

**OWNER'S MANUAL** *Model Number 700255-2* 



# **Berco** Compact Two Stage 40" Snowblower For LAWN AND YARD TRACTORS

\* ASSEMBLY

\* OPERATION

\* REPAIR PARTS

\* MAINTENANCE

# **CAUTION:**

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

104127

#### **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: <u>1 year</u>
- Commercial or rental use: <u>90 days</u>

**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 (supplied with BERCOMAC equipment): 2 years

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.

#### 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 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.

**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 BERCOMAC Service Dealer to arrange service at their dealership. To locate a dealer convenient to you, access our website at <u>www.bercomac.com</u>.

Bring the product and your proof of purchase (sales receipt) to the BERCOMAC dealer.

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# INTRODUCTION

#### TO THE PURCHASER

This new attachment 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. <u>Please check if you have received all the parts for your kit with the list of the bag and the list of the box.</u>

SERIAL NUMBER :

**PURCHASE DATE :** 

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

# SAFETY PRECAUTIONS

Careful operation is your best insurance against an accident. Read this section carefully before operating the tractor and snowblower. This snowblower 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 tractor and snowblower before operating. It is the owner's legal obligation to instruct all operators in safe operation of the snowblower.

#### **TRAINING**

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

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

#### PREPARATION

- 1. Thoroughly inspect the area where the snowblower is to be used and remove door mats, all foreign objects and the like.
- 2. Disengage all clutches and shift into neutral before starting engine.
- 3. Do not operate the snowblower 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 lockopen device.
- g) Replace fuel cap securely and wipe up spilled fuel.
- h) If fuel is spilled on clothing, change clothing immediately.
- 5. Adjust the height of the snowblower to clear gravel or crushed rock surface. This is done by adjusting the skid shoes.
- 6. Never attempt to make any adjustments while the engine (motor) is running (except when specifically recommended by manufacturer).
- 7. Let engine (motor), tractor and snowblower adjust to outdoor temperatures before starting to clear snow.
- 8. Always wear safety glasses or eye shields during operation or while performing an adjustment or repair to protect eyes from foreign objects that may be thrown from the snowblower.

# 9. Never modify the snowblower or any part without the written consent from the manufacturer.

#### **OPERATION**

- 1. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- 2. Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- 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 snowblower for any damage and repair damage before restarting and operating the snowblower.

# SAFETY PRECAUTIONS

- 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. Stop the engine (motor) whenever you leave the operating position, before unclogging the impeller/ collector housing or discharge chute, and when making repairs, adjustments or inspections.
- 6. Take all possible precautions when leaving the machine unattended. Disengage the power takeoff, lower the attachment, set the parking brake, shut the engine off and remove the key.
- 7. When cleaning, unclogging, repairing or inspecting the snowblower & tractor, make certain the collector/impeller and all moving parts have stopped. Disconnect wire from the spark plug(s) and keep wire away to prevent accidental starting.
- 8. Do not run the engine indoors, except when starting the engine and for transporting the snowblower 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 odourless, colorless and can cause death.
- 9. Do not clear snow across the face of slopes; go up and down. Exercise extreme caution when operating on slopes. Do not attempt to clear steep slopes.
- 10. Never operate the snowblower without proper guards, plates, or other safety protective devices in place.
- 11. Never direct discharge at bystanders or operate the snowblower near glass enclosures, automobiles, window wells, drop-offs, and the like without proper adjustment of the snow discharge angle. Never allow anyone including children and pets in the clearance area.
- 12. Do not overload the machine capacity by attempting to clear snow at too fast a rate. Let the snowblower ingest snow at its own rate.
- 13. Never operate the snowblower at high transport speeds on slippery surfaces. Look behind and use care when backing.
- 14. Do not carry passengers.
- 15. Disengage power to the collector /impeller to stop all rotating parts when the snowblower is transported or not in use.

- 16. Use only accessories approved by the manufacturer of the snowblower (such as wheel chains, counterweights, cabs). You must use 100 lbs. of rear counterweight for better traction and a greater stability at all times when using a snowblower that is installed on the front of a tractor.
- 17. Never operate the snowblower without good visibility or light.

#### **CLEARING A CLOGGED DISCHARGE CHUTE:**

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.

#### To clear the chute:

- 1. Lower snowblower to the ground and set parking brake.
- 2. SHUT THE ENGINE OFF & REMOVE KEY!
- 3. Wait 10 seconds to be sure the **all moving parts** such as the impeller blades have stopped moving.
- 4. Disconnect wire from the spark plug(s) and keep wire away to prevent accidental starting.
- 5. Always use a clean-out tool of at least 36" in length, NOT YOUR HANDS.

#### MAINTENANCE AND STORAGE

- 1. Check shear bolts, engine mounting bolts, and other bolts at frequent intervals for proper tightness to be sure the snowblower is in safe working condition.
- 2. Never store the machine 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.
- 3. Always refer to the owner's manual when you store the snowblower for an extended period.
- 4. Maintain or replace safety and instruction labels, as necessary.
- 5. Run the snowblower a few minutes after throwing snow to prevent freeze-up of the rotating parts such as collector/impeller.

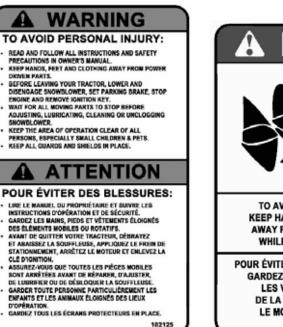


### SAFETY DECALS

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



Decal # 102124



Decal # 102125

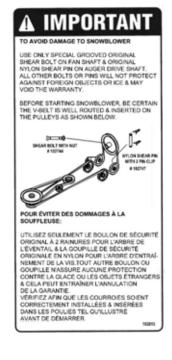


Decal # 102126



Decal # 102127





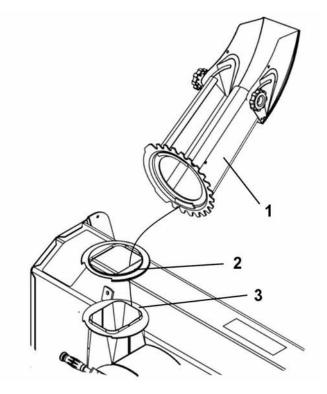
Decal # 102128

### ASSEMBLY

#### STEP 1 SNOWBLOWER PREPARATION:

Install the rotation ring (item 2) over opening (item 3) as shown and align the notches.

Place the chute (item 1) (facing the rear) and clip the back over the rotation ring then turn the chute towards the front to lock into place.

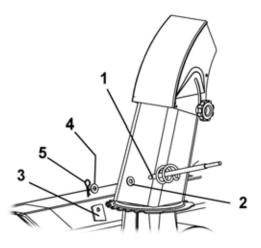


Install chute

Place a 7/16" flatwasher (item 2) on the rotation worm shaft (item 1).

Install the rotation worm in the rotation support (item 3).

Secure with a 7/16" dia. flatwasher (item 4) and a 2.5 mm. hair pin (item 5).



Install rotation worm

#### NEW:

In a constant effort to improve our products, a lift assist spring was added to the snowblower. The new generation of subframes are now equipped to receive this spring.

However, if you wish to benefit from this improvement, you may modify the left support on your subframe by following the instructions below.

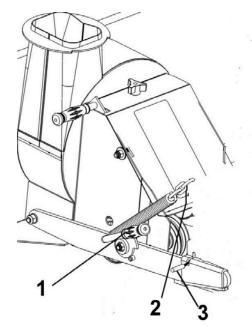
Make a bracket (item 4) to be able to install the lift assist spring.

To determine how long to make it and where to place the bracket on the left support of the subframe, lift the snowblower, and pull the tension arm (item 1) towards the back.

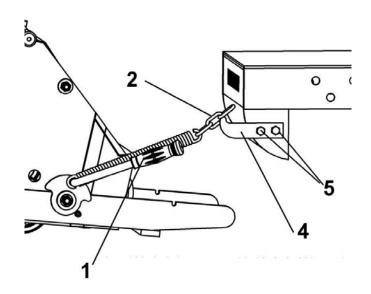
Adjust the bracket in order to hook the chain (item 2) (preferably in the second link of the chain) on the hook.

Install the bracket in that position with two bolts (item 5).

If the spring is not required simply remove it.



If required, make and install the bracket for the lift assist spring.



This figure is for your information only.

## ASSEMBLY

# STEP 2

#### SNOWBLOWER INSTALLATION:

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.

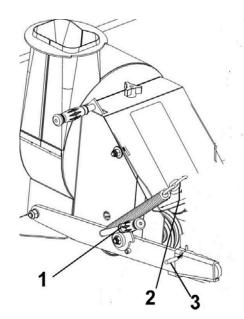
Attach the snowblower to the subframe as shown.

Make sure the snowblower is pushed in until locked into place by the springs (item 3).

Lift the snowblower.

Turn the tension arm (item 1) towards the back and install the chain (item 2) on the hook (if subframe is equipped with one)

Turn the tension arm towards the front to apply tension on the spring.



Install snowblower

Lower the snowblower.



CAUTION

The belt tension and lift assist spring arm are spring loaded & need to be held firmly while displacing to prevent injury.

Remove the belt guard.

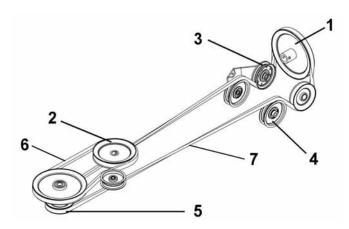
Install the belt on the pulleys as shown.

Install the belt on the drive mechanism pulley (item 5) under the tractor.

NOTE: See belt instructions in the Maintenance section.

Apply tension on the belt by pulling up the belt tension arm. (See instructions in Maintenance section). Reinstall the belt quard.





- Item 1: Snowblower pulley
- Item 2: Tractor engine pulley
- Item 3: Flat pulley L.H.
- Item 4: Flat pulley R.H.
- Item 5: Drive mechanism pulley
- Item 6: Drive mechanism belt
- Item 7: Snowblower belt

### ASSEMBLY

#### VERIFY BELT ROUTING:

-Lower the snowblower to the ground and let it run for a few seconds under supervision.

- -Disengage the snowblower and stop the engine.
- -Remove the belt guard.
- -Check the belts to make sure they are well inserted in the pulleys and that they have not flipped on their sides on the pulleys and that they do not touch the belt guides.

-Reinstall the belt-guard.



# WARNING



TO PREVENT INJURIES:

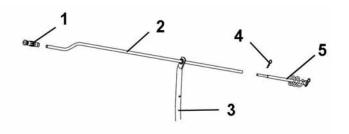
It is the person who installs the drive mechanism responsibility to make sure that when the clutch is disengaged that all moving parts stop.

For more information, do not hesitate to contact the technical support.

Insert the handgrip (item 1) on the handle (item 2).

Insert the handle (item 2) through the support (item 3) as shown.

Insert the handle (item 2) on the rotation worm (item 5) and secure with a 2.5 mm. hair pin (item 4).



Install handle

#### VERIFY SKID SHOE ADJUSTMENT:

<u>LEVEL PAVED SURFACE:</u> Adjust skid shoes to allow 3/16" to 1/4" clearance (A) between cutting edge and surface.

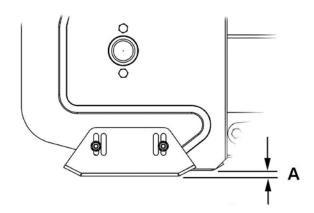
<u>UNEVEN OR GRAVEL SURFACE</u>: Adjust skid shoes to allow 1/2" to 5/8" clearance (A) between cutting edge and surface.

#### VERIFY TIRE PRESSURE:

Check and adjust tractor tire pressure as follows:

Front tires:	14-15 psi
Back tires:	7-8 psi

Tire pressure must be even on both sides of tractor.



Adjust skid shoes

### **OPERATION**

#### **SNOWBLOWER OPERATION**

- a) Make sure the snowblower is clear of snow before engaging the snowblower.
- b) Make sure that the auger and impeller operate freely.
- c) Start the tractor engine.
- d) Before engaging the snowblower drive, always have the engine running at medium R.P.M.
- e) Operate the snowblower at maximum engine R.P.M.

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

#### **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 and to prevent property damage. To change the deflector angle, loosen the two deflector knobs & adjust the deflector to the appropriate angle and retighten the two knobs securely.

#### SNOW REMOVAL

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. For best results, raise the snowblower and remove a top layer of snow. A second pass with the snowblower will remove the remaining snow.



# WARNING



-Do not attempt to clear plugged chute, auger or fan of snow while tractor engine is running.
-Disengage snowblower.
-Lower snowblower onto ground.
-Set the parking brake.
-Stop engine, remove the ignition key, disconnect the wire from spark plug(s) and keep away from spark plug(s) to prevent accidental starting.
-Make sure all moving parts have stopped.
-Do not use hand to unplug chute.
-Use a 36" (924 mm.) minimum length stick or board.







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



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.

- -Tractor manufacturer approved tire chains are required.
- -Do not operate on a slope greater than 10°. -When dismounting the attachment remove rear counterweights.

### MAINTENANCE

# 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.

#### MAINTENANCE

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

#### **ADJUSTMENTS**

#### SKID SHOE ADJUSTMENT:

<u>Level Paved Surface</u>: Adjust skid shoes to obtain 3/16" to 1/4" clearance between cutting edge and surface.

<u>Uneven or Gravel Surface</u>: Adjust skid shoes to obtain 1/2" to 5/8" clearance between cutting edge and surface.

#### CHAIN ADJUSTMENT:

<u>Auger drive chain</u>: Loosen the 3/8" x 2 1/2" hex bolt (see Parts Breakdown, Snowblower) on snowblower's right side, and set chain tension leaving 1/2" deflection in chain span. Retighten hex bolt securely.

#### LUBRICATION

Apply oil at all pivot points.

<u>Drive Chains</u>: Lubricate with chain saw chain lubricant every four hours of operation and at the end of each operation.

<u>Chute Rotation System</u>: Oil chute base, rotation worm every eight hours of operation.

#### **CUTTING EDGE MAINTENANCE**

Verify from time to time the wear on the cutting edge to make sure you do not wear out the base of the snowblower's chassis. This cutting edge is reversible. All you have to do is unscrew the bolts and turn the cutting edge, reinstall and tighten the bolts securely.

#### SHEAR BOLT & SHEAR PIN REPLACEMENT

Shear bolts and shear pins 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.

#### Fan Shear Bolt Replacement:

The fan is protected by a special shear bolt with two grooves. If you hit a foreign object or ice, the shear bolt is designed to break in two upon absorbing impact. The fan will stop turning. This is to avoid damage to the fan or to the snowblower. Replace only with original part (for identification, see parts list: "Snowblower"). The use of any other bolt may void the warranty. Accessible by removing the belt guard.

#### Auger Shear Pin Replacement:

The auger is protected by a special nylon shear pin. If you hit a foreign object or ice, the shear pin is designed to break in two upon absorbing impact. The auger will stop turning. This is to avoid damage to the auger or the snowblower. Replace only with original parts (for identification, see parts list: "Snowblower"). The use of any other pin may void the warranty. Accessible by removing the belt guard.

#### **STORAGE**

- a) Clean snowblower and subframe 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 and the subframe in a dry place.

### MAINTENANCE

#### **BELT REPLACEMENT**

#### SNOWBLOWER BELT REPLACEMENT

- a) Lower the snowblower to the ground.
- b) Install the V-belt as shown.
- c) Apply tension on the belt by pulling up the tension arm (item 1).

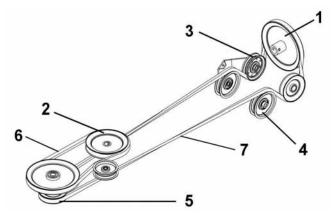
After installation of the snowblower belt, make sure there is enough tension on the belt. To obtain the proper tension, the distance between the coils of the spring should be .25" (1/4") approx. If not, remove the bolt, sleeve and the spring (item 3) from the original hole and reinstall them in the second hole (item 2). This will apply more tension on the belt helping to prevent it from slipping in the pulleys.

d) 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 (A) <u>must be</u> in the V of the pulley (B). The back of the belt (C) <u>must rest</u> on the flat pulley (D).



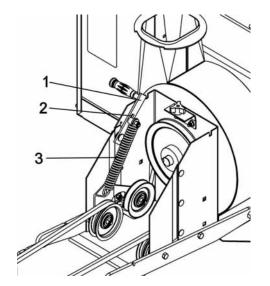
# CAUTION

The belt tension and lift assist spring arm are spring loaded & need to be held firmly while displacing to prevent injury.

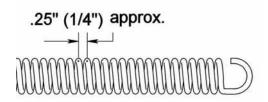


Belt routing

- Item 1: Snowblower pulley
- Item 2: Tractor engine pulley
- Item 3: Flat pulley L.H.
- Item 4: Flat pulley R.H.
- Item 5: Drive mechanism pulley
- Item 6: Drive mechanism belt
- Item 7: Snowblower belt



Tension adjustment



Distance between the coils

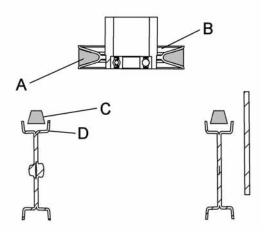
### MAINTENANCE

- e) If in the future, for any reason, the belt flips on its side, follow this step to prevent it from repeating. Remove the belt & turn it 180° (left strand of belt on right side and vice versa). If this is not done, the belt will continue to flip and will break the inner cords of the belt at every 3 to 4 inches.
- f) If after a certain time, the belt stretches and the left flat pulley (item 3) becomes closer to the ground, you must compensate by raising the right side flat pulley (item 4) into the upper hole.
- g) Use genuine belts only, they are specifically fabricated for this application.
- h) Reinstall the belt guard.
- i) To know the belt identification, please refer to the subframe manual.

**NOTE**: Belts must be under high tension at all times. If spring is damaged or stretched, you must replace it.

#### Drive mechanism belt:

See subframe manual for belt replacement instructions.



Belt insertion

### DISMOUNTING

#### 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.



The belt tension and lift assist spring arm are spring loaded & need to be held firmly while displacing to prevent injury.

- a) Remove the hair pin and the handle for the chute rotation.
- b) Remove the belt guard and release the tension on the belt by displacing the tension arm backwards. The tension arm is spring loaded and needs to be held firmly while lowering to prevent injuries. Remove the belt.
- c) Detach the snowblower by removing the lift assist spring and by lifting the two spring locks on the male quick hitch and pulling out the snowblower one side at a time.

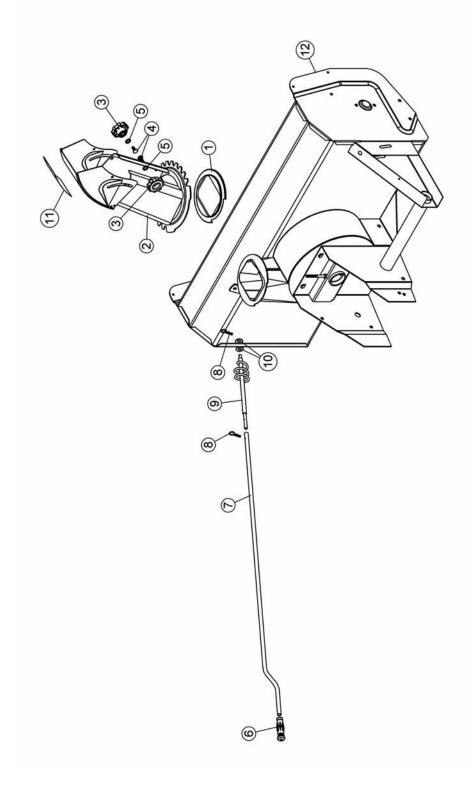
# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
Auger stops turning.	Nylon shear pin is probably broken.	Replace shear pin (for identification, see parts list "Snowblower").
	The reduction chain is broken or the connecting link is unlocked.	Remove both chain guards. Inspect & repair chain if needed (for identification, see parts list "Snowblower").
Fan stops turning.	Shear bolt is probably broken.	Replace shear bolt (for identification, see parts list "Snowblower").
Snowblower stops turning.	One of the two belts is probably damaged or broken.	Check both belts and replace damaged belt(s) (for instructions, see Belt Replacement section).
Belt has burn marks in specific places.	Lack of tension on belt.	Adjust manual clutch cable or replace springs if stretched. To obtain the proper tension, the distance between the coils of the spring should be .25" (1/4"). If not, remove the bolt, sleeve and the spring from the original hole and reinstall them in the second hole. (See Maintenance section, Belt installation, adjustment and replacement).
	Snowblower engaged when plugged.	Make sure the auger & the fan are not frozen or plugged before engaging.
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.

# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION		
Chute rotation is difficult.	Dirt or ice may be underneath chute.	Dismount chute by removing the rotation worm (for identification, see parts list "Chute with Rotation System"). Turn the chute completely towards the rear and i will disconnect from base. 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.		
Snowblower does not raise evenly.	Tire pressure uneven from one side to another.	Verify and adjust tire pressure: Front tires: 14 to 15 psi Rear tires: 7 to 8 psi		
	Maladjustment of the snowblower.	Loosen male hitch on snowblower (for identification, see parts list "Snowblower"). Place a shim (ex.:piece of wood approx. 2" thick) under the lowest side of snowblower which needs to be leveled. Re-tighten bolts.		
Snowblower vibrates or is abnormally noisy.	Damaged pulley.	Replace pulley.		
abhormaily hoisy.	Damaged bearing.	Replace bearing.		
	Damaged fan.	Dismount & repair or replace fan.		
	Damaged auger.	Replace auger.		
Auger turns the wrong way.	Belt is installed improperly.	See Belt mounting instructions in subframe / Drive mechanism manual.		

### PARTS BREAKDOWN / NOMENCLATURE DES PIÈCES CHUTE WITH ROTATION SYSTEM / GOULOTTE AVEC SYSTÈME DE ROTATION

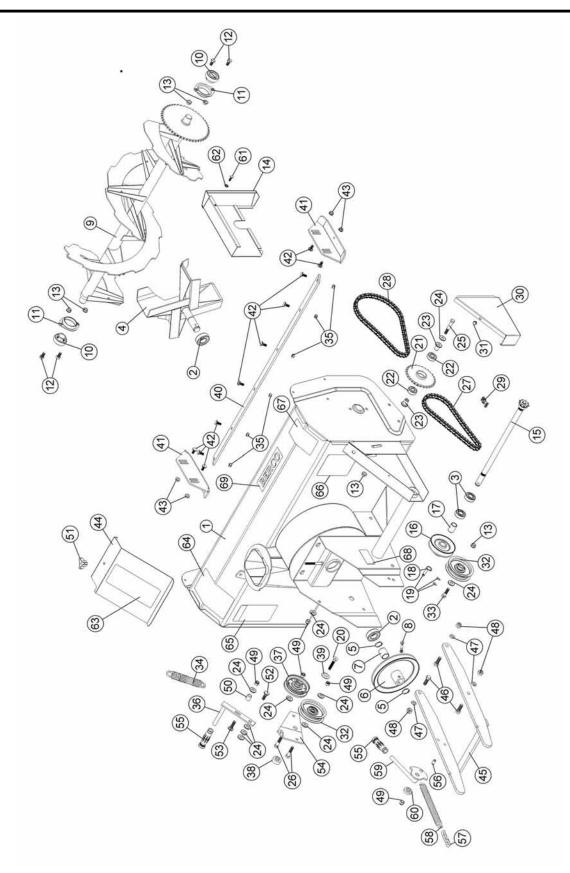


# PARTS LIST / LISTE DES PIÈCES

REF. RÉF.	DESCRIPTION	DESCRIPTION	QTY QTÉ	PART # PIÈCE #
1	Rotation ring	Coussinet de rotation	1	102756
2	Chute	Goulotte	1	102748
3	Knob	Bouton	2	102020
4	Carriage bolt 5/16" n.c. x 3/4"	Boulon à carrosserie 5/16" n.c. x 3/4"	2	O/L
5	Nylon flat washer 7/16"	Rondelle plate de nylon 7/16"	2	102011
6	Handgrip	Poignée	1	102062
7	Handle	Manivelle	1	102061
8	Hair pin 2.5mm	Goupille à ressort 2.5mm	2	102013
9	Rotation worm	Spirale de rotation	1	102695
10	Flat washer 7/16" hole	Rondelle plate 7/16" trou	2	O/L
11	Danger decal	Décalque danger	1	102127
12	Frame	Châssis	1	REF

O/L = Obtain locally/obtenir localement

### PARTS BREAKDOWN / NOMENCLATURE DES PIÈCES SNOWBLOWER / SOUFFLEUSE



# PARTS LIST / LISTE DES PIÈCES

REF. RÉF.	DESCRIPTION	DESCRIPTION	QTY QTÉ	PART # PIÈCE #	
1	Frame	Châssis	1	103000	
2	Bearing	Roulement à billes	2	102757	
3	Bearing	Roulement à billes	2	102758	
4	Fan	Éventail	1	102743	
5	Retaining ring	Bague de retenue	2	102760	
6	Main drive pulley inc. 102784	Poulie d'entraîn. princ. inc. 102784	1	102691	
7	Oil lite bushing	Coussinet imprégné d'huile	1	102784	
8	Shear bolt /N.I.L.N.T. pkg-10	Boulon de séc. /É.G.N.M. pqt-10	1	102744	
9	Auger 40"	Vis 40"	1	102000	
10	Bearing with set screw	Roulement à billes avec vis à pression	2	102755	
11	Flangette	Flangette	2	102680	
12	Hex. bolt 3/8" n.c. x 3/4"	Boulon hex. 3/8" n.c. x 3/4"	4	O/L	
13	Flange nut 3/8" n.c.	Écrou à bride 3/8" n.c.	6	O/L	
14	Chain guard	Garde-chaîne	1	102698	
15	Drive shaft	Arbre de commande	1	102696	
16	Auger drive pulley inc. 102783	Poulie d'entraîn. de la vis inc. 102783	1	102690	
17	Oil-lite bushing	Coussinet imprégné d'huile	1	102783	
18	Retaining ring	Bague de retenue	1	102761	
19	Nylon shear pin w/2 clips	Goupille de sécurité nylon a/2 clips	1	102747	
20	Hex socket f.h. cap screw 3/8" n.c. x 2 1/4"	Vis a pression hex. t.p. 3/8" n.c. x 2 1/4"	1	O/L	
21	Double sprocket inc. 102759 & 102683	Pignon double inc. 102759 & 102683	1	102684	
22	Bearing	Roulement à billes	2	102759	
23	Flange sleeve	Douille à bride	2	102683	
24	Flat washer 7/16" hole	Rondelle plate 7/16" trou	10	O/L	
25	Hex. bolt 3/8" n.c. x 2 1/2"	Boulon hex 3/8" n.c. x 2 1/2"	1	O/L	
26	Hex. bolt 3/8" n.c. x 1 3/4"	Boulon hex. 3/8" n.c. x 1 3/4"	2	O/L	
27	Roller chain #40 x 54 /w connecting link	Chaîne #40 x 54 mailles /a maille d'accoup.	1	102767	
28	Roller chain #40 x 64 /w connecting link	Chaîne #40 x 64 mailles /a maille d'accoup.	1	102768	
29	Connecting Link #40	Maille d'accouplement #40	1	102040	
30	Chain guard	Garde-chaîne	1	102745	
31	Tapping screw 1/4" n.c. x 1/2"	Vis taraudeuse 1/4" n.c. x 1/2"	1	O/L	
32	Flat pulley	Poulie plate	2	102765	
33	Hex. bolt 3/8" n.c. x 1 1/2"	Boulon hex. 3/8" n.c. 1 1/2"	1	O/L	
34	Spring	Ressort	1	102861	
35	Stover lock nut 5/16" n.c.	Écrou de blocage 5/16" n.c.	6	O/L	

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# PARTS LIST / LISTE DES PIÈCES

REF. RÉF.	DESCRIPTION	DESCRIPTION DESCRIPTION			
36	Tension arm	Bras de tension	1	103026	
37	Idler	Poulie	1	103044	
38	Flange washer	Rondelle à bride	1	103025	
39	Special washer	Rondelle plate spécial	1	103042	
40	Cutting edge 40"	Racloir 40"	1	102047	
41	Skid shoe	Patin	2	103188	
42	Carriage bolt 5/16" n.c. x 3/4"	Boulon à carrosserie 5/16" n.c. x 3/4"	10	O/L	
43	Flange nut 5/16" n.c.	Écrou à bride 5/16" n.c.	4	O/L	
44	Belt guard	Garde courroie	1	103024	
45	Male hitch	Attache mâle	1	103043	
46	Hex. bolt 7/16" n.c. x 1 1/4"	Boulon hex. 7/16" n.c. x 1 1/4"	3	O/L	
47	Lock washer 7/16"	Rondelle de blocage 7/16"	3	O/L	
48	Nylon insert lock nut 7/16" n.c.	Écrou à garniture de nylon 7/16" n.c.	3	O/L	
49	Nylon insert lock nut 3/8" n.c.	Écrou à garniture de nylon 3/8" n.c.	5	O/L	
50	Sleeve Douille		1	103028	
51	Knob	nob Bouton		103027	
52	Carriage bolt 3/8" n.c. x 1 1/4"	Boulon à carrosserie 3/8" n.c. x 1 1/4"	1	O/L	
53	Carriage bolt 3/8" n.c. x 1-1/2"	Boulon à carrosserie 3/8" n.c. x 1 1/2"	1	O/L	
54	Tension lever	Levier de tension	1	103023	
55	Handgrip	Poignée	2	102062	
56	Roll pin 3/8" x 3/4"	Goupille roulée 3/8" x 3/4"	1	O/L	
57	Chain	Chaîne	1	103950	
58	Spring	Ressort	1	103073	
59	Tension arm	Bras de tension	1	103947	
60	Flange washer	Rondelle à bride	1	103481	
61	Hex. bolt 1/4" n.c. x 3/4"	Boulon hex. 1/4" n.c. x 3/4"	1	O/L	
62	Spring Washer	Rondelle à ressort	1	104352	
63	Important decal	Décalque important	1	102815	
64	Warning decal	Décalque attention	1	102125	
65	Danger decal Décalque danger		1	102128	
66	Warning decal	Décalque attention	1	102124	
67	Danger decal	Décalque danger	1	102126	
68	Serial number	Numéro de série			
69	Berco decal	Décalque Berco	1	102471	

O/L = Obtain locally/obtenir localement

#### 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.

SEE Grade No.		2				5			8 *				
	ATION S PER GRADE IUFACTURING	TORQUE				TORQUE				TORQUE			
BC	OLT SIZE	POUNE	S FEET	NEWTON-	METERS	POUN	DS FEET	NEWTON-	METERS	POUND	S FEET	NEWTON-N	IETERS
Inches	Millimetre	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min. Max.	Max.	Min. Max.	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

\*Thick nuts must be used with grade 8 bolts

METRIC BOLT TORQUE SPECIFICATIONS								
COARSE THREAD FINE THREAD								
Size Screw	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	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**

