

OWNER'S MANUAL *Model Number* 700272-2 Subframe





* ASSEMBLY

* REPAIR PARTS

* **OPERATION**

* 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 preestablished 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 (installed in factory on BERCO equipment): 2 years
- Engines (sold separately): Validate with the dealer.
 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 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.

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>. Don't forget to bring the product and your proof of purchase (sales receipt) to the BERCOMAC dealer.

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

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

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





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.
- 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 lockopen 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 starting to clear snow.
- 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. Never modify the accessory or any part without the written consent from the manufacturer.





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.
- 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 clean 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

- When cleaning, repairing or inspecting the vehicle and accessory, make certain that all moving parts have stopped. 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 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.



STEP 1

SUBFRAME INSTALLATION:

IMPORTANT: TORQUE ALL BOLTS ACCORDING TO TORQUE SPECIFICATION TABLE (SEE TABLE OF CONTENTS) WHEN STATED: TIGHTEN FIRMLY. REFER TO PARTS BREAKDOWN SECTION FOR PARTS IDENTIFICATION.

<u>NOTE</u>: The mower deck must be removed before installing the subframe.

Remove the nuts from the pivot shoulder bolts (item 1) that hold the mower's lift arms (item 2).

Install the sleeves (item 3), 9/16" flat washers (item 4) and 1/2" locknuts (item 5) supplied with the kit on the pivot bolts.

Tighten securely.

Install the subframe (item 1) on the tractor by hooking the rear portion (item 2) onto the sleeves just installed.

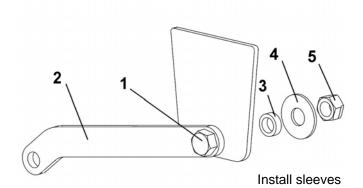
Lift the front portion of subframe (item 3) and hook up onto the front tractor hitch.

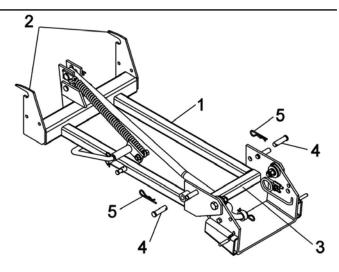
Secure in place with two $1/2 \times 1 3/4"$ pins (item 4) and two 3 mm hair pins (item 5).

NOTE: The $1/2 \ge 1 \ 3/4$ " pins should be in place at all times when subframe is installed. If not, the mounting pins will bend and the subframe may drop and could damage the tractor's frame.

TOOLS REQUIRED:

Ratchet Wrench: 3/4", 1/2" Socket: 3/4", 1/2"





Install subframe

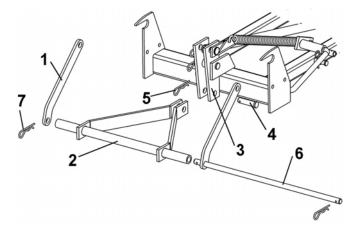
Lower the mower lift arms (item 1) and install the lift bracket (item 2) to the lever (item 3) with a $1/2 \times 1 3/4"$ pin (item 4).

Secure with a 3 mm hair pin (item 5).

Attach the rear portion of the lift bracket (item 2) to the mower lift arms (item 1) with a $1/2 \times 17^{"}$ pin (item 6).

Secure with two 3 mm hair pins (item 7)

Tighten securely.



Install the lift bracket

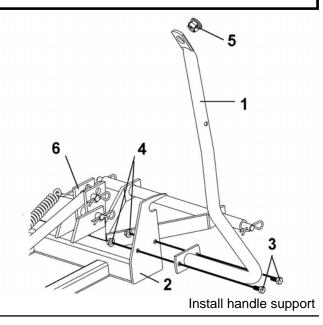
Install the handle support (item 1) to the subframe (item 2) with two $5/16 \times 3/4$ " hex bolts (item 3) and flange nuts (item 4).

Tighten securely.

Insert the plastic grommet (item 5) into the handle support.

NOTE: The lever (item 6) has two sets of holes to be able to install the push tube.

The rear hole is for the snowblower and rotary broom and the front hole is for the blade if more lift is needed.



NOTE: This subframe is equipped with a helper spring for the lift mechanism. The tension on the spring must be released to be able to install or to dismount the attachments. Tension can be released on the spring when using the blade for example to scrape harder.

Release the tension on the spring by lifting the hydraulic, remove the pin and move the arm (item 1) towards the front.

Secure with a pin and hair pin.



CAUTION



TO PREVENT INJURIES:

Always raise the attachment to reduce the tension on the spring before applying or releasing tension on the helper spring. Firmly hold the handle when you release the tension because the arm will kick back due to the tension on the spring.



WARNING



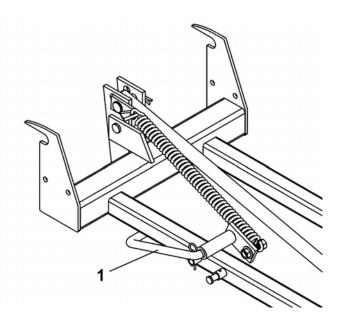
TO PREVENT INJURIES AND FOR MORE TRACTION WHEN USING AN ATTACHMENT:

-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.



STEP 2 SNOWBLOWER INSTALLATION:

Refer to snowblower owner's manual, parts breakdown section for parts identification.

WARNING



FOR YOUR SECURITY:

Read the snowblower's owner's manual for safety precautions and rules.

Follow the assembly and operation instructions.

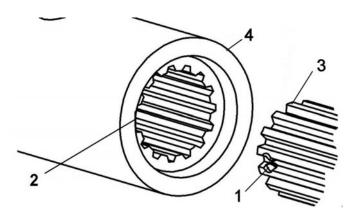
Insert the male section of the driveline (item 3; kit #700433) into the snowblower's driveline (item 4) by aligning the stamped mark (item 1) with the large groove (item 2).

Only one position allows the shafts to be inserted into one another.





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.

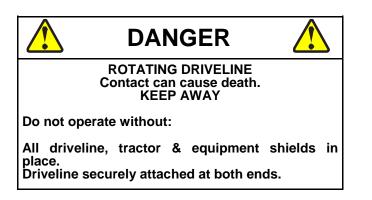


Install the driveline





If the driveline is not completely covered, be sure a guard extension is installed. Do not operate without driveline completely covered by the shield.



NOTE: This subframe is equipped with a helper spring for the lift mechanism. The tension on the spring must be released to be able to install or to dismount the attachments. Tension can be released on the spring when using the blade for example to scrape harder.

Release the tension on the spring by lifting the hydraulic, remove the pin (item 2) and move the arm (item 3) towards the front.

Secure with the pin (item 2) and hair pin.



CAUTION



TO PREVENT INJURIES:

Always raise the attachment to reduce the tension on the spring before applying or releasing tension on the helper spring. Firmly hold the handle when you release the tension because the arm will kick back due to the tension on the spring.

Attach the snowblower to the subframe as shown.

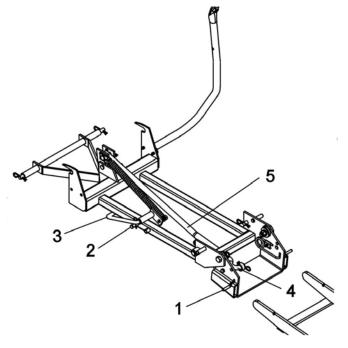
Make sure the snowblower is pushed in until locked into place by the springs (item 1).

Apply tension on the spring by lifting the attachment, remove the pin (item 2) and move the arm (item 3) towards the back.

Secure with the pin (item 2) and hair pin.

NOTE: The lifting height of the snowblower <u>must not</u> <u>be higher than 5".</u>

If the height is higher than 5", adjust the height by screwing the adjustment rod (item 4) into the push tube (item 5) until the 5" maximum have been reached.



Move tension arm and attach snowblower

Connect the driveline to the tractor's P.T.O. spline shaft.

Make sure that the driveline yoke is securely attached to the tractor's P.T.O.

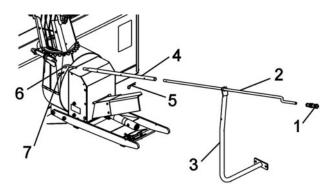
Install the handgrip (item 1) on the handle (item 2).

Insert the handle through the handle support (item 3).

Install the handle extension (item 4; included with the subframe) in the handle and secure with a 2.5 mm hair pin (item 5).

Install the handle hook (item 6) on the rotation worm.

Insert hook (item 6) in handle and lock in place with a 2.5 mm hair pin (item 7).

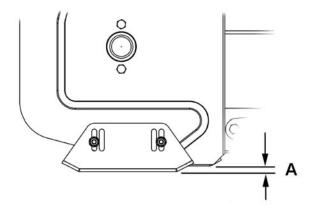


Install handle

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: Tire manufacturer max pressure Back tires: 7 - 8 psi

Tire pressure must be even on both sides of tractor.

Adjust skid shoes

STEP 3 ROTARY BROOM INSTALLATION:

Refer to rotary broom owner's manual, parts breakdown section for parts identification.

WARNING



FOR YOUR SECURITY:

Read the rotary broom owner's manual for safety precautions and rules.

Follow the assembly and operation instructions.

Insert the male section of the driveline kit (item 3; 700275 kit) into the rotary broom's driveline (item 4) by aligning the stamped mark (item 1) with the large groove (item 2).

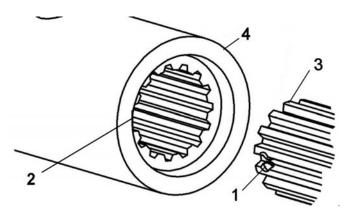
Only one position allows the shafts to be inserted into one another.





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.



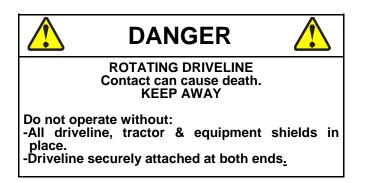
Install the driveline







If the driveline is not completely covered, be sure a guard extension is installed. Do not operate without driveline completely covered by the shield.



Release the tension on the spring by lifting the hydraulic, remove the pin (item 2) and move the arm (item 3) towards the front.

Secure with a pin (item 2) and hair pin.







TO PREVENT INJURIES:

Always raise the attachment to reduce the tension on the spring before applying or releasing tension on the helper spring. Firmly hold the handle when you release the tension because the arm will kick back due to the tension on the spring.

Attach the rotary broom to the subframe as shown.

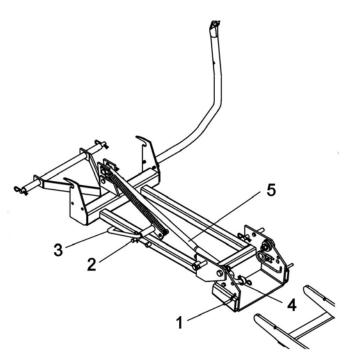
Make sure the rotary broom is pushed in until locked into place by the springs (item 1).

Apply tension on the spring by lifting the attachment, remove the pin (item 2) and move the arm (item 3) towards the back.

Secure with a pin (item 2) and hair pin.

NOTE: The lifting height of the rotary broom <u>must</u> not be higher than 5".

If the height is higher than 5", adjust the height by screwing the adjustment rod (item 4) into the push tube (item 5) until the 5" maximum have been reached.



Move tension arm and attach rotary broom

Connect the driveline to the tractor's P.T.O. spline shaft.

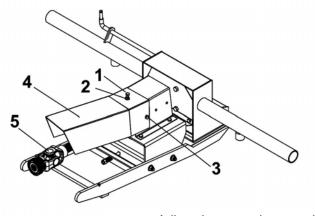
Make sure that the driveline yoke is securely attached to the tractor's P.T.O.

Lower the rotary broom to the ground.

Adjust the extension guard (item 4) by screwing the bolt (item 1) so that it is parallel with the driveline.

Tighten firmly.

Be sure that the guard does not come into contact with the driveline when the rotary broom is raised.



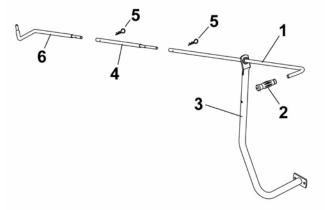
Adjust the extension guard

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

Insert the handle (item 1) through the support (item 3) and onto the extension (item 4) as shown.

Secure with a 2.5 mm hair pin (item 5).

Insert the extension (item 4) into the control rod (item 6) and secure with a 2.5 mm hair pin (item 5).



Install handle

VERIFY TIRE PRESSURE:

Check and adjust tractor tire pressure as follows:

Front tires: Tire manufacturer max. pressure Back tires: 7 - 8 psi

Tire pressure must be even on both sides of tractor.

<u>STEP 4</u> <u>UTILITY BLADE INSTALLATION:</u>

Refer to blade owner's manual, parts breakdown section for parts identification.



Read the blade owner's manual for safety precautions and rules. Follow the assembly and operation instructions.

Release the tension on the spring by lifting the hydraulic, remove the pin (item 2) and move the arm (item 3) towards the front.

Secure in place with a pin (item 2) and a hair spring.







TO PREVENT INJURIES:

Always raise the attachment to reduce the tension on the spring before applying or releasing tension on the helper spring. Firmly hold the handle when you release the tension because the arm will kick back due to the tension on the spring.

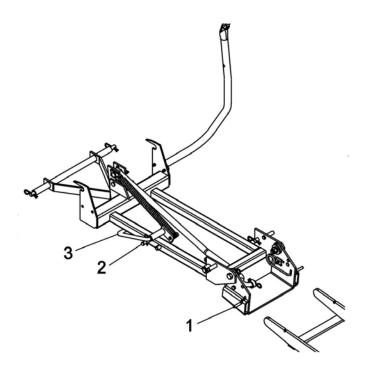
Attach the blade to the subframe as shown.

Make sure the blade is pushed in until locked into place by the springs (item 1).

Apply tension on the spring by lifting the attachment, remove the pin (item 2) and move the arm (item 3) towards the back.

Secure with a pin (item 2) and hair pin.

NOTE: Tension can be released on the spring when using the blade to scrape harder.



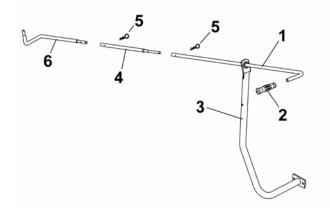
Move tension arm and attach blade

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

Insert the handle through the support (item 3) and onto the extension (item 4) as shown.

Secure with a 2.5 mm hair pin (item 5).

Insert the extension (item 4) into the control rod (item 6) and secure with a 2.5 mm hair pin (item 5).



Install handle

VERIFY TIRE PRESSURE:

Check and adjust tractor tire pressure as follows:

Front tires: Tire manufacturer max. pressure Back tires: 7 - 8 psi

Tire pressure must be even on both sides of tractor.

MAINTENANCE

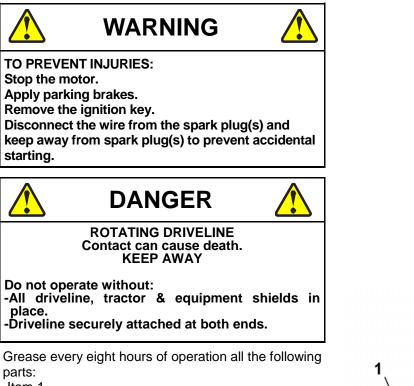
MAINTENANCE

- a) Check mounting bolts at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
- b) Apply oil at all pivot points.

END OF SEASON STORAGE

- a) Clean and repaint all parts from which the paint has worn.
- b) Apply oil at all pivot points.
- c) Inspect and replace all defective parts before next season.

LUBRICATION:

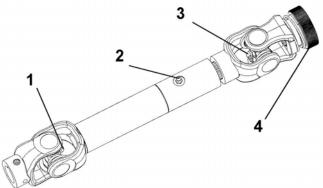


- -Item 1
- -Item 2

Grease every sixteen hours of operation all the following parts:

- -Item 1
- -Item 2
- -Item 3
- -Item 4

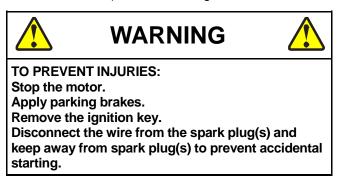
See each attachment manual for their maintenance.



DISMOUNTING

DISMOUNTING THE SUBFRAME:

See attachment owner's manual (Snowblower, Rotary broom and Blade) for dismounting instructions.



- a) Remove the rear counterweight if installed.
- b) Lower the hydraulic lift.
- c) Detach the lift bracket by removing the hair pin and pull out the pin.
- d) Remove the two pins and hair pins that hold the front portion of the subframe.
- e) Place a piece of wood under the back of the subframe to prevent the subframe from dropping to the ground.
- f) Unlock the tractor hitch and pull out the subframe.

TORQUE SPECIFICATION TABLE

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

* Thick nuts must be used with grade 8 bolts

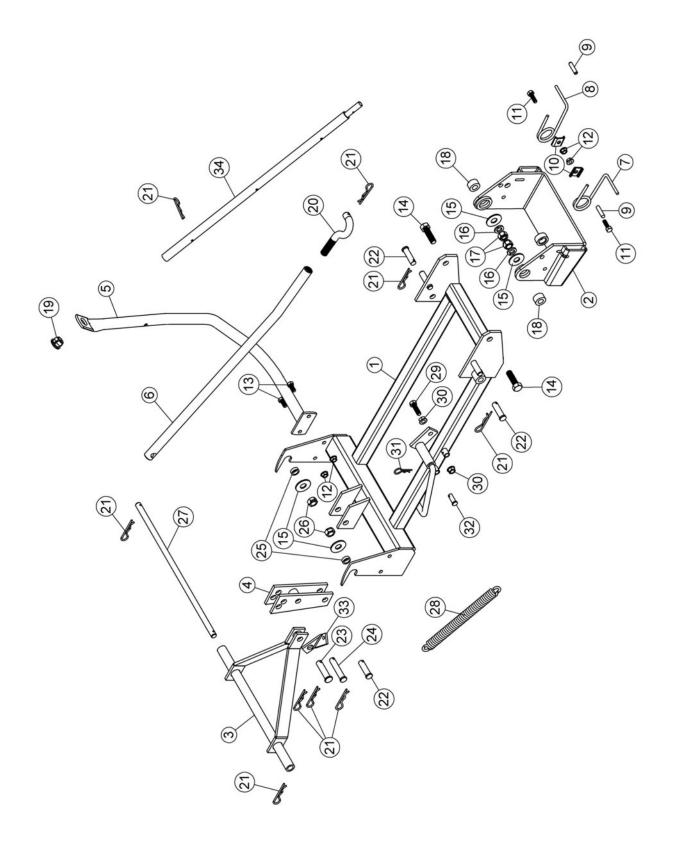
SEE Grade	No.	2			5			8 *					
BOLT HEAD IDENTIFICATION MARKS AS PER GRADE NOTE MANUFACTURING MARKS WILL VARY			TOR	QUE		TORQUE				TORQUE			
BOLT SIZE		FOOT	POUNDS	NEW TON-N	IETERS	FOOT	POUNDS	NEW TON-METERS		FOOT POUNDS		NEW TON-METERS	
Inches	Millimetre	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min. 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

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			

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.

PARTS BREAKDOWN

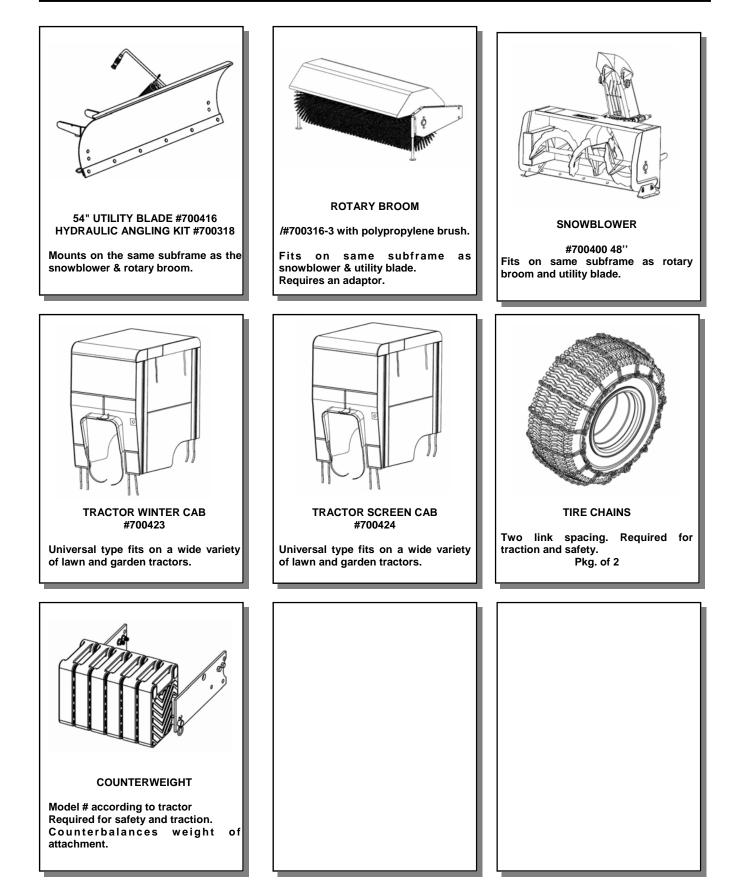
SUBFRAME 700272-2



PARTS LIST SUBFRAME 700272-2

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Subframe	Sous-châssis	1	102906
2	Pivot support	Support de pivot	1	103345
3	Lift bracket	Support de relevage	1	102902
4	Lever	Levier	1	102907
5	Handle support	Support de manivelle	1	102899
6	Push tube	Tube de poussée	1	102905
7	Right spring lock	Ressort de barrure droit	1	102209
8	Left spring lock	Ressort de barrure gauche	1	102208
9	Handgrip	Poignée	2	102248
10	Spring bracket	Fixation du ressort	2	102210
11	Hex. bolt 5/16" n.c. x 1"	Boulon hex. 5/16" n.c. x 1"	2	O/L
12	Flange nut 5/16" n.c.	Écrou à bride 5/16" n.c.	4	O/L
13	Hex. bolt 5/16" n.c. x 3/4"	Boulon hex. 5/16" n.c. x 3/4"	2	O/L
14	Hex. bolt 1/2" n.c. x 1 3/4"	Boulon hex. 1/2" n.c. x 1 3/4"	2	O/L
15	Flat washer 9/16" hole	Rondelle plate 9/16" trou	4	O/L
16	Lock washer 1/2"	Rondelle de blocage 1/2"	2	O/L
17	Nylon Insert lock Nut 1/2" n.c.	Écrou à garniture de nylon 1/2" n.c.	2	O/L
18	Sleeve	Douille	2	103346
19	Plastic grommet	Oeillet de plastique	1	102063
20	Adjusting rod	Tige d'ajustement	1	102653
21	Hair pin 3mm	Goupille à ressort 3mm	9	102617
22	Pin	Goupille	3	102188
23	Pin	Goupille	1	102079
24	Pin	Goupille	1	102189
25	Sleeve	Douille	2	102909
26	Stover lock nut 1/2" n.c.	Écrou de blocage 1/2" n.c.	2	O/L
27	Pin	Goupille	1	102910
28	Spring	Ressort	1	103073
29	Hex. bolt 3/8" n.c. x 1 1/4"	Boulon hex. 3/8" n.c. x 1 1/4"	1	O/L
30	Flange nut 3/8" n.c.	Écrou à bride 3/8" n.c.	2	O/L
	Hair pin 2.5mm	Goupille à ressort 2.5mm	1	102013
32	Pin	Goupille	1	103077
33	Attaching plate	Plaque d'attache	1	103171
34	Handle extension	Extension de manivelle	1	103577

ATTACHMENTS



NOTES



WHEN PERFORMANCE & DEPENDABILITY ARE NON NEGOTIABLE!

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