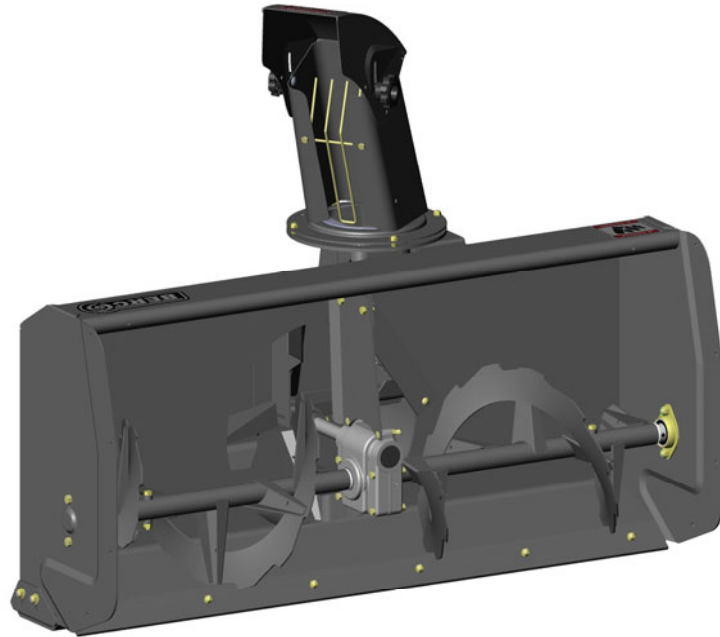




OWNER'S MANUAL
Model Number

700560 Snowblower



BERCO
P.T.O. 48" Snowblower
For
COMPACT 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 or semi-commercial use: 1 year
- 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 BERCO 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.

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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. **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.

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 #105127



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

DECAL #105128



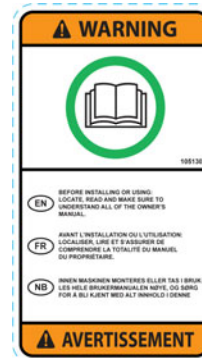
To avoid injury from drive belt:
Keep hands, feet & clothing away.
Do not attempt to install or remove drive belt without reading owner's manual.

DECAL #105852



To avoid serious injury:
Keep people and clothing away.
Do not operate without all driveline, tractor and equipment shields in place, nor without the drivelines securely attached at both ends.

DECAL #105130

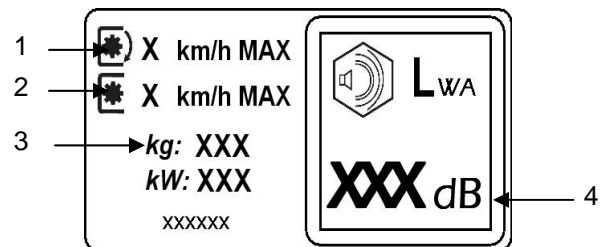


Before installing or using:
Locate, read and make sure to understand all of the owner's manual.

DECAL #105131



Refer to owner's manual about wearing safety glasses, ear muffs and mask.



- 1-Do not drive faster than 3 KM/H when the snowblower is in operation.
- 2-Do not drive faster than 10 KM/H when the snowblower is in the raised position.
- 3-The head of the snowblower weighs 114kg.
- 4-The sound pressure level (dBA) is measured from the driver's position and with the snowblower on the ground at full engine speed.

ASSEMBLY

STEP 1

SNOWBLOWER PREPARATION:

Refer to parts breakdown section for parts identification.

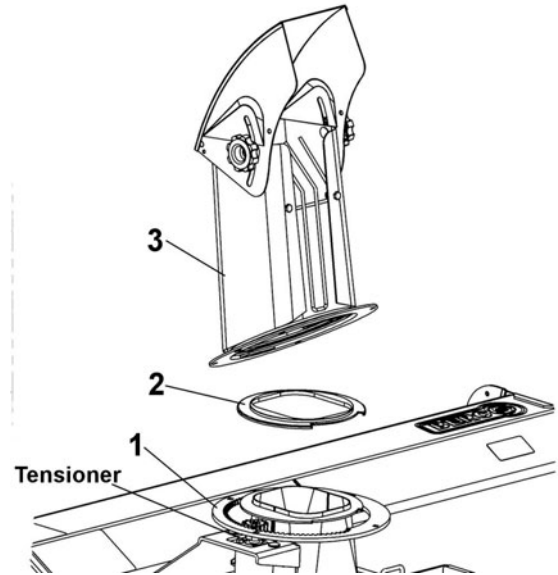
Remove the snowblower from the shipping crate.
Remove the support plates from the skid shoes.

TOOLS REQUIRED:

Wrench 7/16"
Socket 7/16"
Ratchet

IMPORTANT: TORQUE ALL BOLTS ACCORDING TO TORQUE SPECIFICATION TABLE (SEE TABLE OF CONTENTS), WHEN STATED: TIGHTEN FIRMLY.

Loosen the tensioner of the hydraulic motor. Install rotation rings and chute.		
# Item	Description	Action
1	Metal rotation ring	Install over opening of the chute as shown.
2	Nylon rotation ring	Install over opening of the chute as shown.
3	Chute	Place the chute (facing the rear) and clip the back under the rotation ring .
Turn the chute towards the front to lock into place.		



Install rotation rings & the chute

Secure the rotation ring and chute together. IMPORTANT: Make sure to place the holes of the metal rotation ring (item 1) in line with the holes at the base of the chute (item 2) as shown in Figure A.		
# Item	Description	Action
3	Spacer (qty 4)	Insert between the rotation ring and chute as shown.
4	Carriage bolt 1/4" x 1" (qty 4)	Insert from the bottom of rotation ring as shown.
5	Nylon insert lock nut 1/4" (qty 4)	Insert on the bolts and tighten firmly.
Turn the chute towards the front to lock into place. Loosen the two bolts (item 6) to adjust the rotation motor's sprocket into the teeth of the rotation ring. Tighten bolts.		

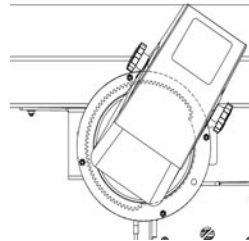
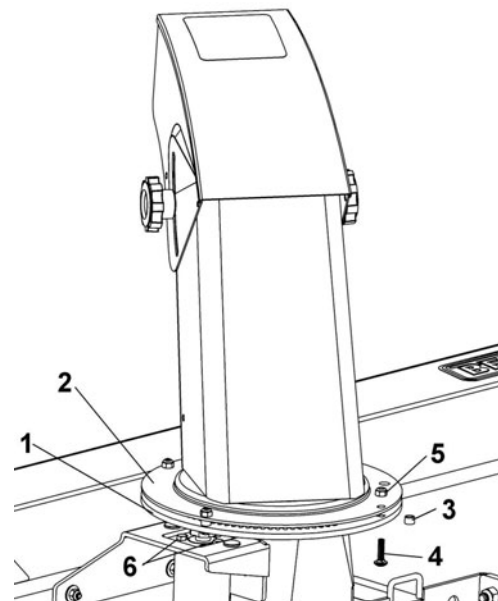


Figure A



Secure the rotation ring & chute together.

ASSEMBLY

Install the hydraulic hoses (item 1, sold separately) into the hydraulic outlets on the rotation motor (item 2).

Install the nylon sleeving over the hoses.

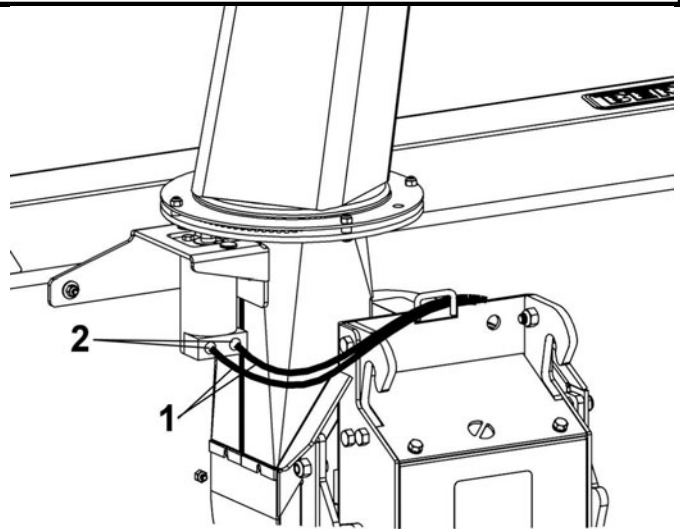


WARNING



TO PREVENT INJURIES:

Hydraulic oil under pressure can cause skin injection injury. If you are injured by hydraulic oil, get medical attention immediately.

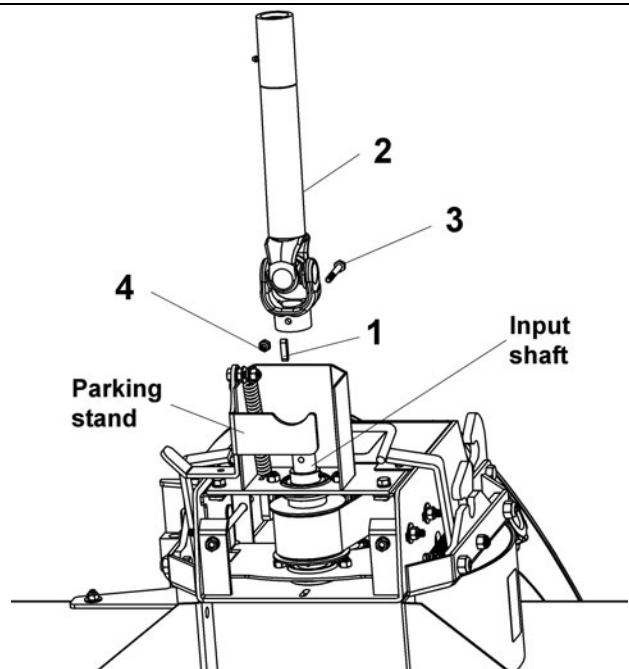


Install hydraulic hoses

NOTE: Lower the parking stand with your foot. Turn the snowblower face down. Take care to avoid being pinched by the parking stand. Install the half drive line (item 2).

# Item	Description	Action
1	Key	Insert in the half drive line.
2	Half drive line	Insert on input shaft and align the holes together as shown.
3	Hex bolt 1/4" x 2"	Insert as shown.
4	Nylon insert lock nut 1/4" (qty 4)	Insert on the bolt and tighten firmly.

Turn the snowblower back on the parking stand.



Install half drive line

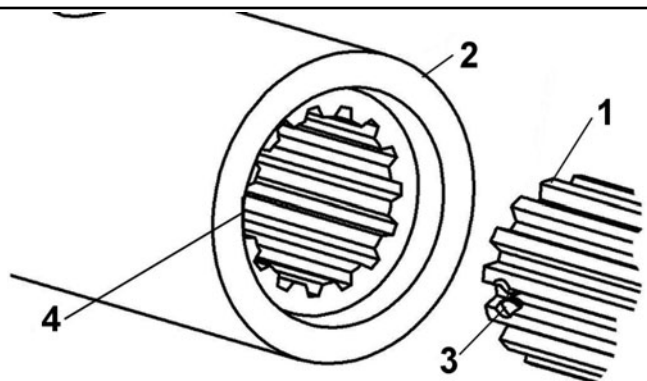
STEP 2

SNOWBLOWER INSTALLATION:

Refer to parts breakdown section for parts identification.

Install the P.T.O. drive mechanism (item 1) from separate kit, into the snowblower's driveline (item 2) by aligning the stamped marks (item 3) (located between the splines at the end of the shaft) with the large groove (item 4) in the hollow tube on the snowblower's section.

Only one position allows the sections to be inserted one into the other.



Install the P.T.O. drive mechanism

ASSEMBLY

NOTE: Make sure the latch (item 3) on the snowblower is in the lowest position.

Drive the tractor up to the snowblower.

Insert the rod (item 1) on subframe's male hitch into the hooks (item 2) of the snowblower's female hitch. Lift the snowblower with subframe hitch so that the latch (item 3) locks the bottom part of the subframe to the snowblower.

Make sure the parts are well inserted together. Make sure the latch is locked into the lower position.

Lower the snowblower to the ground.



DANGER



ROTATING DRIVELINE
Contact can cause death.
KEEP AWAY

Do not operate without:
All driveline, tractor & equipment shields in place.
Driveline securely attached at both ends.



WARNING



TO PREVENT INJURIES:

Stop the motor.

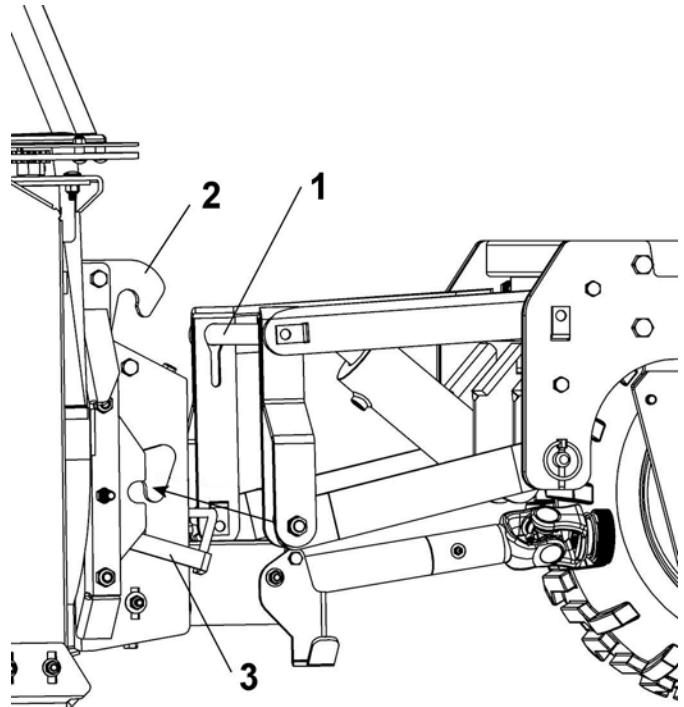
Apply parking brake.

Remove the ignition key.

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

Connect the PTO drive mechanism to the installed accessory drive P.T.O. spline shaft. Make sure the driveline yoke is securely attached to the P.T.O. drive mechanism.

Connect the hydraulic hoses from the chute rotation to the tractor's hydraulic outlets. Please refer to the tractor's manual.



Install the snowblower



DANGER



If the driveline is not completely covered, be sure a guard extension is installed.

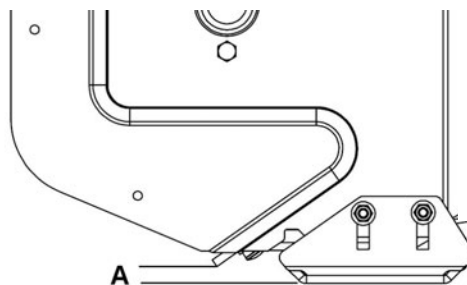
Do not operate without driveline completely covered by the shield.

ASSEMBLY

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

VERIFY TIRE PRESSURE:

Refer to the vehicle's owner manual for tire pressure.
Check and adjust tractor tire pressure.
Tire pressure must be even on both sides of vehicle.

OPERATION

SNOWBLOWER OPERATION

IMPORTANT:

Always inspect the hydraulic components and hoses before using. Replace any damaged or worn parts immediately. If you suspect a hose leak, **DO NOT** use your hand to locate it. Use a piece of cardboard or wood.

- 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.
- 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

Use the tractor's hydraulic joystick to turn the chute from one side to the other.

If the chute does not turn in the desired direction, switch the hydraulic hoses on the tractor.

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 or use the optional electric chute deflector kit.

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



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



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) (if applicable) and keep wire away to prevent accidental starting.

-Do not use hand to unplug chute use a clean-out tool of at least 36" (1 m) length.



WARNING



TO PREVENT INJURIES:

Lower the snowblower when the vehicle is parked.

Temperature changes could change the hydraulic pressure, causing the snowblower to drop unexpectedly, damaging the hydraulic components. Failure to do this could result in serious personal injury.



WARNING



TO PREVENT INJURIES:

Never leave the driver seat without disengaging the snowblower, stopping the engine and removing the ignition key.

MAINTENANCE



WARNING



TO PREVENT INJURIES:

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

MAINTENANCE

- 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 the snowblower when in raised position.

ADJUSTMENTS

Skid shoe adjustment:

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

UNEVEN OR GRAVEL SURFACE: Adjust skid shoes to allow 1/2" to 5/8" or 13mm to 16mm clearance 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

Apply oil at all pivot points.

Chute Rotation System: Oil chute base 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 155 ml 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:

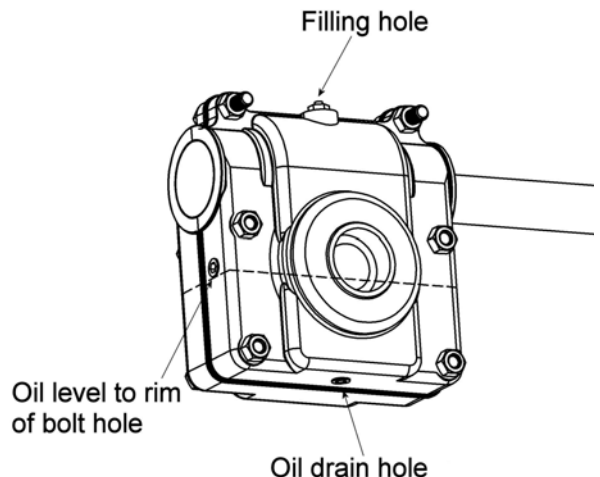
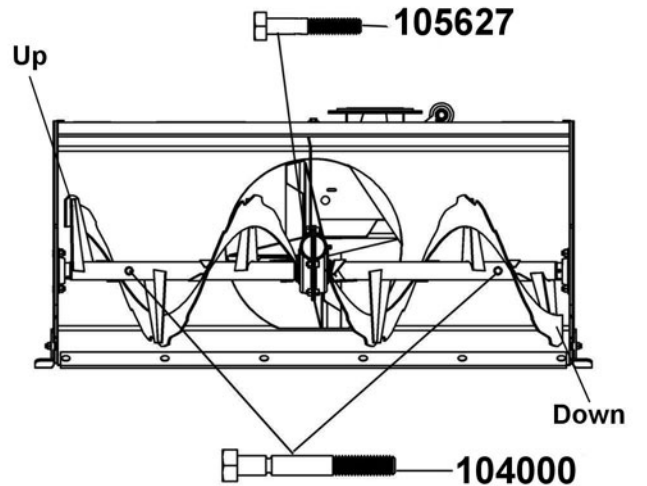
Use only the original shear bolts (grooved bolts).

#104000 in bags of 10 for the augers.

#105627 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.



Gear Box

MAINTENANCE

BELT REPLACEMENT:

- 1) Remove the belt guard (item 1).
- 2) Remove the half driveline (item 2).
- 3) Remove the driveline guard (item 3).
- 4) Loosen the nuts (item 4) on both sides.
- 5) Loosen the tensioner nuts (item 5).
- 6) Remove the belt (item 6).

IMPORTANT:

If aligning or replacing the pulley is necessary, clean the parts and apply some "Loctite" 2760 on the key and the set screws. Tighten firmly. (Use heat to soften the "loctite" when removing the set screws).

Reinstall the belt and parts by reversing the steps. See belt adjustment section for appropriate belt tension.

IMPORTANT:

Make sure the notches of the belt are well inserted into the those of the pulley.

BELT ADJUSTMENT:

Loosen the nuts on the belt guard (item 1).

Loosen the four nuts (item 4) (two on each side) from the reduction box.

Use the two adjustment nuts (item 5) to adjust tension.

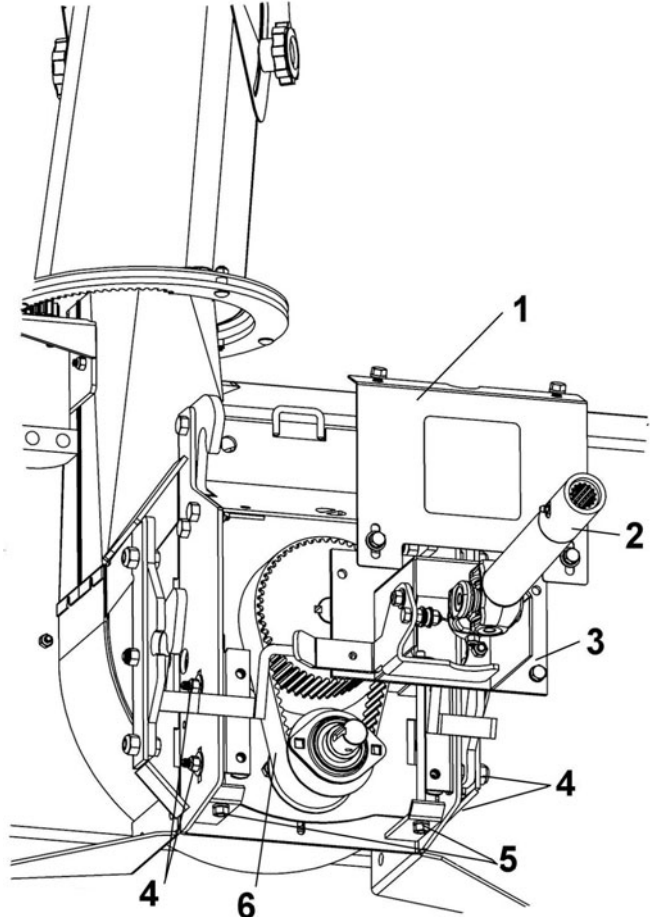
Lack of tension or too much on the belt will drastically reduce the belt's life span.

Loosen the bolts to reduce tension on belt or tighten the bolts to apply tension.

TIP: There must be between 1/16" and 1/8" of deflection on one strand of the belt when you apply a slight pressure on the belt with your finger.

IMPORTANT: Verify belt alignment.

Retighten the nuts and reinstall the belt guard.



DANGER



CONTACT WITH ROTATING DRIVELINE CAN CAUSE SEVERE INJURY OR DEATH.

Operate only when all driveline, tractor and equipment shields are in place.

Be sure driveline securely attached and locked at both ends before operating.

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) (if applicable) and keep away from spark plug(s) to prevent accidental starting.

- a) Lower the parking stand with your foot.
- b) Disconnect the driveline from tractor's P.T.O. by sliding back the collar on the yoke then pull the driveline out.
- c) Unlock the snowblower by lifting the latch on the snowblower.
- d) Start the tractor and lower the subframe and snowblower to the ground. Back up with the tractor and the snowblower will come off.

SUBFRAME DISMOUNTING

See the subframe owner's manual for dismounting instructions.

END OF SEASON 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 for the next season.
- c) Store the snowblower and the subframe in a dry place.
- d) Follow the instructions in the Lubrication section.

TROUBLESHOOTING

* Please refer to parts breakdown section for parts identification.

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
Snowblower vibrates or is abnormally noisy.	Damaged pulley.	Replace pulley.
	Damaged drive shaft.	Replace drive shaft.
	Damaged bearing.	Replace bearing.
	Damaged fan.	Dismount & repair or replace fan.
	One or both sections of the auger is bent.	Replace one or both sections of auger.
One or both sections of the auger have stopped turning.	Shear bolt is probably broken.	Replace shear bolt (for identification, see Parts List "Snowblower"). Also see "Maintenance" section.
Snowblower stopped turning.	The belts are damaged or snapped.	Check & replace damaged belts (see instructions in section: Belt replacement & adjustments.
	Damaged drive shaft.	Replace drive shaft.
Belt is worn at a specific point.	Snowblower was engaged when already plugged.	Make sure auger & fan are not plugged or frozen before engaging snowblower.
Chute rotation is difficult.	Dirt or ice may be underneath chute.	Clean the base of chute & the rotation ring. Lubricate chute inside & out.
	The base of the chute may be damaged or bent.	Replace defective parts.
	Dirt in the oil.	Replace hydraulic oil.
The chute plugs easily.	Vehicle engine is turning too slowly.	Always have engine at full R.P.M. when using the snowblower.
	Advancing too quickly with vehicle.	Reduce speed. Allow snowblower to ingest snow at its own speed.
Snowblower digs into ground.	Ground is not frozen or too soft.	Adjust skid shoes lower so they may better support the snowblower.
Snowblower does not raise evenly.	Uneven tire pressure from one side to another.	Refer to the vehicle's owner manual for tire pressure. Check and adjust tractor tire pressure. Tire pressure must be even on both sides of vehicle.
Snowblower raises or lowers too slowly.	Dirt in the oil.	Change the hydraulic oil.
	Damaged bushing	Replace the bushing.
Electric motor for the chute deflector does not work.	Overheating of the motor.	These motors are equipped with an internal protector. Wait 10 minutes before using.
	Motor and connector terminals are oxidized.	Clean the terminals inside the connector and the motor terminals.

TORQUE SPECIFICATION TABLE

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

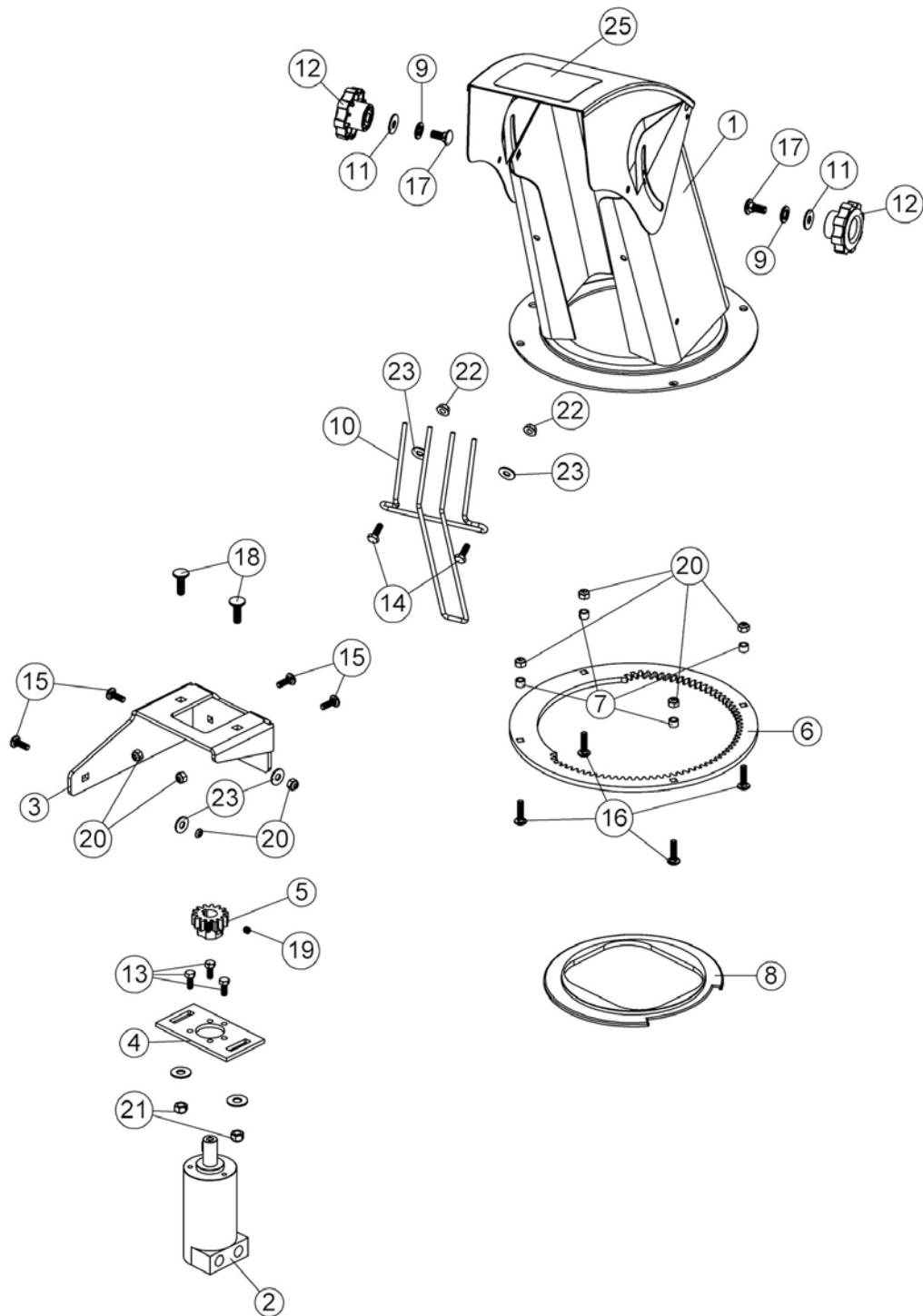
NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

* 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

PARTS BREAKDOWN CHUTE



PARTS LIST CHUTE

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Chute	Goulotte	1	105890
2	Hydraulic motor 32cc	Moteur Hydraulique 32cc	1	105783
3	Motor support	Support-moteur	1	105885
4	Support plate	Plaque de support	1	105886
5	Sprocket	Pignon	1	105887
6	Rotation ring	Anneau de rotation	1	105888
7	Spacer	Espaceur	4	105889
8	Rotation ring	Anneau de rotation	1	103943
9	Nylon flat washer 7/16"	Rondelle plate de nylon 7/16"	2	102011
10	Hand guard	Fourche protectrice	1	102012
11	Nylon flat washer 11/32"	Rondelle plate de nylon 11/32"	2	102009
12	Knob	Bouton	2	102020
13	Hex. bolt M6 x 1.00 x 16	Boulon hex. M6 x 1.00 x 16	3	O/L
14	Hex. bolt 1/4" n.c. x 3/4"	Boulon hex. 1/4" n.c. x 3/4"	2	O/L
15	Carriage bolt 1/4" n.c. x 3/4"	Boulon à carrosserie 1/4" n.c. x 3/4"	4	O/L
16	Carriage bolt 1/4" n.c. x 1"	Boulon à carrosserie 1/4" n.c. x 1"	4	O/L
17	Carriage bolt 5/16" n.c. x 3/4"	Boulon à carrosserie 5/16" n.c. x 3/4"	2	O/L
18	Carriage bolt 5/16" n.c. x 1"	Boulon à carrosserie 5/16" n.c. x 1"	2	O/L
19	Hex. socket set screw 1/4" n.c. x 1/4"	Vis à pression hex. 1/4" n.c. x 1/4"	1	O/L
20	Nylon insert lock nut 1/4" n.c.	Écrou à garniture de nylon 1/4" n.c.	8	O/L
21	Nylon insert lock nut 5/16" n.c.	Écrou à garniture de nylon 5/16" n.c.	2	O/L
22	Flange nut 1/4" n.c.	Écrou à bride 1/4" n.c.	2	O/L
23	Flat washer 5/16" hole	Rondelle plate 5/16" trou	4	O/L
24	Flat washer 3/8" hole	Rondelle plate 3/8" trou	2	O/L
25	Danger decal chute	Décalque danger goulotte	1	105127

O/L = Obtain Locally

PARTS LIST SNOWBLOWER

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Frame 48"	Châssis 48"	1	105891
2	Latch	Loquet	1	105875
3	Parking stand	Pied de stationnement	1	105876
4	Sleeve	Douille	2	105877
5	Reduction box	Boîte de réduction	1	105878
6	Driveline guard	Garde de l'arbre à cardan	1	105879
7	Belt guard	Garde-courroie	1	105880
8	Spring	Ressort	1	105881
9	Latch bracket	Attache de loquet	2	105883
10	Latch	Loquet	2	105882
11	Cutting edge 48"	Racloir 48"	1	105825
12	Spring	Ressort	1	105874
13	Flangette	Flangette	6	102213
14	Flangette	Flangette	2	102680
15	Bearing with set screw	Roulement à billes avec vis à pression	5	102755
16	Oil lite bushing	Coussinet imprégné d'huile	2	102784
17	Half teles. driveline w/set screw	Demi arbre à cardan a/vis à pression	1	105770
18	Key 1/4" x 1/4" x 2"	Clé 1/4" x 1/4" x 2"	3	102922
19	Shear plate	Plaque de cisaillement	1	103933
20	Rotation bushing	Coussinet de rotation	4	103946
21	Shear bolt / N.I.L.N. (auger) pkg-10	Boulon de séc. / É.G.N. (vis) pqt-10	2	104000
22	Sprocket with set screw	Pignon avec vis à pression	1	104428
23	Gear box left rotation	Boîte d'engrenage rotation gauche	1	104718

O/L = Obtain Locally

PARTS LIST SNOWBLOWER

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
24	Shaft 48"	Arbre 48"	1	104721
25	Reinforcement	Renfort	1	105484
26	Sprocket with set screw	Pignon avec vis à pression	1	105677
27	Input shaft	Arbre d'entrée	1	105771
28	Gear box support	Support de boîte d'engrenage	1	105787
29	Fan	Éventail	1	105789
30	Auger 48" left	Vis 48" gauche	1	105793
31	Auger 48" right	Vis 48" droite	1	105794
32	Left skid shoe	Patin gauche	1	105795
33	Right skid shoe	Patin droit	1	105796
34	Key 1/4" x 1/4" x 1.000"	Clé 1/4" x 1/4" x 1.000"	1	102017
35	Shear bolt / N.I.L.N. (fan) pkg-10	Boulon de séc./ É.G.N. (éven.) pqt-10	1	105627
36	Adjustment bolt	Boulon d'ajustement	2	105898
37	Timing belt 640-8MT-50	Courroie synchronisée 640-8MT-50	1	105765
38	Hex. bolt 1/4" n.c. x 1"	Boulon hex. 1/4" n.c. x 1"	1	O/L
39	Hex. bolt 1/4" n.c. x 2"	Boulon hex. 1/4" n.c. x 2"	1	O/L
40	Hex. bolt 5/16" n.c. x 3/4"	Boulon hex. 5/16" n.c. x 3/4"	8	O/L
41	Hex. bolt 5/16" n.c. x 1 1/4"	Boulon hex. 5/16" n.c. x 1 1/4"	1	O/L
42	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
43	Hex. bolt 3/8" n.c. x 3/4"	Boulon hex. 3/8" n.c. x 3/4"	4	O/L
44	Hex. bolt 3/8" n.c. x 1 1/2"	Boulon hex. 3/8" n.c. x 1 1/2"	2	O/L
45	Hex. bolt 7/16" n.c. x 1"	Boulon hex. 7/16" n.c. x 1"	4	O/L
46	Hex. bolt 7/16" n.c. x 1 1/4"	Boulon hex. 7/16" n.c. x 1 1/4"	6	O/L

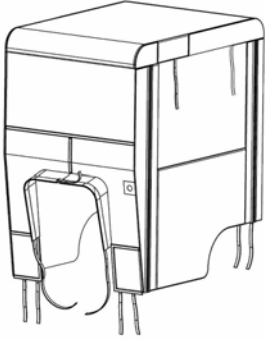
O/L = Obtain Locally

PARTS LIST SNOWBLOWER

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
47	Carriage bolt 1/4" n.c. x 3/4"	Boulon à carrosserie 1/4" n.c. x 3/4"	2	O/L
48	Carriage bolt 5/16" n.c. x 3/4"	Boulon à carrosserie 5/16" n.c. x 3/4"	11	O/L
49	Carriage bolt 5/16" n.c. x 1"	Boulon à carrosserie 5/16" n.c. x 1"	10	O/L
50	Nylon insert lock nut 1/4" n.c.	Écrou à garniture de nylon 1/4" n.c.	3	O/L
51	Nylon insert lock nut 1/4" n.c. (thin)	Écrou à garniture de nylon 1/4" n.c.(mince)	3	O/L
52	Nylon insert lock nut 5/16" n.c.	Écrou à garniture de nylon 5/16" n.c.	19	O/L
53	Nylon insert lock nut 3/8" n.c.	Écrou à garniture de nylon 3/8" n.c.	6	O/L
54	Nylon insert lock nut 7/16" n.c.	Écrou à garniture de nylon 7/16" n.c.	10	O/L
55	Stover lock nut 5/16" n.c.	Écrou de blocage 5/16" n.c.	6	O/L
56	Flange nut 5/16" n.c.	Écrou à bride 5/16" n.c.	1	O/L
57	Flat washer 5/16" hole	Rondelle plate 5/16" trou	9	O/L
58	Flat washer 3/8" hole	Rondelle plate 3/8" trou	6	O/L
59	Flat washer 7/16" hole	Rondelle plate 7/16" trou	1	O/L
60	Lock washer 5/16"	Rondelle de blocage 5/16"	8	O/L
61	Berco decal	Décalque Berco	1	102471
62	Decal danger auger	Decalque danger vis	1	105126
63	Decal danger belts	Decalque danger courroies	1	105128
64	Decal read instructions	Decalque lire instructions	1	105130
65	Decal warning safety	Decalque avertissement sécurité	1	105131
66	Decal PTO	Décalque PTO	2	105852
67	Specifications decal	Décalque spécifications	1	REF
68	Serial number	Numéro de série	1	REF
69	Made in Canada decal	Décalque Fabriqué au Canada	1	REF

O/L = Obtain Locally

OPTIONS



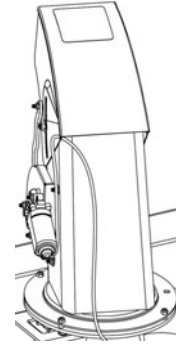
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