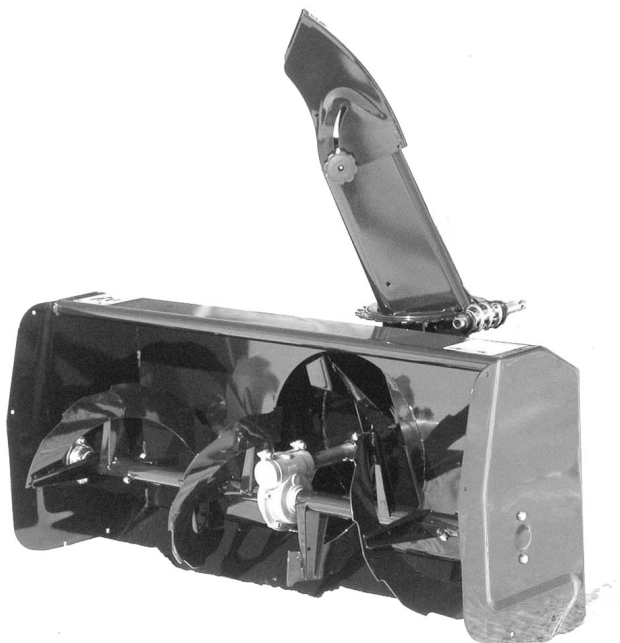




OWNER'S MANUAL
Model Number

700474-1 Snowblower 44"
700478-1 Snowblower 48"



BERCO
Northeast Two Stage 44" & 48" Snowblower
for electric lift
FITS ON LAWN, YARD & GARDEN TRACTORS

- * ASSEMBLY
- * OPERATION
- * REPAIR PARTS
- * MAINTENANCE

CAUTION:
READ & FOLLOW ALL SAFETY RULES & INSTRUCTIONS BEFORE
OPERATING YOUR EQUIPMENT



LIMITED WARRANTY

Conditions and Products Covered:

BERCOMAC guarantees any part of the product or accessory manufactured by BERCOMAC and found in the reasonable judgment of BERCOMAC to be defective in material and or workmanship will be repaired or replaced by an authorized dealer without charge up to our maximum labor rates and pre-established times. For replacement parts only standard ground freight services are covered. This warranty extends to the original retail purchaser only and is not transferable to any subsequent purchasers.

Warranty Period

(from date of the original retail purchase)

- Residential use: 1 year
- Semi-commercial, professional or rental use: 90 days

Exceptions Noted Below; the following items are guaranteed by the original manufacturer and have their own warranty, conditions and limited time:

- Tire Chains: 90 days
- Engines: Will vary as per the manufacturer
Please refer to the engine manufacturer's warranty statement included with the unit. BERCOMAC is not authorized to handle warranty adjustments on engines.

Items and Conditions NOT Covered:

This warranty does not cover the following:

- Pick-up or delivery charges or in-home services fees.
- Any damage or deterioration of the unit, parts and or finish of these due to normal use, wear and tear, or exposure.
- Cost of regular use or maintenance service or parts, such as gas, oil, lubricants, tune-up parts, and adjustments.
- Any part or accessory which has been altered, modified, misused, neglected, accidentally damaged or not properly installed, maintained, stored or repaired not in accordance with the instructions in the owner's manual.
- Repair due to normal wear and or any wear items such as shear pins, bolts, belts, etc.
- Expedited freight fee services for replacement parts.
- Shear bolts and shear pins are to be considered as a preventive measure not as an assured protection, any damages resulting from the lack of shear bolts breakage are not covered.

NOTE: All warranty work must be performed by an authorized dealer using original (manufacturer) replacement parts.

NOTE: Bercomac reserves the right to change or improve the design of any part or accessory without assuming any obligation to modify any product previously manufactured.

Instructions for Obtaining Warranty Services:

Contact dealer where equipment was purchased or any other BERCO service dealer to arrange service at their dealership. To locate a dealer convenient to you, access our website at www.bercomac.com. Don't forget to bring your proof of purchase (sales receipt) to the BERCOMAC dealer.

Owner's Responsibilities:

BERCOMAC's defective equipment or part must be returned to an authorized dealer within the warranty period for repairs. In the event that defective merchandise must be returned to manufacturer for repairs, freight fees are prepaid and a written authorization from BERCOMAC must be obtained by dealer prior to the shipment. This warranty extends only to equipment operated under normal conditions. To validate a warranty claim, it is the user's responsibility to maintain and service the unit as specified in the owner's manual or to have the unit serviced at their dealer at their expense.

General Conditions:

The sole liability of BERCOMAC with respect to this warranty shall be strictly and exclusively repair and replacement as mentioned herein. BERCOMAC shall not have any liability for any other costs, loss or damage, including but not limited to, any incidental or consequential loss or damage.

In particular, without being limited to, BERCOMAC shall have no liability or responsibility for:

- Travel time, overtime, after hours time or other extraordinary repair charges or relating to repairs and or replacements outside of normal business hours.
- Rental of like or similar replacement equipment during the period of any, repair or replacement work.
- Any communicating or travel charges.
- Loss or damage to person or property other than that covered by the terms of this warranty.
- Any claims for lost revenue, lost profit or any similar costs as a result of damage or repair.
- Attorney's fees.

BERCOMAC's responsibility in respect to claims is limited to making the required repairs or replacement without charge up to our maximum labor rates and pre-established times and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any product or accessory.

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

TABLE OF CONTENTS

| | PAGE |
|---|------|
| INTRODUCTION | 2 |
| SAFETY PRECAUTIONS | 3 |
| SAFETY DECALS | 5 |
| ASSEMBLY | |
| Tools Required | 6 |
| Step 1: Snowblower Preparation | 6 |
| Step 2: Snowblower Installation | 7 |
| OPERATION | |
| Snowblower Operation | 8 |
| Controls | 8 |
| Clearing a Clogged Discharge Chute | 8 |
| Verify Tire Pressure | 8 |
| Adjust Skid Shoes | 8 |
| MAINTENANCE | |
| Adjustments | 9 |
| Lubrication | 9 |
| Cutting Edge Maintenance | 9 |
| Augers and Fan Shear Bolt Replacement | 9 |
| Belt Installation, Adjustment and Replacement | 10 |
| Replacement of one or two sections of the auger and / or gear box | 11 |
| DISMOUNTING & STORAGE | |
| Snowblower Dismounting | 12 |
| Storage | 12 |
| TROUBLESHOOTING | 13 |
| PARTS BREAKDOWN AND PARTS LIST | |
| Chute | 16 |
| Snowblower | 18 |
| TORQUE SPECIFICATION TABLE | 22 |
| OPTIONS & ATTACHMENTS | 23 |

INTRODUCTION

TO THE PURCHASER

This new accessory was carefully designed to give years of dependable service. This manual has been provided to assist in the safe operation and servicing of your attachment.

NOTE: All photographs and illustrations in the manual may not necessarily depict the actual models or attachment, but are intended for reference only and are based on the latest product information available at the time of publication.

Familiarize yourself fully with the safety recommendations and operating procedures before putting the machine to use. Carefully read, understand and follow these recommendations and insist that they be followed by those who will use this attachment.



THIS SAFETY ALERT SYMBOL IDENTIFIES AN IMPORTANT SAFETY MESSAGE IN THIS MANUAL THAT HELPS YOU AND OTHERS AVOID PERSONAL INJURY OR EVEN DEATH. DANGER, WARNING, AND CAUTION ARE SIGNAL WORDS USED TO IDENTIFY THE LEVEL OF HAZARD. HOWEVER, REGARDLESS OF THE HAZARD, BE EXTREMELY CAREFUL.

DANGER: Signals an extreme hazard that will cause serious injury or death if recommended precautions are not followed.

WARNING: Signals a hazard that may cause serious injury or death if the recommended precautions are not followed.

CAUTION: Signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed.

Record your attachment serial number and purchase date in the section reserved below (there is no serial number on the subframe). Your dealer requires this information to give you prompt, efficient service when ordering replacement parts. Use only genuine parts when replacements are required.

If warranty repairs are required please present this registration booklet and original sales invoice to your selling dealer for warranty service.

This manual should be kept for future reference.

Please check if you have received all the parts for your kit with the list of the bag and the list of the box.

| | |
|---|--|
| SERIAL NUMBER : (IF APPLICABLE) | |
| MODEL NUMBER: | |
| PURCHASE DATE : | |



SAFETY PRECAUTIONS



Careful operation is your best insurance against an accident. Read this section carefully before operating the vehicle and accessory. This accessory is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury. All operators, no matter how experienced they may be, should read this and other manuals related to the vehicle and accessory before operating. It is the owner's legal obligation to instruct all operators in safe operation of the accessory.

GLOSSARY:

In this manual, right and left sides are determined by sitting on the seat of the vehicle facing forward.

In this manual, "accessories" means attachments (snowblower, rotary broom, blade etc.) that you install on the vehicle (lawn tractors, A.T.V. s etc).

TRAINING:



This symbol, "Safety Alert Symbol", is used throughout this manual and on the accessory's safety labels to warn of the possibility of serious injury. Please take special care in reading and understanding the safety precautions before operating the vehicle and accessory.

1. Read this owner's manual carefully. Be thoroughly familiar with the controls and proper use of the vehicle and accessory. Know how to stop the unit and disengage the controls quickly.
2. Never allow children to operate the vehicle nor the accessory. Never allow adults to operate the vehicle nor the accessory without proper instructions.
3. No one should operate the vehicle nor the accessory while intoxicated or while taking medication that impairs the senses or reactions.
4. Keep the area of operation clear of all people, particularly small children and pets.

PREPARATION:

1. Thoroughly inspect the area where the accessory is to be used and remove door mats, all foreign objects and the like.
2. For motorized accessories, disengage all clutches and shift into neutral before starting engine.
3. Do not operate the accessory without wearing adequate winter outer garments. Avoid loose fitting clothing that can get caught in moving parts. Wear footwear that will improve footing on slippery surfaces.

4. Handle fuel with care, it is highly flammable.
 - a) Use approved fuel container.
 - b) Never add fuel to a running engine or hot engine.
 - c) Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
 - d) Never fill containers inside a vehicle, or on a truck or a trailer bed with a plastic liner. Always place containers on the ground, away from your vehicle, before filling.
 - e) When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
 - f) Keep the nozzle in contact with the rim of the fuel tank or container opening at all times, until refueling is complete. Do not use a nozzle lock-open device.
 - g) Replace fuel cap securely and wipe up spilled fuel.
 - h) If fuel is spilled on clothing, change clothing immediately.
5. Never attempt to make any adjustments while the engine (motor) is running (except when specifically recommended by manufacturer).
6. Let the vehicle and accessory adjust to outdoor temperatures before using.
7. Never use an accessory without proper guards, plates, or other safety protective devices in place
8. Always make sure to wear the appropriate safety equipment required (glasses, muffs, mask...) for each type of product. See operation section.
9. Always make sure of having safe traction on the vehicle by using the recommended accessories (chains, A.T.V. tracks, counterweights...). See operation section.
10. Always make sure the all components are correctly installed. (driveline securely attached and locked at both ends, belts properly installed...)
11. Always handle the winch cable with thick leather gloves.
12. **Never modify the accessory or any part without the written consent from the manufacturer.**



SAFETY PRECAUTIONS



OPERATION:

1. Do not put hands or feet near, under or inside rotating parts.
2. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
3. After striking a foreign object, stop the engine (motor), disconnect the wire from the spark plug(s) and keep wire away to prevent accidental starting. Thoroughly inspect the accessory for any damage and repair damage before restarting and using the accessory.
4. If the unit should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning of trouble.
5. Take all possible precautions when leaving the vehicle unattended. Disengage the power take-off, lower the attachment, place the transmission into neutral, set the parking brake, stop the engine and remove the contact key.
6. Do not run the engine indoors, except when starting the engine and for transporting in or out of the building. Do not operate or let motor run in a storage area without ventilation because gas contains carbon monoxide which is odorless, colorless and can cause death.
7. Never use the accessories across the face of slopes, go from top to bottom. Exercise extreme caution when using equipment on slopes. Do not attempt to clear a steep slope.
8. Never tolerate bystanders in the working zone. Never use an accessory in the direction of bystanders, it might throw gravel or debris that can hurt people or damage property.
9. Never operate the accessory at high transport speeds on slippery surfaces. Use care when backing up.
10. Do not carry passengers.
11. Disengage power to the accessory when it is transported or not in use.
12. Never operate the accessory without good visibility or light.
13. Keep the accessory away from heat sources or flames.
14. Never handle the winch cable or hook while in tension.

MAINTENANCE AND STORAGE

1. When cleaning, repairing or inspecting the vehicle and accessory, make certain that all moving parts have stopped. For gasoline engine, disconnect wire from the spark plug(s) and keep wire away to prevent accidental starting.
2. Check all the bolts and components at frequent intervals to make sure that they are properly tightened.
3. Never store a motorized accessory with fuel in the fuel tank inside a building where ignition sources are present such as hot water and space heaters, clothes dryers, and the like. Allow the engine to cool before storing in any enclosure.
4. Always refer to the owner's manual when you store the accessory and vehicle for a prolonged or an unspecified length of time.
5. Maintain or replace safety and instruction labels, as necessary.
6. For winter accessories, (if applicable), let the engine run for a few minutes after clean snow in order to prevent the rotary parts from freezing.
7. Inspect the vehicle's and accessory's air filter (if applicable) every day. Clean it or replace it as necessary. Change the oil more often when working in dusty conditions. See the vehicle's and accessory's owner's manual.



**THIS SYMBOL MEANS
DANGER !
BECOME ALERT !
YOUR SAFETY IS INVOLVED !**



SAFETY DECALS



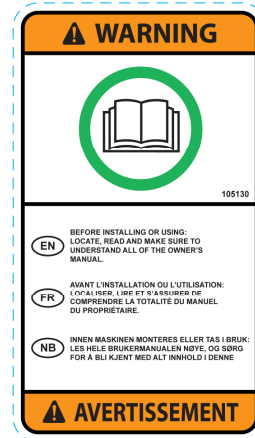
**REPLACE IF DECALS ARE DAMAGED
SEE PARTS BREAKDOWN FOR DECAL LOCATION**

DECAL #105126



To avoid serious injury:
Keep hands, feet & clothing away from rotating auger while engine is running.

DECAL #105130



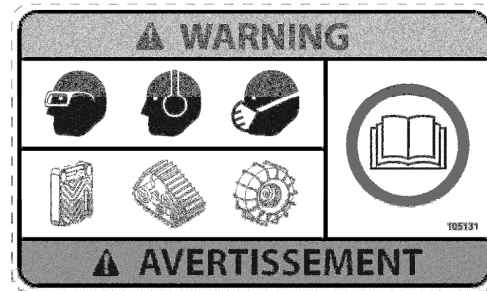
Before installing or using:
Locate, read and make sure to understand all of the owner's manual.

DECAL #105127



To avoid serious injury:
Keep hands out of this discharge chute while engine is running.

DECAL #105131



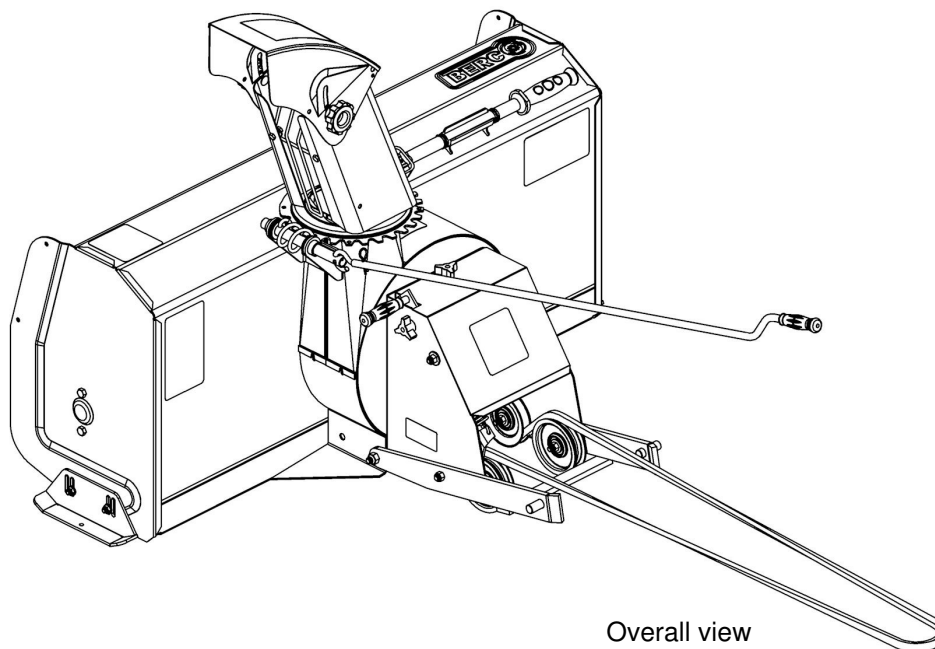
Refer to owner's manual about wearing safety glasses, ear muffs and mask.
Refer to owner's manual for use of counter weights, cat tracks and tire chains.

DECAL #105128



To avoid injury from drive belt:
Keep hands, feet & clothing away.
Do not attempt to install or remove drive belt without reading owner's manual.

ASSEMBLY



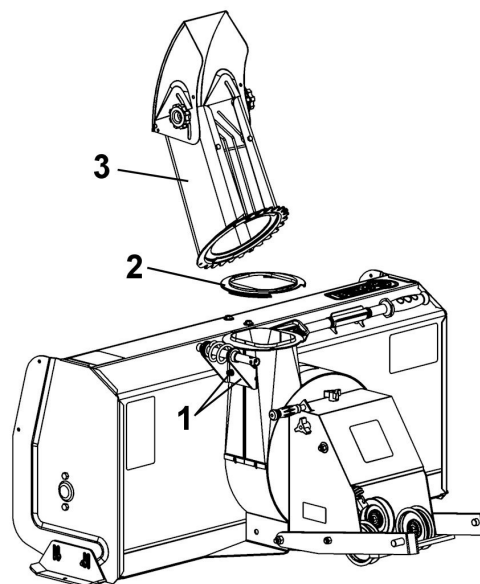
TOOLS REQUIRED:

1 Wrench, 1/4"

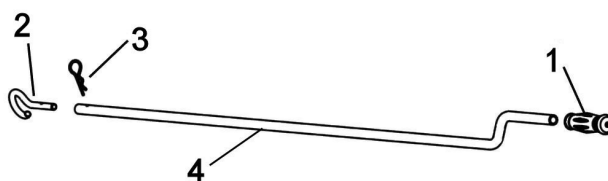
SNOWBLOWER PREPARATION:

Refer to parts breakdown section for parts identification.

| Install the chute (item 3). | | |
|-----------------------------------|-------------------|--|
| Item # | Description | Action |
| 1 | Flange nut (qty2) | Loosen to last threads. |
| 2 | Rotation ring | Install over opening. |
| 3 | Chute | Place as shown, turn to lock into place. |
| Firmly retighten the flange nuts. | | |



| Prepare handle(item 4). | | |
|--|----------------|------------------------|
| Item # | Description | Action |
| 1 | Hand grip | Install on handle. |
| 2 | Hook | Install on handle. |
| 3 | Hair pin 2.5mm | Secure hook on handle. |
| Store these parts safely until you install the snowblower. | | |



OPERATION



WARNING



Read the tractor Owner's Manual carefully. Be thoroughly familiar with the controls & proper use of the attachment. Know how to stop the attachment quickly.

SNOWBLOWER OPERATION

- Make sure the snowblower is clear of snow before engaging the snowblower.
- Make sure that the auger and impeller operate freely.
- Start the tractor engine.
- Before engaging the snowblower drive, always have the engine running at medium R.P.M.
- When removing snow, do not use the snowblower as a dozer blade to push snow. Allow snowblower to ingest snow at its own speed. If the speed of your tractor is too fast, the snowblower may become overloaded and plug.

IMPORTANT: USE FULL ENGINE R.P.M. WHEN REMOVING WET OR STICKY SNOW. LOW R.P.M. WILL TEND TO PLUG THE CHUTE.

CLEARING A CLOGGED DISCHARGE CHUTE:



WARNING



Hand contact with the rotating impeller inside the discharge chute is the most common cause of injury associated with snowblowers. Never use your hand to clean out the discharge chute.

- Do not attempt to clear plugged chute, auger or fan of snow while the snowblower's engine is running.
- Disengage snowblower.
- Lower snowblower to the ground and set parking brake.
- SHUT THE ENGINE OFF & REMOVE KEY!**
- Wait 10 seconds to be sure that all moving parts such as the impeller blades have stopped moving.
- Disconnect wire from the spark plug(s) and keep wire away to prevent accidental starting.
- Always use the clean-out tool (chute shovel) supplied with this snowblower, **NOT YOUR HANDS**

VERIFY TIRE PRESSURE:

Tire pressure must be even on both sides of tractor according to the owner's manual of the vehicle.



WARNING



TO PREVENT INJURIES AND FOR MORE TRACTION WHEN USING AN ATTACHMENT:

- Rear counterweight of 100 lbs. minimum is required to counterbalance the attachment's weight.
- Manufacturer approved tire chains are required.
- Do not operate on a slope greater than 10°.
- When dismantling the attachment remove rear counterweights.

CONTROLS

CHUTE ROTATION

The chute rotation handle is located to the left of steering wheel. Turning the handle in a clockwise direction, the discharge chute will turn in a clockwise direction or vice versa.

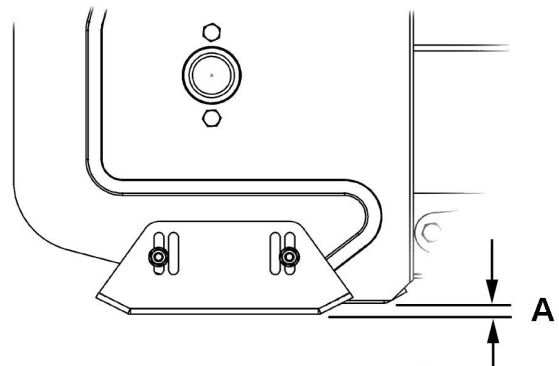
CHUTE DEFLECTOR

Set the angle of the deflector according to the distance the snow must be thrown. To change the deflector angle, loosen the two deflector knobs & adjust the deflector to the appropriate angle.

VERIFY SKID SHOE ADJUSTMENT:

LEVEL PAVED SURFACE: Adjust skid shoes to allow 3/16" to 1/4" or 5mm to 7mm clearance (A) between cutting edge and surface.

UNEVEN OR GRAVEL SURFACE: Adjust skid shoes to allow 1/2" to 5/8" or 13mm to 16mm clearance (A) between cutting edge and surface.



Adjust skid shoes

INSTALLATION

STEP 2

SNOWBLOWER INSTALLATION:

You must install the subframe and drive mechanism before continuing to install the snowblower.



WARNING



TO PREVENT INJURIES:

Stop the motor.

Apply parking brake.

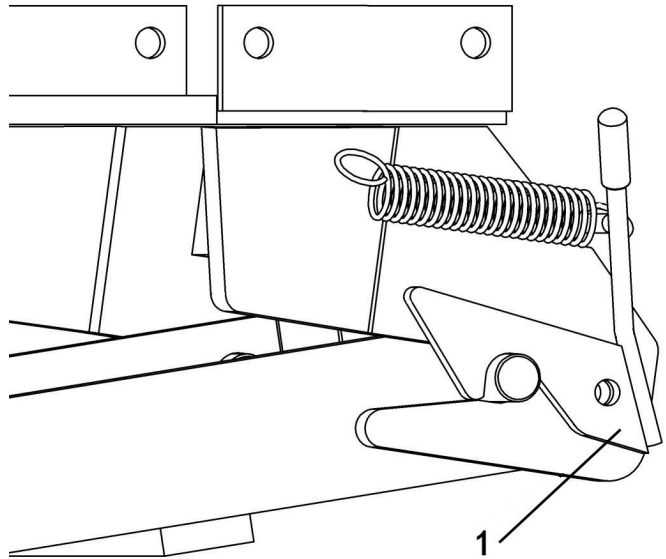
Remove the ignition key.

Disconnect the wire from the spark plug(s) and keep away from spark plug(s) to prevent accidental starting.

Attach the snowblower to the subframe as shown. Make sure the snowblower is pushed in until locked into place by the lock (item 1).

Install belts.

NOTE: See the belt installation instructions in the Maintenance section.



Insert the snowblower in the lock.



CAUTION



The belt tension arm & needs to be held firmly while displacing to prevent injury.



CAUTION



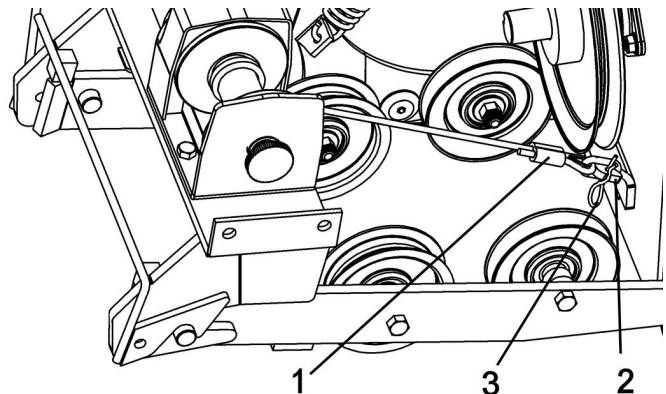
Never use the snowblower without the belt guard.

After installing the belt, hook the winch cable (item 1) to the hook (item 2) and secure with a 2.5mm hair pin (item 3).

Familiarize yourself with the winch control and make sure the cable stays wrapped from the bottom of the drum of the winch. See picture of the winch in the subframe's owner manual.

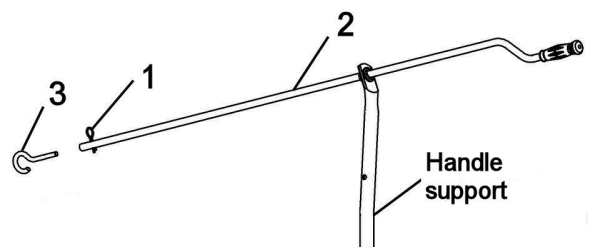
Lift and lower the snowblower using the switch.

When lowering the accessory, release the switch of the winch control as soon as the accessory touches the ground.



Install the cable

| Install handle (item 2). | | |
|--------------------------|-------------|--|
| Item # | Description | Action |
| 1 | Hair pin | Remove from handle. |
| 2 | Handle | Insert in handle support. |
| 3 | Hook | Insert in handle and secure with hair pin. |



Install handle

MAINTENANCE

Refer to parts breakdown section for parts identification.



WARNING



TO PREVENT INJURIES:

Stop the motor.
Apply parking brake.
Remove the ignition key.
Disconnect the wire from the spark plug(s) and keep away from spark plug(s) to prevent accidental starting.



CAUTION



TO PREVENT INJURIES:

-Check mounting bolts at frequent intervals for proper tightness in order to prevent costly repairs.
-Make sure your snowblower is in safe working condition.
-Provide adequate blocking before working under snowblower when in raised position.

SKID SHOE ADJUSTMENT:

LEVEL PAVED SURFACE: Adjust skid shoes to allow 3/16" to 1/4" or 5mm to 7mm clearance (A) between cutting edge and surface.

UNEVEN OR GRAVEL SURFACE: Adjust skid shoes to allow 1/2" to 5/8" or 13mm to 16mm clearance (A) between cutting edge and surface.

CUTTING EDGE MAINTENANCE

Verify from time to time the wearing on the cutting edge to make sure you do not wear out the base of the snowblower's chassis. This cutting edge is reversible.

SNOWBLOWER PULLEY REPLACEMENT or ALIGNMENT:

Clean the parts before aligning or replacing the pulley. Apply some "Loctite" 2760 on the key and the set screws. Tighten firmly. (Use heat to soften the "loctite" when removing the set screws).

LUBRICATION

Grease the wheel axles, the fork pivots after every sixteen hours of use.

Apply oil at all pivot points.

Chute Rotation System: Oil chute base, rotation worm every sixteen hours of operation.

Gear box:

Check the oil annually. If necessary, add AGMA 5 EP or SAE 90 oil.

The gear box should have a total of 275ml of oil or filled to the rim of the bolt hole when installed on the snowblower. (see figure)

AUGERS AND FAN SHEAR BOLT REPLACEMENT

Shear bolts are to be considered a preventive measure and not an assured protection. Operator vigilance is required. Thoroughly inspect the areas where the snowblower is to be used and remove all foreign objects.

To avoid damage to the snowblower:

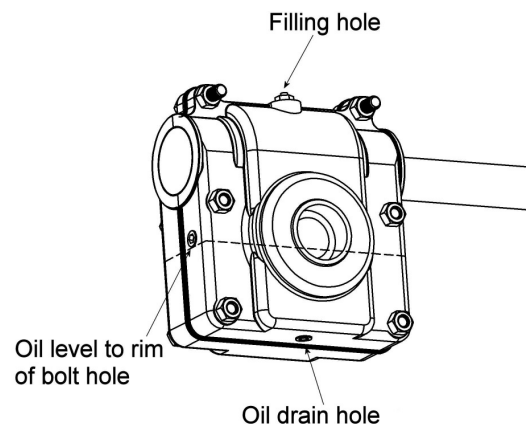
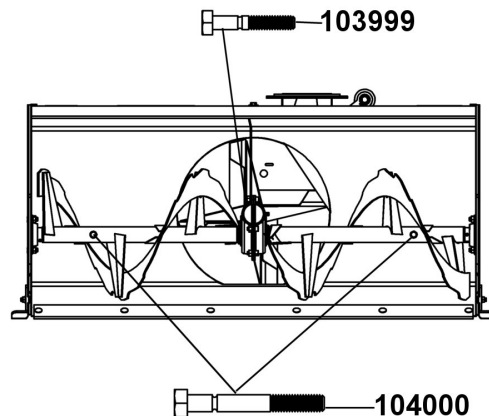
Use only the original shear bolts (grooved bolts).

#104000 in bags of 10 for the augers.

#103999 in bags of 10 for the fan.

The use of any other shear bolt will not insure any protection and may void the warranty.

IMPORTANT: IT IS VERY IMPORTANT TO REPLACE THE AUGERS IN THE SAME POSITION AS SHOWN IN THE DRAWING BEFORE INSTALLING THE SHEAR BOLTS.



MAINTENANCE

BELT INSTALLATION, ADJUSTMENT, AND REPLACEMENT:



WARNING



The belt tension arm is spring loaded & needs to be held firmly while displacing to prevent injury.

SNOWBLOWER BELT:

- a) Lower the snowblower to the ground.
- b) Remove the belt guard.
- c) Remove tension on the belt by lowering the tension arm (item 1)
- d) Loosen the knob (item 2) on the bracket that holds the bearing (item 3).
- e) Install the belt as shown.
- f) Adjust the bracket by pushing on the bearing (item 3) to apply a slight pressure on the back of the belt (just enough to hold the belt in place). It is normal that the bearing is off centre (towards the vehicle) on the pulley. Just make sure that it does not come into contact with the wall of the pulley.
- g) Tighten firmly with the knob.
- h) Apply tension on the belt by pulling up the tension arm (item 1). To obtain the proper tension, the distance between the coils of the spring (item 6) should be .25" (1/4") approx.
If not, remove the bolt, sleeve and the spring from the original hole and reinstall them in the second hole (item 5). This will apply more tension on the belt helping to prevent it from slipping in the pulleys.
- i) Engage the snowblower for a few seconds under supervision. Stop the engine. Inspect the belt to make sure it does not interfere with any parts; that it is well inserted in the pulleys and that it has not flipped on it's side while still on the pulleys. The V of the belt **must be in** the V of the pulleys. The back of the belt **must rest on** the flat pulleys (D) as shown.
- j) Reinstall the belt guard.
- k) Use genuine belts only, they are specifically fabricated for this application.

NOTE: There must be a good tension on the belt at all times. If spring is damaged or stretched, you must replace it.

DRIVE MECHANISM BELT:

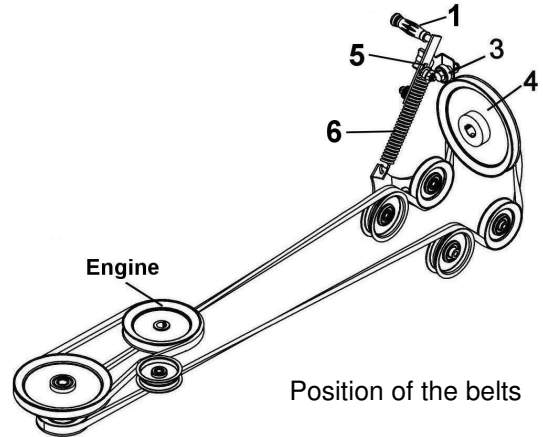
See subframe manual for belt replacement instructions.



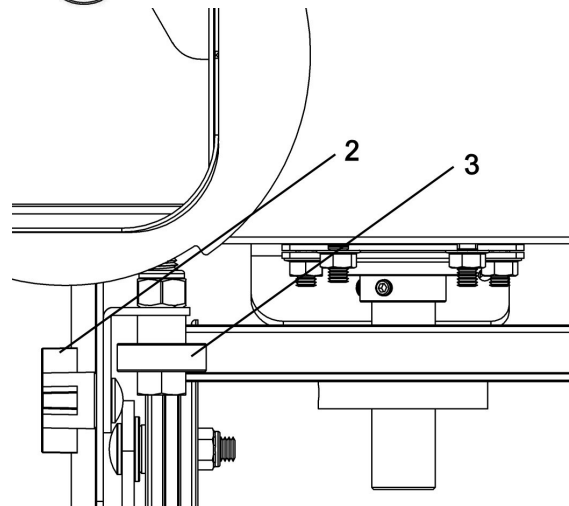
CAUTION



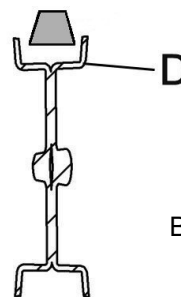
Never use the snowblower without the belt guard.



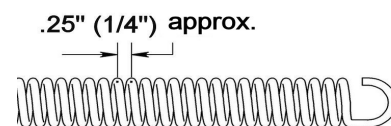
Position of the belts



Top view
Position of the bearing



Belt Insertion



Distance between coils

REPLACEMENT OF ONE OR TWO SECTIONS OF THE AUGER AND / OR GEAR BOX

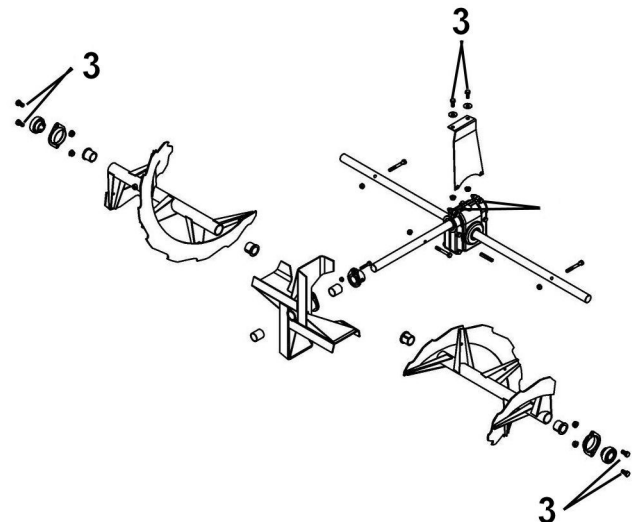
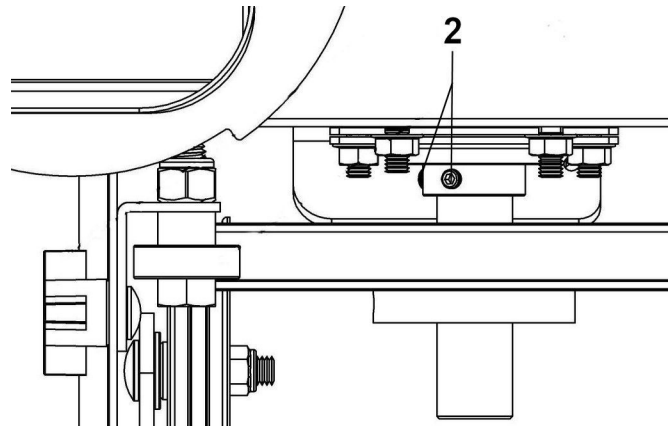
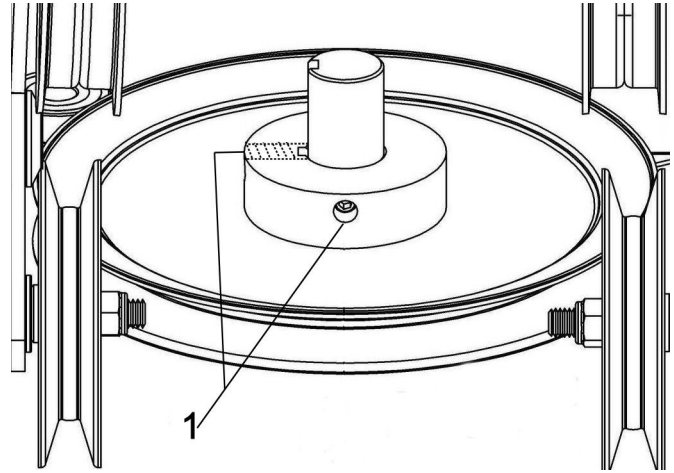
For belt part numbers, refer to snowblower parts breakdown section for parts identification

Snowblower must be detached & disconnected from the tractor to replace the auger or the gear box.

- a) Remove the belt guard.
- b) Remove the belt. See manual.
- c) Turn the snowblower face down (optional).
- d) Loosen the 2 set screws (item 1) on the pulley (it may be necessary to heat the set screw and center of pulley to soften the "loctite").
- e) Remove the pulley.
- f) Loosen the 2 set screws (item 2) on the bearing behind the snowblower (it may be necessary to heat the set screw to soften the "loctite").
- g) Remove all the bolts (item 3) and the nuts that support the gear box and its support.
- h) Remove the assembly (gear box, its support, the fan and augers) from the snowblower and save the nylon bushings and bearings.
- i) Replace the appropriate parts. Insert the shaft and the key into the new gear box (if required).
- j) Install the new auger or augers on their respective side in the position shown with the same nylon bushings on the shaft of the new gear box as shown.
- k) Re-install parts by repeating steps backwards.

IMPORTANT: You must clean the parts and apply some "Loctite" 2760 on the key of the pulley and the set screws of the bearing and pulley. Tighten firmly.

Follow the instructions in the belt replacement and adjustments sections.



DISMOUNTING & STORAGE

SNOWBLOWER DISMOUNTING



WARNING



TO PREVENT INJURIES:

Stop the motor.

Apply parking brakes.

Remove the ignition key.

Disconnect the wire from the spark plug(s) and keep away from spark plug(s) to prevent accidental starting.



CAUTION



The belt tension is spring loaded & needs to be held firmly while displacing to prevent injury.

- a) Remove the hair pin and the handle from the chute rotation.
- b) Remove the belt guard.
- c) Unhook the winch cable from the snowblower.
- d) Release the tension on the belt by displacing the tension arm backwards. Remove the belt from the engine pulley under the tractor.
- e) Remove the snowblower by activating the latch of the female hitch.
- f) Reinstall the belt guard.



WARNING



Never use the snowblower without the belt guard.

STORAGE

- a) Clean snowblower thoroughly and repaint all parts from which paint has worn.
- b) List the replacement parts that will be needed to be replaced before the next season.
- c) Follow the instructions in the Lubrication section.
- d) Store the snowblower in a dry place.

TROUBLESHOOTING

* Please refer to parts breakdown section for parts identification.

| PROBLEM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|--|---|---|
| One section or both sections of the auger stops turning. | Shear bolts are probably broken. | Replace shear bolts. |
| Fan stops turning. | Shear bolt is probably broken. | Replace shear bolts. |
| Snowblower stops turning. | One of the two belts is probably damaged or broken. | Check both belts and replace damaged belt(s). |
| Belt snapping, shredding, burning or worn in a specific place. | Lack of tension on belt. | Adjust manual clutch cable or replace springs if stretched. |
| | Snowblower engaged when plugged. | Make sure the auger & the fan are not frozen or plugged before engaging. |
| | Not original belts. | Always use original belts. |
| | Worn belt. Belt may be worn causing a slack. | Inspect the belt. Replace if required. |
| | Not original shear bolts. | Use original shear bolts |
| | Imperfections in pulleys. | Verify if the pulleys are damaged. Verify that pulleys are smooth, without rust spots. Sand down the pulleys or replace them. |
| | Interference. | Make sure that belt does not come into contact with any other part, bolts, guides etc... when engaged. |
| | Belt has flipped on its side. | When installing new belt, have snowblower run between 20 to 40 seconds. Turn everything off and verify that belt has not turned on its side. If so, remove belt and re-install in opposite fashion to rectify the bad twist the belt has taken. |
| Chute plugs easily. | Tractor engine turning too slowly. | Run engine at full throttle during snowblowing operation. |
| | Advancing too quickly with tractor. | Allow snowblower to ingest snow at its own speed. |
| Chute rotation is difficult. | Dirt or ice may be underneath chute. | Dismount chute. Clean the base of chute and the rotation ring. Lubricate & re-install. |
| Snowblower digs into ground. | Ground is not frozen or too soft. | Adjust skid shoes lower so they may better support the snowblower. If problem persists, change skid shoes for heavy duty skid shoes (option #700243) which cover more surface and prevents snowblower from digging. |

TROUBLESHOOTING

* Please refer to parts breakdown section for parts identification.

| PROBLEM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|---|--|---|
| Snowblower does not raise evenly. | Tire pressure uneven from one side to another. | Tire pressure must be even on both sides of tractor according to the owner's manual of the vehicle. |
| Snowblower vibrates or is abnormally noisy. | Damaged pulley. | Replace pulley. |
| | Damaged bearing. | Replace bearing. |
| | Damaged fan. | Dismount & repair or replace fan. |
| | Damaged auger. | Replace auger. |

* Please refer to parts breakdown section in subframe manual for parts identification.

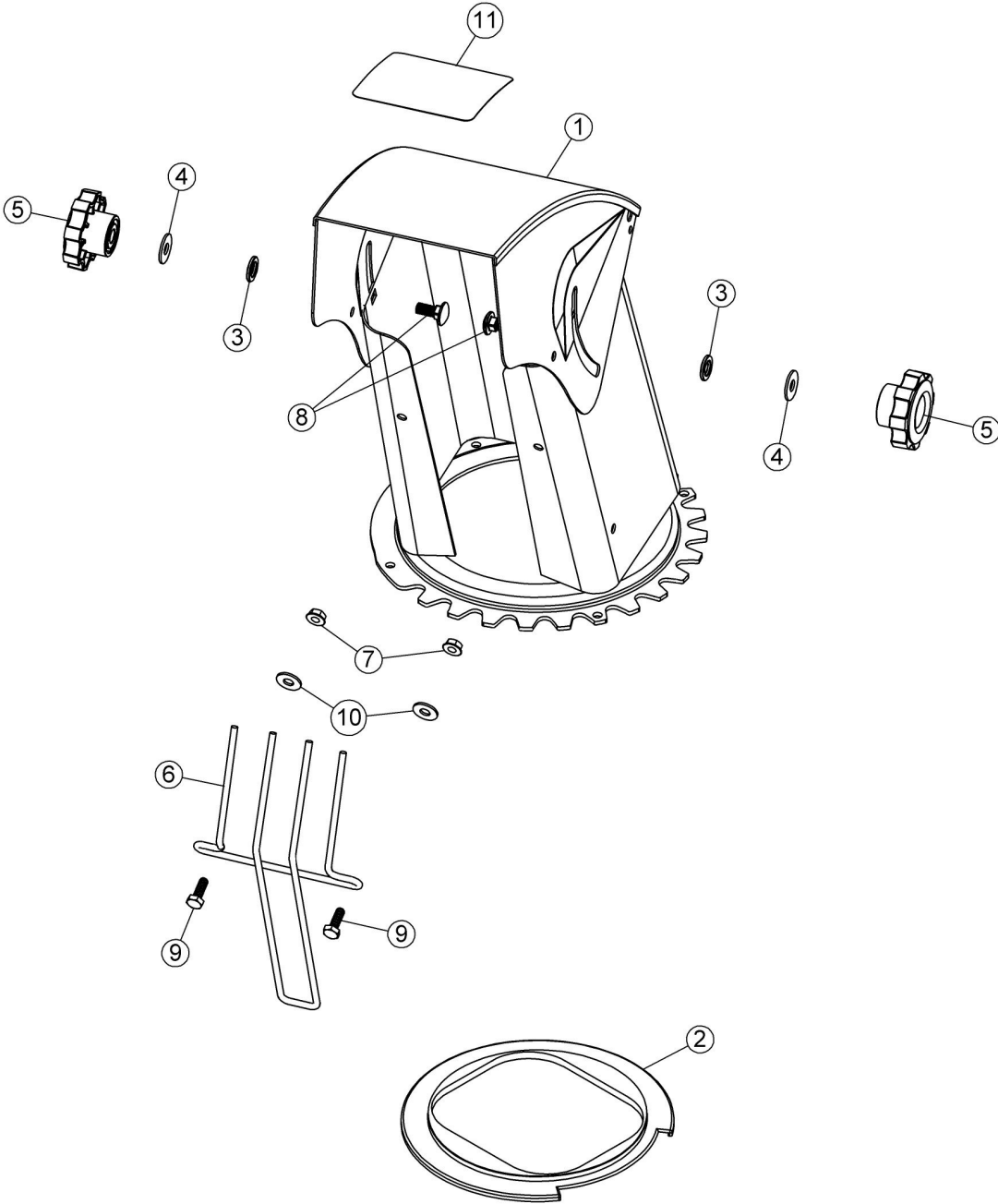
| PROBLEM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|---|--|---|
| Winch runs backwards. | Winch wires reversed. | Recheck wiring. |
| | Switch wires reversed. | Recheck wiring. |
| | Switch installed incorrectly. | Check switch installation. |
| | Battery wires reversed. | Recheck wiring. |
| | Winch cable is not winded up from the bottom of spool. | Wind winch cable from underneath. |
| Winch will not operate or runs in one direction only. | Vehicle's ignition switch is at OFF position. | Turn vehicle's ignition switch at ON position. |
| | Broken wires or bad connection. | Check for poor connections. |
| | Control switch is inoperative. | Replace control switch. |
| | Relay or breaker is damaged. | Replace the relay or breaker. |
| | Limit switch is damaged. | Replace limit switch. |
| | Winch is damaged. | Replace or repair winch. |
| Winch runs but with insufficient power or line speed. | Weak battery. | Recharge or replace battery. Check charging system |
| | Poor battery connection. | Check battery terminals for corrosion. Clean when required. |
| | Winch is damaged. | Replace or repair winch. |

TROUBLESHOOTING

* Please refer to parts breakdown section in subframe manual for parts identification.

| HOW TO KNOW | POINTS TO CHECK |
|--------------------------------------|--|
| Poor connections. | Recheck wiring with the owner's manual. |
| HI/LOW voltage tester does not work. | Connect it on battery posts (+ and -) of a functional battery. If there is no light, the tester is damaged. |
| The control switch inoperative. | Test both connectors with HI/LOW voltage tester. If light comes ON in both positions (IN & OUT), the switch is operative. |
| Relay is damaged | When it is working, there is a "CLICK" sound when the control switch is activated. Check connections with HI / LOW voltage tester. |
| Winch is damaged | The ultimate test is to connect the winch directly to the battery and reverse the wires to test both directions. If the winch doesn't work, it is damaged. |
| The limit switch is damaged. | When the limit switch is pushed or stuck inside, the winch can't raise the accessory, only lower it. If not replace it. |
| The breaker is damaged. | Check the voltage on both terminals on the breaker with the HI / LOW voltage tester. If not replace. |

PARTS BREAKDOWN CHUTE



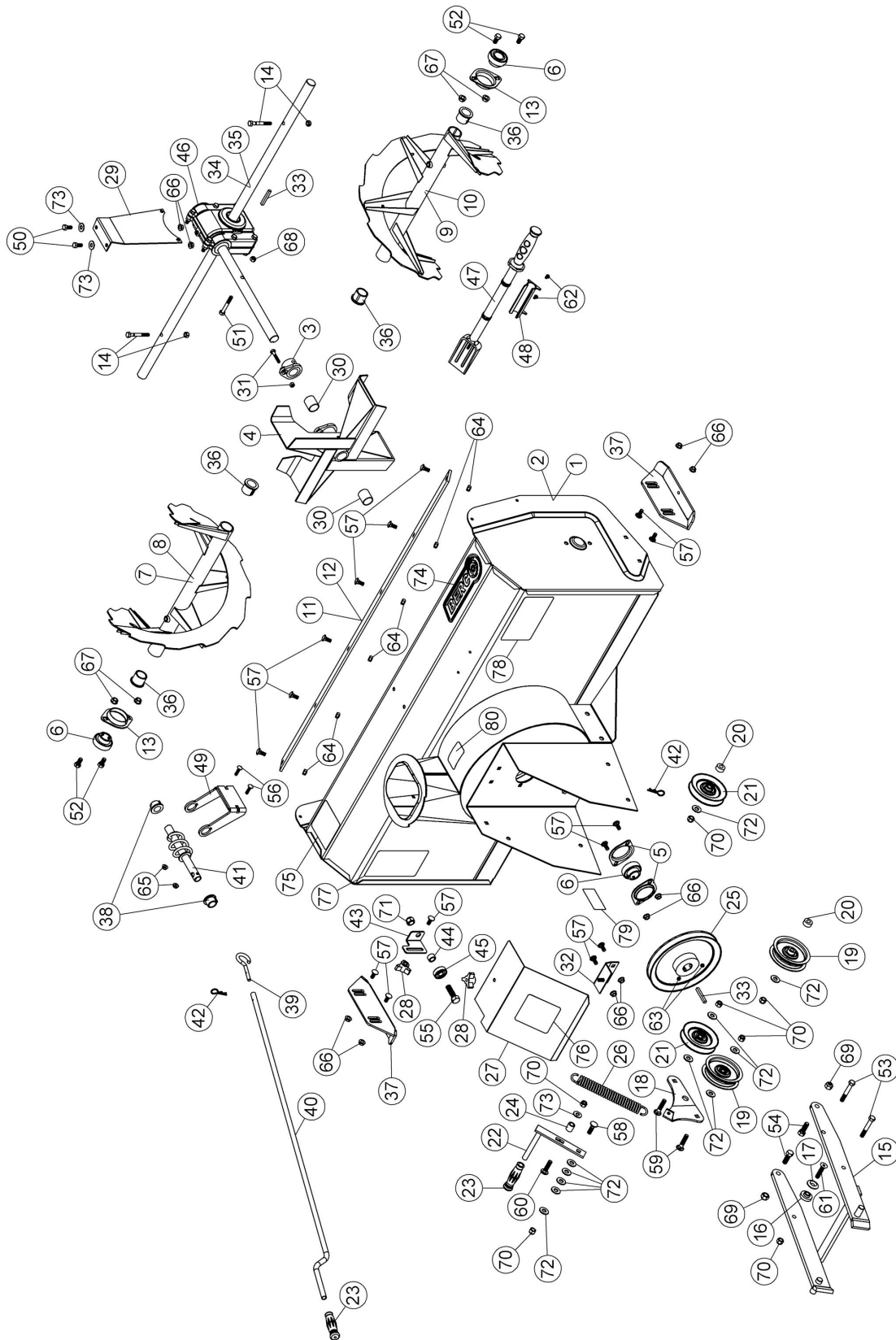
PARTS LIST CHUTE WITH ROTATION SYSTEM

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|--------------|---------------------------------|--|--------------|-------------------|
| 1 | Chute | Goulotte | 1 | 103936 |
| 2 | Rotation ring | Anneau de rotation | 1 | 103943 |
| 3 | Nylon flat washer 7/16" | Rondelle plate de nylon 7/16" | 2 | 102011 |
| 4 | Nylon flat washer 11/32" | Rondelle plate de nylon 11/32" | 2 | 102009 |
| 5 | Knob | Bouton | 2 | 102020 |
| 6 | Hand guard | Fourche protectrice | 1 | 102012 |
| 7 | Flange nut 1/4" n.c. | Écrou à bride 1/4" n.c. | 2 | O/L |
| 8 | Carriage bolt 5/16" n.c. x 3/4" | Boulon à carrosserie 5/16" n.c. x 3/4" | 2 | O/L |
| 9 | Hex. bolt 1/4" n.c. x 3/4" | Boulon hex. 1/4" n.c. x 3/4" | 2 | O/L |
| 10 | Flat washer 5/16" hole | Rondelle plate 5/16" trou | 2 | O/L |
| 11 | Danger decal chute | Décalque danger goulotte | 1 | 105127 |

O/L = Obtain Locally

PARTS BREAKDOWN

SNOWBLOWER 700474-1 / 700478-1



PARTS LIST

SNOWBLOWER 700474-1 / 700478-1

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|--------------|--------------------------------------|--|--------------|-------------------|
| 1 | Frame 44" | Châssis 44" | 1 | 104851 |
| 2 | Frame 48" | Châssis 48" | 1 | 104852 |
| 3 | Shear plate | Plaque de cisaillement | 1 | 103933 |
| 4 | Fan | Éventail | 1 | 103932 |
| 5 | Flangette | Flangette | 2 | 102213 |
| 6 | Bearing with set screw | Roulement à billes avec vis à pression | 3 | 102755 |
| 7 | Auger 44" left | Vis 44" gauche | 1 | 104760 |
| 8 | Auger 48" left | Vis 48" gauche | 1 | 104765 |
| 9 | Auger 44" right | Vis 44" droite | 1 | 104761 |
| 10 | Auger 48" right | Vis 48" droite | 1 | 104766 |
| 11 | Cutting edge 44" | Racloir 44" | 1 | 102101 |
| 12 | Cutting edge 48" | Racloir 48" | 1 | 103187 |
| 13 | Flangette | Flangette | 2 | 102680 |
| 14 | Shear bolt / N.I.L.N. (auger) pkg-10 | Boulon de séc. / É.G.N. (vis) pqt-10 | 2 | 104000 |
| 15 | Male hitch | Attache mâle | 1 | 104853 |
| 16 | Flange washer | Rondelle à bride | 1 | 102081 |
| 17 | Special washer | Rondelle plate spécial | 1 | 103042 |
| 18 | Tension lever | Levier de tension | 1 | 104854 |
| 19 | Flat pulley | Poulie plate | 2 | 102765 |
| 20 | Sleeve | Douille | 2 | 103939 |
| 21 | V pulley | Poulie en V | 2 | 102766 |
| 22 | Tension arm | Bras de tension | 1 | 103026 |
| 23 | Handgrip | Poignée | 2 | 102062 |
| 24 | Sleeve | Douille | 1 | 103028 |
| 25 | V pulley | Poulie en V | 1 | 103740 |
| 26 | Spring | Ressort | 1 | 102861 |

O/L = Obtain Locally

PARTS LIST

SNOWBLOWER 700474-1 / 700478-1

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|--------------|------------------------------------|---------------------------------------|--------------|-------------------|
| 27 | Belt guard | Garde-courroie | 1 | 104855 |
| 28 | Knob | Bouton | 2 | 103027 |
| 29 | Gear box support | Support de boîte d'engrenage | 1 | 104746 |
| 30 | Oil lite bushing | Coussinet imprégné d'huile | 2 | 102784 |
| 31 | Shear bolt / N.I.L.N. (fan) pkg-10 | Boulon de séc./ É.G.N. (éven.) pqt-10 | 1 | 103999 |
| 32 | Belt guard support | Support de garde-courroie | 1 | 103990 |
| 33 | Key 1/4" x 1/4" x 2" | Clé 1/4" x 1/4" x 2" | 2 | 102922 |
| 34 | Shaft 44" | Arbre 44" | 1 | 104720 |
| 35 | Shaft 48" | Arbre 48" | 1 | 104721 |
| 36 | Rotation bushing | Coussinet de rotation | 4 | 103946 |
| 37 | Skid shoe | Patin | 2 | 103188 |
| 38 | Rotation bushing | Coussinet de rotation | 2 | 103945 |
| 39 | Handle hook | Crochet de manivelle | 1 | 102006 |
| 40 | Handle | Manivelle | 1 | 102061 |
| 41 | Rotation worm | Spirale de rotation | 1 | 102005 |
| 42 | Hair pin 2.5mm | Goupille à ressort 2.5mm | 2 | 102013 |
| 43 | Bracket | Fixation | 1 | 104734 |
| 44 | Bushing | Coussinet | 1 | 102225 |
| 45 | Bearing | Roulement à billes | 1 | 104624 |
| 46 | Gear box left rotation | Boîte d'engrenage rotation gauche | 1 | 104718 |
| 47 | Chute shovel | Pelle à goulotte | 1 | 105700 |
| 48 | Chute shovel support | Support de pelle à goulotte | 1 | 105701 |
| 49 | Worm supports | Supports de spirale | 1 | 105755 |
| 50 | Hex. bolt 5/16" n.c. x 3/4" | Boulon hex. 5/16" n.c. x 3/4" | 2 | O/L |
| 51 | Hex. bolt 5/16" n.c. x 2 1/4" GR8 | Boulon hex. 5/16" n.c. x 2 1/4" GR8 | 1 | O/L |
| 52 | Hex. bolt 3/8" n.c. x 3/4" | Boulon hex. 3/8" n.c. x 3/4" | 4 | O/L |

O/L = Obtain Locally

PARTS LIST

SNOWBLOWER 700474-1 / 700478-1

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|--------------|--|--|--------------|-------------------|
| 53 | Hex. bolt 3/8" n.c. x 2 1/2" | Boulon hex 3/8" n.c. x 2 1/2" | 2 | O/L |
| 54 | Hex. bolt 7/16" n.c. x 1 1/4" | Boulon hex. 7/16" n.c. x 1 1/4" | 2 | O/L |
| 55 | Hex. bolt 1/2" n.c. x 1 3/4" | Boulon hex. 1/2" n.c. x 1 3/4" | 1 | O/L |
| 56 | Carriage bolt 1/4" n.c. x 1" | Boulon à carrosserie 1/4" n.c. x 1" | 2 | O/L |
| 57 | Carriage bolt 5/16" n.c. x 3/4" | Boulon à carrosserie 5/16" n.c. x 3/4" | 15 | O/L |
| 58 | Carriage bolt 3/8" n.c. x 1 1/4" | Boulon à carrosserie 3/8" n.c. x 1 1/4" | 1 | O/L |
| 59 | Carriage bolt 3/8" n.c. x 1 3/4" | Boulon à carrosserie 3/8" n.c. x 1 3/4" | 2 | O/L |
| 60 | Carriage bolt 3/8" n.c. x 1-1/2" | Boulon à carrosserie 3/8" n.c. x 1 1/2" | 1 | O/L |
| 61 | Hex socket f.h. cap screw 3/8" n.c. x 1-3/4" | Vis a pression hex. t.p. 3/8" n.c. x 1-3/4" | 1 | O/L |
| 62 | Socket head cap screw M5 x 0.80 x 10 | Vis à six pans creux tête ronde M5 x 0.80 x 10 | 2 | O/L |
| 63 | Hex. socket set screw 5/16" n.c. x 5/16" | Vis à pression hex. 5/16" n.c. x 5/16" | 2 | O/L |
| 64 | Stover lock nut 5/16" n.c. | Écrou de blocage 5/16" n.c. | 6 | O/L |
| 65 | Flange nut 1/4" n.c. | Écrou à bride 1/4" n.c. | 2 | O/L |
| 66 | Flange nut 5/16" n.c. | Écrou à bride 5/16" n.c. | 10 | O/L |
| 67 | Flange nut 3/8" n.c. | Écrou à bride 3/8" n.c. | 4 | O/L |
| 68 | Nylon insert lock nut 5/16" n.c. | Écrou à garniture de nylon 5/16" n.c. | 1 | O/L |
| 69 | Nylon insert lock nut 7/16" n.c. | Écrou à garniture de nylon 7/16" n.c. | 2 | O/L |
| 70 | Nylon insert lock nut 3/8" n.c. | Écrou à garniture de nylon 3/8" n.c. | 7 | O/L |
| 71 | Nylon Insert lock Nut 1/2" n.c. | Écrou à garniture de nylon 1/2" n.c. | 1 | O/L |
| 72 | Flat washer 7/16" hole | Rondelle plate 7/16" trou | 11 | O/L |
| 73 | Flat washer 3/8" hole | Rondelle plate 3/8" trou | 3 | O/L |
| 74 | Berco decal | Décalque Berco | 1 | 102471 |
| 75 | Decal danger auger | Décalque danger vis | 1 | 105126 |
| 76 | Decal danger belts | Décalque danger courroies | 1 | 105128 |
| 77 | Decal read instructions | Décalque lire instructions | 1 | 105130 |
| 78 | Decal warning safety | Décalque avertissement sécurité | 1 | 105131 |
| 79 | Serial number | Numéro de série | 1 | REF |
| 80 | Made in Canada decal | Décalque Fabriqué au Canada | 1 | REF |

O/L = Obtain Locally

TORQUE SPECIFICATION TABLE

GENERAL TORQUE SPECIFICATION TABLE USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

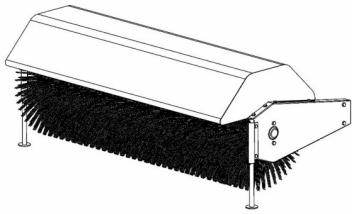
NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

* Thick nuts must be used with grade 8 bolts

| SEE Grade No. | | 2 | | | | 5 | | | | 8 * | | | |
|--|------------|-------------|------|----------------|-------|-------------|------|----------------|-------|-------------|------|----------------|--------|
| BOLT HEAD IDENTIFICATION MARKS AS PER GRADE NOTE MANUFACTURING MARKS WILL VARY | | TORQUE | | | | TORQUE | | | | TORQUE | | | |
| BOLT SIZE | | FOOT POUNDS | | NEW TON-METERS | | FOOT POUNDS | | NEW TON-METERS | | FOOT POUNDS | | NEW TON-METERS | |
| Inches | Millimetre | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 1/4" | 6.35 | 5 | 6 | 6.8 | 8.13 | 9 | 11 | 12.2 | 14.9 | 12 | 15 | 16.3 | 30.3 |
| 5/16" | 7.94 | 10 | 12 | 13.6 | 16.3 | 17 | 20.5 | 23.1 | 27.8 | 24 | 29 | 32.5 | 39.3 |
| 3/8" | 9.53 | 20 | 23 | 27.1 | 31.2 | 35 | 42 | 47.5 | 57 | 45 | 54 | 61 | 73.2 |
| 7/16" | 11.11 | 30 | 35 | 40.7 | 47.4 | 54 | 64 | 73.2 | 86.8 | 70 | 84 | 94.9 | 113.9 |
| 1/2" | 12.7 | 45 | 52 | 61 | 70.5 | 80 | 96 | 108.5 | 130.2 | 110 | 132 | 149.2 | 179 |
| 9/16" | 14.29 | 65 | 75 | 88.1 | 101.6 | 110 | 132 | 149.2 | 179 | 160 | 192 | 217 | 260.4 |
| 5/8" | 15.88 | 95 | 105 | 128.7 | 142.3 | 150 | 180 | 203.4 | 244.1 | 220 | 264 | 298.3 | 358 |
| 3/4" | 19.05 | 150 | 185 | 203.3 | 250.7 | 270 | 324 | 366.1 | 439.3 | 380 | 456 | 515.3 | 618.3 |
| 7/8" | 22.23 | 160 | 200 | 216.8 | 271 | 400 | 480 | 542.4 | 650.9 | 600 | 720 | 813.6 | 976.3 |
| 1" | 25.4 | 250 | 300 | 338.8 | 406.5 | 580 | 696 | 786.5 | 943.8 | 900 | 1080 | 1220.4 | 1464.5 |

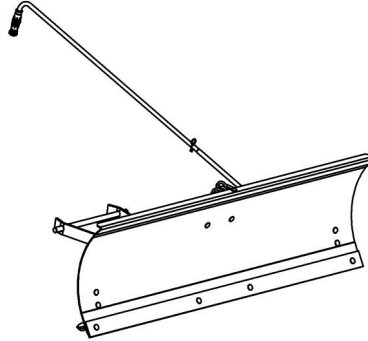
| METRIC BOLT TORQUE SPECIFICATIONS | | | | | | | |
|-----------------------------------|-----------|---------------|-------------|---------------|-------------|-------------|---------------|
| | | COARSE THREAD | | | FINE THREAD | | |
| Size Screw | Grade No. | Pitch (mm) | Foot Pounds | Newton-Meters | Pitch (mm) | Foot Pounds | Newton-Meters |
| M6 | 4T | 1.00 | 3.6 - 5.8 | 4.9 - 7.9 | - | - | - |
| | 7T | | 5.8 - 9.4 | 7.9 - 12.7 | | - | - |
| | 8T | | 7.2 - 10 | 9.8 - 13.6 | | - | - |
| M8 | 4T | 1.25 | 7.2 - 14 | 9.8 - 19 | 1.00 | 12 - 17 | 16.3 - 23 |
| | 7T | | 17 - 22 | 23 - 29.8 | | 19 - 27 | 25.7 - 36.6 |
| | 8T | | 20 - 26 | 27.1 - 35.2 | | 22 - 31 | 29.8 - 42 |
| M10 | 4T | 1.50 | 20 - 25 | 27.1 - 33.9 | 1.25 | 20 - 29 | 27.1 - 39.3 |
| | 7T | | 34 - 40 | 46.1 - 54.2 | | 35 - 47 | 47.4 - 63.7 |
| | 8T | | 38 - 46 | 51.5 - 62.3 | | 40 - 52 | 54.2 - 70.5 |
| M12 | 4T | 1.75 | 28 - 34 | 37.9 - 46.1 | 1.25 | 31 - 41 | 42 - 55.6 |
| | 7T | | 51 - 59 | 69.1 - 79.9 | | 56 - 68 | 75.9 - 92.1 |
| | 8T | | 57 - 66 | 77.2 - 89.4 | | 62 - 75 | 84 - 101.6 |
| M14 | 4T | 2.00 | 49 - 56 | 66.4 - 75.9 | 1.50 | 52 - 64 | 70.5 - 86.7 |
| | 7T | | 81 - 93 | 109.8 - 126 | | 90 - 106 | 122 - 143.6 |
| | 8T | | 96 - 109 | 130.1 - 147.7 | | 107 - 124 | 145 - 168 |
| M16 | 4T | 2.00 | 67 - 77 | 90.8 - 104.3 | 1.50 | 69 - 83 | 93.5 - 112.5 |
| | 7T | | 116 - 130 | 157.2 - 176.2 | | 120 - 138 | 162.6 - 187 |
| | 8T | | 129 - 145 | 174.8 - 196.5 | | 140 - 158 | 189.7 - 214.1 |
| M18 | 4T | 2.00 | 88 - 100 | 119.2 - 136 | 1.50 | 100 - 117 | 136 - 158.5 |
| | 7T | | 150 - 168 | 203.3 - 227.6 | | 177 - 199 | 239.8 - 269.6 |
| | 8T | | 175 - 194 | 237.1 - 262.9 | | 202 - 231 | 273.7 - 313 |
| M20 | 4T | 2.50 | 108 - 130 | 146.3 - 176.2 | 1.50 | 132 - 150 | 178.9 - 203.3 |
| | 7T | | 186 - 205 | 252 - 277.8 | | 206 - 242 | 279.1 - 327.9 |
| | 8T | | 213 - 249 | 288.6 - 337.4 | | 246 - 289 | 333.3 - 391.6 |

OPTIONS & ATTACHMENTS

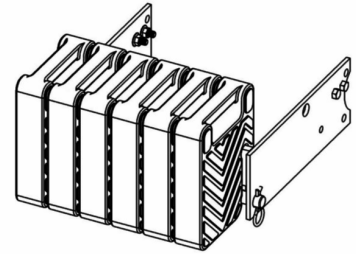


ROTARY BROOM
#700380 with nylon brush
/#700381 with polypropylene brush.

Fits on same subframe as snowblower or utility blade.
Requires an adaptor.

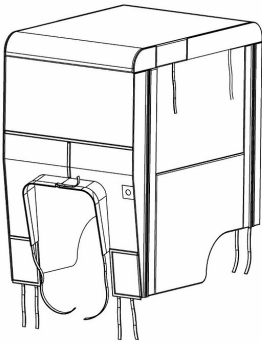


SNOW BLADE #700463
Mounts on the same subframe as the snowblower & rotary broom.

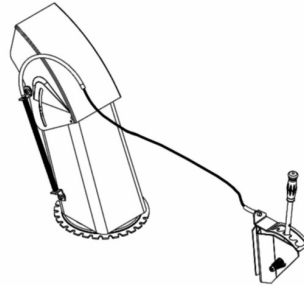


COUNTERWEIGHT

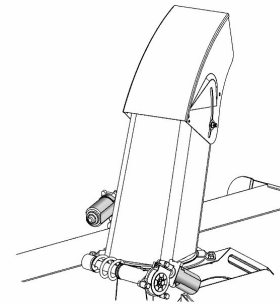
Model # as per tractor
Required for safety and traction.
Counter-balances weight of attachment.



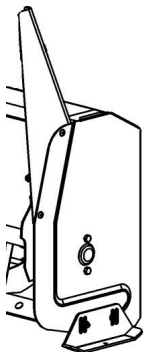
TRACTOR WINTER CAB
#700271
#700423
Universal type fits on a wide variety of lawn and garden tractors.



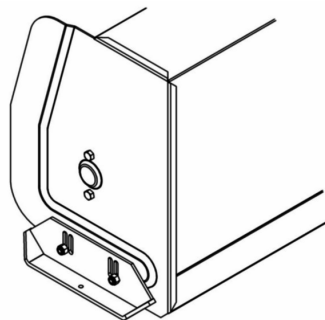
MANUAL DEFLECTOR ADJUSTMENT KIT #700239
ELECTRIC DEFLECTOR ADJUSTMENT KIT #700526
Adjusts height at which snow is thrown from the driver's seat.



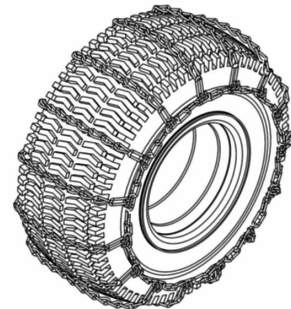
ELECTRIC CHUTE ROTATION & DEFLECTOR KIT #700518
Allows to turn chute and adjust deflector electrically from driver's seat.



SNOW DRIFT CUTTER
#700260 for Compact & Northeast snowblowers.
Facilitates and increases snow intake.
Pkg. of 2



HEAVY DUTY SKID SHOES #700243
For gravel driveways.
Pkg. of 2



TIRE CHAINS
Two link spacing. Required for traction and safety.
Pkg. of 2



***WHEN PERFORMANCE
& DEPENDABILITY
ARE NON NEGOTIABLE!***

Bercomac Limitée
92, Fortin North, Adstock, Quebec, Canada, G0N 1S0

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