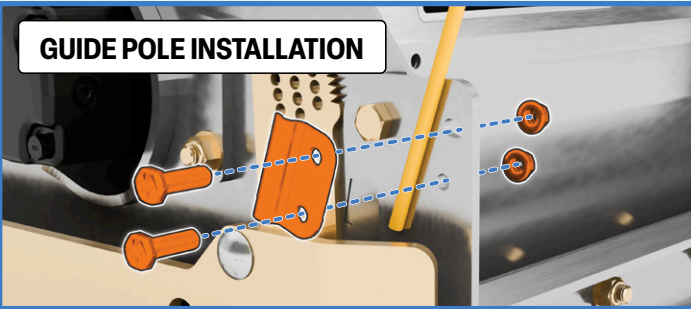
WARNING

The scrape edge springs store significant mechanical energy. Always fully release spring tension using the provided adjustment handles before removing, replacing, or servicing the secondary scrape edge or spring components. Do not remove hardware while the springs are under tension.

GUIDE POLES

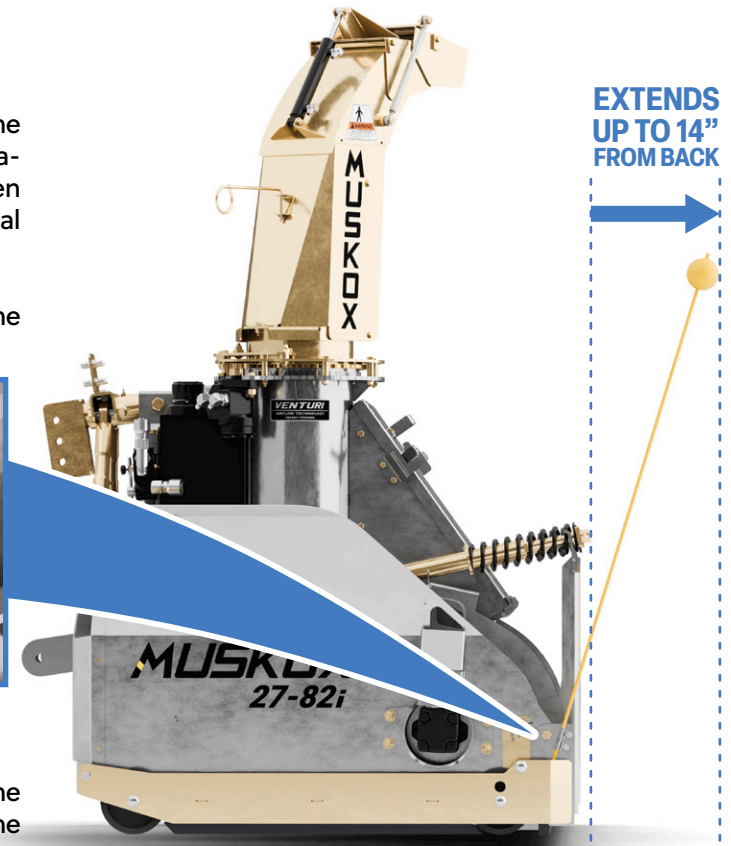
The guide poles provide a visual reference when backing the snowblower toward garage doors, buildings, or other obstacles. The poles help the operator judge the distance between the blower and an obstacle, reducing the risk of accidental contact and damage.

The 5 foot long guide poles extend up to 14 inches from the back of the snowblower.



GUIDE POLE INSTALLATION

Guide poles are attached in the back of both corners of the blower by a bracket & two bolts. The blower ships with the poles un-installed.



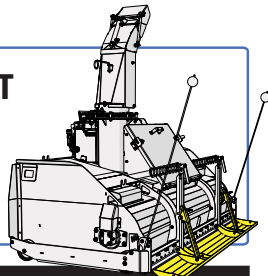
GRAVEL PACKER (OPTIONAL ACCESSORY)

The optional Gravel Packer is designed for snow removal on gravel roads and softer substrates. The attachment trails behind the blower, holding it above the gravel to help prevent rocks from entering the blower or being thrown through the chute. It also packs the remaining snow into a smooth, compacted winter driving surface.

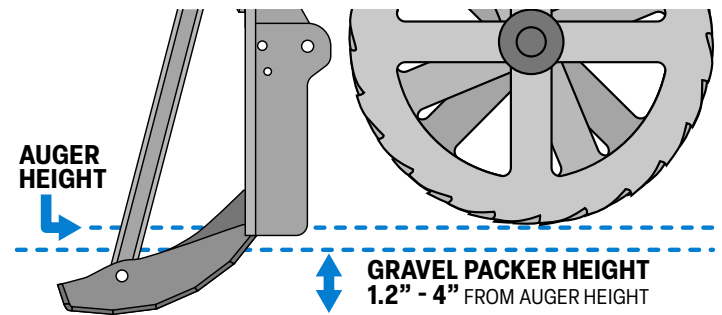
GRAVEL PACKER ATTACHMENT PART # 700-2705

Includes all mounting hardware required.

- GRAVEL PACKER ATTACHMENT - 27-82i
QUANTITY: 1



The Gravel Packer can be stowed up against the back of the blower, allowing normal operations without removing the attachment. The scrape edge trip protection also continues to function normally with this attachment connected.



SPECIFICATIONS

MODEL	27-82i GRAVEL PACKER
DIMENSIONS	82"L x 18"H x 11"D
APPROXIMATE WEIGHT	60 lbs

The distance of the Gravel Packer from the height of the auger is adjustable from 1.2" to 4". This accommodates different operating conditions and works with the AX/S Torsion System, allowing the blower to continue following uneven terrain.

It is attached to the secondary scrape edge. This allows it to benefit from the trip edge protection, should you encounter obstacles while blowing snow. (See page 27 for details.)

WEARABLE KITS

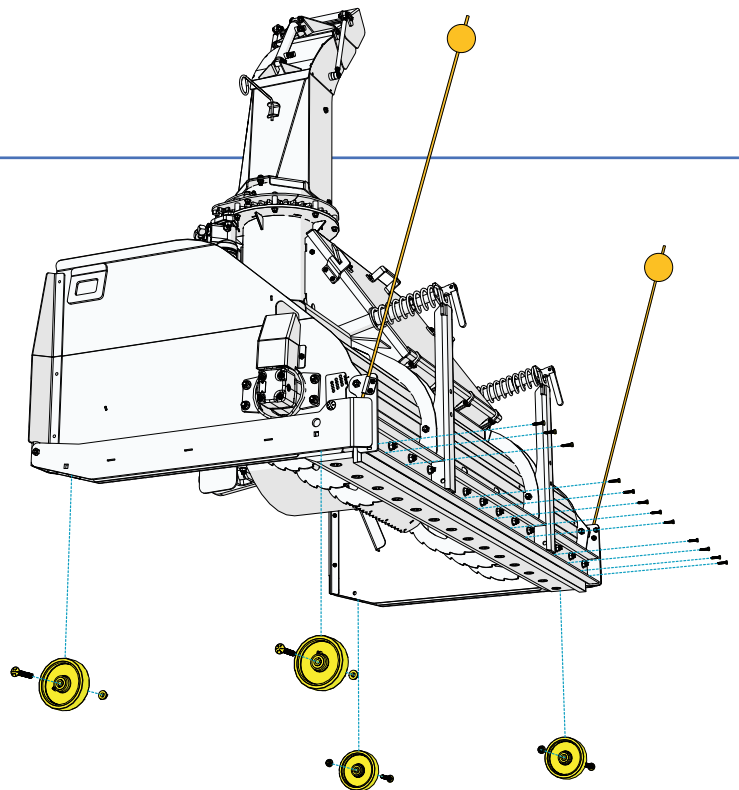
27-82i WEARABLE PARTS KIT

(FOR ALL SCRAPE EDGE OPTIONS BELOW)

PART # 700-2701

Includes the following:

- PTO SLIP CLUTCH PADS (NOT SHOWN)
QUANTITY: 2
- WHEELS - 6" X 11/2"
QUANTITY: 4
- FIBERGLASS GUIDE POLE (WITH ORANGE TENNIS BALLS)
QUANTITY: 4
- LAG BOLT - 1/4" X 11/2"
QUANTITY: 14
- SHEAR BOLT M10 X 60 W/NUT (NOT SHOWN)
QUANTITY: 2
- BOLT - 1/2-13 X 3 1/2" GR 8
QUANTITY: 4
- NUT FLG NYL- 1/2" GR 8
QUANTITY: 4



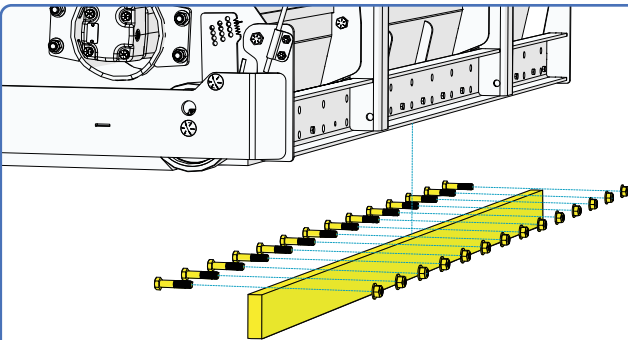
REPLACEMENT RUBBER SCRAPE EDGE KIT

(SECONDARY SCRAPE EDGE ONLY)

PART # 700-2702

Includes the following:

- RUBBER CUT EDGE - 27-82i
QUANTITY: 2
- BOLT HEX-1/2" X 2 1/4"-GR8
QUANTITY: 14
- NUT FLG NYL-1/2"- GR8
QUANTITY: 14



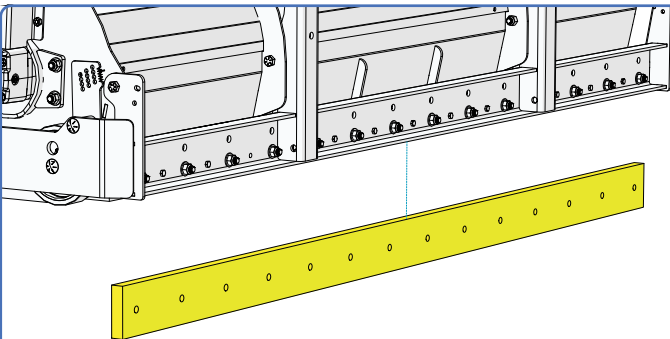
UHMW SCRAPE EDGE KIT

(SECONDARY SCRAPE EDGE ONLY)

PART # 700-2703

Includes the following:

- SCRAPE EDGE - UHMW
QUANTITY: 1



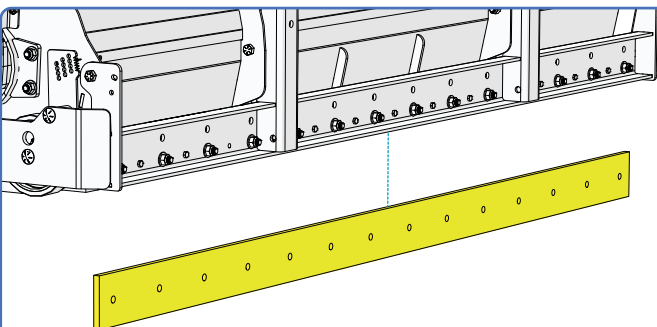
STAINLESS STEEL SCRAPE EDGE KIT

(SECONDARY SCRAPE EDGE ONLY)

PART # 700-2704

Includes the following:

- SCRAPE EDGE - STAINLESS STEEL
QUANTITY: 1



CLEANING & GENERAL STORAGE

The following are best practices for cleaning & storing your galvanized snow blower.

CLEANING YOUR MUSKOX 27-82i

RINSE OFF DIRT AND DEBRIS

- Use a garden hose or pressure washer (low to medium pressure) to remove mud, salt, and grime.
- Avoid high-pressure nozzles at close distance, which can damage coatings.

USE MILD SOAP IF NEEDED

- Wash with a mild detergent (dish soap works well) and a soft brush to remove stuck-on materials.

NOTICE

 **Do not use harsh acids, alkaline cleaners, or aggressive solvents — these can damage the zinc coating.**

REMOVE CORROSIVE MATERIALS PROMPTLY

If the implement has been exposed to:

- Road salt / brine
- Fertilizers
- Livestock waste
- Concrete splash

Rinse thoroughly to prevent chemical attack on the zinc surface.

DRY THOROUGHLY

Let the implement fully dry before storage. Moisture trapped in joints or between plates can lead to white rust on new galvanized surfaces. Allow good airflow.

STORING YOUR MUSKOX 27-82i

- Clean the snow blower thoroughly before storage.
- Inspect for damage or wear and replace parts as needed.
- Lubricate grease fittings.
- Store unit in a dry and protected place. Leaving the unit outside will materially shorten its life.
- Touch up all unpainted surfaces with paint to avoid rust.
- Be sure to allow for adequate airflow. Storing it on a pallet or raised off of the ground is recommended.

ADDITIONAL NOTES ON STORAGE OF GALVANIZED IMPLEMENTS

Proper storage is crucial for preventing "white rust" and ensuring the longevity of your galvanized snow blower.

- **Ventilation & Drainage:** Store implements in a dry, well-ventilated area. If stacking items, ensure they are angled to allow for proper drainage and air circulation between surfaces to prevent water accumulation.
- **Avoid Dampness:** Do not store equipment directly on the ground or in damp, poorly ventilated conditions for extended periods.
- **Protection from Elements:** While galvanized steel is durable, covering newly galvanized items during transport in winter can protect them from de-icing salts, which can cause premature aging.
- **Separation from Dissimilar Metals:** Avoid direct contact with dissimilar metals such as brass or copper, especially in corrosive environments. Use an insulator to create a barrier if contact is unavoidable.
- **Repair Damage:** Regularly inspect the implements for signs of wear, scratches, or damage. Promptly repair any damaged areas with zinc-rich paint or other approved methods in accordance with ASTM A780 Practice to prevent rust from spreading to the underlying steel.

REMOVING THE BLOWER FROM STORAGE

Before returning the blower to service after an extended period of storage, perform a complete inspection and service. Correct any problems found before operating the machine.

CLEAN THE BLOWER

- Clean the blower. Remove dirt, debris, accumulated snow-removal chemicals, and any material that may have collected during storage. Wash with fresh water and a mild detergent as necessary. Allow the machine to dry thoroughly.
- Inspect the galvanized finish. Check galvanized surfaces for damage, excessive corrosion, or areas where the zinc coating has been worn away. Avoid acidic, strongly alkaline, or abrasive cleaning products that may damage the galvanized coating. Remove road salt and deicing chemicals thoroughly.
- Perform a complete visual inspection. Check the frame, shroud, chute, auger, fan, cutting edges, skid shoes, fasteners, guards, shields, and other components for damage, excessive wear, corrosion, or loose/missing hardware.

PTO SYSTEM

- Check guards and shields. Verify that all PTO guards, driveline shields, access covers, and other safety guards are installed, secure, and in good condition.
- Inspect the PTO driveline. Check the PTO shaft, universal joints, telescoping sections, guards, and retaining components for wear or damage. Lubricate all grease points according to the lubrication schedule and verify that the telescoping shaft moves freely.
- Service and test the PTO slip clutch. Friction discs can seize together during extended storage, preventing the clutch from slipping when an overload occurs. Before seasonal operation, service and test the slip clutch according to the procedure in the PTO Slip Clutch section of this manual. Do not assume the clutch is operational simply because the driveline turns normally.

LUBRICATION

- Lubricate the blower. Grease all lubrication points and lubricate other components as specified in the maintenance schedule. Wipe away excess grease that could collect dirt or debris.

HYDRAULIC SYSTEM

- Inspect the hydraulic system. Check the hydraulic pump, reservoir, motors, valves, hoses, fittings, and connections for leaks, damage, abrasion, cracking, or deterioration. Repair damaged components before operation.
- Check the hydraulic fluid. Verify that the reservoir is filled to the specified level. Inspect the fluid for cloudiness, discoloration, unusual odor, sludge, or visible contamination. Do not automatically replace hydraulic fluid solely because the blower has been in storage. Replace contaminated or deteriorated fluid as required.
- Inspect the hydraulic filter. Check the filter and filter restriction indicator, if equipped. Replace the filter if the service interval has been reached, a restriction is indicated, or hydraulic contamination is suspected.
- Inspect hydraulic couplers and connections. Make sure all connections are clean, fully seated, and free from corrosion or damage before operating the system.

FINAL OPERATIONS CHECK

- Check chute operation. Inspect the chute, rotation system, deflector, adjustable rotation stops, cleanout access, and related hydraulic components. Verify that all components move freely and that locking or retaining mechanisms function correctly.
- Check safety decals. Make sure all safety and operating decals are present, clean, and legible. Replace any missing or damaged decals.
- Check attachment points. Inspect the three-point hitch, pins, bushings, retaining clips, and other tractor attachment points for wear or damage.
- Perform an initial operational check. After completing all inspections and attaching the blower correctly to the tractor, start the machine at low PTO speed and allow the hydraulic system to circulate oil before applying a heavy load. Observe the blower for abnormal noise, vibration, leakage, or improper operation.

IMPORTANT: CORRECT ANY LEAKS, DAMAGED COMPONENTS, MISSING GUARDS, LOOSE HARDWARE, OR OTHER UNSAFE CONDITIONS BEFORE PLACING THE BLOWER INTO SERVICE.

BOLT TORQUE SPECIFICATIONS

GENERAL TORQUE SPECIFICATION TABLE

Use the following chart when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.

SAE BOLT TORQUE SPECIFICATIONS

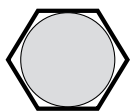
NOTE:

The following torque values are for use with extreme pressure lubricants, plating or hard washer applications. Increase torque 15 when using hardware that is unplated and either dry or lubricated with engine oil.

Bolt Size		SAE GRADE 5 TORQUE				SAE GRADE 8 TORQUE			
		Pounds Feet		Newton-Meters		Pounds Feet		Newton Meters	
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF
1/4	6.35	8	9	11	12	10	13	14	18
5/16	7.94	14	17	19	23	20	25	27	34
3/8	9.53	30	36	41	49	38	46	52	62
7/16	11.11	46	54	62	73	60	71	81	96
1/2	12.70	68	82	92	111	94	112	127	152
9/16	14.29	94	112	127	152	136	163	184	221
5/8	15.88	128	153	174	207	187	224	254	304
3/4	19.05	230	275	312	373	323	395	438	536
7/8	22.23	340	408	461	553	510	612	691	830
1	25.40	493	592	668	803	765	918	1037	1245
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103

BOLT HEAD IDENTIFICATION MARKS AS PER GRADE

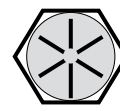
NOTE: Manufacturing Marks Will Vary



GRADE 2
No Markings



GRADE 5
3 Radial Lines



GRADE 8
6 Radial Lines

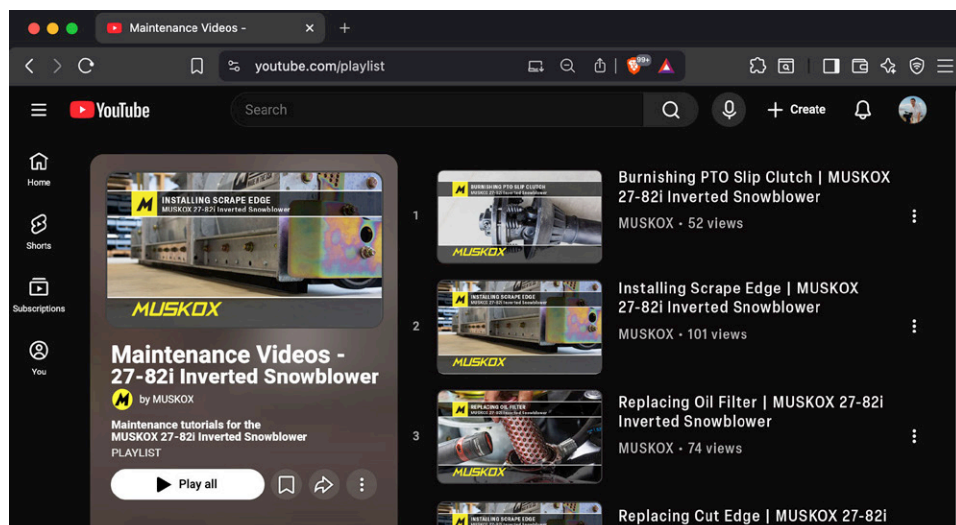
NOTE:

Nylock nuts are utilized when greater resistance to vibrating loose is required, and greater operating temperatures are not a factor. In addition, like lock nuts, nylock nuts have a safety feature that if the bolt does vibrate loose, the nut will remain on the screw. Install nylock nuts to the standard torque shown above.

TORQUE SPECIFICATIONS FOR UHMW (PLASTIC) PARTS:

Fasteners attached to UHMW (plastic) parts should ONLY be tightened to secure part. DO NOT OVERTIGHTEN or damage may occur to plastic part.

MAINTENANCE VIDEOS AND RESOURCES



LOCATING MAINTENANCE VIDEOS AND RESOURCES

To review our extensive library of step-by-step maintenance videos and resources, please visit www.muskoxmn.com/support or simply use the QR code to the right.



Refer to our video resources online for more information on this and other maintenance issues at www.muskoxmn.com/support

READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.



MAINTENANCE SCHEDULE

BEFORE EACH USE

Check and tighten all hardware and fasteners
Check hydraulic fluid level.
Inspect hydraulic hoses, fittings, pump, valves, and motors for leaks or damage.
Inspect the PTO driveline and guards for damage and proper installation.
Verify that all shields, covers, and access doors are installed and secured.
Inspect the auger, fan, chute, and cutting edges for damage or excessive wear.
Check the chute and deflector for proper operation.
Inspect the blower for any condition that could affect safe operation.

EVERY 8 HOURS / DAILY

Lubricate PTO driveline grease points.
Lubricate designated snow blower grease points.
Check the PTO shaft telescoping sections for free movement.
Inspect the PTO slip clutch and driveline for signs of overheating, slipping, or damage.
Inspect cutting edges, skid shoes, and other ground-contact components for wear.

EVERY 40 HOURS

Inspect three-point hitch pins, bushings, and attachment points for wear.
Inspect the chute rotation and deflector mechanisms.
Inspect hydraulic hoses for abrasion, cracking, weathering, or deterioration.
Inspect hydraulic oil filter for debris or sediment.
Check the hydraulic reservoir breather and clean or service as required.

EVERY SEASON

Hydraulic Oil: Replace the hydraulic oil at the beginning of the winter season.
Hydraulic Filter: Replace the hydraulic oil filter at the beginning of the winter season. <ul style="list-style-type: none"> • Replace the filter sooner if hydraulic oil becomes contaminated or the hydraulic system has been opened for service. • Check the hydraulic oil level after filter replacement and add the specified oil as necessary.

BEGINNING OF EACH SEASON OR AFTER EXTENDED STORAGE

Perform the complete Removing the Blower From Storage inspection. (See page 31)
Replace hydraulic oil and oil filter.
Service and test the PTO slip clutch to verify that the friction discs have not seized during storage.
Lubricate all grease points.
Inspect the PTO driveline, universal joints, telescoping sections, and guards.
Inspect hydraulic fluid condition and level.
Inspect the complete hydraulic system for leaks, deterioration, or damage.
Inspect the galvanized finish and clean away dirt, road salt, or other corrosive contaminants.
Check all safety decals and replace any that are missing or illegible.
Perform a low-speed operational check before returning the blower to normal service.

END OF SEASON / BEFORE STORAGE

Thoroughly clean the blower and remove accumulated dirt, salt, and deicing chemicals.
Allow the blower to dry before storage.
Inspect the galvanized finish and address damaged areas as required.
Inspect and service the PTO driveline.
Inspect the hydraulic system for leaks or damage.
Inspect and clean the auger, fan, chute, and snow recycling passages.
Repair damaged components and replace missing hardware before storage.
Store the blower in a clean, dry location whenever possible.

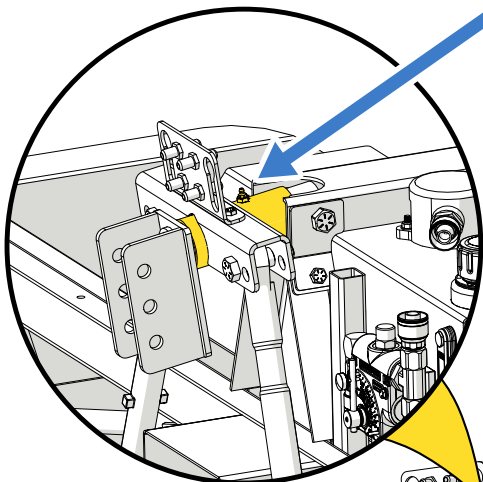
NOTE:

Service intervals shown in this schedule should be considered minimum requirements. Severe operating conditions, heavy use, contamination, or prolonged exposure to road salt and moisture may require more frequent inspection and maintenance.

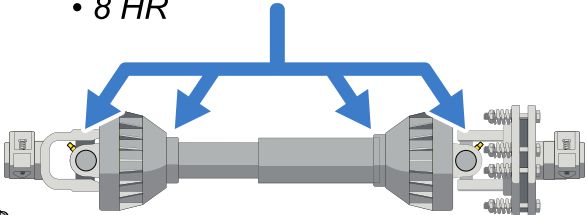
GREASE POINTS

GREASE POINTS

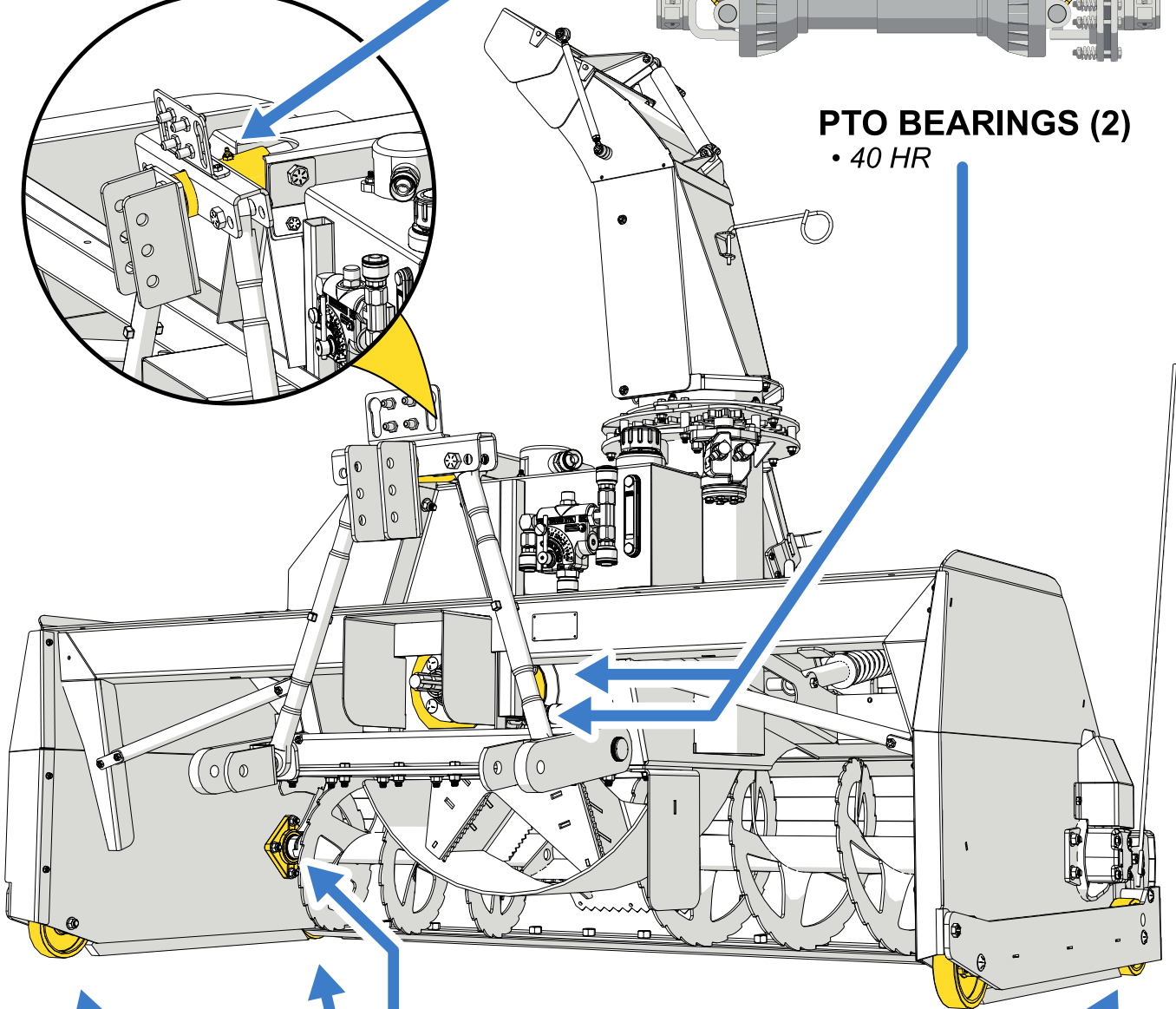
AXIS TORSION (1)
• 40 HR



PTO SHAFT U-JOINT (4)
• 8 HR



PTO BEARINGS (2)
• 40 HR



AUGER BEARING (1)
• 40 HR

WHEELS (4)
• 8 HR

TROUBLESHOOTING

Before inspecting, servicing, adjusting, or clearing an obstruction: Disengage the PTO, lower the blower to the ground, set the parking brake, shut off the tractor engine, remove the key, and wait for all moving components to come to a complete stop.

PROBLEM	POSSIBLE CAUSE	SOLUTION
AUGER WILL NOT TURN	Flow control valve closed or set too low	Open flow control valve and adjust to desired auger speed.
	Obstruction lodged in auger	Shut down the machine and remove the obstruction.
	Low Hydraulic Oil	Check reservoir sight gauge. Add specified hydraulic oil as required.
	Hydraulic system problem	Inspect hoses, fittings, filter, and hydraulic pump.
AUGER STOPS OR SLOWS UNDER LOAD	Foreign object or excessive load causing hydraulic bypass to activate	Stop operation and inspect the auger for an obstruction.
	Auger feeding snow too quickly	Reduce auger speed with the variable flow control valve.
FAN WILL NOT TURN	PTO not engaged or driveline not properly connected	Verify PTO engagement and driveline connections.
	Fan obstructed	Shut down the machine and clear the obstruction.
	PTO shear bolt broken	Inspect and replace with the specified shear bolt.
FAN SLOWS OR STOPS UNDER LOAD	PTO slip clutch slipping	Inspect and service the slip clutch.
	Excessive snow entering fan	Reduce travel speed and/or auger speed.
POOR SNOW THROWING DISTANCE	PTO operating below rated speed	Operate the tractor at the engine speed required to produce 540 PTO RPM.
	Auger speed incorrect for snow conditions	Adjust the variable flow control valve.
	Chute or fan obstructed	Shut down the machine and remove accumulated snow or ice.
CHUTE PLUGS FREQUENTLY	Wet or heavy snow	Reduce travel speed and auger speed.
	Chute throat restricting snow flow	Consider removing the chute throat when operating in warm or wet snow.
	Snow or ice buildup	Shut down the machine and clear the chute using the cleanout access.
CHUTE WILL NOT ROTATE OR TILT	Hydraulic connection or tractor remote issue	Inspect hydraulic connections and tractor hydraulic controls.
	Snow or ice restricting movement	Shut down the machine and remove the obstruction.
EXCESSIVE VIBRATION OR UNUSUAL NOISE	Ice or debris accumulated in fan	Shut down the machine and inspect the fan and housing.
	Loose or damaged component	Inspect the fan, PTO driveline, mounting hardware, and blower for damage. Do not operate until corrected.

TROUBLESHOOTING (CONT.)

Before inspecting, servicing, adjusting, or clearing an obstruction: Disengage the PTO, lower the blower to the ground, set the parking brake, shut off the tractor engine, remove the key, and wait for all moving components to come to a complete stop.

PROBLEM	POSSIBLE CAUSE	SOLUTION
BLOWER DOES NOT SCRAPE EVENLY	Blower not properly leveled	Follow the blower leveling procedure and verify proper three-point hitch adjustment.
	Cut edges worn or improperly adjusted	Inspect, adjust, or replace the cut edges as required.
	AX/S Torsion movement restricted	Inspect the AX/S system for interference or obstruction.
PTO SLIP CLUTCH SLIPS EXCESSIVELY	Slip clutch improperly adjusted	Inspect and adjust the slip clutch according to the slip clutch procedure.
	Friction discs worn or contaminated	Inspect and replace components as required.
SLIP CLUTCH DOES NOT SLIP WHEN OVERLOADED	Friction discs seized after storage	Burnish the slip clutch according to the maintenance procedure.
	Slip clutch adjusted too tightly	Perform the specified slip clutch adjustment procedure.



Refer to our video resources online for more information on this and other maintenance issues at www.muskoxmn.com/support

WARRANTY

LIMITED WARRANTY

MUSKOX 27-82i

We stand behind our engineering — and our customers. Every new MUSKOX 27-82i is backed by a **2-year limited warranty**, starting from the date of retail purchase. Contact us if there's a defect in **materials** or **workmanship**.

WHAT'S COVERED

This Limited Warranty covers **MUSKOX-manufactured components** found to be defective during the warranty period. We will, upon inspection confirming a defect in materials or workmanship:

- **Repair or replace** the defective part.
- Cover parts and/or labor as needed.*

* Warranty coverage for labor, travel, or related service expenses is determined by MUSKOX based on the nature of the repair.

WHAT'S NOT COVERED

(WEAR PARTS & OTHER EXCLUSIONS)

Certain parts naturally wear down over time. These are considered **wear parts** and are not covered under this Limited Warranty.

Examples include:

Auger teeth, scraper blades, cutting edges, glide shoes, bearings, rubber deflectors and similar contact components.

Also not covered:

- Improper use or maintenance
- Unauthorized repairs or modifications
- Non-MUSKOX replacement parts
- Accidental or impact-related damage

WARRANTY REGISTRATION

The warranty period begins on the original retail purchase date. If the original retail purchase date cannot be verified through product registration or acceptable proof of purchase, MUSKOX reserves the right to determine the warranty start date based on available sales records, including the date the product was sold to an authorized dealer.



How to Register:

- Scan this QR code
- Visit our website: www.muskoxmn.com/support
- Or call us at: **218-288-1905**

LEGAL NOTES

This Limited Warranty shall be governed by the laws of the State of North Dakota. Any disputes arising under this warranty shall be resolved in the State of North Dakota. If any provision of this warranty is found unenforceable, the remaining provisions shall remain in effect.

This Limited Warranty replaces all other warranties — **express or implied** — including merchantability or fitness for a particular purpose to the extent permitted by applicable law.

MUSKOX is not liable for indirect, special, or consequential damages.* Our responsibility is limited to **repair or replacement** of the defective part.

* Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

QUESTIONS? NEED HELP?

We're here to support you — before, during, and after the snow flies.

Browse video tips and full warranty info at:

- www.muskoxmn.com/support
- 218-288-1905

RECAP: YOUR RESPONSIBILITIES

- Register within 30 days to ensure timely warranty support.
- Maintain your equipment per manual
- Contact us with questions — we're here to help

WARRANTY PROCESS (QUICK OVERVIEW)

STEP	ACTION
1	Register your machine within 30 days of purchase via QR code or our website
2	If an issue arises, contact us directly by phone or through our support site
3	We may request the part be shipped to us (freight pre-paid) for inspection
4	If covered, we'll repair or replace the part under warranty
5	Claim must be submitted within 45 days of the repair

NOTES

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

MUSKOX

MUSKOX

BRING IT. DO IT. OWN IT.

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